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EDITION **5**

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*Peter Sommers (MBA, B.App. Sci, GAICD, FRACI)
CEO Rowe Scientific Pty Ltd.*

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WHY WE ARE MARKET LEADERS

Rowe Scientific Pty Ltd is an Australian owned and operated company. We are successful in supplying the science community because we are supported by many wonderful clients. Here are just some of our focus points...

1. ISO9001

Since its incorporation in 1987, Rowe Scientific Pty Ltd. has been administered on the scientific principles of traceability and accuracy (Reg Rowe is an industrial chemist). Rowe Scientific is an ISO9001:2015 accredited company (License No.QEC10372) which means that we have proven quality control procedures.

2. SERVICE

We offer a 24 hour, 7 day service in emergency situations in order for our clients to maintain production in their laboratories.

3. MANUFACTURE

We have an industrial chemistry manufacturing division and our own laboratory. This means that we can supply laboratory solutions (traceable to NBS/NIST standards) at a competitive price, and to your specific requirements.

4. ELECTRONIC DATA INTERCHANGE

We currently operate EDI with many companies, and can also save you administration expenses. Our computer system has the flexibility to accommodate all forms of EDI, including integration with SAP, DVO and Bar Coding Technology.

5. ELECTRONIC QUOTATIONS

The price and availability details of your product enquiry can be emailed to you automatically at the completion of your call, to give you an accurate record of technical details and catalogue numbers.

6. REORDER REPORT

We can email you a report of all the items and their quantities which you have purchased from us in the past, along with their present price and availability. This allows you to easily monitor your usage and to replenish your stocks.

7. FIXED PRICES

For items which you repeatedly use, we can fix the price for 6 or 12 months. This is then logged into our computer to ensure that we will always have stock for you, and that you will always receive the agreed price, regardless of who you speak to. We can also handle "forward orders" for you.

8. YOUR WAREHOUSE NUMBERS ON DELIVERY DOCKETS

We can print your warehouse part numbers on our delivery dockets for the specific items which you have ordered, to make it easier for you to identify the items. Simply tell us your number for that item and we will enter it into our computer.

9. INVENTORY MANAGEMENT

For corporate clients, we can manage your stores, ensuring that your expensive time is not wasted on routine ordering. This provides you with the following cost savings.

- Your staff are freed up to do other things
- You never run out of items as we are responsible for monitoring the stock

10. KEY PERFORMANCE INDICATOR (KPI) REPORTS

For corporate clients with whom we have supply contracts, we provide quarterly KPI reports, which allows you to monitor our delivery performance. Invoice errors (or lack of) and cost cutting initiatives on your behalf. This improves the efficiency of your scientific supply.

Process knowledge: We visit scientific exhibitions overseas, and are aware of different brands of the same product which are available. Our knowledge of what the items are used for allows us to make cost reduction recommendations. For example, there are many instances where the use of expensive grades of filter paper and of chemicals is not required. Most end users do not know what things cost, and most suppliers do not know what things are used for, but we at Rowe Scientific know both the cost and the use, hence our ability to reduce cost. Our commitment to contract clients is to share 50/50 in any cost savings with them, and to document the progress made quarterly.

12. NEWSLETTER

Each month we send you a "fun" newsletter which includes a "Clever Person Quiz", "Did You Know?", Specials and some product information.

13. WE ARE EXPERTS IN SUPPLY AND DISTRIBUTION...ITEMS NOT LISTED

We can obtain almost any item, from anywhere in the world. If you do not see exactly the product you require listed in

our catalogue, please talk to our friendly, qualified staff. We visit overseas trade exhibitions each year to keep the most up to date products in front of you.

14. AUSTRALIAN PRODUCTS

It is our policy, quality and price being approximately equal, to supply Australian manufactured items wherever possible. This enables us to provide immediate after sales service, (and helps Australia).

15. FLEXIBILITY

Rowe Scientific Pty Ltd is very efficient and client focussed. This allows us to rapidly implement change. PLEASE advise us of any way in which we can improve in order to serve you better. (We consider our clients to be "partners" in our company).

16. HANDS-ON TECHNICAL EXPERIENCE

All of our 43 client service people have practical laboratory experience and the majority of these with tertiary scientific qualifications, which means that they can make meaningful contributions in problem solving. We understand your science.

17. FAST DELIVERY

i) We have large warehouses in Perth, Adelaide, Brisbane, Sydney and Melbourne which hold good stocks, that means we can supply quickly. This includes export orders to the Pacific Rim and to Africa.

ii) We import from U.K., Europe, U.S.A., Canada, Japan etc., which means:

- We can supply almost anything;
- Our prices are very competitive;
- Our supply is prompt because we can air freight (<5 days from overseas)

18. LOW PRICES

Our prices are very competitive because for the majority of the items we deal in, we are manufacturers' agents. We also import in bulk quantities.

19. CLIENT OF THE MONTH

Each month our computer randomly chooses a "Client of the Month". If you are chosen, you feature in our newsletter and receive \$100 worth of free scientific items from a list we provide.

20. E-COMMERCE

We are committed to remaining abreast of our clients' E-commerce requirements. Our web address is: www.rowe.com.au. The E-commerce facility on our site is constantly being developed and reviewed.

21. INSTRUMENT REPAIR SERVICE

There are many small instruments in laboratories which staff do not have time to fix. Our instrument technicians are able to get these instruments out of dark cupboards and back into use, rather than new ones being bought, thus reducing your costs.

22. "ONE STOP SHOP"

As well as supplying the full range of scientific consumables and instrumentation detailed in this catalogue, we also supply chemicals of all grades in all quantities. This potentially allows us to be a partner for all of your scientific needs, thus reducing the number of your vendors.

23. STAFF EMPOWERMENT

We have a comprehensive cross checking computer system which gives early warning of any potential stock outs, or slippage of delivery dates. Your Account Manager has full access to this information and is empowered to ensure you are looked after.

24. IN-HOUSE MANUFACTURING FACILITY

We can manufacture custom chemical solutions for you in our laboratory, under the ISO9001:2015 supervision of a chartered chemist.

25. EASY TO DEAL WITH

Our amenable staff, the majority of whom are ex-laboratory people, are co-operative and easy to deal with. Orders may be placed by mail, email or phone. All common credit cards are acceptable, and 30 day accounts are available to approved clients.

26. LOYAL, EFFICIENT STAFF

The team effort of our excellent staff IS Rowe Scientific Pty Ltd. 100% Australian owned.

27. NO SUBSTITUTION

All pack sizes and brands of product have a unique "Rowe Code" which means that whenever you order a specific Rowe Code, you will always receive the same identical product.

Our Vision

We are the preferred scientific supplier in our geographical region; a profitable company with which customers can identify and one where our dedicated staff are of paramount importance through their hard work, providence of goodwill and committed customer service.

Our Mission

The purpose of Rowe Scientific Pty Ltd is to keep our clients supplied with the scientific items they need to do their work.

Our Motto

Rowe Scientific - for when accuracy and professionalism are important.

(Developed by a consensus of all the staff of our company. We teach new staff members our culture)

PROFESSIONALISM means:

- We ensure our knowledge of our products is always current.
- We always focus on the client.
- We are aware of relevant changes in our market
- We respect the confidentiality of our clients and our company.
- Our response to our clients is fast
- There is loyalty between staff members 24 hours per day.
- We endeavour at all times to be honest with clients and colleagues.
- Our presentation of both ourselves and our company is high.
- Being dedicated to excellence, and pursuing our Vision and Mission.

(a consensus of all the staff of our company.)

QUALITY AND VALUES

QUALITY POLICY STATEMENT

Rowe Scientific Pty Ltd is recognised as a market leader in providing scientific supplies to our clients.

Our reputation is based on our uncompromising ability to respond to the needs of clients whilst providing unsurpassed levels of service.

This reputation has been achieved through creating a highly trained and motivated staff combined with supplying the best products available.

Each and every member of the Rowe Scientific Pty Ltd team is responsible for the quality of product and services we provide to our existing and prospective clients.

In order to maintain our current position and to create a platform for our future improvement, development and growth, we are committed to developing Management Systems based on the internationally recognised criteria of ISO 9001:2015.

We are personally committed to the future improvement and growth of Rowe Scientific Pty Ltd which will be achieved through ongoing training of all employees and the continuous improvement of our Management Systems.

We urge employees to share this commitment with us so that together we can continue to surpass the expectations and needs of our clients.

HEALTH, SAFETY, ENVIRONMENT & COMMUNITY

For our company to have a future, the ongoing health and safety of our employees must never be compromised. eg this is reflected in our staff regularly attending Dangerous Goods courses.

The environment in which we operate must be maintained as self sustaining (be the same or better in 100 years, for future generations). eg this is reflected in protecting the groundwater under our sites.

The community in which we operate must be supportive of our presence. eg this is reflected in us doing business with neighbourhood companies, and in keeping our neighbours informed of our Dangerous Goods Emergency Plans.

The company is committed to achieving compatibility between economic development and the maintenance of the environment.

To fulfil this commitment, the company will abide by all environmental laws.

OUR COMPANY'S PHILOSOPHY

As a company, we aim to supply profitably the highest quality laboratory products sold in Australia and overseas. We want to achieve the maximum possible customer satisfaction and ensure the prosperity of the Company and its staff.

To assist in this, we aim to achieve mutual trust and co-operation between all people within the Company and make Rowe Scientific a place where long term job satisfaction can be achieved. We recognise that people are our most valued resource and in line with this spirit believe that the following principles are of value to all.

PEOPLE

- We will develop and expand the contributions of all staff by strongly emphasising training and by the encouragement of personal involvement in the day-to-day management of their specific areas of responsibility. We seek to delegate and involve staff in discussion and decision making particularly in those areas in which each of us can effectively contribute so that all may participate in the efficient running of Rowe Scientific. We firmly believe in common terms and conditions of employment.

TEAMWORK

- We recognise that all staff have a valued contribution to make as individuals but in addition believe that this contribution can be most effective within a teamworking environment. Our aim is to build a Company with which people can identify and to which we all feel commitment.

COMMUNICATION

- Within the bounds of commercial confidentiality we will encourage open channels of communication. We would like everyone to know what is happening in our Company, how we are performing and what we plan. We want information and views to flow freely upward, downward and across our Company.

OBJECTIVES

- We will agree clear and achievable objectives and provide meaningful feedback on performance.

FLEXIBILITY

- We will not be restricted by the existing way of doing things. We will continuously seek improvements in all our actions. These are tough targets and we aim high. With hard work and goodwill we will continue to grow.



*We are proud to be
a 100% Australian
owned company.
Since 1987.*

ORDERING ONLINE

How to order online at your convenience using the Rowe Scientific Web Store and its easy to use features.

As a guest, when you arrive at the Rowe Scientific Web Store, you can search for products and populate a trolley. To obtain pricing, please request a quote on your trolley of products. Clients with a login account will see pricing directly, and will be able to place orders over the Rowe Scientific Web Store.

HOW TO LOG IN

If you have a login account, enter your username and password in the login panel at the top right hand corner. This will log you into your personalised Web Store account and show your special pricing.

YOUR WELCOME PANEL

When you have successfully logged in, you will see your welcome panel to the right. Here you will find some useful features that are explained on this page.

MY BACKORDERS

My backorders is a searchable list of your current back orders with Rowe Scientific. This data is updated overnight to keep you fully informed.

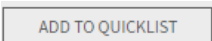
QUICK ORDER

YOUR TEN MOST PURCHASED ONLINE ITEMS			
Enter quantity on any of the items in the below lists then hit the 'Add all to Trolley' button at the bottom of the page.			
Items		Qty	UOM
CB3515	BUFFER pH 10.00 (BLUE) SOLUTION INST TRACEABLE, IN CONTAMINATION PROOF BOTTLE (R608+)	179.71	500mL
FP1041	FILTER PAPER 25.0cm WET STRENGTHENED (MN722) IN BROWN PAPER PACKING PARTICLE RETENTION IS BETWEEN 7-12 MICRON (405722025)	144.82	100

Quick Order allows you place orders from a list of routinely ordered products. There are two parts to your quick order page.

Your top ten recent purchases and a manual list made up of items you have added to your quick order list. These are grouped by product type e.g. Glassware for glass beakers etc.

To add a product to your quick order list, click on the add to quicklist button on the product listing. If the button does not appear on an item, it is already in your quick order list.



To order items directly by quick order list, simply enter the quantity required for each item being ordered then select the add to trolley button. You will see these items appear in your 'trolley' panel and the total value of your order. You can continue searching and shopping for products or view your trolley and process your order.

Please note: only orders placed online appear in the list below
View last 10 orders

Order No. 222611 Customer Ref. Cartland

Product ID	Description
FP2227	FILTER PAPER 25.0cm SIMILAR TO G4 (MNS1) (434)
FP4640	FILTER PAPER GLASS FIBRE 11.0cm SIMILAR TO GPB

ORDER HISTORY

Here you can see a list of recent online orders placed via our Web Store.

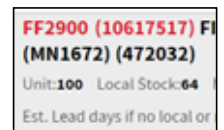
THE SEARCH BAR



The search bar functionality on the right allows you to string key words together as you would a Google search. e.g. 'beaker 250mL' the results will list those items found which best match the exact criteria to the top of the results page. When you use the product filter buttons a second inner search bar appears in the search results page allowing you to drill down from the results using key words.

SEARCH BY YOUR PART NUMBER

We can upload your part numbers (where supplied by you) for contract lines allowing you to also search by your part number for easy and accurate ordering of what you need. Your part number will appear in red in brackets directly after the Rowe code.



SEE YOUR AGREED PRICING

You will see your agreed contract and special pricing. This is indicated by the words **Your contract/special price** above the price.



AVAILABILITY

You can check the availability and estimated lead times on products. Faster lead times may be available on request. The national stock is the total of our stock across the country.



WAREHOUSE LOCATIONS



NEW SOUTH WALES & ACT



VICTORIA & TASMANIA



QUEENSLAND



WESTERN AUSTRALIA



SOUTH AUSTRALIA & NT

With a network of warehouses and offices across Australia backed with industry experienced Account Managers, and servicing local, regional and overseas clients, your laboratory needs are never too far away.

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by phone or face to face,
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Western Australia

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rowewa@rowe.com.au



CLASSIFICATION AND LABELLING FOR WORKPLACE HAZARDOUS SUBSTANCES

EXPLOSIVE

PICTOGRAM CODE GHS01



SIGNAL
WORD

**DANGER /
WARNING**

GASES UNDER PRESSURE

PICTOGRAM CODE GHS04



SIGNAL
WORD

WARNING

LOW TOXICITY WARNING

PICTOGRAM CODE GHS07



SIGNAL
WORD

WARNING

FLAMMABLE

PICTOGRAM CODE GHS02



SIGNAL
WORD

**DANGER /
WARNING**

CORROSIVE

PICTOGRAM CODE GHS05



SIGNAL
WORD

**DANGER /
WARNING**

HEALTH HAZARD

PICTOGRAM CODE GHS08



SIGNAL
WORD

**DANGER /
WARNING**

OXIDISING

PICTOGRAM CODE GHS03



SIGNAL
WORD

**DANGER /
WARNING**

TOXIC

PICTOGRAM CODE GHS06



SIGNAL
WORD

DANGER

ENVIRONMENT HAZARD

PICTOGRAM CODE GHS09



SIGNAL
WORD

WARNING

EXPLOSIVE**HAZARD STATEMENT****GHS01**

- H200** Unstable explosives.
- H201** Explosive; mass explosion hazard.
- H202** Explosive; severe projection hazard.
- H203** Explosive; fire, blast or projection hazard.
- H204** Fire or projection hazard.
- H205** May mass explode in fire.
- H240** Heating may cause an explosion.
- H241** Heating may cause a fire or explosion.

FLAMMABLE**HAZARD STATEMENT****GHS02**

- H220** Extremely flammable gas.
- H222** Extremely flammable aerosol.
- H223** Flammable aerosol.
- H224** Extremely flammable liquid and vapour.
- H225** Highly flammable liquid and vapour.
- H226** Flammable liquid and vapour.
- H227** Combustible liquid.
- H228** Flammable solid.
- H241** Heating may cause a fire or explosion.
- H242** Heating may cause fire.
- H250** Catches fire spontaneously if exposed to air.
- H251** Self-heating; May catch fire.
- H252** Self-heating in large quantities; May catch fire.
- H260** In contact with water releases flammable gasses which may ignite spontaneously.
- H261** In contact with water releases flammable gasses

OXIDISING**HAZARD STATEMENT****GHS03**

- H270** May cause or intensify fire; oxidiser.
- H271** May cause fire or explosion; strong oxidiser.
- H272** May intensify fire; oxidiser.

CORROSIVE**HAZARD STATEMENT****GHS05**

- H290** May be corrosive to metals.
- H314** Causes severe skin burns and eye damage.
- H318** Causes serious eye damage.

ENVIRONMENT HAZARD**HAZARD STATEMENT****GHS09**

- H400** Very toxic to aquatic life.
- H410** Very toxic to aquatic life with long lasting effects.
- H411** Toxic to aquatic life with long lasting effects.
- H412** Harmful to aquatic life with long lasting effects.
- H413** May cause long lasting harmful effects to aquatic life.

GASES UNDER PRESSURE**HAZARD STATEMENT****GHS04**

- H280** Contains gas under pressure; may explode if heated.
- H281** Contains refrigerated gas; may cause cryogenic burns or injury.

TOXIC**HAZARD STATEMENT****GHS06**

- H300** Fatal if swallowed.
- H301** Toxic if swallowed.
- H310** Fatal in contact with skin.
- H311** Toxic in contact with skin.
- H330** Fatal if inhaled.
- H331** Toxic if inhaled.

LOW TOXICITY WARNING**HAZARD STATEMENT****GHS07**

- H302** Harmful if swallowed.
- H312** Harmful in contact with skin.
- H315** Causes skin irritation.
- H317** May cause an allergic skin reaction.
- H319** Causes serious eye irritation.
- H332** Harmful if inhaled.
- H335** May cause respiratory irritation.
- H336** May cause drowsiness or dizziness

HEALTH HAZARD**HAZARD STATEMENT****GHS08**

- H304** May be fatal if swallowed and enters airways.
- H334** May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H340** May cause genetic defects.
- H341** Suspected of causing genetic defects.
- H350** May cause cancer.
- H351** Suspected of causing cancer.
- H360** May damage fertility or the unborn child.
- H360F** May damage fertility.
- H360D** May damage the unborn child.
- H360FD** May damage fertility. May damage the unborn child.
- H360FD** May damage fertility. Suspected of damaging the unborn child.
- H360DF** May damage the unborn child. Suspected of damaging fertility.
- H361** Suspected of damaging fertility or the unborn child.
- H361F** Suspected of damaging fertility.
- H361D** Suspected of damaging the unborn child.
- H361FD** Suspected of damaging fertility. Suspected of damaging the unborn child.
- H362** May cause harm to breast-fed children.
- H370** Causes damage to organs.
- H371** May cause damage to organs.
- H372** Causes damage to organs through prolonged or repeated exposure.
- H373** May cause damage to organs through prolonged or repeated exposure.

RISK & SAFETY PHRASES

RISK		R33	Danger of cumulative effects	R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R1	Explosive when dry	R34	Causes burns		
R2	Risk of explosion by shock, friction, fire or other sources of ignition.	R35	Causes severe burns	R21/22	Harmful in contact with skin and if swallowed
R3	Extreme risk of explosion by shock, friction, fire and other sources of ignition	R36	Irritating to eyes	R23/24	Toxic by inhalation and in contact with skin
R4	Forms very sensitive explosive metallic compounds.	R37	Irritating to respiratory system	R23/25	Toxic by inhalation and if swallowed
R5	Heating may cause explosion	R38	Irritating to skin	R23/24/25	Toxic by inhalation, in contact with skin and if swallowed
R6	Explosive with or without contact with air	R39	Danger of very serious irreversible effects	R24/25	Toxic in contact with skin and if swallowed
R7	May cause fire	R40	Possible risk of irreversible effects		
R8	Contact with combustible material may cause fire	R41	Risk of serious damage to eyes	R26/27	Very toxic by inhalation and in contact with skin
R9	Explosive when mixed with combustible material	R42	May cause sensitisation by inhalation	R26/28	Very toxic by inhalation and if swallowed
R10	Flammable	R43	May cause sensitisation by skin contact	R26/27/28	Very toxic by inhalation, in contact with skin and if swallowed
R11	Highly flammable	R45	May cause cancer	R27/28	Very toxic in contact with skin and if swallowed
R12	Extremely flammable	R46	May cause heritable genetic damage		
R14	Reacts violently with water	R48	Danger of serious damage to health by prolonged exposure	R36/37	Irritating to eyes and respiratory system
R15	Contact with water liberates extremely flammable gases	R49	May cause cancer by inhalation	R36/38	Irritating to eyes and skin
R16	Explosive when mixed with oxidising substances	R50	Very toxic to aquatic organisms	R36/37/38	Irritating to eyes, respiratory system and skin
R17	Spontaneously flammable in air	R51	Toxic to aquatic organisms	R37/38	Irritating to respiratory system and skin
R18	In use may form flammable/ explosive vapour - air mixture	R52	Harmful to aquatic organisms	R39/23	Toxic: danger of very serious irreversible effects through inhalation
R19	May form explosive peroxides	R53	May cause long term adverse effects in the aquatic environment	R39/24	Toxic: danger of very serious irreversible effects in contact with skin
R20	Harmful by exhalation	R54	Toxic to flora	R39/25	Toxic: danger of very serious irreversible effects if swallowed
R21	Harmful in contact with skin	R55	Toxic to fauna		
R22	Harmful if swallowed	R56	Toxic to soil organisms	R39/23/24	Toxic: danger of very serious irreversible effects through inhalation and in contact with skin
R23	Toxic by inhalation	R57	Toxic to bees		
R24	Toxic in contact with skin	R58	May cause long term adverse effects in the environment	R39/23/25	Toxic: danger of very serious irreversible effects through inhalation and if swallowed
R25	Toxic if swallowed	R59	Dangerous for the ozone layer		
R26	Very toxic by inhalation	R60	May impair fertility	R39/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed
R27	Very toxic in contact with skin	R61	May cause harm to the unborn child		
R28	Very toxic if swallowed	R62	Possible risk of impaired fertility		
R29	Contact with water liberates toxic gas	R63	Possible risk of harm to the unborn child		
R31	Contact with acids liberates toxic gas	R64	May cause harm to breastfed babies		
R32	Contact with acids liberates very toxic gas	R65	Harmful: May cause lung damage if swallowed		
		R20/21	Harmful by inhalation and in contact with skin		
		R20/22	Harmful by inhalation and if swallowed		

R39/26	Very toxic: danger of very serious irreversible effects through inhalation	R48/21	Harmful: danger of serious damage to health by prolonged exposure in contact with skin	SAFETY	
R39/27	Very toxic: danger of very serious irreversible effects in contact with skin	R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed	S1	Keep locked up
R39/28	Very toxic: danger of very serious irreversible effects if swallowed	R48/20/21	Harmful: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin	S2	Keep out of reach of children
R39/26/27	Very toxic: danger of very serious irreversible effects	R48/20/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin	S3	Keep in a cool place
R39/26/28	Very toxic: danger of very serious irreversible effects through inhalation and if swallowed	R48/21/22	Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed	S4	Keep away from living quarters
R39/27/28	Very toxic: danger of very serious irreversible effects in contact with skin and if swallowed	R48/20/21/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed	S5	Keep contents under...(there follows the name of the liquid)
R39/26/27/28	Very toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed	R48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation	S6	Keep under...(there follows the name of an inert gas)
R40/20	Harmful: possible risk of irreversible effects through inhalation	R48/24	Toxic: danger of serious damage to health by prolonged exposure in contact with skin	S7	Keep container tightly closed
R40/21	Harmful: possible risk of irreversible effects in contact with skin	R48/25	Toxic: danger of serious damage to health by prolonged exposure if swallowed	S8	Keep container dry
R40/22	Harmful: possible risk of irreversible effects if swallowed	R48/23/24	Toxic: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin	S9	Keep container in a well ventilated place
R40/20/21	Harmful: possible risk of irreversible effects through inhalation and in contact with skin	R48/23/25	Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed	S12	Do not keep the container sealed
R40/20/22	Harmful: possible risk of irreversible effects through inhalation and if swallowed	R48/24/25	Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed	S13	Keep away from food, drink and animal foodstuffs
R40/21/22	Harmful: possible risk of irreversible effects through inhalation and if swallowed	R48/23/24/25	Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed	S14	Keep away from...(a list of incompatible material will follow)
R40/20/21/22	Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed			S15	Keep away from heat
R42/43	May cause sensitisation by inhalation and skin contact			S16	Keep away from sources of ignition
R48/20	Harmful: danger of serious Damage to health by prolonged exposure through inhalation			S17	Keep away from combustible material
				S18	Handle and open container with care
				S20	When using, do not eat or drink
				S21	When using do not smoke
				S22	Do not breathe dust
				S23	Do not breathe vapour
				S24	Avoid contact with skin
				S25	Avoid contact with eyes
				S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
				S27	Take off immediately all contaminated clothing
				S28	After contact with skin, wash immediately with plenty of (to be specified by the manufacturer)
				S29	Do not empty into drains
				S30	Never add water to this product
				S33	Take precautionary measures against static discharges
				S35	This material and its container must be disposed of in a safe way

RISK & SAFETY PHRASES

S36	Wear suitable protective clothing	S62	If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label
S37	Wear suitable gloves	S1/2	Keep locked up and out of reach of children
S38	In case of insufficient ventilation, wear suitable respiratory equipment	S3/7	Keep container tightly closed in a cool place
S39	Wear eye / face protection	S3/9/14	Keep in a cool well ventilated place away from... (incompatible materials to be indicated by manufacturer)
S40	To clean the floor and all objects contaminated by this material use...(there follows suitable cleaning material)	S3/9/14/49	Keep only in the original container in a cool well ventilated place away from... (incompatible materials to be indicated by manufacturer)
S41	In case of fire and / or explosion do not breathe fumes	S3/9/49	Keep only in the original container in a cool, well ventilated place
S42	During fumigation / spraying wear suitable respiratory equipment	S3/14	Keep in a cool place away from... (incompatible materials to be indicated by the manufacturer)
S43	In case of fire use...(there follows the type of fire fighting equipment to be used)	S7/47	Keep container tightly closed at a temperature not exceeding... °C (to be specified by the manufacturer)
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible)	S7/8	Keep container tightly closed and dry
S46	If swallowed, seek medical advice immediately and show the label or container	S7/9	Keep container tightly closed and in a well ventilated place
S47	Keep at temperature not exceeding...	S20/21	When using do not eat, drink or smoke
S48	To be kept wet with (there follows a material name)	S24/25	Avoid contact with skin and eyes
S49	Keep only in the original container	S29/56	Do not empty into drains, dispose of this material and its container to a hazardous or special waste collection point
S50	Do not mix with...	S36/37	Wear suitable protective clothing and gloves
S51	Use only in well ventilated areas	S36/37/39	Wear suitable protective clothing, gloves and eye/face protection
S52	Not recommended for interior use on large surface areas	S36/39	Wear suitable protective clothing and eye/face protection
S53	Avoid exposure- obtain special instructions before use	S37/39	Wear suitable gloves and eye/face protection
S56	Dispose of this material and its container at a hazardous or special waste collection point	S47/49	Keep only in the original container at temperature not exceeding... °C (to be specified by the manufacturer)
S57	Use appropriate container to avoid environmental contamination		
S59	Refer to manufacturer/supplier for information on recovery recycling		
S60	This material and its container must be disposed of as hazardous waste		
S61	Avoid release to the environment. Refer to special instructions/safety data sheets		

Air Gun/Blowers

DESCRIPTION (EACH)	ROWE CODE
CEJN Blue Air Gun (#208)	RA1003
Ryco, Red	RA1010
Silvent, 100mm S/Steel Laval nozzle	RA1027



AIR SAMPLING

Why is Air Monitoring useful?

Air monitoring can help in assessing the risk to your workers because it can show:

- How much your workers are being exposed to;
- Which processes or products are the source of the exposure; and
- If your current control measures are working.

How should Air Monitoring be conducted?

Air monitoring to determine a worker's exposure involves measuring the level of an airborne contaminant in the breathing zone of workers using a personal sampler during their usual work activities, including routine breaks. Figure below shows an approximation of a worker's breathing zone.

Worker's breathing zone



DETECTOR TUBES - DRAGER

DRAGER DETECTOR TUBES	STANDARD MEASURING RANGE	ROWE CODE
ACETIC ACID 5/a	5-80 ppm	ID1680
ALCOHOL 25/a	25-5000 ppm	ID1673
AMINE	Qualitative	IC1688
AMMONIA 0.25/a	0.25-3 ppm	IC1790
AMMONIA 0.5%/a	0.5-10% by volume	IC1667
AMMONIA 2/a	2.0-30 ppm	IC1795
AMMONIA 20/a-d	20-1500 ppm	IC1666
AMMONIA 5/a	5-70 ppm	IC1634
AMMONIA 5/b	5-100 ppm	IC1702
ARSINE 0.05/a	0.05-3 ppm	IC1678
BENZENE	0.5-10 pp	NB0002
BENZENE 0.5/a	0.5-10 ppm	NB0006
BENZENE	10-250 ppm	NB0003
BENZENE 2/a	2-60 ppm	ID1677
BENZENE 5/b	5-50 ppm	NB0005
BENZENE	50-2500 ppb	NB0004
BUTADIENE 10/a-d	10-300 ppm	NB0007
CARBON DIOXIDE	0.5-10% by volume	IC1611
CARBON DIOXIDE	0.5-6 0.1-1.2% by volume	IC1612
CARBON DIOXIDE 100/a-p		IC1658
CARBON DIOXIDE 100/a	100-3000 ppm	IC1609
CARBON DIOXIDE	1-20% by volume	IC1613
CARBON DIOXIDE	5-60% by volume	IC1615
CARBON DISULFIDE	3-95 ppm	IC1653
CARBON DISULFIDE 30/a	32-3200 ppm	ID1605
CARBON DISULFIDE 5/a	5-60 ppm	IC1618
CARBON MONOXIDE	0.3-7.0% by volume	ND1610
CARBON MONOXIDE 10/b	10-3000 ppm	IC1684
CARBON MONOXIDE 2/a	2-300 ppm	IC1635
CARBON MONOXIDE 5/c	5-700 ppm	IC1636
CARBON MONOXIDE 50/a-d		IC1606
CARBON MONOXIDE	5-150 ppm	IC1633
CARBON MONOXIDE	8-150 ppm	IC1637
CHLORINE 0.2/a	0.2-3 ppm	ID1639
CHLORINE 0.3/b	0.3-5 ppm	IC1638
CHROMIC ACID 0.1/a	0.1-0.5 mg/m ³	ND1620
CYCLOHEXYLAMINE 2/a	2-30 ppm	IC1619
DIFFUSION FOR HYDROCHLORIC 10/a-d		IC1685



ROWE CODE
IC1667



ROWE CODE
IC1611



ROWE CODE
ID1639

DRAGER DETECTOR TUBES	STANDARD MEASURING RANGE	ROWE CODE
DT ETHYL BENZENE 30/a	30-400 ppm	ND0019
ETHANOL 100/a	100-3000 ppm	ND0021
ETHYLENE 0.1/a	1-5 ppm	IC1570
ETHYLENE 50/a	50-2500 ppm	ND0016
ETHYL GLYCOL ACETATE 50a		ID1635
FORMALDEHYDE 0.2/a	0.2-5 ppm	ND1649
FORMALDEHYDE 2/a	2-40 ppm	ND1648
FORMIC ACID	1-15 ppm	IC1687
HYDROCARBON 0.1%/c	0.1-1.3%	ND1602
HYDROCARBON 2a	2-24mg/L	ND1601
HYDROCHLORIC ACID 0.2/a	0.2-20 ppm	ID1601
HYDROCHLORIC ACID 1/a	1-10 ppm	ID1679
HYDROCHLORIC ACID 50/a	50-5000 ppm	ID1670
HYDROCYANIC ACID 20/a-d		IC1668
HYDROGEN	0.2-2.0% by volume	ID1642
HYDROGEN	0.5%	IC1622
HYDROGEN CYANIDE 0.5/A	0.5-5 ppm / 5-50 ppm	ND0001
HYDROGEN FLUORIDE	0.5-90 ppm	ND0017
HYDROGEN FLUORIDE 1.5/b <i>(for measurement of hydrofluoric acid 48% in air)</i>	1.5-15 ppm / 6-60 ppm	IC1782
HYDROGEN SULFIDE	0.2-5 ppm	IC1640
HYDROGEN SULFIDE	0.2-7% by volume	IC1651
HYDROGEN SULFIDE	2-60 ppm	ND1647
HYDROGEN SULFIDE 0.2/b	0.2-6 ppm	IC1645
HYDROGEN SULFIDE 0.5/a	0.5-15 ppm	IC1642
HYDROGEN SULFIDE 1/c	1-200 ppm	IC1643
HYDROGEN SULFIDE 1/d	1-200 ppm / 1-20 ppm	IC1674
HYDROGEN SULFIDE 2/a	2-200 ppm	IC1641
HYDROGEN SULFIDE 5/b	5-60 ppm	IC1655
HYDROGEN SULFIDE 10/a-d		IC1602
HYDROGEN SULFIDE 100/a	100-2000 ppm	IC1639
MERCAPTAN 0.1/a	0.1-2.5 ppm / 3-15 ppm	IC1797
MERCAPTAN 0.5/a	0.5-5 ppm	IC1798
MERCAPTAN 20/a	20-100 ppm	IC1796
MERCURY 0.1/b	0.05-2mg/m ³	ID1676
METHANOL 20/a		ND0022
METHYL BROMIDE	0.5-5 ppm / 5-30 ppm	IC1689
METHYLENE CHLORIDE 20/a	20-100 ppm	IC1631



ROWE CODE
ND0021



ROWE CODE
IC1622



ROWE CODE
IC1797

DETECTOR TUBES - DRAGER

DRAGER DETECTOR TUBES	STANDARD MEASURING RANGE	ROWE CODE
NATURAL GAS TEST	Qualitative	IC1607
NITOUS FUMES 0.5/a	0.5-10 ppm	ID1674
NITRIC ACID 1/a	1-15 ppm / 5-50 ppm	ID1690
NITROGEN DIOXIDE 0.1/a	0.1-30 ppm	ND0003
NITROGEN DIOXIDE 10/a-d		IC1608
NITROGEN DIOXIDE 2/c	5-100 ppm (5 strokes) / 2-50 ppm (10 strokes)	ID1681
NITROUS FUMES 0.2/a	0.5-10 ppm	ND0008
NITROUS FUMES 100/c	100-1000 ppm / 500-5000 ppm	ID1672
NITROUS FUMES 2/a	2-100 ppm	IC1646
NITROUS FUMES 50/a	50-2000 ppm	IC1686
OIL IMPACTOR	0.1-1.0mg/m ³	ND0013
OIL MIST 10/a-p		IC1704
OPENER		ND1605
ORGANIC ARSENIC AND ARSINE		ND0024
OXYGEN 5%/c	5-23%	IC1621
OXYGEN 5%/b	5-23%	IC1692
OZONE	0.05-0.7 ppm	IC1650
OZONE	20-300 ppm	IC1700
PERCHLORETHYLENE 10/b	10-500 ppm	ND0006
PERCHLOROETHYLENE 0.1/a	0.1-4 ppm	ND0004
PERCHLOROETHYLENE 2/a	2-300 ppm	ND0005
PETROLEUM HYDROCARBONS 10/a	10-300 ppm	ND1650
PETROLEUM HYDROCARBONS	100-3000 ppm	NP0002
PETROLEUM HYDROCARBONS 100/a	100-2500 ppm	IC1694
PETROLEUM HYDROCARBONS	20-500 ppm	NP0001
PHENOL 1/b	1-10 ppm	ND0023
PHOSGENE 0.02/a	0.02-1 ppm	IC1628
PHOSPHINE 0.1/a	0.1- 4.0 ppm	IC1627
POLY TEST	Qualitative	IC1626
STYRENE 10/a	10-200 ppm	IC1617
STYRENE 10/b	10-250 ppm	IC1625
SULFUR DIOXIDE	0.5-5 ppm / 1-25 ppm	IC1630
SULFUR DIOXIDE 0.1/a	0.1-3 ppm	IC1325
SULFUR DIOXIDE 1/a	1-25 ppm	IC1624
SULFUR DIOXIDE 5/a-d		IC1604



ROWE CODE
ID1674



ROWE CODE
ND0005



ROWE CODE
IC1630

DRAGER DETECTOR TUBES	STANDARD MEASURING RANGE	ROWE CODE
SULFUR DIOXIDE 20/a	20-200 ppm	IC1620
SULFUR DIOXIDE 50/b	50-500 ppm / 400-8000 ppm	ND0007
SULFURIC ACID 1/a	1-5 mg/m ³	IC1648
TOLUENE 100/a	100-1800 ppm	NT0003
TOLUENE 5/b	5-300 ppm	NT0001
TOLUENE 50/a	50-400 ppm	NT0002
TRICHLOROETHYLENE 2/a	2-250 ppm	ND1630
TRICHLOROETHYLENE 50/a	50-500 ppm	ND1631
WATER VAPOUR 0.1	1-40mg/L	IC1673
WATER VAPOUR 0.1/a	0.1-1.0mg/L	IC1603
WATER VAPOUR 1/b	1-40mg/L	IC1698
WATER VAPOUR 20/a-p		IC1675
WATER VAPOUR 5/a-p <i>(for testing water content in air)</i>	5-250mg/L	IC1601
XYLENE 10/a	10-400 ppm	NX0001
CYANIDE	2-15mg/cu meter	IC1605



ROWE CODE
IC1620



ROWE CODE
ND1631



ROWE CODE
IC1605

DETECTOR TUBES - GASTEC

GASTEC DETECTOR TUBES	STANDARD MEASURING RANGE	ROWE CODE
AMMONIA	2.5-200 ppm	NG0008
AROMATIC HYDROCARBONS	0.4-200 ppm	NG1012
BENZENE	0.1-60 ppm	NG1028
CARBON DIOXIDE 2H	0.5-20% by volume	NG1017
CARBON DISULFIDE	0.63-100 ppm	NG1046
CARBONYL SULFIDE	5-200 ppm	NG1043
FORMALDEHYDE	0.1-20 ppm	NG2000
MERCAPS	0.5-120 ppm	NG1038
HYDROGEN FLUORIDE GAC17	0.25-100 ppm	NG1025
HYDROGEN PEROXIDE (<i>long term</i>)	0.5-40 ppm	NG1036
HYDROGEN SULFIDE GAC4HP	0.25-20% by volume	NG0168
HYDROGEN SULFIDE	1-240 ppm	NG1023
HYDROGEN SULFIDE	0.05-4 ppm	NH0013
HYDROGEN SULFIDE	0.25-120 ppm	NH0015
HYDROGEN SULFIDE	0.1-4.0% by volume	NG1001
HYDROGEN SULFIDE	0.5-12 ppm	NG1004
OXYGEN GT31B	3-24% by volume	NG1020
SULFIDE IONS in solution	0.5-20 ppm	NG0176
SULFIDE IONS in solution	2-300 ppm	NG0178

GASTEC



DETECTOR TUBES - KITAGAWA

KITAGAWA DETECTOR TUBES	STANDARD MEASURING RANGE	PACK SIZE	ROWE CODE
ACETALDEHYDE	5-140 ppm	10	NK1002
ACETYLENE	50-1000 ppm	10	NK1175
ACROLEIN	0.005-1.8%	10	NK1007
ACRYLONITRILE	11-120 ppm	10	NK1000
AMMONIA	0.1-1.0%	10	NK1013
AMMONIA	0.2-20 ppm	10	NK1015
AMMONIA	5-260 ppm	10	NK1017
AMMONIA	50-900 ppm	10	NK1019
BENZENE	5-200 ppm	10	NK1020
1-BUTANOL	4-100 ppm	10	NK1025
CARBON DIOXIDE	0.05-1%	10	NK1110
CARBON DIOXIDE	1-20% (126SH)	10	NK1100
CARBON DIOXIDE	5-50%	10	NK1102
CARBON DIOXIDE	100-2000 (1 stroke), 200-4000 (0.5 Stroke)	10	NK1105
CARBON DISULFIDE	0.8-50 ppm	10	NK1135
CARBON DISULFIDE	30-500 ppm	10	NK1130
CARBON MONOXIDE	1-50 ppm	10	NK1028
CARBON MONOXIDE	5-300 and 25-1000 ppm	10	NK1004
CARBON MONOXIDE	50-1000 ppm	10	NK1027
CHLORIDE ION	1-60 ppm	10	NK0008
CHLORINE	0.1-2 ppm	10	NK1030
CHLORINE	1-40 ppm	10	NK1035
ETHYL MERCAPTAN	2.5-80 ppm	10	NK0003
ETHYL/METHYL/BUTYL CELLOSOLVE		10	NK1070
FORMALDEHYDE	0.05-4.0ppm	10	NK0001
FORMALDEHYDE	1-35 ppm	10	NK1040
GAS DETECTION PUMP AP-20 with hand strap, rubber tube connectors, grease, carry case and manual		EA	NK1190
GENERAL HYDROCARBONS		10	NK1045
HYDROGEN	0.05-0.8%	5	NK1180
HYDROGEN CHLORIDE	0.4-40 ppm	10	NK1150
HYDROGEN CYANIDE	0.5-100 ppm	10	NK1055
HYDROGEN CYANIDE	2-100 ppm	10	NK1115
HYDROGEN FLUORIDE	1-30 ppm	10	NK1060
HYDROGEN SULFIDE	0.2-6 ppm	10	NK1145
HYDROGEN SULFIDE	0.5-40 ppm	10	NK1140
HYDROGEN SULFIDE	1-60 ppm	10	NK1065



ROWE CODE
NK1000



ROWE CODE
NK1190

DETECTOR TUBES - KITAGAWA

KITAGAWA DETECTOR TUBES	STANDARD MEASURING RANGE	PACK SIZE	ROWE CODE
INORGANIC GAS QUALITATIVE DETECTION	Qualitative	10	NK1131
MERCAPTANS	0.5-10 ppm	10	NK1072
METHYL/ETHYL/KETONE	20-1500 ppm	10	NK1075
METHYL MERCAPTAN	5-140 ppm	10	NK1120
METHYL MERCAPTAN	50-1000 ppm	10	NK1125
NAPHTHALENE	10-400 ppm	10	NK1080
N-HEXANE	0.05-0.6%	10	NK1050
NITROGEN DIOXIDE	0.5-30 ppm	10	NK1081
NITROGEN OXIDES	1-300 ppm	5	NK1082
NITROGEN OXIDES	0.5-30 ppm	10	NK1083
OZONE	0.025-3 ppm	10	NK1085
PHOSGENE	0.1-20 ppm	10	NK1087
PHOSPHINE/ARSINE	0.05-2 ppm	10	NK1090
SULFUR DIOXIDE	0.5-10 and 0.25-5 ppm	10	NK1093
SULFUR DIOXIDE	1-60 ppm	10	NK1092
SULFURIC ACID	0.5-5mg/m ³	10	NK1094
TIP CUTTER for gas detection tubes		EA	NK1195
TOLUENE	10-500 ppm	10	NK1095
WATER VAPOUR	0.05-2mg/L	10	NK1096

This represents a sample of detection tubes available, please speak to a Rowe Scientific consultant for more details.



ROWE CODE NK1195



AIR SAMPLING PUMPS - GILIAN

GilAir® Plus

Innovation delivered:

The ultimate personal air sampling pump delivering enhanced performance, greater versatility, and superior design and comfort.

The widest flow range of any personal air sampling pump

Personal Industrial Hygiene Air Sampling Pump The GilAir® Plus features wide dynamic flow and pressure ranges to address all personal air sampling methods with flow ranges between 20 and 5,100 cc/min. With patent pending QuadModeSM air sampling technology, the GilAir Plus can perform both high-flow constant pressure and constant flow (450-5,100 cc/min) and low-flow constant pressure and constant flow (20-499 cc/min) with a single pump without external adapters. It's like getting two pumps in one.

Pump Model	Flow Rate 1-5000 cc/min	QuodMode Technology	Battery Options (NiMH ALKALINE & DC)	Timer Program Functions	Advanced Program Functions	Data Logging	SmartCal Calibration Option	Standard Temp & Pressure Data (STP)	Bluetooth Option
Basic	✓	✓	✓	✓			✓*		
Data Log	✓	✓	✓	✓	✓	✓	✓		✓
STP	✓	✓	✓	✓	✓	✓	✓	✓	✓

*A current list of iOS and Android devices can be found at www.sensidyne.com on the GilAir Plus product page.

GILAIR PLUS - SINGLE PUMP PERSONAL AIR SAMPLING PUMP	ROWE CODE
Basic Pump (no charger)	NP5268
Basic Pump (with charger)	NP5253
Datalog model starter kit	NP0056
STP model starter kit	NP5257

GILAIR PLUS 3 UNIT KIT - PERSONAL AIR SAMPLING PUMP	ROWE CODE
Basic Pump (with charger)	NP0068
Datalog model	NP0058
STP model	NP0069

GILAIR PLUS 5 UNIT KIT - PERSONAL AIR SAMPLING PUMP	ROWE CODE
Basic Pump (with charger)	NP5267
Datalog model	NP0070
STP model	NP5258



AIR SAMPLING PUMPS - GILIAN

GilAir-3 and GilAir-5

Proven, robust 3 and 5 LPM air sampling pumps

The GilAir pumps (GilAir-3 & GilAir-5) have one of the largest user bases of any air sampling pump worldwide. These reliable 3 and 5 litre per minute air sampling pumps have automatic constant flow, assuring sampling is maintained within +/- 5% of the initial set point. Setting the flow rate on the GilAir-3 & GilAir-5 is a simple process that requires no special adjustment tool, so you spend less time configuring pumps.

GilAir-3 and GilAir-5 pumps also boast these features:

The GilAir-3 and 5 are available in 3 models; Basic, Clock and Programmable. The Basic model is straight-forward and easy to use. Clock models provide an elapsed-time clock display. Programmable models enable a timer which can start or stop the pump at preset time intervals or program a delayed start.

GILAIR-3 AIR SAMPLING PUMP BASIC	ROWE CODE
Basic Pump (no charger)	NP5400
Five-Pack Kit, Pump with Clock (with charger)	NP0087
Programmable Pump Kit (no charger)	NP0084

GILAIR-5 AIR SAMPLING PUMP BASIC	ROWE CODE
Basic Pump (no charger)	NP0089
Pump with Clock (no charger)	NP0090
Programmable Pump Kit (no charger)	NP0091

GILAIR-3 AIR SAMPLING PUMP STARTER KIT	ROWE CODE
Pump with no clock (with charger)	NP0052
Pump with Clock (with charger)	NP0085
Programmable Pump (with charger)	NP0086

GILAIR-5 AIR SAMPLING PUMP STARTER KIT	ROWE CODE
Pump with no clock (with charger)	NP0048
Pump with Clock (with charger)	NP0092
Programmable Pump (with charger)	NP0093

GILAIR-3 AIR SAMPLING PUMP FIVE PACK KIT	ROWE CODE
Pump with no clock (with charger)	NP0051
Pump with Clock (with charger)	NP0087
Programmable Pump (with charger)	NP0088

GILAIR-5 AIR SAMPLING PUMP FIVE PACK KIT	ROWE CODE
Pump with no clock (with charger)	NP0094
Pump with Clock (with charger)	NP0095
Programmable Pump (with charger)	NP0096



Gilian BDX-II

Low cost, up to 3 LPM pump

The Gilian BDX-II is an economical air sampling pump designed specifically for abatement and lead applications. It is a compact and rugged air sampling pump optimized for sample methods between 500 cc/min and 3000 cc/min. The BDX-II is powered by a rechargeable NiMH battery that provides up to 10 hours of operation on a single charge.

- 500-3000 cc/min
- Anti-tamper control covers
- Sealed internal components
- Rechargeable NiMH battery pack
- Easy calibration
- UL approved for operation in hazardous areas



GILIAN BDX-II AIR SAMPLING PUMP

ROWE CODE

Pump (no charger)	NP5471
Pump Kit (with charger, tool kit, tubing, clip and manual)	NP0021

Gilian LFS-113

Compact, pocket-sized, low flow air sampling pump

The Gilian LFS-113 low flow sampler is the most powerful and reliable pocket sized personal air sampler available today. The LFS-113 offers two sampling modes selectable by the user. The constant flow control mode holds the flow within +/- 5% of the set flow. The multi-flow (constant pressure control) mode allows multiple samples to be taken simultaneously. No other pocket sized pump matches the wide flow range and high back pressure capability of the LFS-113. Basic and a clock models are available in both UL and ATEX versions.



GILIAN LFS-113 AIR SAMPLING PUMP

ROWE CODE

Basic Pump (no charger)	NP0013
Pump with Clock (with charger)	NP0018
Starter Kit, Pump with no Clock (with charger)	NP5723
Starter Kit, Pump with Clock (with charger)	NP5735
Five-Pack Kit, Pump with no Clock (with charger)	NP0047
Five-Pack Kit, Pump with clock (with charger)	NP0097

AIR SAMPLING PUMPS - GILIAN

Gilian AirCon-2

Portable high volume area sampler

A powerful 2-30 LPM constant flow sampler offering full portability and programmability

The AirCon-2 sampler is a high volume unit with an extended flow range, designed for collecting particulate in a given plant area. It is ideal for asbestos background and clearance sampling following NIOSH, OSHA or EPA methodology and for ambient dust monitoring. The AirCon-2 System is available in a programmable version that operates off either AC or battery power. It comes with an adjustable tripod mast and connecting hose to hold the filter cassette at the proper height and isolate the filter from the vibration of the unit. Cassette and filter media must be ordered separately.

AIRCON-2 HIGH VOLUME AREA AIR SAMPLER	ROWE CODE
Programmable Model (with battery power)	NP5810

AIRCON-2 POWER ACCESSORIES	ROWE CODE
Power Module Charger (no AC cord)	NP5820
Power Module Charger (with AC cord)	NP0098



Gilian Gilibrator-2

Primary standard accuracy and performance validation for sampling pump air flows from 1 cc/min to 30 LPM

The Gilibrator-2 System provides users with a convenient and highly automated way to check almost any commercially available air sampling pump for proper air flow function before deployment. The system consists of an electronic Gilibrator-2 Base which is used with any of three sizes of wet bubble cells. These patented interchangeable components are also available as part of kits which can also include a complete calibration diagnostic panel. All cells use a twist-on bayonet design for quick and easy mounting to the base. All are certified for accuracy and traceable to NIST.

GILIBRATOR-2 AIR SAMPLING PUMP	ROWE CODE
LOW FLOW CELL KIT (1 to 250 cc/min) (Control base, low flow cell, DC charger/ AC power supply, tubing and soap solution with dispenser in hard shell carry case)	NP0067
LOW FLOW CELL DIAGNOSTIC KIT (Control base, low flow cell, DC charger/ AC power supply, tubing and soap solution with dispenser in hard shell carry case. Carry case also includes built-in diagnostic panel with rotameters and pressure gauge.)	NP0099
STANDARD FLOW CELL KIT (20 cc/min to 6000 cc/min) (Control base, standard flow cell, DC charger/ AC power supply, tubing and soap solution with dispenser in hard shell carry case)	NP5308
STANDARD FLOW CELL DIAGNOSTIC KIT (Control base, standard flow cell, DC charger/ AC power supply, tubing and soap solution with dispenser in hard shell carry case. Carry case also includes built-in diagnostic panel with rotameters and pressure gauge.)	NP5305
HIGH FLOW CELL KIT (2 to 30 LPM) (Control base, high flow cell, DC charger/ AC power supply, tubing and soap solution with dispenser in hard shell carry case)	NP5312
DIAGNOSTIC PANEL (2 to 50 cc, 20 to 200 cc, 0.5 to 5 LPM) (Mounted on Hi/Lo stand)	NP5321



To discuss the Gilian air sampling pump range further and explore solutions suitable to your needs, speak to a Rowe Scientific consultant.

AUTOCLAVES - TUTTNAUER

2840EL-D Benchtop autoclave for Life Sciences



Designed to save space on your laboratory workbench, the 2840EL-D is a front loading benchtop autoclave that provides high quality, repeatable performance and accountability for a wide range of applications used in modern laboratories.

ADVANCED CONTROL SYSTEM

Take Advantage of Tuttnauer's state-of-the-art control system with multi-colour display

SAFE

Automatic pressure locking system. Door will not open when the chamber is overpressured

OPTIONAL INTERNAL PRINTING

Documents date, time, temperature and pressure



INTUITIVE MULTI-COLOUR DISPLAY

Multi-colour display for easier reading gives quick access to important information. Colour is used to indicate the stage of the cycle

HIGH QUALITY STAINLESS STEEL

316L grade stainless steel chamber and door with electro-polish finish

DIVERSE LOAD TYPES

The 2840EL-D autoclave comes with 8 factory set cycle programs that cover the processing needs of most laboratories and research centres

CHAMBER DIMENSIONS Ø x D (mm)	CHAMBER VOLUME (LITRE)	EXTERNAL DIMENSIONS W x H x D (mm)	ROWE CODE
280 x 400	28	530 x 425 x 636	IA0112

Autoclave Accessories

AUTOCLAVE INDICATOR TAPE

LIGHT YELLOW IN COLOUR

13mm x 55m ROWE CODE PA0019

19mm x 50m ROWE CODE PA1101



AUTOCLAVE BAGS

SMALL (305 x 610mm), natural, printed, biohazard, plastic ROWE CODE PA1313

MEDIUM (570 x 750mm), 50 micron, natural, printed, biohazard ROWE CODE PA1314

LARGE (720 x 910mm), 80 micron, natural, printed, biohazard ROWE CODE PA1315



AUTOCLAVE DEODORISER

Anabac autoclave deodorants dissolve during an autoclaving destruction cycle. The capsule melts completely without leaving residues and eliminates the unpleasant odours that can emerge from the autoclave.

During and after the process, Anabac refreshes and perfumes the air in the room in which the autoclave is located. It is biodegradable.

Anabac Classic is compatible with all autoclaves and does not affect the autoclaving process.

DEODORANTS AVAILABLE: Citrus CA6457, Berry CA6459, Classic CA6455, Coconut CA6460, Mimosa CA6462, Vanilla CA6461, Peach CA6458 and Poma CA6456



LABORATORY STERILISERS - LABOKLAV



LABOKLAV 25



Compact benchtop design with unique viewing window. Laboklav offer a range of solutions. Speak to one of our consultants about your steriliser needs.

BENCH TOP AUTOCLAVE - LABOKLAV

**ROWE
CODE**

LABOKLAV 25-MV - Air cooling with integrated vacuum pump, rapid recooling steam generator, automatic closing system, 25L nominal capacity - can fit up to 5 x 1L bottles, 240V/10 AMP

IL0086

LABOKLAV 25B BASIC UNIT - With integrated steam generator, automatic closing system, 25L nominal capacity - can fit upto 5 x 1L bottles 10, AMP

IA0160

LABOKLAV 25M - Air cooling with integrated steam generator and rapid recooling automatic closing system, 25L nominal capacity - can fit up to 5 x 1L bottles, 10 AMP

IA0161

LABOKLAV 25V - Air cooling with integrated steam generator vacuum system, automatic closing system, 25L nominal capacity - can fit up to 5 x 1L bottles, 10 AMP

IA0162



LABOKLAV 55 - 195

A well designed unit at a low height for easy loading. Baskets are adapted to the chamber size to permit optimal utilisation of the chamber volume. Optional loading system and lifting devices make loading and unloading of the autoclave easy, even for heavy items requiring sterilisation.

IA0185 Autoclave Laboklav 80 MS double jacket water cooling and compressed air counter pressure 80L capacity 410mm diameter chamber x 610mmL with touch display and USB port, 3-phase power.

SHP Steriltechnik autoclaves offer a wide range of chamber sizes between 25L and 195L, universal installation options such as free-standing or tabletop units, with numerous configurations providing individual solutions for your specific requirements.

Typical areas of application for our units include all microbiological laboratories in research institutions, universities, quality control in the pharmaceutical and food industries as well as waste sterilisation, for example in the field of medical diagnosis.

Laboklav series autoclaves are characterised by their reliability and quality. Manufactured exclusively in Germany to high and continuously monitored quality standards. Units are TÜV-certified and approved for series production and bear the CE mark.

They comply with the following standards:

- Pressure Equipment Directive 97/23/EU
- DIN 58950: Sterilisation - Steam sterilisers for pharmaceutical products
- DIN 58951: Sterilisation - Steam sterilisers for laboratory use



Can also be vertically floor mounted.

SAMPLE BAGS

AUTOCLAVABLE BAG	PACK	ROWE CODE
340 x 165 x 70mm, No. 13, paper	1000	PA1176
340 x 200 x 30mm, Guardian No. 2, paper	500	PA1175
340 x 250 x 60mm, Satchel, sterilope No. 4, paper	500	HA0051
340 x 250 x 60mm, No. 4, paper	500	PA1179
490 x 70 x 35mm, Guardian No. 9, paper	1000	PA1387
490 x 70 x 35mm, Satchel, sterilope No. 9, paper	1000	HA0047
440 x 202 x 98mm, No. 30, paper	250	PA1188
305 x 605mm, natural, printed, Biohazard	100	PA1320
305 x 610mm, natural, printed, Biohazard, plastic	500	PA1313
570 x 750mm, yellow, printed, Biohazard	300	PA0060
720 x 910mm, natural, printed, Biohazard	100	PA1315



ROWE CODE
PA1387

BAG WITH PRESS SEAL - PLASTIC	PACK	ROWE CODE
50 x 75mm, 75 micron	1000	RB0102
50 x 90mm	1000	RB1480
100 x 75mm, 50 micron	1000	RB1390
100 x 75mm, 50 micron	1000	RB1389
100 x 150mm, 50 micron	1000	RB1430
100 x 150mm, 50 micron	100	RB1431
100 x 150mm, 75 micron	1000	RB0096
125 x 75mm, 50 micron	1000	RB1400
125 x 75mm, 80 micron	100	RB1453
125 x 205mm, 75 micron	1000	RB0097
150 x 230mm, 40 micron	1000	RB1500
150 x 230mm, 75 micron	1000	RB0098
200 x 125mm, 40 micron	100	RB1455
200 x 125mm, 50 micron	100	RB1450
230 x 150mm, 50 micron, with 3 white panels	1000	RB0114
230 x 155mm, 100 micron, with 3 white panels	2000	RB0074
230 x 155mm, 100 micron, with 3 white panels	1000	RB1205
230 x 300mm, 75 micron	500	RB0099
230 x 305mm, 50 micron	100	RB1645
230 x 305mm, 40 micron	1000	RB1210
230 x 305mm, 50 micron	1000	RB1215
230 x 320mm, 100 micron, with white panel	500	RB1223
250 x 200mm, 40 micron	1000	RB1550
250 x 350mm, 30 micron	1000	RB0037
250 x 380mm, 80 micron	1000	RB1545
300 x 380mm, 40 micron	100	RB1649
300 x 380mm, 50 micron	1000	RB1650
330 x 330mm, 40 micron	100	HB0162
380 x 500mm, 75 micron	2 x 500	RB0026
380 x 280mm, 50 micron	100	RB1659



ROWE CODE
RB0098



ROWE CODE
RB1645

PAPER SAMPLE BAG	PACK	ROWE CODE
Sample bag with wire tie - 147 x 75mm	1000	RB0087
Sample bag with wire tie - 205 x 100mm	1000	RB0088
Sample Box (5" x 3") to suit sample bag (385L x 80W x 124Hmm)	EA	RB0034
Sample Box (8" x 4") to suit sample bag (455L x 100W x 205Hmm)	EA	RB1936
Cardboard pulp box (large) 500 x 360 x 100mm		RB1955
Cardboard box (extra strong) 305 x 215 x 305mm		RB0029

BEST SELLERS



ROWE CODE
RB0087

CALICO SAMPLE BAG	PACK	ROWE CODE
300 x 200mm with draw string	100	RB1900
350 x 250mm with side tie	100	RB1902
300 x 450mm with draw string	100	RB0139
457 x 457mm with draw string		RB0022

GEO GREEN SAMPLE BAG	PACK	ROWE CODE
Open top, 305 x 450mm x 150µm plastic UV stabilised		RB1355
Open top, 250 x 380 x 125µm plastic UV stabilised, write on strip	500	RB0193
600 x 400mm x 150µm, plastic		RB1342
305 x 450mm x 150µm plastic UV stabilised	100	RB1562
750 x 450mm x 150µm plastic UV stabilized,		RB1351
380 x 255mm x 125µm plastic UV, write on panel	500	RB1535
610 x 400mm x 150µm plastic UV treated, holds 15kg rock	5 x 200	RB0081



ROWE CODE
RB0170

STAND UP, ZIP LOCK, POUCH BAG WITH TEAR NOTCH, LAMINATE MATTE SILVER	PACK	ROWE CODE
100 x 170 x 70mm gusset, 70g	1000	RB0163
160 x 230 x 90mm gusset, 250g	500	RB0166
190 x 265 x 110mm gusset, 500g	500	RB0168
235 x 345 x 120mm gusset, 1kg	500	RB0170

WHIRL-PAK POLYETHYLENE SAMPLE BAG	PACK	ROWE CODE
75 x 125mm, 58mL capacity, 57µm thick, sterile, write-on strip	500	RB1605
75 x 185mm, 118mL capacity, 57µm thick, sterile	500	RS0173
95 x 180mm, 207mL capacity, 76µm thick, sterile	500	RB1602
115 x 230mm, 532mL capacity, 64µm thick, sterile, black	500	RS0187
115 x 230mm, 532mL capacity, 64µm thick, sterile, write-on strip	500	RB1690
Speci-Sponge 115 x 230mm, 532mL capacity, 64µm thick, with sponge for environmental surface sampling, sterile, write-on strip	100	RB1603
150 x 230 mm, 710mL capacity, 76µm thick, sterile, write-on strip	500	RB1606
150 x 230mm, 710mL capacity, 76µm thick, sterile, stand-up, write-on strip	500	RB1608
190 x 380mm, 2041mL capacity, 76µm thick, sterile	500	PB0070



ROWE CODE
RS0173

*Whirl-Pak manufacture a vast range of bags.
Call us with your size and application.*

BAGMIXER® - INTERSCIENCE

Super efficient blending for sample preparation

BagMixer® 400

DESCRIPTION	ROWE CODE
Bag Blender Bagmixer 400P Plain Door 220v, 50hz	IS4200

The BagMixer® lab blender ensures optimal extraction by the action of its two paddles. Adapted to any sample (food, agricultural, chemical, medical, environmental) to be analysed between 50 mL and 400 mL, it ensures homogenisation in 30 to 60 seconds.

Quick Homogenising of Samples

- Optimal bacterial extraction
- Only 60 seconds to homogenise a sample

Easy Cleaning

- Fully opening door to 270°

- All stainless steel

User-friendly

- Compact
- Adjustable blending time (30 - 210 secs. or open running)
- Q-Tight® closing: no more leaks



BagMixer® 400CC

DESCRIPTION	ROWE CODE
Bag Blender Mixer Model 400CC for Operation On 230v 50hz	IS4202

BagMixer® 400 CC® is an easy-to-use and powerful lab blender. Adapted to all kinds of applications and with a guarantee of optimal bacterial extraction, it is a great tool for lab analyses avoiding all risks of cross-contamination. With similar performance to the above, the 400CC features a glass viewing window allowing you to see the process.

Quick Homogenising of Samples

- Optimal bacterial extraction
- Only 60 seconds to homogenise a sample

Easy Cleaning

- Exclusive Click & Clean® removable paddles (Patented)
- Fully opening window door to 270°
- Security drip tray
- All stainless steel

User-Friendly

- Compact
- Multifunction screen: ease of use
- Side-by-side paddle stop: easy insertion of the bag
- Q-Tight® closing: no more leaks

Accuracy

- Adjustable blending speed (4 - 6 - 8 - 10 strokes per second)
- Adjustable blending time (1 sec - 1 hour or open-running)
- Adjustable blending power: adapted to any kind of sample (Patented)



Blender Bags

CAPACITY	SIZE (mm)	DESCRIPTION	PACK SIZE	ROWE CODE
400mL	190x300	Bagfilter "Pipet & Roll" Sterile Filter Bags	500	IB0778
400mL	190x300	Bagfilter P Sterile Filter Bags	500	IS4100
400mL	190x300	Bagfilter XF Sterile Filter Bags	500	IB0764
400mL	175x300	Baglight 400 Polysilk Sterile	250	IS0149
400mL	175x300	Baglight Polysilk Sterile	250	IS4210
3500mL	380x560	Baglight Polysilk Sterile	250	PB0585



ROWE CODE
IB0778



ROWE CODE
IB0764

ANALYTICAL BALANCES

METTLER TOLEDO	MS104TS	MS204TS	ML104T	ML204T	ME104	ME204
Maximum capacity	120 g	220 g	120 g	220 g	120 g	220 g
Readability	0.1 mg	0.1 mg	0.1 mg	0.1 mg	0.1 mg	0.1 mg
Repeatability (typical)	0.08 mg	0.08 mg	0.08 mg	0.08 mg	0.08 mg	0.08 mg
Settling time	2 s	2 s	2 s	2 s	2 s	2 s
Minimum Weight (USP, 0.1%, typical)	160 mg	160 mg	160 mg	160 mg	160 mg	160 mg
ROWE CODE	IB0918	IB0117	IB0224	IB0144	IB0919	IB0076

OHAUS	EXPLORER EX124	EXPLORER EX224	EXPLORER EX324
Maximum capacity	120 g	220 g	320 g
Readability	0.1 mg	0.1 mg	0.1 mg
Repeatability (typical)	0.0001 g	0.0001 g	0.0001 g
Stabilisation time	2 s	2 s	3 s
Minimum Weight (USP, 0.1%, typical)	0.16 g	0.16 g	0.16 g
ROWE CODE	IB1240	IB7416	IB0116



ROWE CODE IB1240

OHAUS	ADVENTURER AX124	ADVENTURER AX224	ADVENTURER AX324
Maximum capacity	120 g	220 g	320 g
Readability	0.1 mg	0.1 mg	0.1 mg
Repeatability (typical)	0.1 mg	0.1 mg	0.1 mg
Stabilisation time	3 s	3 s	3 s
Minimum Weight (USP, 0.1%, typical)	0.2 g	0.2 g	0.2 g
ROWE CODE	IB0052	IB0149	IB0033



ROWE CODE IB0149

OHAUS	PIONEER PX124	PIONEER PX224
Maximum capacity	120 g	220 g
Readability	0.1 mg	0.1 mg
Repeatability (typical)	0.0001 g	0.0001 g
Stabilisation time	3 s	3 s
Minimum Weight (USP, 0.1%, typical)	200 mg	200 mg
ROWE CODE	IB0437	IB0427



ROWE CODE IB0437

BENCH SCALES - INDUSTRIAL

OHAUS - COLUMN MOUNT	i-D33XW30C1R6	i-D33XW60C1L7	i-D33XW150C1X7
Capacity	30 kg	60 kg	150 kg
Trade Approved Readability	10 g	20 g	50 g
Non-Trade Readability	5 g	10 g	20 g
Platform Size	355 x 305 mm	550 x 420 mm	550 x 420 mm
ROWE CODE	IB0831	IB0827	IB0833



ROWE CODE
IB0831



ROWE CODE
IB0827



ROWE CODE
XXX

OHAUS - FRONT MOUNT	i-D33XW30C1R5	i-D33XW60C1L5	i-D33XW150C1X5
Capacity	30 kg	60 kg	150 kg
Trade Approved Readability	10 g	20 g	50 g
Non-Trade Readability	5 g	10 g	20 g
Platform Size	355 x 305 mm	550 x 420 mm	650 x 500 mm
ROWE CODE	IB0926	IB0927	IB0928

COMPACT FOOD SCALES

OHAUS	V71P3T	V71P30T
Capacity	3 kg	30 kg
Readability	0.1 g	1 g
Platform Size	225 x 300 mm	225 x 300 mm
ROWE CODE	IB0193	IB0398



ROWE CODE
IB0398

MICRO BALANCES

METTLER TOLEDO	XPR10	XPR2	XPR2U
Maximum capacity	10.1 g	2.1 g	2.1 g
Readability	0.001 mg	0.001 mg	0.0001 mg
Repeatability* (5% load)	0.0004 mg	0.0005 mg	0.00015 mg
Settling time*	< 8 s	< 8 s	< 10 s
Minimum weight* (5% load, k=2, U=1.0%)	0.082 mg	0.1 mg	0.03 mg
USP minimum weight* (5% load, k=2, U=0.10%)	0.82 mg	1.0 mg	0.3 mg
ROWE CODE	IB0592	IM0336	IM0894

* = typical value



ROWE CODE IM0894



ROWE CODE IB0592

FEATURES	
Features	Accurate Results Active Temperature Control system (ATC™)
	Magnetic Force Restoration weighing sensor with high resolution
	MinWeigh warning function
Efficient Operation	Storage of methods
	Built-in results notepad
	Capacitive colored touchscreen with gesture control, glove compatible
Quality Assurance	GWP Approved built-in quality assurance monitoring
	Tolerance Profiles
	Password protection
	User management
	Change history
	Adjustment and routine test history
	Balance ready StatusLight™
	LevelControl: Level warning with graphical levelling guide
	Temperature and time programmable proFACT
	Efficient operation via SmartView terminal
Seamless Process	Storage of SOPs in method library (including sample series and tolerances)
	Multiple ports for easy connectivity and data export: 4 x USB, 1 x LAN
	Compact design with small footprint
Sustainable Value	Optimized draft shield for easy cleaning
	Overload protection

AntiStatic Kit for Microbalance

- Includes:
- One stand
 - One Compact Electrode

This kit helps to address one of the major challenges in micro-weighing, the freestanding ionizer removes electrostatic charges on samples and containers.

ROWE CODE IA0357



SEMI-MICRO BALANCES

METTLER TOLEDO	ANALYTICAL XPR205	BALANCE XSR105	ANALYTICAL MS105
Maximum capacity	220 g	120 g	120 g
Readability	0.01 mg	0.01 mg	0.01 mg
Repeatability (typical)	0.007 mg	0.008 mg	0.015 mg
Settling time	2 s	3 s	3 s
Minimum Weight (USP, 0.1%, typical)	14 mg	16 mg	30 mg
ROWE CODE	IB0917	IB0639	IB1014

OHAUS	EXPLORER EX125	PIONEER PX85	PIONEER PX225D
Maximum capacity	120 g	82 g	82 g / 220 g
Readability	0.01 mg	0.01 mg	0.01 mg / 0.1 mg
Repeatability (typical)	0.015 mg	0.02 mg	0.02 mg / 0.1 mg
Stabilisation time	8 s	10 s	10 s
Minimum Weight (USP, 0.1%, typical)	20 mg	20 mg	20 mg
ROWE CODE	IB0369	IB0655	IB0443



ROWE CODE IB0369



ROWE CODE IB0655



ROWE CODE IB1014



MOISTURE BALANCES

METTLER TOLEDO	HX204	HS153	HC103	HE73
Maximum capacity	200 g	150 g	101 g	71 g
Min. rec'd moisture range (%MC)	0.01	0.5	1	1
Readability MC	0.001 %	0.01 %	0.01 %	0.01 %
Repeatability (sd) with 2 g sample	0.05 %	0.05 %	0.1 %	0.15 %
Drying unit and Drying Temperature	Halogen (40 - 230°C)	Halogen (40 - 230°C)	Halogen (40 - 230°C)	Halogen (50 - 200°C)
Drying Programs	Steps; Gentle; Std; Rapid	Gentle; Standard; Rapid	Standard; Rapid	Standard; Rapid
ROWE CODE	IB2148	IB2155	IB0183	IB0324



ROWE CODE IB2148



ROWE CODE IB0183



ROWE CODE IB0207

OHAUS	MB120	MB90	MB25	MB23
Sample size	0.5 - 120 g	0.5 - 90 g	110 g (max capacity)	110 g (max capacity)
Readability Moisture Content	1 mg/0.01%	1 mg/0.01%	5 mg/0.05%	10 mg/0.1%
Drying unit and Drying Temperature	Halogen (40 - 230°C)	Halogen (40 - 200°C)	Halogen (50 - 160°C)	Infrared Coil (50 - 160°C)
Drying Programs	Ramp; Std; Step; Fast	Standard; Fast	1 standard heating profile	1 standard heating profile
ROWE CODE	IB0207	IB0194	IB2122	IB2000

PORTABLE BALANCES

OHAUS	COMPASS CX1201	COMPASS CX5200
Maximum capacity	1200 g	5,200 g
Readability	0.1 g	1 g
Repeatability (typical)	-	-
Stabilisation time	1.5 s	1.5 s
Minimum Weight (USP, 0.1%, typical)	-	-
ROWE CODE	IB0584	IB0524

COUNTING BALANCE

*Reliable Counting Scales
to Ensure Accurate Results*

OHAUS	RANGER COUNT 3000
Maximum capacity	30 kg
Readability	1 g
Repeatability (Certified)	10 g
ROWE CODE	IB0694

PRECISION BALANCES

METTLER TOLEDO	MS303TS	MS1602TS	MS6002TS	ML203T	ML3002T
Maximum capacity	320 g	1,620 g	6.2 kg	220 g	3.2 kg
Readability	1 mg	0.01 g	0.01 g	1 mg	0.01 g
Repeatability (typical)	1 mg	0.007 g	0.007 g	0.7 mg	0.007 g
Settling time	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s
Minimum Weight (USP, 0.1%, typical)	1.4 g	14 g	14 g	1.4 g	14 g
ROWE CODE	IB0219	IB0118	IB0190	IB0328	IB0187



ROWE CODE IB0219



ROWE CODE IB0118



ROWE CODE IB0190

METTLER TOLEDO	ML6002T	ME203	ME2002	ME4002	MS12002TS
Maximum capacity	6.2 kg	220 g	2.2 kg	4.2 kg	12.2 kg
Readability	0.01 g	1 mg	0.01 g	0.01 g	0.01 g
Repeatability (typical)	0.007 g	0.7 mg	0.007 g	0.007 g	0.007 g
Settling time	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s
Minimum Weight (USP, 0.1%, typical)	14 g	1.4 g	14 g	14 g	14 g
ROWE CODE	IB0235	IB0614	IB0785	IB0125	IB0195



ROWE CODE IB0785



ROWE CODE IB0125



ROWE CODE IB0195

OHAUS	EXPLORER EX223	EXPLORER EX2202	EXPLORER EX10020	EXPLORER EX12001	EXPLORER EX35001
Maximum capacity	220 g	2,200 g	10200 g	12,000 g	35,000 g
Readability	1 mg	0.01 g	0.01 g	0.1 g	0.1 g
Repeatability (typical)	0.001 g	0.01 g	0.01 g	0.1 g	0.1 g
Settling time	1 s	1 s	1 s	1 s	1 s
Minimum Weight (USP, 0.1%, typical)	1.6 g	16 g	100 g	210 g	210 g
ROWE CODE	IB7470	IB2242	IB7403	IB7401	IB7198



ROWE CODE IB7470



ROWE CODE IB2242



ROWE CODE IB7198

OHAUS	ADVENTURER AX223	ADVENTURER AX2202	ADVENTURER AX8201
Maximum capacity	220 g	2,200 g	8,200 g
Readability	1 mg	0.01 g	0.1 g
Repeatability (typical)	1 mg	0.01 g	0.1 g
Settling time	2 s	1.5 s	1.5 s
Minimum Weight (USP, 0.1%, typical)	2 g	20 g	200 g
ROWE CODE	IB0113	IB0044	IB0034



ROWE CODE IB0034

OHAUS	PIONEER PX223	PIONEER PX2202	PIONEER PX4201
Maximum capacity	220 g	2,200 g	4,200 g
Readability	0.001 g	0.01 g	0.1 g
Repeatability (typical)	0.001 g	0.01 g	0.1 g
Settling time	2 s	1 s	1 s
Minimum Weight (USP, 0.1%, typical)	2 g	20 g	200 g
ROWE CODE	IB0486	IB0326	IB0836



ROWE CODE IB0486

BAROMETERS

MONITOR, THERMOMETER/BAROMETER/HUMIDITY	ROWE CODE
0 to 50°C temp range, 0 to 90% humidity range, data logging	IM0592



PORCELAIN BASINS

HALDENWANGER - PORCELAIN BASIN	VOL mL	PACK SIZE	ROWE CODE
50mmD x 10mmH with flat bottom	10	EA	WB1002
63mmD x 13mmH with flat bottom	20	EA	WB1004
70mmD x 28mmH	50	EA	WB1150
80mmD x 16mmH	45	EA	WB1005
97mmD x 40mmH, evaporating with flat bottom	140	EA	WB1030
100mmD x 20mmH, evaporating low form with flat bottom	100	EA	WB1015
125mmD x 27mmH with flat bottom	270	20	WB0002
150mmD x 55mmH	420	EA	WB1350
160mmD x 64mmH	580	EA	WB1020
JIPO - EVAPORATING PORCELAIN BASIN	VOL mL	PACK SIZE	ROWE CODE
42mmD x 19mmH	10	EA	WB1001
81mmD x 38mmH	107	EA	WB1006
94mmD x 42mmH	140	EA	WB1007
98mmD x 40mmH with flat bottom and spout	154	EA	WD0001
126mmD x 53mmH with flat bottom and spout	330	EA	WD0008



ROWE CODE
WB1002



ROWE CODE
WB1030



ROWE CODE
WB1007



Your size not shown? Please give us a call!

BEAKER - BOROSILICATE GLASS

SIMAX	mL	PACK SIZE	ROWE CODE
Low Form Beakers GRADUATED & SPOUTED	10	EA 10	GB1509
	25	EA 10	GB1560
	50	EA 10	GB1660
	100	EA 10	GB1810
	150	EA 10	GB1870
	250	EA 10	GB2060
	400	EA 10	GB2210
	600	EA 10	GB2310
	800	EA 10	GB2510
	1000	EA 10	GB2610
	2000	EA 4	GB2810
	3000	EA 4	GB2960
	5000	EA 2	GB3110
10000	EA	GB0356	
20000	EA	GB0357	
Tall Form Beakers GRADUATED & SPOUTED	25	EA 10	GB0358
	50	EA 10	GB1366
	100	EA 10	GB3210
	150	EA 10	GB3310
	250	EA 10	GB3460
	400	EA 10	GB3560
	600	EA 10	GB3850
	1000	EA 10	GB4085
2000	EA 6	GB4071	
3000	EA 6	GB4065 GB0359	
Conical / Philips Beakers GRADUATED & SPOUTED	150	EA	GB0360
	250	EA 10	GB1355
	500	EA 10	GB1455

KEY BRANDS WE CARRY
Simax, Kimble Heavy Duty, Witeg, Schott. Please enquire for others.






DWK LIFE SCIENCES DURAN WHEATON KIMBLE	mL	PACK SIZE	ROWE CODE
Low Form Beakers HEAVY DUTY	250	EA 48	GB2100 GB2102
	400	EA 48	GB2340 GB2342
	600	EA 36	GB2350 GB2351
	1000	EA 24	GB2650 GB2660
	2000	EA 9	GB2910 GB2911
	4000	EA 4	GB3020 GB3010



PHILIPS BEAKER

BEAKER - PLASTIC

		mL	PACK SIZE	ROWE CODE
Polypropylene • GRADUATED • CHEMICAL COMPATIBLE • AUTOCLAVABLE		50		PB3855
		100		PB3955
		250		PB4002
		500	ea	PB4102
		1000		PB4202
		2000		PB4252
		5000		PB4355
		10000		PB0432
Polymethylpentene TPX • GRIFFIN • LOW FORM • GRADUATED		50	ea	PB3900
		100	12	PB0299
		250	6	PB0300
		600	4	PB0301
		1000	3	PB0302
		2000	ea	PB0303
		5000	ea	PB0304
		10000	ea	PB0305
		mL	PACK SIZE	ROWE CODE
PTFE • GOOD HEAT TRANSFER • MOULDED POURING SPOUT		50	ea	PB4450
		100	ea	PB4500
		250	ea	PB4550
		1000	ea	PB4580
		2000	ea	PB4590
		5000	ea	PB1006
		mL	PACK SIZE	ROWE CODE
Polypropylene • LOW FORM • GRADUATED		25	ea	PB3800
		50	ea	PB3850
		100	ea	PB3950
		250	ea	PB4000
		500	ea	PB4100
		1000	ea	PB4200
		2000	ea	PB4250
		3000	ea	PB4275
Polypropylene • LOW FORM • BLUE GRADUATED		500	ea	PB4105
		5000	ea	PB4108
TPX • LOW FORM • GRADUATED • CRYSTAL CLEAR • AUTOCLAVABLE		50	ea	PB3900
		250	ea	PB4020
		1000	4	PB4225



The TPX™ family of Polymethylpentene (PMP) polyolefin resins offer a unique combination of Transparency, Heat Resistance and Releasability. Low haze values, and low refractive index, TPX™ exhibits transparency equivalent to glass or acrylic. With a high melting point and extremely low water absorption rate, TPX™ is an excellent choice for items that require steam sterilization. The surface tension of TPX™ is very low, and its Releasability properties are truly unique



If you don't see what you're seeking listed here, please call us.

BENCHTOP PAPER SHEETS	ROWE CODE
Benchtop protector - 48 x 60cm, PE coated	FL1000
Benchkote surface protector - 46cm x 50m	FB1010
Benchkote bench protector sheets - 46 x 57cm	FB1000
Labtop - 48 x 60cm, polyethylene coated (MN 210pe) (similar to Benchkote)	FL1005
Labtop - 50m x 60cm roll, polyethylene coated (MN210pe)	FL1025



BUNSEN BURNERS

BUNSEN BURNER (EACH)	ROWE CODE
Safety Burner - With display, movement sensor, flame monitor and overheating protection, fire-boy plus, manual, continuous operation possible(foot pedal on/off available on request)	HB0267
Electric with MC5 controller - 800 to 1000°C, 230V	HB2707
Micro - LPG with air regulator and stopcock, 90mm high	HB2658
Semi-micro - LPG flame retention collar, 100mm high	HB2685
Semi-micro - LPG flame retention collar with stopcock, 100mm high	HB2687
11mm OD, Natural gas, 135mm high	HB2800
11mm OD, LPG, 135mm high	HB2850
18mm OD, natural gas with retention collar and stopcock	HB2551
LPG with flame retention collar, 18mmOD x 135mmH	HB2550
Semi-micro, natural gas with flame retention collar, 100mm high	HB2690
11mmOD x 135mmH, complete with stopcock, natural gas	HB2870
Portable - To suit C250 cylinder	HB2716



ROWE CODE
HB2707

BUNSEN BURNER ACCESSORIES	ROWE CODE
Silicone Rubber Tubing - Reinforced ends, 90cm	PT0086
Miniflam Bunsen Gas Canister - 300g	HG0111
Red Silicone Tubing - 8mmID, 4mm wall, for LPG gas bunsen burners	PT0682
Bunsen Burner Gas Cylinder - Self sealing cartridge, 73% butane 27% propane, 230g primus 2207	HB0028
Bunsen Burner Gas Cylinder - C250	HB2706
Spark Lighter - Safety-flameless, to suit bunsen burner	HS0738



ROWE CODE
HG0111

WARING BLENDERS

Since 1937 Waring, universally known for introducing the first blender in America, is one of today's leading manufacturers of professional appliances for the food service and laboratory industries.



Waring blender, immersion model WSB50 with heavy duty 30cm removable shaft and all purpose stainless steel blade, variable speed motor with 9 settings and "continuous on" setting, 750 Watts 230V/50Hz
ROWE CODE IB0635



Blender accessory container mini 37-110mL standard blending assembly with snap tight plastisol lid
ROWE CODE IB4288



Waring single speed base only CE approved 230v 50Hz
ROWE CODE IB4145



Waring model LB20ES variable speed with 1L stainless steel container
ROWE CODE IB4201



Waring model LB20EG variable speed with 1.2L glass container
ROWE CODE IB4242



Waring two speed blender with timer, 1L stainless steel container and baked enamel base
ROWE CODE IB0370



Microniser, laboratory, heavy duty with liquilock™ seal system, 3.75L, clear bowl, includes: 4 x standard discs, 230V, 50/60Hz
ROWE CODE IM0564



Biochemical Oxygen Determination BOD

The VELP RESPIROMETRIC Sensor BOD is designed to provide a smart and cloud-enabled solution to laboratories of water and wastewater quality control.

BOD (Biochemical Oxygen Demand) Determination is a simple and easy way for monitoring the microorganisms' activity in water samples with extremely reliable results.

In particular, microorganisms present or inoculated in a water sample containing biodegradable organic substance, consume oxygen for their metabolic activity and produce a corresponding volume of carbon dioxide.

The carbon dioxide gets absorbed by a strong alkali positioned in the neck of the bottle. The result of this process is a decrease in gas pressure. The BOD measures this change in gas pressure between the beginning to the end of the analysis and gives a result expressed in mg/l.

RESPIROMETRIC Sensor System for plastic biodegradability

Designed to support aerobic degradation test for the determination of the degree of biodegradability of plastic materials, including those containing formulation additives, in an aqueous medium.

- Multistirrer Digital 6-positions to precisely set stirring speed and enable the lock feature to avoid unintentional modification of the stirring speed.
- Results reading in Pressure values (millibar).
- Pressure range: 500 ÷ 2000 mbar (hPa).
- The bright 4-digit LED display ensures long battery life in respect of other sensors in the market.
- Intuitive 2 button interface to facilitate the analysis set up.

RESPIROMETRIC Sensor System for soil analysis

Designed to support aerobic degradation tests on soil and compost. The analysis provides microbial soil respiration results from the mineralization of organic substances. A major application of these tests is related to the detection and monitoring processes during decontaminations and clean-ups.

- The bright 4-digit LED display ensures long battery life in respect of other sensors in the market.
- Intuitive 2 button interface to facilitate the analysis set up.
- Pressure range: 500 ÷ 2000 mbar (hPa).
- Results available in mbar.



ROWE CODE IV0288

Velp BOD & Aerobic Respirometric Sensor Kit
6 position, BOD and pressure range.
Includes 500mL bottles, stirring station, stirring bars, KOH containers, databox and respirosoft software.



ROWE CODE IV0293

Velp Plastic Biodegradability Respirometric Sensor Kit
6 position, includes 6 analysis kits, multistirrer digital 6, stirring bars, databox and respirosoft software.

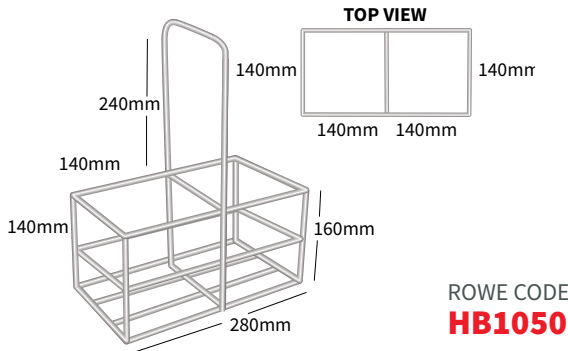


ROWE CODE IV0295

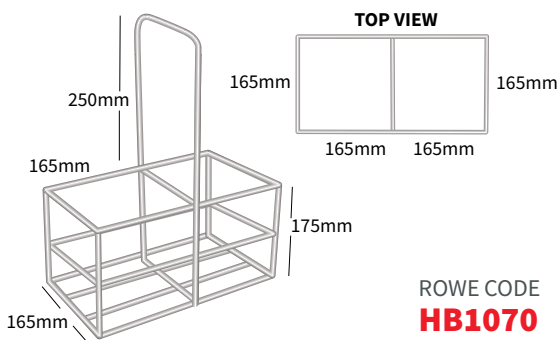
Velp Aerobic Soil And Compost Respirometric Sensor Kit
6 positions. Includes 6 analysis kits, databox and respirosoft software.

LAB BOTTLE CARRIERS

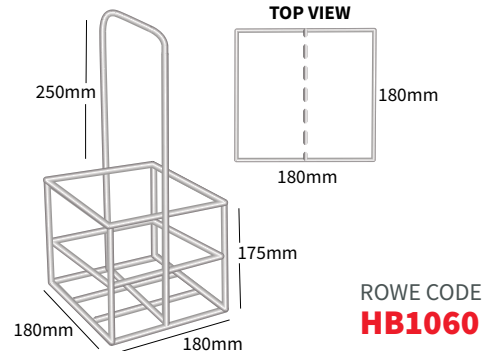
2 POSITION CARRIER HOLDS 2 x 2.5L WINCHESTER BOTTLES



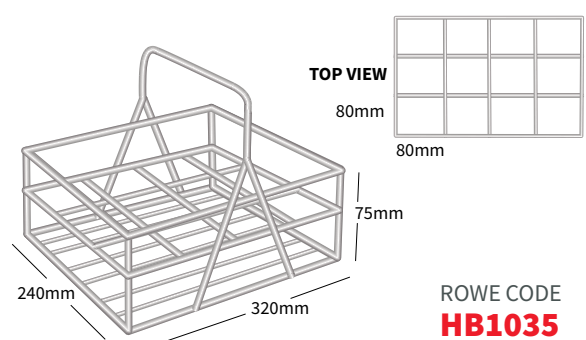
2 POSITION CARRIER HOLDS 2 x 4L BOTTLES



SINGLE POSITION CARRIER HOLDS 1 x 4L BOTTLE



4 x 3 POSITION CARRIER HOLDS 12 x 80mm BOTTLES



BOTTLE CARRIER POSITIONS	MATERIAL	BOTTLE HOLE DIMENSIONS (mm)	ROWE CODE
1 x 4L Bottle	White plastic coated wire	180 x 180	HB1060
1 x 5L Bottle (with handle on each side)		200 x 200	HC0404
2 x 2.5L Winchester Bottles		140 x 140	HB1050
2 x 3L Bottles (with handles)		75 x 75	HB1044
2 x 4L Bottles		165 x 165	HB1070
4 x 3 position bottle carrier		80 x 80	HB1035
6 x 1L Wide Mouth Plastic Bottles		100 x 100	HB1045
4 x 2L Bottles	Stainless steel	175 x 110	HC0045
6 x 2L Bottles		150 x 150	HC5085
6 x 1L Bottles (3 tier)	White plastic coated wire	100 x 100	HB1081
10 x 1L Bottles (3 tier)	White plastic coated wire	100 x 100	HB1082

CARBOYS - TARSONS

Tarsons Carboy - Autoclavable with Stop Cock

Material: Medical grade Polypropylene

Iconic lab essentials for large volume liquid storage and dispensing where autoclavability is desired. Their rugged construction makes them compatible with lab reagents including most acids, bases, alcohols, aldehydes, esters, and aliphatic hydrocarbons. Suitable for higher temperature applications up to 135°C.

CAPACITY (L)	HANDLES	STD. PACK SIZE	ROWE CODE
10	2	EA	PC3917
20	2	EA	PC3918
50	2	EA	PC3919



Tarsons Rectangular Carboy with Stop Cock

Material: High density Polyethylene

Easy to store and dispense sterile water, media and solutions with Tarsons rectangular carboy. These carboys have a polypropylene stop cock, stainless steel handle for easy carrying and a wide mouth for easy clearing.

CAPACITY (L)	HANDLES	STD. PACK SIZE	ROWE CODE
5	1	EA	PC0190
10	1	EA	PC0191
20	1	EA	PC0192



Tarsons Round Carboy - Autoclavable

Material: Medical grade Polypropylene

CAPACITY (L)	HANDLES	STD. PACK SIZE	ROWE CODE
10	2	EA	PC0457
20	2	EA	PC0458
50	2	EA	PC0459



**BEST
SELLER**

CARBOYS - KARTELL

Kartell Aspirator Bottles - Heavy Duty

Material: High density polyethylene

Designed for lifetime service. Can be used in sub zero temperatures. Very sturdy construction having a 2mm wall thickness whilst retaining translucency. The 3/4" BSP Waddington & Duval tap (supplied) mates with a 12mm deep thread in the aspirator for total leak proof performance.

VOL (L)	ID MOUTH (mm)	DIA BOTTLE (mm)	HEIGHT (mm)	HANDLES	STD. PACK SIZE	ROWE CODE
5	45	165	335	1	EA	PB3240
10	55	210	415	1	EA	PB3250
25	55	280	525	2	EA	PB3260
50	55	365	600	2	EA	PB3270
Tap for Aspirator Bottles 3/4" BSP Thread						PT1050



Kartell Carboy - Narrow Neck & Heavy Walled

Material: High density Polyethylene

2mm heavy robust bottles which can withstand considerable abuse. The insert plug and soft seal cap makes them leakproof. The cap can be wired down for added safety. Complete with carrying handles.

VOL (L)	ID MOUTH (mm)	OD (mm)	HEIGHT (mm)	HANDLES	STD. PACK SIZE	ROWE CODE
5	45	165	335	1	EA	PB3505
10	55	210	415	1	EA	PB3510
25	55	280	525	2	EA	PB3503
50	55	365	600	2	EA	PB3280



Kartell Carboy - Wide Neck & Heavy Walled

Material: High Density Polyethylene

Very robust bottles, ideal for liquids or powders. Wide mouth for easy filling and emptying. Insert seal for complete leakproof closure. Caps can be wired down for safety. Tommy bar lugs on 10 litre capacity to assist release. Carrying handles.

VOL (L)	ID MOUTH (mm)	OD (mm)	HEIGHT (mm)	STD. PACK SIZE	ROWE CODE
5	90	165	315	EA	PB3470
10	120	210	390	EA	PB3500



Kartell LABWARE

HIGH DENSITY POLYETHYLENE (HDPE) - TARSONS

BOSTON ROUND BOTTLE	MATERIAL (BOTTLE/CAP)	VOLUME (mL)	PACK SIZE	ROWE CODE
HDPE - NARROW MOUTH				
<ul style="list-style-type: none"> • Translucent • Rigid • Linerless leak proof closure with integral seal ring • Ideal for liquids • Good for freezer storage at -100°C 	HDPE/PP	30	12	PB0192
		60	12	PB0194
		125	12	PB0189
		250	12	PB0221
		500	12	PB0219
		1000	6	PB0290
		250	BUY IN BULK Min 50 x	PB0355
HDPE - WIDE MOUTH				
<ul style="list-style-type: none"> • Translucent • Rigid • Linerless leak proof closure with integral seal ring • Ideal for liquids • Good for freezer storage at -100°C • Wide mouth allows easy filling of contents 	HDPE/PP	30	12	PB0202
		60	12	PB0205
		125	12	PB0284
		250	12	PB0229
		500	12	PB0224
		1000	6	PB0285
		2000	EA	PB0253
		125	BUY IN BULK Min 50 x	PB2249*
		250		PB2319*
		500		PB2499*
		1000		PB2579*



ROWE CODE
PB0194



ROWE CODE
PB2499



Polyethylene Properties

Flexible, translucent/waxy, weatherproof, good low temperature toughness (to -60°C), easy to process by most methods, low cost, good chemical resistance.

Physical Properties

Tensile Strength: 0.20 - 0.40 N/mm²
 Notched Impact Strength: No break KJ/m²
 Thermal Coefficient of Expansion: 100 - 220 x 10⁻⁶
 Maximum Continued Use Temperature: 65°C
 Density: 0.944 - 0.965 g/cm³

Resistance to Chemicals

Dilute Acid ****
 Dilute Alkalis ****
 Oils and Greases ** variable
 Aliphatic Hydrocarbons *
 Aromatic Hydrocarbons *
 Halogenated Hydrocarbons *
 Alcohols ****
 KEY: * poor, ** moderate, *** good, **** very good

Source: British Plastics Federation



POLYPROPYLENE (PP) - TARSONS

BOSTON ROUND BOTTLE	MATERIAL (BOTTLE/CAP)	VOLUME (mL)	PACK SIZE	ROWE CODE
PP - NARROW MOUTH				
<ul style="list-style-type: none"> • Translucent • Rigid • Linerless leak proof closure with integral seal ring • Ideal for liquids • Autoclavable 	PP/PP	30	12	PB0187
		60	12	PB0188
		125	12	PB0186
		250	12	PB0227
		500	12	PB0223
		1000	6	PB0289
		2000	EA	PB0191
		4000	EA	PB0228
8000	EA	PB0239		
PP - WIDE MOUTH				
<ul style="list-style-type: none"> • Translucent • Rigid • Linerless leak proof closure with integral seal ring • Ideal for liquids • Wide mouth allows easy filling of contents • Autoclavable 	PP/PP	30	12	PB0204
		60	12	PB0207
		125	12	PB0217*
		250	12	PB0232*
		500	12	PB0226*
		125	BUY IN BULK Min 50 x	PB3335
		250		PB3337
		500		PB3319



ROWE CODE PB0223



ROWE CODE PB0217



The properties of Polypropylene include...

- Semi-rigid
- Translucent
- Good chemical resistance
- Tough
- Good fatigue resistance
- Integral hinge property
- Good heat resistance

Polypropylene does not present stress-cracking problems and offers excellent electrical and chemical resistance at higher temperatures. While the properties of Polypropylene are similar to those of Polyethylene, there are specific differences. These include a lower density, higher softening point (Polypropylene doesn't melt below 160°C. Polyethylene, a more common plastic, will anneal at around 100°C) with higher rigidity and hardness. Additives are applied to all commercially produced polypropylene resins to protect the polymer during processing and to enhance end-use performance.

BOROSILICATE & AMBER GLASS

LABORATORY BOTTLE - GL45			
	VOLUME (mL)	PACK SIZE	ROWE CODE
BOROSILICATE GLASS - SCHOTT			
Screw Cap	500	10	GB8000
	1000	10	GB8050
BOROSILICATE GLASS - SIMAX			
With blue screw cap and pouring ring	50	10	GB7855
	100	10	GB7910
	250	10	GB7955
	500	10	GB8005*
	1000	10	GB8055
	2000	10	GB8105
	5000	6	GB8155
	10000	EA	GB8195

***BEST SELLERS**



ROWE CODE GB8055

LABORATORY BOTTLE - GL45			
	VOLUME (mL)	PACK SIZE	ROWE CODE
AMBER BOTTLE - SIMAX			
With blue screw cap and pouring ring	25	EA	GB0226
	50	10	GB0217
	100	10	GB0218
	250	10	GB7972
	500	10	GB8011
	1000	10	GB8061
	2000	10	GB8066
	5000	6	GB0220
	10000	EA	GB0221
	15000	EA	GB0224
	20000	EA	GB0225



ROWE CODE GB8061

LABORATORY BOTTLE - GL80			
	VOLUME (mL)	PACK SIZE	ROWE CODE
BOROSILICATE GLASS - SIMAX			
Square, wide neck with blue screw cap	1000	10	GB0235
	2000	10	GB0236

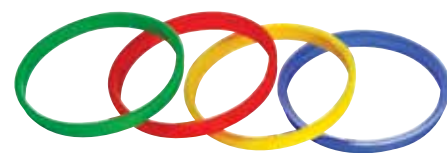


ROWE CODE GB0235



ACCESSORIES

LABORATORY BOTTLE ACCESSORIES	PACK SIZE	MFR	ROWE CODE
POURING RING			
GL32 blue	10	SCHOTT	GB8303
GL32 red	10	SCHOTT	GB8318
GL45 blue (*Sold as 10 pack)	10*	SCHOTT	GB8300
GL45 green (*Sold as 10 pack)	10*	SCHOTT	GB8312
GL45 grey (*Sold as 10 pack)	10*	SCHOTT	GB8313
GL45 red	10	SCHOTT	GB8305
GL45 yellow (*Sold as 10 pack)	10*	SCHOTT	GB8314
GL45 blue	EA	SIMAX	GB8302
GL45 clear (*Sold as 10 pack)	10*	SIMAX	GB0266
GL45 red (Suitable to 200°C)	10	SIMAX	GB8358
BOTTLE CAPS			
GL32 blue	10	WITEG	GB0340
GL45 blue	10	SIMAX	GB8333
GL45 red (Suitable to 200°C)	10	SIMAX	GB8357
GL45 green (*Sold as 10 pack)	10*	SIMAX	GB0263
GL45 orange (*Sold as 10 pack)	10*	SIMAX	GB0264
GL45 red (PTFE liner)	10	WITEG	GB8342
GL45 yellow	10	SIMAX	GB0265
GL45 blue	10	SCHOTT	GB8306
GL45 red	10	SCHOTT	GB8308
Cap with ports GL45 2 x GL14 ports in lid	2	SCHOTT	GB8380
Cap with ports GL45 3 x GL14 ports in lid	2	SCHOTT	GB8381



POURING RINGS

HIGH TEMPERATURE RINGS



32mm
ROWE CODE
GB8318

45mm
ROWE CODE
GB8305

COLOURED SCREW CAPS



ROWE CODE
GB0265, GB0263, GB0264



ROWE CODE
GB8380

ROWE CODE
GB8381

DROPPING BOTTLE	PACK SIZE	ROWE CODE
15mL - HDPE, complete with cap	EA	PD4125
25mL - Amber glass, 67mm dropper, red teat	EA	GB4250
30mL - Polystyop Volac 16/16 stopper, clear glass	EA	GB4629
30mL - HDPE (BP0030) with nozzle (CP0100) and overcap (CP0101)	EA	PD4120
46mL - HDPE with insert and screw cap (BP0040/CP0100/CP0101)	EA	PD4130
50mL - Round, amber glass, 80mm glass dropper, red teat	EA	GB4450
100mL - Clear glass, dropping pipette, rubber teat	EA	CB2069
100mL - Round, amber glass, 80mm glass dropper, red rubber teat	EA	GB4658
125mL - LDPE	12	PB0196
250mL - Polyethylene	EA	PD4115
500mL - Polyethylene	EA	PB0026



ROWE CODE
CB2069

BUCKETS - VARIOUS

BUCKET	VOL (L)	ROWE CODE
White plastic with lid	1.2	PB4634
White PP with PP handle and tamper evident	2.2	PB0614
With handle and tamper proof lid	2.3	PB0023
Round with plastic handle and tamper evident lid with tear-off in rim	4	PB4659
Plastic (natural) with plastic handle and tamper evident lid with tear-off in rim	5	PB4650
White polypropylene with polypropylene handle and tamper evident lid	5	PB4639
White DG with white DG, tamper evident, hard lid	10	PB4707
White with plastic handle and lid (non DG - general purpose)	11	PB4708
Red HDPE with plastic handle and white plastic lid	13.6	PB4801
White "Baroda" with lid to suit	15	PB3636
White HDPE (DG) with metal handle and DG approved safe seal lid	20	PB4704
White plastic with metal handle and tamper evident lid (HDPE)	20	PB4869
White plastic with metal handle and tamper evident lid (PP)	20	PB0072
Plastic (natural) with wire handle and tamper evident lid with bung provision at base for tap (HDPE)	25	PB3656
15 gallon, round tapered with lid	67.7	PB4855



ROWE CODE
PB4639



ROWE CODE
PB4708

ICE BUCKET (CRYOCHILL)	COLOUR	VOLUME (L)	ROWE CODE
RECTANGULAR - POLYURETHANE			
Without cover (315 x 235 x 130mm)	Black	4	PI0024
	Blue		PI0025
	Green		PI0026
	Red		PI0027
Without cover (445 x 375 x 155mm)	Black	9	PI0028
	Blue		PI0029
	Green		PI0030
	Red		PI0031
SQUARE - POLYURETHANE			
Without cover (175 x 175 x 100mm)	Black	1	PI0020
	Blue		PI0021
	Green		PI0022
	Red		PI0023
With cover (283 x 283 x 130mm)	Black	2.5	PB0012
	Blue		PB0013
	Green		PB0014
	Red		PB0015
With cover (280 x 280 x 185mm)	Black	4.5	PI0016
	Blue		PI0017
	Green		PI0018
	Red		PI0019



Pulp Density Buckets are on page 315

DIGITAL BURETTE "TITRETTE" - BRAND



BURETTE DIGITAL "TITRETTE"	VOL	PACK SIZE	ROWE CODE
With recirculating valve	10mL	EA	CB0394
	25mL		DB1079
	50mL		DB1080
With RS232 interface and recirculating valve	10mL		DB0001
	25mL		DB1081
	50mL		CB1934



ROWE CODE
DB1079



ROWE CODE
DB0001



ROWE CODE
DB1081



ROWE CODE
CB1934

(Bottles not included).

BURETTE - WITEG



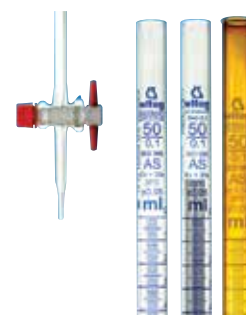
AUTOMATIC BURETTE PELLET PATTERN WITH 2 LITRE RESERVOIR (EACH)	CAP (mL)	DIVISION (mL)	CLASS	TOL (mL) ±	ROWE CODE
Schellbach blue line with PTFE stopcock	10	0.02	AS	0.02	GB8897
	25	0.05		B	0.03
Amber glass with lateral PTFE needle valve			50		0.1
Schellbach blue line with PTFE stopcock	GB8844				
Schellbach blue line with lateral PTFE needle valve	GB0230				
Amber glass with PTFE stopcock	100	0.2	B	0.2	GB8843
Amber glass, interm ST-Glass plugs and lateral PTFE needle valve					GB0280
Amber glass with lateral PTFE needle valve					GB0389

ROWE CODE
GB0256

DR SCHILLING BURETTE B CLASS (EACH)	CAPACITY (mL)	DIVISION (mL)	TOL (mL) ±	RESVR BTL (mL)	ROWE CODE
Complete with plastic bottle, screw cap and plastic foot	5	0.02	0.02	500	GB8956
	10	0.05	0.05		GB8957
	25	0.10	0.10	1000	GB9065
	50				GB9080

ROWE CODE
GB8957

SCHELLBACH BURETTE AS CLASS (EACH)	CAPACITY (mL)	DIVISION (mL)	TOL (mL) ±	ROWE CODE	
With PTFE stopcock, blue graduations, borosilicate glass	includes batch certificate	5	0.02	0.01	GB0028
		10		0.02	GB9002
		25	0.05	0.03	GB9001
		50	0.10	0.05	GB9003
		100	0.20	0.10	GB9007
					GB9005

ROWE CODE
GB9003

SCHELLBACH BURETTE DAFFERT PATTERN AS CLASS (EACH)	CAPACITY (mL)	DIVISION (mL)	TOL (mL) ±	ROWE CODE
With PTFE stopcock	10	0.05	0.04	GB8805
	25			GB8806
	50	0.1	0.08	GB8807
	100			GB8808

ROWE CODE
GB8806

Class F1 analytical masses are stainless steel analytical masses suitable for analytical measurements, precession balance calibration and as economy reference standards. Manufactured from highly polished non-magnetic Stainless Steel. Available as single units from 1mg to 20kg, or in cased sets.

All sets consist of masses in the 1-2-2-5 sequence and are supplied with a carry case. Cased sets are available from 1mg to 20kg.

DESCRIPTION	PART NUMBER	VALUE	ROWE CODE
8 weights	CF1-SDG050	1g - 50g	IM1774
9 weights	CF1-SDG100	1g - 100g	IM1775
12 weights	CF1-SMG1	1mg - 500mg	IM1773

Masses also available:

- **Cast iron**
- **Brass**
- **Iron**
- **NATA Certification**

Masses available in an array of types e.g. slotted, flat circular, nesting masses.

To find out more call Rowe Scientific Pty Ltd.



DESCRIPTION	QTY	ROWE CODE
Mass NATA certification for brass masses	EA	IM0561
Balance table complete, antivibration & non magnetic, 1200w x 600d x 800h (790mm min to 910mm max)	EA	HB0284
Mass case for 200g single mass, plastic with foam insert	EA	IM0835
NATA - SS mass precision, NATA certification	EA	IM1401
Mass Case - 1mg - 200g, plastic case velvet lined with plastic tweezers	EA	IM1701
F1 Mass - 200g, 1mg, stainless steel	EA	IM4015
Mass - 2000g, stainless steel, 10mg, F1 class, complete in wooden case	EA	IM5345
Benchtop Anti-Vibration Stone - White, 450 x 550 x 50mm, 30kg, includes 4 x waffle pads	EA	HB0054
Mass - NATA certification 1 - 4 masses	EA	IM14010
F1 Mass set - 1 - 100g, stainless steel, complete in plastic case with plastic tweezers (9 masses)	SET	IM1775
Mass - Serial number marking on weights	EA	IM1402
Mass (standard) cast iron - 2kg (stamped for trade use)	EA	IM1600



***Only a sample of our offering -
please call to discuss your requirements.***

CENTRIFUGES - BOECO

**BOECO Centrifuge C-28A**

The non-refrigerated microprocessor-controlled C-28 A is the ideal bench-top centrifuge for performing daily routine tasks in doctors' laboratories and small hospitals. Because of the wide range of accessories the C-28A can also be used for sample preparation in research and industrial laboratories.

The centrifuge has a brushless frequency drive (no carbon brushes).

A special locking device allows effortless opening and closing of the lid with just one hand.

Controls and displays

- During centrifugation the actual values of the parameters are indicated;
- Entry of the running parameters via water-protected foil keypad;
- Speed display in RPM x 100, input in steps of 100;
- Time t/min: 1 - 99 min, continuous operation;
- Impulse key: For short centrifugation operations.

Safety

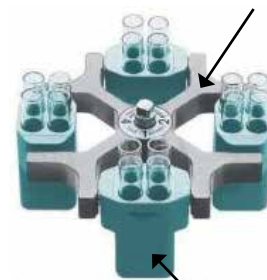
- Housing and lid of metal finished in a scratch and impact resistant coating;
- Centrifuge chamber of stainless steel;
- Lid locking and holding device;
- See-through glass in the lid;
- Emergency lid lock release;
- Imbalance switch-off;
- Easily exchangeable rotors;
- Automatic rotor recognition.

The C-28 A conforms to safety regulations such as IEC 61010 or the CE mark and all relevant EC standards and DIN norms and has been manufactured by a ISO 9001 accredited company.

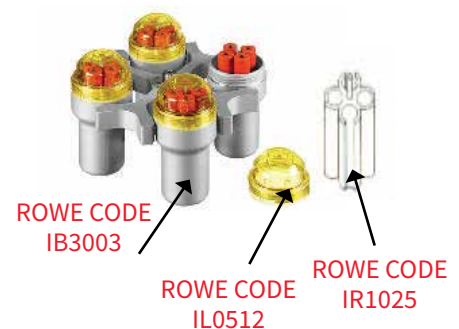
Capacity (max):	4 x 100 mL (swing-out rotor)
Speed / RCF (max):	6000 RPM / RCF 4.186
Dimension:	261x368x437mm (HxWxD)
Net weight:	15.5 kg



ROWE CODE IC3774

Swing Out Rotor
ROWE CODE IR1002

ROWE CODE IS5050

ROWE CODE
IB3003ROWE CODE
IL0512ROWE CODE
IR1025

CENTRIFUGES - BOECO

BOECO Centrifuges M-240 / M-240R

Even thermosensitive samples can be gently centrifuged thanks to highly reliable refrigeration. Best separation results are guaranteed with the smooth-running, high-performance motor featuring a maintenance-free frequency drive. With the optional autoclavable and aerosol-tight accessories, even infectious materials can be processed safely for both the user and the environment.

User-Friendliness

- Automatic lid locking;
- Quick-entry foil keypad;
- Easy-to-read, digital display;
- Display of current parameter values;
- Select key for parameter selection;
- Impulse key for short centrifuging;
- Open lid key;
- RCF key;
- Twist knob to enter values;
- RPM in increments of 10;
- Running time in minutes, max. 99 min;
- Temperature in increments of 1°C (M-240R);
- 4 programmable memories.

Refrigeration (M-240R)

- Infinitely variable setting from -10 °C to +40 °C;
- Fast Cool function in 10 - 15 min to +4 °C;
- Stand-by mode maintains the set temperature;
- Automatic refrigeration switch-off when the lid is opened.

Safety

- Lid dropping protection;
- Lid locking and holding;
- Emergency lid lock release;
- Motor overheating protection;
- Chamber overheating protection;
- Imbalance switch-off;
- Standstill indication;
- With the refrigerated model M-240R the LED in the open key lights up with the M-240 the lid opens automatically after the rotor has come to a standstill.

The M-240 / M-240R conforms to safety regulations such as IEC 61010, all relevant EC standards and DIN norms and have been manufactured by a ISO 9001 accredited company.

	M-240	M-240 R
Dimensions (mm) (H x W x D)	260 x 275 x 347	260 x 281 x 547
Net weight (approx)	11.5 kg	28 kg
Radio interference	EN 55011 ISM class B	
Immunity	EN 50082-2	
Central chamber temperature	as per DIN 58970	



ROWE
CODE IC3776



ROTOR: 50° angle, 24 place
ROWE CODE IR1005



LID: Aerosol tight and autoclavable
ROWE CODE IC3097

CENTRIFUGES - DLAB



D1008 Palm Micro Centrifuge

- Easy to operate with dual start/stop function - 7000 RPM fixed speed
- supplied with two rotors for 8 x 2mL tubes and 16 x PCR tubes
- Quick-change rotor without any tool (adapters included)



WITH BLUE LID
 ROWE CODE IC0039



WITH GREEN LID
 ROWE CODE IC0590



DM0412 Low Speed Centrifuge

- Easy operation with intuitive menu and easy-to-read display
- Speed can be set in RPM/RCF - 4500 RPM maximum speed
- Maintenance-free brushless DC motor
- Complete with A6-50P plastic angle rotor for 6 x 50mL or 6 x 15mL tubes

ROWE CODE IC0403

DM0424 Multi-Purpose Low Speed Centrifuge

- Quiet, compact and convenient with LCD display
- Maximum speed up to 4000 RPM - Can be set in RPM/RCF
- 3 customizable routine programs (Blood, Urine and Faecal)
- 3 acceleration and 4 deceleration rates
- Maximum capacity 4 x 50mL - can accommodate different sizes of blood collection and centrifuge tubes (suitable for swing out and angle rotor)

ROWE CODE IC0832



CENTRIFUGES - DLAB



D1524R High Speed Refrigerated Micro Centrifuge



- Precooling - the compressor automatically starts cooling as long as the set temperature is lower than the ambient temperature
- Temperature range -20°C to 40°C
- Short pre-cooling time (7 minutes from room temperature to 4°C)
- 9 program storage capacity
- High-strength aluminum alloy rotor can be fully autoclavable at 121°C
- Adjustable acceleration/deceleration at 9 levels allows gentle braking at low speed for better separation
- Complete with AS24-2 rotor, 24 x 1.5/2.0mL tubes

ROWE CODE IC0587

D3024 High Speed Micro Centrifuge

- Brushless motor drive (maintenance free)
- Safety features include door interlock; excessive speed and temperature detection (automatic self-diagnostics)
- Aluminum alloy rotors fully autoclavable at 121°C temperature and high pressure disinfection
- Complete with AS24-2 rotor for 24 x 1.5/2.0mL tubes

ROWE CODE IC0036



DM1424 Hematocrit Centrifuge

- Speed range of 200-12000 RPM - Precise and independent control of speed and time
- Pulse operation for fast and convenient quick spins
- Features include speed/RCF switch; short-time run function; audible alert function
- Safety features include door interlock; overspeed detector; over-temperature detector; automatic internal diagnosis and automatic rotor identification
- Complete with AC24 rotor kit (fits 24 capillary tubes)

ROWE CODE IC0866

CENTRIFUGES - CENTURION



CS04B Dual Centrifuge Complete with Rotor

- Max speed 4000 RPM (10 RPM steps)
- Max RCF 10 - 2150 G
- Timer 0 - 9 hours and hold (30 sec steps)
- 99 programs - 10 programs for acceleration and Deceleration rates
- Includes 8 x 50mL fixed angle rotor

ROWE CODE IC0730



C2004 Medium Centrifuge

- Speed 500 - 4000 RPM
- Max RCF 2200 G
- Timer 0 - 99 minutes and hold
- 10 programs - 10 programs for acceleration and deceleration rates

ROWE CODE IC4160

*Only a sample of our offering -
please call to discuss your requirements.*

CENTRIFUGES - EPPENDORF

eppendorf

5810 Bench top Centrifuge

- High-speed Centrifuge - Max speed 14,000 RPM
- Complete with S-4-104 rotor, 4 x 750mL round swing out buckets and adapters to hold 56 x 15mL or 28 x 50mL tubes
- Non-refrigerated

ROWE CODE IC0434



5430 R High Speed, Refrigerated

- With FA-45-30-11 rotor incl. Rotor lid for 30 x 1.5/2.0mL tubes
- Max speed 17,500 RPM
- 5 program keys for easy access to routine programs
- Saves up to 50 user-defined programs

ROWE CODE IC0786

5804 G Centrifuge

- Includes Rotor S-4-72 - Max capacity of conical tubes per rotor: 32 x 15 mL/16 x 50 mL
- Plate rotor for centrifugation of all types of MTP, PCR, cell culture, or deep-well plates
- Fixed-angle rotors for high-speed applications in tubes from 0.2mL to 85mL
- Max speed 14,000 RPM

ROWE CODE IC0865



FRONTIER™ 5000 SERIES MULTI PRO - OHAUS

Ohaus Frontier 5000 Multi-Pro Centrifuges are designed for universal use in multiple applications in research, industrial, and clinical laboratories and can be combined with their range of rotors and accessories for customised use. Available in 7 models with capacities from 0.2mL to 4 x 750mL, they feature high-speed performance at maximum volume, automatic rotor identification, and safety features.

**FC5816R Centrifuge**

- Speed Range 200 - 16,000 RPM
- Maximum rotor capacity 6 x 250mL
- Refrigeration Range -20°C to 40°C)
- 99 program memories
- 10 Acceleration and Deceleration rates
- Pre-cool time From room temperature to 4°C < 10 minutes
- Includes Swing-out rotor with 4 x 250mL, Adapter Racks for 28 x 15mL tubes (4 x racks) and 12 x 50mL tubes (4 x racks)

ROWE CODE IC0746

FC5718 Centrifuge

- Speed Range 200 - 18,000 RPM
- Maximum rotor capacity 4 x 100mL
- 99 program memories
- 10 Acceleration and Deceleration rates

ROWE CODE IC0748

**FC5706 Centrifuge**

- Speed Range 200 - 6000 RPM
- Maximum rotor capacity 6 x 50mL
- 10 Acceleration and Deceleration rates
- Without rotor

ROWE CODE IC0751

DIGTOR CENTRIFUGES - ORTO ALRESA



Digtor 22 C - CE 238

- Heated
- Max capacity 4 x 100mL
- Max speed 3000 RPM / 2425 xg
- Designed for oil/petrol applications
- 40 programmable memories

ROWE CODE IC0818



Digtor 22 - CE 228

- High capacity - Ventilated
- Max capacity 4 x 750mL
- Max speed 14,300 RPM / 21,948 xg
- 40 programmable memories

ROWE CODE IC0827

Also available in a refrigerated version, the Digtor 22 R.



AHN MYLAB® CLC-02

The ideal blood separation centrifuge

- Max speed 4500 RPM
- 1x fixed angle combi-rotor
- Fits 4 x 50mL tubes or 8 x 15mL tubes and 6 pieces tube holders

ROWE CODE IC0943



AHN MYLAB® HC-01 HEMATOCRIT

- 12000 RPM
- With rotor
- Fits 24 x 74/45mmL capillary tubes

ROWE CODE IC0826

CLEANING VERIFICATION - SURFACES

novaLUM II-X ATP Detection System
Advanced Cleaning Verification



Why risk the unseen?

- FAST - PocketSwab Plus detects ATP in 5 seconds
- CONVENIENT - Room Temperature Storage PocketSwab Plus for surfaces
- EFFECTIVE - Detects even the lowest levels of ATP
- SAFE - Sodium azide-free
- Audit Compliant - Data reporting (novaLINK software)
- Data Transfer - USB and WiFi

HARDWARE/SWABS	ROWE CODE
novaLUM IIX	IM0216
PocketSwab Plus ATP swab for surfaces, PK/100	HS0169
AllerGiene ATP swab for controlling cross contamination from food residue, PK/25	GC0163
WaterGiene ATP swab for production and rinse waters, PK/25	GC0167

ATP Detection System for Hygiene Verification

HARDWARE/SWABS	ROWE CODE
Pocketswab-Plus for ATP monitoring, PK/100, for use with Novalum Luminometer	HS0169
Pocketswab-Plus for ATP monitoring, PK/100, for use with Novalum Luminometer	GP1193
Allergiene Swab, PK/25, ATP hygiene test for controlling cross-contact from food residue, for use with Novalum	GC0163
Watergiene PK/4x25, for ATP detection in food plant production waters, rinse water and wet surfaces use with novalum	GC0166
Field swab, PK/25, for ATP detection in outdoor/field environment use with Novalum	GC0165
ATP positive control/kit/4 tablets (requires chilled transport and freezer storage)	GC0171

BUFFERS

BUFFER SOLUTIONS	COLOUR	VOLUME (mL)	ROWE CODE
pH 1.00 buffer solution. NIST traceable	Colourless	500	CB0036
pH 1.68 buffer solution. NIST traceable	Colourless	500	CB2595
pH 1.68 buffer solution. NIST traceable	Colourless	5000	CB2593
pH 2.00 buffer (Citrate) NIST traceable	Colourless	500	CB2599
pH 4.00 buffer solution. NIST traceable Contamination proof bottle (certificate online)	Red	500	CB2660
pH 4.00 buffer solution NIST traceable. Contamination proof bottle	Colourless	500	CB2690
pH 4.00 buffer solution (certificate online)	Red	1000	CB2665
pH 4.00 buffer solution	Colourless	1000	CB0014
pH 4.00 buffer solution (certificate online)	Red	5000	CB2706
pH 4.00 buffer solution (certificate online)	Colourless	5000	CB2708
pH 6.88 buffer at 20c solution (certificate online)	Colourless	500	CB3001
pH 6.88 buffer at 20c solution	Colourless	1000	CB2990
pH 6.88 buffer solution	Purple	1000	CB0506
pH 6.88 buffer solution	Purple	5000	CB0507
pH 7.00 buffer solution NIST traceable. Contamination proof bottle	Colourless	500	CB3118
pH 7.00 buffer solution. NIST traceable Contamination proof bottle. (certificate online)	Green	500	CB3115
pH 7.00 buffer solution (certificate online)	Green	1000	CB3110
pH 7.00 buffer solution	Colourless	1000	CB0015
pH 7.00 buffer solution (certificate online)	Green	5000	CB3106
pH 7.00 buffer solution (certificate online)	Colourless	5000	CB0404
pH 9.2 buffer solution	Turquoise	500	CB0508
pH 9.2 buffer solution NIST traceable. Contamination proof bottle.	Colourless	500	CB3370
pH 9.2 buffer solution	Turquoise	1000	CB0504
pH 9.2 buffer solution	Colourless	1000	CB3380
pH 9.2 buffer solution	Turquoise	5000	CB0505
pH 10.00 buffer solution. NIST traceable Contamination proof bottle. (certificate online)	Blue	500	CB3515
pH 10.00 buffer solution (certificate online)	Blue	1000	CB3510
pH 10.00 buffer solution (certificate online)	Blue	5000	CB3475
pH 12.00 buffer solution. NIST traceable	Colourless	500	CB3606



ROWE CODE
CB0036



ROWE CODE
CB2599



ROWE CODE
CB2660



ROWE CODE
CB2665



ROWE CODE
CB3115



ROWE CODE
CB3370

ELECTRODE SOLUTIONS	VOLUME (mL)	ROWE CODE
Electrode (pH) storage solution	250	CP1015
Electrode (pH) storage solution	500	CP1032
Electrode (pH) storage solution	1000	CE0298
Electrode (pH) storage solution	5000	CP1043
Electrode cleaning solution (PEPSIN/HCl)	5000	CE2153
Ferrous-ferric redox standard 476mV @25°C (Ag/AgCl/SAT. KCl) (ORP solution, light's solution)	1000	CO1110
ORP solution 600mV +/-20mV @ 25°C	1000	CO1111
pH electrode filling solution (3.5M KCl)	200	IP1000
Potassium chloride 3M	1000	CP2510
Potassium chloride 3.3M	5000	CP2565
Potassium chloride 3.5M	1000	CP2512
Zobell solution A & B (ORP standard, 229mV @ 25°C)	2 x 250	IZ1005
Zobell solution A & B (ORP standard, 229mV @ 25°C)	2 x 1000	IZ1010

Rowe Scientific Pty. Ltd. are national distributors for these brands of fine chemicals.



ROWE CODE
CP1032



ROWE CODE
CE0298



ROWE CODE
CO1110



ROWE CODE
CO1111



ROWE CODE
IZ1010



CONDUCTIVITY STANDARDS

CONDUCTIVITY SOLUTIONS	VOLUME	ROWE CODE
1±0.25 uS/cm @ 25°C (certificate online) (AR)	500mL	IC1204
5uS/cm @ 25°C	1L	CC0937
10uS/cm @ 25°C	1L	IC1960
20uS/cm in contamination proof bottle	500mL	IC2037
25uS/cm @ 25°C (certificate online)	1L	IC1885
40uS/cm @ 25°C	1L	CC1879
50uS/cm @ 25°C	1L	IC1968
84uS/cm @ 25°C (certificate online)	500mL	IC2018
100uS/cm @ 25°C	1L	IC1971
100uS/cm @ 25°C	500mL	CC0811
150uS/cm @ 25°C	1L	IC1972
150uS/cm @ 25°C (certificate online)	5L	IC5330
500uS/cm @ 25°C	1L	IC2053
718uS/cm @ 25°C	1L	IC1953
718uS/cm @ 25°C	5L	IC1954
1000uS/cm @ 25°C	1L	IC1947
1413us/cm @25°C	500mL	IC2012
2000uS/cm @ 25°C (certificate online)	1L	CC0723
2344uS/cm @ 25°C	500mL	CC6363
5000uS/cm @ 25°C	1L	IC2054
1.413mS/cm @ 25°C (certificate online)	1L	IC19548
1.413mS/cm @ 25°C (certificate online)	5L	IC1955
2.76mS/cm @ 25°C (certificate online)	1L	IC1956
2.76mS/cm @ 25°C (certificate online)	5L	IC2027
6.67mS/cm @ 25°C (certificate online)	1L	IC1962
12.90mS/cm @ 25°C (certificate online)	1L	IC1957
12.90mS/cm @ 25°C (certificate online)	5L	IC5320
24.82 mS/cm @ 25°C	1L	IC1959
40mS/cm @ 25°C	1L	IC2061
58.670mS/cm @ 25°C (certificate online)	1L	IC1975
58.670mS/cm @ 25°C	5L	IC1973
80mS/cm @ 25°C	1L	IC1281
100mS/cm @ 25°C	1L	IC2051
111.90mS/cm @ 25°C (1.0M KC l)	1L	IC1925
200mS/cm @ 25°C (certificate online)	1L	IC2052
Salinity Standard Solution 35p pt (35ppk) (35 practical salinity units) for conductivity meter calibration	500mL	CS0984



ROWE CODE
CC6362



ROWE CODE
IC1953



ROWE CODE
CC1879



ROWE CODE
IC5330



ROWE CODE
CS0984



ROWE CODE
IC1960

TURBIDITY STANDARDS

TURBIDITY STANDARDS	VOLUME	ROWE CODE
1 NTU stabilised (certificate online)	500mL	CT0746
10 NTU stabilised (certificate online)	500mL	CT0747
20 NTU stabilised (certificate online)	500mL	CT0748
40 NTU stabilised (certificate online)	500mL	CT0749
100 NTU stabilised (certificate online)	500mL	CT0750
100 NTU SOLUTION	2L	CT2814
800 NTU stabilised (certificate online)	500mL	CT0765
4000 NTU (certificate online)	500mL	CT4675
Set - sealed vials for models 2100Q/QIS (Contains 10 20 100 & 800 NTU) (certificate online)	KIT	CK0219

ROWE CODE
CT4675ROWE CODE
CT0750

CLEANING AND BIOLOGICAL CONTROL	VOLUME	ROWE CODE
Buffer acetate pH4 for amperometric chlorine analysis (AR)	5L	CB3180
Ethanol 70% v/v GLR (HDPE jerrycan) (needs license)	2.5L	CE1590
Ethanol 70% v/v denatured with methanol (no permit required)	5L	CE2125
Ethanol 70% v/v GLR in plastic jerrycan (needs licence)	5L	CE0265
Ethanol 70% w/w GLR (77% v/v) in 10L HDPE container (needs licence)	10L	CE2167
Ethanol 70% v/v GLR (black plastic drum) (needs licence)	20L	CE1591
Ethanol 70% w/w GLR (77% v/v) in plastic container (needs licence)	20L	CE0262
Ethanol 80% v/v GLR in jerrycan (needs licence)	5L	CE0296
Ethanol 80% v/v GLR undenatured (needs license)	10L	CE0289
Phosphate buffered saline pH 7.4, 20x concentrate	1L	CP0988
Propan 2-ol GLR (isopropyl alcohol) 70%	5L	CP0956
Propan-2-ol GLR (isopropyl alcohol) 70% (plastic drum)	20L	CP6375
Quantumclean laboratory detergent	1L	CQ1000
Quantumclean laboratory detergent	5L	CQ1050
Quantumclean laboratory detergent	20L	CQ1100
Sodium hydroxide 0.2%w/v (AR)	20L	CS0004
Sulfamic acid 99.8% technical	25kg	CS14785

ROWE CODE
CE0265ROWE CODE
CE1590

STANDARD SOLUTIONS IN VARIOUS MATRICES

STANDARD SOLUTIONS IN VARIOUS MATRICES	VOLUME (mL)	ROWE CODE
COPPER STANDARD SOLUTION		
2ppm in 0.5% NaCN, 0.5% NaOH	1000	CC5171
5ppm in 0.5% NaCN, 0.5% NaOH	1000	CC5175
10ppm in 0.5% NaCN, 0.5% NaOH	1000	CC5176
20ppm in 0.5% NaCN, 0.5% NaOH	1000	CC5177
1ppm in 2% v/v HNO ₃ (online certificate)	500	CC0869
5ppm in 20% HCl	1000	CC5161
10ppm in 20% HCl	1000	CC5160
100ppm in 20% HCl	1000	CC5170
CYANIDE STANDARD SOLUTION		
50ppm CN in 2% NaOH (online certificate)	1000	CC6385
100ppm CN in 2% NaOH (online certificate)	1000	CC6386
200ppm CN in 2% NaOH (online certificate)	1000	CC6388
1000mg/L CN in 0.1M NaOH	1000	CC0705
FLUORIDE ANALYSIS REAGENTS		
0.2ppm F in water	1000	CF1480
0.2ppm F in sodium sulfate 1g/L	5000	CF0020
0.5ppm F in water	1000	CF1445
0.5ppm F in sodium sulfate 1g/L	1000	CF1460
0.5ppm F in sodium sulfate 1g/L	5000	CF1424
1ppm F in water	1000	CF1446
1ppm F in sodium sulfate 1g/L	1000	CF1461
1ppm F in sodium sulfate 1g/L (online certificate)	5000	CF1434
2ppm F in water	1000	CF1440
2ppm F in sodium sulfate 1g/L	1000	CF1463
2ppm F in sodium sulfate 1g/L (non-qap)	5000	CF1441
10ppm F in water (online certificate)	1000	CF1455
50ppm F in sodium sulfate 1g/L (online certificate)	5000	CF0198
1000mg/L F in water	1000	CF0022



ROWE CODE
CC5171



ROWE CODE
CC6385



ROWE CODE
CF1445

We have chosen to only list those standards manufactured internally by Rowe Scientific. We offer the full listing of High Purity Standards (HPS), many of which are stocked. Please call us to enquire.

STANDARD SOLUTIONS IN VARIOUS MATRICES	ROWE CODE
GOLD STANDARD SOLUTION - VOLUME 1000mL	
0.1ppm AAS in DIBK & 1% aliquat (online certificate)	CG0262
0.5ppm AAS in DIBK & 1% aliquat	CG1218
1ppm AAS in DIBK & 1% aliquat	CG1219
2ppm in DIBK & 1% aliquat	CG1221
2.5ppm AAS in DIBK & 1% aliquat	CG1228
5ppm AAS in DIBK & 1% aliquat	CG1222
10ppm AAS in DIBK & 1% aliquat	CG1223
20ppm AAS in DIBK & 1% aliquat	CG1224
50ppm AAS standard, in DIBK & 1% aliquat	CG1235
0.50ppm in 10% HCl	CS4033
1ppm in 10% HCl (certified)	CS4054
2ppm in 10% HCl (certified)	CS4058
5ppm in 10% HCl (certified)	CS4035
10ppm in 10% HCl (certified)	CS4040
20ppm in 10% HCl (certified)	CS4045
25ppm in 10% HCl (certified)	CS4049
30ppm in 10% HCl (certified)	CS4048
40ppm in 10% HCl (certified)	CS4047
100ppm in 10% HCl (certified)	CS4055
1000ppm in 10% HCl, trace HNO ₃ (online certificate)	CG0228
10,000ppm in 10% HCl trace HNO ₃ (online certificate)	CS4014
1ppm in 5% v/v HNO ₃ , 10% v/v HCl matrix with precipitate from 1.89g/L AgNO ₃ (certified)	CG0008
2ppm in 5% v/v HNO ₃ , 10% v/v HCl matrix with precipitate from 1.89g/L AgNO ₃ (certified)	CG0009
5ppm in 5% v/v HNO ₃ , 10% v/v HCl matrix with precipitate from 1.89g/L AgNO ₃ (certified)	CG0010
10ppm in 5% v/v HNO ₃ , 10% v/v HCl matrix with precipitate from 1.89g/L AgNO ₃ (certified)	CG0011
20ppm in 5% v/v HNO ₃ , 10% v/v HCl matrix with precipitate from 1.89g/L AgNO ₃ (certified)	CG0013
30ppm in 5% v/v HNO ₃ , 10% v/v HCl matrix with precipitate from 1.89g/L AgNO ₃ (certified)	CG0014
50ppm in 5% v/v HNO ₃ , 10% v/v HCl matrix with precipitate from 1.89g/L AgNO ₃ (certified)	CG0015

STANDARD SOLUTIONS IN VARIOUS MATRICES	ROWE CODE
GOLD STANDARD SOLUTION - VOLUME 1000mL	
80ppm in 5% v/v HNO ₃ , 10% v/v HCl matrix with precipitate from 1.89g/L AgNO ₃ (certified)	CG0016
100ppm in 5% v/v HNO ₃ , 10% v/v HCl matrix with precipitate from 1.89g/L AgNO ₃ (certified)	CG0017
5ppm in 20% HCl/10% HNO ₃ (certificate online)	CS4112
25ppm in 20% HCl/10% HNO ₃ (certificate online)	CG0293
1ppm in 0.1% w/v NaOH/0.01% w/v NaCN (certified)	CS4060
2ppm in 0.1% w/v NaOH/0.01% w/v NaCN (certified)	CS4053
1ppm in 0.25% NaCN, 0.1% NaOH (certified)	CS4079
2ppm in 0.25% NaCN, 0.1% NaOH (certified)	CS4081
5ppm in 0.25% NaCN, 0.1% NaOH (certified)	CS4082
10ppm in 0.25% NaCN, 0.1% NaOH (certified)	CS4084
50ppm in 0.25% NaCN, 0.1% NaOH (certified)	CS4095
100ppm in 0.25% NaCN, 0.1% NaOH (certified)	CS4100
1000ppm in 0.25% NaCN, 0.1% NaOH (certified)	CS4039
1000ppm in 0.5% w/v NaOH, 2.5% w/v NaCN	CG1178

STANDARD SOLUTIONS IN VARIOUS MATRICES	ROWE CODE
IRON STANDARD SOLUTION - VOLUME 500mL	
10ppm in 2% v/v HNO ₃ (online certificate)	CI0257

MULTI-ELEMENT STANDARD SOLUTION - VOLUME 1000mL	
Gold and silver 1ppm in 0.1% NaOH 0.01% NaCN matrix (certified)	CM0706

POTASSIUM STANDARD SOLUTION - VOLUME 500mL	
1000ppm in 2% v/v HNO ₃ (online certificate)	CP1141

SILVER STANDARD SOLUTION - VOLUME 1000mL	
5ppm in 5% HNO ₃ (certified)	CS8567

SODIUM STANDARD SOLUTION - VOLUME 500mL	
300ppm in 2% v/v HNO ₃ (online certificate)	CS1692

ZINC STANDARD SOLUTION - VOL 500mL	
1000ppm Zinc in 2% v/v HNO ₃	CZ0047

VOLUMETRIC TITRATION SOLUTIONS

VOLUMETRIC TITRATION SOLUTIONS	VOLUME (mL)	ROWE CODE
Ammonium thiocyanate (0.100+/-0.002)M (AR) (online certificate)	2500	CA2087
Barium chloride 0.1M	5000	CB3608
Barium chloride 1M	5000	CB1539
EDTA (disodium) 0.15 +/- 0.001M	5000	CE1192
EDTA disodium salt 0.01M solution ethylenediaminetetraacetic acid (AR)	500	CE1260
EDTA disodium salt 0.01M solution ethylenediaminetetraacetic acid (AR)	2500	CE1320
EDTA disodium salt 0.01M solution ethylenediaminetetraacetic acid (AR)	5000	CE0034
EDTA disodium salt solution 0.1M (AR)	500	CE1240
EDTA disodium salt 0.1M (AR) standard solution (online certificate)	2500	CE1325
Hydrochloric acid (0.01 +/- 0.0001)M (AR) (online certificate)	2500	CH1104
Hydrochloric acid (0.02 +/- 0.0005M) (AR)	2500	CH0378
Hydrochloric acid (0.1 +/- 0.001M) (AR)	125	CH1130
Hydrochloric acid (0.1 +/- 0.0005)M (AR) standard solution	1000	CH1112
Hydrochloric acid (0.1 +/- 0.0005)M (AR) standard solution	2500	CH1115
Hydrochloric acid (0.1 +/- 0.0005)M (AR) standard solution	20,000	CH1113
Hydrochloric acid (0.5 +/- 0.0005)M (AR) standard solution	1000	CH1455
Hydrochloric acid (0.5 +/- 0.0005)N (AR) standard solution	2500	CH1255
Hydrochloric acid (0.5 +/- 0.0005)N (AR) standard solution (online certificate)	10,000	CH1457
Hydrochloric acid (1 +/- 0.01)M (AR) standard solution	2500	CH1569
Hydrochloric acid (1 +/- 0.01)M (AR) standard solution	5000	CH1575
Hydrochloric acid (1 +/- 0.001)M (AR) (online certificate)	10,000	CH0362
Hydrochloric acid (1 +/- 0.01)M (AR) standard solution	20,000	CH1570
Hydrochloric acid (1 +/- 0.05)M (AR) standard solution	1000	CH1560
Hydrochloric acid 2 +/- 0.05M (AR) standard solution	5000	CH1610
Hydrochloric acid (2.7 +/- 0.02)M (AR) (online certificate)	10,000	CH0669
Iodine solution 0.005M in black plastic drum	10,000	CI1006
Iodine (0.1 +/- 0.001)N (0.05M) solution	2500	CI1102



ROWE CODE
CA2087



ROWE CODE
CE1260



ROWE CODE
CE1325



ROWE CODE
CH0378



ROWE CODE
CH1455



ROWE CODE
CI1102

Not seeing your product - please call us!
This is only a sample of what we have available.

VOLUMETRIC TITRATION SOLUTIONS	VOLUME (mL)	ROWE CODE
Potassium dichromate 0.1M (AR)	2000	CP4840
Potassium dichromate solution 4.390g/L	2500	CP1148
Potassium permanganate solution 0.02M (0.1N) (AR)	2500	CP4674
Silver nitrate 0.01M solution	5000	CS8236
Silver nitrate 0.0282N	500	CS3055
Silver nitrate (0.05 +/- 0.001)M (AR) solution	5000	CS0174
Silver nitrate (0.1 +/- 0.001)M (AR) solution (in glass bottle)	2500	CS8330
Silver nitrate (0.1 +/- 0.001)M (AR) solution (in HDPE jerrycan)	2500	CS8342
Silver nitrate (0.1 +/- 0.001)M (online certificate) (AR)	10,000	CS0162
Silver nitrate 0.171M (online certificate)	5000	CS1682
Silver nitrate 0.282N	500	CS3060
Silver nitrate solution (1.732g/L) (AR)	1000	CS8245
Silver nitrate (1.732g/L) (AR)	5000	CS8247
Silver nitrate 5.202g/L (online certificate)	10,000	CS0164
Sodium hydroxide (0.01 +/- 0.0005)M standard solution (online certificate)	1000	CS1153
Sodium hydroxide (0.01 +/- 0.0005)M standard solution (online certificate)	5000	CS1152
Sodium hydroxide (0.05 +/- 0.001)M (AR) solution	5000	CS0176
Sodium hydroxide (0.1 +/- 0.0005)M (AR) standard solution	1000	CS11520
Sodium hydroxide (0.1 +/- 0.0005)M (AR) standard solution	2500	CS11390
Sodium hydroxide (0.1 +/- 0.0005)M (AR) standard solution (online certificate)	5000	CS11515
Sodium hydroxide solution (0.2 +/- 0.005)M	10,000	CS1171
Sodium hydroxide solution (0.333 +/- 0.0005)N ar	2500	CS1166
Sodium hydroxide solution (0.333 +/- 0.0005)N (AR)	5000	CS1167
Sodium hydroxide solution (0.333 +/- 0.0005)N (AR)	10,000	CS1168
Sodium hydroxide (0.5 +/- 0.0005)M (AR) standard solution	2500	CS12100
Sodium hydroxide (0.5 +/- 0.0005)M (AR) standard solution	10,000	CS12156
Sodium hydroxide (1 +/- 0.005)M (AR) standard solution	1000	CS12045
Sodium hydroxide (1 +/- 0.005)M (AR) standard solution	2500	CS0962
Sodium hydroxide (1 +/- 0.005)M (AR) standard solution (online certificate)	5000	CS11765
Sodium hydroxide (1 +/- 0.005)M (AR) standard solution (online certificate)	10,000	CS11768
Sodium hydroxide (1 +/- 0.005)M (AR) standard solution	20,000	CS11770
Sodium hydroxide (2 +/- 0.005)M (AR)	5000	CS12217



ROWE CODE
CP4840



ROWE CODE
CS0174



ROWE CODE
CS0162



ROWE CODE
CS0176



ROWE CODE
CS1171



ROWE CODE
CS1170

VOLUMETRIC TITRATION SOLUTIONS

VOLUMETRIC TITRATION SOLUTIONS	VOLUME (mL)	ROWE CODE
Sodium thiosulfate solution (0.1+/-0.001)M (0.1N)	1000	CS2590
Sodium thiosulfate (0.1 +/- 0.001)M (0.1N) (online certificate)	2500	CS1606
Sodium thiosulfate 0.1M (AR)	5000	CS14165
Sodium thiosulfate 0.2M (AR) (online certificate)	10,000	CS14180
Sulfuric acid (0.01+/- 0.0002)M, (0.020N) (AR) standard solution	500	CS3015
Sulfuric acid (0.01 +/- 0.0002)M, (0.020N) (AR) standard solution	1000	CS6699
Sulfuric acid (0.01 +/- 0.0002)M, (0.020N) (AR) standard solution	2500	CS14843
Sulfuric acid (0.1 +/- 0.0005)N (0.05M) (AR) standard solution	500	CS1508
Sulfuric acid (0.1 +/- 0.0005)N (0.05M) (AR) standard solution	1000	CS14856
Sulfuric acid (0.1 +/- 0.0005)N (0.05M) (AR) standard solution	5000	CS14925
Sulfuric acid (0.25 +/- 0.005)M, (0.500N) (AR) standard solution	5000	CS14934
Sulfuric acid (0.25 +/- 0.005)M (0.500N) (AR) standard solution	20,000	CS14931
Sulfuric acid (0.5 +/- 0.05)M (1.0N) (AR) standard solution	1000	CS15505
Sulfuric acid (0.5 +/- 0.005)M, (1.00N) (AR) standard solution	5000	CS15500
Sulfuric acid 0.5N (AR) solution	200L	CS14930
Sulfuric acid 0.588 +/- 0.005N solution	5000	CS14938
Sulfuric acid (1 +/- 0.02M) (2N) (AR) standard solution	1000	CS1576
Sulfuric acid 3M (AR)	5000	CS0001
Sulfuric acid 5N (2.5M) (AR)	500	CS1586
Sulfuric acid 5N (2.5M) (AR)	2500	CS14933



ROWE CODE
CS2590



ROWE CODE
CS6699



ROWE CODE
CS14934



ROWE CODE
CS15500



ROWE CODE
CS14938



ROWE CODE
CZ1585

INDICATORS

INDICATORS	UOM	ROWE CODE
ANS reagent	500mL	CA0001
Dimethylaminobenzylidene (5-(U)) rhodanine	5g	CD1850
Dimethylaminobenzylidene (5-(U)) rhodanine	10g	CD1851
Dimethylaminobenzylidene (5-(u)) rhodanine	25g	CD3979
Dimethylaminobenzylidene rhodanine 0.1% w/v solution in acetone (cyanide indicator)	500mL	CD1856
Indicator iron titration (1% w/v sodium diphenylamine sulfonate in sulfuric acid) (AR)	1L	CI3600
Iron (III) (ferric) ammonium sulfate solution (2.69% w/v as $\text{NH}_4\text{Fe}(\text{SO}_4)_2$) (0.1M FAS in 5% v/v H_2SO_4) (AR)	10L	CF0940
Methyl orange 0.1% w/v in methanol	100mL	CM4215
Methyl orange solution 0.05% m/v in water	100mL	CM4235
Methyl red indicator, free acid (AR)	25g	CM2315
Methyl red 0.1% m/v in methanol (AR)	100mL	CM2310
Mixed indicator (Rankine SO_2) (0.1% Methyl red + 0.05% Methylene blue)	100mL	CM2312
Mixed indicator (Rankine SO_2) (0.1% Methyl red + 0.05% Methylene blue)	500mL	CM2308
Phenolphthalein 0.1% w/v in ethanol	100mL	CP5257
Phenolphthalein solution 1% indicator in propan-2-ol	100mL	CP5253
Phenolphthalein GLR	100g	CP5237
Phenolphthalein solution 0.5% w/v in ethanol	500mL	CP5211
Phenolphthalein solution 1% w/v in ethanol	500mL	CP5210
Phenolphthalein solution 1% in ethanol	1L	CP5262
Universal indicator (pH 3.0 - 11.0)	500mL	CU1020

ETHANOL STANDARDS	VOLUME	ROWE CODE
Ethanol standard (5 +/- 0.05)% v/v (online certificate)	500 mL	CE0016
Ethanol standard (10 +/- 0.1)% v/v (online certificate)	500 mL	CE0007
Ethanol standard (12 +/- 0.1)% v/v (online certificate)	500 mL	CE0008
Ethanol standard (15 +/- 0.2)% v/v (online certificate)	500 mL	CE0009



ROWE CODE
CA0001



ROWE CODE
CD1851



ROWE CODE
CI3600



ROWE CODE
CM4235



ROWE CODE
CM2312



ROWE CODE
CP5262

REAGENTS

REAGENTS	UOM	ROWE CODE
Acetic acid glacial AR	2.5L	CA1215
Acetone GLR (metal drum) (transport below 50°C)	20L	CA1600
Acetone AR (glass bottle)	2.5L	CA1500
Acetone AR (plastic container)	2.5L	CA1510
Acetone GLR (general purpose) (plastic drum)	10L	CA1601
Acetone GLR (plastic container)	2.5L	CA1452
Acid mixture (NSNi) (hydrofluoric / perchloric acid)	2.5L	CA1114
Acid mixture (NSNi) (hydrofluoric / perchloric acid)	4.83L	CA1124
Aliquat 336 (tricaprylmethylammonium chloride)	1L	CA3100
Aluminium potassium sulfate dodecahydrate GLR	500g	CA3524
Ammonia solution 25% AR (glass bottle)	2.5L	CA0782
Ammonium hydroxide 25% GLR	10L	CA0077
Ammonium acetate AR	5kg	CA0024
Ammonium acetate AR	500g	CA0037
Ammonium chloride AR	500g	CA1808
Ammonium hydrogen difluoride	500g	CA2220
Anti-bumping granules (fused alumina) small 1-3mm	250g	CA1107
Ascorbic acid (L+) AR	500g	CA4705
Calcium carbonate AR	500g	CC1612
Chloroform AR	2.5L	CC3144
Citric acid anhydrous BP/FCC 12-40 mesh	25kg	CC3099
Citric acid anhydrous GLR	1kg	CC3079
Citric acid monohydrate	25kg	CC3057
Citric acid monohydrate GLR	5kg	CC3050
Copper (II) sulfate pentahydrate technical	5kg	CC5851
Dichloromethane AR	2.5L	CD1104
Diisobutylketone (DIBK)	20L	CD1500
Diisobutylketone (DIBK)	2.5L	CF1555
Diisobutylketone with 1% aliquat 336	2.5L	CF1560
Diisobutylketone with 1% aliquat 336 (plastic drum)	20L	CD1550
Distilled (demin) water	20L	CD2400
Distilled (demin) water	5L	CD2405
Distilled (demin) water (natural HDPE drum)	20L	CD2404
Distilled (demin) water (refill)	1000L	CD2462
EDTA disodium salt dihydrate, AR (ethylenediaminetetraacetic acid, disodium salt, dihydrate)	500g	CE1100



ROWE CODE
CA1215



ROWE CODE
CA1452



ROWE CODE
CA3100



ROWE CODE
CA1107



ROWE CODE
CD2405

REAGENTS	UOM	ROWE CODE
Ethanol 95% AR (glass bottle) (needs licence)	2.5L	CE1665
Ethanol 95% GLR (plastic container) (needs licence)	5L	CE0261
Ethanol absolute AR (plastic container) (needs licence)	20L	CE0323
Ethanol absolute GLR (needs licence)	5L	CE1693
Ethanol absolute GLR (plastic container) (needs licence)	20L	CE1706
Ethanol absolute GLR (plastic container) needs a licence	10L	CE1750
Ethanol absolute AR (glass bottle) (needs license)	2.5L	CE1616
Ethanol absolute AR (plastic container) (needs licence)	5L	CE2072
Ethanol absolute AR (plastic container) (needs licence)	10L	CE1738
Ethanol absolute AR (plastic container) (needs licence)	2.5L	CE1622
Ethanol absolute denatured (100IMS) (licence not required)	2.5L	CE1715
Ethanol absolute denatured (100IMS) (license not required)	20L	CE1703
Ethylene glycol 50% v/v in deionised water	20L	CE2127
Ethylene glycol technical	2.5L	CE0300
Glycerol GLR	10L	CG1650
Gold wire (99.99%) 1mm diameter	1g	CG2010
Hydrochloric acid solution 3M (AR)	1L	CH0350
Hydrochloric acid (HCl 10% w/w) technical	5L	CH1072
Hydrochloric acid 32% AR	20L	CH1730
Hydrochloric acid 32% AR	2.5L	CH1680
Hydrochloric acid 32% technical	2.5L	CH1100
Hydrochloric acid 32% technical (includes drum)	20L	CH1160
Hydrochloric acid solution 10% w/w technical	10L	CH1077
Hydrochloric acid solution 10% w/w technical	20L	CH1090
Hydrogen peroxide 30% AR w/v (100 volume)	500mL	CH1197
Hydrogen peroxide 30% AR w/v (100 volume)	2.5L	CH2852
Lead foil, 0.18mm thick 80mm wide (for fire assay)	500g	CL1576
Lead foil 0.18mm thick 80mm wide (for fire assay)	5kg	CL1577
LST heavy liquid SG 2.85 @ 20c	1L	CL1934
Methanol AR	2.5L	CM2175
Methanol AR (plastic container)	2.5L	CM2184
Methanol AR (plastic jerrycan)	5L	CM5500
Methanol GLR (plastic container)	10L	CM3658
Methanol GLR (plastic container)	20L	CM1950
Methylated spirits 95%	20L	CM2465



ROWE CODE
CE1693



ROWE CODE
CE2072



ROWE CODE
CE0300



ROWE CODE
CL1577



ROWE CODE
CM2465

REAGENTS

REAGENTS	UOM	ROWE CODE
Methylated spirits 95% GLR	5L	CM2460
Nitric acid 0.1M (AR)	1L	CN1187
Nitric acid 2.5% v/v AR	2.5L	CN0941
Nitric acid 10% v/v AR	5L	CN1045
Nitric acid 68% w/w AR	2.5L	CN1062
Nitric acid 68% w/w AR	15L	CN2587
Phosphoric acid (ortho) 25% v/v	5L	CO13125
Phosphoric acid (ortho) 25% w/v	10L	CP1181
Phosphoric acid (ortho) 25% w/v	20L	CO1312
Phosphoric acid (ortho) 85% AR	2.5L	CO1317
Potassium chloride AR	500g	CP2600
Potassium chloride AR	5kg	CP2605
Potassium hydroxide pellets AR	500g	CP3950
Potassium iodide AR	500g	CP4052
Potassium iodide AR	5kg	CP4125
Potassium nitrate technical grade	25kg	CP4455
Potassium oxalate monohydrate AR	500g	CP4632
Propan-2-ol (isopropanol) GLR	2.5L	CP6371
Propan-2-ol (isopropyl alcohol) GLR	10L	CP5357
Propan-2-ol (isopropyl alcohol) GLR (plastic container)	20L	CP5352
Propan-2-ol (isopropyl alcohol) AR (glass bottle)	2.5L	CP6365
Propan-2-ol (isopropyl alcohol) AR (plastic bottle)	2.5L	CP0117
Propan-2-ol (isopropyl alcohol) AR (plastic DG container with tap & cap)	20L	CP6368
Propan-2-ol (isopropyl alcohol) AR (transport below 70°C)	20L	CP6367
Quantumclean laboratory detergent	5L	CQ1050
Silver nitrate AR less than 2.5ppm AU (greater than 99.5% Pure, conforms to ACS)	500g	CS8400
Sodium (tetra) pyrophosphate food grade	5kg	CS6739
Sodium (tri-sodium) citrate dihydrate AR	500g	CS14050
Sodium carbonate anhydrous AR	500g	CS10038
Sodium chloride AR	500g	CS10307
Sodium chloride AR	5kg	CS10363
Sodium cyanide briquette, approx 12.5g/pc (needs license)	5.1kg	CS0168
Sodium cyanide briquette, approx 13.3g/pc (needs license)	7.7kg	CS0167
Sodium fluoride AR	500g	CS10988
Sodium gluconate (plastic bucket)	10kg	CS11156
Sodium hydroxide 30% w/w technical	15L	CC4736



ROWE CODE
CM2460



ROWE CODE
CP1181



ROWE CODE
CP4125



ROWE CODE
CP6368



ROWE CODE
CS10307



ROWE CODE
CC4736

REAGENTS	UOM	ROWE CODE
Sodium hydroxide 30% w/v technical	20L	CS0157
Sodium hydroxide 40% w/v AR	5L	CS3065
Sodium hydroxide 40% w/v (10N) GLR (natural container)	10L	CC4760
Sodium hydroxide 50% w/w technical	2.5L	CS6876
Sodium hydroxide 50% w/w technical (natural container)	10L	CS1579
Sodium hydroxide 50% w/w GLR (natural container)	10L	CC4762
Sodium hydroxide AR 8% m/v	10L	CC4663
Sodium hydroxide 60% w/v AR	2.5L	CS12292
Sodium hydroxide micropearls GLR	500g	CS11350
Sodium hydroxide pellets AR (less than 10ppm SiO ₂)	500g	CS12005
Sodium hydroxide pellets AR	5kg	CS12014
Sodium hypochlorite 12.5% (Transport below 30°C)	2L	CS12342
Sodium hypochlorite GLR 12.5%	5L	CS12345
Sodium hypochlorite 12.5% (Includes drum) (20L container plus vent cap) (liquid chlorine)	20L	CS12341
Sodium peroxide AR (fine grains)	500g	CS12981
Sodium sulfate anhydrous (granular) AR	500g	CS13355
Sodium sulfide flake technical	1.5kg	CS13664
Sodium sulfide flake technical	2.5kg	CS13666
Sodium thiosulfate pentahydrate AR	500g	CS14251
Sulfuric acid 2% v/v AR	1L	CS14977
Sulfuric acid 10% v/v AR	1L	CS1492
Sulfuric acid 1:1 v/v AR (50%)	2.5L	CS14982
Sulfuric acid (no fume acid) (drum deposit not included) 32% w/w	15L	CS15115
Sulfuric acid 96 - 98% technical	25kg	CS14900
Superfloc 573 GLR (liquid cationic flocculant)	1L	CS7352
Tartaric acid AR	500g	CT1000
Tetraethylene pentamine (TEPA) GLR	1L	CT0033
Tetraethylenepentamine (TEPA) 20% solution in water	10L	CT1384
Toluene GLR	2.5L	CT2265
Tris (hydroxymethyl) aminomethane AR (tris base)	500g	CT0032
Water ultrapure 15-18 megohm at production, 0.2µm filtered	5L	CW1003
Water ultrapure, 15-18 megohm at production, 0.2µm filtered	20L	CW1004
Xylene sulfur free GLR	5L	CX0030
Xylene sulfur free GLR	10L	CX1243



ROWE CODE
CC4760



ROWE CODE
CS12292



ROWE CODE
CS12342



ROWE CODE
CS14982



ROWE CODE
CT2265



ROWE CODE
CZ1432

CALIBRATION SOLUTIONS

Why HPS?

MEETING ISO STANDARDS

High-Purity Standards understands a comprehensive quality system is key to our customers' confidence in the products that we manufacture. That is why we developed our Total Quality System with the help and assessment of independent agencies. We are certified to ISO 9001:2015 and accredited by ANAB to ISO/IEC 17025:2017 and ISO 17034:2016.

COMPREHENSIVE PRODUCT TESTING

At High-Purity Standards, being called a Certified Reference Material requires extensive testing including:

- Certified value assignment
- Batch homogeneity testing for each lot
- Long-term and short-term stability testing

NIST TRACEABILITY

For inorganic standards, the scope of HPS ISO 17034 certificates has been limited to only those products that can be validated against the NIST Standard Reference Material 3100 series. This validation process meets the requirements established by NIST for maintaining direct NIST Traceability.

Where NIST Standard Reference Materials do not exist, HPS uses second sources provided by reputable CRM suppliers to provide an independent validation of products. Consequently, the certificate for these products will not include the ISO 17034 icon. HPS distinguishes between Certificates of Analysis by only placing icons on products that pass the most rigorous testing for traceability.

READING THE CERTIFICATES OF ANALYSIS

Each Certificate of Analysis provides detailed and specific information as to the extensive analysis behind the manufacturing of each product. HPS uses the best practices throughout this process, but should you encounter a discrepancy or concern, we would welcome your phone call.



ROWE CODE
BA1001



ROWE CODE
BB2505



ROWE CODE
BC1805



ROWE CODE
BI1150

ICP CALIBRATION SOLUTIONS	VOLUME (mL)	ROWE CODE
ALUMINIUM, 1000ppm ICP calibration standard in 2% HNO ₃	500	BA0980
ALUMINIUM, 10,000ppm ICP calibration standard in 10% HNO ₃	500	BA1001
ARSENIC, 1000ppm ICP calibration standard in 2% HNO ₃	500	BA2002
ARSENIC, 10,000ppm ICP calibration standard in 20% HNO ₃	500	BA2025
BARIUM, 10,000ppm ICP calibration standard in 4% HNO ₃	500	BB1571
BERYLLIUM, 1000ppm ICP calibration standard solution in 2% HNO ₃	500	BB0995
BORON, 1000ppm ICP calibration standard in H ₂ O	500	BB2505
CALCIUM, 1000ppm ICP calibration standard in 2% HNO ₃	500	BC1010
CALCIUM, 10,000ppm ICP calibration standard in 4% HNO ₃	500	BC1061
CHROMIUM, 10,000ppm ICP calibration standard in 10% HNO ₃	500	BC1652
COBALT, 1000ppm ICP calibration standard in 2% HNO ₃	500	BC3010
COBALT, 10,000ppm ICP calibration standard in 4% HNO ₃	500	BC3050
COPPER, 1000ppm ICP calibration standard in 2% nitric acid	500	BC2010
COPPER, 10,000ppm ICP calibration standard in 4% HNO ₃	500	BC1806
COPPER, 10,000ppm ICP calibration standard in 10% HCL	500	BC1805
IRON, 1000ppm ICP calibration standard in 2% nitric acid	500	BI2050
IRON, 10,000ppm ICP calibration standard in 10% HNO ₃	500	BI1150
LEAD, 1000ppm ICP calibration standard in 2% HNO ₃	500	BL1002
LEAD, 10,000ppm ICP calibration standard in 4% HNO ₃	500	BL1040
LUTETIUM, 1000ppm ICP standard solution in 2% nitric acid	500	BL1065
MAGNESIUM, 1000ppm ICP calibration standard in 2% HNO ₃	500	BM1005
MAGNESIUM, 10,000ppm ICP calibration standard in 4% HNO ₃	500	BM1053
MANGANESE, 1000ppm ICP calibration standard in 2% nitric acid	500	BM2010
MANGANESE, 10,000ppm ICP calibration standard in 4% HNO ₃	500	BM2060

ICP CALIBRATION SOLUTIONS	VOLUME (mL)	ROWE CODE
MERCURY , 1000ppm ICP calibration standard in 2% HNO ₃	500	BM2110
MULTI - 4 ELEMENT STANDARD , Fe 5000ppm, Co, Cu & V 500ppm in 5% nitric acid	500	BM0176
MULTI - 4 ELEMENT STANDARD (in 2 solutions) Solution A: Ba, B & Ti 500ppm in 2% nitric acid, Solution B: Sb 500ppm in 20% aqua regia	2 x 500	BM0178
MULTI - 4 ELEMENT STANDARD , U ₃ O ₈ 3000ppm, SO ₄ 20,000ppm, Cl 4000ppm & Fe 3000ppm in 2% HNO ₃ matrix	1000	BS0177
MULTI - 5 ELEMENT STANDARD , Al 5000ppm, Bi, Cr, Ni & U 500ppm in 5% nitric acid	500	BM0175
MULTI - 5 ELEMENT STANDARD , U ₃ O ₈ 1000ppm, 10,000ppm SO ₄ , 12,000ppm Cl, 100ppm K & Ca 300ppm in 2% HNO ₃ matrix	1000	BS0172
MULTI - 5 ELEMENT STANDARD , Be, Mn, Pb, Se & Zn 500ppm in 5% nitric acid	500	BM0179
MULTI - 6 ELEMENT STANDARD , As, Li, Mo, Sn, Sr & Ti 500ppm in 10% hydrochloric acid	500	BM0177
MULTI ELEMENT , ICP calibration mix, 2000ppm of Fe, Mg, Na, Ni, S in 5% HCl	1000	BM3440
MULTI ELEMENT , ICP calibration mix, 500ppm of Al, Ca, Co, Fe, Mg, Mn, K, Na, Ni, S, Si, & 50ppm of As, Cr, Cu, Zn, in 5% HCl	1000	BM3443
MULTI ELEMENT STANDARD , ICP quality control, 27 elements in 4% HNO ₃ + TR HF	250	BM3967
MULTI ELEMENT , ICP quality control standard in 5% HNO ₃ + TR HF	500	BM3962
NICKEL , 1000ppm ICP calibration standard in 2% HNO ₃	500	BN0990
NICKEL , 10,000ppm ICP calibration standard in 4% HNO ₃	500	BN1010
NICKEL , 20,000ppm ICP calibration standard in 10% HNO ₃ (includes ICP-MS scan & certificate)	500	BN1023
NITRIC ACID , 5%, reagent blank for ICP	500	BN1901
PHOSPHORUS , 10,000ppm ICP standard in 0.05% HNO ₃	500	BK1100
POTASSIUM , 1000ppm ICP calibration standard in 1% HNO ₃	500	BP1517
POTASSIUM , 10,000ppm ICP calibration standard in 1% nitric acid	500	BP1510
SCANDIUM , 100ppm ICP calibration standard in 2% HNO ₃	500	BS1004
SCANDIUM , 500ppm ICP calibration standard in 2% HNO ₃	500	BS1010
SELENIUM , 1000ppm ICP calibration standard in 2% HNO ₃	250	BS1900
SILICON , 1000ppm ICP calibration standard in H ₂ O (source (NH ₄) ₂ SiF ₆)	500	BS1515
SILICON , 10,000ppm ICP calibration standard in H ₂ O (source (NH ₄) ₂ SiF ₆)	500	BS1555
SILICON , 1000ppm ICP calibration standard in H ₂ O (source Na ₂ SiO ₃)	500	BS1514
SILVER , 1000ppm ICP calibration standard in 2% HNO ₃	500	BS2005
SODIUM , 10,000ppm ICP calibration standard in 1% nitric acid	500	BS1020
STANDARD CERTIFIED WASTEWATER SOLUTION , in HNO ₃	10	SW1360
SULFUR , 10,000ppm ICP calibration standard in H ₂ O	500	BS1040
SULFUR , 20,000ppm ICP calibration standard in H ₂ O	500	BS1041
TELLURIUM , 1000ppm ICP calibration standard in 20% HCl	500	BT1120
TITANIUM , 10,000ppm ICP standard in 5% HNO ₃ + 2% HF	500	BT2680
VANADIUM , 1000ppm ICP calibration standard in 2% HNO ₃	500	BV1070
YTTERBIUM , 1000ppm ICP calibration standard in 2% HNO ₃	500	BY1009
YTTERBIUM , 10,000ppm ICP calibration standard in 4% HNO ₃	500	BU1016
YTTRIUM , 1000ppm ICP calibration standard solution in 2% nitric acid	500	BY1120
YTTRIUM , 10,000ppm ICP calibration standard in 4% HNO ₃	500	BY1060
ZINC , 1000ppm ICP calibration standard in 2% HNO ₃	500	BZ1810
ZINC , 10,000ppm ICP calibration standard in 4% HNO ₃	500	BZ1820



ROWE CODE
BM0178



ROWE CODE
BM3443



ROWE CODE
BS1900



ROWE CODE
BY1120

For standards in more complex matrices, see the Standard Solutions manufactured by Rowe Scientific on page 75.

BENCHTOP CHILLERS

PolyScience Benchtop Chillers

These powerful, low-temperature chillers are well matched for use with rotary evaporators, vacuum systems, spectrometers, and other analytical equipment. They also are available with a mobile cart accessory for convenient placement under a bench.

LS Series -20° to +40°C

POLYSCIENCE BENCHTOP CHILLER

Model LS5 with turbine pump, -20 to 40°C

Key Specifications

Working Temperature: -20° to +40°C

Temperature Stability: ±0.1°C

Cooling Capacity: Up to 1290 watts @ 20°C

Features

- Optimised for high performance at low temperatures
- Capable of cooling multiple rotary evaporators
- WhisperCool® Environmental Control System
- Large, easy to read LED display
- Space-saving design
- Cooling at ambient temperatures as high as 35°C
- Low flow shutoff and alarm, high and low temperature alarms
- Simple setup, operation, and maintenance
- Centrifugal or turbine pump
- Fluid level indicator
- RS232 communication and external water filter optional



Polyscience Benchtop Chiller
Model LS Series

ROWE CODES	IC0270	IC0271	IC0272
SPECIFICATIONS	LS SERIES CHILLER, TURBINE PUMP	LS SERIES CHILLER, CENTRIFUGAL PUMP	LS SERIES CHILLER, CENTRIFUGAL PUMP
Working Temperature Range	-20° to 40°C	-20° to 40°C	-20° to 40°C
Temperature Stability	±0.1°C	±0.1°C	±0.1°C
Pump Type	Turbine	Centrifugal	Centrifugal
Cooling Capacity @ -20°C	150 W (60Hz)/140 W (50Hz)	230 W (60Hz)/230 W (50Hz)	260 W (60Hz)/240 W (50Hz)
Cooling Capacity @ -10°C	345 W (60Hz)/330 W (50Hz)	435 W (60Hz)/435 W (50Hz)	475 W (60Hz)/460 W (50Hz)
Cooling Capacity @ 0°C	540 W (60Hz)/500 W (50Hz)	680 W (60Hz)/680 W (50Hz)	750 W (60Hz)/700 W (50Hz)
Cooling Capacity @ +10°C	790 W (60Hz)/750 W (50Hz)	1030 W (60Hz)/1030 W (50Hz)	1130 W (60Hz)/1070 W (50Hz)
Cooling Capacity @ +20°C	900 W (60Hz)/830 W (50Hz)	1160 W (60Hz)/1160 W (50Hz)	1290 W (60Hz)/1190 W (50Hz)
Cooling Capacity @ +30°C	1020 W (60Hz)/990 W (50Hz)	1380 W (60Hz)/1380 W (50Hz)	1460 W (60Hz)/1420 W (50Hz)
Cooling Capacity @ +40°C	1140 W (60Hz)/1105 W (50Hz)	1550 W (60Hz)/1545 W (50Hz)	1610 W (60Hz)/1580 W (50Hz)
Maximum Pressure	43.40 psi (60Hz)/32.00 psi (50Hz)	9.00 psi (60Hz)/5.50 psi (50Hz)	14.50 psi (60Hz)/10.50 psi (50Hz)
Maximum Pressure Flow Rate	2.60 gpm (60Hz)/2.20 gpm (50Hz)	3.90 gpm (60Hz)/3.40 gpm (50Hz)	3.50 gpm (60Hz)/3.10 gpm (50Hz)
50Hz Part Number	LS52TY1A110A	LS52M21A110A	LS52MY1A110A

LM Series -10° to +30°C

POLYSCIENCE BENCHTOP CHILLER

Model LM6 with centrifugal pump, -10 to 30°C

Key Specifications

Working Temperature: -10° to +30°C

Temperature Stability: ±0.1°C

Cooling Capacity: Up to 560 watts @ 20°C

Features

- Optimised for performance at low temperatures
- Ideal for benchtop rotary evaporators
- Large, easy to read LED display
- Space-saving design
- Cooling at ambient temperatures as high as 35°C
- Low flow shutoff and alarm, high and low temperature alarms
- Simple setup, operation, and maintenance
- Choice of two different centrifugal pumps
- Fluid level indicator
- RS232 communication and external water filter optional



Polyscience Benchtop Chiller
Model LM Series

ROWE CODES	IC0273	IC0274
SPECIFICATIONS	LM SERIES CHILLER, CENTRIFUGAL PUMP	LM SERIES CHILLER, CENTRIFUGAL PUMP
Working Temperature Range	-10° to 30°C	-10° to 30°C
Temperature Stability	±0.1°C	±0.1°C
Pump Type	Centrifugal	Centrifugal
Cooling Capacity @ -10°C	170 W (60Hz)/110 W (50Hz)	230 W (60Hz)/140 W (50Hz)
Cooling Capacity @ 0°C	250 W (60Hz)/170 W (50Hz)	350 W (60Hz)/250 W (50Hz)
Cooling Capacity @ +10°C	340 W (60Hz)/280 W (50Hz)	470 W (60Hz)/390 W (50Hz)
Cooling Capacity @ +20°C	420 W (60Hz)/390 W (50Hz)	560 W (60Hz)/520 W (50Hz)
Cooling Capacity @ +30°C	540 W (60Hz)/500 W (50Hz)	650 W (60Hz)/600 W (50Hz)
Maximum Pressure	14.50 psi (60Hz)/12.50 psi (50Hz)	5.10 psi (60Hz)/4.40 psi (50Hz)
Maximum Pressure Flow Rate	3.50 gpm (60Hz)/3.00 gpm (50Hz)	2.10 gpm (60Hz)/1.80 gpm (50Hz)
50Hz Part Number	LM62MY1A110AT	LM62GY1A110A

BENCHTOP CHILLERS

MM Series -5° to +50°C

POLYSCIENCE BENCHTOP CHILLER

Model LS5 with turbine pump, -5° to +50°C, 240v 50hz, cooling capacity @ 20°C: 830w, max flow 8.3L/min. Max pressure 32psi

Key Specifications

Working Temperature: -5° to +50°C

Temperature Stability: ±0.1°C

Cooling Capacity: Up to 460 watts @ 20°C

Features

- Precise and stable temperature control at low temperatures
- Large, easy to read LED display
- Space-saving, benchtop design
- Cooling at ambient temperatures as high as 35°C
- Low flow shutoff and alarm, high and low temperature alarms
- Simple setup, operation, and maintenance
- Choice of two different centrifugal pumps
- Fluid level indicator
- RS232 communication and external water filter optional



Polyscience Benchtop Chiller
Model MM Series

ROWE CODES	IC0275	IC0205
SPECIFICATIONS	MM SERIES CHILLER, CENTRIFUGAL PUMP	MM SERIES CHILLER, CENTRIFUGAL PUMP
Working Temperature Range	-5° to 50°C	-5° to 50°C
Temperature Stability	±0.1°C	±0.1°C
Pump Type	Centrifugal	Centrifugal
Cooling Capacity @ -05°C	115 W (60Hz)/105 W (50Hz)	130 W (60Hz)/115 W (50Hz)
Cooling Capacity @ 0°C	195 W (60Hz)/175 W (50Hz)	215 W (60Hz)/190 W (50Hz)
Cooling Capacity @ +10°C	305 W (60Hz)/270 W (50Hz)	320 W (60Hz)/290 W (50Hz)
Cooling Capacity @ +20°C	435 W (60Hz)/390 W (50Hz)	460 W (60Hz)/410 W (50Hz)
Cooling Capacity @ +30°C	465 W (60Hz)/420 W (50Hz)	490 W (60Hz)/440 W (50Hz)
Cooling Capacity @ +40°C	505 W (60Hz)/450 W (50Hz)	520 W (60Hz)/470 W (50Hz)
Cooling Capacity @ +50°C	535 W (60Hz)/480 W (50Hz)	550 W (60Hz)/495 W (50Hz)
Maximum Pressure	14.50 psi (60Hz)/12.50 psi (50Hz)	5.10 psi (60Hz)/4.40 psi (50Hz)
Maximum Pressure Flow Rate	3.50 gpm (60Hz)/3.00 gpm (50Hz)	2.10 gpm (60Hz)/1.80 gpm (50Hz)
50Hz Part Number	MM72MY1A110A	MM72GY1A110A

6000 Series PolyScience Benchtop Chillers

Stable and reliable cooling for many common heat removal applications, including laser etching, AA furnaces, ICP, rotary evaporators, vacuum systems, reaction vessels, plasma etching, and condenser cooling.

Features

- Large, dual displays indicate temperature, pressure or flow rate simultaneously
- Compact, portable design takes up less floor space
- Choice of pumps and compressor sizes

Select from the LS Series, LM Series, MM Series or the range of PolyScience additives and coolants.

NB: Other models available upon request.



PolyScience Benchtop Chiller Model 6300 Series



Digital temperature display, digital pressure/flow rate display and fluid level gauge.

DESCRIPTION	MAX FLOW	MAX PRESSURE	ROWE CODE
6000 Series Chiller, Turbine Pump 1HP	11 L/min	83 psi	IC0189
6300 Series Chiller, Magnetic drive 1/3 HP	14.7 L/min	9.5 psi	IC0204

Coolants and Thermal Fluids

Enhance and extend the performance of your PolyScience circulator, general purpose water bath, chiller, or recirculating cooler with genuine PolyScience fluids, accessories, and replacement parts.

DESCRIPTION	ROWE CODE
Thermal fluid Polycool HC-50 temperature range -50° to 100°C	CT1527
Thermal fluid Polycool PG-20 temperature range -20° to 100°C	CT1699
Coolant Polyclear Mix 30 Plus with corrosion inhibitor 15° to 90°C	IC0445
Clarifier solution Polyclean, keeps water bath reservoirs clean and odour-free	IC0364



IC0445



CT1699



CT1527



IC0364

THIN LAYER CHROMATOGRAPHY (TLC)

Thin layer chromatography (TLC) and high performance thin layer chromatography (HPTLC), also called planar chromatography are based on a multistage distribution process involving:

- Suitable adsorbents (the stationary phase) coated as a thin layer onto a suitable support / backing (e.g., glass plate, polyester or aluminum sheet)
- Solvents or solvent mixtures (the mobile phase or eluent)
- Sample molecules (analytes)

Today TLC has gained increasing importance as an analytical separation technique, which is probably due to effects of instrumentation and automation. At the same time the applicability of thin layer chromatography was enhanced by development of new adsorbents and backings. MACHEREY-NAGEL offers a versatile range of ready-to-use layers, which are the result of 50 years of continuous research and development.

Features of modern TLC / HPTLC

The success of thin layer chromatography as a highly efficient microanalytical separation method is based on a large number of advantageous properties:

- High sample throughput in a short time
- Suitable for screening tests
- Pilot procedure for HPLC and Flash chromatography
- After separation the analytical information can be stored for a longer period of time (the TLC ready-to-use layer acts as storage medium for data)
- Separated substances can be subjected to subsequent analytical procedures (e.g., IR, MS) at a later date
- Rapid and cost-efficient optimization of the separation due to easy change of mobile and stationary phase

GAS CHROMATOGRAPHY (GC)

In gas chromatography (GC), the mobile phase is always a gas, mostly either He, N₂ or H₂. The stationary phase is often a viscous, gum-like liquid adhered to the inner wall of a capillary column (WCOT = Wall Coated Open Tubular). Transport of the components (analytes) occurs exclusively in the mobile phase, while separation only takes place in the stationary phase. The quality of a separation (resolution) depends on the residence time of the components within the stationary phase and on the rate of interactions. The type of interaction between component and phase (selectivity) is determined by the functional groups of the stationary phase. The polarity of the phase is a function of its substituents.

MACHEREY-NAGEL produces more than 50 GC phases. Most of them are USP listed. Each column is individually tested and supplied with test certificate (incl. test chromatogram) and instruction leaflet, but without fittings or ferrules. Columns have fused ends or are sealed with septa, to protect them from atmospheric oxygen. The standard size of a GC cage is 7 " (inch). In addition to the standard program we can often also offer custom-made columns (further dimensions, with integrated guard column, supplied on a 5 inch (5 ", ~13 cm) cage e.g., for the Agilent GC 6850. etc.).

SOLID PHASE EXTRACTION (SPE)

SPE is a powerful method for sample preparation and is used by most chromatographers today.

About 30 years ago MACHEREY NAGEL designed and introduced CHROMABOND SPE cartridges containing silica-based adsorbents.

SPE is a form of digital (step-wise) chromatography designed to extract, partition, and / or adsorb one or more components from a liquid phase (sample) onto a stationary phase (adsorbent or resin). An adsorbed substance can be removed from the adsorbent by stepwise increase of elution strength of the eluent (step gradient technique).

SPE extends a chromatographic system's lifetime, improves qualitative and quantitative analysis, and the demand placed on an analytical instrument is considerably lessened.

HPLC AND UHPLC

High performance liquid chromatography (HPLC) is part of liquid chromatographic separating processes of substance mixtures and their analysis. At the beginning the technique was also called high pressure liquid chromatography due to the high back pressure of the column. HPLC offers qualitative (identification of substances) and quantitative (concentration determination) analysis by comparison with standard substances. At the beginning of the 21st century the HPLC was complemented by the even more efficient UHPLC (ultra high performance liquid chromatography). Hereby even higher pressures (> 400 bar) result in shorter analysis time and enhanced efficiency enabling a higher sample throughput with smaller sample volumes.

Each MACHEREY NAGEL HPLC / UHPLC column is individually tested according to the most important characteristic parameters in quality control and the results are documented in a certificate of analysis.

CHROMATOGRAPHY CONSUMABLES

DESCRIPTION	PACK SIZE	MFR PART NUMBER	ROWE CODE
CHROMATOGRAPHY REAGENTS, ION PAIRING (IPC OR PIC)			
Butane-1-sulfonic acid, Sodium salt - LiChropur	25g	118303	CB0447
Butane-1-sulfonic acid, Sodium salt, >99% for IPC	10g	19022-10G-F	CB0448
Cetyl trimethylammonium hydrogen sulfate - LiChropur	25g	118313	CC0783
Cetyl trimethylammonium hydrogen sulfate, 99%	5g	374598-5G	CC0764
Dodecane-1-sulphonic Acid, Sodium salt - LiChropur	25g	118308	CD0632
Dodecane-1-sulphonic Acid, Sodium salt, >99%	1g	106437-1G	CD0633
Dodecyl hydrogen sulphate, Sodium salt - LiChropur	25g	118309	CD0634
Heptane-1-sulphonic Acid, Sodium salt - LiChropur	25g	118306	CH2091
Heptane-1-sulphonic Acid, Sodium salt >99% for IPC	10g	51832-10G-F	CH0341
Hexane-1-sulphonic Acid, Sodium salt HPLC Grade	100g	HL188	CH2007
Hexane-1-sulphonic Acid, Sodium salt - LiChropur	25g	118305	CH2089
Octane-1-sulphonic Acid, Sodium salt - HPLC Grade	100g	OL025	CO1740
Octane-1-sulphonic Acid, Sodium salt - LiChropur	25g	118307	CO1763
Pentane-1-sulphonic Acid, Sodium salt HPLC Grade	25g	PL324	CP1508
Pentane-1-sulphonic Acid, Sodium salt - LiChropur	25g	118304	CP0964
Tetra-n-butylammonium hydrogen sulphate - LiChropur	25g	118312	CT0659
Tetra-n-butylammonium hydrogen sulphate, >99% for IPC	10g	86853-10G-F	CT0660
Tetramethylammonium hydrogen sulfate - LiChropur	25g	118310	CT0661



CH2091



CT0659

CHROMATOGRAPHY SOLVENTS			
Acetone HPLC (B&J)	4L	AH010-4	CA1695
Acetone HPLC, GC & Pesticide Residue Grade (B&J)	4L	010-4	CA1712
Acetone for HPLC - LiChrosolv	2.5L	100020	CA1707
Acetone for GC, GC-MS - SupraSolv	4L	100012	CA1517
Acetonitrile HPLC (B&J)	4L	AH015-4	CA1901
Acetonitrile UV HPLC GC PESTICIDE low in water (B&J)	4L	017-4	CA1930
Acetonitrile HPLC - ChromaSolv	4x4L	34851-4X4L	CA0096
Acetonitrile for Gradient HPLC - LiChrosolv	4L	100030	CA1940
Acetonitrile OPTIMA LC/MS, ECOSAFPAK	4L	FSBA955-A	CA6092
Acetonitrile Hypergrade for LC-MS - LiChrosolv	2.5L	100029	CA1943
Acetonitrile LC-MS - ChromaSolv	2.5L	34967-2.5L	CA6126
1-Butanol for HPLC - LiChrosolv	2.5L	101988	CB4218
1-Butanol for HPLC - ChromaSolv	1L	34867-1L	CB9235
n-Butyl Chloride (1-Chlorobutane) HPLC (B&J)	4L	034-4	CC3121
n-Butyl Chloride (1-Chlorobutane) HPLC - LiChrosolv	1L	101692	CC3122
tert-Butyl Methyl Ether for HPLC - LiChrosolv	2.5L	101845	CT2095
Chloroform HPLC (B&J)	4L	AH049-4	CC3316
Chloroform for HPLC - LiChrosolv	4L	102444	CC3315
Cyclohexane HPLC & Pesticide Residue (B&J)	4L	053-4	CC6241



CB4218

CHROMATOGRAPHY CONSUMABLES

DESCRIPTION	PACK SIZE	MFR PART NUMBER	ROWE CODE
CHROMATOGRAPHY SOLVENTS			
Dichloromethane HPLC (B&J)	4L	300-4	CD1195
Dichloromethane for HPLC - LiChrosolv	4L	106044	CD1161
Ethanol for Gradient HPLC - LiChrosolv	4L	111727	CE1737
Ethanol, SupraSolv for GC, GC-MS	2.5L	102371	CE2063
Ethyl Acetate HPLC (B&J)	4L	AH100-4	CE0980
Ethyl Acetate for HPLC - LiChrosolv	4L	100868	CE0994
n-Heptane HPLC (B&J)	4L	207-4	CH2134
n-Heptane for HPLC - LiChrosolv	2.5L	104390	CH2141
n-Hexane 95% HPLC (B&J)	4L	AH216-4	CH2295
n-Hexane 95% HPLC	4L	LC1083-G4L	CH0329
n-Hexane for HPLC - LiChrosolv	4L	104391	CH2329
n-Hexane, Suprasolv for GC	4L	104371	CH2327
Methanol HPLC (B&J)	4L	AH230-4	CM2116
Methanol HPLC	4L	2314-4L	CM2105
Methanol GC Residue Grade	4L	ME03184000	CM2118
Methanol for HPLC - LiChrosolv	4L	106018	CM2156
Methanol for Gradient HPLC - LiChrosolv	4L	106007	CM2157
Methanol Hypergrade for LC-MS - LiChrosolv	2.5L	106035	CM2140
Methanol Chromasolv for HPLC	4X4L	34860-4X4L-R	CM0095
Methanol HPLC, GC & Pesticide Residue (B&J)	4L	230-4	CM2115
Methanol Suprasolv for GC, GC-MS	4L	106011	CM2124
Methanol LC/MS, RCI	4L	LM1115-G4L	CM3835
Methanol OPTIMA for LC/MS, ECOSAFPAK	4L	FSBA456-4	CM3649
Propan-1-ol for HPLC - LiChrosolv	2.5L	101024	CP1094
Propan-2-ol HPLC (B&J)	4L	AH323-4	CP1061
Propan-2-ol for HPLC - LiChrosolv	4L	101040	CP1056
Pentane SupraSolv for GC, GC-MS	2.5L	100882	CP6149
Pentane HPLC (B&J)	4L	312-4	CP1533
Tetrahydrofuran HPLC (B&J)	4L	AH340-4	CT1935
Tetrahydrofuran for HPLC - LiChrosolv	4L	108101	CT1925
Toluene HPLC (B&J)	4L	347-4	CT2320
Toluene for HPLC - LiChrosolv	2.5L	108327	CT2273
Toluene, Suprasolv for GC	4L	108389	CT2277
1,2,4-Trichlorobenzene Spectro Grade	2L	256412	CT1468
2,2,4-Trimethylpentane (iso-Octane) HPLC (B&J)	4L	362-4	CT2203
2,2,4-Trimethylpentane (iso-Octane) for HPLC - LiChrosolv	2.5L	104717	CT1386
Water for HPLC - LiChrosolv	2.5L	115333	CW1106
Water for HPLC (B&J)	4L	365-4	CW1112
WATER ULTRAPURE 18 Mega-Ohm, 0.2um FILTERED	5L	*R698+	CW1003



CE0994



CM2156



CP6149

STANDARDS FOR ION CHROMATOGRAPHY (IC)

DESCRIPTION	PACK SIZE (mL)	MFR PART NUMBER	ROWE CODE
ACETATE IC std 1000ppm in H ₂ O	100	IC-AC-M-100	BA1040
AMMONIUM IC std 100ppm in H ₂ O	250	IC-NH-250	BA1600
AMMONIUM IC std 1000ppm in H ₂ O	100	IC-NH-M-100	BA1601
	500	IC-NH-M-500	BA0007
AMMONIUM IC std 1000ppm as N in H ₂ O	100	IC-NT-M-100	BA1030
BARIUM IC std 1000ppm in 0.5% HNO ₃	100	XRSAU-13-100	BB0008
BARIUM IC std 10,000ppm in H ₂ O	250	HPS-130-082-250	BB0014
BROMATE IC std 1000ppm in H ₂ O, NIST traceable	100	IC-BRO3-M-100	BB1576
BROMIDE IC std 1000ppm in H ₂ O	100	IC-BR-M-100	BB5000
	250	IC-BR-M-250	BB0015
	500	IC-BR-M-500	BB0013
CALCIUM IC std 1000ppm in H ₂ O	100	IC-CA-M-100	BC0012
	500	IC-CA-M-500	BC0019
CARBONATE IC std 1000ppm in H ₂ O	100	VRSAU-1-100	BC0037
CHLORATE IC std 1000ppm in H ₂ O	100	IC-CLO3-M-100	BC1080
	250	IC-CLO3-M-250	BC0082
CHLORIDE IC std 100ppm in H ₂ O	250	IC-CL-250	BC0039
CHLORIDE IC std 1000ppm in H ₂ O	100	IC-CL-M-100	BC1305
	500	IC-CL-M-500	BC1300
CHLORITE IC std 1000ppm in H ₂ O, NIST traceable	100	IC-CLO2-M-100	BC1371
COBALT IC std 10,000ppm in H ₂ O	250	130-086-250	BC0047
COPPER IC std 10,000ppm in H ₂ O	250	130-084-250	BC0046
DIETHANOLAMINE IC std 1000ppm in H ₂ O	250	HPS-130-089-250	BD0001
ETHANOLAMINE IC std 1000ppm in H ₂ O	250	IC-EA-M-250	BE0003
FLUORIDE IC std 100ppm in H ₂ O	100	IC-FF-100	BF0002
	250	IC-FF-250	BF1000
FLUORIDE IC std 1000ppm in H ₂ O	100	IC-FF-M-100	BF1005
	250	IC-FF-M-250	BF0004
	500	IC-FF-M-500	BF1010
FLUORIDE IC std 10,000ppm in H ₂ O	250	IC-FF-10M-250	BF0006
	500	IC-FF-10M-500	BF1011
FORMATE IC std 1000ppm in H ₂ O, amber bottle (6 month exp)	100	IC-FM-M-100	BF0003
IODIDE IC std 10ppm in H ₂ O	100	IC-II-10-100	BI0023
IODIDE IC std 1000ppm in H ₂ O	100	IC-II-M-100	BI0301
	500	IC-II-M-500	BI0018
LITHIUM IC std 1000ppm in H ₂ O	100	IC-LI-M-100	BL0015
MAGNESIUM IC std 1000ppm in H ₂ O	100	IC-MG-M-100	BM0026
	500	IC-MG-M-500	BM0077
MANGANESE IC std 1000ppm in 0.5% HNO ₃	100	XRSAU-11-100	BM0117
METHYL DIETHANOLAMINE IC std 1000ppm in H ₂ O	250	HPS-130-088-250	BM0151
NICKEL IC std 10,000ppm in H ₂ O	250	130-085-250	BN0019

ROWE CODE
BA1030ROWE CODE
BF0004ROWE CODE
BI0301

STANDARDS FOR ION CHROMATOGRAPHY (IC)

DESCRIPTION	PACK SIZE (mL)	MFR PART NUMBER	ROWE CODE
NITRATE IC std 1000ppm in H ₂ O	100	IC-NO-M-100	BN1805
	250	IC-NO-M-250	BN0012
NITRATE IC std 1000ppm as N in H ₂ O	100	IC-NO3-M-100	BN1087
	500	IC-NO3-M-500	BN0002
NITRITE IC std 100ppm in H ₂ O	100	IC-N-100	BN1811
NITRITE IC std 1000ppm in H ₂ O	100	IC-N-M-100	BN1810
	500	IC-N-M-500	BN1085
NITRITE IC std 1000ppm as N in H ₂ O	100	IC-NO2-M-100	BN1086
	250	IC-NO2-M-250	BN0029
	500	IC-NO2-M-500	BN0021
NITROGEN from nitrate IC std 1000ppm as N in H ₂ O (from sodium nitrate)	250	IC-NO3-M-250	BN0027
NITROGEN IC std 1000ppm as nitrogen from ammonia in H ₂ O	250	IC-NH3-N-M-250	BN0028
	500	IC-NH3-N-M-500	BN0007
NITROGEN IC std 100ppm as nitrogen in H ₂ O	500	IC-NT-500	BN1034
NITROGEN IC std 1000ppm as nitrogen in H ₂ O	500	IC-NT-M-500	BA1032
PERCHLORATE IC std 1000ppm in H ₂ O	100	IC-CLO4-M-100	BP0023
PHOSPHATE IC std 100ppm in H ₂ O	500	IC-PP-500	BP1957
	100	IC-PP-M-100	BP1050
	250	IC-PP-M-250	BP0013
PHOSPHATE IC std 1000ppm in H ₂ O	500	IC-PP-M-500	BP1955
	100	IC-KPP-M-100	BP0004
PHOSPHATE IC std 1000ppm as P in H ₂ O	100	IC-KP-M-100	BP1015
PHOSPHORUS IC std 100ppm in H ₂ O	100	IC-KP-100	BP1018
PHOSPHORUS IC std 100ppm in H ₂ O	250	IC-P-250	BP1950
PIPIRAZINE IC std 1000ppm in H ₂ O	250	HPS-130-087-250	BP0018
POTASSIUM IC std 1000ppm in H ₂ O	100	IC-K-M-100	BP0001
	500	IC-K-M-500	BP0007
SODIUM IC std 1000ppm in H ₂ O	100	IC-NA-M-100	BS0051
	500	IC-NA-M-500	BS1475
STRONTIUM IC std 1000ppm in 0.5% HNO ₃	100	XRSAU-12-100	BS0105
STRONTIUM IC std 10,000ppm in H ₂ O	250	HPS-130-081-250	BS0139
SULFATE IC std 1000ppm in H ₂ O	100	IC-SS-M-100	BS2605
	250	IC-SS-M-250	BS0108
	500	IC-SS-M-500	BS0093
SULFIDE IC std 1000ppm in H ₂ O	100	VRSAU-16-100	BS0107
THIOCYANATE IC std 1000ppm in H ₂ O (from sodium thiocyanate)	100	IC-SCN-M-100	BT0041
THIOSULFATE IC std 1000ppm in H ₂ O	100	VRSAU-15-100	BT0027
THIOSULFATE IC std 1000ppm in H ₂ O from Na ₂ S ₂ O ₃	100	IC-S2O3-M-100	BT0036
	500	IC-S2O3-M-500	BT0030
ZINC IC std 10,000ppm in H ₂ O	250	130-083-250	BZ0007



ROWE CODE
BN0012



ROWE CODE
BP1050



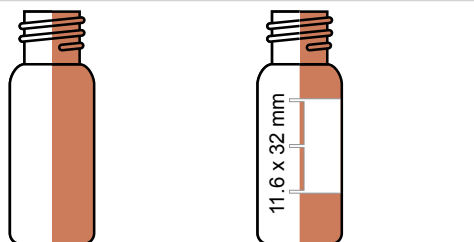
ROWE CODE
BT0030

VIALS & CAPS FOR GC/HPLC - MACHEREY-NAGEL

N8 N9

Screw Neck Vials N8

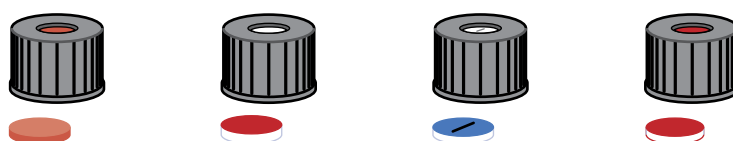
SMALL OPENING, PACK OF 100



70213 / 70213.2	702004 / 702893
1.5 mL	1.5 mL label + scale
VV0025 / VV0072	VV0018 / VV2128

Ready Assembled Screw Closures N8

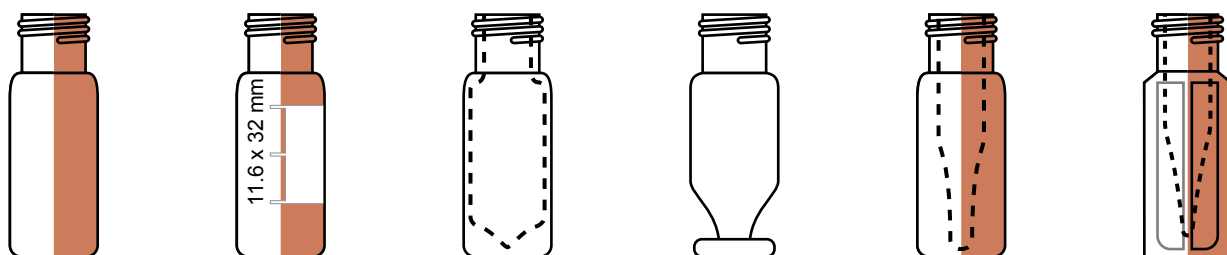
8-425 THREAD, PACK OF 100



702067	70245	702437	702069
Red Rubber / FEP colourless	Silicone white / PTFE red	Silicone white / PTFE blue, slit	PTFE red / Silicone white / PTFE red
VC0257	VC0065	VC0259	VC0258

Screw Neck Vials N9

WIDE OPENING, PACK OF 100



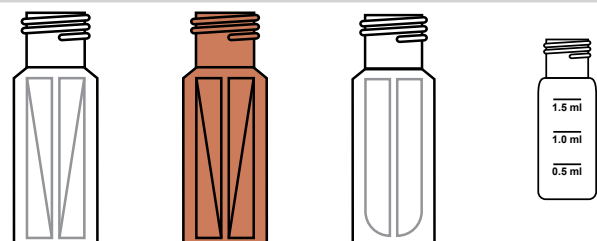
Polypropylene / Glass

702282 / 702293	702283 / 702284	702006	702088	702007 / 702008	702135* / 702335*
1.5 mL	1.5 mL label + scale	1.1 mL 15 µL funnel in solid glass bottom	1.1 mL conical with a round pedestal glass plate	0.2 mL with integrated 0.2 mL insert	0.2 mL PP vial with integrated 0.2 mL glass insert
VV0027 / VV0074	VV0712 / VV0028	VV0045	VV0048	VV0046 / VV0047	VV0073 / VV0049

* upon request also with a silanized insert

Plastic Screw Neck Vials N9

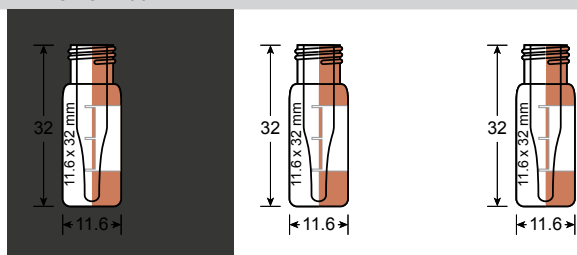
POLYPROPYLENE, PACK OF 100



702009	702172	702010	702500
0.3 mL with inner cone	0.3 mL with inner cone	0.7 mL with round bottom insert	1.5 mL with scale
VV0039	VV0075	VV0076	VV0077

Pre-Assembled Vial-Insert Combinations

PACK OF 100



702177	702178	702179
0.2 mL VV0027 pre-assembled with VV0055	0.2 mL VV0712 pre-assembled with VV0055	0.2 mL VV0028 pre-assembled with VV0055
VV0078	VV0079	VV0082

We stock syringe filters in Millex, MSI, Filter-Bio, Macherey-Nagel, Sartorius, Whatman, Advantec and Pall brands all in 4mm, 13mm, 25mm, 30mm and 33mm diameters. 0.8um, 0.22 um, 1.2 um, 0.45 um and other micron sizes also available with G/F Prefilters if required. Sterile syringe filters also available upon request.

VIALS & CAPS FOR GC/HPLC - MACHEREY-NAGEL

N9 N11






Ready Assembled Screw Closures N9

N 9 PP SCREW CAP, COLOR AS INDICATED, CENTER HOLE OR CLOSED TOP, PACK OF 100

								
PTFE virginal, white		702029 VC0260	702031 VC0261	-	-	-	-	702032 VC0262
Red Rubber / FEP colourless		702030 VC0263	702732 VC0213	702080 VC0264	702081 VC0265	702082 VC0266	702147 VC0267	702033 VC0013
Silicone white / PTFE red		702287 VC0268	702287.1 VC0505	702036 VC0269	702037 VC0270	702038 VC0058	702107 VC0224	702034 VC0501
Silicone white / PTFE blue, slit		702288 VC0271	702288.1 VC0225	702039 VC0272	702040 VC0273	702083 VC0274	702109 VC0275	-
PTFE red / Silicone white / PTFE red		702286 VC0276	702035 VC0277	702158 VC0278	702084 VC0279	702085 VC0280	702159 VC0281	-


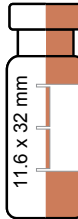
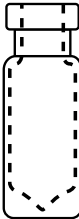

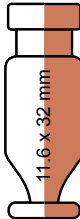

BONDED CLOSURES (INSEPARABLE SEPTA), PACK OF 100

MAGNETIC SCREW CAP

				
702028	702026	702027	702155	
Red Rubber / TEF colourless	Silicone beige / PTFE white	Silicone beige / PTFE white, slit	Silicone white / PTFE red	
VC0214	VC0507	VC0283	VC0282	

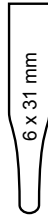
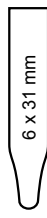
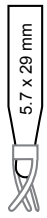
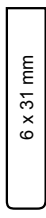
Crimp Neck Vials N11

WIDE OPENING, PACK OF 100

					
70201HP / 70201HP.2	702885 / 702892	702888	702141	702015 / 702016	702891 / 702014
1.5 mL	1.5 mL label + scale	1.1 mL 15 µL funnel in solid glass bottom	1.1 mL conical	1.1 mL conical with a round pedestal glass plate	0.2 mL with integrated 0.2 mL insert
VV1310 / VV0083	VV0034 / VV0035	VV0084	VV0085	VV0086 / VV0087	VV0088 / VV0089

Inserts for Vials N9 and N11 (for vials with wide opening)

PACK OF 100

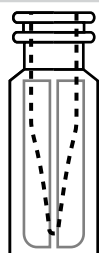
			
702813 / 702077 silanised	702716	702818 / 702818.1 silanised	702825
0.2 mL, conical, 15 mm tip	0.25 mL, conical, 12 mm tip	0.1 mL with plastic spring	0.3 mL with flat bottom
VV0055 / VV0090	VV0057	VV0050 / VV0094	VV0059

Need 47mm Mobile Phase filter membranes? Check our Rowe Scientific website for 0.45µ and 0.22µ in PTFE, Cellulose, PVDF, Nylon, PES and more.

N 11

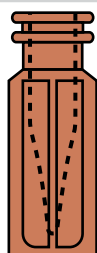
Crimp Neck / Snap Ring Vials N11

POLYPROPYLENE / GLASS, PACK OF 100



702134*
0.2 mL
PP vial with integrated 0.2 mL glass insert

VV0095



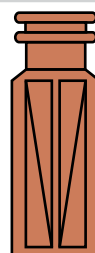
702334
0.2 mL
PP vial with integrated 0.2 mL glass insert

VV0096



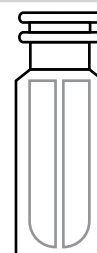
702809
0.3 mL
with inner cone

VV0097



702173
0.3 mL
with inner cone

VV0098



702174
0.7 mL
with round bottom insert

VV0099

* upon request also with a silanized insert

Plastic Crimp Neck / Snap Ring Vials N11

POLYPROPYLENE, PACK OF 100

Ready Assembled Crimp Closures N11

N 11 ALUMINIUM CRIMP CAP, COLOR AS INDICATED, CENTER HOLE, PACK OF 100



70284
PTFE
virginal,
white

VC0059



70231
Natural rubber /
Butyl red-
orange /
TEF colourless;
1.3 mm

VC0284



702001
Natural rubber
red-orange /
TEF colourless

VC0060



70256
Natural rubber /
Butyl red-
orange /
TEF colourless;
1.0 mm

VV1315



70231.1
Natural rubber /
Butyl red-
orange /
TEF colourless;
1.0 mm

VC0062



70231.2
Natural rubber /
Butyl red-
orange /
TEF colourless;
1.0 mm

VC0063



70231.3
Natural rubber /
Butyl red-
orange /
TEF colourless;
1.0 mm

VC0064



70231.4
Natural rubber /
Butyl red-
orange /
TEF colourless;
1.0 mm

VC0285



702730*
Red Rubber /
FEP colourless

VC0061



70288*
Silicone white /
PTFE red

VC1990



702823*
Silicone white /
PTFE blue,
cross-slit

VC0215



702995*
PTFE red /
Silicone white /
PTFE red

VC0286



702175
O-ring /
Aluminium
septa,
phthalate-free

VC0287



MAGNETIC

702879
Silicone white /
PTFE red

VC0288



PE CAP

702401
transparent,
closed top,
thin
piercing area




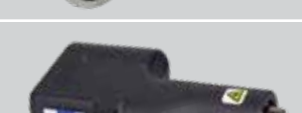
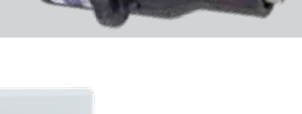


VC0289

* also available with green, red or blue cap


CRIMPING - MACHEREY-NAGEL

N 11

Crimping tools

Manual crimper (Standard), height adjustable, for 11 mm aluminium crimp caps	EA	735111 VC3000	
Manual decapper (Standard) for 11 mm aluminium crimp caps	EA	735911 VD1010	
Manual decapper (Plier Style) for 11 mm and 20 mm aluminium crimp caps	EA	735911.20 VD1010	
Ergonomic crimper for 11 mm aluminium crimp caps	EA	735211 VC3010	
Ergonomic decapper for 11 mm aluminium crimp caps	EA	735311 VD1020	
Electronic crimper for 11 mm aluminium crimp caps (battery-powered)	EA	735511 VC0290	
Electronic decapper for 11 mm aluminium crimp caps (battery-powered)	EA	735611 VD0004	

Containers for vials 11.6 x 32 mm

81 position container (blue) for all vials 11.6 x 32 mm with flat bottom, 130 x 130 x 45 mm, coded, with transparent lid (suitable for freezers)	EA	702514 VC0291	
50 position vial rack (blue) for all vials 11.6 x 32 mm with flat bottom, 190 x 100 x 22 mm, stackable	EA	702502 VR0002	

! Optimal Crimping

For an optimal crimp result the crimping tool needs to be adjusted to:

- type and height of the vial's neck;
- thickness and hardness of the septa;
- properties of the cap (type, material).

For doing so, please refer to the instruction manual of the individual tool. Permanent control of the crimp result and thus of the crimping tool settings is necessary.

Incorrect crimping can be recognised by the following features:



Cap deformation



Pulled up edge of the center hole



Strong formation of wrinkles



Convex looking liner



Cap can be turned with only low expenditure of power

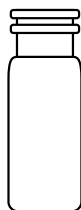
Micro syringes for GC and HPLC ! - we supply Hamilton and SGE, individually or in 6-packs.

VIALS & CAPS FOR GC/HPLC - MACHEREY-NAGEL

N 11

Snap ring vials N11

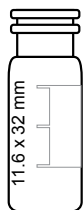
WIDE OPENING, PACK OF 100



702714

1.5 mL

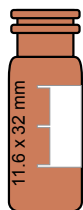
VV0302



702713

1.5 mL
label + scale

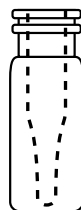
VV0304



702712

1.5 mL
label + scale

VV0101



702709

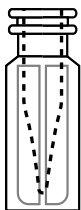
0.2 mL
with integrated 0.2 mL insert

VV0102

Crimp neck / snap ring vials N11

Plastic crimp neck / snap ring vials N11

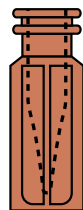
POLYPROPYLENE / GLASS, PACK OF 100



702134*

0.2 mL
PP vial with integrated
0.2 mL glass insert

VV0095



702334*

0.2 mL
PP vial with integrated
0.2 mL glass insert

VV0096



702809

0.3 mL
with inner cone

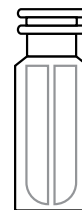
VV0097



702173

0.3 mL
with inner cone

VV0098



702174

0.7 mL
with round bottom insert

VV0099

* upon request also with a silanised insert

Ready assembled snap ring caps N11

N 11 PE SNAP RING CAP, HARD, COLOR AS INDICATED, CENTER HOLE, PACK OF 100



702731

Red Rubber / FEP colourless

VC0390



702710

Silicone white / PTFE red

VC0391



702064

Silicone white / PTFE blue,
cross-slit

VC0292



702718

PTFE red / Silicone white /
PTFE red

VC0293



702401

Transparent, closed top,
thin piercing area

VC0289



702063

VC0294



702710.1

VC0296



702717.2

VC0298



702718.1

VC0300

N 11 PE SNAP RING CAP, SOFT, LIGHT BLUE, CENTER HOLE, PACK OF 100



702063.2080

VC0295



702710.2080

VC0297



702717.2080

VC0298



702718.2080

VC0301

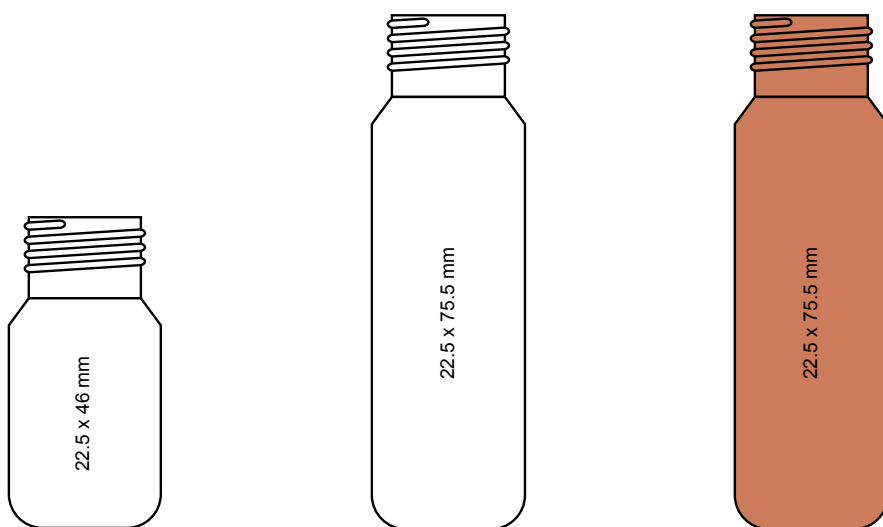
Solid Phase Extraction. SPE's are available in cartridge and column formats in almost any phase you can think of!

VIALS & CAPS FOR HEADSPACE - MACHEREY-NAGEL

N 18

Headspace screw neck vials N18

PACK OF 100



702866

10 mL

VV2113

702826

20 mL

VV2210

702826.2

20 mL

VV0064

Container for vials N18 and N20

VR0003

25 position container (blue) for all vials with a diameter up to 23.5 mm max, 130 x 130 x 80 mm, with transparent lid (suitable for freezers)

EA



Ready assembled magnetic screw closures N18

N 18 MAGNETIC SCREW CAP, SILVER, CENTER HOLE, PACK OF 100



702827

Silicone blue
transparent / PTFE white

VC0066



702055

Silicone white / PTFE blue

VC1921



702136

Silicone white / PTFE blue, slit

VC0302



702072

Red Rubber / TEF colourless

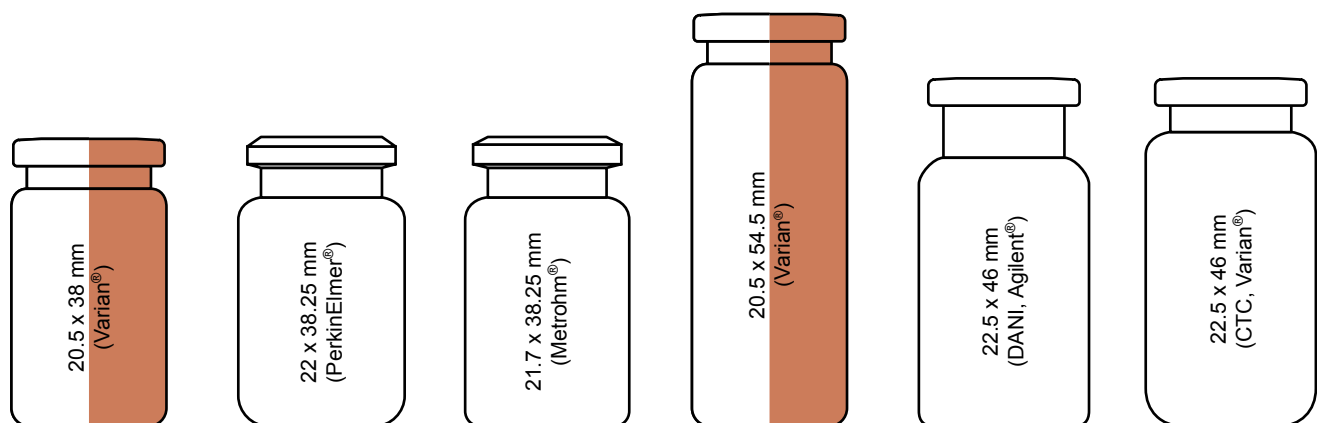
VC1923

GC capillary columns. The OPTIMA range from MN including LIPODEX and HYDRODEX for ENANTIOMER separations.

N20

Crimp neck vials N20, 5–10 mL

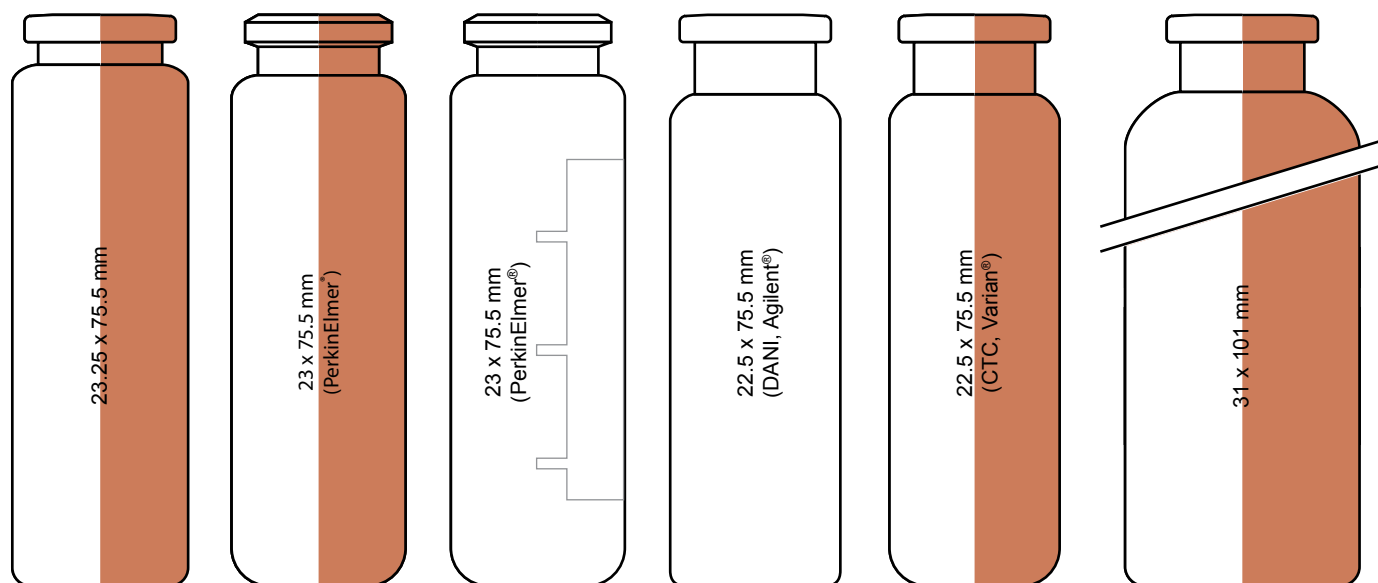
5–10 ML, PACK OF 100



70204.36 / 70215.36	702917	702020	70205.36 / 70216.36	702918	702924
5 mL	6 mL	5 mL	10 mL	10 mL	10 mL
flat bottom	rounded bottom	flat bottom	flat bottom	flat bottom	rounded bottom
flat DIN crimp neck	beveled HS crimp neck	beveled HS crimp neck	flat DIN crimp neck	flat DIN crimp neck	flat DIN crimp neck
VV0063 / VV0037	VV2114	VV0051	VV0060 / VV0061	VV0062	VV0103

Crimp neck vials N20, 20 and 50 mL

20 AND 50 ML, PACK OF 100



70206.36 / 70217.36	70254 / 702541	702540	702261	702263 / 702263.2	70208.36 / 702100
20 mL	20 mL	20 mL	20 mL	20 mL	50 mL
flat bottom	rounded bottom	rounded bottom	flat bottom	rounded bottom	flat bottom
flat DIN crimp neck	beveled HS crimp neck	beveled HS crimp neck	flat DIN crimp neck	flat DIN crimp neck	flat DIN crimp neck
VV0104 / VV0105	VV0058 / VV0106	VV0107	VV2220	VV0029 / VV0030	VV2450 / VV0108

GC capillary columns. The OPTIMA range from MN including LIPODEX and HYDRODEX for ENANTIOMER separations.

CRIMPING - MACHEREY-NAGEL

N 20

■ Crimping tools

Manual crimper (Standard), height adjustable, for 20 mm aluminium crimp caps	EA	735120 VC3007	
Manual decapper (Standard) for 20 mm aluminium crimp caps	EA	735920 VD0002	
Manual decapper (Plier Style) for 11 mm and 20 mm aluminium crimp caps	EA	735911.20 VD0003	
Ergonomic crimper for 20 mm aluminium crimp caps	EA	735220 VC3050	
Ergonomic decapper for 20 mm aluminium crimp caps	EA	735320 VD1060	
Electronic crimper for 20 mm aluminium crimp caps (battery-powered)	EA	735520 VC0304	
Electronic decapper for 20 mm aluminium crimp caps (battery-powered)	EA	735620 VD0005	

■ Ready assembled crimp closures, plain crimp caps and single septa N20

SINGLE SEPTA N20, PACK OF 100

Butyl red / PTFE gray	Butyl light gray / PTFE dark gray	Molded septa Butyl / PTFE gray	Butyl dark gray / PTFE gray (only centrally laminated)	Silicone blue transparent / PTFE colourless	Silicone white / PTFE beige
70277 VS0081	702057 VS0082	702101 VS0083	702D20TB VS0084	VS00850 VS00850	70278 VS0085



ASSEMBLED IN N20 ALUMINIUM CRIMP CAPS, CENTER HOLE, PACK OF 100

702773 VC0305	702775 VC0246	70234.9 VC0306	70234 VC1937	702093 VC0230	702094 VC1932
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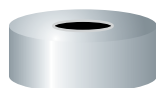
ASSEMBLED IN N20 ALUMINIUM PRESSURE RELEASE CAPS, CENTER HOLE, PACK OF 100

702836 VC0307	702829 VC0309	70234.8 VC0308	702071 VC0310	702927 VC0311	702835 VC0312
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ASSEMBLED IN N20 BI-METAL CRIMP CAPS, CENTER HOLE, PACK OF 100

702838 VC0313	702834 VC0245	702837 VC0314
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ASSEMBLED IN N20 MAGNETIC CRIMP CAPS, CENTER HOLE, PACK OF 100

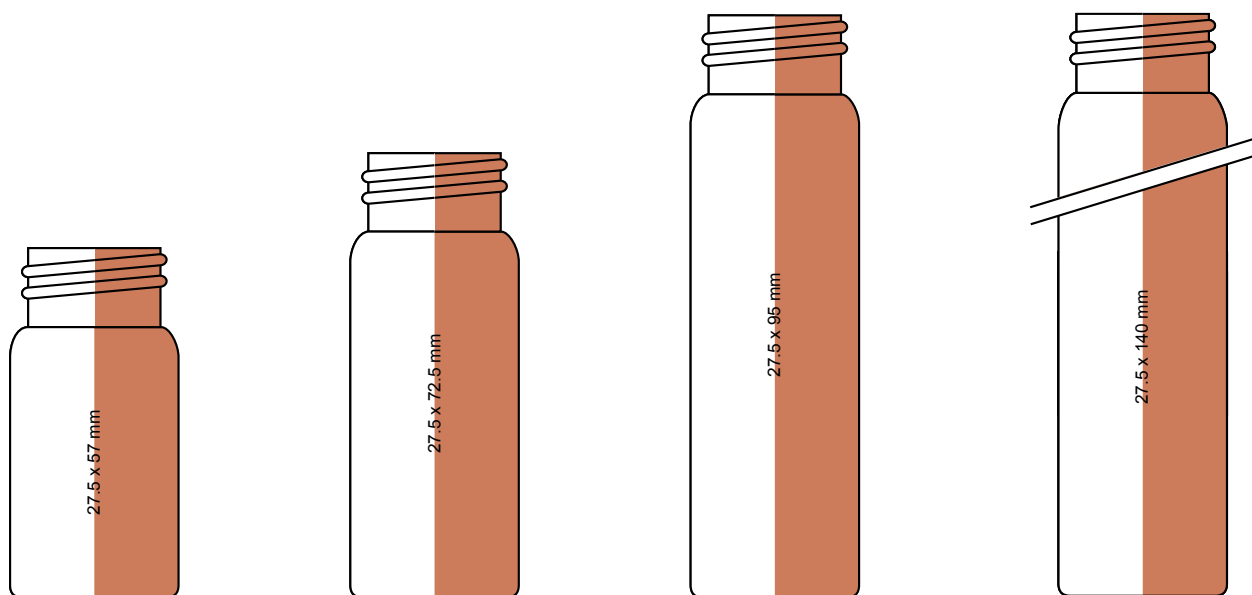
702774 VC0315	702928 VC0316	702928.9 VC0317	702929 VC0244
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SCREW NECK VIALS & CAPS N24 - MACHEREY-NAGEL

N24

Screw neck vials N24

FOR TOC / VOC ANALYSIS AS WELL AS FOR SAMPLE STORAGE, PACK OF 100



VV0930 / VV0020	VV0109 / VV0111	VV0940 / VV0001	VV0112 / VV0113
20 mL	30 mL	40 mL	60 mL
VV0930 / VV0020	VV0109 / VV0111	VV0940 / VV0001	VV0112 / VV0113

Ready assembled screw closures N24

N 24 PP SCREW CAP, WHITE, CENTER HOLE OR CLOSED TOP, PACK OF 100



702130	702102	702060	702060
Butyl red / PTFE gray	Butyl red / PTFE gray	no liner	no liner
VC0318	VC0319	VC0232	VC0530
BONDED CLOSURES (INSEPARABLE SEPTA), PACK OF 100		REMOVABLE PROTECTION LID	SINGLE SEPTA, PACK OF 100

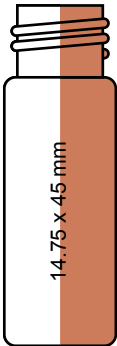
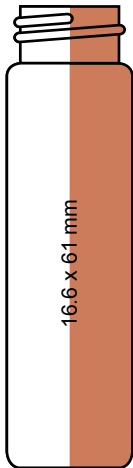
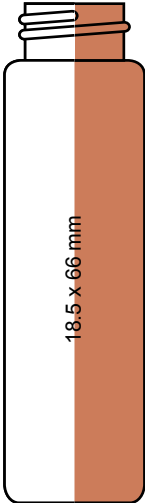
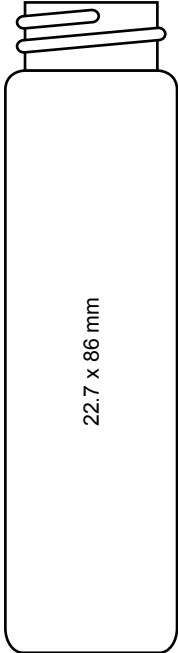


702058	702059	702073	702168	702791	702062
Center hole cap Silicone white / PTFE beige	Closed top cap Silicone white / PTFE beige	Closed top cap Red Rubber / TEF colourless	Silicone natural / PTFE colourless	Butyl red / PTFE gray	Silicone natural / PTFE colourless
VC0943	VC1945	VC0320	VC0321	VS0086	VS0048

VIALS & CAPS FOR STORAGE OF LIQUID SAMPLES - MACHEREY-NAGEL

DIV

Screw neck vials

N 13 (13-425 THREAD)	N 15 (15-425 THREAD)	N 18 (18-400 THREAD)	N 20 (20-400 THREAD)
			
14.75 x 45 mm	16.6 x 61 mm	18.5 x 66 mm	20.6 x 71 mm
702962 / 702973	702096 / 702311	70285 / 702097	702098
4 mL	8 mL	12 mL	16 mL
VV0252 / VV0031	VV0508 / VV0509	VV0512 / VV0513	VV0516
			702099
			24 mL
			VV0524

Screw closures

N 13 (13-425 THREAD)	N 15 (15-425 THREAD)	N 18 (18-400 THREAD)	N 20 (20-400 THREAD)
			
702103	702104	702180	702105
Closed top cap, septum F217 white / PTFE beige, firmly fixed	Closed top cap, septum F217 white / PTFE beige, firmly fixed	Center hole cap, Silicone white / PTFE beige (bonded)	Closed top cap, septum F217 white / PTFE beige, firmly fixed
VS0023	VC0515	VC0322	VV0518
			702106
			Closed top cap, septum F217 white / PTFE beige, firmly fixed
			702181
			Center hole cap, Silicone white / PTFE beige (bonded)
			VC0323

Ask us to package a deal with your solvent needs. Special pricing for quantity. Enquire now.

CLAMPS - VARIOUS**Bosshead Clamp Met-App**

With fixed right angled vee grooves.

WILL HOLD ROD DIAMETER (mm)	PACK SIZE	ROWE CODE
16	EA	HB1100
25	EA	HB1160



ROWE CODE
HB1100

Burette Clamp Tarson

Material: Polypropylene

Boss head supplied with two olives so that the clamp can fit onto support rods having diameters 8 - 14mm. Stainless steel spring loaded centre arm holds burette firmly against the two outer arms and is protected by rubber grips. Graduations and meniscus are visible at all time. Suitable for all burettes.

NO. CLAMPS	ROD DIAMETER (mm)	PACK SIZE	ROWE CODE
1	8 -14	EA	PB0310
2	8 -14	EA	PB0309



ROWE CODE
PB0309

Retort Clamp Met-App

For holding various diameter objects. Made from aluminium die-cast. Jaws are vinyl coated.

DESCRIPTION	ROWE CODE
Four prong clamp with 9x15mm long arm. Holds 2-70mm diameter objects.	HR1000
Same as above, but jaws are cork lined.	HR1010
Heavy duty clamp - Large. Holds 50-180mm diameter objects.	HR1030
Three prong clamp with 12x115mm long arm. Holds 6-80mm diameter objects with 2 separate locking screws either side of clamp.	HR1056
Three prong clamp - Micro with 120mm long arm. Holds 0-15mm diameter objects.	HR1058
Three prong clamp with 10x125mm long arm and twin screw. Holds 5-80mm diameter objects.	HR1070
Three prong clamp (swivel) with Bosshead, for 6-80mm objects	HR1057



ROWE CODE
HR1000



ROWE CODE
HR1030

Clamps may be fibreglass covered for heat protection or made from other materials where necessary.

CLAMPS - VARIOUS

Retort Rings Met-App

With Bosshead - Made of zinc plated steel, fitted with a fixed angle bosshead. Available in 40, 50, 60, 70, 80, 90, 100, 120, 140mm ID sizes.

With Arm. Made of zinc plated steel, with a 180mm long arm. Available in 40, 50, 60, 70, 80, 90, 100, 120, 140, 160mm ID sizes

With Arm and open front. Made of zinc plated steel, with a 180mm long arm. Available in 40, 50, 60, 70, 80, 90, 100, 120, 140, 160mm ID sizes



ROWE CODE
HR1195



ROWE CODE
HR1150



ROWE CODE
HR1222

Retort Stand Tarsons

Rectangular Base made of polypropylene. Polyethylene coated rod positioned at side of base.

BASE SIZE (L x W mm)	ROD LENGTH (cm)	PACK SIZE	ROWE CODE
220 x 150	80	EA	HR3304

Retort Stand Met-App

Rectangular Base. Made of heavy iron casting. Threaded hole at one end, and 12mm hard aluminium rod.

BASE SIZE (L x W mm)	ROD LENGTH (cm)	PACK SIZE	ROWE CODE
150 x 105	50	EA	HR3301
200 x 140	60	EA	HR3300
260 x 160	70	EA	HR3305
300 x 150	75	EA	HR3320
320 x 170	90	EA	HR3310

BEST
SELLER



ROWE CODE
HR3301



HOFFMAN CLAMP
ROWE CODE HH1000

Tubing Clamps Met-App

Made of Nickel plated brass.

DESCRIPTION	ROWE CODE
Screw Compressor - Hoffman Type 20mm opening with hinged bottom part	HH1000
Same as above but with 25mm opening	HH1005
Same as above but with 31mm opening	HT2050
Mohr Clip for 13mm diameter	HT2100
Mohr Clip for 16mm diameter tubing	HT2150



MOHR CLAMP
ROWE CODE HT2100

ALPHA RESOURCES - PRODUCTS FOR CARBON & SULFUR ANALYSIS

DESCRIPTION - ALPHA RESOURCES	UOM	ROWE CODE
Tin Foil Cups - 36 x 36mm	200	AA1565
Iron Chip Accelerator	908g	AA1592
Vanadium Pentoxide - Non-fused form	250g	CV1190
Ceramic Crucible - For carbon and sulfur analysis (25 OD/19 ID x 25 H mm) (foil wrapped)	1000	AA1501
Benzoic Acid - 1g tablet	100	AB0003
In Line Particle Filter "Balston" - For sulfur analyser	EA	AA1720
Alphacel® V Tungsten - Fine Grain (-20/+40 Mesh)	5lb	AA1599
Smooth Wall Tin Capsule - 18 H x 5 OD mm	100	AA1130
Copper Sticks	100g	AA1518
Quartz Wool Strips - 254 x 381 mm	10	AA1806
Copper Metal Accelerator - 30 mesh	3lb	AA1520
Nickel Boat Liner - For liquid samples (50 L x 17 W mm)	100	AA1583
N Platinum Catalyst	50g	AA1517
AlphaSolve II - CO ₂ absorbent (20 - 30 Mesh)	500g	AA1561
Glass Wool for gas train	454g	AA1620
Furnace Reagent - Mixture of calcium oxide and kaolin	100g	AA1780
Magnesium Oxide Furnace Reagent	200g	AA1781
Aluminum Oxide Pellets	200g	AA1506
Combustion Tube Variomax - Stainless steel	EA	AC0028
Evacuated Pin Tube - 150mm L x 3.5 ID/5 OD mm	1000	AA1020
Pin Tube Holder - 3.5mm & 4mm pin sizes	EA	AA1030
Copper Turnings - Degassed	200g	AA1524
Nickel Baskets - Low Oxygen (1g baskets)	100	AA0005
Carbon and Sulfur CRM - C= 0.216%, S= 0.0183% (1g steel pin)	454g	AA1626
Alpha Alphacel III Tungsten Accelerator	5lb	AA1590
Alpha Cloth - 8" plain brown	10	AA1581
Alpha Crucible Covers - 4mm hole	1000	AA1512
Alpha paper filter CS800	10	AA1765
Alpha truspec porous crucible - For solid samples, FP528	10	AA1674
Copper oxide, rare earth	50g	CC5443
Crucible "Alpha" - For carbon and sulfur analysis (25 OD/19 ID x 25 H mm) ceramic	1000	AA1501
Magnesium perchlorate granular - "Anhydron" Alphadri	454g	CM2905
Part - particle filter, to suit carbon and sulfur analysers	EA	AP0005

ROWE CODE
AA1565ROWE CODE
AA1501ROWE CODE
AA1720ROWE CODE
AA1518

Other CRM's available on request.
LECO available on request.



CERTIFIED REFERENCE MATERIALS

Rowe Scientific stocks and supplies a wide range of Certified Reference Materials. Listing these standards would involve a catalogue of its own so we have listed a synopsis of the major sources of Certified Reference Materials and the types that they cover.

ASCRM - Australian Standards and Certified Reference Materials

Canmet

Canmet has around eighty different types of material available in its range of Certified Reference Materials.

These include environmental reference materials, powdered Canadian ores, geochemical and radioactive reference materials, physical test materials, metals and alloys.

NIST (formerly NBS)

The National Institute of Standards and Technology (USA) produce a huge range of standards which are characterised by the prefix "SRM". These can be separated into three main areas:

- Standard reference materials for Chemical Composition
- Standard reference materials for Physical Properties and
- Standard reference materials for Engineering Materials

Standard Reference Materials for Chemical Composition include ferrous metals, non ferrous metals, microanalysis, high purity materials, health and industrial hygiene, inorganics, primary gas mixtures, fossil fuels, organics, food and agriculture, geological materials and ores, ceramics and glasses, cement and engine wear materials.

The range of SRM's for Physical Properties include ion activity, electrical, polymeric, thermodynamic and optical properties, radioactivity, metrology, ceramics and glasses and X-ray spectrometry.

NIST's range of engineering standard reference materials include materials for sizing, surface finish, nondestructive evaluation and fire research.

BGS

British Geological Survey Standard Reference Materials can be identified by the prefix "IGS". The range includes geological ores and ore concentrates with certified values for rare-earth oxides.

South African Standards

Identified by the prefix SARM, South African Standards produce a range of Certified Reference Materials which includes geological, ores, semi processed minerals, coal and uranium.



BAS

Bureau of Analysed Standards prepare a large range of Certified Reference Materials for the metallurgical industry. These are commonly identified by the prefixes BCS and ECRM.

The range includes ferrous and non-ferrous metals, ores, fluxes, ceramic materials, minerals and cements.

National Water Research Institute

The Canadian National Water Research Institute, or NWRI, prepare a range of water and sediment certified reference materials with values for trace metals, major ions, organic compounds and nutrients.

National Research Council Canada

This range of certified reference materials for environmental analysis can be identified by a code consisting of an acronym followed by a number.

The range includes biological tissue, natural waters, sediments and toxins.

BCR

The Community Bureau of Reference's (BCR) range of Certified Reference Materials can be classified under the following headings: Environment, Water and Food Microbiology, Food and Agriculture, Biomedical, Physical Properties and Industrial Raw Materials and Products.

High Purity Standards

As well as boasting a wide range of metals, salts & oxides, HPS produce a range of Certified Reference Materials. These include certified wastewater, sediment & soil solutions, trace metals in drinking & biological materials, sea water and TCLP solutions.

*Many other certified reference materials available.
Please ask about your requirements.*

IMS STANDARDS



Certified Reference Materials (CRMs) for Mining Laboratories - Quality Control Perspective

Trust in laboratory results can be established through the routine use of quality control standards, or CRMs. Inserted into the process at regular intervals, CRMs provide immediate feedback to the chemist or technician that the method is performing as expected in regards the precision and accuracy of the analysis. In the mining and minerals sectors, there are two main types of CRMs available.

- Natural Ore CRMs, manufactured from ore material selected to be representative of desired gangue and economic mineralogy; and,
- Manufactured CRMs, containing a mixture of ores and materials in order to obtain specific analyte concentration ranges.

Both CRM types have their application in a quality assurance system when monitoring performance of the analytical stages in isolation. Natural ore CRM being useful in testing the complete analysis including the digestion phase which may include volatiles or refractory minerals, and manufactured ores being of use to monitor the final analytical stage with confidence in the performance of the digestion stage.

Where possible, the selection of CRMs from an ISO 17034 accredited manufacturer should be made. Accreditation provides the user with assurance of the manufacturer's competence in the planning, control, production, certification, and distribution of CRMs.

The certificate of a CRM contains important information such as overall chemistry or mineralogical properties, along with a description of the statistical treatment of data. CRM certificates should contain information about;

Homogeneity - Homogeneity is a key property of all CRMs and should be verified in the certification process to ensure fit-for-purpose material. Typical assessments of homogeneity include replicate tests of multiple samples analysed under repeatability conditions at a single laboratory. This process provides confidence that the CRM is homogenous not only from aliquot to aliquot, but also across the production cycle or batch and provides ongoing consistency to users.

Characterisation - the certified value is commonly determined through a round-robin exercise with a network of competent laboratories each receiving multiple samples of the candidate CRM for single analysis. The results from the laboratories undergo statistical analysis to determine the certified value and uncertainty measurements. A number of important statistical parameters should be described.

- Certified Value is the mean or median of the population. It should be accompanied by the SI unit of measure. The number of significant figures shown doesn't indicate a level of uncertainty. Other statistical parameters should be referred to for this purpose.
- Standard Deviation (SD) is an estimate of the global standard deviation and includes all sources of uncertainty including CRM material homogeneity, measurement uncertainty, and within and between-laboratory uncertainty. The SD is commonly used by the laboratory's customers to validate the analysis results they receive.
- Within-Laboratory Standard Deviation is an estimate of the average of within-laboratory uncertainty from the certification process participants, excluding the between-laboratory uncertainty component. The within-laboratory standard deviation is a common measure of the expected performance of the CRM, however laboratories should validate their own quality control limits derived from replicate analysis.
- Confidence Interval is an estimate of the true (unknowable) analyte concentration in the CRM. This is a function of the agreement between laboratories, and the number of participating laboratories. The narrower the interval, the more precise the certified value. The 95% CI should not be used for determination of quality control gates.
- Standard Uncertainty is the sum of variance from characterisation, homogeneity and stability studies, and is specified in the ISO17034 system. It can be used for assessing both precision and bias.

When reading the CRM certificate, careful selection of the correct statistic is required. During interpretation of control charts, results outside 2 times the SD either side of the certified value constituting a warning result and may occur 5% of the time. Results outside 3 times the SD is a failure and may occur 1% of the time.

Stability - Some CRMs are stored and used for long periods of time, either by the manufacturer before sale, or the laboratory prior to use. CRMs should have a long shelf life when stored in accordance with the manufacturer's instructions. Particular care should be taken with CRMs that contain unstable compounds (eg. sulphides).

Commutability - where applicable, it is important to understand the methods the CRM has been certified for, and if the certified values can be applied to other methods. Leaches and partial methods are generally not commutable, even between laboratories claiming the same method.

IMS STANDARDS

Tips for the correct use of CRMs in the laboratory:

- Ensure CRMs are stored in a clean location and easily accessible to the analytical area. Store the CRM according to the manufacturer's instructions
- Check the instructions to determine if the CRM needs any pre-treatment before use. This may include tumbling the container to minimise the effects of segregation during transport, or pre-drying the CRM before use.
- Open only one container of CRM at a time to minimise contamination. Take care if decanting. Ensure work area is clean and tidy.
- When the laboratory process is on a batch or rack basis, ensure at least one CRM is included. Depending on the method and rack size, CRM usage rates can be as high as 1:10, but no less than 1:100. If possible, profile the CRM into random locations in the analytical batch or rack to minimise systematic bias.
- Cycle multiple CRMs across the calibration range of the method, with particular attention to the range critical to the customer to make important decisions.
- Produce daily or weekly Shewhart charts to monitor CRM results and detect outliers and trends.
- Ensure you order CRMs well in advance to complete a validation of each CRM delivery before use.

IMS Standards Current Range


CRM#	DESCRIPTION	AU (G/T)	STOCKS
IMS-225	Basalt, Weathered Sediment	0.21	
IMS-265	Basalt, Sulphide	0.31	
IMS-190	Basalt, Sulphide	0.32	LOW
IMS-226	Basalt, Weathered Sediment	0.61	
IMS-227	Basalt, Weathered Sediment	0.82	
IMS-255	Basalt, Sulphide	0.89	
PBS-86	Basalt	0.98	SOLD OUT
IMS-191	Basalt, Sulphide	0.98	SOLD OUT
IMS-266	Basalt, Sulphide	1.03	
IMS-192	Basalt, Sulphide	1.87	LOW
PBS-87	Basalt	1.93	SOLD OUT
IMS-267	Basalt, Sulphide	2.00	
IMS-230	Basalt, Weathered Sediment	2.19	
IMS-231	Basalt, Weathered Sediment	3.43	
PBS-88	Basalt	4.20	SOLD OUT
IMS-247	Basalt, Sulphide	4.24	
IMS-193	Basalt, Sulphide	4.35	SOLD OUT
IMS-261	Basalt, Weathered Sediment	7.03	
IMS-194	Basalt, Sulphide	8.01	LOW

KLEN STANDARDS



KLEN Standards Current Range

SKU	BATCH #	BASE	RANGE PPM	AUPPM
21000001	74806	Oxide	Blank	0.002
21001011	83313	Oxide	0.0 - 0.15	0.081
21001021	82708	Oxide	0.15 - 0.30	0.166
21001021	81778	Oxide	0.15 - 0.30	0.239
21001021	81956	Oxide	0.15 - 0.30	0.239
21001021	82709	Oxide	0.15 - 0.30	0.246
21001031	82710	Oxide	0.30 - 0.50	0.399
21001041	81774	Oxide	0.50 - 0.80	0.609
21001041	81796	Oxide	0.50 - 0.80	0.705*
21001051	83071	Oxide	0.80 - 1.10	0.982*
21001061	83072	Oxide	1.10 - 1.50	1.26
21001071	81929	Oxide	1.50 - 2.50	1.76
21001081	83105	Oxide	2.50 - 5.00	3.69
21001081	82146	Oxide	2.50 - 5.00	4.98*
21001091	83106	Oxide	5.0 - 10.0	5.37
21001091	81250	Oxide	5.0 - 10.0	7.36
21001091	83260	Oxide	5.0 - 10.0	8.78
21001101	80320	Oxide	10.0 - 20.0	13.83
21001111	78738	Oxide	20.0 - 50.0	25.20
21001111	79278	Oxide	20.0 - 50.0	48.90
21001491	81980	Oxide	> 100	100.00
21002121	74383	Oxide	< 10.0 + Ag < 100	4.93
21002131	74465	Oxide	< 10 + Ag 100 - 1000	4.94
21002141	74589	Oxide	<10 + Ag > 1000	8.65
21003211	79279	Oxide	< 2 Pt < 2 Pd < 2	1.35
22001011	75228	Sulphide	0.0 - 0.15	0.065
22001011	74594	Sulphide	0.0 - 0.15	0.105
22001021	82893	Sulphide	0.15 - 0.30	0.28
22001031	81792	Sulphide	0.30 - 0.50	0.429
22001041	81905	Sulphide	0.50 - 0.80	0.727
22001051	81138	Sulphide	0.80 - 1.10	1.03
22001061	82908	Sulphide	1.10 - 1.50	1.29*
22001061	81357	Sulphide	1.10 - 1.50	1.40
22001071	82909	Sulphide	1.50 - 2.50	1.98
22001071	81160	Sulphide	1.50 - 2.50	2.02
22001081	81947	Sulphide	2.50 - 5.00	3.28
22001091	83107	Sulphide	5.0 - 10.0	5.36*
22001091	81237	Sulphide	5.0 - 10.0	7.89
22001101	83261	Sulphide	10.0 - 20.0	13.70
22001101	81760	Sulphide	10.0 - 20.0	14.6*
22001111	81325	Sulphide	>20.0	24.2
22002121	74358	Sulphide	< 10.0 + Ag < 100	4.87

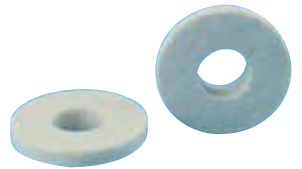
Certified Reference Material		Certificate of Analysis	
			
Manufacturers Details			
KLEN International (74) Pty Ltd 36 Hemisphere Street Neerabup, Western Australia, 6031		PO Box 529 Wanneroo WA 6946	
Concentration of Certified Analyte/s			
Au	0.002 g/t (ppm)		
CRM Type Oxide			
Identifiers			
Batch number : 74806 Lab ID (LIMS): KO74806 Stock Keeping Unit (SKU) (2kg jar) : 21000001 SKU (30g sachet) : 21000003 SKU (50g sachet) : 21000005 SKU (150g sachet) : 21000007 Date of Manufacture : July 2017 Period of Validity : 36 months			
NB: For ease of documentation, only the larger pack size is referenced throughout the CoA. However, product making up all jars and sachets originate from the same batch number.			
Intended Use			
This product is for use as a reference material for monitoring and testing the accuracy of laboratory analysis of minerals and ores.			
Analyte Data Table			
Analyte	Certified Value g/t	Measurement Uncertainty g/t	Number of ISO/IEC 17025 Certified Laboratories
Gold	0.002	0.0004	17
Document Name 21000001_Oxide_Au_BN_74806 ver 1.2		Page 1 of 9	

VARIOUS CRUCIBLES

CERAMIC CRUCIBLES - ALPHA RESOURCES	SIZE	QTY	ROWE CODE
Glazed TGA	Small 16cc	5	AA1504
	Large 20cc		AA1507
Covers with 10mm hole in centre	25mm DIA	100	AA0013
		1000	AA1514
Covers TGA	small	5	AA1511
Porous covers		1000	AA1510
Covers with 4mm hole		1000	AA1512
Porous crucible for solid samples		10	AA1674



ROWE CODE AA1501



ROWE CODE AA1514

CERAMIC CRUCIBLES FOR CARBON & SULFUR ANALYSIS	SIZE	QTY	ROWE CODE
	25 OD x 19 ID x 25 H (mm)	1000	AC0032
Foil wrapped	25 OD x 19 ID x 25 H (mm)	1000	AA1501



ROWE CODE AC0032

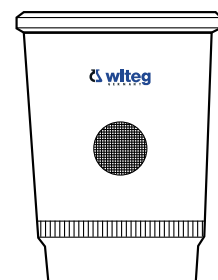
FIRE ASSAY CRUCIBLES	WEIGHT (G)	QTY	ROWE CODE
Premium	30g	2040	YC1003
		64	YC1008
DFC Multitrip	50g	1440	YC1005
Multitrip	55g	1380	YC1007

GOOCH & GRAPHITE CRUCIBLES

GOOCH RUBBERS	QTY	ROWE CODE
Gooch rubber (Guko), grey, Top 78mm OD & 66mm ID, Bottom 58mm OD & 45mm ID, size 7	EA	HS2260
Gooch rubber (Guko) grey, 27mm top, 17mm base, size 2	EA	HG0586
Gooch rubber (Guko) grey, 33mm top, 17mm base, size 3	EA	HG0587
Gooch rubber (Guko) grey, 41mm top, 27.5mm base, size 4	EA	HS2247
Gooch rubber (Guko) grey, 53mm top, 33mm base, size 5	EA	HS2246
Gooch rubber (Guko) grey, 68mmOD top, 48mmOD bottom, 35mmID bottom, Size 6	EA	HS2249
Set of 7 Gooch neoprene rubber (Guko), DIA ranging 21 - 86mm	SET	HG0072
Conical adaptor / Gooch rubber - No.3, 32mmID top x 22mmID bottom x 32mm deep, red natural rubber	EA	HS2100
Conical adaptor / Gooch rubber - No.2, 29mmID top x 19mmID bottom x 25mm deep, red natural rubber	EA	HS2095
Conical adaptor / Gooch rubber - No.4, 41mmID x 29mmID bottom x 38mm deep, red natural rubber	EA	HS2150
Conical adaptor / Gooch rubber - 38mmID top x 25mmID bottom x 32mm deep, red natural rubber	EA	HS2097

ROWE CODE
HS2095ROWE CODE
HG0072

GOOCH CRUCIBLES	ROWE CODE
Gooch Adaptor 24/29 drip cone 40mmID with water lead	GA0004
40mL Gooch funnel to suit 40mm disc	GF6000
50ml Gooch funnel for Gooch crucible	GF6020
Gooch crucible filter - Porosity 4, sintered disc, 30mL glass	GC0137
Gooch crucible filter - Porosity 1, sintered disc, 50mL glass	GC0481
Gooch crucible filter - Porosity 4, sintered disc, 50mL glass	GC1480
Gooch crucible filter - Porosity 5 sintered disc, 50mL glass	GC0565

ROWE CODE
GC0481

GRAPHITE CRUCIBLES	QTY	ROWE CODE
Clay/graphite crucible - A100 universal with lip	EA	AC1000
Graphite crucible - 50 OD x 40 ID x 55 H mm	EA	AC1001
Clay/graphite crucible - A12	EA	AC1005
Graphite crucible - 106 OD x 80 ID mm, 110 Internal H x 130 Ex H mm	EA	AC1004
Graphite crucible - 40 OD x 30 ID mm, 50 Ex H x 45 Internal H mm	EA	AC1012
Graphite crucible - 140 H x 130 Deep mm, 90mm OD, 10mm wall	EA	AC0006
Graphite crucible - High temperature for Leco	1000	AC0013

ROWE CODE
AC0013

NICKEL CRUCIBLES

NICKEL CRUCIBLES - LOW FORM				
VOL (mL)	DIAMETER (mm)	HEIGHT (mm)	QTY	ROWE CODE
10 (without lid)	25 (0.5mm WALL)	25	EA	HC1328
15 (without lid)	30 (0.5mm WALL)	30	EA	HC1329
15	36 TOP / 32 BOTTOM	23	EA	HC1349
20	36 TOP		EA	HC1354
35	47 TOP / 40 BOTTOM	30	EA	HC1362
45	46 TOP / 38 BOTTOM	35	EA	HC1360
55			EA	CN1870
250			EA	CN1869
Cover for 20mL, low form or straight wall crucible			EA	CN1861
Cover for 55mL, low form or straight wall crucible			EA	CN1863
Cover for 250mL, low form or straight wall crucible			EA	CN1862



ROWE CODE
CN1870



ROWE CODE
CN1867

NICKEL CRUCIBLES - TALL FORM				
VOL (mL)	DIAMETER (mm)	HEIGHT (mm)	QTY	ROWE CODE
20	(0.9mm WALL)		EA	HC1369
20	30 (2mm WALL)	30	EA	HC0295
20	38 TOP	35	EA	HC1330
20			EA	CN1867
30	43 TOP / 28 BOTTOM	44	EA	HC1359
50			EA	CN0268
50	45 TOP / 34 BOTTOM (0.021mm WALL)	51	EA	HC1370
70	50 (1mm WALL)	50	10	HC0400
75	54 TOP / 39 BOTTOM (0.53mm WALL)	56	EA	HC0536
100	(0.5mm WALL)		EA	HC1376
100			EA	CN1864
Cover for 20mL, high form crucible			EA	CN1860



ROWE CODE
CN1871



NICKEL
CRUCIBLES

NICKEL CRUCIBLES - STRAIGHT WALL				
VOL (mL)	DIAMETER (mm)	HEIGHT (mm)	QTY	ROWE CODE
15	33	22	EA	HC1353
20	33	29	EA	HC1345
55			EA	CN1871
250	83	57	EA	HC1365
500	104	63	EA	HC1367

PLATINUM CRUCIBLES

PLATINUM CRUCIBLES	QTY	ROWE CODE
5mL, micro	EA	CP3060
10mL, standard	EA	CP3061
15mL, standard	EA	CP6214
15mL, standard form, 30mm DIA x 31mm H, approx 11g	EA	AC1116
20mL, 20g	EA	AC1110
25mL, 36mm DIA x 34mm H, approx 19g	EA	AC1115
30mL, standard	EA	CP3062
35mL, 26g	EA	AC1100
50mL, 45mm DIA x 44mm H, approx 38g	EA	AC0014
80mL, standard form, 51mm DIA x 53mm H, approx 51g	EA	AC1117
100mL, 56mm DIA x 57mm H	EA	AC1120



ROWE CODE
CP3061

CRUCIBLE LIDS - PLATINUM	QTY	ROWE CODE
Lid, fits 25mL crucible	EA	CP3058
Lid, fits 30mL crucible	EA	CP3059



ROWE CODE
CP3058

CRUCIBLE LIDS - NICKEL	QTY	ROWE CODE
To suit 20-0015LF and 20-0020LF crucibles	EA	HC0492
To suit 20-0020HF and 20-0020HFHW037 crucibles	EA	HC1371
To suit 20-0025SW, 20-0035SW, 20-0045SW, 20-0055SW straight walled and 20-0025LF, 20-0035LF, 20-0045LF, 20-0055LF low form crucibles	EA	HC1325
To suit 20-0030HF and 20-0050HF crucibles	EA	HC1358
To suit 20-0100HF crucible	EA	HC0063
To suit 25mL, 35mm diameter crucible	EA	HC1372
To suit 40mm diameter crucible	EA	HC1355
To suit 45mL low form crucible	EA	HC1373
To suit 70mL, 50mm diameter crucible	EA	HC1375



ROWE CODE
HC1372

PORCELAIN CRUCIBLES

PORCELAIN CRUCIBLES - LOW FORM				
VOL (mL)	DIAMETER (mm)	HEIGHT (mm)	QTY	ROWE CODE
5 (#1/30)	30	19	EA	WC2235
6	30	19	EA	WC0014
10 (#1/35)	35	22	EA	WC1405
11	35	22	EA	WC1400
17 (#1/40)	40	25	EA	WC0017
21	45	28	EA	WC1505
25	45	28	EA	WC1500
29	50	32	EA	WC1600
34 (1/50)	50	32	EA	WC1655
40 (with lid)	55	34	EA	WC2050
63	60	38	EA	WC1645
85	70	44	EA	WC1750
91 (#1/70)	70	44	EA	WC1755



ROWE CODE
WC1505



ROWE CODE
WC2000

If you can't see the item you are looking for, please call us!

New South Wales & ACT

Ph: (02) 9603 1205
rowensw@rowe.com.au

Queensland

Ph: (07) 3376 9411
roweqld@rowe.com.au

South Australia & NT

Ph: (08) 8186 0523
rowesa@rowe.com.au

Victoria & Tasmania

Ph: (03) 9701 7077
rowevic@rowe.com.au

Western Australia

Ph: (08) 9302 1911
rowewa@rowe.com.au



VARIOUS CRUCIBLES

PORCELAIN CRUCIBLES - MEDIUM FORM

VOL (mL)	DIAMETER (mm)	HEIGHT (mm)	QTY	ROWE CODE
5	25	20	EA	WC2650
12	35	28	EA	WC2755
15	35	28	EA	WC2750
20	40	32	EA	WC2410
25 (with lid)	40	36	EA	WC2450
30	45	36	EA	WC2855
38	45	36	EA	WC2850
50 (with lid)	46	40	EA	WC1657
(with lid)	53	46	EA	WC1660
90	60	48	EA	WC2860
120	70	56	EA	WC3155
150	70	56	EA	WC3150
400 (with lid)	100	100	EA	WC0001

ROWE CODE
WC2450ROWE CODE
WC3155

PORCELAIN CRUCIBLES - HIGH FORM

VOL (mL)	DIAMETER (mm)	HEIGHT (mm)	QTY	ROWE CODE
15 (#3/30)	30	38	EA	WC1110
35 (#3/40)	40	50	EA	WC3605
50 (with lid)	43	58	EA	WC1250

ROWE CODE
WC1110

CRUCIBLE LIDS - PORCELAIN

	QTY	ROWE CODE
Glazed porcelain lid to suit 45mm diameter, high form, crucible	EA	WC0020
To suit 25mm diameter crucible	EA	WC1805
To suit 35mm diameter crucible	EA	WC1810
To suit 40mm diameter crucible	EA	WC1825
To suit 52mm diameter crucible	EA	WC1830
To suit 60mm diameter crucible	EA	WC0002
To suit 70mm diameter crucible	EA	WC1845
To suit 80mm diameter crucible (MFD/1)	EA	WC1850

ROWE CODE
WC0020

SILICA CRUCIBLES

SILICA CRUCIBLES - LOW FORM				
VOL (mL)	DIAMETER (mm)	HEIGHT (mm)	QTY	ROWE CODE
5 (S1410)	29	19	EA	TC1434
15	41	24	EA	TC0004
15	41	25	EA	TC1427
15	41	28	EA	TC1425
25	47	28	EA	TC1428
25	47	28	EA	TC1450
50	57	37	EA	TC1500
50	57	37	EA	TC1501
80	67	45	EA	TC1520
80	67	45	EA	TC1525
150	82	51	EA	TC1530
150	82	51	EA	TC1532



ROWE CODE
TC1532

SILICA CRUCIBLES - HIGH FORM				
VOL (mL)	DIAMETER (mm)	HEIGHT (mm)	QTY	ROWE CODE
30 (with lid)	43	39	EA	TC1446
50	51	51	EA	TC1447

SILICA CRUCIBLES				
COKING	DIAMETER (mm)	HEIGHT (mm)	QTY	ROWE CODE
With lugs	25	38	EA	TC1300
With projection	25	38	EA	TC1305
Without projections	25	38	EA	TC1306
Without projections	25	38	EA	TC1330

CRUCIBLE LIDS - SILICA		QTY	ROWE CODE
To suit 21mm diameter to fit 25mm coking		EA	TC1355
To suit 25mm coking crucible		EA	TC1350
To suit 25mm volatile T2010/M		10	TC1351
41mm diameter to fit TC1425		EA	TC1430
47mm diameter with ring handle to fit TC1500		EA	TC1505
47mm diameter, translucent		EA	TC1507
To suit 47mm diameter, 25mL crucible		EA	TC1506
51mm diameter to fit 50mL, tall form, crucible		EA	TC1555
57mm diameter		EA	TC1540
67mm diameter		EA	TC1526
82mm diameter, to fit 150mL, low form, crucible (S1475)		EA	TC1504
To suit TC1535, transparent		EA	TC1536
To suit TC1427 (T1435), transparent		EA	TC1433

VARIOUS CRUCIBLES

STAINLESS STEEL CRUCIBLES

VOL (mL)	DIAMETER (mm)	HEIGHT (mm)	QTY	ROWE CODE
	30 TOP / 25 BOTTOM	15	10	HC1321
100 (with lid)	58 TOP	50	EA	HC1322

ZIRCONIUM CRUCIBLES - STRAIGHT WALL

VOL (mL)	DIAMETER (mm)	HEIGHT (mm)	QTY	ROWE CODE
5	21	19	EA	HC1290
10	27	22	EA	HC1291
15	33	22	EA	HC1263
20	33	29	EA	HC1264
20	33 (2mm WALL)	29	EA	HC1266

ZIRCONIUM CRUCIBLES - LOW FORM

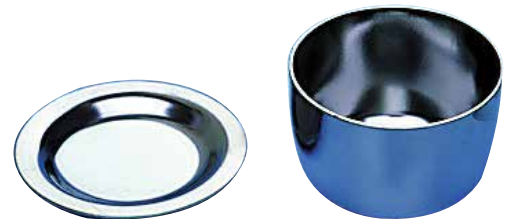
VOL (mL)	DIAMETER (mm)	HEIGHT (mm)	QTY	ROWE CODE
20	36 TOP / 32 BOTTOM	33	EA	HC12645
25 (#10-25LF)	47 TOP / 40 BOTTOM	23	EA	HC1265
35	46 TOP / 38 BOTTOM	30	EA	HC1285
35	46 TOP / 38 BOTTOM	30	EA	HC1286
40	42 TOP / 30 BOTTOM (2mm WALL)	40	EA	HC1295
40	42 TOP / 30 BOTTOM (2mm WALL)	40	EA	HC1296
45	46 TOP / 38 BOTTOM	35	EA	HC1299
45	47 TOP	34	EA	HC1298
55	47 TOP / 38 BOTTOM	43	EA	HC1300
100	59 TOP / 53 BOTTOM	46	EA	HC1268



ROWE CODE
HC1290



ROWE CODE
HC1291



ROWE CODE
HC1265



ROWE CODE
HC1296

CRYOKIT



cryokit®

Specialised range of gloves and accessories to protect operators working with liquid nitrogen and cryogenic liquids.

Cryokit® delivers the requirement for ergonomic protection

- Extended insulation from the cold
- Waterproof while still delivering flexibility and dexterity
- Manufactured of composite materials that remain unaffected by contact (immersion) in cryogenic liquids
- The Porelle® internal membrane keeps your hands dry and comfortable.



CRYOKIT 400 - 550

Softness, Dexterity, Comfort. Our most popular glove.

CRYOKIT 400-550 are available in sizes 6 -11, in either the standard 400mm or longer 550mm lengths.

Suitable for all work in the presence of liquid nitrogen and other cryogenic liquids. Protects from cold contact and prevents burns in case of leakage of liquids.



Suitable for work in: Biology, Biobanks, Workshops, Food industry, Molecular cuisine, Scientific research, Medical Technologies, etc.

ROWE CODE	HC0357	HC0358	HC0359	HC0360	HC0361	HC0362	HC0363	HC0364	HC0365	HC0366
SIZES	6	7	8	9	10	11	8	9	10	11
LENGTH (mm)	400	400	400	400	400	400	550	550	550	550



CRYOPLUS 2.1

Textured outer finish for enhanced grip.

The glove is made entirely with a special composite fabric coupled with a waterproof polyolefin Porelle®membrane.

Available in four different lengths: Standard 380mm and 450mm sizes 7-11; and with longer glove lengths of 450mm and 550mm in sizes 8-11.



Suitable for work in: Biology, Biobanks, Food industry, Molecular cuisine, Gelateria, Chemical industry, Scientific research, Environmental, Medical Technologies, etc.

ROWE CODE	HC0377	HC0378	HC0379	HC0380	HC0381	HC0382	HC0383	HC0384
SIZES	8	9	10	11	8	9	10	11
LENGTH (mm)	550	550	550	550	650	650	650	650

ROWE CODE	HC0367	HC0368	HC0369	HC0370	HC0371	HC0372	HC0373	HC0374	HC0375	HC0376
SIZES	7	8	9	10	11	7	8	9	10	11
LENGTH (mm)	380	380	380	380	380	450	450	450	450	450



CRYOLITE APRON

Protection from splashes of cryogenic liquids.

Made of a special extra resistant composite coated fabric, with adjustable clip buckles at both collar and waist.

Standard size at 700 x 900mm, also available in lengths of 1100, 1200 and 1350mm.

Suitable for work in: Biology, Biobanks, Food industry, Molecular cuisine, Gelateria, Chemical industry, Scientific research, Environmental, Medical Technologies, etc.



ROWE CODE	HC0346	HC0347	HC0348	HC0349
SIZES (mm)	700 x 900	700 x 1100	700 x 1200	700 x 1350

CRYOKIT

CLEAR - CRYO

Face shield for cryogenic protection.



Specifically designed to protect the face, the front of the head and neck from liquid splashes, drops and sprays. Made with specially designed polycarbonate face screen, 90 degree tilting head band and adjustable head circumference. Suitable for prolonged use due to its ergonomic design, with a clear distortion free lens.

ROWE CODE	HC0355
SIZE	395 x 240 x 2mm

GHETTE - CRYO

Protective overshoes for cryogenic use.



This overshoe is made entirely of a special composite coated, water resistant fabric. Designed to be worn over shoes with a universal fitting for any application. Incorporates polyester velcro lace system for ease of use.



ROWE CODE	HC0354
SIZE	UNIVERSAL

CRYOGENIC CARRYING CASE

Protection for your cryogenic PPE equipment.



A practical case containing:

- CRYOKIT 400 size 9 gloves*
- CLEAR-CRYO face shield
- GHETTE CRYO protective overshoes
- T-CRYO LITE apron size 700x900

Suitable for work in: Biology, Biobanks, Food industry, Molecular cuisine, Gelateria, Chemical industry, Scientific research, Environmental, Medical Technologies, etc.

*(Glove size can be changed at time of order)

ROWE CODE	HC0356
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Suitable for work in: Food industry, Gas production, Transportation, Chemical industry, Environmental, Metallurgy, Glass industry etc. **N.b.** Not intended for immersion.

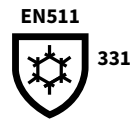
CRYOLITE - HP

For light industrial use - extreme cold and heat.

Fully waterproof glove to protect the hand and forearm in operations that involve the use of liquid nitrogen (or other cryogenic liquid) as well as high heat.

Made with materials specifically designed to keep the hands warm and dry for prolonged usage, the multilayered construction provides a high level of thermal protection, flexibility and dexterity from -200 °C to 250 °C.

ROWE CODE	HC0340	HC0341	HC0342	HC0343
SIZES	8	9	10	11
LENGTH (mm)	380	380	380	380



Suitable for work in: Food industry, Gas production, Transportation, Chemical industry, Environmental, Metallurgy, Glass industry etc. **N.b.** Especially designed for liquid gas transport.

CRYO - HD

For heavy industrial use in extreme cold.

Manufactured from water repellent grain leather (1.2mm) suitable for heavy duty industrial usage. The internal insulation consists of a polyester fleece (320g/sqm) coupled with a waterproof polyolefin Porelle® membrane. Overall glove length is 380mm with an inbuilt split leather safety cuff. Flexibility tested after contact with liquid nitrogen for 1 minute.

ROWE CODE	HC0344	HC0345
SIZES	10	11
LENGTH (mm)	380	380



CRYOKIT CHEF

Food grade cryogenic protection in the kitchen.

Made with a special black coloured elastic and waterproof fabric, coupled with an internal insulation of a polyolefin Porelle® membrane. Suitable for food contact. Overall glove length is 300mm with an inbuilt safety cuff.

ROWE CODE	HC0324	HC0325	HC0326	HC0327	HC0328
SIZES	7	8	9	10	11
LENGTH (mm)	300	300	300	300	300

CRYOKIT



CRYOLITE - HPS

Cryogenic Protection Gloves.
 -200°C to +250°C

Heavy duty, water proof gloves that offer extreme low temperature protection in operations which involve the use of cryogenic gases.

Manufactured from water repellent grain leather (1.3 mm thick) made waterproof with Porelle® polyolefin membrane. The internal insulation consists of a polyester fleece (240g/m²). Overall glove length is 380mm with an inbuilt split leather safety cuff.

ROWE CODE	HC0555	HC0556	HC0557	HC0558
SIZES	8	9	10	11
LENGTH (mm)	380	380	380	380

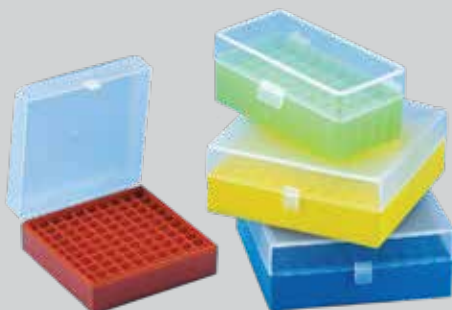
CRYOGENIC STORAGE

FREEZER STORAGE BOXES

The CRYOCHILL™ range of freezer storage boxes have a hinged lid for ease of use and to prevent accidental opening of boxes in a deep freezer. Boxes are stackable and suitable for use in temperatures to -90°C.

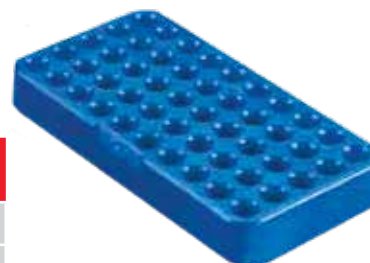


POLYPROPYLENE BOXES	PLACES	COLOUR	UNIT	ROWE CODE
FREEZER BOX CRYOCHILL™ (-90c) Holds 1/1.8mL cryo vial or 1.5/2mL micro tube, with hinged lid, autoclavable	50	ASSORTED	5	PB0168
	100	BLUE	EA	PT2005
POLYCARBONATE BOXES	PLACES	COLOUR	UNIT	ROWE CODE
FREEZER BOX CRYOCHILL™ Holds 1-2mL internally threaded vials with transparent cover 133 x 133 x 52mm	81	BLUE	4	PB0242
	81	GREEN	4	PB0243
	81	RED	4	PB0245
	81	YELLOW	4	PB0247
	100	BLUE	4	PB0211
	100	GREEN	4	PB0212
	100	RED	4	PB0214
	100	WHITE	4	PB0215
	100	YELLOW	4	PB0216



CRYOVIAL RACKS

Polycarbonate racks, 195L x 101W x 24mmH. Rack wells accommodate Tarson Cryochill starfoot vials, locking vials in to allow single handed opening and closing.



POLYCARBONATE RACKS	COLOUR	WELLS	UNIT	ROWE CODE
Rack for cryochill cryovials, suits star base vials	BLUE	50	EA	PR0143
	GREEN	50	EA	PR0144
	RED	50	EA	PR0145
	WHITE	50	EA	PR0146

CRYOGENIC VIALS

Cryovial polypropylene with screw cap, round bottom and star base self-standing.

STAR BASE - STERILE	ROWE CODE
1.8mL external thread	PV1025
1.8mL internal thread	PV0017
STAR BASE - STERILE	ROWE CODE
4.5mL external thread	PV1030
4.5mL internal thread	PV0009
V BASE, SKIRTED - NON STERILE	ROWE CODE
1.8mL with frosted writing patch and graduated	PC0140



SUPER COOL PRODUCT!

Gel-Filled mini cooler racks to suit a variety of Cryogenic vials and tubes.



CUVETTES

For Spectroscopy

Standard and semi-micro disposable cuvettes for spectroscopy made of optical PS and PMMA UV grade. With optical windows to achieve optimal transmittance through spectral range from 340 to 800 nm (OPS) and from 280 to 800 nm (PMMA UV grade).

The engineering and quality control determine the reproducibility of the cuvettes. These are strictly controlled and variations should be within the range +/-1% absorption. This is vital when batch analysis is being undertaken. Dust-proof packing: 100pcs in expanded polystyrene box with dust lid.



Cuvettes BRAND

CUVETTES BRAND	PACK SIZE	ROWE CODE
Visible Macro, 2.5-4.5mL, Polystyrene	100	CB1823
UV, Macro, Fill volume 2.5-4.5mL, 230-900nm	100	CB1997
Plastibrand, Polystyrene, 10mm, Semi Micro	100	CC2456
Visible, Semi-Micro, Fill volume 1.5-3mL, PMMA	100	CP3105
Disposable, 2.5mL, 10mm, UV PMMA	100	PC0359

ROWE CODE PC0359

Visible Range Cuvettes - Optical Polystyrene Kartell

CAPACITY (mL)	PATH LENGTH (mm)	TYPE	PACK SIZE	ROWE CODE
4.5	10	Standard	100	PC3750
1.5	10	Semi-micro	100	PC3740
2.5	10	Semi-micro	100	PC3796
4.5	10	4 clear faces	100	PC3785



UV Range Cuvettes - UV grade PMMA Kartell

CAPACITY (mL)	PATH LENGTH (mm)	TYPE	PACK SIZE	ROWE CODE
4.5	10	Standard	100	PC3770
4.5	10	4 Clear Faces	100	PC3790



Cuvettes - Polystyrene Jet Biofil

CAPACITY (mL)	PATH LENGTH (mm)	TYPE	PACK SIZE	ROWE CODE
1.5	10	Semi-micro	100	PC0539
4.5	10	Standard	100	PC0538

Cuvette Holder

Material: Polyethylene

Can accommodate 12x10mm cuvettes vertically in firm recesses for preparation work, or 12 x 10mm cuvettes horizontally for storage and protection. In storage mode the racks are stackable.



ROWE CODE PC3765

CUVETTES - STARNA

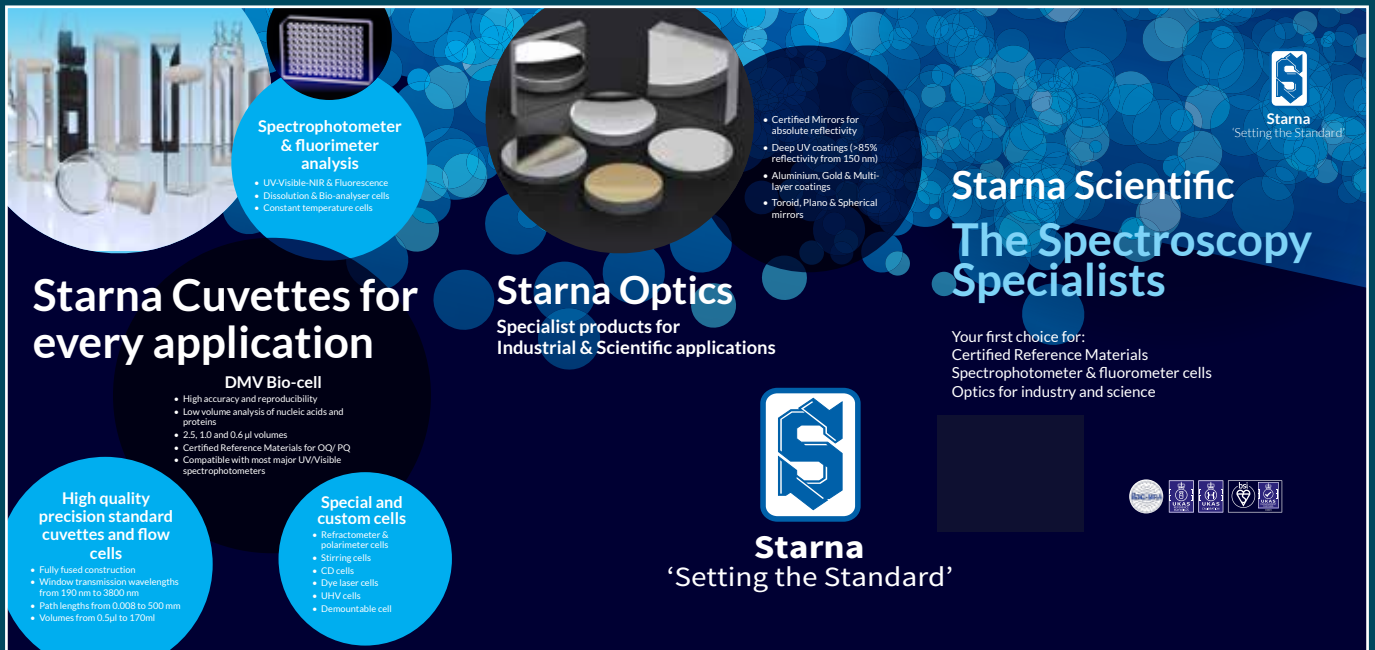
STOP PRESS!

WE ARE NOW THE OFFICIAL STARNA DISTRIBUTOR IN AUSTRALIA

Are you required to calibrate your instrument?

STARNA manufacture instrument calibration sets to meet USP/EP requirements.

Starna are ISO 17025 accredited to produce ISO 17034 certified standards.



Starna Cuvettes for every application

DMV Bio-cell

- High accuracy and reproducibility
- Low volume analysis of nucleic acids and proteins
- 2.5, 1.0 and 0.6 µl volumes
- Certified Reference Materials for OQ/PQ
- Compatible with most major UV/Visible spectrophotometers

High quality precision standard cuvettes and flow cells

- Fully fused construction
- Window transmission wavelengths from 190 nm to 3800 nm
- Path lengths from 0.008 to 500 mm
- Volumes from 0.5µl to 170ml

Spectrophotometer & fluorimeter analysis

- UV-Visible-NIR & Fluorescence
- Dissolution & Bio-analyser cells
- Constant temperature cells

Starna Optics
Specialist products for Industrial & Scientific applications

- Certified Mirrors for absolute reflectivity
- Deep UV coatings (>85% reflectivity from 150 nm)
- Aluminium, Gold & Multi-layer coatings
- Toroid, Plano & Spherical mirrors

Special and custom cells

- Refractometer & polarimeter cells
- Stripping cells
- CD cells
- Dye laser cells
- UV cells
- Demountable cell

Starna
‘Setting the Standard’

Starna Scientific
The Spectroscopy Specialists

Your first choice for:
Certified Reference Materials
Spectrophotometer & fluorimeter cells
Optics for industry and science




Using a Spectrophotometer
Then you need our Certified Reference Materials!
The world's widest range from Starna Scientific

Using a Spectrofluorometer
Then you need our Reference Materials (including Certified!)
The world's widest range from Starna Scientific

Wavelength?
Starna wavelength references cover a wavelength range from 190 nm in the Deep UV to 18.5 µm in the Mid IR. Absorbance references for wavelengths from 190 nm to 3.2 µm.

Pharmacopoeia compliance?
Qualify your UV visible spectrophotometer for **wavelength and photometric accuracy, stray light and resolution** with these convenient, easy to use sets. Comply with the latest revisions of USP Chapter <857>, EP 2.2.25 and most other pharmacopoeias.

ISO/IEC 17025
General requirements for the competence of testing and calibration laboratories. The gold standard for calibration, required by ISO 17034. Starna has been accredited to ISO/IEC 17025 since 2001.

Application?
References for:
• Spectrofluorometer performance qualification
• Microplate applications
• Molecular biology applications and PCR
• Fluorescence microscopy
• OEM & Custom references
• Calibration and certification services

Pharmacopoeia compliance?
• Including references cited in USP Chapter <853> for spectrofluorometer qualification
• Formats and concentrations to suit the application

Technique?
Starna have references for many spectrophotometry based techniques including DNA/RNA assays, microvolume measurements and plate readers – even Raman!

Traceability and International Recognition
All Starna CRM calibrations are traceable to NIST or other NMI SRMs. Certificates of Calibration. Starna CRMs are recognised by National agencies in all countries that are signatories to ILAC.

ISO 17034
General requirements for the competence of reference material producers. Accreditation is mandatory for all reference material producers. Starna has been accredited to ISO 17034 (previously ISO Guide 34) since 2006.

Parameter?

- Wavelength
- Spectral correction (relative intensity)
- Sensitivity (signal-to-noise)
- Quantum yield

CUVETTES - GLASS & QUARTZ

Material Specifications

Starna offers five window materials, Optical Glass, Special Optical Glass and Pyrex® for the visible range, Spectrosil® Quartz for the far UV range and Infrasil® Quartz or equivalent for the near infrared. If a material required is not shown in this catalogue, please contact us for availability. All materials used to construct the cells are suitable for use in the following wavelength range:

Optical Glass	334 through 2500 nm
Special Optical Glass	320 through 2500 nm
Pyrex®	320 through 2500 nm
Spectrosil® Quartz	170 through 2700 nm
Infrasil®	220 through 3800 nm

For fluorescent applications, Spectrosil® is recommended as it does not exhibit any background fluorescence. Some other materials, especially glass and lower grades of quartz may have some background fluorescence. Standard window thickness is 1.25mm, polished to a flatness tolerance of better than 4 Newton Fringes per centimetre in the viewing area. They are typically flat to better than 1 micron (0.001mm) over the whole window area. The scratch and dig specification for surface polish is 60/40. The meticulous care taken in the preparation and construction of regular quartz fluorescent cells allows for normal tolerances to be sufficiently stringent for use in laser applications.

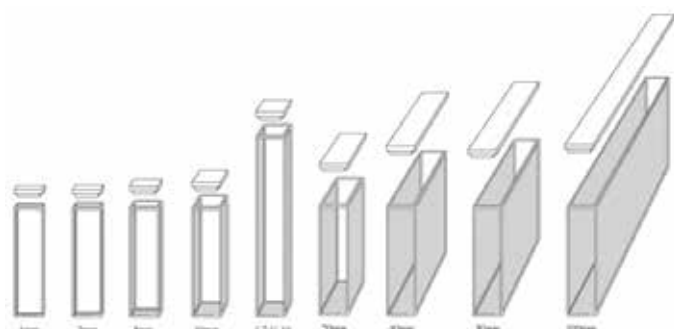
Cell Matching

The high degree of accuracy maintained during production ensures a standard path length tolerance of +/- 0.01mm. The tolerance maintained for parallelism of the windows is better than 3 minutes of arc, therefore quartz cells vary little in transmission values. Slight differences in the transmission of new glass cells are due to variations in raw material transmission characteristics. The transmission of matched cells is measured and each cell is given a match code. These codes are only of real value when comparing new cells because the transmission characteristics may change as surface contamination or deterioration occurs during normal use. Thus, a new cell of a particular match code will not necessarily match an older cell of the same match code.

Cells which are commonly used (eg. 1-Q-10) are normally supplied from stock in unlimited quantities of the same match code. The less commonly used cells can usually be supplied in matched sets of two or four. In the case of Tablet Dissolution flow cells, matched sets of eight or more can be supplied.

WINDOW MATERIAL	MATCHING TOLERANCE	MEASURED AT WAVELENGTH
Optical Glass	0.5 %	350 nm
Special Optical Glass	1.0 %	320 nm
Spectrosil Quartz	1.5 %	200 nm
Infrasil Quartz	1.5 %	240 nm

Cuvettes STARNA	PATH LENGTH (mm)	# POLISHED WINDOWS	CAPACITY (mL)	ROWE CODE
OPTICAL GLASS - USABLE RANGE 334 TO 2500nm				
Optical glass cell	1	2	0.4	GC1123
Optical glass cell	10	2	3.5	GC1111
Optical glass cell - Matched set of 4	10	2	3.5	GC1131
Optical glass cell - Matched pair	10	2	3.5	GC1136
Optical glass cell - Matched	50	2	17.5	GC11355
Optical glass cell	50	2	17.5	GC11357
SPECTROSIL® QUARTZ OR EQUIVALENT - USABLE RANGE 170 TO 2700nm				
Quartz cell	10	2	3.5	GC1116
Quartz cell - Matched with lids	10	2	3.5	GC1117
Quartz cell - Matched set of 4	10	2	3.5	GC1118
Quartz cell	50	2	17.5	GC1139




Please contact us with your specific needs!

MEASURING CYLINDERS - GLASS

Graduated Cylinders


BRAND graduated and mixing cylinders provide the highest accuracy. Strict statistical quality controls ensure maintenance of these high standards.

All BLAUBRAND® graduated cylinders are supplied with a batch number and an accompanying batch certificate in the original packaging. On request, they are also available with an individual certificate, USP individual certificate or DAkkS calibration certificate.

MEASURING CYLINDER (GLASS) - BRAND	VOLUME (mL)	PACK QTY	ROWE CODE
'A' CLASS BLUE GRADUATIONS WITH HEXAGONAL BASE 	5	2	DM0013
	10	2	CB1761
	25	2	CB1763
	50	2	CB1766
	100	2	GM1575
	250	2	GM1265
	500	2	GM1576
	1000	EA	GM1577
	2000	EA	CB1762




ROWE CODE
GM1575

MEASURING CYLINDER (GLASS) - WITEG	VOLUME (mL)	PACK QTY	ROWE CODE
 'A' CLASS, TALL FORM, SPOUTED WITH HEXAGONAL BASE	5	EA	GC1047
	10	EA	GC1049
	25	EA	GC1064
	50	EA	GC1107
	100	EA	GC1166
	250	EA	GC1208
	500	EA	GC1276
	1000	EA	GC1286
	2000	EA	GC1371
'B' CLASS, LOW FORM, SPOUTED WITH HEXAGONAL BASE	50	EA	GC0094
	100	EA	GC0010
	250	EA	GC1294
	500	EA	GC1295
	1000	EA	GC1296



ROWE CODE
GC1064 & GC1107

MIXING CYLINDER (GLASS) - WITEG	VOLUME (mL)	PACK QTY	ROWE CODE	
 POLYETHYLENE STOPPER, POLYPROPYLENE BASE & COLLAR, BLUE GRADUATIONS	25	EA	GM9001	
	Red base	50	EA	GM9002
		100	EA	GC9010
	Yellow base	250	EA	GC9011
		500	EA	GC9012
	Purple base	1000	EA	GC9013
	No collar	2000	EA	GM0036



ROWE CODE
GM9002

MEASURING CYLINDERS - GLASS

Graduated glass measuring cylinders with socket and stopper to suit acc. to EN ISO 4788. Also referred to as "Mixing Cylinders" and made from borosilicate glass with acid and alkali resistant DIFFICO stain graduations and inscriptions.

MEASURING CYLINDER (GLASS) - WITEG • TALL FORM • SPOUTED	VOLUME (mL)	PACK QTY	ROWE CODE
With blue polypropylene base and collar	10	10	GC9002
With green/natural polypropylene base and collar	25	10	GC9003
With red polypropylene base and collar	50	10	GC9004
With orange polypropylene base and collar	100	10	GC9005
With yellow polypropylene base and collar	250	10	GC9006
With light blue polypropylene base and collar	500	10	GC9007
With purple polypropylene base and collar	1000	10	GC9008
With polypropylene base no collar (blue graduations)	2000	10	GC9009

Volumetric glassware or volumetric flasks are containers that have been calibrated to a specific volume. A volumetric flask should be used whenever an accurate concentration of solution is required. When measuring liquids in a graduated cylinder, you always measure from the centre of the curvature in the liquid called the meniscus. Some liquids, like mercury, have a convex meniscus. Most liquids, however, will have a concave meniscus and the volume in the graduated cylinder should be read from the bottom centre of this meniscus.

If you can't see the item you are looking for, please call us!

New South Wales & ACT

Ph: (02) 9603 1205
rowensw@rowe.com.au

Queensland

Ph: (07) 3376 9411
roweqld@rowe.com.au

South Australia & NT

Ph: (08) 8186 0523
rowesa@rowe.com.au

Victoria & Tasmania


Ph: (03) 9701 7077
rowevic@rowe.com.au

Western Australia

Ph: (08) 9302 1911
rowewa@rowe.com.au



MEASURING CYLINDERS - PLASTIC

MEASURING CYLINDER (PLASTIC) - TARSON	VOLUME (mL)	PACK QTY	ROWE CODE
 TPX, 'A' CLASS, TALL FORM	25	EA	PC0172
	50	EA	PC0173
	100	EA	PC0174
	250	EA	PC0175
	500	EA	PC0176
	1000	EA	PC0177
	2000	EA	PC0178
TPX, 'B' CLASS, TALL FORM	10	EA	PC0164
	25	EA	PC0165
	50	EA	PC0166
	100	EA	PC0167
	250	EA	PC0168
	500	EA	PC0169
	1000	EA	PC0170
	2000	EA	PC0171
POLYPROPYLENE, 'B' CLASS, TALL FORM	10	EA	PC0156
	25	EA	PC0157
	50	EA	PC0158
	100	EA	PC0159
	250	EA	PC0160
	500	EA	PC0161
	1000	EA	PC0162
2000	EA	PC0163	

BEST SELLERS




ROWE CODE
PC0167

BEST SELLERS



ROWE CODE
PC0169

MEASURING CYLINDER (PLASTIC) - KARTELL	VOLUME (mL)	PACK QTY	ROWE CODE
 POLYPROPYLENE, TALL FORM	50	EA	PM1850
	100	EA	PM1900
	250	EA	PM1950
	500	EA	PM2000
	1000	EA	PM2050
TPX, TALL FORM	50	EA	PM1050
	100	EA	PM1100
	250	EA	PM1150
	500	EA	PM1200
	1000	EA	PM1250



ROWE CODE
PM1950

Desiccators are an economical and reliable way to assure dry, dust-free, and if necessary air-free storage of humidity sensitive products, such as valuable reagents or electronics. Depending upon what you are storing, optimal conditions can be achieved using standard desiccants in a manual or automated format, with gas purge, or by keeping the contents under vacuum.

When choosing a desiccator consider the following questions:

1. What storage environment is optimal or required?

Use the information below for an overview of the environment and benefits each method of desiccation provides.

STANDARD DESICCANT	AUTOMATED STANDARD DESICCANT	GAS PURGE DESICCANT	VACUUM DESICCANT
Manual monitoring and operation. Moisture is absorbed from air in the unit by using a desiccant. Once the desiccant is 'saturated' it must be regenerated through heating, or replaced.	Electric fans and heaters continuously regenerate the desiccant to prevent saturation and to automatically maintain a low humidity environment.	A slow steady flow of inert gas (often dry nitrogen) is provided.	Air and moisture are removed from the chamber by use of a vacuum pump.
Flexibility to use any type of desiccant (silica gel beads, activated charcoal, etc.) based on economics and convenience.	Convenience, requires minimal monitoring.	Achieve relative humidity at a much faster rate.	Best for total dry storage or if air could be damaging to material being stored.
Portability.	Precise control of humidity. Operates on a set schedule of desiccation followed by a regeneration period.	Dust free and desirable for many applications including clean room environments.	Dust free and desirable for many applications including clean room environments.
Economical functionality. Most desiccants can be regenerated periodically.	Process uses silica gel beads that last for thousands of regeneration cycles.	Option to close stopcocks and use with regular desiccants.	Option to close stopcocks and use with regular desiccants.

2. What size(s) are the items you need to store and in what quantity?

Interior volume of the desiccator and shelving should be considered. As a visual reference of the interior space an estimate of how many standard 355mL cans of soft drink would fit into each unit has been used. Estimates are a guideline only based on interior volume and do not take shelving or desiccator shape into consideration.

3. How important are ease and economy of use?

Each method of desiccation has advantages and trade-offs. Each user must determine the method that best serves their purposes. Using standard desiccants and regenerating them as needed is economical, but requires monitoring. There may also be more variability in your environment. An automated desiccator requires much less monitoring but uses electric power. Gas ported desiccators are quick to achieve relative humidity, but if the unit is accessed frequently, proportionately more gas will be needed to keep the desired low humidity level. Vacuum desiccators remove air and moisture and can be brought back to vacuum rather easily after opening, but require a pump.

Once you have determined your most desirable method of desiccation, there are a variety of styles and sizes of desiccators to choose from.

MODE	VOL (cu.ft)
Standard Desiccation	<0.50, 0.51-1.25, 126-174, >1.75
Automated Standard Desiccation	
Gas Purge Desiccation	

ACRYLIC DESICCATORS - PLAS-LABS

PLAS-LABS Acrylic Desiccators

Clear and Light Sensitive Units. Our Desiccators are designed to protect, store, or assist in transporting critical materials and prevent their contamination. They are dust and moisture free cabinets that safeguard valuable research specimens or sensitive electronic components. You may easily observe the status of your components without opening the door.

Under a slight positive N2 charge they prevent moisture from penetrating the molecular structure of stored components. Amber coloured units "CGA" are very effective for protection from harmful U.V. rays for light sensitive components.



ROWE CODE
PD0086



ROWE CODE
PD0106



ROWE CODE
PD0099



ROWE CODE
PD0101

PLAS-LABS DESICCATOR CABINETS	ROWE CODE
MODEL 860.5-CG - 300 x 300 x 150mm, clear acrylic, with 2 shelves	PD0086
PART - Clear perforated shelf for model 860.5-CG , 300 x 300 x 6.35mm	PD0087
MODEL 860-CG - 300 x 300 x 300mm, clear acrylic, with 2 shelves	PD0106
PART - Clear perforated shelf for model 860-CG , 300 x 300 x 6.35mm	PD0089
PART - Clear perforated shelf for model 861-CG , 300 x 300 x 6.35mm	PD0091
MODEL 862-CG - 450 x 450 x 450mm, clear acrylic, with 4 shelves	PD0092
PART - Clear perforated shelf for model 862-CG , 450 x 450 x 6.35mm	PD0093
MODEL 863-CG - 600 x 450 x 600mm, clear acrylic, with 4 shelves	PD0094
PART - Clear perforated shelf for model 863-CG , 600 x 450 x 6.35mm	PD0095
PART - Clear perforated shelf with bow guard for model 863-CG , 600 x 450 x 6.35mm	PD0096

PLAS-LABS DESICCATOR CABINETS - MULTI CUBICLE	ROWE CODE
MODEL 860-CG/10 - 1200 x 600 x 1677mm, clear acrylic, with 2 shelves	PD0097
PART - Clear perforated shelf for model 860-CG/10 , 600 x 600 x 6.35mm	PD0098
MODEL 860-CG/8 - 1200 x 600 x 1575mm, clear acrylic, with 2 shelves	PD0099
PART - Clear perforated shelf for model 860-CG/8 , 600 x 600 x 6.35mm	PD0100
MODEL 860-CG/6 - 1200 x 600 x 1270mm, clear acrylic, with 2 shelves	PD0101
PART - Clear perforated shelf for model 860-CG/6 , 600 x 600 x 6.35mm	PD0102
PART - Clear perforated shelf with bow guard for model 860-CG/6 , 600 x 600 x 6.35mm	PD0103

ACRYLIC DESICCATORS - PLAS-LABS

PLAS-LABS Amber Acrylic Desiccators

PLAS-LABS DESICCATOR CABINETS - AMBER ACRYLIC	ROWE CODE
MODEL 860.5-CGA - 300 x 300 x 150mm, with 2 shelves	PD0104
PART - Amber perforated shelf for model 860.5-CG , 300 x 300 x 6.35mm	PD0105
MODEL 860-CGA - 300 x 300 x 300mm, with 2 shelves	PD0106
PART - Amber perforated shelf for model 860-CG , 300 x 300 x 6.35mm	PD0107
MODEL 861-CGA - 300 x 300 x 600mm, with 2 shelves	PD0108
PART - Amber perforated shelf for model 861-CG , 300 x 300 x 6.35mm	PD0109
MODEL 862-CGA - 450 x 450 x 450mm, with 4 shelves	PD0110
PART - Amber perforated shelf for model 862-CG , 450 x 450 x 6.35mm	PD0111
MODEL 863-CG - 600 x 450 x 600mm, with 4 shelves	PD0112
PART - Amber perforated shelf for model 863-CG , 600 x 450 x 6.35mm	PD0113
PART - Amber perforated shelf with bow guard for model 863-CG , 600 x 450 x 6.35mm	PD0114

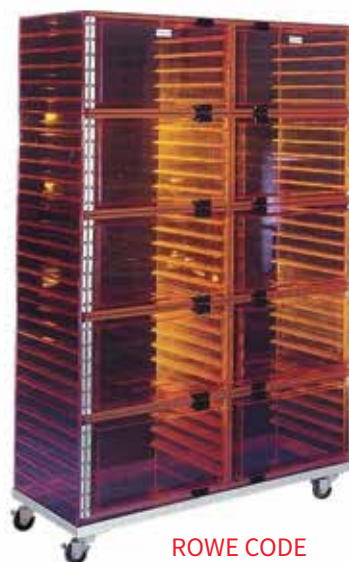


ROWE CODE
PD0104

PLAS-LABS DESICCATOR CABINETS - MULTI CUBICLE - AMBER ACRYLIC	ROWE CODE
MODEL 860-CGA/10 - 1200 x 600 x 1677mm, with 2 shelves	PD0115
PART - Amber perforated shelf for model 860-CGA/10 , 600 x 600 x 6.35mm	PD0116
MODEL 860-CGA/8 - 1200 x 600 x 1575mm, with 2 shelves	PD0117
PART - Amber perforated shelf for model 860-CGA/8 , 600 x 600 x 6.35mm	PD0118
MODEL 860-CGA/6 - 1200 x 600 x 1270mm, with 2 shelves	PD0119
PART - Amber perforated shelf for model 860-CGA/6 , 600 x 600 x 6.35mm	PD0120
PART - Amber perforated shelf with bow guard for model 860-CGA/6 , 600 x 600 x 6.35mm	PD0121



ROWE CODE
PD0112

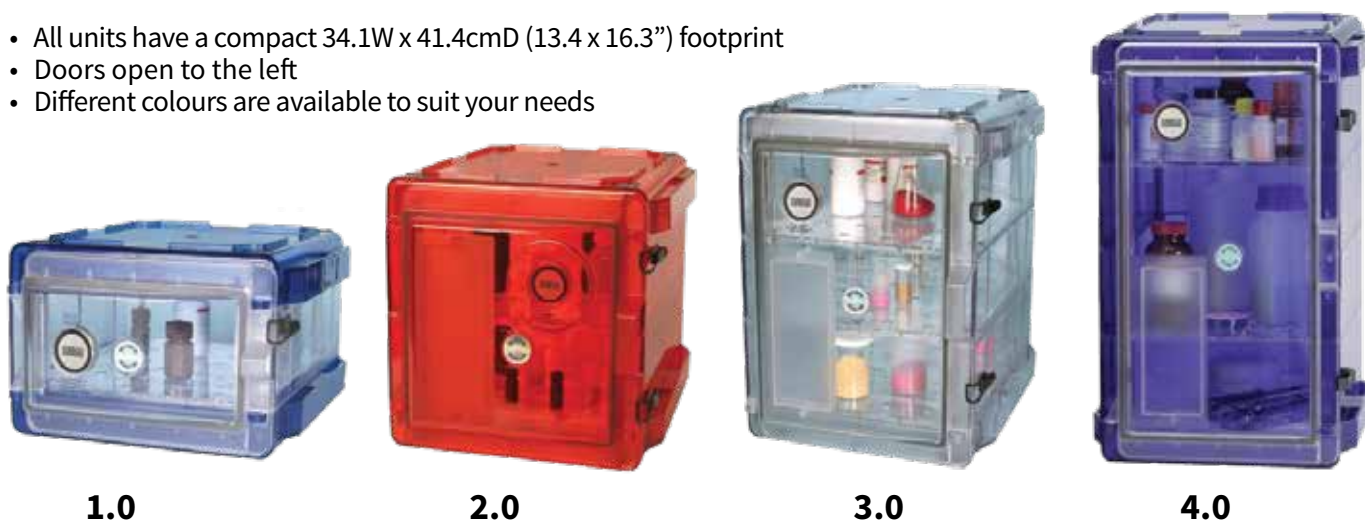


ROWE CODE
PD0115

DESICCATOR - SECADOR**Secador®**

1.0, 2.0, 3.0 and 4.0 Vertical Desiccator Cabinets
Interchangeably Stackable up to 3 Units High
U.S. Patents: 6,834,920; 7,318,630 and D474,626

- All units have a compact 34.1W x 41.4cmD (13.4 x 16.3") footprint
- Doors open to the left
- Different colours are available to suit your needs

**1.0****2.0****3.0****4.0****Specifications**

MODEL	INTERNAL VOLUME	CAPACITY (355mL CANS)	# OF SHELVES	HEIGHT
1.0	0.74 cu. ft.	20	1 (fixed)	21.3cm (8.4")
2.0	1.16 cu. ft.	40	2	31.4cm (12.4")
3.0	1.55 cu. ft.	60	3	41.7cm (16.4")
4.0	1.87 cu. ft.	70	3	51.8cm (20.4")

Secador® 1.0, 2.0, 3.0 and 4.0 Desiccator Cabinets

CATALOG NO.	MODEL	DESCRIPTION	ROWE CODE
F42071-0000	1.0	Clear	PD1505
F42071-0006	1.0	Clear w/Blue End-caps	CS4243
F42071-0008	1.0	Amber (50+% visible light blocking.)	CS4242
F42072-1000	2.0	Clear	PD1514
F42073-1000	3.0	Clear	PD1513
F42073-1008	3.0	Amber (50+% visible light blocking.)	CS4244
F42074-1000	4.0	Clear	PD1511
F42074-1006	4.0	Clear, with Blue End-caps	PD1509
F42074-1008	4.0	Amber (50+% visible light blocking.)	CC2304

DESICCATOR CABINETS

- Durastar® co-polyester construction blocks 99% of UV light* and is resistant to staining, crazing and chemical attack; amber colour units also block over 50% visible light
- Use with any desiccant including cans and disposable cartridges.
- Desiccants can be placed under the bottom shelf to preserve storage space
- Different colours are available to suit your needs

Secador® Mini Desiccator Cabinet

The Perfect Choice When Benchtop Space Is at a Premium

- Internal Volume: 0.31 cu. ft.; Holds: 12 cans
- Clear polystyrene for easy viewing of contents
- Option to mount to the underside of a shelf; kit information below
- Door opens to the left
- Overall Dimensions:
33.8W x 25.4D x 21.6H cm

ROWE CODE PD1501

Under Shelf Mounting Kit Available (F42075-0201).

For Secador® Mini Desiccator Cabinet

Fittings and instructions for mounting the Secador®

Mini Desiccator Cabinet - F42075-1000

underneath a shelf with a minimum thickness of 12mm.



Secador® 4.0 Horizontal

Auto-Desiccator Cabinets

- Internal Volume: 1.87 cu. ft.; Holds: 70 cans
- Two removable shelves
- Pull down 'oven style' door
- Overall Dimensions: 51.8W x 41.4D x 34.1H cm

ROWE CODE PD1516

Secador® 4.0 Horizontal Profile Desiccator Cabinets

Large Wide Storage Space

U.S. Patents: 6,834,920; 7,318,630 and D474,626

- Internal Volume: 1.87 cu. ft.; Holds: 70 cans
- Two removable shelves
- Pull down 'oven style' door
- Overall Dimensions: 51.8W x 41.4D x 34.1H cm

ROWE CODE PD1516



Dry-Keeper™ Vertical Desiccator Cabinet

Large Space

- Interior Volume: 2.01 cu.ft.; Holds: 70 cans
- Three removable shelves can be set in fifteen positions
- Methyl-methacrylate with sleek black accents
- Door opens to the right and is 25 x 45cm
- Includes desiccant tray

ROWE CODE PD1506

Dry-Keeper™ Stacking Desiccator Cabinet

Stack up to Five Units

- Interior Volume: 0.35 cu. ft.; Holds: 13 cans
- Smoke-tinted, polystyrene
- Two removable shelves can be set at four heights
- Pull down door slides out of the way into a compartment located underneath the cabinet
- Includes a small tray for desiccant

ROWE CODE PD1596



DESICCATOR CABINETS

Secador® 2.0, 3.0 and 4.0 Auto-Desiccator Cabinets



Size Specifications

MODEL	INTERNAL VOLUME	CAPACITY (355ML CANS)	# OF SHELVES	HEIGHT
2.0	1.16 cu. ft.	40	2	31.4cm (12.4")
3.0	1.55 cu. ft.	60	3	41.7cm (16.4")
4.0	1.87 cu. ft.	70	3	51.8cm (20.4")

Interchangeably Stackable - up to 3 units high (All units have a compact 34.1W x 41.4D cm footprint)

- Doors open to the left
- Different colours are available to suit your needs

CATALOG NO.	MODEL	DESCRIPTION	ROWE CODE
F42072-1220	2.0	Clear 1.2 cu. ft. 31.4cm (12.4")	CS4240
F42073-1220	3.0	Clear 1.6 cu. ft. 41.7cm (16.4")	PD1512
F42073-1228	3.0	Amber (50+% visible light blocking) 1.6 cu. ft. 41.7cm (16.4")	CS4241
F42074-1220	4.0	Clear 1.9 cu. ft. 51.8cm (20.4")	PD1510

Desiccants

- CS7482 SILICA GEL SELF INDICATING 2-5mm ORANGE (*R207+)
- CS7455 SILICA GEL SELF INDICATING GRANULES 5-10 MESH BLUE (*R207+)
- CD2565, CD2566, PD1507 DESICCATOR DESI-CAN DESICCANT CANISTER (F420460000)
- CD1958 DESICCATOR CARTRIDGES, DIAM. 65mm
- CD1959 DESICCATOR CARTRIDGES, DIAM. 100mm

We can also help you with CRM's (Certified Reference Materials) and solid standards.

- All units have a compact 34.1W x 41.4D cm footprint
- Doors open to the left
- Different colours are available to suit your needs



MODEL	INTERNAL VOLUME	CAPACITY (355ML CANS)	# OF SHELVES	HEIGHT
1.0	0.74 cu. ft.	20	1	(fixed) 21.3cm (8.4")
2.0	1.16 cu. ft.	40	2	31.4cm (12.4")
3.0	1.55 cu. ft.	60	3	41.7cm (16.4")
4.0	1.87 cu. ft.	70	3	51.8cm (20.4")

CATALOG NO.	MODEL	DESCRIPTION	ROWE CODE
F42071-0002	1.0	Clear, with Gas Ports	PD1503
F42072-1002	2.0	Clear, with Gas Ports	PC1560
F42072-1009	2.0	Amber, with Gas Ports (50+% visible light blocking.)	IC0355
F42074-1009	4.0	Amber, with Gas Ports (50+% visible light blocking.)	TBA

Secador® 4.0 Horizontal Profile Gas-Ported Desiccator Cabinet

- Internal Volume: 1.87 cu. ft.; Holds: 70 cans
- Two removable shelves
- Pull down 'oven style' door
- Interchangeably stackable up to 3 units
- Overall Dimensions: 51.8W x 41.4D x 34.1H cm



VACUUM PUMPS FOR PORTED DESICCATORS



PUMP VACUUM
DIAPHRAGM TYPE
18.4L/min (JAVAC)
ROWE CODE IP1880



VACUUM PUMP OIL FREE
PISTON R-SERIES
34L/min 120mbar
ULTIMATE VACUUM (JAVAC)
ROWE CODE IP2034

DESICCATORS - GLASS & PLASTIC

GLASS DESICCATORS

INNER DIAM (mm)	DESCRIPTION	BRAND	ROWE CODE
100	Complete with stopcock and plastic knob	SIMAX	GD1001
150	Complete with stopcock and plastic knob	SIMAX	GD1055
150	Complete with stopcock flange (O.D. 215mm)	SCHOTT	GD1053
200	Novus borosilicate glass with cone needle valve stopcock 24/29 (without plate)	WITEG	GD0017
200	Complete with plastic knob and stopcock (without plate)	SIMAX	GD1073
200	Complete with 24/29 stopcock in lid, 200mm borosilicate glass flange (O.D. 270mm)	SIMAX	GD1086
250	Complete with plastic knobbed lid flange (O.D. 320mm) (without plate)	SIMAX	GD1219
250	Complete with plastic knob and stopcock (without plate)	SIMAX	GD1081
250	Complete with stopcock 24/29 socket flange (O.D. 320mm)	SCHOTT	GD1083
300	Novus borosilicate glass with cone needle valve stopcock 24/29 (without plate)	WITEG	GD0016
300	Novus with knobbed lid duran glass	WITEG	GD1092
300	Complete with 24/29 stopcock in lid, 300mm borosilicate glass flange (O.D. 390mm)	SIMAX	GD1236
300	Complete with stopcock and flat flange porcelain plate (O.D. 380mm)	SCHOTT	GD0081



ROWE CODE
PD1462

PLASTIC DESICCATOR VACUUM

INNER DIAM (mm)	DESCRIPTION	BRAND	ROWE CODE
150	Polypropylene base/polycarbonate lid, PP/PTFE stopcock in lid (includes plate)	TARSON	PD0041
150	Polypropylene/polycarbonate	KARTEL	PD1462
200	Polypropylene base/polycarbonate lid, PP/PTFE stopcock in lid (includes plate)	TARSON	PD1452
200	Non-vacuum - Polypropylene/polycarbonate (includes plate)	TARSON	PD0038
200	Polypropylene/polycarbonate	KARTEL	PD1450
250	Polypropylene base/polycarbonate lid, PP/PTFE stopcock in lid (includes plate)	TARSON	PD1471
250	Non-vacuum - Polypropylene base/polycarbonate lid (includes plate)	TARSON	PD0039
250	Polypropylene/polycarbonate (without plate)	KARTEL	PD1470
300	Polypropylene base/polycarbonate lid, PP/PTFE stopcock in lid (includes plate)	TARSON	PD1475
300	Non-vacuum - Polypropylene/polycarbonate (includes plate)	TARSON	PD0040



ROWE CODE
PD0040

ROWE SCIENTIFIC DETERGENT - QUANTUMCLEAN

Clean your lab glassware and apparatus with
QUANTUMCLEAN concentrate



Quantumclean - For total cleaning (including radioactive decontamination) of all laboratory and industrial glassware, plastics, ceramics and stainless steel.

- IDEAL FOR USE IN ULTRASONIC CLEANERS • PHOSPHATE FREE • BIODEGRADABLE

Supplied as a liquid concentrate for dilution with water (approx. 2-5% is adequate for most laboratory applications).
 Ideal for manual cleaning or for use in an ultrasonic cleaner.



Royal Flying Doctor Service

ROWE SCIENTIFIC DETERGENT - QUANTUMCLEAN		
1L	5L	20L
CQ1000	CQ1050	CQ1100

**ASK US
FOR A
SAMPLE**

PROUDLY SUPPORTING THE ROYAL FLYING DOCTOR SERVICE OF AUSTRALIA

Each purchase of Quantumclean results in a \$2.00 per item donation to the Royal Flying Doctor Service of Australia.

Proudly manufactured in Australia by Rowe Scientific Pty Ltd

DETERGENT - ALCONOX

ALCONOX - POWDERED PRECISION CLEANER

Original general-purpose powder for manual, soak, and ultrasonic cleaning of glass, metal, and plastic. No interfering residues. Has inhibitory residue test. USDA/FDA compliant. Dilute 1:100. pH 9.5

1.8kg	9 x 1.8kg	11kg	45.4kg
CA0537	NA0020	CA1523	CA1527

ALCOJET - LOW-FOAMING POWDERED DETERGENT

General-purpose non-ionic powder for labware and machine washers, manual, and ultrasonic cleaning. Corrosion-inhibited for glassware, metals, and plastic. No interfering residues. Has inhibitory residue test. USDA authorized. Dilute 1:200. pH 11.5

	1.8kg	9x1.8kg	11kg (25lb)
	CA0489	NA0023	CA6473

ALCOTABS - TABLET PIPET DETERGENT

Effervescent detergent tablet for maximum cleaning in siphon pipet washers. Slow release bubbles and free rinsing give no interfering residues. Has inhibitory residue test. Use 2 tabs/wash. pH 6.5

	100 Tablets	6 x 100 Tablets
	CA2958	NA0024

CITRAJET - LIQUID ACID CLEANER

Suitable for machine, spray-CIP, manual, and ultrasonic cleaning or acid neutralizing. Corrosion-inhibited for glassware, metals, and plastic. Surfactant rinse for no interfering residues. Has inhibitory residue test. FDA compliant. Dilute 1:100. pH 2.5

	3.8L	4x3.8L
	CC0061	NC0044

CITRANOX - LIQUID ACID CLEANER AND DETERGENT

Liquid acid cleaner for manual, soak and ultrasonic cleaning or acid neutralizing. Corrosion-inhibited for glassware, metals, and plastic. Surfactant rinse aids for no interfering residues. Has inhibitory residue test. USDA and FDA compliant. Dilute 1:100. pH 2.5

	3.8L	4 x 3.8L
	CC0601	CC6480



ROWE CODE
CA0537



ROWE CODE
CA0489



ROWE CODE
CC0061



ROWE CODE
CC0601



DETONOX DETERGENT

Non-caustic, liquid concentrate detergent for hand and ultrasonic use on challenging residues. Exceptional removal of cosmetic and pharmaceutical polymers, sticky extracts, resins, creams and lotions. Concentrated, highly emulsifying and penetrating formula is free rinsing for reliable results, and leaves no interfering residues. Dilute 1:100. pH 10.5

	3.8L	4 x 3.8L
	ND0033	ND0029



ROWE CODE
CL0857

LIQUINOX DETERGENT

Critical Cleaning Liquid Detergent. Original general-purpose, phosphate-free liquid for manual, soak, and ultrasonic cleaning of glass, metal, and plastic. No interfering residues. Has inhibitory residue test. USDA/FDA compliant. Dilute 1:100. pH 8.5

	3.8L	4 x 3.8L
	CL0857	NL0009



ROWE CODE
NL0011

LUMINOX - LOW-FOAMING, NEUTRAL PH DETERGENT

Suitable for use in manual, ultrasonic, and machine or noncorrosive, light-duty cleaning. No chelation or alkaline waste treat problems. Free rinsing, eliminating interfering residues. Dilute 3:100. pH 7.0

	3.8L	4x3.8L
	NL0011	NL0010

TERGAJET - PHOSPHATE-FREE, NON-IONIC POWDER

Suitable for machine washers, hand, and ultrasonic cleaning. Corrosion-inhibited for labware. For water, microbiology, and environmental labs. No interfering residues. Has inhibitory residue test. Dilute 1:200. pH 11.5

	1.8kg	9x1.8kg
	NT0050	NT0049



ROWE CODE
NT0050

TERGAZYME - ENZYME-ACTIVE POWDERED DETERGENT

Enzymatic cleaner for manual, soak, and ultrasonic cleaning of proteins, tissue, and body fluids from glass, metals, and plastic, with no interfering residues. Cleans filter membranes, fermenters and bioreactors. Has inhibitory residue test. FDA/USDA compliant. Dilute 1:100. pH 9.5

	1.8kg	9x1.8kg
	CT4856	CT4857



ROWE CODE
CT4856

DETERGENT - ALCONOX

DETERGENT 8 - LOW-FOAMING ION-FREE LIQUID DETERGENT

DG

Non-ionic detergent for PC board washing machines, manual, and ultrasonic cleaning. Ion- and chelate-free for no conductive residues on electronics and no chelate interference in waste. Phosphate-free. Dilute 3:100. pH 11 DG CLASS 8

		3.8L	4x3.8L
		ND0032	ND0031

SUITABLE FOR MACHINE USE



ROWE CODE
ND0032

DETOJET - LOW-FOAMING LIQUID DETERGENT

DG

Heavy-duty alkaline degreaser. Non-ionic liquid for labware and machine washers, manual, and ultrasonic cleaning. Corrosion-inhibited for glass, metals, and plastic. No interfering residues. Has inhibitory residue test. USDA/FDA compliant. Dilute 1:200. pH 12. DG CLASS 8

		3.8L	4x3.8L
		CD4062	ND0030

SUITABLE FOR MACHINE USE



ROWE CODE
CD4062

SOLUJET - NON-IONIC LIQUID

DG

Suitable for machine, spray-CIP, manual, soak, and ultrasonic cleaning. High emulsifying and penetrating formula. Corrosion-inhibited for glass, metals, and plastic. No interfering residues. Has inhibitory residue test. FDA compliant. Dilute 1:200. pH 12. DG CLASS 8

		3.8L	4x3.8L
		NS0021	NS0020

SUITABLE FOR MACHINE USE



ROWE CODE
NS0021

DG

*These products are classified as Dangerous Goods.
Minimum order quantities apply*

VARIOUS DETERGENTS

EXTRAN DETERGENT	SIZE	ROWE CODE
AP11 - Powder, mildly alkaline	2kg	CE2111
AP22 - Liquid acid rinse with citric acid	10L	CE2149
MA05 - Phosphate free	5L	CE2104
MA01 - Alkaline for manual cleaning	2.5L	CE2121
MA02 - Neutral	5L	CE2062



ROWE CODE
CE2111

DECON 90 DETERGENT	
Surface active cleaning agent, and/or radioactive decontaminant, for laboratory, medical and industrial applications. Supplied as a liquid concentrate, for dilution with water. For 'manual' cleaning, or for use in an ultrasonic cleaning bath. For cleaning and/or decontaminating glassware, ceramics, rubbers, most plastics, stainless steel and ferrous metals.	
	5L
	CD1240



ROWE CODE
CE2062

DIVERSEY DETERGENT - PYRONEG	
Glassware & instrument cleaner – suitable for both manual and ultrasonic cleaning (Powder)	
	9kg (3 x 3kg)
	CD1430



ROWE CODE
CD1240



ROWE CODE
CD1430



VARIOUS DETERGENTS

ECOLAB DETERGENT	SIZE	ROWE CODE
Asepti Advantage - Detergent	2 x 5L	CD4013
Asepti High pH - Detergent	5L	CD4066
Asepti Metal Pro - Detergent	2 x 5L	CD0617
Asepti Multiclean - Detergent	5L	CD2178
Asepti Neutraliser - Acid neutraliser and neutralising rinse	5L	CD2177
Asepti Neutraliser - Acid neutraliser and neutralising rinse	2 x 5L	CD1574
Asepti Validate - Detergent	2 x 5L	CD4080
Guardian Clean - Washing detergent tablets	200 (4kg)	IG0157
Guardian Safe - Machine warewashing detergent	15L	CD3994
Guardian Safe - Machine warewashing detergent	2 x 5L	CD3995
Jet Dry - Rinse aid	2 x 5L	CD4052
Lime-A-Way Descaler - Hard water deposit and lime scale remover	2 x 5L	CL1946



ROWE CODE
CD4066

TEEPOL DETERGENT	SIZE	ROWE CODE
Teepol L Multi Purpose - Detergent	5L	CD4101



ROWE CODE
CD4101

WHITELEY HEALTHCARE DETERGENT	SIZE	ROWE CODE
Medizyme Proteolytic - Enzyme cleaner detergent	5L	CD1423
Viraclean - Detergent and disinfectant for surface cleaning	5L	CD1407



ROWE CODE
CD1423



ROWE CODE
CD1407



DEWAR FLASKS

Two distinctive ranges of Dilvac Dewar flasks in containers - all utilising the proven borosilicate glass inner vessels. Offered in stove-enamelled steel and hygienic satin finish stainless steel. Designed for safe use and transportation of liquid gases, all Dilvac Dewar flasks are manufactured to exacting and high quality standards.



1L CAPACITY

- Glass in enamelled steel container with handle
 - Vented lid with clamp • 116mm DIA x 228mm H
- ROWE CODE HD0071

2L CAPACITY

- Glass in enamelled steel container with handle
 - Vented lid with clamp • 142mm DIA x 268mm H
- ROWE CODE HD0077



2L CAPACITY

- Glass in enamelled steel container with handle and lid
 - 142mm DIA x 268mm H
- ROWE CODE HD0047

4.5L CAPACITY

- Glass in enamelled steel container with handle and lid
 - 182mm DIA x 350mm H
- ROWE CODE HD0049

Haier



ROWE CODE HD0121

DEWAR FLASKS AND ACCESSORIES BY HAIER	ROWE CODE
Dewar Flask - 10L with 125mm opening High capacity series for storage or transport of liquid nitrogen	HD0121
Dewar Flask - 10L, aluminium construction, with 125mm opening Holds 100 x 2mL vials, includes racks and boxes High capacity series for storage or transport	HD0117
Dewar Flask - 35L, aluminium construction, with 80mm opening High capacity series for storage or transport	HD0105
Dewar Flask - 35L, aluminium construction, with 125mm opening Holds 750 x 2mL vials, includes racks and boxes High capacity series for storage or transport	HD0116
Cork only for Dewar Flask Suitable for HD0105, HD0117, HD0122	HD0122
Lockable Cap for Dewar Flask - 80mm Suitable for Haier 35L Dewar Flask	HD0106
Roller Base for Dewar Flask - 5 wheels Suitable for Haier 30/35/50L tanks	HD0118

Available in many sizes for a wide range of applications.

DIGESTION UNITS - SEMI-AUTOMATIC



DK 6 Digestion Unit

Kjeldahl Digestion Units with 6-position aluminium heating block that offers an excellent thermal homogeneity.

The DK 6 Series digestion unit with aluminium heating block ensures high thermal homogeneity heating up to 450 °C. The temperature of the block is constantly controlled by a microprocessor and is extremely stable, homogeneous and precise: $\pm 0.5^{\circ}\text{C}$ at all selectable temperatures.

The DK 6 Series guarantees accuracy and repeatability. The DK 6 series perform batch digestion of up to 6 samples with 250 ml test tubes - $\varnothing 42$ m, reducing the energy consumption (-13% compared to the previous series). Low energy consumption provides lower costs of analysis and limits CO₂ release.

ROWE CODE: ID0296

DK 8 Digestion Unit

Kjeldahl Digestion Units with 8-position aluminium heating block that offers an excellent thermal homogeneity.

The DK 8 Series digestion unit with aluminium heating block ensures high thermal homogeneity heating up to 450 °C. The temperature of the block is constantly controlled by a microprocessor and is extremely stable, homogeneous and precise: $\pm 0.5^{\circ}\text{C}$ at all selectable temperatures.

The DK 8 Series guarantees accuracy and repeatability. The DK 8 performs batch digestion of up to 8 samples with 250 ml test tubes - $\varnothing 42$ m, reducing the energy consumption (-13% compared to the previous series). Low energy consumption provides lower costs of analysis and limits CO₂ release.

ROWE CODE: ID0300



***Other configurations available within our complete Digestion range.
Please contact our team to discuss your requirements.***

DIGESTION UNITS

DK 18/26 Digestion Unit

Kjeldahl Digestion Units with 18-position aluminium heating block that offers an excellent thermal homogeneity for micro-kjeldahl applications.

The DK 18/26 Series digestion unit with aluminium heating block ensures high thermal homogeneity heating up to 450 °C. The temperature of the block is constantly controlled by a microprocessor and is extremely stable, homogeneous and precise: $\pm 0.5^{\circ}\text{C}$ at all selectable temperatures.

The DK 18/26 Series guarantees accuracy and repeatability. The DK 18/26 performs batch digestion of up to 18 samples with 100 ml test tubes - \varnothing 26 mm, reducing the energy consumption (-13% compared to the previous series). Low energy consumption provides lower costs of analysis and limits CO₂ release.

ROWE CODE: ID0303



DK 20 Digestion Unit

Kjeldahl Digestion Units with 20-position aluminium heating block that offers an excellent thermal homogeneity.

The DK 20 Series digestion unit with aluminium heating block ensures high thermal homogeneity heating up to 450 °C. The temperature of the block is constantly controlled by a microprocessor and is extremely stable, homogeneous and precise: $\pm 0.5^{\circ}\text{C}$ at all selectable temperatures.

The DK 20 Series guarantees accuracy and repeatability. The DK 20 series perform batch digestion of up to 20 samples with 250 ml test tubes - \varnothing 42 m, reducing the energy consumption (-13% compared to the previous series). Low energy consumption provides lower costs of analysis and limits CO₂ release.

ROWE CODE: ID0305



DK 42/26 Digestion Unit

Kjeldahl Digestion Units with 42-position aluminium heating block that offers an excellent thermal homogeneity for micro-kjeldahl applications.

The DK 42/26 Series digestion unit with aluminium heating block ensures high thermal homogeneity heating up to 450 °C. The temperature of the block is constantly controlled by a microprocessor and is extremely stable, homogeneous and precise: $\pm 0.5^{\circ}\text{C}$ at all selectable temperatures.

The DK 42/26 Series guarantees accuracy and repeatability. The DK 42/26 performs batch digestion of up to 42 samples with 100 ml test tubes - \varnothing 26 mm, reducing the energy consumption (-13% compared to the previous series). Low energy consumption provides lower costs of analysis and limits CO₂ release.

ROWE CODE: ID0307



DIGESTION UNITS - AUTOMATIC

DKL 8 Automatic Digestion Unit

Automatic Kjeldahl Digestion Units with 8 positions aluminium heating block that offers excellent thermal stability and homogeneity.

DKL digesters are fully automatic and immediately ready to use, as they consist of an aluminium heating block, a lift for automatic sample handling, suction hood, test tubes, test tube rack and drip tray.

The DKL series provides the operator with the ultimate technology that allows the laboratory technician to set up the analysis choosing from a library of 54 programs (30 pre-installed + 24 customizable), press START and walk away, boosting the lab productivity.

Ease of loading and unloading make the VELP DKL a pleasure to use when carrying out Kjeldahl analysis, and there is no need to handle the sample when the tubes are hot!

ROWE CODE: ID0070



DKL 12 Automatic Digestion Unit

Automatic Kjeldahl Digestion Units with 12 positions aluminium heating block that offers excellent thermal stability and homogeneity.

DKL digesters are fully automatic and immediately ready to use, as they consist of an aluminium heating block, a lift for automatic sample handling, suction hood, test tubes, test tube rack and drip tray.

The DKL series provides the operator with the ultimate technology that allows the laboratory technician to set up the analysis choosing from a library of 54 programs (30 pre-installed + 24 customizable), press START and walk away, boosting the lab productivity.

Ease of loading and unloading make the VELP DKL a pleasure to use when carrying out Kjeldahl analysis, and there is no need to handle the sample when the tubes are hot!

ROWE CODE: ID0069

DKL 20 Automatic Digestion Unit

Automatic Kjeldahl Digestion Units with 20 positions aluminium heating block that offers excellent thermal stability and homogeneity.

DKL digesters are fully automatic and immediately ready to use, as they consist of an aluminium heating block, a lift for automatic sample handling, suction hood, test tubes, test tube rack and drip tray.

The DKL series provides the operator with the ultimate technology that allows the laboratory technician to set up the analysis choosing from a library of 54 programs (30 pre-installed + 24 customizable), press START and walk away, boosting the lab productivity.

Ease of loading and unloading make the VELP DKL a pleasure to use when carrying out Kjeldahl analysis, and there is no need to handle the sample when the tubes are hot!

ROWE CODE: ID1704



DKL 42/26 Automatic Digestion Unit

Automatic Kjeldahl Digestion Units with 42 positions aluminium heating block that offers excellent thermal stability and homogeneity.

DKL digesters are fully automatic and immediately ready to use, as they consist of an aluminium heating block, a lift for automatic sample handling, suction hood, test tubes, test tube rack and drip tray.

The DKL series provides the operator with the ultimate technology that allows the laboratory technician to set up the analysis choosing from a library of 54 programs (30 pre-installed + 24 customizable), press START and walk away, boosting the lab productivity.

Ease of loading and unloading make the VELP DKL a pleasure to use when carrying out Kjeldahl analysis, and there is no need to handle the sample when the tubes are hot!

ROWE CODE: ID0205



FUME CONTROL

For applications where the digestion process produces fumes, acid gases or corrosive substances, it is strongly recommended to combine with dedicated scrubbing accessories.

JP Pump aspirates noxious fumes to ensure a safer work environment.

ROWE CODE: IP2050



SMS Scrubber neutralizes hazardous fumes produced during digestion.

ROWE CODE: IS5100



DILUTER SYRINGE	ROWE CODE
10µL type 1701ASRN	GS15175
1mL for Hamilton ML600	ID2053
2.5mL for Hamilton ML600	ID2069
5mL for Hamilton ML600	ID0026
10mL for Hamilton ML600	ID2054
25mL for Hamilton 600 diluter/dispenser	ID2036
250µL for Hamilton ML600	ID2068
Diluter fill tube for ML600 12 gauge 48	ID2077

DUAL SYRINGE DILUTER	ROWE CODE
Microlab 600 with basic Hamilton controller. Includes hand probe, universal valves and tubing. Plus 1mL and 10mL syringes	ID2945
Microlab 600 with basic Hamilton controller. Includes hand probe, universal valves and tubing. Syringes as specified	ID0085



ROWE CODE
ID2069



ROWE CODE
ID2945

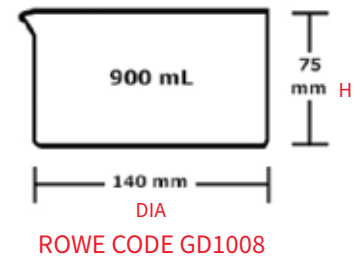
For all of the Syringe permutations - Call us!



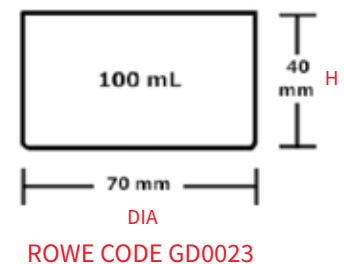
DISHES - VARIOUS

DISHES CRYSTALLIZING - GLASS 

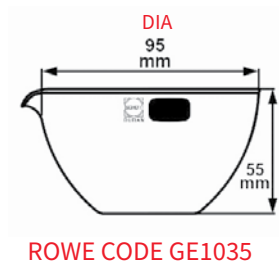
SPOUTED	PACK SIZE	ROWE CODE
100mL - 70mm DIA x 40mmH	EA	GD1003
300mL - 95mm DIA x 55mmH	EA	GD1000
500mL - 115mm DIA x 65mmH	EA	GD1007
900mL - 140mm DIA x 75mmH	EA	GD1008
2000mL - 190mm DIA x 90mmH	EA	GD0019
3500mL - 230mm DIA x 100mmH	EA	GD0034



NON-SPOUTED	PACK SIZE	ROWE CODE
100mL - 70mm DIA x 40mmH	EA	GD0023
300mL - 95mm DIA x 55mmH	EA	GC1055
900mL - 140mm DIA x 75mmH	EA	GD0026

DISHES EVAPORATING - GLASS 

DIMENSIONS	PACK SIZE	ROWE CODE
60mL - 70mm DIA	EA	GE1010
90mL - 80mm DIA	EA	GE1001
170mL - 95mm DIA	EA	GE1035
320mL - 115mm DIA	EA	GE1040
600mL - 140mm DIA	EA	GE1045

DISHES PETRI - PLASTIC  

DIMENSIONS	PACK SIZE	ROWE CODE
90mm DIA x 15mmH - STERILE (SPL)	50 BAGS X 10	PP0132
90mm DIA x 15mmH - STERILE (SPL)	20 BAGS X 10	PP0185
90mm DIA x 14mmH	600	PD0064
90mm DIA x 14mmH - STERILE	600	PD0065
90mm DIA x 14mmH - STERILE - HALF PLATE	600	PD0078
60mm DIA - STERILE - VENTED	1000	PP1194

DISHES PETRI - GLASS 

FLINT GLASS AUTOCLAVABLE	PACK SIZE	ROWE CODE
40mm DIA x 12mmH	EA	GP1101
60mm DIA x 15mmH	EA	GP1102
100mm DIA x 20mmH	EA	GD1015
120mm DIA x 20mmH	EA	GD1019
150mm DIA x 20mmH	EA	GD1018
200mm DIA x 30mmH	EA	GD0047



DISPENSETTE 'S' - BRAND



DISPENSETTE 'S' - DIGITAL	VOL (mL)	PACK SIZE	ROWE CODE
With recirculation valve (analogue version recommended for concentrated acids) *(check chemical compatibility)	0.1-1	EA	DD0058
	1-10		DD0017
	0.2-2		DD0023
	0.5-5		DB0022
	2.5-25		DB0014
	5-50		DD0025
Without recirculation valve (analogue version recommended for concentrated acids) *(check chemical compatibility)	0.1-1		DD0057
	0.2-2		DD0011
	0.5-5		DD0016
	1-10		DL5120
	2.5-25		DD0018
	5-50		DD0024



ROWE CODE
DD0025

DISPENSETTE 'S' - ANALOGUE	VOL (mL)	PACK SIZE	ROWE CODE
With recirculation valve *(check chemical compatibility)	0.1-1 x 0.02	EA	DB0016
	0.2-2 x 0.05		DD0033
	0.5-5 x 0.1		DD0034
	1-10 x 0.2		DB0018
	2.5-25 x 0.5		DD0035
	5-50 x 1.0		DB0019
	10-100 x 1.0		DD0036
Without recirculation valve *(check chemical compatibility)	0.1-1 x 0.02		DD0026
	0.2-2 x 0.05		DD0027
	0.5-5 x 0.1		DD0028
	1-10 x 0.2		DD0029
	2.5-25 x 0.5		DD0030
	5-50 x 1.0		DD0031
	10-100 x 1.0		DD0032



ROWE CODE
DB0016

DISPENSETTE 'S' - FIXED VOLUME	VOL (mL)	PACK SIZE	ROWE CODE
With recirculation valve *(check chemical compatibility)	1	EA	DD0039
	2		DD0040
	5		DD0041
	10		DD0042
Without recirculation valve *(check chemical compatibility)	1		DD0037
	2		DB0024
	5		DB0025
	10		DD0038



ROWE CODE
DD0041

(Bottles not included).

The NEW Dispensette®S Trace Analysis bottle-top dispenser is designed for use in trace analysis. The high-purity materials of the dispenser release no metal ions.

- New discharge tube - with or without recirculation valve
- New valve system - no sealing rings necessary
- Dispensing of media in the volume range from 1-10mL
- Volume selection with interior scalloped track
- Dispensing hydrofluoric acid is no problem with the platinum-iridium valve spring.
- Trace metal content generally below the detectability threshold of normal analytical procedures

DISPENSETTE 'S' - TRACE ANALYSIS	VOL (mL)	VALVE SPRING	PACK SIZE	ROWE CODE
With recirculation valve *(check chemical compatibility)	1-10	Platinum-iridium	EA	GD0027
		Tantalum		DD0060
Without recirculation valve *(check chemical compatibility)		Platinum-iridium		GD0028
		Tantalum		DD0059



ROWE CODE
GD0027

DISPENSETTE 'S' - ORGANIC DIGITAL	VOL (mL)	PACK SIZE	ROWE CODE
With recirculation valve *(check chemical compatibility)	1-10	EA	DD0021
	2.5-25		DD0045
	5-50		DD0046
Without recirculation valve *(check chemical compatibility)	0.5-5		DB0023
	1-10		DB0021
	2.5-25		DD0043
	5-50	DD0044	



ROWE CODE
DB0021

DISPENSETTE 'S' - ORGANIC ANALOGUE	VOL (mL)	PACK SIZE	ROWE CODE
Adjustable, with recirculation valve *(check chemical compatibility)	0.5-5	EA	DL4981
	1-10		DD0020
	2.5-25		DB0017
	5-50		DD0051
	10-100		DD0052
Adjustable, without recirculation valve *(check chemical compatibility)	0.5-5		DD0047
	1-10		DD0019
	2.5-25		DD0048
	5-50		DD0049
	10-100		DD0050



ROWE CODE
DD0052

DISPENSETTE 'S' - ORGANIC FIXED VOLUME	VOL (mL)	PACK SIZE	ROWE CODE
With recirculation valve *(check chemical compatibility)	5	EA	DD0055
	10		DD0056
Without recirculation valve *(check chemical compatibility)	5		DD0053
	10		DD0054

(Bottles not included).

SERIPETTOR - BRAND

Seripettor® and Seripettor® Pro are innovative bottle-top dispensers from BRAND with a special design. A lifting spring provides automatic filling. When the piston seal is worn out, the entire dispensing unit can be exchanged by the user, quickly and easily.



ROWE CODE DD0075



ROWE CODE DS0172

SERIPETTOR - BOTTLE TOP DISPENSER	VOL (mL)	PACK SIZE	ROWE CODE
Seripettor *(check chemical compatibility)	0.2-2	EA	DS0171
	1-10		CB1917
	2.5-25		DD0075
Seripettor - Pro *(check chemical compatibility)	0.2-2		DS0172
	1-10		DD0078
	2.5-25		DD1111

SERIPETTOR®

for dispensing alkaline, buffer and vitamin solutions, as well as culture media, e.g., agar nutrient medium, up to 60°C

SERIPETTOR® PRO

broader scope of application compared to the seripettor®; for dispensing many acidic, alkaline and saline solutions, and solvents

Do you require your liquid handling equipment certified to ISO 17025 to meet your accreditation requirements? All Dispensette S dispensers can be ordered with a DAkkS accreditation certificate.



DISPENSER SELECTION CHART

Reagent	BRAND		Reagent	BRAND		Reagent	BRAND	
	Dispensette® S	Dispensette® S Organic		Dispensette® S	Dispensette® S Organic		Dispensette® S	Dispensette® S Organic
Acetaldehyde	+	+	Cyclohexane		+	Methylene chloride		+
Acetic acid (glacial), 100%	+	+	Cyclohexanone	+	+	Mineral oil (Engine oil)	+	+
Acetic acid, ≤ 96%	+	+	Cyclopentane		+	Monochloroacetic acid	+	+
Acetic anhydride		+	Decane	+	+	Nitric acid, ≤ 30%	+	+
Acetone	+	+	1-Decanol	+	+	Nitric acid, 30-70% */ **		+
Acetonitrile	+	+	Dibenzyl ether	+	+	Nitrobenzene	+	+
Acetophenone		+	Dichloroacetic acid		+	Oleic acid	+	+
Acetyl chloride		+	Dichlorobenzene	+	+	Oxalic acid	+	
Acetylacetone	+	+	Dichloroethane		+	n-Pentane		+
Acrylic acid	+	+	Dichloroethylene		+	Peracetic acid		+
Acrylonitrile	+	+	Dichloromethane		+	Perchloric acid	+	+
Adipic acid	+		Diesel oil (Heating oil), bp 250-350 °C		+	Perchloroethylene		+
Allyl alcohol	+	+	Diethanolamine	+	+	Petroleum, bp 180-220 °C		+
Aluminium chloride	+		Diethyl ether		+	Petroleum ether, bp 40-70 °C		+
Amino acids	+		Diethylamine	+	+	Phenol	+	+
Ammonia, ≤ 20%	+	+	Diethylene glycol	+	+	Phenylethanol	+	+
Ammonia, 20-30%		+	Dimethyl sulfoxide (DMSO)	+	+	Phenylhydrazine	+	+
Ammonium chloride	+		Dimethylaniline	+		Phosphoric acid, ≤ 85%	+	+
Ammonium fluoride	+		Dimethylformamide (DMF)	+	+	Phosphoric acid, 85% + Sulfuric acid, 98%, 1:1	+	+
Ammonium sulfate	+		1,4 Dioxane		+	Piperidine	+	+
n-Amyl acetate	+	+	Diphenyl ether	+	+	Potassium chloride	+	
Amyl alcohol (Pentanol)	+	+	Essential oil		+	Potassium dichromate	+	
Amyl chloride (Chloropentane)		+	Ethanol	+	+	Potassium hydroxide	+	
Aniline	+	+	Ethanolamine	+	+	Potassium permanganate	+	
Barium chloride	+		Ethyl acetate	+	+	Propionic acid	+	+
Benzaldehyde	+	+	Ethylbenzene		+	Propylene glycol (Propanediol)	+	+
Benzene (Benzol)	+	+	Ethylene chloride		+	Pyridine	+	+
Benzine (Petroleum benzin), bp 70-180 °C		+	Fluoroacetic acid		+	Pyruvic acid	+	+
Benzoyl chloride	+	+	Formaldehyde, ≤ 40%	+		Salicylaldehyde	+	+
Benzyl alcohol	+	+	Formamide	+	+	Scintillation fluid	+	+
Benzylamine	+	+	Formic acid, ≤ 100%		+	Silver acetate	+	
Benzylchloride	+	+	Glycerol	+	+	Silver nitrate	+	
Boric acid, ≤ 10%	+	+	Glycol (Ethylene glycol)	+	+	Sodium acetate	+	
Bromobenzene	+	+	Glycolic acid, ≤ 50%	+		Sodium chloride	+	
Bromonaphthalene	+	+	Heating oil (Diesel oil), bp 250-350 °C		+	Sodium dichromate	+	
Butanediol	+	+	Heptane		+	Sodium fluoride	+	
1-Butanol	+	+	Hexane		+	Sodium hydroxide, ≤ 30%	+	
n-Butyl acetate	+	+	Hexanoic acid	+	+	Sodium hypochlorite	+	
Butyl methyl ether	+	+	Hexanol	+	+	Sulfuric acid, ≤ 98%	+	+
Butylamine	+	+	Hydriodic acid, ≤ 57% **	+	+	Tartaric acid	+	
Butyric acid	+	+	Hydrobromic acid	+	+	Tetrachloroethylene		+
Calcium carbonate	+		Hydrochloric acid, ≤ 20%	+	+	Tetrahydrofuran (THF) */ **		+
Calcium chloride	+		Hydrochloric acid, 20-37% **		+	Tetramethylammonium hydroxide	+	
Calcium hydroxide	+		Hydrogen peroxide, ≤ 35%		+	Toluene		+
Calcium hypochlorite	+		Isomyl alcohol	+	+	Trichloroacetic acid		+
Carbon tetrachloride		+	Isobutanol	+	+	Trichlorobenzene		+
Chloro naphthalene	+	+	Isooctane		+	Trichloroethane		+
Chloroacetaldehyde, ≤ 45%	+	+	Isopropanol (2-Propanol)	+	+	Trichloroethylene		+
Chloroacetic acid	+	+	Isopropyl ether	+	+	Trichlorotrifluoro ethane		+
Chloroacetone	+	+	Lactic acid	+		Triethanolamine	+	+
Chlorobenzene	+	+	Methanol	+	+	Triethylene glycol	+	+
Chlorobutane	+	+	Methoxybenzene	+	+	Trifluoro ethane		+
Chloroform		+	Methyl benzoate	+	+	Trifluoroacetic acid (TFA)		+
Chlorosulfonic acid		+	Methyl butyl ether	+	+	Turpentine		+
Chromic acid, ≤ 50%	+	+	Methyl ethyl ketone	+	+	Urea	+	
Chromosulfuric acid	+		Methyl formate	+	+	Xylene		+
Copper sulfate	+		Methyl propyl ketone	+	+	Zinc chloride, ≤ 10%	+	
Cresol		+				Zinc sulfate, ≤ 10%	+	
Cumene (Isopropyl benzene)	+	+						

The above recommendations reflect testing completed prior to publication. Always follow instructions in the operating manual of the instrument as well as the reagent manufacturer's specifications. In addition to these chemicals, a variety of organic and inorganic saline solutions (e.g., biological buffers), biological detergents and media for cell culture can be dispensed. Should you require information on chemicals not listed, please feel free to contact BRAND. Status as of: 0520-13

* use ETFE/PTFE bottle adapter
** use PTFE seal for valve block

DISPENSERS LIQUID - OPTIFIX

DISPENSER SOLVENT	VOL (mL)	ROWE CODE
Suitable for dispensing solvents and viscous media *(check chemical compatibility)	2	DL5155
	5	DL5160
	10	DL5170
	30	DL5175
	50	DL5180
	100*	DL5190
	200	DL5195
	500	DL5210

DISPENSER BASIC	VOL (mL)	ROWE CODE
Allows a wide range of volumes to be dispensed safely and accurately directly from storage bottles *(check chemical compatibility)	2	DL5300
	5	DL5350
	10	DL5400
	30	DL5450
	50	DL5500
	100*	DL5550
	200	DL5340
	300	DL5650
500	DL5670	

DISPENSER SAFETY	VOL (mL)	ROWE CODE
Suitable for safe dispensing of fuming acids and other corrosive liquids. It has triple sealing for your safety	2	DL6000
	5	DL6030
	10	DL6050
	30	DL6060
	50	DL6100
	100	DL6120

DISPENSER SAFETY 'S'	VOL (mL)	ROWE CODE
With safety stopcock and ventilation tube	2	DO0018
	5	DO0002
	10	DL6055
	30	DO0019
	50	DO0011
	100	DO0020

DISPENSER UNIVERSAL	VOL (mL)	ROWE CODE
For hydrofluoric acid (HF)	5	DL6310
	10	DL6300
	30	DL6340
	50	DL6320

OPTIFIX®



ROWE CODE
DL5170



ROWE CODE
DL6120



ROWE CODE
DL6310

CHEMICAL RESISTANCE LIST

Chemical resistance list for OPTIFIX and POLYFIX Dispenser

Chemicals	Dispenser FORTUNA OPTIFIX BASIC, SAFETY & SAFETY S	Dispenser FORTUNA OPTIFIX SOLVENT	Dispenser FORTUNA OPTIFIX UNIVERSAL HF	Dispenser FORTUNAPOLYFIX (glass piston 101.070)	Dispenser FORTUNAPOLYFIX (PTFE encased piston, 101.071)
1,4 Dioxane ⁽²⁾		+			
1-Blutanol		+		+	
1-decanol ⁽²⁾		+			
Acetaldehyde ⁽¹⁾⁽²⁾	+		+		
Acetic acid ⁽²⁾	+		+		
Acetic anhydride ⁽²⁾	+		+		
Acetone ⁽²⁾		+			
Acetone, ≤ 20 °C		+		+	
Acetonitrile ⁽¹⁾⁽²⁾		+			
Acetophenone ⁽²⁾		+			
acetyl chloride ⁽¹⁾⁽²⁾		+			
Acetylacetone ⁽²⁾		+			
Acryl acid ethyl ester ⁽¹⁾⁽²⁾		+			
Acrylnitrile ⁽²⁾		+			
Adipic acid, aqueous		+		+	
Aluminium chloride	+		+		+
Amino acids	+				+
Ammoniac (ammonium hydroxide), ≤ 20 %	+				+
Ammoniac (ammonium hydroxide), ≤ 20-30 % ⁽²⁾	+				
Ammonium chloride	+		+		+
Ammonium fluoride, aqueous	+		+		+
Ammonium sulfate, aqueous	+		+		+
Amyl acetate ⁽²⁾		+			
Amyl alcohol (pentanol)		+		+	
Aniline ⁽¹⁾⁽²⁾		+			
Barium chloride, aqueous	+		+		+
Benzaldehyde, aqueous ⁽¹⁾		+		+	
Benzene ⁽¹⁾⁽²⁾		+			
Benzoic acid, aqueous		+		+	
Benzyl alcohol		+		+	
Blutanediol ⁽²⁾		+			
Boric acid, aqueous ⁽²⁾	+		+		
Bromine (liquid) - clear ⁽¹⁾⁽²⁾		+			
Buffer solution (e.g. Acetate, Phosphate)	+		+		+
Butyl acetate ⁽¹⁾⁽²⁾		+			
Butyl methyl ether ⁽¹⁾⁽²⁾		+			
Butylamine ⁽²⁾		+			
Butyric acid ⁽²⁾		+			
Calcium chloride	+		+		+
Calcium hydroxide (solved chalk), aqueous ⁽²⁾	+		+		
Calcium hypochlorite (chlorinated lime), aqueous	+		+		+
Carbon disulfide		+		+	
Carbon tetrachloride ⁽²⁾		+			
Chlornaphthaline ⁽²⁾		+			
Chloroacetic acid ⁽¹⁾⁽²⁾	+		+		

*SAFETY Dispenser recommended ⁽¹⁾ safety stopcock recommended**SAFETY S Dispenser recommended ⁽²⁾ PTFE adapters recommended

CHEMICAL RESISTANCE LIST

Chemicals	Dispenser FORTUNA OPTIFIX BASIC, SAFETY & SAFETY S	Dispenser FORTUNA OPTIFIX SOLVENT	Dispenser FORTUNA OPTIFIX UNIVERSAL HF	Dispenser FORTUNAPOLYFIX (glass piston 101.070)	Dispenser FORTUNAPOLYFIX (PTFE encased piston, 101.071)
Chlorobenzene ⁽²⁾		+			
Chloroform (Trichlormethane) ⁽¹⁾⁽²⁾		+			
Chlorosulfuric acid ⁽¹⁾⁽²⁾	+/**		+		
Chromic acid, ≤ 50 % ⁽¹⁾⁽²⁾	+/**		+		
Copper sulfate solution	+		+		+
Cresol ⁽¹⁾⁽²⁾		+			
Cumene (Isopropylbenzol) ⁽²⁾		+			
Cyclohexane ⁽²⁾		+			
Cyclohexanone ⁽²⁾		+			
Decane ⁽²⁾		+			
Dibenzyl ether ⁽²⁾		+			
Dichlorbenzene ⁽²⁾		+			
Dichlorethane ⁽¹⁾⁽²⁾		+			
Dichlormethane ⁽¹⁾⁽²⁾		+			
Dichloroacetic acid ⁽²⁾		+			
Dichloroethene ⁽¹⁾⁽²⁾		+			
Diethanolamine ⁽¹⁾⁽²⁾		+			
Diethyl ether ⁽¹⁾⁽²⁾		+			
Diethylamine ⁽¹⁾⁽²⁾		+			
Diethylene glycol ⁽²⁾		+			
Dimethyl sulfoxide ⁽²⁾		+			
Dimethylaniline ⁽¹⁾⁽²⁾		+			
Dimethylformamide (DMF)		+		+	
Diphenyl ether ⁽¹⁾⁽²⁾		+			
Ellyl alcohol		+		+	
Essential oil (aromatic oil)		+		+	
Ethanol (Ethylalcohol)		+		+	
Ethanolamine		+		+	
Ethyl acetate ⁽²⁾		+			
Ethylbenzol ⁽²⁾		+			
Ethylene glycol		+		+	
Ethleneglycolether		+			
Fluoric acid ⁽¹⁾⁽²⁾			+		
Fluoroacetic acid ⁽²⁾	+				
Formaldehyde ⁽¹⁾		+		+	
Formamide ⁽²⁾		+			
Formic acid ⁽¹⁾⁽²⁾		+			
Gasoline (petrol gasoline, hexane) ⁽²⁾		+			
Glacial acetic acid ⁽²⁾	+		+		
Glycol (Methyl ethyl ketone)		+		+	
Glycolic acid, ≤ 50 %		+		+	
Heptane, Hexane (petrol) ⁽¹⁾⁽²⁾		+			
Hexanoic acid ⁽²⁾		+			
Hexanol ⁽²⁾		+			
HPLC water	+	+	+		

Chemicals	Dispenser FORTUNA OPTIFIX BASIC, SAFETY & SAFETY S	Dispenser FORTUNA OPTIFIX SOLVENT	Dispenser FORTUNA OPTIFIX UNIVERSAL HF	Dispenser FORTUNAPOLYFIX (glass piston 101.070)	Dispenser FORTUNAPOLYFIX (PTFE encased piston, 101.071)
Hydrobromic acid, aqueous	+		+		+
Hydrochloric acid, ≤ 20 %	+		+		+
Hydrochloric acid, 20-35 %** ⁽¹⁾⁽²⁾	+/*		+		
Hydrochloric acid, concentrated ⁽¹⁾⁽²⁾	+/**		+		
Hydrogen cyanide ⁽¹⁾	+/**		+		+
Hydrogen peroxide ⁽²⁾		+			
Hydroiodic acid, ≤ 57 % ⁽²⁾	+				
Iodine, solved in solvent ⁽²⁾		+			
Iso amyl alcohol ⁽²⁾		+			
Isobutanol		+		+	
Isooctane		+		+	
Isopropanol (2-propanol)		+		+	
Isopropyl ether ⁽¹⁾⁽²⁾		+			
Kerosene (petroleum benzine, petrol) ⁽¹⁾⁽²⁾		+			
Lactic acid	+		+		+
Lead acetate - aqueous	+		+		+
Magnesium chloride	+		+		+
Methoxybenzene ⁽¹⁾⁽²⁾		+			
Methyl alcohol ⁽¹⁾⁽²⁾		+			
Methyl chloride ⁽²⁾		+			
Methyl ethyl ketone ⁽²⁾		+			
Methyl formate ⁽¹⁾⁽²⁾		+			
Methyl propyl ketone ⁽¹⁾⁽²⁾		+			
Methylene chloride		+			
Methylene chloride ⁽¹⁾⁽²⁾		+			
Natrium dichromate ⁽¹⁾⁽²⁾	+		+		
Nitric acid, ≤ 10 %	+		+		+
Nitric acid, ≤ 30 % ⁽²⁾	+/*		+		
Nitric acid, 30-70% */** ⁽¹⁾⁽²⁾	+/**		+		
Nitrobenzene ⁽²⁾		+			
Oleic acid < 20° C		+		+	
Oleic acid, > 20° C ⁽²⁾		+			
Oxalicacid	+		+		+
Peptone water	+		+		+
Perchlorethylene ⁽¹⁾⁽²⁾		+			
Perchloric acid ⁽¹⁾⁽²⁾	+/**		+		
Perfume (oil) ⁽²⁾		+			
Petroleum ether, 20°C ⁽¹⁾		+			
Petroleum, 20°C		+			
Phenol ⁽¹⁾⁽²⁾		+			
Phosphoric acid, aqueous	+		+		+
Phosphoric acid, concentrated ⁽¹⁾⁽²⁾	+/**		+		
Potassium chloride	+		+		+
Potassium dichromate	+		+		+
Potassium hydroxide	+		+		+

CHEMICAL RESISTANCE LIST

Chemicals	Dispenser FORTUNA OPTIFIX BASIC, SAFETY & SAFETY S	Dispenser FORTUNA OPTIFIX SOLVENT	Dispenser FORTUNA OPTIFIX UNIVERSAL HF	Dispenser FORTUNAPOLYFIX (glass piston 101.070)	Dispenser FORTUNAPOLYFIX (PTFE encased piston, 101.071)
Potassium iodide ⁽²⁾	+		+		
Potassium permanganate ⁽²⁾	+/*		+		
Potassium-natrium-tartrate (Seignette salt)	+		+		+
Propionic acid		+		+	
Propylene glycol (Propanediol)		+		+	
Propylene oxide ⁽²⁾		+			
Pyridine ⁽²⁾		+			
Salicylaldehyde ⁽²⁾		+			
Silver nitrate	+/*		+		+
Sodium acetate	+		+		+
Sodium chloride (Sodium chloride solution)	+		+		+
Sodium fluoride ⁽²⁾			+		
Sodium hydroxide solution, aqueous (sodium hydroxide)	+		+		+
Sodium hypochlorite ⁽¹⁾⁽²⁾	+/**		+		
Sulfuric acid, ≤ 40 % ⁽¹⁾	+/*		+		
Sulfuric acid, ≤ 98 % ⁽¹⁾⁽²⁾	+/**		+		
Tartaric acid	+		+		+
Tetrahydrofuran (THF) ⁽¹⁾⁽²⁾		+			
Tetramethylammonium hydroxide (TMAH) ⁽²⁾	+				
Tifluoroacetic acid (TFA) ⁽¹⁾⁽²⁾		+			
Toluene ⁽¹⁾⁽²⁾		+			
Trichlorobenzene ⁽²⁾		+			
Trichlorethane ⁽²⁾		+			
Trichlorethylene ⁽¹⁾⁽²⁾		+			
Trichloroacetic acid ⁽²⁾	+		+		
Triethanolamine, pure		+		+	
Triethylene glycol ⁽²⁾		+			
Turpentine (-oil) ⁽²⁾		+			
Urea	+		+		+
Xylene ⁽²⁾		+			
Zinc chloride	+		+		+
Zinc sulfate	+		+		+

*SAFETY Dispenser recommended

**SAFETY S Dispenser recommended

⁽¹⁾safety stopcock recommended

⁽²⁾PTFE adapters recommended

This table has been carefully checked. Here, the current state of knowledge was applied. No legal claims can be derived from this information. Please always consider the manufacturer's specifications of the devices used and chemicals to be dosed. Many more reagents can be dispensed with the FORTUNA

General suitability of the FORTUNA Dispenser

aqueous liquids, acids, bases and crystallizing liq	BASIC				
solvents; chemicals that swell PTFE		SOLVENT			
hydrofluoric acid and extremely hazardous chemicals			HF		
strong acids and hazardous chemicals	SAFETY				
strong or fuming acids and odourous chemicals	SAFETY S				
liquids, that do not attack polypropylene chemically and do not swell PTFE					POLYFIX PTFE
liquids, that do not attack polypropylene chemically and swell PTFE			POLYFIX glass		

In March 2020

Dispenser Stand

Made from heavy steel and finished in bright yellow, this unique stand enables an Optifix dispenser to be used for remote dispensing from drums etc. Has a holder for storage of the discharge tube when not in use.

HEIGHT (mm)	DIAMETER OF BASE (mm)	PACK SIZE	ROWE CODE
210	120	EA	DL5145

**DISPENSER BOTTLE TOP - EPPENDORF**

VARISPENSER 2	VOL (mL)	PACK SIZE	ROWE CODE
With recirculation valve *(check chemical compatibility)	0.5-5	EA	DD0199
	1-10		DD0200
	2.5-25		DD0127
	5-50		DD0197
Without recirculation valve *(check chemical compatibility)	0.2-2		DD0082
	0.5-5		DD0068
	1-10		DD0069
	2.5-25		DD0083
	5-50	DD0084	

eppendorf

ROWE CODE
DD0068

(Bottles not included).

SEMI-AUTOMATIC DISTILLATION UNITS - FOR KJELDAHL PROTEIN DETERMINATION



UDK 129 KJELDAHL DISTILLATION UNIT

An entry-level distillation for Kjeldahl protein determination, Non-Protein Nitrogen (NPN), volatiles and more.

The UDK 129 is an entry-level and reliable solution for safe distillations. The most suitable distiller for laboratories looking for a simple but efficient instrument for Kjeldahl nitrogen TKN, proteins, ammoniacal nitrogen, nitric nitrogen (Devarda), TVBN, sulfites, phenols, volatile acids, cyanides, and alcohol content.

The Kjeldahl distillation unit UDK 129 includes features that ensure efficient and reliable distillation, far beyond the expectations of an ordinary entry-level unit:

- Programmable sodium hydroxide addition;
- High-precision pump ensuring constant accurate dosing of the reagent;
- Intuitive interface for easy analysis settings;
- Maximum safety for the operator, wide accessory range.

ROWE CODE ID0326



UDK 139 SEMI-AUTOMATIC KJELDAHL DISTILLATION UNIT

For Kjeldahl protein determination, Non-Protein Nitrogen (NPN), volatiles and more.

The UDK 139 is a convenient and reliable solution for safe, semi-automated distillations. The perfect distiller for laboratories looking for precise and reproducible results of Kjeldahl nitrogen TKN, proteins, ammoniacal nitrogen, nitric nitrogen (Devarda), TVBN, sulfites, phenols, volatile acids, cyanides, and alcohol content.

The Kjeldahl distillation unit UDK 139 combines excellent value-for-money with high reliability and advanced performance.

- The semi-automatic process ensures efficient operations;
- Programmable water and sodium hydroxide addition;
- Selectable steam generation output level 10% – 100%;
- Auto removal of residues from sample tube;
- Clear and intuitive operations thanks to the Smart User Interface and digital display;
- Maximum safety for the operator ;
- Unmatched flexibility with a wide accessory range

ROWE CODE ID0327



DISTILLATION UNITS AUTOMATIC - VELP

UDK 149 AUTOMATIC KJELDAHL NITROGEN PROTEIN ANALYZER

Automatic distillation for Kjeldahl protein determination, Non-Protein Nitrogen (NPN), volatiles and more. Connection to external potentiometric titrators for higher sample throughput.

The UDK 149 is designed for maximum versatility and reproducible results when determining Kjeldahl nitrogen TKN, proteins, ammoniacal nitrogen, nitric nitrogen (Devarda), TVBN, sulfites, phenols, volatile acids, cyanides, and alcohol content.

UDK 149 can be used in combination with several models of external potentiometric titrators for higher sample throughput and direct output of the final result.

- Connection to various external titrators for automated processing and efficient operations;
- Premium result accuracy and precision;
- Programmable boric acid, water, sodium hydroxide addition;
- Selectable steam generation output level 10% – 100%;
- Auto removal of residues from sample tube;
- Clear and intuitive operations thanks to the Smart User Interface and digital display;
- Maximum safety for the operator, wide accessory range.

ROWE CODE ID0328



UDK 159 AUTOMATIC KJELDAHL NITROGEN PROTEIN ANALYZER

Fully automatic distillation and titration for Kjeldahl protein determination, Non-Protein Nitrogen (NPN), volatiles and more. Precision, accuracy, and safety.

The UDK 159 is designed for high-throughput laboratories looking for precise and reproducible results of Kjeldahl nitrogen TKN, proteins, ammoniacal nitrogen, nitric nitrogen (Devarda), TVBN, sulfites, phenols, volatile acids, cyanides, and alcohol content.

The fully automatic process ensures efficient operations, distillation and titration performed simultaneously.

- Shortest time-to-results with online titration and automatic results calculation;
- Premium result accuracy and precision thanks to the integrated colorimetric titrator with high precision burette;
- Programmable boric acid, water, sodium hydroxide addition;
- Selectable steam generation output level 10% – 100%;
- Auto removal of residues from titrator & sample tube;
- Clear and intuitive operations thanks to the Smart User Interface and digital display;
- Maximum safety for the operator, wide accessory range.

ROWE CODE ID0329



UDK 169 WITH AUTOKJEL AUTOSAMPLER NITROGEN PROTEIN ANALYZER

Fully automatic distillation and titration for Kjeldahl protein determination, Non-Protein Nitrogen (NPN), volatiles and more. Connection to autosampler for high sample throughput and unattended operation.

The UDK 169 is designed for high-throughput laboratories looking for precise and reproducible results of Kjeldahl nitrogen TKN, proteins, ammoniacal nitrogen, nitric nitrogen (Devarda), TVBN, sulfites, phenols, volatile acids, cyanides, and alcohol content.

UDK 169 can be used in combination with the separately purchased AutoKjel autosampler, for a highly productive system capable of autonomously processing sample tubes, which are fed directly into the fully automatic distillation and titration unit.

The fully automatic process ensures efficient operations, distillation and titration performed simultaneously.

- Shortest time-to-results with online titration and automatic results calculation;
- Premium result accuracy and precision thanks to the integrated colorimetric titrator with high precision burette;
- Programmable boric acid, water, sodium hydroxide addition;
- Selectable steam generation output level 10% – 100%;
- Auto removal of residues from titrator & sample tube;
- Clear and intuitive operations thanks to the Smart User Interface and digital display;
- Maximum safety for the operator.

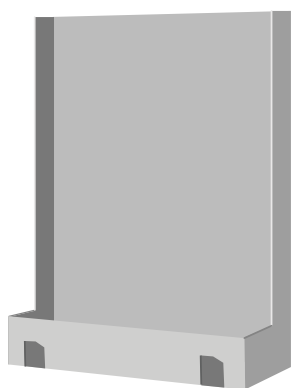
ROWE CODE ID0331
COMPLETE UNIT WITH AUTO-SAMPLER



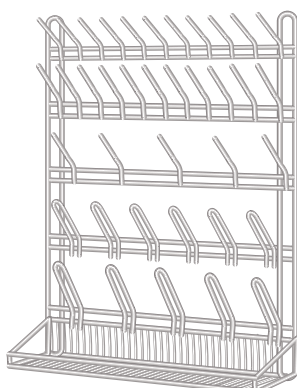
DRYING RACKS	DIMENSIONS W x H x D (mm)	ROWE CODE
Free standing, 36 position, white plastic coated	360 x 500 x 300	HW14738
Wall mounted, 72 position, polystyrene	450 x 630 x 110	PD1600
Wall mounted, plastic coated wire, with basket	570 x 620	HW1200
Wall mounted, 30 removable pegs, trough and drain, steel/polyester	300 x 370	PD0027



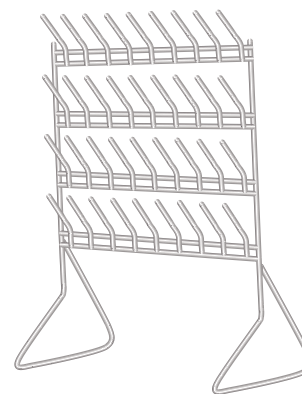
ROWE CODE
PD1600



ROWE CODE
HW1250



ROWE CODE
HW1200



ROWE CODE
HW14738

If you can't see the item you are looking for, please call us!

New South Wales & ACT

Ph: (02) 9603 1205
rowensw@rowe.com.au

Queensland

Ph: (07) 3376 9411
roweqld@rowe.com.au

South Australia & NT

Ph: (08) 8186 0523
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Victoria & Tasmania

Ph: (03) 9701 7077
rowevic@rowe.com.au

Western Australia

Ph: (08) 9302 1911
rowewa@rowe.com.au



ELEMENTAL ANALYSERS - VELP



ROWE CODE IA0070

NDA 702 Dumas Nitrogen Analyser

The NDA 702 Dumas elemental Analyser is the best solution for high throughput labs looking for a fast and safe Analyser.

VERSATILE

Seamlessly choose between Helium and Argon as carrier gas without hardware modifications.

FAST

NDA 702 produces N/Protein results in just 3 to 4 minutes totally unsupervised and cloud-enabled.

PRECISE AND INTUITIVE

The lowest LOD of 0.001 mgN with Helium assures high precision results and excellent reproducibility. The easy-to-use DumaSoft™ software provides an intuitive user experience.

- ermes enabled

The NDA 702 is supplied with everything necessary for the first 1000 analysis and complimentary spare parts.

CN 802 Carbon-Nitrogen Analyser

The CN 802 is a robust and flexible combustion Analyser, that works in accordance with official reference methods. It determines the carbon and nitrogen in many industrial sectors such as agriculture, environmental, food & feed and chemical.

ROBUST AND FLEXIBLE

Fully automatic determination of TC, TOC and TIC (after acidification), TN and Carbon/ Nitrogen Ratio.

PRECISE

The NDIR (Non Dispersive Infrared) detector and LoGas™ TCD (Thermal Conductivity Detector) designed by VELP, guarantees unmatched precision and unrivaled LOD.

INTUITIVE

The CN 802 is easy to use thanks to the user-friendly CNSoft™ software which includes maximum safety controls for the instrument.

- ermes enabled

The CN 802 is supplied with everything necessary for the first 1000 analysis and complimentary spare parts.



ROWE CODE IA0155

EMA 502 Elemental Analyser CHNS-O

The EMA 502 Elemental Analyser CHNS-O is the accurate and reliable solution for the simultaneous determination of carbon, hydrogen, nitrogen, sulfur and oxygen in various industrial sectors such as pharma and life science, organic chemistry, petrochemistry and energy, environmental, agronomy, food & feed.

ALL-IN-ONE SOLUTION

Combustion and pyrolysis in a single Analyser avoiding the need for external modules.

ACCURATE

EMA 502 is a flexible and robust Analyser, designed for superior reliability with high performance and accuracy.

UNMATCHED EASE OF USE

Intuitive operation with the powerful EMASoft™ software. Comprehensive reporting features and pre-loaded methods of analysis.

- ermes enabled

The EMA 502 Elemental Analyser is supplied with all necessary parts to perform up to 1000 analyses CHNS.



ROWE CODE IA0286

Adding value to automation via the cloud



Velp Analytical Analysers, thanks to their connectivity to Velp ermes, allows you to reduce routine operations with real-time monitoring of your elemental analyser wherever you are, at any time.

Velp Analytical Analysers are designed for continuous work with fully automated processes, Velp ermes allows you to manage multiple instruments, consumables, workflows and to drastically reduce diagnostic time to ensure a superior level of service with maximum data security and protection of your data.

Immediate notifications and alerts will allow you to be always informed about the status of your analysis and thanks to the remote interruption you will have total control of your processes ensuring maximum security.

Access the database of your instrument in total security through the Velp ermes platform and work with your colleagues creating and sharing reports from PC, smartphone and tablet.

ermes cloud based connectivity software

1 OR 3 YEAR SUBSCRIPTION FOR UP TO 10 INSTRUMENTS

- Improve your laboratory experience with secure ermes Cloud Platform and access to your Velp instruments working conditions and data anytime and anywhere.
- Monitor and manage multiple instruments and consumables 24/7 from your PC, tablet or smart-phone with ermes.
- Real time visualisation of your analysis and of your instrument working conditions.
- ermes collects and stores your data with the maximum level of encryption following the highest cyber-security standards.
- Effortlessly connect your instrument to ermes cloud platform via secure Wi-Fi or cable.



ROWE CODE IV0171 or IV0172

CLIMATE & GROWTH CHAMBERS

CLIMACELL EVO - CLIMATE CHAMBER	VOL (L)	ROWE CODE
• FORCED AIR CIRCULATION • 0°C TO 100°C • HUMIDITY 10-98%		
1 x inner glass door, ID: 540W x 380D x 535Hmm, OD: 780W x 755D x 1187Hmm	111	IC0327
1 x inner glass door, ID: 540W x 530D x 765Hmm, OD: 780W x 885D x 1450Hmm	222	IC0328
1 x inner glass door, ID: 540W x 380D x 1415Hmm, OD: 1100W x 885D x 1890Hmm	404	IC0329
2 x inner glass door, ID: 940W x 530D x 1415Hmm, OD: 1500W x 885D x 1890Hmm	707	IC0330
3 x inner glass door, ID: (3 x 540W (1905)) x 530D x 1415Hmm, OD: 2530W x 898D x 1921Hmm	1212	IC0331



ROWE CODE
IC0327



ROWE CODE
IC0328



ROWE CODE
IC0329



ROWE CODE
IC0330



GROWTH CHAMBERS	VOL (L)	ROWE CODE
ECC150 - Test chamber for constant climate conditions, 0 to 70°C +/- 0.1°C, humidity 10-85% +/- 2% r.H., 3 x SS shelves, ID: 500W x 500D x 600Hmm, OD: 720W x 810D x 1200Hmm	150	IT0540
CLIMATRON 520-SL-H - Plant growth chamber, refrigerated with shelf lighting and humidity control (shelf light trays not included) -5 to 4°C, ID: 600D x 550W x 1460Hmm	520	IP0461
CLIMATRON 520-DL - Chamber tissue and plant growth, refrigerated with door lights, 10 to 40°C (lights on), ID: 600W x 550D x 1460Hmm	520	IC0254



ROWE CODE
IP0461

EYE WASH STATION



Portable Gravity Fed Eye Wash Unit
ROWE CODE IE0226



Portable Gravity Fed Eye Wash Unit
ROWE CODE IE0347



Pratt Water Preservative Solution
250mL (4 pack)
Suitable only for gravity fed units.
ROWE CODE CE0308



FIBRE ANALYSERS - AUTOMATIC & SEMI AUTOMATIC



Automatic

FIWE Advance produces accurate results that always comply with official ISO and AOAC methods for both Crude Fibre and Detergent Fibre.

In addition, the FIWE Advance method using crucibles avoids the loss of fibre due to the transfer of the sample which remains in the crucible for the duration of the analytical procedure.

The sample in fact remains inside the crucibles during the extraction, digestion, washing and filtration phases, and also during weighing and finally for drying and ashing eliminating the risks of error.



ROWE CODE IF0285

FIWE advance automatic fiber analyser. Fibre Extractor. Crude & detergent determination, 6 positions, automatic operation. Velp FIWE advance, 1 year free subscription to ERMES cloud based application

Semi-Automatic

FIWE 3 and FIWE 6 are fibre analysers suitable for raw fibre extraction, conventionally known as an indigestible residue. Rapid analysis, reliable results and high reproducibility are some of the most relevant benefits of these units which are ideal for the following applications:

- The Weende method, the oldest analytical procedure still in use today, in which fibre concentration is measured as crude fibre (CF)
- The Neutral Detergent Fibre (NDF), a method developed by Van Soest, now the most common measure of fibre used for animal feed analysis
- Acid Detergent Fibre (ADF), a portion of the plant fibre and includes cellulose, lignin and variable amounts of xylans.
- Acid Detergent Lignin (ADL) determination and Wijkstrom technique, a modification of the Weende method

Rapid and efficient filtration

CSF6 is optimal for efficient filtration, after the samples have been processed by the Enzymatic Digester GDE.

This VELP combination allows the analysis to be carried out in accordance with the official AOAC (Determination of Total Dietary Fibre) method with a drastic reduction in the time required compared to the manual procedure.

CFS6 filtration unit is able to perform single or multiple samples at the same time, up to a maximum of 6 samples at the same time, in less than 20 minutes, even at full load.



ROWE CODE IR0117

Raw fibre extractor. 3 positions. Velp FIWE 3



ROWE CODE IR0118

Raw fibre extractor. 6 positions. Velp FIWE 6



ROWE CODE IE0243

Extractor - Dietary fiber CSF6, 230v/50Hz

FILTRATION - FILTER PAPERS - SELECTION CHART

FILTER SPEED	QUALITATIVE	QUALITATIVE WET STRENGTHENED	ASHLESS	HARDENED	HARDENED ASHLESS	RETENTION
FAST	WH 4		WH 41	WH 54	WH 541	COARSE AND GELATINOUS PRECIPITATES
	MN 617		MN 640W	MN 1670	MN 1640W	
MEDIUM FAST	WH 1		WH 43			MEDIUM CRYSTALLINE
	MN 615		MN 640MF			
MEDIUM	WH 2	See POSTLIP Range	WH 40	WH 52	WH 540	CRYSTALLINE
	MN 616		MN 640M	MN 1672	MN 1640M	
SLOW	WH 5		WH 40	WH 50	WH 542	FINE CRYSTALLINE
	WH 6		WH 42			
	MN 619DE		MN 640DD	MN1674	MN 1640D	
			MN 640D			
ASH	WH 0.06%		WH 0.01%	WH 0.025%	WH 0.008%	
	MN 0.1%		MN <0.1%	MN <0.1%	MN <0.1%	

Whatman 3 - Similar to MN618 (Thick medium speed paper with high retention).

Code: WH = Whatman
MN = Macherey Nagel

PLEASE NOTE:

In this filter Paper Selection Table filter papers manufactured by Macherey Nagel are, for convenience only, described as being “similar to” the relevant Whatman number classification. In response to concerns raised by Whatman, we ask you to note that the reference to the Whatman number in respect of such filter papers does not imply that those products are manufactured by or originate from, or otherwise have the sponsorship or approval of, Whatman (the manufacturer of Whatman brand filter papers)

WET STRENGTH - METALLURGY - SELECTION CHART

FILTER SPEED	MODERATE	MODERATE TO HIGH	HIGH	PARTICLE RETENTION
FAST		MN 1670	POSTLIP H W/S	COARSE
		MN 1640W		
MEDIUM		MN 1672	POSTLIP B W/S	MEDIUM / CRYSTALLINE
		MN 1640M	EKWIP 2H	
SLOW	MN 619	MN 1674		CRYSTALLINE (“FINES’)
	MN 619EH	MN 1640D		
	MN 619DE			

FILTER PAPER - MACHEREY-NAGEL

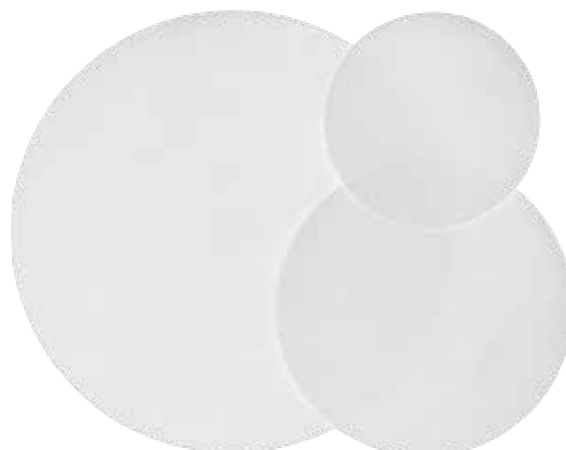
How to determine what size filter paper you require for a funnel:

Filter paper = 2 x 45° funnel diameter and then the next size up.
 For example: If funnel diameter is 5cm, then 2 x = 10cm, next size up is 11cm filter paper.

STANDARD FILTER PAPER - 100 PK	DIAM (cm)	ROWE CODE
MN 615 SIMILAR TO GR.1		
Medium fast filtration, smooth	1.5	FF1120
	3	FF1125
	4.7	FF0493
	5	FF1007
	5.5	FF1000
	7	FF1100
	8.5	FF1105
	9	FF1150
	11	FF1200
	12.5	FF1300
	15	FF1450
	18.5	FF1600
	24	FF1700
	27	FF1950
	32	FF2000
40	FF2020	
50	FF2030	
1/4 FOLDED	12.5	FF0443
Medium fast filtration, smooth	15	FF0452



MN 616 SIMILAR TO GR.1		
Medium fast filtration, smooth	5.5	FF2055
	9	FF2065
	11	FF1172
1/4 FOLDED Medium fast filtration, smooth	15	FF2109
MN 616 md SIMILAR TO GR.2		
Medium to slow filtration, smooth	11	FF2397
	12.5	FF2072
	15	FF2101
	18.5	FP0035
MN 616 md SIMILAR TO GR.114		
Wet strengthened	12.5	FF3115
	15	FF3123
	18.5	FF2100
	24	FF3121



FILTER PAPER - MACHEREY-NAGEL

STANDARD FILTER PAPER - 100 PK	DIAM (cm)	ROWE CODE
MN 617 SIMILAR TO GR.4		
Soft, fast filtration, smooth	4.1	FF2157
	5.5	FP2210
	9	FF2150
	11	FF2160
	12.5	FF2220
	15	FF2227
	18.5	FF2228
	24	FP0011
	32	FP0053

MN 618 SIMILAR TO GR.3		
Medium fast filtration, smooth	7	FF2114
	9	FF2116
	11	FF2124
	15	FF2139
	18.5	FF2151
	24	FF2146

MN 619 eh SIMILAR TO GR.6		
Dense, slow filtration, smooth	5.5	FF0500
	9	FF2301
	11	FF2399
	15	FF2405
	24	FF2407

MN 619 SIMILAR TO GR.6		
Dense, slow filtration, smooth	11	FF2398
	18.5	FF2350

MN 619 de SIMILAR TO GR.5		
Extra dense, very slow filtration, smooth	7	FF0457
	9	FF2385
	12.5	FF2390
	15	FF2401
	18.5	FF2457

MN 619 SIMILAR TO GR.5		
	11	FF2389
	32	FF0534

STANDARD FILTER PAPER - 100 PK	DIAM (cm)	ROWE CODE
MN 640 w SIMILAR TO GR.41		
Fast filtration, smooth	5.5	FF3482
	9	FF2572
	11	FP0037
	12.5	FF2500
	15	FF2570
	18.5	FF3951
	24	FF2690

MN 640 m SIMILAR TO GR.43		
Medium fast filtration, smooth	7	FP0040
	9	FF0440
	12.5	FF2448

MN 640 md SIMILAR TO GR.40		
Medium to slow filtration, smooth	5.5	FP1001
	11	FF2524
	12.5	FP0034
	15	FF2574

MN 640 dd SIMILAR TO GR.44		
Slow filtration, smooth	4.7	FF2670
	12.5	FF2680
	15	FF2685
	24	FF2695

MN 640 d SIMILAR TO GR.42		
Slow filtration, smooth	11	FF2521
	12.5	FP0064
	15	FP0065
	18.5	FP0038
	24	FP0071
	32	FF2920

MN 640 de SIMILAR TO GR.42		
Very slow filtration, smooth	5.5	FF2565
	9	FF2516
	12.5	FF2530
	15	FF2560
	18.5	FF2575
	24	FF2580



WET-STRENGTHENED FILTER PAPER - 100 PK	DIAM (cm)	ROWE CODE
MN 1640 we SIMILAR TO GR.540		
Very fast filtration, smooth	5.5	FF3490
	12.5	FF3330
	32	FF3953
MN 1640 w SIMILAR TO GR.541		
Fast filtration, smooth	5.5	FF3497
	9	FF3500
	11	FF3550
	12.5	FF3600
	15	FF3650
	18.5	FF3700
	24	FF3750
MN 1640 m SIMILAR TO GR.540		
Medium fast filtration, smooth	9	FF3245
	11	FF3250
	12.5	FF3300
	15	FF3350
	18.5	FF3360
	24	FF3956
MN 1640 d SIMILAR TO GR.542		
MN 1640 d similar to GR50	7	FF1555
Slow filtration, smooth	9	FF3800
	11	FF3825
	12.5	FF3850
	15	FF3900
	18.5	FF3950
	24	FF39521
32	FF3954	
MN 1640 de SIMILAR TO GR.542		
Very slow filtration, smooth	5.5	FP0049
	7	FP0048
	9	FP0047
	11	FP0046
	12.5	FP0045
	15	FP0044
	18.5	FP0043
	24	FP0041
	27	FP0042
	32	FF3498

WET-STRENGTHENED FILTER PAPER - 100 PK	DIAM (cm)	ROWE CODE
MN 1670 SIMILAR TO GR.114 & 54		
Fast filtration, smooth	5.5	FF2305
	7	FF2315
	7	FF3246
	9	FF2359
	11	FF2325
	12.5	FF3258
	15	FF3265
	18.5	FF3886
	24	FF3680
	32	FF3685

MN 1672 SIMILAR TO GR.52		
Medium fast filtration, smooth	7	FF2602
	9	FF2600
	11	FF2650
	12.5	FF2700
	15	FF2750
	18.5	FF2800
	24	FF2850
	32	FF2900
	40	FF2901

MN 1674 SIMILAR TO GR.50		
Slow filtration, smooth	7	FF0458
	9	FF2541
	11	FF2540
	12.5	FF2544
	15	FF2542
	24	FF2545
	32	FF2550
	40	FF2552



Specialty manufactured for use in a filter press - See page 175

GLASS FIBRE FILTER PAPER - MACHEREY-NAGEL

GLASS FIBRE FILTERS - 100 PK	DIAM (cm)	ROWE CODE
MN GF-1 SIMILAR TO GF/A		
Binder-free, Retention capacity: 0.7µm	2.5	FF4661
	3.7	FF4102
	4.5	FF4628
	4.7	FF4627
	5.5	FF4672
	7	FF4100
	9	FF4601
	11	FF4649
	12.5	FF4647
	15	FF4673
27	FF0559	

GLASS FIBRE FILTERS - 100 PK	DIAM (cm)	ROWE CODE
MN GF-2 SIMILAR TO GF/B		
Binder-free, Retention capacity: 0.5µm	2.5	FF4706
	3.7	FF4674
	4.5	FF4112
	5.5	FF4159
	7	FF4675
	9	FF4655
	11	FF4648
	12.5	FF4676
	15	FF4654

GLASS FIBRE FILTERS - 100 PK	DIAM (cm)	ROWE CODE
MN GF-3 SIMILAR TO GF/C		
Binder-free, Retention capacity: 0.6µm	2.5	FF4080
	3.7	FF4677
	4.7	FF4128
	5.5	FF4144
	7	FF4150
	9	FF4678
	11	FF4770
	15	FF4155
	24	FF4153
	27	FF0486

GLASS FIBRE FILTERS - 100 PK	DIAM (cm)	ROWE CODE
MN GF-4 SIMILAR TO GF/D		
Binder-free, Retention capacity: 1.4µm	2.5	FF4695
	3.7	FF4679
	4.7	FF4680
	5.5	FF4681
	7	FF4682
	9	FF4608
	11	FF4683
	12.5	FF4611
	15	FF4684

GLASS FIBRE FILTERS - 100 PK	DIAM (cm)	ROWE CODE
MN GF-5 SIMILAR TO GF/F		
Binder-free, Retention capacity: 0.4µm	2.5	FF4806
	3.7	FF4685
	4.7	FP4130
	5.5	FF4686
	7	FF4687
	9	FF4688
	11	FF4689
	12	FF4662
	15	FF4663

GLASS FIBRE FILTERS - 100 PK	DIAM (cm)	ROWE CODE
MN GF-6		
Binder-free, Retention capacity: 0.6µm	2.5	FF4664
	3.7	FF4665
	5.5	FF4666
	7	FF4667
	9	FF4668
	11	FF4669
	12.5	FF4670
	15	FF4671
MN GF-6 similar to GR934-AH	4.7	FF4805

GLASS FIBRE FILTERS - 100 PK	DIAM (cm)	ROWE CODE
MN QUARTZ QF-10		
Quartz QF-10	3.7	FF4807
Quartz	4.5	FP0008
Organic binder 0.6µm retention	4.7	FP0033
Quartz	4.7	FP0007
Quartz	5	FP0009
Quartz	9	FP0010
MN 85/220	11	FF4714

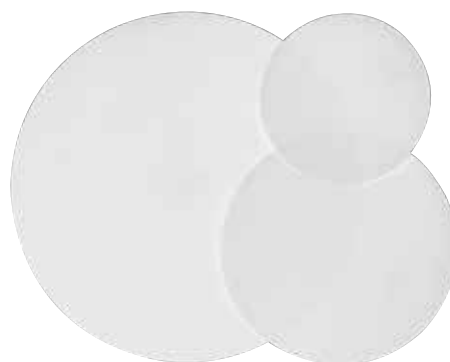
FILTER PAPER - MACHEREY-NAGEL

Our best selling filter paper, specifically developed for Rowe Scientific, for use in a filter press.



MN 722 WET STRENGTHENED	PARTICLE RETENTION	DIAM (cm)	QTY	ROWE CODE
Wrapped in Brown Paper	7-12µm	20	100	FP1007
		25	100	FP1041
			1000	FP1038
		33	100	FP1052
			1000	FP1053
		35	100	FP1012
		40	100	FP0014
63.5	100	FP1011		

**BEST
SELLERS**



FOLDED FILTER PAPER - QTY 100	DIAM (cm)	ROWE CODE
MN 280 Acid washed	11	FF0087
MN 280 acid washed	15	FF0088
MN 614	12.5	FF1065
MN 614	15	FF1066
MN 614 similar to WH2V	18.5	FF1023
MN 614 1/4	24	FP0059
MN 614 1/4	32	FF1025
MN 615 1/4 similar to GR1	18.5	FF0417
MN 615 1/4 similar to GR1	24	FP0061
MN 616 1/4 similar to GR2	18.5	FF2106
MN 616 1/4 similar to GR2	24	FF2111
MN 616 1/4 similar to GR2	32	FF3133
MN 619 EH folded and similar to GR6	9	FF2302
MN 1670 wet strengthened	11	FF0555
MN 1670 wet strengthened	12.5	FF0556



FILTER PAPER - WHATMAN



STANDARD FILTER PAPER	DIAM (cm)	QTY	ROWE CODE
WH GRADE 1			
Medium filtration, smooth, Particle retention: >11µm	1	500	FF1201
	1.5	500	FP0001
	2	400	FF1115
	2.5	100	FF0454
	2.5	400	FF0990
	4.25	100	FF4119
	4.7	100	FF2021
	5.5	100	FF1050
	7	100	FF1110
	8.5	100	FP1630
	9	100	FF1155
	11	100	FF1205
	12.5	100	FF1310
	15	100	FF1550
	18.5	100	FF1650
	24	100	FF1710
	27	100	FF1951
32	100	FF2537	
40	100	FF2023	
50	100	FF1990	

STANDARD FILTER PAPER	DIAM (cm)	QTY	ROWE CODE
WH GRADE 3			
Medium fine filtration, smooth, grained Particle retention: >6µm	5.5	100	FF2110
	7	100	FF2112
	9	100	FF2115
	11	100	FF2125
	12.5	100	FF2130
	15	100	FF2135
	18.5	100	FF2120
	24	100	FF2145

STANDARD FILTER PAPER	DIAM (cm)	QTY	ROWE CODE
WH GRADE 4			
Very fast filtration, smooth Particle retention: 25µm	4.7	100	FF0544
	5.5	100	FF2144
	7	100	FP0069
	9	100	FF2155
	11	100	FF2136
	12.5	100	FF2137
	15	100	FF2138
	18.5	100	FF2225
	24	100	FF2230
	32	100	FP0090

STANDARD FILTER PAPER	DIAM (cm)	QTY	ROWE CODE
WH GRADE 2			
Medium filtration, smooth Particle retention: >8µm	2.5	100	FF0473
	4.2	100	FF4106
	4.7	100	FF0489
	5.5	100	FF2105
	9	100	FF2060
	11	100	FF1206
	12.5	100	FF2070
	15	100	FF2075
18.5	100	FF2076	

STANDARD FILTER PAPER	DIAM (cm)	QTY	ROWE CODE
WH GRADE 5			
Slow filtration, cellulose Particle retention: 2.5µm	5.5	100	FF2310
	7	100	FF2344
	9	100	FF2380
	11	100	FF2127
	12.5	100	FF2395
	15	100	FF2300
	18.5	100	FF2345

STANDARD FILTER PAPER	DIAM (cm)	QTY	ROWE CODE
WH GRADE 2V - FOLDED			
Pre-pleated circle, Med filtration Particle retention: >8µm	18.5	100	FF2103

STANDARD FILTER PAPER	DIAM (cm)	QTY	ROWE CODE
WH GRADE 6			
Medium to slow filtration, smooth Particle retention: 3µm	9	100	FF2387
	11	100	FF1210
	12.5	100	FF1211
	15	100	FF2400
	24	100	FF2260

STANDARD FILTER PAPER	DIAM (cm)	QTY	ROWE CODE
WH GRADE 40			
Medium filtration, High-quality cotton linters Particle retention: 8µm	4.7	100	FF2420
	7	100	FF1740
	9	100	FF2430
	11	100	FF2449
	12.5	100	FF2450
	15	100	FF2455

WH GRADE 41			
Fast filtration, High-quality cotton linters Particle retention: 20µm	4.7	100	FF2022
	5.5	100	FF3480
	7	100	FF2468
	9	100	FF2470
	11	100	FF2523
	12.5	100	FF2555
	15	100	FF2505
	18.5	100	FF2480
32	100	FF2506	

WH GRADE 42			
Slow filtration, High-quality cotton linters Particle retention: 2.5µm	4.7	100	FF2507
	5.5	100	FF2510
	7	100	FF2475
	9	100	FF2515
	11	100	FF2520
	12.5	100	FF2535
	15	100	FF2531
	24	100	FF2581
	32	100	FF2910

WH GRADE 43			
Medium filtration, High-quality cotton linters Particle retention: 16µm	9	100	FF0459

WH GRADE 44			
Medium filtration, High-quality cotton linters Particle retention: 3µm	15	100	FF2539

STANDARD FILTER PAPER	DIAM (cm)	QTY	ROWE CODE
WH GRADE 50			
Slow filtration, High-quality cotton linters Particle retention: 2.7µm	7	100	FF1551
	9	100	FF0503
	11	100	FF0461
	15	100	FF0491
	18.5	100	FF2687

WH GRADE 52			
Medium filtration, High-quality cotton linters Particle retention: 7µm	9	100	FF2601
	11	100	FF2527
	12.5	100	FF3257

WH GRADE 54			
Fast filtration, High-quality cotton linters Particle retention: 22µm	5.5	100	FP0004
	9	100	FF2536
	11	100	FF2452
	12.5	100	FF2454
	18.5	100	FF3885
	24	100	FP0030

WET STRENGTHENED QUALITATIVE FILTER PAPER	DIAM (cm)	QTY	ROWE CODE
WH 91			
Cellulose Particle retention: 10µm	12.5	100	FF3045
	15	100	FF3049
	16.5	1000	FF3066
	24	1000	FF3060

WH 113			
Very fast filtration, Cellulose, Crepe surface Particle retention: 25µm	9	100	FF5700
	11	100	FP0078
	12.5	100	FF0478
	15	100	FP0067

WH 114			
Cellulose, Coarse paper with creped or smooth surface Particle retention: 25µm	12.5	100	FF3110
	15	100	FF3120
	24	100	FF3140

GLASS FIBRE FILTER PAPER - WHATMAN

QUANTITATIVE FILTER PAPER	DIAM (cm)	QTY	ROWE CODE
WH GRADE 540			
Medium filtration, High-quality cotton linters Particle retention: 8µm	4.25	100	FP0016
	5.5	100	FP0003
	9	100	FF3242
	11	100	FF3252
	12.5	100	FF3604
	15	100	FF3355
	18.5	100	FF3410

WH GRADE 541			
Fast filtration, High-quality cotton linters Particle retention: 22µm	4.7	100	FP0027
	5.5	100	FF3495
	7	100	FF3240
	9	100	FF3505
	11	100	FF3555
	12.5	100	FF3605
	15	100	FF3655
	18.5	100	FF3710
	24	100	FF3760

WH GRADE 542			
Medium filtration, High-quality cotton linters Particle retention: 2.7µm	7	100	FF3792
	9	100	FF3805
	11	100	FF3830
	12.5	100	FF3875
	15	100	FF3905
	18.5	100	FF3945

QUANTITATIVE FILTER PAPER	DIAM (cm)	QTY	ROWE CODE
WH GRADE 589/2			
Medium filtration, High-quality cotton linters, Particle retention: 4 to 12µm	4.05	100	FF0423
	11	100	FF1181
	24	100	FF1182

WH GRADE 597 1/2 PLEATED CIRCLES			
Medium fast filtration, Cellulose, Particle retention: 7µm	18.5	100	FP0081

WH GRADE 598			
Medium fast filtration, Cellulose, Particle retention: 10µm	9	100	FP0017

WH GRADE 602H			
Slow filtration, Cellulose, Particle retention: <2µm	12.5	100	FF0509

WH GRADE 0048 SEDIMENT DISK - BABY FOOD TESTING			
Cellulose / Polyester	3.2	1000	FF2129

WH QM-A QUARTZ AIR SAMPLING			
Fast filtration, Binder free	4.7	100	FP0039
	8.2	100	FP0074

GLASS FIBRE FILTER PAPER - WHATMAN

FILTER PAPER - EKWIP

GLASS FIBRE FILTERS	DIAM (cm)	QTY	ROWE CODE
WH GF/A MICROFIBER FILTERS			
Binder-free, high flow rate, Particle Retention 1.6µm	1.3	100	FF4621
	2.1	100	FP0022
	5.5	100	FF4632
	9	100	FF4606
	11	100	FF4638
	12.5	100	FF4640
	15	100	FF4619
WH GF/B MICROFIBER FILTERS			
Binder-free, Particle Retention 1µm	4.7	100	FF4110
WH GF/C MICROFIBER FILTERS			
Binder-free, medium to fast flow rate, Particle Retention 1.2µm	2.5	100	FF4075
	4.7	100	FF4126
	5.5	100	FF4145
	7	100	FF4162
	9	100	FF4603
	11	100	FF4775
	12.5	100	FF4645
	15	100	FF4617
WH GF/D GLASS MICROFIBER PREFILTERS			
Binder-free, Fast flow rate, Particle Retention 2.7µm	4.7	100	FF4129
WH GF/F MICROFIBER FILTERS			
Binder-free, medium flow rate, Particle Retention 0.7µm	2.5	100	FF4133
	4.7	100	FF4135
WH EPM 2000 AIR SAMPLING FILTERS - SHEET - QTY 100			
Binder-free, Particle Retention 0.3µm	20.3 x 25.4		FF4580

EKWIP

DIAM (cm)	SPEC	QTY	ROWE CODE
18.5	2H	1000	FF0468
20.5	2H	1000	FP1025
22	Z1	100	FP1061
27	2H	1000	FF0469
30.5	2H	1000	FP1045
35	2H-AH	1000	FP1060
100	2H-AH	100	FP0070
RING DIAM (cm)	SPEC	QTY	ROWE CODE
25.5 outer 12.5 Inner Ring	U15 25.5A	500	QF0004
SQUARE (cm)	SPEC	QTY	ROWE CODE
90	2H-AH	100	FF0494
14 x 200	Z10	100	FF0546



ROWE CODE
FP1061



ROWE CODE
QF0004



EXTRACTION THIMBLES

MACHEREY NAGEL

Commonly used to hold solid materials from which specific substances are to be eluted, or as filter thimbles for separating solid particles (dust) in air and exhausts. Macherey-Nagel manufacture thimbles from both cellulose fibres and glass microfibres in a variety of grades and in a wide range of sizes.



Extraction thimbles made from glass microfibres

Grade MN 649 Macherey-Nagel

These glass microfibre extraction thimbles are non-sintered thimbles, which display a high degree of air-permeability and very good particle retention. Due to these properties and their high temperature resistance they are ideally suited for dust analysis in industrial and hot exhaust gases.

SIZE: ID x HEIGHT (mm)	STD. PACK SIZE	ROWE CODE
22 x 80	25	FE0902
30 x 100	25	GE1050

Extraction thimbles made from cellulose

Grade MN 645 Macherey-Nagel

Standard grade extraction thimbles made from pure cellulose

SIZE: ID x HEIGHT (mm)	STD. PACK SIZE	ROWE CODE
22 x 80	25	FE0900
27 x 80	25	FE1041
28 x 100	25	FE1032
48 x 145	25	FE1050
60 x 180	25	FE1300



Please contact our sales team for other grades and sizes of extraction and filter thimbles.

CUELS - MABOR

What is the MABOR difference?

1. Raw magnesite is put through a furnace at the mine site and “dead burned” releasing CO2. The waste materials that reveal themselves are manually removed before the pure material is ground and shaped into cupels. This process is crucial as it removes CO2 and impurities that create cracking during heating and stop the loss of gold samples.
2. Mabor’s process of grinding its magnesite to a uniform size before pressing is another reason why its cupels are superior; porous and slightly cracked cupels cause gold samples to sink between these cracks resulting in low or inaccurate gold assays.
3. Other manufacturers use a die-press for cupels, making up to 100 at a time leaving those in the centre and side of the press different in their porosity, Mabor individually press each cupel and use a unique binding recipe to ensure each item reaches the highest internal quality controls.
4. By taking special care with each item, Mabor’s products consistently last longer and produce lower losses. After the cupels and bullion blocks are pressed they are oven dried at 150°C (not sun-dried), meaning it is not necessary to pre-fire Mabor products, saving time, energy and money.
5. The finishing touch for a Mabor cupel is the individual attention each one receives - prior to shipping any rough edges are smoothed out and all dust vacuumed away leaving less dust for your equipment and staff.



CUELS

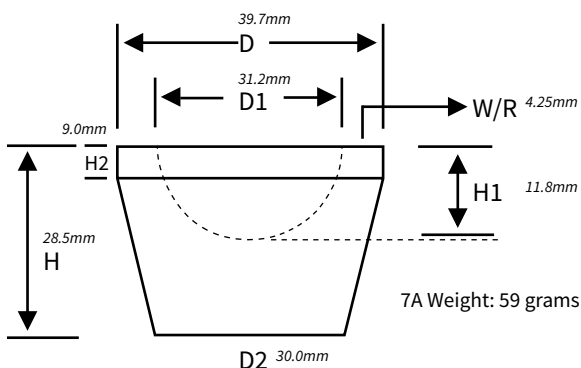
CUPEL SIZE	UNITS / CARTON	ROWE CODE
1	1440	
2X	1296	
3	1080	YC1473
4	819	YC0002
4A	900	
5	728	
6	462	YC1460
7	300	
PM	720	YC1472
6A	300	
7A	300	YC1465
7A	420	
7AL	420	YC1468
7B	300	YC1476
7X	300	YC1469
SA	300	
8	240	

CARTON DIMENSIONS

LENGTH (cm)	WIDTH (cm)	HEIGHT (cm)
39.0	23.0	18.0
39.0	23.0	18.5
39.0	22.5	19.0
38.0	21.5	20.0
39.5	27.0	16.0
39.5	22.0	19.0
39.5	22.5	18.0
41.5	22.5	17.0
43.0	23.5	17.0
41.5	23.0	18.0
50.5	23.0	19.5
50.5	30.7	17.0
50.5	30.7	17.0
42.0	23.0	22.0
42.0	23.0	23.0
42.0	23.0	18.0
38.0	29.5	16.0

WEIGHT

GROSS (kg)
19.5
17.5
18.6
17.2
20.5
18.5
18.0
14.0
20.5
15.0
18.5
25.9
24.3
21.1
23.6
17.1
18.2



7A Size Cupel Dimensions

KEY

- D = Diameter of Cupel
- D1 = Diameter of Cup top Portion
- D2 = Diameter of Base of Cupel
- H = Height of Cupel
- H1 = Depth of Cup
- H2 = Height of Ridge
- W/R = Width of Ridge

FURNACE ACCESSORIES

MABOR Cupels and Bullion Blocks

CUPELS

CUPEL SIZE	UNITS / CARTON	ROWE CODE
8A	200	YC1485
8AM	200	
8C	240	
8S	180	
8Y	200	
9	192	
9C	160	
9F	128	
10	140	IC0064
11	112	
11A	112	
12	45	YC1471
12A	45	
14	16	YC1474
15	4	YC1475
PC	1	

CARTON DIMENSIONS WEIGHT

LENGTH (cm)	WIDTH (cm)	HEIGHT (cm)	GROSS (kg)
46.5	24.5	16.0	20.8
46.5	24.5	16.0	21.8
38.5	30.2	17.5	22.3
45.5	27.8	14.0	20.0
44.5	23.5	15.0	20.2
42.5	23.0	20.0	21.7
42.5	23.0	19.0	20.9
43.0	23.5	18.0	18.4
44.0	26.0	17.0	21.5
42.0	25.0	20.0	22.7
42.0	25.0	20.0	24.2
42.5	26.5	16.0	20.6
42.5	26.5	18.0	23.5
46.5	25.5	16.0	19.7
33.5	33.5	14.5	20.0
29.5	29.5	17.5	16.6

It's how Mabor make their products that make them stand apart from other manufacturers



Mabor cupels are refined like no other with the company using over 100 years of manufacturing know-how to guide their processing practices for more longer-lasting and reliable products

When a fire assayer wants an accurate gold analysis they turn to Mabor - used in gold mines all over the world for almost 100 years - including Australia, South Africa, Colorado and Fiji



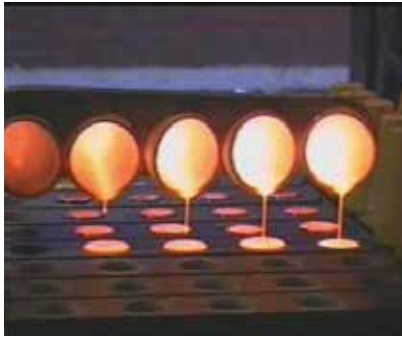
BULLION BLOCKS

SIZE	UNITS / CARTON	ROWE CODE
4HB	224	
4SAHB	60	
6HB	120	
6HB (T)	120	
10HB	60	AB2005
12HB	105	
12HB (L)	48	AB2003
12HB (L) BEV	48	AB2004
14HB	56	
21HB	42	
24HB	48	
24HB	24	

CARTON DIMENSIONS WEIGHT

LENGTH (cm)	WIDTH (cm)	HEIGHT (cm)	GROSS (kg)
42.0	23.0	18.5	22.8
42.0	26.0	13.0	19.8
41.0	24.0	15.5	18.8
43.5	27.0	15.0	22.8
44.0	27.5	13.0	19.2
43.0	21.5	18.0	22.2
38.9	19.9	22.5	19.1
38.9	19.9	22.5	19.1
40.0	21.5	19.0	21.7
36.0	25.0	20.0	21.3
35.0	26.5	18.5	20.3
38.9	19.9	22.5	21.0

THE MANUFACTURER IS CERTIFIED FOR:
 ISO 9001 - QUALITY MANAGEMENT SYSTEMS
 ISO4001 - ENVIRONMENTAL MANAGEMENT SYSTEMS
 OHSAS 18001 - OCCUPATIONAL HEALTH AND SAFETY



MABOR Magnesia Cupels and Bullion Blocks are manufactured on the latest machinery using a unique blend of Magnesium Oxide and special fluxing ingredients.

- Robust mechanical strength;
- Not affected by atmospheric changes;
- No spitting of lead;
- All cupels absorb a charge of approximately 70% of their weight;
- Rapid absorption of large quantity of litharge;
- Free from cracking and pitting;
- Beads are easily removed;
- Perfect uniformity of quality;
- Reduced tendency to freeze.

Chemicals for Gold Fire Assay

DESCRIPTION	STD. PACK SIZE	ROWE CODE
Borax, Anhydrous	25kg	CB3680
Borax, Anhydrous ('Dehybor') 12 mesh	25kg	CB2350
Citric Acid, Anhydrous BP/FCC 12-40 mesh	25kg	CC3099
Citric Acid, Monohydrate	25kg	CC3057
Copper (II) Sulphate Pentahydrate Technical	5kg	CC5851
Flour (Plain)	25kg	CF1350
Flux Type 104 (in 15kg bags)	1000kg	YF0001
Gold Wire (99.99%) 1.0mm diameter	1g	CG2010
Gold 1000ppm Standard Solution	500mL	CG1200
Iron Filings/Powder GLR	500g	CI1250
Lead Foil 0.18mm thick, 80mm wide	500g	CL1576
Lead Foil 0.18mm thick, 80mm wide	5kg	CL1577
Litharge for fire assay, in drum	25kg	CL2109
Maborite (magnesite) for furnace spills and fire assay	25kg	YM1000
Potassium Nitrate	25kg	CP4455
Silica Flour (200 mesh)	25kg	CS2554
Silver Nitrate AR	500g	CS8400
Silver Wire 0.35mm diameter, gold free	5m	CS7957
Silver Wire 1.0mm diameter, gold Free	100g	CS7950
Sodium Carbonate (Dense Soda Ash)	25kg	CS7000
Sulfamic Acid 99.8% technical	25kg	CS14785
Zircon Mould Coat B (ready for brushing)	1kg	CZ1432

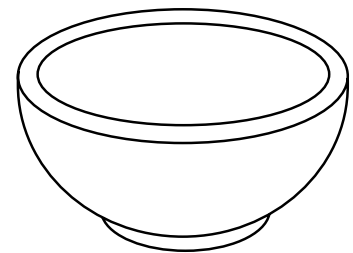
Furnace Accessories

DESCRIPTION	SIZE	STD. PACK SIZE	ROWE CODE
Muffle No.5, D Mould, slotted vent	Large	EA	FI1634
Tongs (lead button type) 10mmD, mild steel	950mmL	EA	YT1050
Tong, mild steel, for use with single cupel	980mmL	EA	YT0006
Cupel Fork, 1.5m long handle, 25 x 40mm DIA (5W x 5D) prongs, mild steel handle with heat resistant S/S tines		EA	QC0005
Cocktail Shaker Fibreglass		EA	YC1010
Crucible Clay Graphite, Universal with Lip	100A	EA	AC1000
Crucible Clay Graphite	A12	EA	AC1005
Crucible, Graphite 106 OD x 80 ID, 110 IH x 130 EXH mm		EA	AC1004
Crucible, Graphite 140 H x 130 D x 90 OD mm (10mm wall)		EA	AC0006

FURNACE ACCESSORIES

Furnace Accessories

DESCRIPTION	STD. PACK SIZE	ROWE CODE
Furnace Part, D Mould No.4	EA	FI1635
Furnace Part, Vent to suit No.4 D Mould	EA	FI1636
Furnace Tile 460 x 250 x 15mm	EA	YF1310
Furnace Tile 600 x 600 x 25mm	EA	YF1305
Furnace Tile 650 x 610 x 25mm	EA	YF0011
Kaowool Blanket 25 x 610 x 7200mm	Roll	AK1525
Mould, 5 place	EA	YC1055
Scorifier 3 inch diameter Atlantic	240	IS0073



ROWE CODE
IS0073



Furnace Muffle



L40/11

- With flap door;
- B510 controller with datalog capability;
- Up to 1100°C;
- 40L capacity;
- Requires 5 pin 3 phase, 10 amp + neutral and earth outlet

ROWE CODE IF0514



- With lift door and adjustable air inlet;
- Exhaust outlet at furnace rear;
- B510 controller with datalog capability

LT5/13

- Up to 1300°C;
- 5L capacity;
- 15.2A

ROWE CODE IF0513

LT15/12

- Up to 1200°C;
- 15L capacity
- 15.2A

ROWE CODE IF0466



BASIC "LE" MODEL

- With flap door;
- Exhaust outlet at furnace rear;
- Basic R7 controller;
- Non-classified fibre insulation;
- Up to 1100 °C (working temp 1050 °C);
- 230V/12.6A.

14L capacity ROWE CODE IF0163

24L capacity ROWE CODE IF0526

FURNACES



Cupellation Furnace MODEL EMF-C

- Uses No. 4 Muffle;
- Takes 50 x Cupels at a time;
- Easy to maintain and operate.

ROWE CODE IF1560

Fusion Furnace MODEL 50PF

- Takes 50 x 50 & 65gm, or 84 x 30, 40, & 55gm crucibles at one time;
- Easy to maintain and operate;
- Compatible with "Multi-pour" loading/unloading system.

ROWE CODE YF1560



Trays, racks and multi-pour systems available on request.

ALL SPARE PARTS FOR FURNACES ARE AVAILABLE UPON REQUEST.

FURNACE BLOCKS & MABORITE POWDER

Dread lead on your furnace floor?

FIX IT WITH 

FURNACE BLOCKS AND MABORITE POWDER



Until now the standard solution for lead leaking from the bottom of cupels was buying a thicker, heavier dimension of cupel, making manufacture and shipping more expensive. Independent testing by Mabor has concluded a cheaper, easier method is to use furnace blocks or powder on the furnace floor to absorb leaking lead.

- Mabor's furnace blocks and maborite powder are made from a high grade, dense, raw material that allows a better absorption of lead.
- Unlike cupels, furnace blocks can be reused again and again.*
- Furnace blocks can be made to individual specifications



**Mabor has successfully tested the use of their furnace blocks for more than 5 fires during product testing, with only slight cracking noticed. The number of uses should be determined by inspecting each block after each fire.*

Maborite Furnace Bedding Powder (Fire Assay) 25kg
ROWE CODE CM0092

Maborite Powder (Fire Assay) 25kg
ROWE CODE YM1000

FLASKS - VARIOUS

Erlenmeyer

DESCRIPTION	mL	PACK SIZE	ROWE CODE
Borosilicate Glass Narrow Necked and Rimmed SIMAX	50	EA 10	GF0227
	100	EA 10	GF1710
	200	EA 10	GF1825
	250	EA 10	GF1855
	300	EA 10	GF1986
	500	EA 10	GF2010
	1000	EA 10	GF2160
	2000	EA 6	GF2215



ROWE CODE
GF2010

DESCRIPTION	mL	PACK SIZE	ROWE CODE
Borosilicate Glass Wide Necked and Rimmed SIMAX	50	EA 10	GF1590
	100	EA 10	GF2671
	250	EA 10	GF2805
	300	EA 10	GF2866
	500	EA 10	GF2910
	1000	EA 10	GF2171
	2000	EA 6	GF2310




ROWE CODE
GF2910



BRANDS WE CARRY
Brand, Simax, Kimble heavy duty and Witeg.
Please enquire for others.


FLASKS - VOLUMETRIC

Volumetric

DESCRIPTION	mL	NECK SIZE	PACK SIZE	ROWE CODE
Trapezoidal Class A. BLAUBRAND® Supplied with Polypropylene stopper. 	1	7/16	2	CB2007
	2	7/16	2	CB2006
	5	7/16	2	DF0104
	10	10/19	2	DF0105
	20	10/19	2	DF0106
	25	10/19	2	DF0107
	50	12/21	2	DF0108




ROWE CODE
DF0108

DESCRIPTION	mL	NECK SIZE	PACK SIZE	ROWE CODE
Standard Class A. BLAUBRAND® Supplied with Polypropylene stopper. 	5	10/19	2	CB1782
	10	7/16	2	DF0312
	10	10/19	2	CB1777
	20	10/19	2	DF0141
	20	12/21	2	DF0142
	25	10/19	2	GF4100
	25	12/21	2	CV0425
	50	12/21	2	CB1781
	50	14/23	2	DF0143
	100	12/21	2	CB1776
	100	14/23	2	DF0144
	250	14/23	2	CB1778
	500	19/26	2	GF4125
	1000	24/29	EA	GF4130
	1000	29/32	EA	DF0146
2000	29/32	EA	CB3386	
5000	34/35	EA	CB3384	
10,000	45/40	EA	GF0044	



ROWE CODE
GF4125

DESCRIPTION	mL	PACK SIZE	ROWE CODE
Flanged Rim Class A. BLAUBRAND® 	10	2	DF0306
	20	2	DF0307
	25	2	DF0308
	200	2	DF0309
	250	2	DF0310
	500	2	DF0311
	1000	EA	DF0204



ROWE CODE
DF0310

Volumetric

DESCRIPTION	mL	NECK SIZE	UNIT	ROWE CODE
Standard Class A. BLAUBRAND® Supplied with glass stopper.	5	10/19	2	CB1775
	10	10/19	2	DF0316
	20	10/19	2	DF0313
	20	21/21	2	DF0317
	25	10/19	2	CB1774
	25	12/21	2	DF0319
	50	12/21	2	DF0314
	50	14/23	2	DF0318
	100	12/21	2	CB1772
	100	14/23	2	GF0103
	200	14/23	2	DF0315
	250	14/23	2	CB1773
	500	19/26	2	CB3383
	1000	24/29	EA	DF0205
	2000	29/32	EA	DF0206
	5000	34/35	EA	CB3382



ROWE CODE
DF0314

Do you require certified flasks with a certificate generated by an ISO17025 accredited laboratory?

We can supply your requirements by providing a factory certificate issued by a DAkkS accredited laboratory. Due to the ILAC-MRA agreement, this accreditation is recognised by NATA.

Call your local Rowe Scientific consultant to find out more.

DESCRIPTION	mL	NECK SIZE	UNIT	ROWE CODE
DAkkS Calibration Certificate Class A. BLAURAND® Borosilicate Glass 3.3 Supplied with Polypropylene stopper.	5	10/19 W*	EA	DF0175
	10	10/19	EA	DF0176
	20	10/19	EA	DF0177
	20	12/21 W*	EA	DF0178
	25	10/19	EA	DF0179
	50	12/21	EA	DF0181
	100	12/21	EA	DF0183
	100	14/23	EA	GF0148
	200	14/23	EA	DF0184
	250	14/23	EA	DF0185
	500	19/26	EA	GF0149
	1000	24/29	EA	DF0186
	2000	29/32	EA	DF0187
	5000	34/35	EA	DF0188**



ROWE CODE
GF0149


CERTIFICATES AND THEIR CHARACTERISTICS

Overview of the most important certificates and their characteristics


	① Quality certificate	② Declaration of conformity	③ DAkkS Calibration Certificate
Description	Document that certifies the accuracy of an instrument. Quality certificates are available as individual certificates (with serial number) or batch certificates (with batch number).	Confirmation that the instrument meets the requirements of the German Weights and Measures Act and the ordinances based on it.	Internationally recognized certification of the traceability of the measurement results to national standards.
Issuer	Manufacturer	Manufacturer	Accredited laboratory
Area of application	<ul style="list-style-type: none"> ■ To minimize the effort required for initial inspection ■ For assuring the demanded traceability of results 	For all instruments in legally regulated areas (e.g. pharmacies, diagnostic laboratories, public offices)	<ul style="list-style-type: none"> ■ For especially high-profile calibrations ■ For calibration in accredited laboratories
Reference standard	Selectable: Either manufacturer specifications or industrial standards	Approval for legally regulated areas in accordance with the German Weights and Measures Act and the ordinances based on it. Marking: DE-M 19	ISO/IEC 17 025
Content	<p>All BRAND quality certificates include a declaration of conformity.</p> <p>General:</p> <ul style="list-style-type: none"> ■ Manufacturer ■ Product ■ Batch/serial number ■ Single/mean value ■ Error of measurement/standard deviation <p>Additional information on BRAND certificates</p> <ul style="list-style-type: none"> ■ All test equipment used ■ Measurement method ■ Comparative values (volume/error limit) ■ QC representative/Date <p>These specifications are provided either as a mean value of the total batch (batch certificate) or as a value of the individual measuring instrument (individual certificate)</p>	<p>All BRAND declarations of conformity include a quality certificate.</p> <ul style="list-style-type: none"> ■ Product designation including ID number ■ Date of issue ■ Manufacturer ■ Laws and technical rules used as a basis ■ Signature of a company representative 	<ul style="list-style-type: none"> ■ Name of the accreditation body ■ Name and address of the issuing laboratory plus accreditation number ■ Unique sequential number of the calibration certificate and customer ■ Applied methods and conditions (e.g. ambient conditions) under which the calibrations or measurements were executed ■ Designation of the calibrated or measured object ■ Date of the measurement and date of issue ■ Measurement results and measurement uncertainties ■ Name, function, and signature of authorized representatives
Available for	<ul style="list-style-type: none"> ■ BLAUBRAND® volumetric instruments and pycnometers ■ Class A plastic volumetric instruments ■ The following liquid handling instruments: Dispensette®, Titrette®, HandyStep®, Transferpette®, Transferpettor <p>These instruments are supplied with a batch or individual certificate as standard</p>	<ul style="list-style-type: none"> ■ BLAUBRAND® volumetric instruments ■ Class A plastic volumetric instruments ■ Liquid handling instruments 	<ul style="list-style-type: none"> ■ BLAUBRAND® volumetric instruments ■ BLAUBRAND® pycnometers ■ ASTM centrifuge tubes ■ Class A plastic volumetric instruments ■ Liquid handling instruments

FLASKS - VOLUMETRIC

Volumetric

DESCRIPTION	mL	NECK SIZE	STOPPER	PACK SIZE	ROWE CODE
<p>USP Certified Class A. BLAURAND®</p> <p>With stoppers.</p> <p>Do you require USP certified glassware?</p> <p>USP volumetric instruments comply with the Class A error limits required by the United States Pharmacopeia.</p> <p>Supplied with batch certificate or individual certificate available on request.</p> 	5	10/19	GLASS	2	DF0134
	10	10/19	GLASS	2	GF0221
	20	10/19	GLASS	2	GF0222
	25	10/19	GLASS	2	DF0135
	50	12/21	GLASS	2	GF0223
	100	14/23	GLASS	2	GF0224
	250	14/23	GLASS	2	DF0137
	500	19/26	GLASS	2	DF0138
	1000	24/29	GLASS	EA	DF0139
	2000	29/32	GLASS	EA	DF0140
	5	10/19	PP	2	DF0125
	20	10/19	PP	2	DF0127
	25	10/19	PP	2	CF0210
	50	12/21	PP	2	DF0128
	100	14/23	PP	2	DF0129
	250	14/23	PP	2	DF0130
500	19/26	PP	2	DF0131	
1000	24/29	PP	EA	DF0132	
2000	29/32	PP	EA	DF0133	

ROWE CODE
DF0139

DESCRIPTION	mL	NECK SIZE	PACK SIZE	ROWE CODE
<p>PURprotect PLASTIC COATED Class A. BLAUBRAND® Wide mouth, PP Stopper</p> 	50	14/23	2	DF0159
	100	14/23	2	DF0160
	200	14/23	2	DF0161
	250	14/23	2	DF0162
	500	19/26	2	DF0163
	1000	24/29	EA	DF0164

ROWE CODE
DF0161**Synthetic coating for better protection**

The PUR coating envelops the volumetric flasks like a protection skin.

In the event of breakage, the safety coating helps contain the glass fragments. The light blue coating facilitates optical distinction. The maximum operating temperature at dry heat is 135 °C (exposure time < 30 min). Frequent autoclaving at 121 °C reduces splintering protection. Cleaning up to max. 95 °C.


FLASKS - VOLUMETRIC GLASS AMBER

Volumetric - Glass Amber

DESCRIPTION	NECK SIZE	mL	STOPPER	PACK SIZE	ROWE CODE
<p>USP Certified Amber Glass Class A. BLAUBRAND®</p> <p>With stoppers.</p> <p>USP volumetric instruments comply with the Class A error limits required by the United States Pharmacopeia.</p> <p>Supplied with batch certificate or individual certificate available on request.</p>	10/19	5	GLASS	2	DF0115
	10/19	10	GLASS	2	DF0116
	10/19	20	GLASS	2	DF0117
	10/19	25	GLASS	2	DF0118
	12/21	50	GLASS	2	DF0119
	14/23	100	GLASS	2	DF0120
	14/23	200	GLASS	2	DF0121
	14/23	250	GLASS	2	DF0122
	19/26	500	GLASS	2	DF0123
	24/29	1000	GLASS	EA	DF0124
	10/19	5	PP	2	DF0109
	10/19	10	PP	2	DF0110
	10/19	20	PP	2	DF0111
	10/19	25	PP	2	DF0112
	12/21	50	PP	2	DF0113
	14/23	100	PP	2	GF0218
	14/23	200	PP	2	GF0217
	14/23	250	PP	2	GF0219
	19/26	500	PP	2	GF0220
24/29	1000	PP	EA	DF0114	




ROWE CODE
DF0122

DESCRIPTION	NECK SIZE	mL	STOPPER	PACK SIZE	ROWE CODE
<p>Amber Glass Class A. BLAUBRAND®</p> <p>With stoppers.</p> <p></p>	10/19	5	PP	2	CB0282
	10/19	10	PP	2	CB0265
	10/19	20	PP	2	CB0384
	10/19	25	PP	2	CB0368
	14/23	50	PP	2	DF0173
	12/21	50	PP	2	DF0166
	14/23	100	PP	2	DF0167
	14/23	200	PP	2	DF0172
	14/23	250	GLASS	2	CB2044
	19/26	500	PP	2	DF0321
	24/29	1000	GLASS	EA	DF0171



ROWE CODE
CB2044

Volumetric - Glass Amber

DESCRIPTION	NECK SIZE	mL	STOPPER	ROWE CODE
Amber Stained Borosilicate Glass 3.3 Class A. With white graduation and stoppers. Pack Size: Each 	10/19	10	PE	GF0181
	10/19	20	PE	GF0248
	10/19	25	PE	GF0174
	12/21	50	PE	GF4079
	14/23	100	PE	GF4085
	14/23	200	PE	GF0152
	14/23	250	PE	GF0055
	14/23	500	PE	GF0153
	24/29	1000	Glass	GF9010
	29/32	2000	PE	GF9021
	34/35	5000	PE	GF0004



If you can't see the item you are looking for, please call us!

New South Wales & ACT

Ph: (02) 9603 1205
rowensw@rowe.com.au

Queensland

Ph: (07) 3376 9411
roweqld@rowe.com.au

South Australia & NT

Ph: (08) 8186 0523
rowesa@rowe.com.au

Victoria & Tasmania

Ph: (03) 9701 7077
rowevic@rowe.com.au

Western Australia

Ph: (08) 9302 1911
rowewa@rowe.com.au



FLASKS - VOLUMETRIC/STANDARD GLASS

Volumetric/Standard - Glass

DESCRIPTION	mL	NECK SIZE	STOPPER	ROWE CODE
For Kohlrausch sugar analysis (2 markings)	50/55			GF0507
	100/110mL			GF0508

DESCRIPTION	mL	NECK SIZE	STOPPER	ROWE CODE
Borosilicate Glass 3.3 Class A with blue graduations. With plastic stoppers	5	10/19	PE	GF3660
	10	7/16	PE	GF9001
	10	10/19	PE	GF9020
	20	10/19	PE	GF9002
	25	10/19	PE	GF9003
	50	12/21	PE	GF9004
	100	12/21	PE	GF9006
	100	14/23	PE	GF9039
	200	14/23	PE	GF9005
	250	14/23	PE	GF9007
	500	19/26	PE	GF9008
	1000	24/29	PE	GF9009
	2000	29/32	PE	GF9011
5000	34/35	PE	GF9012	



DESCRIPTION	mL	NECK SIZE	STOPPER	ROWE CODE
Stopper to fit volumetric flask		24/29	PE	PS1551
		29/32	PE	GS1001



ROWE CODE
GF0507




ROWE CODE
GF9005




ROWE CODE
PS1551

FLASKS - VOLUMETRIC PLASTIC


Volumetric - Plastic

DESCRIPTION	mL	NECK SIZE	PACK SIZE	ROWE CODE
PMP Class A. Transparent with PP stopper. Lot number imprinted on each flask 	10	10/19	2	DF0378
	25	10/19	2	DF0379
	50	12/21	2	DF0380
	100	14/23	2	DF0386
	1000	24/29	EA	PV1766


ROWE CODE
DF0383

DESCRIPTION	mL	NECK SIZE	PACK SIZE	ROWE CODE
PMP Class B. Transparent with PP stopper. 	10	B10/19	EA	DF0197
	25	B10/19	EA	DF0198
	50	B12/21	EA	DF0199
	100	B14/23	EA	DF0200
	250	B19/26	EA	DF0201
	500	B19/26	EA	DF0202
	1000	B24/29	EA	DF0203

ROWE CODE
DF0202

DESCRIPTION	mL	PACK SIZE	ROWE CODE
PFA Class A with screw cap. (Perfluoroalkoxy Copolymer) 	10	EA	DF0101
	25	EA	DF0102
	50	EA	DF0103
	100	EA	PF0025
	250	EA	PF1008
	500	EA	PF1009



DESCRIPTION	mL	PACK SIZE	ROWE CODE
Polypropylene High clarity Class B. With PP stopper. 	10	EA	DF0196
	25	EA	PF0021
	50	EA	CP3132
	100	EA	PF0022
	250	EA	PF0093
	500	EA	CP3131
	1000	EA	PF0095

ROWE CODE
PF0093

VELP FLOCCULATORS

Do you test wastewater for coagulation and turbidity?

Designed for use with the Jar test, a preliminary test used in water treatment and similar applications.



FP4 Portable Flocculator

4 place portable Jar Test Flocculator, 240V AC 12V DC

- Choice of 20/40/50/100/200 rpm stirring speeds;
- Precise speed from an electronically controlled DC gear motor;
- 4 samples can be processed in parallel at one time;
- Designed to be used on-site for immediate results;
- Strong resistance to chemical and mechanical corrosion;
- Central light to facilitate reading.

ROWE CODE IF1160



FC S Series Flocculator with 4 or 6 independent positions

Flocculators with 4 or 6 independent positions that allow standard conditions to be adopted for the Jar Test.

- Speed can be changed whilst in operation;
- Illuminated back panel to aid in sample observation;
- Stirring rods adjustable in height without tools;
- Precise speed from an electronically controlled DC gear motor;
- Strong resistance to chemical and mechanical corrosion;
- Independently selectable speeds 10/15/30/45/60/90/120/150/200/300 rpm.

ROWE CODE IF1171 (6 position)

JLT 4 Series Flocculator with 4 or 6 positions

Digital Flocculators with 4 and 6 positions with timer and illuminated back panel to allow standard conditions to be met for the Jar Test.

- Microprocessor controlled operating time for unattended operation;
- Illuminated back panel to aid in sample observation;
- Stirring rods adjustable in height without tools;
- Digitally selectable speed from 10 to 300 rpm;
- Identical speed and time for all positions for comparable results;
- Strong resistance to chemical and mechanical corrosion;
- High visibility LED displays for speed and time.

ROWE CODE IF1155 (4 position)

Also available,
Flocculator Carrying
Case for FP4
(sold separately)

ROWE CODE IF1165



ULTRA LOW TEMPERATURE FREEZERS (-86°C) - HAIER

Haier

Haier J series is energy saving and with VIP (Vacuum Insulation Panel) design with extra insulation, cuts down on heat loss to cabinet by 25% and helps reduce energy consumption by more than 20%. Power consumption is typically only 8.5 kWh/day.



J SERIES FUNCTIONS

Remote Alarm	Y
High/Low Temperature	Y
Hot Condenser	Y
Power Failure	Y
Sensor Error	Y
Low Battery	Y
High Ambient Temperature	Y
Door Ajar	Y

Slim design

Easily fits through standard lab doorways and features a small footprint.

Reliable

Cabinet temperature can reach -86 with temp uniformity within 5°C.



ROWE CODE IF0362

Freezer, ULT -86°C,
J series

100L

Volume Litres	100
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	46.8
Controller	Microprocessor
Display	LED
Net/Gross Weight (approx) kg	108/132
Interior Dimension (W*D*H) mm	330 × 481 × 630
Exterior Dimension (W*D*H) mm	770 × 660 × 810

ROWE CODE IF0353

Freezer, ULT -86°C,
J series

388L

Volume Litres	388
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	49
Controller	Microprocessor
Display	LCD
Net/Gross Weight (approx) kg	255/286
Interior Dimension (W*D*H) mm	465 x 716 x 1310
Exterior Dimension (W*D*H) mm	812 x 980 x 1980

ULTRA LOW TEMPERATURE FREEZERS (-86°C) - HAIER

ROWE CODE IF0354

Freezer, ULT -86°C,
J series

490L

Volume Litres	490
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	50
Controller	Microprocessor
Display	LED
Net/Gross Weight (approx) kg	295/335
Interior Dimension (W*D*H) mm	590 x 630 x 1310
Exterior Dimension (W*D*H) mm	873 x 900 x 1980

ROWE CODE IF0355

Freezer, ULT -86°C,
J series

578L

Volume Litres	578
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	50
Controller	Microprocessor
Display	LED
Net/Gross Weight (approx) kg	300/330
Interior Dimension (W*D*H) mm	620 x 716 x 1310
Exterior Dimension (W*D*H) mm	895 x 980 x 1960

ROWE CODE IF0356

Freezer, ULT -86°C,
J series

728L

Volume Litres	728
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	50
Controller	Microprocessor
Display	LED
Net/Gross Weight (approx) kg	345/385
Interior Dimension (W*D*H) mm	766 x 716 x 1310
Exterior Dimension (W*D*H) mm	1041 x 980 x 1980

ROWE CODE IF0357

Freezer, ULT -86°C,
J series

828L

Volume Litres	828
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	50
Controller	Microprocessor
Display	LED
Net/Gross Weight (approx) kg	380/410
Interior Dimension (W*D*H) mm	870 x 716 x 1310
Exterior Dimension (W*D*H) mm	1145 x 980 x 1980

Refrigerators - See pages 285 on!

Haier

Haier BP series, the third generation ULT Freezer. The dual compressor cascade system uses frequency conversion technology to automatically control the speed on the compressor. Working hard when you are frequently opening the doors, maintains a more stable temperature. With reduced demand, the compressor uses less power and the internal fan slows, generating less noise.

BP SERIES FUNCTIONS

Remote Alarm	Y
High/Low Temperature	Y
Hot Condenser	Y
Power Failure	Y
Sensor Error	Y
Low Battery	Y
High Ambient Temperature	Y
Door Ajar	Y

ROWE CODE IF0344

Freezer, ULT -86°C,
BP series with variable
speed compressor

579L

Volume Litres	579
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	43.5
Controller	Microprocessor
Display	LED
Net/Gross Weight (approx) kg	325/355
Interior Dimension (W*D*H) mm	620 x 716 x 1310
Exterior Dimension (W*D*H) mm	895 x 998 x 1980

ROWE CODE IF0346

Freezer, ULT -86°C,
BP series with variable
speed compressor

729L

Volume Litres	729
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	43.5
Controller	Microprocessor
Display	LED
Net/Gross Weight (approx) kg	350/385
Interior Dimension (W*D*H) mm	766 x 716 x 1310
Exterior Dimension (W*D*H) mm	1046 x 998 x 1980

ULTRA LOW TEMPERATURE (ULT) FREEZERS (-86°C) - HAIER



ROWE CODE IF0348

Freezer, ULT -86°C,
BP series with variable
speed compressor

829L

Volume Litres	829
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	43.5
Controller	Microprocessor
Display	LED
Net/Gross Weight (approx) kg	380/415
Interior Dimension (W*D*H) mm	870 x 716 x 1310
Exterior Dimension (W*D*H) mm	1145 x 998 x 1980

ROWE CODE IF0350

Freezer, ULT -86°C,
BP series with variable
speed compressor

959L

Volume Litres	959
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	47
Controller	Microprocessor
Display	LED
Net/Gross Weight (approx) kg	450/485
Interior Dimension (W*D*H) mm	1016 x 716 x 1310
Exterior Dimension (W*D*H) mm	1296 x 998 x 1980

Haier

Haier BPT series feature a touch screen for ease of use. Suitable for products which require strict storage conditions such as viruses, pathogens, red blood cells, white blood cells, skin, bones, bacteria, semen, biological products, ocean products, electronic devices and special materials. Ideal for long term storage, meeting the cold storage requirements found in hospitals, disease control and prevention centres, scientific research institutions, biomedical engineering institutions, agriculture, fisheries, electronics and chemical industries.

BPT SERIES FUNCTIONS

Remote Alarm	Y
High/Low Temperature	Y
Hot Condenser	Y
Power Failure	Y
Sensor Error	Y
Low Battery	Y
High Ambient Temperature	Y
Door Ajar	Y

ROWE CODE IF0345

Freezer, ULT -86°C,
BPT series with variable
speed compressor,
touch screen **579L**

Volume Litres	579
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	43.5
Controller	Microprocessor
Display	LCD
Net/Gross Weight (approx) kg	325/355
Interior Dimension (W*D*H) mm	620 x 716 x 1310
Exterior Dimension (W*D*H) mm	895 x 998 x 1980

ROWE CODE IF0347

Freezer, ULT -86°C,
BPT series with variable
speed compressor,
touch screen **729L**

Volume Litres	729
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	43.5
Controller	Microprocessor
Display	LCD
Net/Gross Weight (approx) kg	350/385
Interior Dimension (W*D*H) mm	766 x 716 x 1310
Exterior Dimension (W*D*H) mm	1046 x 998 x 1980

ULTRA LOW TEMPERATURE (ULT) FREEZERS (-86°C) - HAIER



ROWE CODE IF0349

Freezer, ULT -86°C,
BPT series with variable
speed compressor, **829L**
touch screen

Volume Litres	829
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	43.5
Controller	Microprocessor
Display	LCD
Net/Gross Weight (approx) kg	380/415
Interior Dimension (W*D*H) mm	870 x 716 x 1310
Exterior Dimension (W*D*H) mm	1145 x 998 x 1980

ROWE CODE IF0351

Freezer, ULT -86°C,
BPT series with variable
speed compressor, **959L**
touch screen

Volume Litres	959
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	47
Controller	Microprocessor
Display	LCD
Net/Gross Weight (approx) kg	450/485
Interior Dimension (W*D*H) mm	1016 x 716 x 1310
Exterior Dimension (W*D*H) mm	1296 x 998 x 1980

Haier

Haier ST series utilizes an independent dual refrigeration system for preservation of your most valuable samples. Both compressors operate to reach -80°C. If one system fails, the other will maintain temperature to ensure safe sample storage.

ST SERIES FUNCTIONS

Remote Alarm	Y
High/Low Temperature	Y
Hot Condenser	Y
Power Failure	Y
Sensor Error	Y
Low Battery	Y
High Ambient Temperature	Y
Door Ajar	Y



ROWE CODE IF0360

Freezer, ULT -86°C,
ST series with dual
refrigeration systems
(1x redundant), touch screen

578L

Volume Litres	578
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	53
Controller	Microprocessor
Display	LCD
Net/Gross Weight (approx) kg	325/355
Interior Dimension (W*D*H) mm	620 x 716 x 1310
Exterior Dimension (W*D*H) mm	895 x 998 x 1980

ROWE CODE IF0361

Freezer, ULT -86°C,
ST series with dual
refrigeration systems
(1x back-up), touch screen

728L

Volume Litres	728
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	50
Controller	Microprocessor
Display	LCD
Net/Gross Weight (approx) kg	350/385
Interior Dimension (W*D*H) mm	766 x 716 x 1310
Exterior Dimension (W*D*H) mm	1046 x 998 x 1980

CHEST FREEZER (-86°C) - HAIER

J SERIES FUNCTIONS

Remote Alarm	Y
High/Low Temperature	Y
Hot Condenser	Y
Power Failure	Y
Sensor Error	Y
Low Battery	Y
High Ambient Temperature	Y
Door Ajar	Y

Haier



ROWE CODE IF0358

Freezer, ULT -86°C,
J series - Chest

100L

Volume Litres	100
Cabinet Type	Chest
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	49
Controller	Microprocessor
Display	LED
Net/Gross Weight (approx) kg	138/160
Interior Dimension (W*D*H) mm	470 x 450 x 480
Exterior Dimension (W*D*H) mm	769 x 825 x 1120

ROWE CODE IF0359

Freezer, ULT -86°C,
J series

420L

Volume Litres	420
Cabinet Type	Chest
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	50
Controller	Microprocessor
Display	LED
Net/Gross Weight (approx) kg	310/357
Interior Dimension (W*D*H) mm	1367 x 462 x 652
Exterior Dimension (W*D*H) mm	2130 x 870 x 1020

SPARK FREE FREEZER - HAIER**-25°C Freezer**

**SPARK
FREE!**

ROWE CODE IF0383 92L

Freezer, 92L under bench biomedical spark-free (-10°C to -25°C), solid door. External dimensions (mm) 642w x 625d x 835h, alarm, key-lock.

HYDROCARBON ENERGY-SAVING

DW-25L92 adopts an efficient hydrocarbon (HC) compressor and optimized refrigeration system, to give a power consumption of just 0.65KWh/24h.

ENVIRONMENTALLY FRIENDLY

The HC system is a completely green refrigeration solution. With LBA foamed polyurethane insulation in line with European ROHS directive for environmentally friendly materials.

LOW NOISE

Optimized hydrocarbon system and structural noise reduction design, DW-25L92 noise 27 dB, super quiet and low noise.

SECURITY LOCK

Mechanical lock plus lock catch, the mechanical door lock can be opened with one key, and the door lock can be padlocked. Secure and safe, suitable for multiple users.

-30°C Freezer

**SPARK
FREE!**

ROWE CODE IF0421 278L

Freezer, -30°C, 278L, spark free, SF series upright 745w x 675d x 1810mm high, manual defrost

HIGH-EFFICIENCY AND ENERGY SAVING COMPRESSOR AND SYSTEM

Industrial grade energy-saving compressor and optimized cooling system reduce more than 55% power consumption to achieve -30 °C compared with older models.

GREEN AND ENVIRONMENTAL FRIENDLY

- Hydrocarbon refrigerant compressor, hydrocarbon refrigerant, completely green and environmentally friendly refrigeration system.
- Built with isopentane foam polyurethane insulation, the series complies with European RoHS Directive, green and environmental protection/friendly.

LOW SOUND LEVEL

Sound-reducing design with optimized system and structures reduces the sound level by more than 5 dB (DW-30L508 41dB), completely eliminating annoying high-pitched WWW noise.

SUPERIOR TEMPERATURE UNIFORMITY

Evaporator-shelf design produces a faster cooling process and a more uniform temperature distribution. The temperature uniformity at characteristic points is ± 4 °C.

LOW TEMPERATURE FREEZERS (-25°C) - HAIER

Haier

Haier Biomedical series are a completely green refrigeration solution. With LBA foamed polyurethane insulation in line with European ROHS directive for environmentally friendly materials.

BIOMEDICAL SERIES FUNCTIONS

Remote Alarm	Y
High/Low Temperature	Y
Sensor Error	Y
Door Ajar	Y



ROWE CODE
IF0382

ROWE CODE IF0382

Freezer -25°C,
With HC compressor
DW-25L92

92L

Volume Litres	92
Cabinet Type	Under bench
Cooling Performance (°C)	-25
Temp Range (°C)	-10~-25
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	27
Controller	Microprocessor
Display	LCD
Net/Gross Weight (approx) kg	46/51
Interior Dimension (W*D*H) mm	435 x 410 x 635
Exterior Dimension (W*D*H) mm	640 x 610 x 810

ROWE CODE IF0423

Freezer -25°C,
With HC compressor
DW-25L262

262L

Volume Litres	262
Cabinet Type	Upright
Cooling Performance (°C)	-25
Temp Range (°C)	-10~-25
Cooling Type	Direct cooling
Defrost Mode	Manual
Refrigerant	HC
Noise ((dB(A))	34
Controller	Microprocessor
Display	LCD
Net/Gross Weight (approx) kg	88/93
Interior Dimension (W*D*H) mm	480 x 465 x 1430
Exterior Dimension (W*D*H) mm	700 x 705 x 1665

FREEZER RACKS - HAIER

Customise your freezer storage with Haier freezer racks and shelves. Racks fit various models and are also compatible with freezer boxes from other manufacturers. These racks are designed to utilise freezer space and satisfy the storage requirements of biobanks.

Side-access freezer rack features:

- Frame and interior grids are made with 304 stainless steel for durability and better appearance.
- No sharp edges to avoid risk of injury.
- Steel plate thickness: Combination of 0.5 and 1.0 mm.
- Side-access design for convenient access.
- Suitable for common low temperature freezers.
- Suitable for standard sized freezer boxes.

Sliding-drawer freezer rack features:

- Made with 304 stainless steel.
- Steel plate thickness: Combination of 0.5 and 1.0 mm.
- Sliding-drawer design for convenient operation.
- Low temperature rated plastic handles are standard on draw racks for ease of use and safety.
- Labelling slots are standard on draws. The outward pouch design protects the slot from potential damage caused by low temperature.



DESCRIPTION	DIMENSIONS	ROWE CODE
Rack freezer ULT side access for 2 inch freezer box (check freezer suitability).	133mm D x 133mm W x 53mm H	IR0212
Rack freezer ULT side access for 2 inch freezer box.	133mm D x 133mm W x 53mm H	IR0210
Rack freezer ULT sliding drawer for 2 inch freezer box (check freezer suitability).	133mm D x 133mm W x 53mm H	IR0213
Rack freezer ULT sliding drawer for 2 inch freezer box.	133mm D x 133mm W x 53mm H	IR0211



Sliding-draw freezer rack



Side-access freezer rack



LOW TEMPERATURE FREEZERS (-20°C) - THERMOLINE



ROWE CODE
IF0097

Only a sample of the available range!

ROWE CODE
IF0097 **181L**
Freezer -20°C

Volume Litres	181
Cabinet Type	Upright
Cooling Performance (°C)	-20
Temp Range (°C)	-15~-20
Defrost Mode	Manual
Controller	Digital LAE controllers
Storage Containers included	6
Weight (approx) kg	60
Interior Dimension (W*D*H) mm	405 x 380 x 1240
Exterior Dimension (W*D*H) mm	550 x 560 x 1460
Door Ajar Alarm	Y
High and Low Temp Alarm	Y
Door Lock	Y

ROWE CODE
IF0490 **440L**
Refrigerator
+4~+10°C

Volume Litres	440
Cabinet Type	Upright
Cooling Performance (°C)	-20
Temp Range (°C)	-15~-20
Defrost Mode	Manual
Controller	Digital LAE controllers
Storage Containers included	4
Weight (approx) kg	40
Interior Dimension (W*D*H) mm	400 x 400 x 430
Exterior Dimension (W*D*H) mm	550 x 560 x 860
Door Ajar Alarm	Y
High and Low Temp Alarm	Y
Door Lock	Y

LOW & ULTRA LOW TEMP FREEZERS - LIEBHERR

LIEBHERR



Only a sample of the available range!

ROWE CODE
IF0377
Freezer Low
Temp -45°C

201L

Volume Litres	201
Cabinet Type	Chest
Cooling Performance (°C)	-45
Temp Range (°C)	-10~-45
Cooling Type	Static
Defrost Mode	Manual
Refrigerant	R290
Controller	Electronic control system
Display	External digital
Weight (approx) kg	58
Interior Dimension (W*D*H) mm	889x410x630
Exterior Dimension (W*D*H) mm	1138 x 740 x 915
Power Failure Alarm	When mains power returns

ROWE CODE
IF0476
ULT Freezer
-86°C

491L

Volume Litres	491
Cabinet Type	Upright
Cooling Performance (°C)	-86
Temp Range (°C)	-40~-86
Refrigerant	R290
Controller	Electronic control system
Smart Monitoring	Retrofittable, connectivity application available as option.
Weight (approx) kg	254
Exterior Dimension (W*D*H) mm	921 x 1085 x 1966
Power Failure Alarm	Y
Malfunction: Warning signal	Optical and acoustical

ROWE CODE
IF0424
Fridge/Freezer
Combo -30°C

107L
Freezer
254L
Fridge



Volume Litres	361
Cabinet Type	Upright
Cooling Performance (°C)	-30
Temp Range (°C)	+3~+16 & -9~-30
Cooling Type Freezer	Static
Cooling Type Fridge	Dynamic
Defrost Mode Freezer	Manual
Defrost Mode Fridge	Automatic
Refrigerant	R600a
Controller	Electronic control system
Display	External digital
Weight (approx) kg	85
Exterior Dimension (W*D*H) mm	597 x 615 x 2003
Power Failure Alarm	When mains power returns

FREEZERS - NULINE



ROWE CODE
IF0534

ROWE CODE
IF0536

ROWE CODE

IF0534

Freezer

-18 to -22°C

125L

**SPARK
SAFE!**

Volume Litres	125
Cabinet Type	Upright
Cooling Performance (°C)	-22
Temp Range (°C)	-18~-22
Refrigerant	R600a
Controller	Digital
Cooling System / Defrost	Static
Weight (approx) kg	39
Exterior Dimension (W*D*H) mm	595 x 650 x 830
Door	Solid
Adjustable Shelves	Fixed
Door Ajar Alarm	Optional

ROWE CODE

IF0535

Freezer

-18 to -22°C

350L

**SPARK
SAFE!**

Volume Litres	350
Cabinet Type	Upright
Cooling Performance (°C)	-22
Temp Range (°C)	-18~-22
Refrigerant	R290
Controller	Digital
Cooling System / Defrost	Static
Weight (approx) kg	74
Exterior Dimension (W*D*H) mm	640 x 670 x 2010
Door	Solid
Adjustable Shelves	Fixed
Door Ajar Alarm	Optional

ROWE CODE

IF0536

Freezer

-18 to -22°C

570L

**SPARK
SAFE!**

Volume Litres	570
Cabinet Type	Upright
Cooling Performance (°C)	-22
Temp Range (°C)	-18~-22
Refrigerant	R290
Controller	Digital
Cooling System / Defrost	Static
Weight (approx) kg	94
Exterior Dimension (W*D*H) mm	775 x 750 x 1850
Door	Solid
Adjustable Shelves	Fixed
Door Ajar Alarm	Optional

FREEZERS - NULINE



ROWE CODE
IF0538

ROWE CODE

IF0538

Freezer

-18 to -22°C

1400L

Volume Litres	1400
Cabinet Type	Top Mounted
Cooling Performance (°C)	-22
Temp Range (°C)	-18~-22
Refrigerant	R404a
Controller	Digital
Cooling System / Defrost	Fan Forced / Auto Defrost
Weight (approx) kg	202
Exterior Dimension (W*D*H) mm	1480 x 830 x 2050
Door	Solid
Adjustable Shelves	10
Door Ajar Alarm	Optional
Digital Display / Built in Alarms	Y
Castor Wheels	Y

LABORATORY FUNNELS

SUPPORT DISK FOR BUCHNER FUNNELS (EACH)

Useful interface between filter paper and perforated Buchner plate. Avoids clogging of filter holes.

- Texture 300 micron (μm);
- 160mm diameter for Rowe Code PF1159;
- 70mm diameter for Rowe Code PF1154;
- Polyethylene.



BUCHNER FUNNELS - POLYPROPYLENE - KARTELL	CAPACITY (mL)	DIAMETER (mm)	HOLES DIA (mm)	ROWE CODE
	40	42.5	1	PF0990
2-part	390	90	2	PF1050
For 110mm filter paper	810	130	2	PF1100
For 150mm filter paper	2100	160	2.5	PF1110
	6000	240	3	PF1150



BUCHNER FUNNELS - PORCELAIN - JIPO	LENGTH OF STEM (mm)	HOLES DIA. (mm)	ROWE CODE
55mmD filter paper (237/2)	64	1	WF1055
90mmD filter paper (237/2)	64	1	WF1060
90mmD (#237/4)	71	1.5	WF1070

ANALYTICAL FUNNEL (EACH)

Designed specifically for analytical chemistry. Takes a standard size filter paper. Body of funnel is exact 60° angle. Provided with external and internal ribs. Autoclavable. SUITABLE FOR FOODSTUFF.

- 120mm diameter;
- Polypropylene.

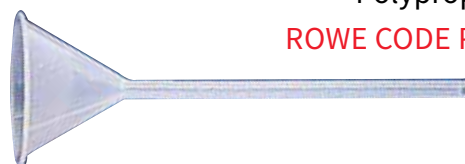
ROWE CODE PF1750

LONG-STEM FUNNEL (EACH)

The 60° angle sides are provided with ribs for fast filtration and allow the use of standard size filter papers. SUITABLE FOR FOODSTUFF.

- 65mm diameter;
- Polypropylene.

ROWE CODE PF1379



ANALYTICAL FUNNEL (EACH)

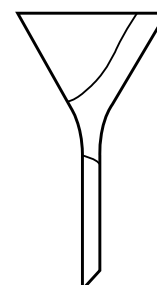
Durable and translucent funnel that allows safe and easy transfers of solids or liquids from one vessel to another.

- 45mm diameter;
- Polypropylene;
- Autoclavable.

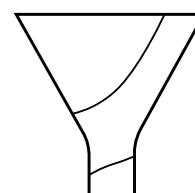
ROWE CODE PF1459

GLASS FUNNELS - WITEG

GLASS FUNNELS - WITEG (EACH)	ROWE CODE
SHORT STEM - BOROSILICATE GLASS	
35mmD	GF5365
45mmD	GF5771
55mmD	GF0370
70mmD - 70mm stem	GF5718
80mmD	GF5614
100mmD	GF5709
150mmD - 150mm stem	GF5758
200mmD	GF0045
SHORT STEM - SODA GLASS	
55mmD	GF5591
60mmD - 60mm stem	GF5592
70mmD	GF5593
80mmD - 85mm stem	GF5594
100mmD	GF5595
120mmD	GF0175
POWDER FUNNELS WITH SHORT WIDE STEM	
70mmD - Borosilicate glass	GF0056
100mmD - Borosilicate glass	GF5375
160mmD - Duran glass	GF5309
LONG STEM - BOROSILICATE GLASS	
80mmD - 150mm stem	GF5261
HIRSCH FUNNEL	
25mL, 55mmD - por 1, disc OD 25mm, stem OD 8mm	GF0260
WEIGHING FUNNEL	
3mL - 80mmL x 22mmD	GF0383
6mL - 85mmL x 28mmD	GF0438
10mL - 95mmL x 32mmD, glass pointed	GF0204
30mL - 110mmL x 40mmD, glass pointed	GF0020
DROPPING FUNNEL	
50mL - Cylindrical, 19/26 cone and socket, ungraduated, ST-stopcock	GF0387
50mL - Cylindrical, 14/23 cone and socket, ungraduated, ST-stopcock	GF0130
100mL - Pressure equalising, 24/29 cone and socket	GF0215
100mL - Cylindrical, 19/26 cone and socket, ungraduated, ST-stopcock	GF0131
100mL - Pressure equalising, 19/26 cone and socket	GF0213
250mL - Pressure equalising, 19/26 cone and socket	GF0214
250mL - Pressure equalising, 24/29 cone and socket	GF0216



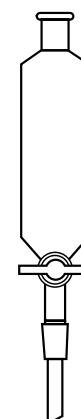
ROWE CODE
GF5592



ROWE CODE
GF0056



ROWE CODE
GF0438



PEAR OR SQUIB SHAPE
ROWE CODE
GF0131

GLASS FUNNELS - WITEG

GLASS FUNNELS - WITEG	QTY	ROWE CODE
SEPARATORY FUNNEL SQUIBB		
50mL - With PTFE key and glass 19/26 stopper	EA	GF4654
50ml - With PTFE stopcock	EA	GF4520
100mL - Ungraduated, borosilicate glass with glass stopcock and 19/26 plastic stopper	2	GF0359
100mL - 65mmD, borosilicate glass with PTFE stopcock	EA	GF4577
100mL - Cylindrical, graduated, Borosilicate glass with glass stopcock and plastic stopper	EA	GF4574
100mL - Conical, duran tubing with ST-PTFE stopcock	EA	GF0399
100mL - Ungraduated, amber glass with glass stopcock and 19/26 plastic stopper	2	GF0431
100mL - Cylindrical, graduated with removable PTFE stopcock	EA	GF4570
250mL - Borosilicate glass with glass stopcock and 29/32 plastic stopper	EA	GF4612
250mL - Borosilicate glass with PTFE stopcock	EA	GF4607
250mL - Cylindrical, graduated glass with PTFE stop cock and 29/32 plastic stopper	EA	GF4586
250mL - Conical, graduated, glass with ST-PTFE stopcock and ST-PE stopper	EA	GF0284
250mL - Amber glass with PTFE needle valve and 24/29 stopper	EA	GF4611
250mL - Conical, ungraduated with bore needle valve (3mm) and PE stopper 29/32	EA	GF0029
250mL - Cylindrical, ungraduated with PTFE stopcock	EA	GF4609
500mL - Borosilicate glass with PTFE stopcock	EA	GF4655
500mL - Cylindrical, graduated glass with PTFE stop cock and 29/32 plastic stopper	EA	GF4588
500mL - Conical, graduated with glass stopcock	EA	GF0230
500mL - Conical, graduated, glass with ST-PTFE stopcock and ST-PE stopper	EA	GF0107
500mL - Conical PTFE key and 29/32 stopper	EA	GF0173
500mL - Graduated with PTFE stopcock	EA	GF9016
500mL - Ungraduated, borosilicate glass with glass stopcock and 29/32 plastic stopper	2	GF0358
1L - With PTFE stopcock	EA	GF4579
1L - Cylindrical, graduations with PTFE stopcock and stopper, 90mm stem	EA	GF0108
1L - Conical, graduated with glass stopcock	EA	GF0231
1L - Borosilicate glass with PTFE stopcock, graduated	EA	GF9014
1L - Conical, PTFE key and 29/32 stopper	EA	GF0442
2L - Conical, PTFE key and 29/32 stopper, duran tubing	EA	GF4786
2L - Graduated with economy needle valve, stopcock (6mm), PE stopper ST 29/32	EA	GF0238
2L - Conical with solid ST stopcock	EA	GF4780
2L - Graduated with PTFE stopcock	EA	GF9015



ROWE CODE
GF0359



ROWE CODE
GF4570



ROWE CODE
GF0029



ROWE CODE
GF9014

PLASTIC & GLASS FUNNELS - TARSONS

PLASTIC FUNNELS - TARSONS (EACH) ROWE CODE

ANALYTICAL FUNNEL - POLYPROPYLENE

45mmD	PF1459
65mmD	PF1605
75mmD	PF1675
90mmD	PF0013
100mmD	PF1705
160mmD	PF1805

POWDER FUNNEL - POLYPROPYLENE

65mmD	PF0038
80mmD	PF1955
100mmD - Discharge spout 20mmD	PF2006
150mmD - Discharge spout 27mmD	PF0039

FILTER HOLDER WITH FUNNEL - AUTOCLAVABLE POLYSULFONE

47mmD membrane, 250mL cap lower chamber	PF0017
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FILTER HOLDER WITH RECEIVER - AUTOCLAVABLE POLYSULFONE

250mL funnel and receiver	47mmD Barbed fitting accepts 6 - 8mm ID tubing	PF1216
500mL funnel and receiver		PF1202
500mL funnel and 1000mL receiver		PF1209

GLASS FUNNELS - TARSONS (EACH) ROWE CODE

FILTER FUNNEL

50mL - Buchner, porosity 4	GF0255
125mL - Porosity 3	GF0406
125mL - Porosity 4	GF5035

SCREW FUNNEL

90mmD - Filter holder with polypropylene funnel and 1000mL glass reservoir	GF1192
100mmD - Ribbed, borosilicate	GF6112



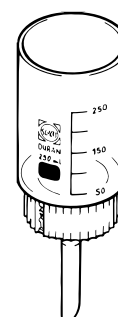
ROWE CODE
PF2006



ROWE CODE
PF0017



ROWE CODE
PF1209



ROWE CODE
GF1192



GLASSWARE WASHERS - MIELE

Lab Washers with Feed Pump for AD water*



- Stainless steel exterior;
- Performance/cycle, e.g. 64 narrow-necked/lab glassware w/ injectors;
- Efficient use of resources – variable speed pump heater;
- Dispense process chemicals easily: in-door powder dispenser;
- Pump for DI water: final rinse with DI water;
- Commissioning required.

MODEL NUMBER PG8504 ADP
ROWE CODE CD1543

Lab washer with Feed Pump for AD water, Liquid Dispensing and EcoDry function*

- Liquid dispensing;
- Performance/cycle, e.g. 128 laboratory flasks;
- Efficient use of resources – variable speed pump heater;
- 2 x internal pumps - Pump for DI water;
- Safety through monitoring – wash pressure and spray arm sensing;
- Convenient drying support – EcoDry;
- Total security – link to process documentation possible;
- Commissioning required.

MODEL NUMBER PG8583 ADP
ROWE CODE ID0104



Lab Washer with Liquid Dispensing and DryPlus Hot Air Drying*

- Performance/cycle, e.g. 128 laboratory flasks;
- Efficient use of resources – variable speed pump heater;
- Safety through monitoring – wash pressure and spray arm sensing;
- 1 x internal dispensing pump;
- DI water connection;
- Efficient hot air drying – DryPlus;
- Total security – link to process documentation possible;
- Commissioning required.

MODEL NUMBER PG8593 AD
ROWE CODE IG0047

Lab Washer with AD Water Connection, Liquid Dispensing, EcoDry function and Oil Seals*

- Performance/cycle, e.g. 128 laboratory flasks;
- 2 x internal pumps with DI water connection;
- For oil based applications;
- Efficient use of resources – variable speed pump heater;
- Safety through monitoring – wash pressure and spray arm sensing;
- Convenient drying support – EcoDry;
- Total security – link to process documentation possible;
- Commissioning required.

MODEL NUMBER PG8583 AD LD OIL
ROWE CODE IG0045



Lab Washer with Pump for AD Water, Liquid Dispensing, DryPlus and Conductivity Monitoring*

- Performance/cycle, e.g. 128 laboratory flasks;
- Efficient use of resources – variable speed pump heater;
- 90cm wide stainless steel;
- 2 x internal pumps with DI water connection;
- Safety – wash pressure, spray arm and conductivity monitoring;
- Efficient hot air drying – DryPlus;
- Total security – link to process documentation possible;
- Commissioning required.

MODEL NUMBER PG8583 CD ADP
ROWE CODE IG0046

**Accessories purchased separately*

Miele
PROFESSIONAL

ACCESSORIES FOR GLASSWARE WASHERS

Upper Basket

- Height adjustable basket with open front for the optimum loading of inserts;
- Stainless steel exterior;
- Vertical clearance 160 +/- 30mm, Width 475mm, Depth 443mm;
- Integrated spray arm;
- For use with CD1543, ID0104, IG0047.

ROWE CODE ID0237



Lower Basket

- Lower basket with open front for the optimum loading of injector modules or inserts;
- Two module connections for loading up to 2 injector modules or inserts;
- Automatic closing of the connections when not in use;
- Clearances: Width 494mm, Length 440 mm;
- For use with CD1543, ID0104, IG0047.

ROWE CODE ID0239

1/4 Insert for Test Tubes

- Insert for the optimum loading of test tubes
- Suitable for approx. 200 test tubes (up to 12 x 165mm);
- Including lid A 13;
- The mesh width is 9 x 9mm.

ROWE CODE ID9053



Insert for the optimum loading of wide-necked glassware

- Equipped with 26 small spring hooks x 105mm high;
- The distance between the spring hooks is approx. 60mm.

ROWE CODE IG0107

Modules for Optimum Loading of Laboratory Glassware

- Suitable for lab glassware incl. Erlenmeyer and round flasks;
- Part of the EasyLoad system;
- For use with CD1543, ID0104, IG0047.

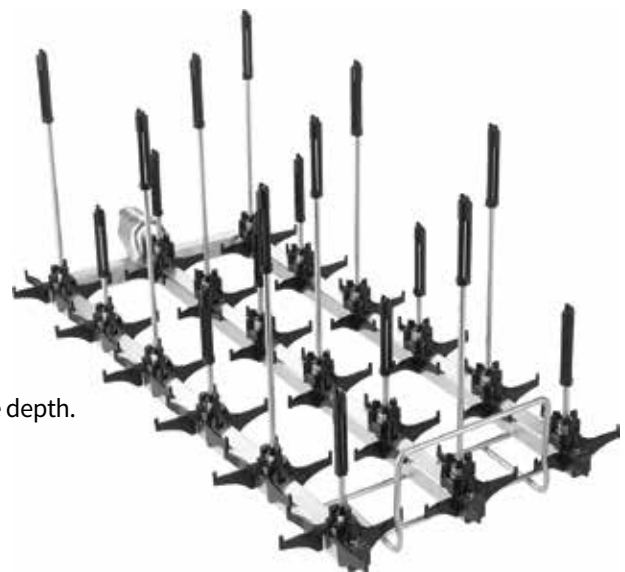


- Can be equipped with 8 nozzles;
- Equipped with 4 A 840 nozzles and 4 A 841 nozzles;
- Nozzle spacing 118mm across the width, 118mm across the depth.

ROWE CODE ID0240

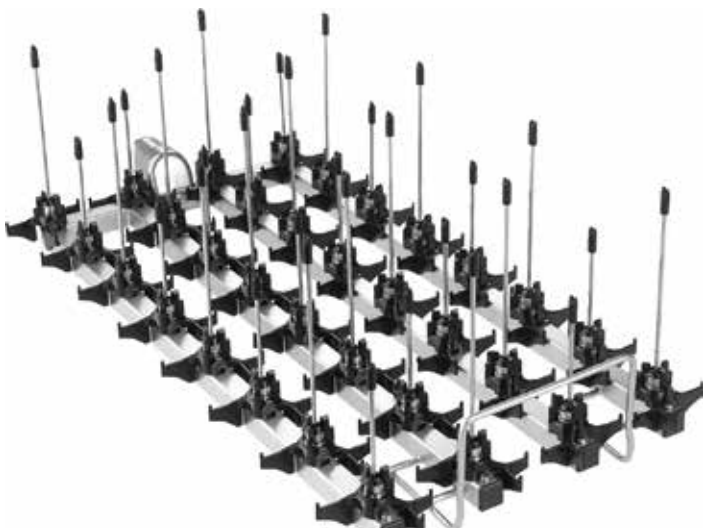
- Can be equipped with 18 nozzles;
- Equipped with 9 A 842 nozzles and 9 A 843 nozzles;
- Nozzle spacing 78mm across the width, 157mm across the depth.

ROWE CODE IG0061



- Can be equipped with 32 nozzles;
- Equipped with 16 A 844 nozzles and 16 A 845 injector nozzles;
- Nozzle spacing 60mm across the width, 57mm across the depth.

ROWE CODE IG0063



Easyload Basket Bundle

- Includes: ID0237 x1, ID0239 x1, ID0238 x2, ID0240 x1 and IG0061

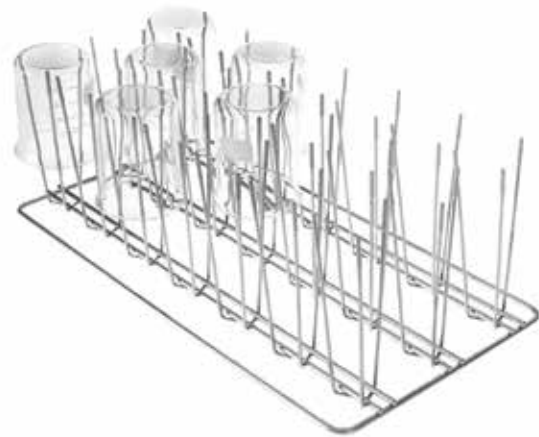
ROWE CODE IG0055

ACCESSORIES FOR GLASSWARE WASHERS

Insert for the optimum loading of beakers

- Suitable for 21 glass beakers up to 250 ml;
- Stainless steel;
- Equipped with 21 x 3 stay bars;
- For use in upper and lower basket.

ROWE CODE IG0109



Lower basket

- Suitable for standard DIN mesh trays and various inserts;
- Vertical clearance dependent on upper basket selected;
- Loading width: 490mm, loading depth: 498mm;
- Open front;
- For use with CD1543, ID0104, IG0047.

ROWE CODE IG0152

WASHER DETERGENTS

ASEPTI METAL PRO

Laboratory non-phosphate and tenside-free detergent which has high cleaning performance and is suitable for reusable laboratory utensils and for reprocessing phases in Miele lab washers.

5L

CD1240



ASEPTI NEUTRALISER

Acid neutraliser and neutralising rinse for returning a highly alkaline wash process to a neutral point. Suitable for all medical, dental and laboratory Miele machines.

5L

CD2177



GUARDIAN CLEAN WASHING DETERGENT TABLETS

Made of a non-caustic, non-chloride, non-phosphate formula with biodegradable surfactants which makes it healthier and safer to use. Suitable for all dishwasher-safe kitchenware. Only suitable for Lab Washer CD1543.

4kg - 200 tablets

IG0157



WASHER DETERGENTS

ALCOJET - LOW-FOAMING POWDERED DETERGENT

General-purpose non-ionic powder for labware and machine washers, manual, and ultrasonic cleaning. Corrosion-inhibited for glassware, metals, and plastic. No interfering residues. Has inhibitory residue test. USDA authorized. Dilute 1:200. pH 11.5

	1.8kg	9x1.8kg	11kg (25lb)
	CA0489	NA0023	CA6473



ROWE CODE
CA0489

TERGAJET - PHOSPHATE-FREE, NON-IONIC POWDER

Suitable for machine washers, hand, and ultrasonic cleaning. Corrosion-inhibited for labware. For water, microbiology, and environmental labs. No interfering residues. Has inhibitory residue test. Dilute 1:200. pH 11.5

		1.8kg	9x1.8kg
		NT0050	NT0049



ROWE CODE
NT0050

CITRAJET - LIQUID ACID CLEANER

Suitable for machine, spray-CIP, manual, and ultrasonic cleaning or acid neutralizing. Corrosion-inhibited for glassware, metals, and plastic. Surfactant rinse for no interfering residues. Has inhibitory residue test. FDA compliant. Dilute 1:100. pH 2.5

		3.8L	4x3.8L
		CC0061	NC0044



ROWE CODE
CC0061

LUMINOX - LOW-FOAMING, NEUTRAL PH DETERGENT

Suitable for use in manual, ultrasonic, and machine or noncorrosive, light-duty cleaning. No chelation or alkaline waste treat problems. Free rinsing, eliminating interfering residues. Dilute 3:100. pH 7.0

		3.8L	4x3.8L
		NL0011	NL0010



ROWE CODE
NL0011

GLOVES - ANSELL

ANSELL GLOVES - LATEX	SIZE	ROWE CODE
MICRO-TOUCH DERMACLEAN Latex, white, textured fingers (powder free)	Extra Small	HG1844
	Small	HG1847
	Medium	HG1848
	Large	HG1849
TOUCH N TUFF Disposable, latex, natural, smooth (powder free)	Small	HG0047
	Medium	HG0048
	Large	HG0049
	Extra Large	HG0050
TOUCH N TUFF Disposable, latex, natural, textured fingers (powder free)	Extra Small	HG0051
	Small	HG0052
	Medium	HG0053
	Large	HG0054
	Extra Large	HG0055



ROWE CODE
HG1847



ROWE CODE
HG1886



ROWE CODE
HG0163



ROWE CODE
HG1892

ANSELL GLOVES - NITRILE	SIZE	ROWE CODE
MICRO-TOUCH NITRA-TEX Examination, nitrile, blue, textured surface (powder free)	Small	HG18884
	Medium	HG18886
	Large	HG1889
	Extra Large	HG1888
TOUCH N TUFF Disposable, nitrile, smooth, green (powder free)	Small	HG1891
	Medium	HG1893
	Large	HG1895
	Extra Large	HG1897
MICROFLEX Disposable, nitrile + neoprene, green, textured fingers (powder free)	Small	HG0161
	Medium	HG0162
	Large	HG0163
	Extra Large	HG0164
	Extra Extra Large	HG0165
VERSATOUGH Nitrile, blue (powder free)	Small	HG0001
	Medium	HG0002
	Large	HG0003
	Extra Large	HG0004
TOUCH N TUFF Disposable, nitrile, green, lightly powdered	Small	HG1890
	Medium	HG1892
	Large	HG1894
	Extra Large	HG1896

GLOVES - ANSELL

ANSELL GLOVES - NITRILE	SIZE	ROWE CODE
TOUCH N TUFF Disposable, nitrile, textured fingers, green, long cuff (powder free)	Small	HG2040
	Medium	HG2041
	Large	HG2042
	Extra Large	HG2043
TOUCH N TUFF Nitrile, textured fingers, blue (powder free)	Small	HG2400
	Medium	HG2405
	Large	HG2410
	Extra Large	HG2415
MICROFLEX Disposable, nitrile, blue (powder free)	Extra Small	HG0189
	Small	HG0152
	Medium	HG0153
MICROFLEX Disposable, nitrile, black (powder free)	Large	HG0154
	Extra Small	HG0305
	Small	HG0080
	Medium	HG0081
MICROFLEX Disposable, nitrile, blue, long cuff, chemotherapy drug approved (powder free)	Large	HG0082
	Extra Large	HG0083
	Small	HG0166
	Medium	HG0167
	Large	HG0168
	Extra Large	HG0180



ROWE CODE
HG2042



ROWE CODE
HG2410



ROWE CODE
HG2015

ANSELL GLOVES - NEOPRENE	SIZE	ROWE CODE
MICRO-TOUCH AFFINITY Neoprene, green (latex and powder free)	Extra Small	HG2005
	Small	HG2010
	Medium	HG2015
	Large	HG2020
	Extra Large	HG2025

ANSELL ARM SLEEVE - PVC	SIZE	ROWE CODE
PVC, clear, light duty, with elastic cuff	450mm	HA1050



ROWE CODE
HA1050



GLOVES - MEDI-FLEX

MEDI-FLEX GLOVES - LATEX	SIZE	ROWE CODE
FLEXI PF Disposable, examination, latex, textured (powder free)	Extra Small	HG0464
	Small	HG0465
	Medium	HG0466
	Large	HG0467
	Extra Large	HG0468



ROWE CODE
HG0466

MEDI-FLEX GLOVES - NITRILE	SIZE	ROWE CODE
NICLEAN 4.2 Disposable, examination, nitrile (powder free)	Extra Small	HG0415
	Small	HG0416
	Medium	HG0417
	Large	HG0418
	Extra Large	HG0419
NISENSE 300 Examination, nitrile, blue, long cuff (300mm)	Extra Small	HG0649
	Small	HG0478
	Medium	HG0479
	Large	HG0480
	Extra Large	HG0481
NISENSE Disposable, examination, nitrile (powder free)	Extra Extra Large	HG0534
	Extra Small	HG0452
	Small	HG0087
	Medium	HG0088
	Large	HG0089
NITRILE BLUE Disposable, examination (powder free)	Extra Large	HG0453
	Extra Small	HG0446
	Small	HG0447
	Medium	HG0448
	Large	HG0449
BLACK WOLF Disposable, examination, nitrile (powder free)	Extra Extra Large	HG0450
	Extra Extra Large	HG0451
	Small	HG0454
	Medium	HG0455
	Large	HG0456
	Extra Large	HG0457
	Extra Extra Large	HG0458



ROWE CODE
HG0416



ROWE CODE
HG0088



ROWE CODE
HG0458

GLOVE BOXES - PLAS LABS

Plas-Labs is the world leader in acrylic glove boxes, anaerobic chambers, nitrogen dry glove boxes, and HEPA filtered isolation glove boxes. Since 1967, Plas-Labs' product line of glove boxes have been used in research laboratories all over the world. Plas-Labs hypoxia chamber glove box is the latest in CO₂ control, oxygen control, and temperature-controlled containment systems.

Plas-Labs offers a two-year warranty on all glove boxes. Plas-Labs produce equipment to help you produce RESULTS! Clearly your best choice!

Basic glove box, series 818

Series 818 glove boxes are designed to be just what they are named, "Basic." This is a simple enclosure that can be used for general isolation or containment work. They are very useful for isolating sensitive research materials from a hostile exterior environment.

These units are engineered to fit general laboratory research situations. They can be easily modified for specific research projects. These are "starter" glove boxes upon which many accessories can be attached allowing for specific research projects. These units are compact, portable, light weight, and can easily be moved from lab to lab.



STANDARD FEATURES OF THE "BASIC" GLOVE BOX:

- Optically clear, one piece acrylic top.
- Matched die molded thermoset, bright white bottom (818-GB only).
- Coved, easy to clean corners with no hidden dark spots.
- Double layered, closed cellular neoprene gasketing system.
- Ambidextrous, white Hypalon gloves for superior chemical and U.V. resistance.
- Adjustable vacuum gauge on transfer chamber.
- White levelling tray for transferring liquids through the transfer chamber.
- Stainless steel "O" rings for gloves.
- Transparent transfer chamber 12" long by 11" diameter (I.D.).
- Standard warranty (12 months).
- All clamps fully adjustable to compensate for wear.
- Hospital grade multiple electrical outlet strip U.L.-C.S.A. (220-240 volt export).
- Optional vacuum pump. 800-PUMP

Need to know more?

Need to know what other options and models are available?

Need a quote?

Scan the QR code and Rowe Scientific will contact you to discuss your requirements.



LA PETITE GLOVE BOX - 815-SERIES



AUTOMATIC ANAEROBIC CHAMBER
857-SERIES



PLAS ■ LABS, INC.™

HEATING BLOCKS - DLAB

DRY BATH HB120-S

- Heating
- Ambient to 120°C
- 175 x 290 x 85mm

ROWE CODE IH0117



HEATING BLOCKS FOR HB120-S

ROWE CODE

FOR STANDARD TUBES

0.2 / 0.5 / 1.5 / 2mL tubes (18 holes each volume)	IH0125
54 x 0.2mL tubes (6.4mm DIA x 15mm DEEP)	IH0120
40 x 0.5mL tubes (8.2mm DIA x 26.4mm DEEP)	IH0121
40 x 1.5mL tubes (11mm DIA x 34.7mm DEEP)	IH0118
40 x 2mL tubes (11mm DIA x 34.7mm DEEP)	IH0119
8 x 50mL tubes (29.8mm DIA x 48mm DEEP)	IH0123
28 x 5/15mL tubes (140) (17mm DIA x 48mm DEEP)	IH0122

FOR CONICAL BOTTOM MICROCENTRIFUGE TUBES

24 x 0.5mL tubes	IB0657
24 x 1.5mL tubes	IB0658

FOR ROUND BOTTOM MICROCENTRIFUGE TUBES

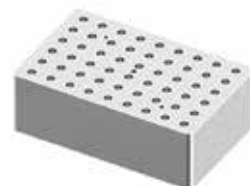
24 x 2.0mL tubes	IB0636
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FOR CENTRIFUGE TUBES

8 x 15mL tubes	IB0637
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FOR MICROPLATE

96 / 384 microplate	IH0124
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ROWE CODE
IH0120



ROWE CODE
IB0657



ROWE CODE
IB0636

ROWE CODE
IH0117



ROWE CODE
IH0124



ROWE CODE
IB0637

Thermo Mix HM100-PRO

- Heating & Mixing
- 15 to 100°C
- Digital LCD
- 200-1500rpm mixing speed
- 200 x 235 x 120mm

Includes one IB0658 heating block for 24 x 1.5mL tubes

ROWE CODE IT0442



ROWE CODE
IT0442

HEATING BLOCKS - MACHEREY-NAGEL



The NANOCOLOR Vario C2 and 4 Heating Blocks enable a fast and safe outcome for all kinds of sample digestions required in water and waste water analysis for up to 12/24 samples in parallel. The standard parameters for routine digestions such as COD, TOC, total nitrogen, total phosphorus and metals are pre-programmed in the heating blocks and help the user to avoid mistakes. The Mini Heating Block is a compact heating block for mobile analysis. Due to its handy size and the flexible power supply via the cigarette lighter of your car, sample digestion on the road is no challenge anymore.



NANOCOLOR VARIO Mini

- Mini heating block
- 40 to 160°C
- Holds 6 x 16mmOD tubes
- Graphic display 128 x 64 pixel

ROWE CODE IH0302

NANOCOLOR VARIO C2

- Single heating block
- 40 to 160°C
- Holds 12 x 16mmOD tubes
- Coloured, backlit LCD touch screen

ROWE CODE IH0300



NANOCOLOR VARIO 4

- Double heating block
- 40 to 160°C
- Holds 24 x 16mmOD tubes
- Coloured, backlit LCD touch screen

ROWE CODE IH0301



HEATING BLOCKS - RATEK

RATEK Digital Dry Block Heaters

- Ambient +5°C to 200°C temperature range • Nitrogen evaporation system available
- Precision 0.1°C digital operation and display • Wide range of standard blocks available



1 Block Heater DBH1000D

- Compact single block heater
- ROWE CODE IH0219

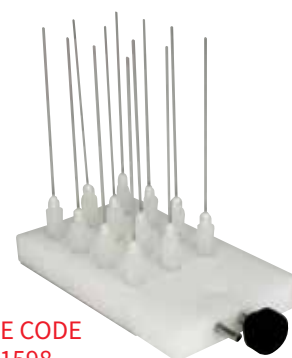
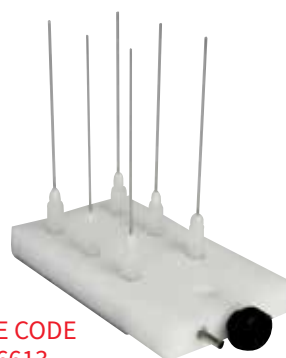
2 Block Heater DBH2000D

- 2 x std block or 1 x 96 well block capacity
- ROWE CODE IH0218

4 Block Heater DBH4000D

- 4 x std block or 2 x 96 well block capacity
- ROWE CODE IH0217

EVAPORATION MANIFOLDS	ROWE CODE
EM4 - 4 needle	IM6600
EM6 - 6 needle	IM6613
EM9 - 9 needle	IM6610
EM12 - 12 needle	ID1598
EM20 - 20 needle	IM6611



BLOCKS	ROWE CODE
EB20 - 20 hole to suit 1.5mL Eppendorf tubes	ID1575
EB30 - 30 hole to suit 0.5mL Eppendorf tubes	ID1577
EB48 - 48 hole to suit 0.2mL Eppendorf tubes	ID1576
FB15 - 12 hole to suite 15mL Falcon tubes	IB0085
FB50 - 4 hole to suit 50mL Falcon tubes	ID1578
MB1 - to suit flat well micro-tray	ID1571
MB2 - 96 place conical well micro-tray (holes 5.5mm DIA)	ID1572
MB3 - 96 place round well micro-tray (holes 8.5mm DIA)	IB0453
MB4 - 96 place tapered well micro-tray (holes 7mm DIA)	IB0628





HEATING MANTLE	ROWE CODE
100mL - Temperature controlled and earthed	IH1165
250mL - Temperature controlled and earthed	IH1180
500mL - Temperature controlled and earthed	IH1190
1000mL - Temperature controlled and earthed	IH1195
3000mL - Controlled and earthed	IH1245
5000mL	IH1235



ROWE CODE
IH1165

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Western Australia

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HOLLOW-CATHODE LAMPS

Photron is an Australian company that specializes in research, development and manufacture of high quality light sources for use in analytical spectroscopy. Stringent process conditions, modern and efficient high vacuum equipment coupled with intelligent selection of internal components provide Photron's hollow cathode lamps with fast warm up times and extended shelf life, guaranteed.

37mm (1.5") Diameter Hollow-Cathode Lamps

For direct use in AAS systems manufactured by Varian, GBC, Hitachi, Shimadzu, Thermo, Unicam Seiko, and all other makes. Use in Perkin Elmer instruments can be facilitated with the use of an adapter kit.

We have a range of multi-element lamps available. We also have OEM lamps available from the manufacturer. These can be supplied coded, which allows for automatic element detection, or uncoded.

We have deuterium lamps for a range of instruments, a number of which we stock.

ELEMENT	SYMBOL	ROWE CODE
ALUMINIUM	Al	IA1005
ANTIMONY	Sb	IA1010
ARSENIC	As	IA1000
BARIUM	Ba	IA1163
BISMUTH	Bi	IA1019
BORON	B	IA1020
CADMIUM	Cd	IA1025
CALCIUM	Ca	IA1045
CHROMIUM	Cr	IA1060
COBALT	Co	IA1027
COPPER	Cu	IA1100
DEUTERIUM	D	IA1130
GOLD	Au	IA1150
IRIDIUM	Ir	IA1160
IRON	Fe	IA1200
LEAD	Pb	IA1225
LITHIUM	Li	IA1230
MAGNESIUM	Mg	IA1240
MANGANESE	Mn	IA1242
MERCURY	Hg	IA1245
MULTI-ELEMENT	Cr, Co, Cu, Fe, Mn, Ni	IA1600
NICKEL	Ni	IA1250
PALLADIUM	Pd	IA1260
PHOSPHORUS	P	IA1265
PLATINUM	Pt	IA1270



SPECIAL CALIBRATION STANDARD SOLUTIONS

We specialise in making Atomic Absorption and ICP working standards to your requirements in our own ISO9001:2015 laboratory, e.g. 10ppm (Fe, Ni) in 10% HCl.

THESE ARE ONLY A SAMPLE OF THE RANGE AVAILABLE - PLEASE CONTACT US WITH YOUR REQUIREMENTS.



PHOTRON PTY. LTD.
SPECIALISTS IN LIGHT SOURCES

Agilent lamps stocked and available on request.

HOTPLATES

HEAVY ACID ENVIRONMENT HOTPLATES - LAB HEAT SOLUTIONS	DIMENSIONS (mm)	ROWE CODE
ALUMINIUM TOP WITH STAINLESS STEEL CHASSIS		
Includes separate digital controller	585 x 315	IH0105
Includes Simmerstat separate controller	585 x 315	IH0062
Includes separate digital controller (15 AMP)	590 x 315	IH0129



ROWE CODE
IH0062

HOTPLATES - VELP	PLATE DIM (mm)	MAX TEMP	ROWE CODE
ROUND ALUMINIUM ALLOY TOP			
VELP RC - Single place	Plate diam 135	370°C	IH1340
VELP RC2 - Two place	Plate diam 135	370°C	IH1350
SQUARE CERAMIC TOP			
VELP REC - Digital Controller	180 x 180	550°C	IH0252



ROWE CODE
IH1340

HEMISPHERIC BOWL FOR FLASKS	ROWE CODE
PRECISELY FITS VELP AREX-6 - 135MM DIAMETER HOTPLATE	
Holds 100mL round bottom flask	IB0386
Holds 250mL round bottom flask	IB0387
Holds 500mL round bottom flask	IB0388



ROWE CODE
IH1350



ROWE CODE
IB0386



ROWE CODE
IB0388

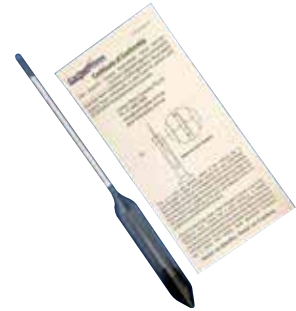


ROWE CODE
IH0252



HYDROMETERS - SPECIFIC GRAVITY

HYDROMETERS - SPECIFIC GRAVITY - CARLTON GLASS	LENGTH (mm)	ROWE CODE
MEASUREMENT RANGE		
0.800 - 0.850 L50 x 0.0005 +/- 0.0005 @ 15.6°C ISO650 x 0.001	325	GH1020
0.800 - 0.850 L50SP x 0.0005g/mL +/- 0.0003g/mL @ 15°C, ISO649	335	GH1066
0.850 - 0.900 L50 x 0.0005g/mL +/- 0.0005 @ 20°C, BS718, ISO649	330	GH0078
0.850 - 0.900 L50 x 0.0005 +/- 0.0005 @ 15.6°C - ISO650	335	GH0077
0.900 - 0.950 L50	335	GH1018
0.900 - 0.950 L50SP x 0.0005g/mL +/- 0.0003g/mL @ 15°C, BS718, ISO649	335	GH1072
0.900 - 0.950 L50 x 0.0005g/mL +/- 0.0005 @ 20°C, BS718, ISO649	330	GH0079
0.950 - 1.000 L50 x 0.0005g/mL +/- 0.0005 @ 20°C, BS718, ISO649	330	GH1219
0.950 - 1.000 L50 x 0.0005 +/- 0.0005 @ 15.6°C ISO650	335	GH1415
0.950 - 1.050 M100 x 0.002 +/- 0.002 @ 15.6°C ISO650	250	GH1016
1.000 - 1.050 L50 x 0.0005 +/- 0.0005 @ 15.6°C ISO650	335	GH1416
1.000 - 1.050 M50 x 0.001 +/- 0.001 @ 15.6°C ISO650	260	GH1325
1.000 - 1.100 M100 x 0.002 +/- 0.002 @ 15.6°C ISO650	260	GH1304
1.000 - 1.200 x 0.005 +/- 0.005 @ 15.6°C	260	GH0006
1.050 - 1.100 L50 x 0.0005 +/- 0.0005 @ 15.6°C ISO650	335	GH1417
1.050 - 1.100 M50 x 0.001 +/- 0.001 @ 15.6°C ISO650	270	GH1335
1.100 - 1.200 M100 x 0.002 +/- 0.002 @ 15.6°C ISO650	260	GH1471
1.100 - 1.300 x 0.005 +/- 0.005 @ 15.6°C	250	GH1490
1.150 - 1.200 M50 x 0.001g/mL +/- 0.001g/mL @ 20°C, BS718, ISO649	270	GH1231
1.200 - 1.300 M100 x 0.002 +/- 0.002 @ 15.6°C ISO650	260	GH0003
1.200 - 1.400 x 0.005 +/- 0.005 @ 15.6°C	260	GH1505
1.300 - 1.400 M100 x 0.002 +/- 0.002 @ 15.6°C ISO650	260	GH0002
1.300 - 1.400 M100 x 0.002g/mL +/- 0.002 @ 20°C, BS718, ISO649	270	GH1270
1.500 - 1.600 M100 x 0.002 +/- 0.002 @ 15.6°C - ISO650	260	GH1378
1.500 - 1.600 M100 x 0.002g/mL +/- 0.002 @ 20°C, BS718, ISO649	250	GH0038



ROWE CODE
GH1471



HYDROMETERS - VARIOUS

HYDROMETERS - SPECIFIC GRAVITY - AMARELL	LENGTH (mm)	ROWE CODE
MEASUREMENT RANGE		
0.800 - 1.000 x 0.002 (without thermometer)	280	GH1120
0.900 - 1.000 x 0.001	300	GH1210
1.000 - 1.060 x 0.001	160	GH1300
1.000 - 1.100	300	GH1355
1.000 - 1.200 x 0.002	280	GH1385
1.000 - 1.300	280 - 300	GH1410
1.000 - 2.000 (Universal)	280 - 350	GH1400
1.100 - 1.200 x 0.001	300	GH1460
1.200 - 1.300	300	GH1500
1.200 - 1.400 x 0.002	288	GH1380
1.300 - 1.400 x 0.001	300	GH1510
1.400 - 1.600 x 0.002	300	GH1530
1.600 - 1.800 x 0.002	300	GH1550
1.800 - 2.000 x 0.002	280	GH1580
2.500 - 3.000	280 - 300	GH1600
2.500 - 3.000 x 0.01	250	GH0045
3.200 - 4.300 x 0.01g/mL @ 20°C (without thermometer)	300	GH1670
4.000 - 4.500, 0.005g/mL @ 20°C	300	GH1604

HYDROMETERS - Baumé - AMARELL	LENGTH (mm)	ROWE CODE
MEASUREMENT RANGE		
-2 to 10 x 0.1 - Reference temperature 20°C	280	GH0025
0 - 15 x 0.1	280	GH2005
10 - 20 x 0.1 - Reference temperature 20°C	280	GH2000

HYDROMETERS - Baumé - CARLTON GLASS	LENGTH (mm)	ROWE CODE
MEASUREMENT RANGE		
-2 to 10 x 0.1	260	GH1780
-2 to 15 x 0.2	250	GH1764
-2 to 18 x 0.2 +/- 0.2 At (Precision hydrometer) @ 20°C	260	GP1204
0 - 30 x 0.5 @ 20°C	250 - 260	GH1860
10 - 20 x 0.1	260	GH1790



ROWE CODE
GH1460



ROWE CODE
GH2000

HYDROMETERS - SOIL - CARLTON GLASS	LENGTH (mm)	ROWE CODE
MEASUREMENT RANGE		
-5 to 60 x 1.0g/L +/- 1.0g/L @ 20°C ASTM 152H	280	GH2260

HYDROMETERS - BARKOMETER - CARLTON GLASS	LENGTH (mm)	ROWE CODE
MEASUREMENT RANGE		
0 - 100		GH1660

HYDROMETERS - BRIX - CARLTON GLASS	LENGTH (mm)	ROWE CODE
MEASUREMENT RANGE		
0 - 10 x 0.1 +/- 0.1 @ 20°C (long stem)	300	GH1760
0 - 30 x 0.5 +/- 0.5 @ 60°C (long stem)	335	GH1756
10 - 20 x 0.1 +/- 0.1 @ 20°C (long stem)	335	GH1706
15 - 25 x 0.1 +/- 0.1 @ 20°C	335	GH0024
15 - 25 x 0.1 +/- 0.1 (for cane payment)	360	GH1784
60 - 70 x 0.1 +/- 0.1 @ 20°C (long stem)	335	GH0013
60 - 75 x 0.2 +/- 0.2 @ 60°C (long stem)	335	GH0014
60 - 90 x 0.5 +/- 0.5 @ 60°C	335	GH1704

HYDROMETERS - PLATO - CARLTON GLASS	LENGTH (mm)	ROWE CODE
MEASUREMENT RANGE		
0 - 5 x 0.1% +/- 0.1 @ 20°C	315	GH1190

HYDROMETERS - GLASS JAR - CARLTON GLASS	ROWE CODE
300mL - 40 OD x 37 ID x 350mmH	GH0898
400mL - 44 OD x 41 ID x 350mmH	GH0891

HYDROMETER - RACK - CARLTON GLASS	ROWE CODE
Small - 6 place (suits M50, M100, OBM, LD, WTW)	PR1040
Large - 6 place (suits NAL, MPL, ABX, BBX, KD)	PR1045

ROWE CODE
GH1660ROWE CODE
GH0013ROWE CODE
GH0898ROWE CODE
PR1045

HYDROMETERS - VARIOUS

HYDROMETER - SPECIFIC GRAVITY MEASUREMENT RANGE	LENGTH (mm)	ROWE CODE
CI SCIENTIFIC		
1.000 - 1.200 x 0.005 @ 15.6°C - Includes 6 point NATA certification	260	GH0071
CARLTON GLASS OR CI SCIENTIFIC		
1.00 - 1.500 x 0.01 M500	250	GH1363
Hydrometer NATA calibration report		GH1045
KIMBLE		
0.800 - 0.910 x 0.001 (High precision) NIST traceable	300	GH0075
BEL-ART		
1.050 - 1.220 x 0.002 @ 15°C, polycarbonate	300	PH1205
2.000 - 3.000 x 0.01 (Durac)		GH0046
ZEAL		
0.990 - 1.040 x 0.0005 @ 15°C (Draft survey)		GH0870



ROWE CODE
GH0075



ROWE CODE
PH1205



ROWE CODE
GH0870

INCUBATORS - MMM MEDCENTER

INCUCELL® / INCUCELL® V**Incubators with Natural / Forced Air Convection**

Suitable for safe treatment of microbiological cultures. The INCUCELL® line produces no noise and provides a very soft air convection within the chamber, the variant INCUCELL® V (with a fan) has an advantage of more precise temperature distribution with small deviations. These devices can be used especially in biological and microbiological laboratories, quality tests in pharmacy, cosmetics and testing in veterinary medicine and food processing industry.

VOLUME: 22, 55, 111, 222, 404, 707 litres

WORKING TEMPERATURE:

INCUCELL®: 5°C above ambient temperature up to 99.9°C

INCUCELL® V: 10°C above ambient temperature up to 99.9°C

INNER: Glass door

INTERIOR: Stainless steel *mat. No. 1.4301 (AISI 304)*



ROWE CODE II0087



*ROWE CODE
II0085

**ROWE CODE II0087**

INCUCELL 22 -
ECO line,
natural air circulation,
up to +99.9°C

22L

Capacity Litres	22
Internal Dimensions (mm) H x W x D	300 x 240 x 350
External Dimensions (mm) H x W x D	610 x 406 x 560
Temp Range (°C)	Ambient +5 to 99.9
Interior Material	Stainless Steel
Number of trays	2 chrome plated
Weight (approx) (kg)	31
Power Supply	230V / 50/60Hz

ROWE CODE II0085

INCUCELL 55 -
ECO line,
natural air circulation,
up to +99.9°C

55L

Capacity Litres	55
Internal Dimensions (mm) H x W x D	350 x 400 x 370
External Dimensions (mm) H x W x D	680 x 620 x 640
Temp Range (°C)	Ambient +5 to 99.9
Interior Material	Stainless Steel
Number of trays	2 chrome plated
Weight (approx) (kg)	55
Power Supply	230V / 50/60Hz

*Stands not included but available as an optional extra.

INCUBATORS - MMM MEDCENTER

ROWE CODE II0091
INCUCELL V 55 -
 ECO line,
 forced air circulation,
 up to +99.9°C

55L

Capacity Litres	55
Internal Dimensions (mm) H x W x D	350 x 400 x 370
External Dimensions (mm) H x W x D	680 x 620 x 640
Temp Range (°C)	Ambient +10 to 99.9
Interior Material	Stainless Steel
Number of trays	2 chrome plated
Weight (approx) (kg)	55
Power Supply	230V / 50/60Hz



ROWE CODE II0091*

ROWE CODE II0131
INCUCELL V 222 -
 ECO line,
 forced air circulation,
 up to +99.9°C

222L

Capacity Litres	222
Internal Dimensions (mm) H x W x D	760 x 540 x 520
External Dimensions (mm) H x W x D	1095 x 760 x 790
Temp Range (°C)	Ambient +10 to 99.9
Interior Material	Stainless Steel
Number of shelves	2 stainless steel
Weight (approx) (kg)	100
Power Supply	230V / 50/60Hz



ROWE CODE II0131*

**Stands not included but available as an optional extra.*



FRIOCELL®

Forced Air Circulation

The high technical standard of our FRIOCELL® incubators allows exact incubation processes both for variation and deviation. The units have very short recovery times and show an excellent results in keeping the precise regulation. A unique cooling system ensures, that the samples are not dried while cooling. A high performance system of lighting ensures outstanding homogeneous parameters for tests and growth conditions. These devices are designed for use in biotechnology, botany, food processing industry, cosmetics, chemical industry etc.

- VOLUME:** 55, 111, 222, 404, 707, 1212 litres
- WORKING TEMPERATURE:** 0°C up to 100°C
- INNER:** Glass door
- INTERIOR:** Stainless steel *mat. No. 1.4301 (AISI 304)*



ROWE CODE II0059



ROWE CODE II0060

ROWE CODE II0059
 FRIOCELL 111 - EVO line,
 forced air circulation
 for heating & cooling,
 up to +99.9°C

55L

Capacity Litres	55
Internal Dimensions (mm) H x W x D	355 x 400 x 380
External Dimensions (mm) H x W x D	940 x 640 x 755
Temp Range (°C)	0 to 99.9
Interior Material	Stainless Steel
Number of trays	2 chrome plated
Weight (approx) (kg)	95
Power Supply	230V / 50/60Hz

ROWE CODE II0060
 FRIOCELL 111 - EVO line,
 forced air circulation
 for heating & cooling,
 up to +99.9°C

111L

Capacity Litres	111
Internal Dimensions (mm) H x W x D	535 x 540 x 380
External Dimensions (mm) H x W x D	1187 x 780 x 755
Temp Range (°C)	0 to 99.9
Interior Material	Stainless Steel
Number of trays	2 chrome plated
Weight (approx) (kg)	110
Power Supply	230V / 50/60Hz

INCUBATORS - THERMOLINE

ROWE CODE II0098

Premium Refrigerated Incubator, internal forced air flow, up to +45°C

1100L

Capacity Litres	1100
Internal Dimensions (mm) W x D x H	1320 x 550 x 1460
External Dimensions (mm) W x D x H	1470 x 720 x 2010
Temp Range (°C)	Ambient +5 to 45
Interior Material	Stainless Steel
Number of adjustable shelves	4 PVC coated
Solid doors	2 front opening



ROWE CODE II0098



ROWE CODE II0184

ROWE CODE II0184

Premium Refrigerated Incubator, internal forced air flow, up to +45°C

520L

Capacity Litres	520
Internal Dimensions (mm) W x D x H	590 x 550 x 1460
External Dimensions (mm) W x D x H	740 x 815 x 2010
Temp Range (°C)	+5 to 45
Interior Material	Stainless Steel
Number of adjustable shelves	4 PVC coated
Glass door	1 front door

ROWE CODE II0186

Premium Refrigerated Incubator, internal forced air flow, up to +45°C

520L

Capacity Litres	520
Internal Dimensions (mm) W x D x H	590 x 550 x 1460
External Dimensions (mm) W x D x H	740 x 815 x 2010
Temp Range (°C)	+5 to 45
Interior Material	Stainless Steel
Number of adjustable shelves	4 PVC coated
Solid door	1 front door



ROWE CODE II0186

INCUBATORS - HAIER & VELP

Haier

ROWE CODE II0161
HCP-168 CO₂ Incubator
with touch screen,
direct heat (+/-0.1°C accuracy,
4 minute recovery) Up to +55°C

168L

Capacity Litres	168
Dimensions (mm) W x H x D	714 x 887 x 812
Temp Range (°C)	Ambient +3 to 55
Number of shelves	3
CO ₂ (%)	0 - 20
Humidity	Off or >90%RH
Dry Heat Sterilisation	180°C on all internal surfaces
IoT Connectivity	Yes
Weight (approx) (kg)	110
Power Supply	220 V / 50 Hz



ROWE CODE II0161



ROWE CODE II0118

ROWE CODE II0118
FTC 120 Cooled
Incubator,
Fixed Temp +20°C

120L

Capacity Litres	120
Dimensions (mm) W x H x D	540 x 905 x 550
Temp Range (°C)	Fixed temp at 20
Number of shelves	2
Weight (approx) (kg)	36
Power Supply	230 V / 50-60 Hz

ROWE CODE II0189
FOC 120I Connect -
Cooled incubator with
internal transparent
door, up to +50°C

109L

Capacity Litres	109
Dimensions (mm) W x H x D	540 x 912 x 550
Temp Range (°C)	+3 to 50
Number of shelves	2
Ermes connection	Yes - via Wi-Fi
Communication interfaces	2 Internal sockets modbus connectivity
Weight (approx) (kg)	36
Power Supply	230 V / 50-60 Hz



ROWE CODE II0189

VELP
SCIENTIFICA

INCUBATORS - VELP

ROWE CODE II0187

FOC 120E Connect
Cooled Incubator,
up to +50°C

109L

Capacity Litres	109
Dimensions (mm) W x H x D	540 x 912 x 550
Temp Range (°C)	+3 to 50
Number of shelves	2
Ermes connection	Yes - via Wi-Fi
Communication interfaces	2 Internal sockets modbus connectivity
Weight (approx) (kg)	36
Power Supply	230 V / 50-60 Hz



ROWE CODE II0188

FOC 200E Connect
Cooled Incubator,
up to +50°C

169L

Capacity Litres	169
Dimensions (mm) W x H x D	540 x 1263 x 550
Temp Range (°C)	+3 to 50
Number of shelves	3
Ermes connection	Yes - via Wi-Fi
Communication interfaces	2 Internal sockets modbus connectivity
Weight (approx) (kg)	46.3
Power Supply	230 V / 50-60 Hz



ROWE CODE II0190

FOC 200I Connect
Cooled Incubator
with internal
transparent door,
up to +50°C

169L

Capacity Litres	169
Dimensions (mm) W x H x D	540 x 1263 x 600
Temp Range (°C)	+3 to 50
Number of shelves	3
Ermes connection	Yes - via Wi-Fi
Communication interfaces	2 Internal sockets modbus connectivity
Weight (approx) (kg)	46.3
Power Supply	230 V / 50-60 Hz



ROWE CODE
II0190

ermes enabled

ROWE CODE II0191

FOC 200IL Connect -
Illuminated Cooled
Incubator with **internal
transparent door**,
up to +50°C

169L

Capacity Litres	169
Dimensions (mm) W x H x D	540 x 1300 x 550
Temp Range (°C)	+3 to 50
Number of shelves	3 (2 lighted)
Ermes connection	Yes - via Wi-Fi
Communication interfaces	2 Internal sockets modbus connectivity
Weight (approx) (kg)	50
Power Supply	230V/50-60Hz



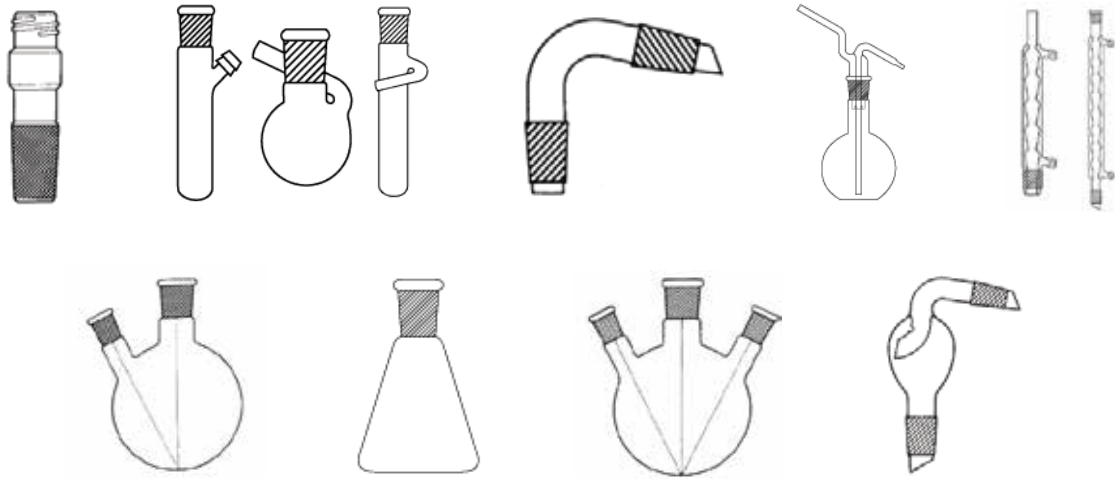
ROWE CODE
II0191

ermes enabled

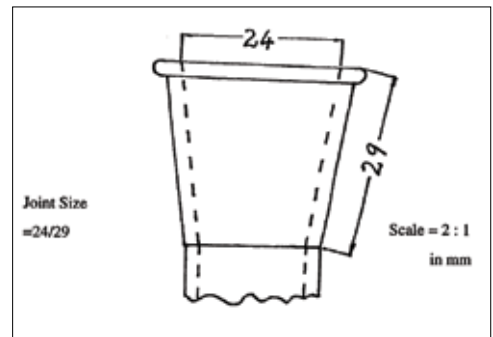
Please check out our section on ovens

INTERCHANGEABLE (JOINTED) GLASSWARE

**A full range of laboratory glassware is available.
To order, please specify item, volume and joint size.**



**Custom Blown glass items are also available.
Please contact us with your requirements.**



JUGS

JUGS - POLYPROPYLENE	ROWE CODE
500mL	PJ1100
500mL	PJ1105
1L	PJ1155
1L	PJ1157
2L	PJ1200
2L	PJ1205
3L	PJ1250
5L	PJ1300



LABORATORY LABELS

THERMAL TRANSFER LABELS FOR CRYOGENIC STORAGE TUBES	SIZE W x H (mm)	PACK	ROWE CODE
Removable, deep-freeze, perforated, 25mm core, white	50.8 x 25.4	1000	HL0391
Removable, deep-freeze, perforated, 25mm core, white	50.8 x 40.6	1000	HL0392
Clear wrap, landscape, 25mm core	25.4 x 25.4	1000	HL0326
43.7mm clear wrap, portrait, 25mm core	25.4 x 25.4	1000	HL0327
Direct thermal, 40mm core	50 x 28	6 X 1250	HL0415
Freezer or liquid nitrogen, white, 25mm core	22.9 x 12.7	3000	HL0362
Freezer or liquid nitrogen, white, perforated, 25mm core	35.6 x 12.7	ROLL	HL0270
DOT & STRIP			
Suitable for cap and side of 1.5 - 2mL cryogenic storage tubes (-196°C to +90°C), white, 25mm core	25.4 x 12.7 9.5mm CIRCLE	2000	HL0279
	36.5 x 14 9.5mm CIRCLE	2000	HL0329
HISTOLOGY LABELS			
Xylene and chemical-resistant labels, -80°C to 120°C	22 x 19.1	1000	HL0405

LABELLING TAPE

WRITABLE TAPE	PACK SIZE	ROWE CODE
Cryogenic tape suitable for frozen containers, white, easy-tear gatorcut, water resistant, -196°C to 100°C, 19mmW x 15m long	1 roll	HT0349
Cryogenic tape for laboratory use, nitrotape 13mmW x 15m long, 1 inch core, white	1 roll	HT0296

MARKER

WRITABLE MARKER	PACK SIZE	ROWE CODE
Black science-marker (fine tip), alcohol and water resistant cryogenic	6	HM0231

PRINTER RESIN RIBBON

FLINT GLASS AUTOCLAVABLE	ROWE CODE
57mmW x 70m long, 13mm core	HP0154
60mmW x 300m long, 25mm xylene/solvent resistant core for thermal transfer printers	HP0237
80mmW x 300m long, 25mm core for RT700 series printers	HP0188

LABORATORY PRINTER

Label printer, thermal transfer and direct thermal, compact Godex RT230I with colour LCD screen, 300 dpi, USB host (A type) / USB 2.0 (B type) / serial RS-232 (DB-9) / ethernet (RJ-45)



FACE MASKS

DESCRIPTION	PACK SIZE	ROWE CODE
Dust Mask - P2, cupped with valve	10	HD1061
Dust Mask - Ear loops, 3 layers, disposable	50	HM0208
Dust Mask - Ear loops, 3 layers, disposable, blue	50	HM0166
P2 Mask - Respirator/face mask, disposable, with valve & carbon filter	10	HR0069
P2 Mask - Respirator/face mask, disposable, with valve & carbon filter	120	HR0070
P2 Mask - Certified, particulate respirator with internal bridge, ear loops, Australian made, TGA	25	NM0024
N95 Mask - Particulate respirator, NIOSH approved	20	NM0021
Carrying case (hard) for full face gas mask	EA	NC0009
X-Plore P3 R - Particle Filter (used with x-plore 3500 mask)	20	NF0007
X-Plore 5500 - Full respirator mask (without cartridges)	EA	NR0016
X-Plore 3300 - Half respirator mask (Medium size, supplied with pair of general purpose chemical filter cartridges)	EA	NR0010
X-Plore 3500 - Half respirator mask (medium size, supplied with pair of filter cartridges)	EA	NR0012
Filter cartridge for "3M" 6000/7500 series half and 6000/7000 series full face mask, A1B1E1K1 (organic/inorganic and acid gases/ammonia/methylamine)	PR	HF0090
Full face mask (reusable) "6000 series" 6900 large	EA	HM0241
Half face mask (reusable) "6200 series" 6502QL medium	EA	HM0174



ROWE CODE
HD1061



ROWE CODE
HM0166



ROWE CODE
NR0012

We carry many brands with various cartridges available. Let us know your needs!

MORTAR & PESTLE

MORTAR AND PESTLE PORCELAIN (EACH)	ROWE CODE
60mm DIAM x 35mmH (60mL)	WM0002
100mm DIAM x 50mmH (100mL)	WM0004
130mm DIAM x 70mmH (300mL)	WM0005
160mm DIAM x 80mmH (500mL)	WM0006
216mm DIAM x 90mmH	WM0008
305mm DIAM (3.5L)	WM0007



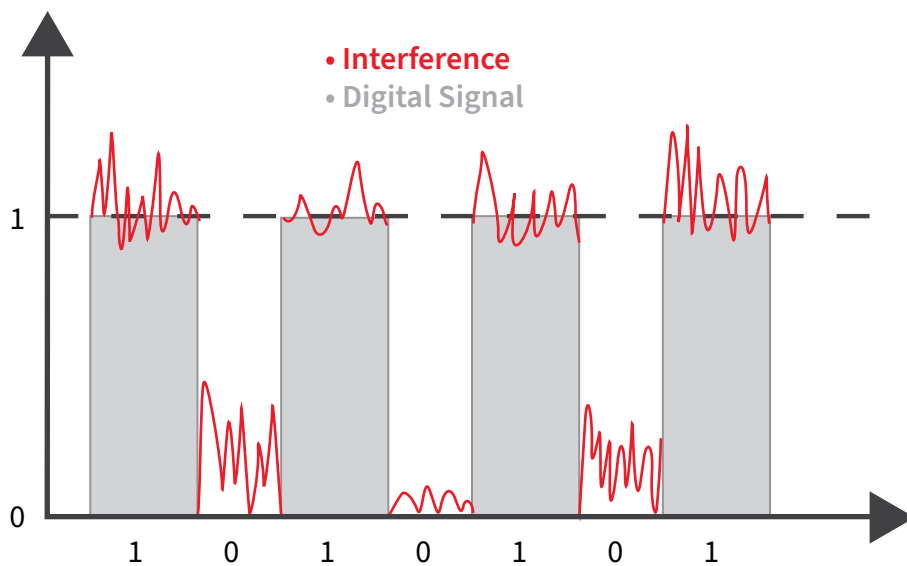
Analogue Probes

The traditional cable carries the signal from the probe to the meter where the signal is analysed and used to determine the concentration of analyte. This technology can be susceptible to interference due to the low signal strength transmitted.

Digital probes, or IDS (Intelligent Digital Sensors)

The IDS system matches two components, digital sensors and matching laboratory meters. The essential innovation is that the processing of the measured signal no longer takes place in the meter, but exclusively in the sensor. Available for standard parameters of pH, ORP, conductivity, dissolved oxygen and turbidity.

Able to store their serial number and calibration data in the sensor memory, it is then easy to use one sensor on multiple meters. Critically, the IDS sensors do not only store data but also process signals and thereby improve data quality. (For pH sensors this also allows an evaluation of sensor quality).



The potential interference in an analogue signal is overcome by processing the signal in the sensor and the data transmission occurring digitally.

IDS goes wireless

As the signal generated by an IDS sensor is digital, it allows for wireless transmission. This permits the removal of all cables joining the sensor to the meter - for use wherever cables get in the way or there is simply too little space available.

Analogue, traditional, sensor wired, signal processing occurs in the meter. Requires specific meter.

Digital, IDS, still wired, but signal processing occurs in the sensor and data is transmitted digitally. Meter is generic for all parameters.

Wireless, the digital signal from an IDS sensor is transmitted wirelessly to the meter.

MULTIPARAMETER METERS



pH, Dissolved Oxygen, Conductivity - All in the same meter.

Multi 3510 IDS • Single channel • Black and white display

Entry level sequential multi-parameter meter, with memory for field use or manual input.

Meter in case (only)	Meter in case with SM Pro armouring	SET 1 with sensor SenTix 940	SET 3 with sensor TetraCon 925	SET 4 with sensor FDO 925
IM0798	CM0616	IM0799	IM0801	IM0803

(Default cable length 1.5m)



ROWE CODE
IM0798

Multi 3620 IDS • Dual channel • All supplied with SM Pro protective armouring

Simultaneous measurement of 2 parameters in any combination, colour display, accepts sensors with cable lengths up to 100 metres, GLP/AQA compliant, data output to PC, USB or printer.

Meter only	SET C with sensors SenTix 940 and TetraCon 925	SET G with sensors SenTix 940, TetraCon 925 and FDO 925 All 3 metre cables	SET WL (meter only) with wireless meter module WLM-M
IM0804	IM0299	IM0805	IM0806



ROWE CODE
IM0229

Multi 3630 IDS • Three channel • All supplied with SM Pro protective armouring

Simultaneous measurement of 3 parameters in any combination, colour display, accepts sensors with cable lengths up to 100 metres, GLP/AQA compliant, data output to PC, USB or printer. Connection of a MPP 930 IDS depth sonde possible.

Meter only	SET F with sensors SenTix 940, TetraCon 925 and FDO 925	SET G with sensors SenTix 940, TetraCon 925 and FDO 925 All 3 metre cables	SET KS2 - Field case set (meter only)	SET WL - Field case with wireless meter module WLM-M
IM0229	IM0807	IM0808	IM0809	IM0812

ELECTRODES		ROWE CODE
WTW		
SENTIX 940 - IDS pH combination electrode with gel electrolyte, plastic shaft and integrated temperature sensor		IE1402
FDO® 925 - Optical IDS Dissolved Oxygen Sensor - Digital, with plug head, requires AS/IDS-X cable or wireless module		IS0574
TETRACON 925 - 4-electrode-IDS conductivity cell with graphite electrodes, epoxy shaft, cell constant 0.475 cm ⁻¹		CP0876

DIGITAL CABLES & ELECTRODES

For other than the standard 1.5m and 3m fixed cables, match the cable of your choice with a plughead electrode (below).

DIGITAL CABLES • Sensor cable to suit WTW IDS sensor with waterproof plug head	ROWE CODE
WTW	
AS/IDS-1.5 - 1.5m cable	IE0057
AS/IDS-3 - 3m cable	IE0323
AS/IDS-6 - 6m cable	IE0324
AS/IDS-10 - 10m cable	IE0325
AS/IDS-15 - 15m cable	IE0326
AS/IDS-20 - 20m cable	IE0327
AS/IDS-25 - 25m cable, supplied with storage reel	IE0328
AS/IDS-40 - 40m cable, supplied with storage reel	IE0329
AS/IDS-60 - 60m cable, supplied with storage reel	IE0330
AS/IDS-100 - 100m cable, supplied with storage reel	IE0331



ROWE CODE
IE0057

ELECTRODES	ROWE CODE
WTW	
Replacement sensor cap	IP0775
FDO® 925 - Optical IDS Dissolved Oxygen Sensor - Digital, with plug head, requires AS/IDS-X cable or wireless module	IS0574
FDO® 925 - Optical IDS Dissolved Oxygen Sensor - Digital, 1.5m cable	IP5345
FDO® 925 - Optical IDS Dissolved Oxygen Sensor - Digital, 3m cable	IS0573
SENTIX 940 - IDS pH combination electrode with gel electrolyte, plastic shaft and integrated temperature sensor	IE1402
SENTIX 940-3 - SENTIX 940 - IDS pH combination electrode with gel electrolyte, plastic shaft and integrated temperature sensor. QSC function. Electrode incl. 3m fixed cable with waterproof digital connector. For MultiLine®, MonoLine, inoLab® IDS	IE0071
SENTIX 940-P - IDS pH combination electrode with liquid electrolyte (3 mol/l KCl), glass shaft and integrated temperature sensor. QSC function. Electrode with plug head for AS IDS/x cable or wireless module	IE0322
TETRACON 925 - 4-electrode-IDS conductivity cell with graphite electrodes, epoxy shaft, cell constant 0.475 cm ⁻¹	CP0876
TETRACON 925-3 - 4-electrode-IDS conductivity cell with graphite electrodes, epoxy shaft, cell constant 0.475 cm ⁻¹ , with 1.5m fixed cable with waterproof digital connector and 3m cable	IS0572
TETRACON 925-P - 4-electrode-IDS conductivity cell with graphite electrodes, epoxy shaft, cell constant 0.475 cm ⁻¹ . Cell with plug head for AS IDS/x cable or wireless module	IE0255
CONDUCTIVITY PROBE TETRACON 325 - 1.5m cable	IS1038



ROWE CODE
IS0574



ROWE CODE
IE1402



ROWE CODE
CP0876

LABORATORY METER ACCESSORIES

PROTECTIVE ARMOUR	ROWE CODE
WTW	
SM PRO - Shock absorbing rubber elastic protective armouring for ProfiLine and MultiLine® portable meters	IM1304
pH - A pHLab/K, Plastic armouring for protecting single pH and ORP electrodes with length 120mm in the field and in a plant	IA0326
DO AND CONDUCTIVITY - A 925K, Plastic Armor for single IDS field sensor, for cabled TetraCon® 925, SensoLyt® 900 or FDO® 925	IA0324
DO AND CONDUCTIVITY (PLUG HEAD) - A 925-P/K, Plastic armour for single IDS field sensor for TetraCon® 925-P, SensoLyt® 900-P, SensoLyt® ORP 900-P, FDO® 925-P or VisoTurb® 900-P, connects to AS/IDS-x	IE0258
DO AND CONDUCTIVITY (PLUG HEAD) - A 925-P/Sp, Stainless steel armour for single IDS field sensor TetraCon® 925-P, SensoLyt® 900-P, SensoLyt® ORP 900-P, FDO® 925-P or VisoTurb® 900-P, connects to AS/IDS-x	IA0325



ROWE CODE
IM1304



ROWE CODE
IA0324



ROWE CODE
IA0325

Let us help you make the correct choice. Call us!

ANALOGUE pH METERS

ANALOGUE pH METERS	ROWE CODE
WTW	
PROFILINE pH/COND 3320 MULTI-PARAMETER PORTABLE METER - Includes SenTix 41 pH and TetraCon 325 conductivity probes, carry case, buffer solutions, batteries and cable	CM1364
PROFILINE pH 3110 PORTABLE METER - pH, mV, includes SenTix 41 probe pH buffers and carry case	IC1238
pH ELECTRODE SENTIX 41 - Integrated temperature sensor, 1m fixed cable (DIN)	IP1675
pH ELECTRODE SENTIX 41-3 - Integrated temperature sensor, 3m fixed cable (DIN)	IP1002
pH ELECTRODE SENTIX 51 - Epoxy with liquid electrolyte, 1 metre cable (DIN) and banana plugs	IE1412
pH ELECTRODE SENTIX MICRO 900 - Digital, 5mmD with integrated temperature sensor, 1.5m cable	IE0362
pH ELECTRODE SENTIX 62 - BNC, 1.5m cable	IP1604
pH ELECTRODE SENTIX 980 IDS - Gel, refillable, combination, ATC, 1.5m cable with W/P digital connection.	IE0195
ProDSS pH SENSOR - With attached replaceable module, to suit YSI ProDSS multi-parameter meter	IS0606

BEST SELLER



ROWE CODE
CM1364



ROWE CODE
IC1238

ORP ELECTRODES	ROWE CODE
WTW	
SENTIX ORP-T 900	IE0236
SENTIX ORP-T 900-P - With plug head (no cable)	IE0259
REDOX (ORP) SENTIX - With plug head (requires cable)	IP1292



ROWE CODE
IP1604



ROWE CODE
IE0236



pH METERS

pH METERS & ELECTRODES	ROWE CODE
AZ INSTRUMENT	
pH PEN - pH range 0.0 - 14.0 x 0.01, auto-calibration, waterproof housing	IM0476
WATER QUALITY TESTING pH PEN - pH range 0.0 - 14.0 x 0.1, auto-calibration, waterproof housing	IM0124
TPS	
WP-80 - pH, mV, temperature, waterproof, RS232 interface with submersible pH and temperature sensors, 1m cable	IM1105
WP-80 - Portable - pH, mV, temperature, waterproof, with IJ type pH and temperature probes, 1m cable	IP1166
WP-80 - Portable - pH, mV, temperature, waterproof, with IJ type pH and temperature probes, 3m cable	IM0240
WP-80D - Dual channel, pH, mV, temperature, without probe or power adapter	IP1168
WP-80D - Dual channel, pH, mV, temperature, with IJ pH probe, 1m cable	IM0093
WP-80D - Dual channel, pH, mV, temperature, with pH and temperature sensor, 1m cable	IM1115
WP-80D - Dual channel, pH, mV, temperature, with pH and temperature sensor, 3m cable	IM1121
WP-PLUS+ - mV, temperature, salinity, TDS, dissolved oxygen, IP-67, RS232 interface, with pH and temperature conductivity, DO sensors, 1m cable	IM0770
AQUA-PH - mV, temperature, waterproof with pH and temperature sensor, 1m cable	IP1198
AQUA-PH - Portable - pH, mV, temperature, waterproof, with IJ style electrode, 1m cable	IP11985
AQUA-PH - Kit - Portable - pH, mV, temperature, waterproof, with high temperature IJ style (IJ44A-HT) electrode and temperature probe, 1m cable	IM0661
90FLT - pH, mV, conductivity TDS, DO2, turbidity, temperature, field data-logger, waterproof, RS232 interface with submersible pH ORP YSI DO2 turbidity K=1/ATC/temperature sensors, 5m cable	IM1325
SMARTCHEM-pH - pH, mV, temperature, waterproof, bench type, with pH and temperature sensors, 1m cable	IP1245
pH CUBE - pH, mV/ORP/temperature bench top meter with accessories, blue	IM0441
pH ELECTRODE - Double junction, gel filled, BNC connector, for aqua/WP ph cube series meters, 1m cable	IP1406
pH ELECTRODE - Temperature sensor, plastic body, AgCl reference, BNC connector, intermediate junction, 1m cable	IE1435
pH ELECTRODE - Submersible, gel AgCl reference, ceramic frit junction, waterproof, BNC connector, 1m cable	IE1025
pH ELECTRODE - Submersible, BNC connector, 5m cable	IP1568
TEMPERATURE/ATC SENSOR - Suit WP/AQUA series instruments, 1m cable	IP1740
TEMPERATURE/ATC SENSOR - Suit pH cube, 3.5mm phono plug for 1852mv, 900P	IP1750
TEMPERATURE SENSOR - 1m for WP91, Aqua-DY meters	IP1408
TEMPERATURE ELECTRODE - Suits 90 series meters, 1m cable	IT2565
TEMPERATURE ELECTRODE - Suits 90 series meters, 2m cable	IE0075
TEMPERATURE ELECTRODE - Suits 90 series meters, 5m cable ET90-S	IA2560



ROWE CODE
IM0476



ROWE CODE
IM0770



ROWE CODE
IP1568



ROWE CODE
IP1750



pH METERS & ELECTRODES	ROWE CODE
IONODE	
IJ44A pH ELECTRODE - BNC connector, reference double junction, "A" glass tip, 1m cable	IP14406
IJ44A pH ELECTRODE - BNC connector, 3m cable	IE0176
IJ44A-HT pH ELECTRODE - Double junction Ag/AgCl kynar body, high temperature 0 - 100°C	IE0191
IJ40A pH ELECTRODE - BNC connector, glass bullet tip, reference double junction Ag/AgCl/Sat KCl gel, polypropylene body, 1m cable	IP1435
IJ40A pH ELECTRODE - PT1000 BNC with 4mm banana plug, 1m cable	IP1493
IJ40A-HT pH ELECTRODE - with coaxial plug (din 19262), inbuilt temp sensor PT1000 with 4mm banana plug / NTC 30 KOHM, 1m cable, high temperature 0 -100°C	IP0659
IH40A-HT pH ELECTRODE - BNC connector, inbuilt temp sensor PT1000 with RCA connector, ATC, 2m cable, high temperature 0 - 100°C	IE0320
IH40A pH ELECTRODE - Ag/AgCl gel filled double junction BNC "A" glass	IP10645
IH40A pH ELECTRODE - Ag/AgCl gel filled double junction BNC "A" glass, 5m cable	IE0078
PBFA pH ELECTRODE - Single junction, 3 ceramic frits, Ag/AgCl refillable BNC connector, 1 metre cable	IP1482
IJ40C pH ELECTRODE - BNC connector, glass bullet tip, reference double junction Ag/AgCl/Sat KCl gel, PP body, 1m cable	IP1488
IJ40C pH ELECTRODE - BNC connector, glass bullet tip, reference double junction Ag/AgCl/Sat KCl gel, PP body, 3m cable	IP1770
IJ40C-HT pH ELECTRODE - BNC connector, glass bullet tip, reference double junction Ag/AgCl/Sat KCl gel, PP body, 1m cable, high temperature 0 - 100°C	IP1550

ROWE CODE
IP14406ROWE CODE
IE0320ROWE CODE
IP1482

ELECTRODES & ACCESSORIES

ION SELECTIVE ELECTRODES (ISE)	MFR	PACK SIZE	ROWE CODE
ELECTRODE BROMIDE ION SELECTIVE IJ SERIES - Intermediate junction, refillable, BNC connector, 1m cable	IONODE	EA	IE3047
ELECTRODE CHLORIDE ION SELECTIVE - Intermediate junction, refillable, BNC connector, 1m cable	IONODE	EA	IE3040
ELECTRODE CYANIDE ION SELECTIVE - Intermediate junction, refillable, BNC connector, 1m cable	IONODE	EA	IE3045
ELECTRODE FLUORIDE ION SELECTIVE IJ SERIES - BNC connector, 1m cable	IONODE	EA	IE3046
ELECTRODE SILVER/SULFIDE ION SELECTIVE - Epoxy body, BNC connector, 1m cable	IONODE	EA	IE0318
ELECTRODE NITRATE ION SELECTIVE - PVC membrane, BNC connector, 1m cable	IONODE	EA	IE0335
PROBE AMMONIA ISE INTELICAL - 1m cable	HACH	EA	IP5338
ELECTRODE CHLORIDE ISE - Factory fitted membrane, BNC connector (includes 2 x 200mL standards and 1 x 45mL probe refill), 1m cable	TPS	EA	IC1026



ROWE CODE
IE3040

PROBE/ELECTRODE ACCESSORIES	MFR	PACK SIZE	ROWE CODE
ELECTRODE (pH) STORAGE SOLUTION - Colourless	ROWE	250mL	CP1015
ELECTRODE (pH) STORAGE SOLUTION - Colourless	ROWE	500mL	CP1032
ELECTRODE (pH) STORAGE SOLUTION - Colourless	ROWE	1L	CE0298
ELECTRODE FILLING SOLUTION - 4MKCL saturated/AGCL	ROWE	1L	CF1020
ELECTRODE CLEANING SOLUTION - PEPSIN/HCL	ROWE	5L	CE2153
ELECTRODE HOLDER - Adjustable, accommodates up to four sensors	IONODE	EA	IE1750
ELECTRODE HOLDER - Stand alone	OHAUS	EA	IH0026
PROBE SUPPORT ARM - Flexible, including probe clamp	TPS	EA	IS1046



ROWE CODE
IP5338



ROWE CODE
IE1750

DISSOLVED OXYGEN METERS

DISSOLVED OXYGEN METERS & SENSORS		ROWE CODE
HACH		
HQ1130 - Portable meter, single parameter, digital input with USB charger and power cable (meter only)		KM0042
INTELICAL LUMINESCENT/OPTICAL DISSOLVED OXYGEN (LDO) PROBE - Digital with 1m cable		IP5300
INTELICAL LUMINESCENT/OPTICAL DISSOLVED OXYGEN (LDO) PROBE - Digital with 3m cable		IP5303
INTELICAL LUMINESCENT/OPTICAL DISSOLVED OXYGEN (LDO) PROBE - Digital, rugged sensor with 5m cable		IP5302
INTELICAL LUMINESCENT/OPTICAL DISSOLVED OXYGEN (LDO) PROBE - Digital, rugged sensor with 10m cable		IP5305
LBOD INTELICAL PROBE - Luminescent/Optical Dissolved Oxygen (LDO) Sensor for BOD Measurements, 1m Cable		IP5304
TPS		
DO, pH, mV, temperature (without probe or cable)		ID1107
WP91 - DO, pH, mV, temperature, waterproof, RS232 interface with YSI DO2 and pH sensor and 1m cable		IM1131
WP91 - pH, mV, temperature, waterproof, RS232 interface with YSI DO2 and submersible IJ type pH sensor and 3m cable		IM0780
WP91 - pH, mV, temperature, waterproof, RS232 interface with YSI DO2 and submersible pH sensor and 3m cable		IM1133
WP91 - DO, pH, mV, temperature with RS232 interface, without probe and cable (meter only)		IM1130
WP-82Y - Waterproof, RS232 interface with YSI DO2 sensor and 1m cable		IM1134
WP-82Y - Waterproof, RS232 interface with YSI DO2 sensor and 3m cable		IM1122
WP-82Y - Waterproof RS232 interface with YSI DO2 sensor and 5m cable		IM1129
WP-82Y - RS232 interface without sensor and cable		IM1125
AQUA-DY - Waterproof with YSI DO2 sensor and 1m cable		IM0600
AQUA-DY - Waterproof with YSI DO2 sensor and 3m cable		IM0605
AQUA-DP - DO, pH, mV, temperature, waterproof meter includes sensor and 1m cable		ID1103
AQUA-DP - DO, pH, mV, temperature, waterproof meter includes sensor and 3m cable		ID1116
AQUA-DP - DO, pH, mV, temperature, waterproof meter includes sensor and 5m cable		ID1102
YSI METERS & SENSORS		
YSI PROSOLO - Hand held Meter (without probe)		IM0438
METER PART - Probe with 4m cable		IM0185
METER PART - Dissolved oxygen probe with 1m cable		IM1392
METER PART - Sensor cap for YSI dissolved oxygen probe		IM1393



ROWE CODE
KM0042



ROWE CODE
IM1134



ROWE CODE
IP5345



ROWE CODE
IM0438

CONDUCTIVITY & DENSITY METERS

CONDUCTIVITY METERS & SENSORS	ROWE CODE
HANNA	
0.0 - 199.9ms/cm range 9ms/cm range	IC1140
EC/TDS/TEMPERATURE METER - Waterproof with probe, batteries and carry case	IC1400
EDGE DEDICATED EC KIT - Conductivity/TDS/salinity - Includes conductivity probe, bench docking station and stand, wall mount, charger, conductivity standards sachets	IM0784
TPS	
WP81 - pH, salinity and temperature with K=10 sensor plastic and 1m cable	IC11065
WP81 - TDS, pH, mV, temperature, waterproof, RS232 interface with K=1 conductivity/ATC sensor and IJ pH probe	IM1023
WP84 - TDS, temperature, waterproof, RS232 interface with K=1/ATC/temperature sensor and 1m cable	IM1145
AQUA-CPA - TDS, pH, temperature, auto-ranging, waterproof with K=1 conductivity/ATC/temperature sensor and pH sensor and 1m cable	IM0443
CONDUCTIVITY SENSOR - K=1/ATC/Temp, suits Aqua/WP series 1m, glass tip with plastic outer	IP0390
CONDUCTIVITY SENSOR - K=10/ATC/Temp, suits Aqua/WP series 1m, glass tip with plastic outer	IP0393
CONDUCTIVITY SENSOR - K=0.1 & 1/ATC/Temp, suits Aqua/WP series 3m	IP0394
CONDUCTIVITY SENSOR - K=10/ATC/Temp, suits Aqua/WP series 5m	IP0397
CONDUCTIVITY SENSOR - K=1, suits labCHEM CP	IP5000
CONDUCTIVITY SENSOR - K=1/ATC/Temp, suits 90 series 1m	IP0399
CONDUCTIVITY SENSOR - K=0.1 & 1/ATC/Temp, suits 90 series 5m	IP0398
CONDUCTIVITY SENSOR - K=10/ATC/Temp, suits 90 series 1m, glass tip with plastic outer	IP0401
CONDUCTIVITY SENSOR - K=10/ATC/Temp, suits 90 series 5m	IP0402



ROWE CODE
IC1400



ROWE CODE
IC11065



ROWE CODE
IM1145



ROWE CODE
IM0443



MULTIPARAMETER METERS

MULTIPARAMETERS & ELECTRODES		ROWE CODE
MYRON		
ULTRAMETER II 6PFC^E - Conductivity, resistivity, TDS, pH, ORP, free chlorine and temperature		IM1220
TECHPRO II TPH1 - Conductivity, TDS, pH, temperature		IM5600
PROBE pH/ORP - Replacement for Myron 6P		IP5002
HACH		
HQ2100 PORTABLE MULTIPARAMETER - Digital, single input, USB charger and power cable		KM0041
INTELICAL pH ELECTRODE - Laboratory general purposes gel filled, 1m cable (digital combination electrode with built-in temperature sensor, epoxy plastic body)		KE0001
INTELICAL pH ELECTRODE - Laboratory low maintenance gel filled with built in temperature sensor, 1m cable		IP5315
INTELICAL pH ELECTRODE - Laboratory low maintenance gel filled, 3m cable		IP5320
INTELICAL CONDUCTIVITY PROBE - Digital, graphite, 4-pole conductivity cell with a temperature sensor, 1m cable		IP5310
INTELICAL CONDUCTIVITY PROBE - Digital, graphite, 4-pole conductivity cell with a temperature sensor, 3m cable		IP5313
INTELICAL ORP/REDOX ELECTRODE - Laboratory low maintenance gel filled, 1m cable		IP5322
TPS		
WP81 - Portable - pH, mV, wide-range conductivity, TDS, temperature, waterproof, RS232 interface with K=1 conductivity/ATC/Temperature sensor and pH sensor with 1m cable and calibration solutions		IM0303
WP81 - Portable - pH, mV, wide-range conductivity, TDS, temperature, waterproof, RS232 interface with K=1 conductivity/ATC/Temperature sensor and pH sensor with 3m cable and calibration solutions		IM0396
IONODE		
REDOX PROBE - Ag/AgCl reference, PRFO plastic body, BNC connector		IP1306
IH30 REDOX PROBE - Gel Ag/AgCl reference, BNC connector, 1m cable		IP12951
IJ64 REDOX PROBE - Ag/AgCl reference, BNC connector		IP1360
IJ64 REDOX PROBE - BNC connector, 2m cable		IP1366
IJ64-HT REDOX PROBE - BNC connector, 1m cable, high temperature 0 - 100°C		IP1315



ROWE CODE
IM1220



ROWE CODE
KM0041



ROWE CODE
IM0303



ROWE CODE
IP12951

Let us help you make the correct choice. Call us!

TURBIDITY & WATER LEVEL METERS

TURBIDIMETERS / TURBIDITY METERS

HACH	ROWE CODE
2100Q - Portable - Including Stablcal calibration standard sample cells and carry case (USEPA compliant)	IT2120
2100Q - Portable - Including Stablcal calibration standard sample cells, USB power module and carry case (USEPA compliant)	IH0227
2100QIS - Portable - Including Stablcal calibration standard sample cells and carry case (ISO compliant)	IT2125
TL2300 TUNGSTEN LAMP TURBIDIMETER - EPA, 0 - 4000 NTU	IT0170
TSS - Portable, handheld turbidity, suspended solids and sludge blanket level, meter only	IM1171
TSS - Portable, hand-held turbidity, suspended solids and sludge level system, complete system with probe, AA batteries and carrying case - does not include charger	IM1143



ROWE CODE
IT2120

LOVIBOND® TINTOMETER

TB350 IR - 0 - 4000 NTU, infrared LED (860nm) light source, includes calibration standards, sample cells and carry case	KT0074
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ROWE CODE
KT0074

ROYCE WATER

AQUA 22 - Total suspended solids 0 - 20,000 mg/L, 10m cable	IM0823
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TPS

90-FLT - pH, conductivity TDS DO2 turbidity temperature, field data logger, waterproof, RS232 interface, with submersible pH, ORP, YSI DO2, turbidity, K=1/ATC/temperature sensors and 1m cable	IM1326
90-FLT - pH, mV, conductivity TDS DO2 turbidity temperature, field data-logger, waterproof, RS232 interface, with submersible pH, ORP, YSI DO2, K=1/ATC/temperature sensors and 5m cable	IM1325
WP-88 - Portable, waterproof, with 5m cable and turbidity sensor	IT1790



ROWE CODE
IT0480

VELP

TB1 - Portable, 0 - 1000 NTU, IR light source 850nm, ISO 7027 compliant. Includes carry case, 4 calibration standards, 3 empty vials, silicone oil and cloth	IT0480
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WATER LEVEL METERS

SOLINST	ROWE CODE
101 P2/M3 - 30m	IM0388
101 P2/M3 - 60m	IM1176
101 P7/LM3 - 150m (laser marked)	IM1184



ROWE CODE
IM1184

ALCOHOL & COLORIMETER METERS

ALCOHOL METERS	ROWE CODE
ALLA FRANCE	
COMPLETE ELECTRIC EBULLIOMETER -220V, measuring range 0-17% alcohol +/- 0.15%, with safety auto-off feature (prevents overheating)	IE0173
ANTON PAAR	
SNAP 41 - Portable 0.2% V/V accuracy	IA0225
SNAP 51 - Portable 0.1% V/V accuracy	IA0226
GLASSCHEM	
VA1/OH1 - Combination - Volatile acid 1-head, alcohol 1-head	GD0067
HANNA	
HI99151 - For beer analysis - Range -2.00 - 16 pH with FC214 electrode	IM0182
HI9810312 - For beer analysis - Range 0.00 - 12.00 pH, wireless with specialised electrode (titanium)	IM0793
COLORIMETER METERS	ROWE CODE
HACH	
DR900 - Handheld multiparameter, includes sample cells, adaptors and manual	IC1581
DR300 - Chlorine, free + total, 0.02 - 2mg/L and 0.1 - 8mg/L, includes carry case and sample	KC0072
DR300 - Chlorine, free + total, MR, 0.05 - 4mg/L and 0.1-10mg/L, includes carry case and sample	KC0088
DR1900 PORTABLE SPECTROPHOTOMETER - 340-800nm - Includes basic printed instrument manual, dust cover, 1-in. square matched glass sample cells, AA batteries and adapter set	IS0019
HANNA	
Bromine, 0.00 - 8.0mg/L with 2 x sample cuvetts	IC1503
CHECKER - Copper, high range, handheld	IC0602
LOVIBOND® TINTOMETER	
MD100 PHOTOMETER - Chlorine range 0.1 - 6 & 0.1 - 10 mg/L, includes DPD tablets and case	IT5001
MD100 PHOTOMETER - Chlorine free and total, 0.02 - 2 & 0.1 - 8 mg/L, includes reagents, 3 x round glass cuvettes with lid, 2 x plastic cuvettes with lid and plastic case	KP0110
MD100 PHOTOMETER - Duo chlorine tablet range 0.01 - 6.0 & 0.1 - 10 mg/L, DPD powder range 0.02 - 2.0mg/L (24mm vial) & 0.1 - 8.0mg/L (10mm multi vial - 2) in case	KM0025
MD200 PHOTOMETER - 4-in-1 chlorine, pH, cyanuric acid, alkalinity-M, reagents and accessories	KM0038
MD200 PHOTOMETER - 5-in-1 chlorine, pH, cyanuric acid, alkalinity-M (total), calcium hardness, reagents and accessories	KM0019
MD200 PHOTOMETER TEST KIT , Chlorine and pH, with reagents and case	KL1177
MD610 PHOTOMETER - In case	KM0013
MACHEREY-NAGEL	
PF-12 PLUS - Compact/portable photometer, preprogrammed Nanocolor tube tests (16mm OD tubes), includes 4 x tubes, funnel, beaker, syringe, USB cable, calibration cuvette, cleaning cloth and hard case	IP2068
QUANTOFIX RELAX - Reflectometer for evaluation of test strips, automatic	IR0370

ROWE CODE
IE0173ROWE CODE
IA0226ROWE CODE
IC0602ROWE CODE
KP0110

DENSITY METERS & REFRACTOMETERS

DENSITY METERS	ROWE CODE
ANTON PAAR	
DMA 35 - Portable - Basic	ID0922
DMA 35 - Portable - Standard Version	ID0149
DMA 501 - Compact digital meter - bench-top	ID0310
DMA 1001 - Compact digital meter - bench-top	ID0180
METTLER TOLEDO	
DENSITY2GO - Digital - Portable	ID0159



ROWE CODE ID0310

ABBE Refractometer

Developed over a century ago, the ABBE type refractometer is an established standard for the measurement of refractive indices, and today, the ABBE Refractometer is commonly used for a wide variety of analysis including purity studies, quantitative analysis of binary mixtures, determination of soluble sugar BRX and fats, and the measurement of refractive indices of plastic films and glass. In view of its high degree of accuracy and simplicity of operation the ABBE refractometer is the most popular refractometer.



ROWE CODE ID0159

REFRACTOMETERS	ROWE CODE
ANTON PAAR	
ABBE 3000 - Automatic	IR0187
ABBE 3100 - Automatic	IR0188
ABBE 3200 - Automatic	IR0189
METTLER TOLEDO	
EXCELLENCE R5 - 1.32 - 1.58 ND in 0.00002 graduations, benchtop,	IR0122
REFRACTO 30PX - 1.32 - 1.50 RI	IR1725
MYBRIX - Digital, 0 - 95% Brix, 0.1 resolution, +/- 0.2 accuracy, handheld	IR0318



ROWE CODE IR0189

REFRACTOMETERS	ROWE CODE
0 - 32% Brix with ATC plastic case	IR1620
0 - 85% Brix, digital, hand held	IR1730
0 - 27 Baume, 0 - 80°C, digital, hand held	IR1732



METTLER TOLEDO



MICROBIAL CULTURE FEATURE

A microbial culture medium is a mixture of substances that promotes and supports the growth and differentiation of microorganisms. Culture media contain nutrients, energy sources, growth-promoting factors, minerals, metals, buffer salts, and gelling agents (for solid media). The sophisticated formulations of our culture media ensure precise, reproducible, and repeatable microbiological test results. Culture media are still the golden standard in pharmaceutical and food and beverage industry to enumerate and detect microorganisms. Microbial culture media can be prepared as a liquid (broth), a solid (agar plates), or as a semi-solid (deeps). Solid and semi-solid media contain a solidifying agent such as agar or gelatine.

Our portfolio includes a broad range of dehydrated culture media in powder or granules. Our superior granulation technology provides maximum convenience, safety and meets the highest industry performance standards. Ready-to-use media are produced under standardized production conditions and solve numerous problems in microbiology laboratories where time, equipment, and trained personnel are often in short supply. We offer ready-to-use 90- and 55-mm agar plates, liquid media bottles, tubes, or 2 mL ampoules, broths and rinse fluids for your microbial testing application.

Rowe Scientific offer the complete range of Dehydrated Culture Media and supplements for the following applications, from Merck.

OVER 200 PRODUCTS IN THIS PORTFOLIO

- CULTURE MEDIA FOR ENVIRONMENTAL MONITORING
- CULTURE MEDIA FOR MEDIA FILL TESTS
- CULTURE MEDIA FOR MYCOPLASMA TESTING
- CULTURE MEDIA FOR PATHOGEN, SPOILAGE ORGANISM & INDICATOR ORGANISM TESTING
- CULTURE MEDIA SUPPLEMENTS AND ADDITIVES

MICROBIAL CULTURE MEDIA PREPARATION

Microbial culture media preparation is the process of mixing nutrients, agents for buffering and maintaining the osmotic balance, as well as selective inhibitors or indicators to create an agar or broth that supports the growth and the differentiation of microorganisms. Microbial culture media preparation is a routine task in the regular monitoring of spoilage and pathogenic microbes in microbiological testing.

TYPES OF CULTURE MEDIA

Microbial culture media should provide optimal growth conditions for all or specific types of microorganisms. The precise composition of a medium depends on the species being cultivated and the application goal. The medium pH needs to be adjusted depending on the microorganisms. Microbial culture media is classified based on several parameters, like chemical constituents, physical nature, and function.

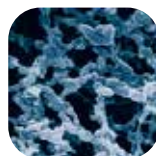




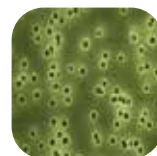
PES



PVDF



MCE



PC



PTFE

Microfiltration is a filtration process which removes contaminants from a fluid or gas by passage through a microporous membrane. A typical microfiltration membrane pore size range is 0.1 to 10 µm. Microfiltration is not fundamentally different from reverse osmosis, ultrafiltration or nanofiltration, except in terms of the size of the molecules it retains.

Filtration Membrane Selection Chart

MATERIAL	FEATURES	APPLICATIONS
NITROCELLULOSE (NC)	<ul style="list-style-type: none"> • Consistent flow rates • High throughputs • Uniform pore structure • Hydrophilic 	<ul style="list-style-type: none"> • Aqueous filtration • Microbiological analysis • Sterility testing • Gravimetric analysis with ashing technique
CELLULOSE ACETATE (CA)	<ul style="list-style-type: none"> • Lowest binding material available • Highest throughput • Strength and dimension stability • Uniform pore structure • Hydrophilic 	<ul style="list-style-type: none"> • Particulate analysis • Tissue culture media sterilization • Protein and enzyme filtration, sterilization • Biological fluid filtration, sterilization
MIXED CELLULOSE ESTERS (MCE)	<ul style="list-style-type: none"> • Naturally hydrophilic • Superior flow rates • Low protein binding • Good chemical compatibility • Superior thermo stability 	<ul style="list-style-type: none"> • Lateral flow assays and dot/slot blotting • Colony counting and sterility testing • General purpose filter
NYLON (PA)	<ul style="list-style-type: none"> • Naturally hydrophilic • Wide chemical compatibility range • Extremely low extractables • Strength and dimensional stability 	<ul style="list-style-type: none"> • Sterilization, clarification of aqueous and organic solvent solutions • HPLC sample preparation
POLYTETRAFLUOROETHYLENE (PTFE)	<ul style="list-style-type: none"> • Naturally hydrophobic • Compatible with strong acids and aggressive solvents • Improved durability and handling 	<ul style="list-style-type: none"> • Filtration of strong acids and aggressive solvents • Venting applications
	<ul style="list-style-type: none"> • Compatible with high temperatures • Chemically and biologically inert 	<ul style="list-style-type: none"> • Filtration of high temperature acids and solvents
POLYCARBONATE (PC)	<ul style="list-style-type: none"> • Smooth flat surface • Precisely controlled cylindrical pores • Narrow pore size distribution • Transparent 	<ul style="list-style-type: none"> • Chemotaxis • Accurate separation of samples by size • Epifluorescence • Cellbiology microscopy
POLYETHERSULPHONE (PES)	<ul style="list-style-type: none"> • Low protein binding • Low extractables • Autoclavable • Wide chemical compatibility range • Strength and dimensional stability 	<ul style="list-style-type: none"> • Cytology • Tissue culture media sterilization • Protein and enzyme filtration, sterilization • Biological fluid filtration, sterilization
	<ul style="list-style-type: none"> • High flow rates • Excellent sample recovery • Controlled pore structures 	<ul style="list-style-type: none"> • Purify and concentrate proteins, enzymes, nucleic acids and antibodies • Desalt
GLASS FIBERS (GF)	<ul style="list-style-type: none"> • Biologically inert • Available with or without acrylic binders • High dirt holding capacity 	<ul style="list-style-type: none"> • Gravimetric analysis • Prefilter to extend final filter life • Clarification of particulate laden solutions
POLYPROPYLENE (PP)	<ul style="list-style-type: none"> • Chemically and biologically inert • More defined pore size and greater retention efficiency than glass prefiltrers • Low fibre release 	<ul style="list-style-type: none"> • Prefilter to extend final filter life • Final filter to noncritical filtrations • Prefiltering solvents and acids
	<ul style="list-style-type: none"> • Wide chemical compatibility range • Extremely low extractables 	<ul style="list-style-type: none"> • Sterilization, clarification of organic solvent solutions • HPLC sample preparation
POLYVINYLIDENE FLUORIDE (PVDF)	<ul style="list-style-type: none"> • Wide chemical compatibility • Excellent mechanical properties • High temperature capabilities • Low extractable levels 	<ul style="list-style-type: none"> • Filtration of high value biomolecules (e.g. monoclonal antibodies)

MICRO FILTERS

Our Price Competitive Range

Filter-Bio are specialised in manufacturing micro filtration products, including lab filtration and industry filtration. With 100,000 clean workshop and ISO9001 certificate they can provide good value, quality products in the micro filtration field.



Membrane Filters

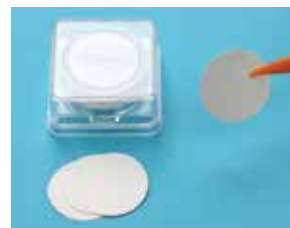
DIAM (mm)	DESCRIPTION	PACK SIZE	ROWE CODE
47	0.22 Micron (PES)	200	FF0286
	0.45 Micron (CA)		FF0278
	0.45 Micron (MCE)		FF0001
	0.45 Micron (PTFE) hydrophilic (PTFE-L)		FF0331
	0.45 Micron (White) gridded sterile		FF0016
	0.8 Micron (MCE)		FF0007
	5.0 Micron (PTFE) Hydrophobic		FF0010



ROWE CODE
FF0010



ROWE CODE
FF0016



ROWE CODE
FF0007



ROWE CODE
FF0286

Syringe Filters

DIAM (mm)	DESCRIPTION	ROWE CODE
25	0.22 Micron (PES) Sterile, individually packed	FF0098
	0.22 Micron (PTFE) Hydrophobic	FF0109
	0.45 Micron Nylon	FF0146
	0.45 Micron (MCE)	FF0221
30	0.22 (MCE), Non sterile	FF0105
	0.45 Micron (PES) With glass fibre pre-filter	FF7557
	0.45 Micron (PES)	FS0034
	0.45 Micron (PVDF) Gamma sterile, individually packed	FF0249



ROWE CODE
FF0146



ROWE CODE
FS0034



ROWE CODE
FF0249



ROWE CODE
FF0098

We have listed by brand, with syringe filters after membrane filters.

MEMBRANE FILTERS - FILTER BIO

PORE (μm)	DIAMETER (mm)	PACK SIZE	ROWE CODE
CELLULOSE ACETATE MEMBRANE FILTER - FILTER-BIO			
0.22	47	200	FF0277
0.22	47	200	FF0472
0.22	142	50	FF0025
0.45	47	200	FF0278
0.45	142	50	FF0030
0.8	142	50	FF0035
CELLULOSE NITRATE MEMBRANE FILTER - FILTER-BIO			
0.22	47	200	FM0028
0.45	47	200	FM0027
0.65	47	200	FM0031
0.80	47	200	FM0029
1.2	47	200	FF0005
3	25	100	FF0386
GLASS FIBRE (BINDER FREE) MEMBRANE FILTER - FILTER-BIO			
0.7 (nominal)	47	100	FF0326
1.2 (nominal)	47	100	FF0327



ROWE CODE
FF0278

*Let us help you make the
correct choice. Call us!*

PORE (μm)	DIAMETER (mm)	PACK SIZE	ROWE CODE
MIXED CELLULOSE ESTERS MEMBRANE FILTER - FILTER-BIO			
0.22	13	400	FF0041
0.22	25	200	FF0046
0.22	142	50	FF0061
0.45	13	400	FF0042
0.45	25	200	FF0011
0.45	142	50	FF0062
0.8	13	400	FF0043
0.8	25	200	FF0003
0.8	142	50	FF0063
1.2	13	400	FF0044
1.2	25	200	FF0047
1.2	142	50	FF0064
3	13	400	FF0045
3	25	200	FF0048
3	142	50	FF0065
0.45 (Black membrane white gridded)	25	200	FF0004
0.45 (White membrane black gridded)	25	200	FF0002
0.22	37	200	FF0049
0.45	37	200	FF0050
0.8	37	200	FF0051
1.2	37	200	FF0052
3	37	200	FF0053
0.22	47	200	FF0054
0.45	47	100	FF0040
0.45	47	200	FF0001
0.8	47	200	FF0007
0.80 (White membrane black gridded)	47	200	FF0448
1.2	47	200	FF0055
1.2 (White membrane black gridded)	47	200	FF0013
3	47	200	FF0012
5	47	200	FF0008
0.22	90	50	FF0056
0.45	90	50	FF0610
0.8	90	50	FF0058
1.2	90	50	FF0059
3	90	50	FF0611
0.45 Black membrane white gridded, sterile	47	200	FF0447
0.8 (Gridded, non sterile)	25	200	FF0348
0.8 (Gridded, sterile)	25	100	FF0347
0.22 White membrane black gridded, sterile	47	200	FF0415
0.45 White membrane black gridded, sterile	47	200	FF0016
0.7 White membrane black gridded, sterile	47	200	FF0017



ROWE CODE
FF0062



ROWE CODE
FF0447

MEMBRANE FILTERS - FILTER-BIO

PORE (µm)	DIAMETER (mm)	PACK SIZE	ROWE CODE
NYLON MEMBRANE FILTER - FILTER-BIO			
0.22	47	200	FF0279
0.45	47	200	FF0280
0.8	47	200	FF0281
1.2	47	200	FF0282
3	47	200	FF0283
5	47	200	FF0284
POLYETHERSULFONE (PES) MEMBRANE FILTER - FILTER-BIO			
0.45	25	200	FM0025
0.1	47	200	FF0285
0.22	47	200	FF0286
0.45	47	200	FF7558
0.8	47	200	FM0012
POLYPROPYLENE MEMBRANE FILTER - FILTER-BIO			
0.22 (Hydrophobic)	47	200	FF0328
0.45 (Hydrophobic)	47	200	FF0329
10 (Hydrophobic)	47	200	FF0015
PTFE MEMBRANE FILTER - FILTER-BIO			
Filter unit in-line, 0.22µm, hydrophobic, stepped hose barb fittings, sterile, indiv wrapped	50	EA	FF0477
Filter unit in-line, 0.45µm hydrophobic, stepped hose barb (7 - 12mm DIA), sterile, indiv wrapped	50	EA	FF0416
3	142	50	FF0071
0.1 (Hydrophobic)	47	200	FF0288
0.22 (Hydrophilic)	47	200	FF0330
0.22 (Hydrophobic)	47	200	FF0289
0.45 (Hydrophilic)	47	200	FF0331
0.45 (Hydrophobic)	47	200	FF0290
1.2 (Hydrophobic)	47	200	FF0291
10 (Hydrophobic)	47	200	FF0009
3 (Hydrophobic)	47	200	FF0292
5 (Hydrophobic)	47	200	FF0010
0.45µm, 150-170µm thickness	Roll - 260mm WIDTH	1m	FF0567
0.45 (Hydrophobic)	90	50	FF0612
PVDF MEMBRANE FILTER - FILTER-BIO			
0.22	47	200	FF0287
0.45 (Hydrophilic)	47	200	FF0006



ROWE CODE
FF0281



ROWE CODE
FF0285



ROWE CODE
FF0288



ROWE CODE
FF0287

FILTER-BIO

SYRINGE FILTERS - FILTER BIO

PORE (μm)	DIAMETER (mm)	PACK SIZE	ROWE CODE
PTFE SYRINGE FILTER - FILTER-BIO			
0.22 (Hydrophilic, non-sterile)	13	100	FF0113
0.45 (Hydrophilic, non-sterile)	13	100	FF0114
0.22 (Hydrophilic, non-sterile)	25	100	FF0115
0.45 (Hydrophilic, non-sterile)	25	1000	FS0096
0.45 (Hydrophilic, non-sterile)	25	100	FF0116
0.22 (Hydrophilic, non-sterile)	30	100	FF0117
0.45 (Hydrophilic, non-sterile)	30	100	FF0118
0.22 (Hydrophobic, non-sterile)	13	100	FF0107
0.45 (Hydrophobic, non-sterile)	13	100	FF0108
0.22 (Hydrophobic, non-sterile)	25	100	FF0109
0.22 (Hydrophobic, non-sterile)	30	100	FF0111
0.45 (Hydrophobic, non-sterile)	30	100	FF0112
PVDF SYRINGE FILTER - FILTER-BIO			
0.22 (Hydrophilic, non-sterile)	30	1000	FS0074
0.45 (Hydrophilic, non-sterile)	30	1000	FF0138
0.22 (Hydrophobic, non-sterile)	25	1000	FS0097



ROWE CODE
FF0114



ROWE CODE
FF0138

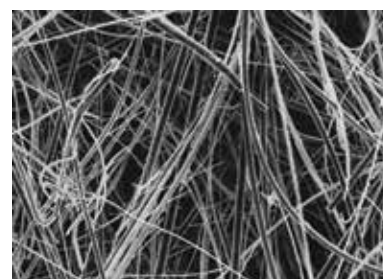
FILTER-BIO

MEMBRANE FILTERS - MERCK

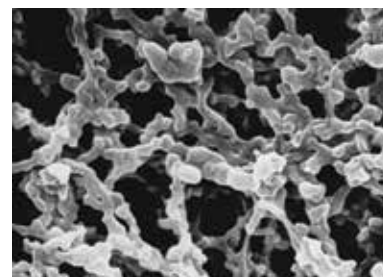
PORE (µm)	DIAMETER (mm)	PACK SIZE	ROWE CODE
CELLULOSE NITRATE MEMBRANE FILTER - MERCK			
1.2	142	50	FF4228
0.65	25	100	FF4401
0.65	47	100	FF4400
0.45 (White gridded)	47	100	FF4252
0.45	142	50	FF5925
GLASS FIBRE MEMBRANE FILTER - MERCK			
QUARTZ	47	100	FF0133
MIXED CELLULOSE ESTERS MEMBRANE FILTER - MERCK			
0.45 (Black gridded, sterile)	13	100	FF4336
0.8 (White gridded)	13	100	FF5011
3	13	100	FF4298
0.1	25	100	FF4181
0.45 (Gridded)	25	100	FF5251
0.45	25	100	FF5250
0.8	25	100	FF5260
0.8 (Gridded, especially clean for asbestos moitoring)	25	100	FF5030
1.2	25	100	FM0004
5	25	100	FF5230
0.22	25	100	FF4410
3	25	100	FF42981
0.45	293	25	FF6012
0.05	47	100	FF4203
0.22	47	100	FF4480
0.22 (White gridded, sterile)	47	600	FF4481
0.45 (Black gridded, sterile)	47	600	FF4212
0.45	47	100	FF4255
0.45 (Black gridded, sterile)	47	600	FF4337
0.45 (White gridded, sterile)	47	600	FF4254
0.45 (Gridded, sterile)	47	600	FF4210
0.8 (White gridded)	47	100	FF5019
1.2 (Gridded)	47	100	FF42915
1.2	47	100	FF4291
5	47	100	FF4293
8	47	100	FF4287
0.22	90	100	FF4483
0.65	90	25	FF4403
3	90	25	FF5202
0.45 (Gridded)	25	100	FF4338
0.8	47	100	FF3535



ROWE CODE
FF4401



ROWE CODE
FF0133



ROWE CODE
FF5251

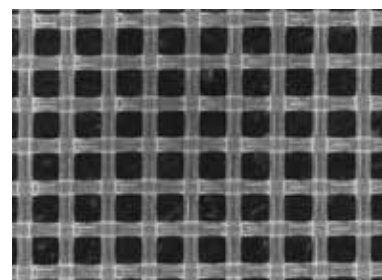


ROWE CODE
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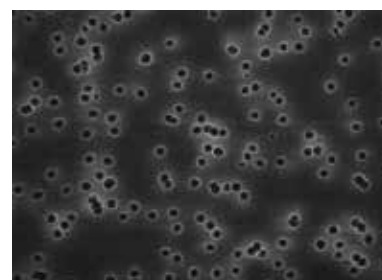
PORE (μm)	DIAMETER (mm)	PACK SIZE	ROWE CODE
MIXED CELLULOSE ESTERS MEMBRANE FILTER - MERCK			
0.025 (Hydrophilic, plain white)	90	25	FF4244
0.7 (S-Pak, white, gridded, sterile)	47	600	FF5248
0.8 (White gridded)	25	100	FF5020
0.1	47	100	FF4182
3	47	100	FF4292
0.45 (White, matched weight pairs)	47	50	FM0001
0.45 (Hydrophilic, black gridded)	47	100	FF4342
MicropreSure® Sampler (Monitor, EO sterilised, 0.45 μm , white gridded)		48	FM0007
NYLON MEMBRANE FILTER - MERCK			
11 (White)	25	100	FF3534
20 (White)	25	100	FF3533
0.45	47	100	FF4251
41	47	100	FM0500
60	47	100	FM0510
0.45 (Plain white)	25	100	FF3532
0.22	47	100	FF4268
10 (Net filter)	47	100	FM0022
100 (Net filter)	47	100	FM0024
120 (Net filter)	47	100	FM0501
20 (Net filter)	47	100	FF0502
30 (Net filter)	47	100	FM0023
POLYCARBONATE MEMBRANE FILTER - MERCK			
0.2	13	100	FF4309
0.4	13	100	FF4352
0.8 (White/clear)	13	100	FF4314
3 (Isopore)	13	100	FF4711
0.2 (Black)	25	100	FF4317
0.2	25	100	FF4319
0.4	25	100	FF4321
0.8 (Isopore)	25	100	FF4707
10 (Isopore)	25	100	FF4713
8 (Hydrophilic Isopore)	25	100	FF0453
0.1	47	100	FF4313
0.2	47	100	FF4308
0.4	47	100	FF4704
0.4 (Isopore)	47	100	FF4327
0.8	47	100	FF4709
10	47	100	FF4333
3 (Isopore)	47	100	FM0056
5 (Isopore)	47	100	FM0057



ROWE CODE
FM0001



ROWE CODE
FM0510

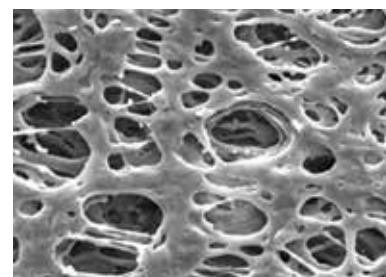


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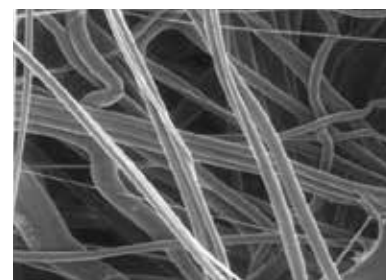
MERCK

MEMBRANE FILTERS - MERCK

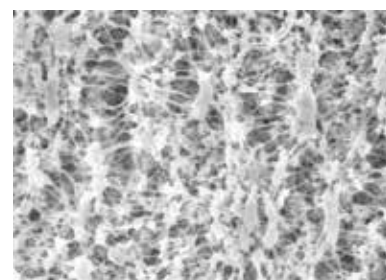
PORE (µm)	DIAMETER (mm)	PACK SIZE	ROWE CODE
POLYETHERSULFONE (PES) MEMBRANE FILTER - MERCK			
0.22 (Hydrophilic WH express plus)	47	100	FF6002
0.22 (Hydrophilic WH express plus)	90	50	FF6003
0.45 (Hydrophilic)	47	100	FF4730
POLYPROPYLENE MEMBRANE FILTER - MERCK			
10	47	100	FF5242
45 (Prefilter screen)	47	100	FF5236
PTFE MEMBRANE FILTER - MERCK			
0.5 (Fluoropore)	25	100	FF4258
1 (Fluoropore)	25	100	FF5928
10 (Millipore)	25	100	FF6770
1 (Fluoropore, hydrophobic with hydrophilic pads)	37	100	FF4078
0.1 (Hydrophilic, white plain Omnipore)	47	100	FF6702
0.2 (Hydrophilic Omnipore)	47	100	FM0013
0.22 (Fluoropore, white)	47	100	FF4323
0.45 (Hydrophilic Omnipore)	47	100	FF6707
0.45 (Fluoropore)	47	100	FF4256
0.5 (Hydrophobic, unlaminate, white plain Fluoropore)	47	100	FF4347
1 (Hydrophilic Omnipore)	47	100	FM0002
10	47	100	FF6775
0.1 (Hydrophilic, white plain Omnipore)	90	25	FF6703
0.45 (Hydrophilic, white plain Omnipore)	90	25	FF6704
PVDF MEMBRANE FILTER - MERCK			
0.45 (Durapore)	142	50	FF5121
0.65 (White, plain, hydrophilic)	142	50	FM0065
0.22 (Durapore)	25	100	FM0035
0.45 (Durapore)	25	100	FF5105
0.22 (Durapore, hydrophobic)	293	25	FM0054
0.1	47	100	FF4263
0.1 (Durapore, hydrophobic)	47	100	FF5156
0.22 (Polyvinylidene Fluoride)	47	100	FF4276
0.45 (Durapore)	47	100	FF5115
0.65 (White, plain, hydrophilic)	47	100	FM0014
0.22 (Durapore)	63.5	25	FM0038
0.45 (Durapore, white, plain)	90	50	FF5120



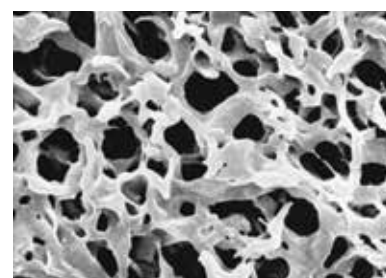
ROWE CODE
FF6003



ROWE CODE
FF5242



ROWE CODE
FF6702



ROWE CODE
FF5156

SYRINGE FILTERS - MERCK

PORE (μm)	DIAMETER (mm)	PACK SIZE	ROWE CODE
MIXED CELLULOSE ESTERS SYRINGE FILTER - MERCK			
0.22 (Millex-GS)	25	1000	FF7505
0.22 (Millex-GS, sterile)	33	250	FF7506
0.22 (Millex-GS, sterile)	33	50	PF3228
NYLON SYRINGE FILTER - MERCK			
0.45 (With glass fiber prefilter Millex HPF HN, non-sterile)	25	50	FF3270
0.45	33	1000	FF3294
0.45	33	250	FF3296
0.45	33	50	FF3293
0.2 (Millex-GN, non-sterile)	33	250	FF0068
POLYETHERSULFONE (PES) SYRINGE FILTER - MERCK			
0.45 (Millex-HP, sterile)	33	250	FF7541
0.45	33	50	FF3295
0.45 (Millex-HP)	33	1000	FF3298
PTFE SYRINGE FILTER - MERCK			
0.2 (Hydrophobic, luer outlet, ethylene oxide, sterilised, Millex FG)	25	50	FF0333
0.2 (Non-sterile, Millex FG)	25	50	FF7548
0.2 (Sterile, hydrophobic, Fluropore, needle outlet)	25	25	FF8000
0.45 (Fluoropore, Millex, disposable)	4	100	CM2383
PVDF SYRINGE FILTER - MERCK			
5 (Millex-SV, Durapore)	25	250	FF7795
0.22 (Millex-GV, Durapore)	33	250	FF7796
0.45 (Millex-HV, Gamma sterile)	33	1000	FF7556
0.45 (Millex-HV)	33	250	FF7532
0.45 (Millex-HV)	33	50	FF7537
0.45 (Millex-HV, Gamma sterile)	33	250	FF7545
0.45 (Millex-HV)	33	1000	FF7528



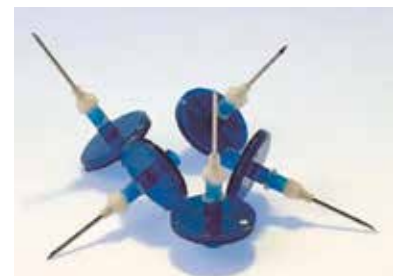
ROWE CODE
FF7506



ROWE CODE
FF3296



ROWE CODE
FF3295



ROWE CODE
FF8000



ROWE CODE
FF7537

FILTER ACCESSORIES

FILTER HOLDER



47mm SWINNEX
ROWE CODE: PF1258

These filters are used to ultra clean or sterilize small volumes of liquids dispensed by syringe. Connect Swinnex 47mm filter holder with tubing to pressurised reservoir or automatic filling machine for filtering larger volumes.

VACUUM PUMP MANIFOLD



STAINLESS STEEL 6 OUTLET
ROWE CODE: HV1277

Vacuum manifolds support simultaneous filtration of three or six test samples. Manifolds connect to single vacuum source and use separate control valves at each station for independent operation.

VACUUM PUMP



OIL FREE PISTON R-SERIES
18L/MIN
120MBAR 95W WITH VACUUM
GAUGE AND MOISTURE TRAP
ROWE CODE: IP0109

Applications include vacuum filtration, filtration for suspended solid (SS) tests, filtration for microbiology tests, vacuum degassing, composites vacuum impregnation, replacement for water jet pumps, vacuum aspiration and vacuum desiccators.

FILTER HOLDER WITH GLASS FUNNEL



47mm INCLUDES 300mL GLASS
FUNNEL, FRITTED GLASS BASE,
1L GLASS SOLVENT COLLECTION
FLASK, ANODIZED ALUMINUM
CLAMP, STANDARD SIZE
ROWE CODE: FV0001

A complete assembly constructed entirely of borosilicate glass with an aluminium clamp. Recommended for HPLC solvent filtration.

HAND OPERATED VACUUM PUMP



WITH GAUGE TO FIT
6mm TUBING
ROWE CODE: PV1700

Light, portable hand operated vacuum pump with gauge, attains a vacuum of 625mm Hg. Pumping rate is 15mL per stroke. Built in vacuum release valve. Can be used as pressure pump by transferring release valve cap to vacuum port. Nozzle fits standard 6mm i.d. tubing. (Tubing not included)

FILTER HOLDER FUNNEL



47mm POLYSULFONE 350mL
FUNNEL, STEM & NO.8
STOPPER GRAVITY SEAL
ROWE CODE: PF1180

A two-piece polysulfone analytical funnel with a unique gravity sealing design. No clamps or locking devices to manipulate. Instead, the Gravi-Seal™ allows easy one-handed operation without danger of filter bypass or sample leakage. Takes standard 47mm membranes.

FILTER HOLDER WITH RECEIVER



47MM, 250ML FUNNEL AND
RECEIVER, POLYSULFONE
ROWE CODE: PF1216

Polysulfone (PSF) filter holders have an upper chamber with either a receiver or funnel. 250mL upper chambers and 250mL receivers (all are graduated in 50mL increments). Holders accept 47mm diameter membranes. Also available in 500mL (Rowe code PF1202) and 1000mL (Rowe code PF1209)

FILTER HOLDER GLASS FUNNEL



47mm 300mL, CLAMP,
SUPPORT BASE,
SIZE NO.8 STOPPER
ROWE CODE: GF1154

The 47mm glass filter holder is designed for vacuum filtration of aqueous and solvent solutions (<500mL) or for analysis of particulate or microbiological contamination. These holders have a sintered glass base which is recommended for general filtration.

See pages 394-395, for typical configurations

MICROSCOPES

BIOLOGICAL MICROSCOPES - NINGBO		ROWE CODE
BIOLOGICAL DME5 - LED BINOCULAR		
• 4x, 10x, 40x and 100x achromat objectives • 20x WF eyepieces • 3W LED illumination • built-in USB camera		EM0166
BIOLOGICAL E5 SERIES BINOCULAR		
• 4x, 10x, 40x and 100x achromat objectives • 10x WF eyepieces • 3W LED illumination		EM0141
BIOLOGICAL E5 SERIES TRINOCULAR		
• 4x, 10x, 40x and 100x achromat objectives • 10x WF eyepieces • 3W LED illumination		EM0142
BIOLOGICAL E5 SERIES BINOCULAR - DME5-B-LED		
• 4x, 10x, 40x and 100x achromat objectives • Built-in digital camera head • WF eyepieces • Mechanical stage • 3W LED		EM0194
BIOLOGICAL E5 SERIES BINOCULAR - DME-500E		
• 4x, 10x, 40x and 100x achromatic objectives • Built-in digital camera head • W-PL10x18 eyepieces • Built in movable stage • 3W LED		EM0241
BIOLOGICAL STUDENT M SERIES MONOCULAR		
• 4x, 10x and 40x objective • Metal stage • Tungsten illumination		EM0132
BIOLOGICAL STUDENT M SERIES MONOCULAR		
• 4x, 10x and 40x objective • Adjustable LED illumination • Mechanical stage.		EM0133
BIOLOGICAL		
• 10 inch touch screen • Zoom lens 0.7x-5x • 4MP camera • 16g memory • LED ring light • Pillar stand		EM0175
EX20-B-H BINOCULAR		
• 4x, 10x, 40x and 100x plan achromat (infinity) objectives • 10x WF eyepieces • 100-240VAC • Rackless mechanical stage • NA 1.25 Koehler condenser • 6V 20W halogen illumination		EM0160
EX20-BLED BINOCULAR		
• 4x, 10x, 40x and 100x plan achromat (infinity) objectives • Mechanical stage • NA 1.25 Koehler condenser • 3W LED illumination • 100-240VAC		EM0237
EX30-T-LED		
• 4x, 10x, 40x and 100x plan achromat (infinity) objectives • 30° gemel trinocular head • HEP PL10 x/20mm (AD) eyepieces • 3W LED • Mechanical stage • Koehler NA 1.25 condenser and tools		EM0181
INVERTED ICX41-T TELESCOPE		
• 4x, 10x, 20x and 40x LWD infinity plan pc objectives • 2 x E/P • Trinocular head • 5:5 Split • ADJ condenser • Mechanical stage • Extra plate and dish holder • Slide and teraseki holders • Green & LBD filters		EM0167
STEREO & METALLURGICAL MICROSCOPES - NINGBO		ROWE CODE
METALLURGICAL BH200M SERIES		
• Reflection/transmission • Trinocular • Reversed quadruple N/P • Standard software		EM0212
STEREO MODEL ST30-2L		
• 10x widefield eyepieces • 2x/4x objectives • Halogen dual illumination • Pillar stand		EM0148
STEREO ZOOM SZM7045TR		
• Trinocular head • 7x - 45x magnification • SZMST2W stand • Top and bottom LED lights		EM0228
STEREO ZOOM SZM7045TR		
• Trinocular head • 7x - 45x magnification • Camera (OD300) • Universal stand with double arm (SZ-STL2) • LED ring light (LY220) • + 2x eyepiece with 1x reticle		EM0169
STEREO ZOOM TRINOCULAR		
• ST2 stand (SZ6745TR+SZMST2)		EM0182
STEREO ZOOM BINOCULAR		
• 5W LED incident and transmitted • Pair of 10 x 20mm eyepieces • 0.5x, 1.5x and 2.0x AUX objectives		EM0216
STEREO ZOOM BINOCULAR		
• 5W LED ring light and transmitted illumination • pair of 10 x 20mm eyepieces		EM0221

ROWE CODE
EM0142ROWE CODE
EM0132ROWE CODE
EM0148

MICROSCOPE COVER SLIPS

MICROSCOPE COVER SLIPS		SIZE (mm)	THKNS (#)	PACK SIZE	ROWE CODE
Borosilicate 3.3 Glass		22 x 22	1	200	EM0116
		22 x 32	1	100	EM0117
		22 x 32	1.5	100	EC0015
		22 x 40	1	100	EM0118
		22 x 50	1	100	EM0119
		22 x 60	1	100	EC0007
		24 x 24	1	200	EC0005
		24 x 32	1	100	EC0006
		24 x 40	1	100	EM0120
		24 x 50	1	100	EM0121
		24 x 55	1	100	EM0123
		24 x 60	1	100	EM0122
		Super White Glass		22 x 22	1
22 x 22	1.5			200	EM0170
22 x 40	1			100	EC0010
22 x 50	1			100	EC0012
22 x 60	1			100	EC0014
24 x 24	1			200	EC0008
24 x 32	1			100	EC0009
24 x 40	1			100	EC0011
24 x 50	1			100	EC0013



ROWE CODE EC0013 & EM0116



ROWE CODE EM0117

MICROSCOPE COVER SLIPS - CIRCULAR		SIZE (mm)	THKNS (#)	PACK SIZE	ROWE CODE
Super White Glass		12	1	100	EM0161
		12	1.5	100	EM0164
		13	1	100	EM0162
		25	1	100	EM0163
		25	1.5	100	EM0165



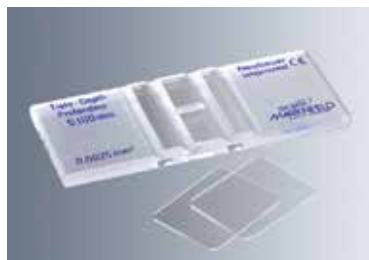
ROWE CODE EM0164

MARIENFELD MICROSCOPY

MARIENFELD HISTOBOND		ROWE CODE
COVER SLIPS • Number 1 • CE marked • Borosilicate glass • Superior		
22 x 22mm, 2-part plastic box		EC0030
22 x 32mm, hinged lid plastic box		EC0031
22 x 40mm, hinged lid plastic box		EC0035
22 x 50mm, hinged lid plastic box		EC0027
24 x 40mm, hinged lid plastic box		EC0032
24 x 50mm, hinged lid plastic box		EC0028
Round 10mm, 2-part plastic box		GC5500
MICROSCOPY ACCESSORIES		
Haemocytometer counting chamber, Neubauer-improved bright-line, without clamps, superior		EH0003
Laboratory markers, black, ultra fine tip, odourless and non toxic, superior		EL0002
MICROSCOPE SLIDES • 76 x 26mm • Thickness 1mm • CE marked • White glass • Superior		
Histobond+, for adhesion of tissue sections, white labelling area, edges ground at 90 degrees		GM2708
Histobond+M, for adhesion of tissue sections, white labelling area, edges ground at 90 degrees		EM0176
Histobond, for adhesion of tissue sections, twin frosted area (20 x 20mm), edges ground at 90 degrees		EM0178
Unimark, for adhesion of tissue sections, white labelling area, edges ground at 90 degrees		EM0180
Microscope slides in sealed aluminium bag, twin frosted area (20 x 20mm), edges ground at 90 degrees		GM3155
Microscope slides in sealed aluminium bag, edges ground at 90 degrees		EM0179



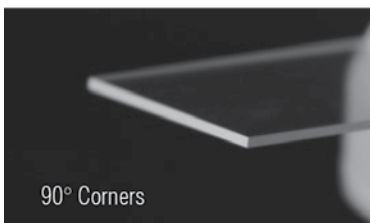
ROWE CODE EC0031



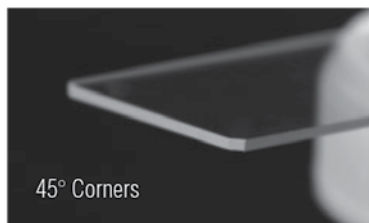
ROWE CODE EH0003



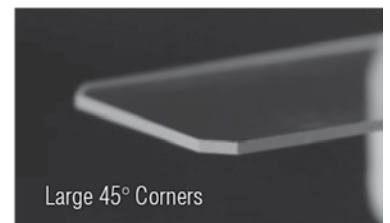
ROWE CODE EM0179



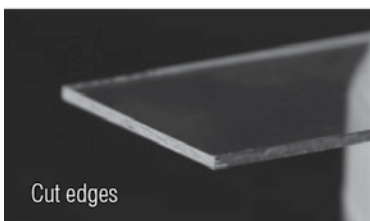
90° Corners



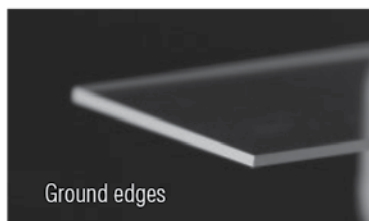
45° Corners



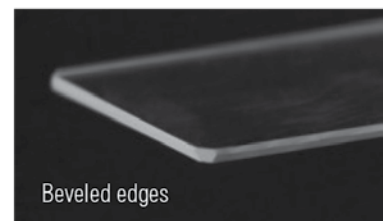
Large 45° Corners



Cut edges



Ground edges



Beveled edges

MICROSCOPE SLIDES

MICROSCOPE SLIDE - GROUND EDGES		SIZE (mm)	ROWE CODE
<ul style="list-style-type: none"> • 50 pieces per box • Hinged-lid box • Individually wrapped • Aluminium vacuum pack 			
STANDARD GRADE			
90° corners	Plain	75 x 25 x 1	EM0224
SUPER GRADE			
45° clipped corners	Frosted area on one end, one side with white marking area. Printable - similar to printaid microscope slides	75 x 25 x 1.1	EM0115
	Frosted area on one end, both sides.		EM0110
	Frosted area on one end, one side.		EM0106
	Ground edges. Plain.		GM0006
90° corners	Frosted area on one end, one side with white marking area. Printable - similar to printaid microscope slides		EM0114
	Frosted area on one end, both sides.		EM0109
	Frosted area on one end, one side.		EM0105
	Ground edges. Plain.		EM0076
SUPER WHITE GLASS			
45° clipped corners	Frosted area on one end, one side with white marking area. Printable - similar to printaid microscope slides	75 x 25 x 1.1	EM0113
	Frosted area on one end, both sides.		EM0108
	Frosted area on one end, one side.		EM0104
	Plain		EM0101
90° corners	Frosted area on one end, one side with white marking area. Printable - similar to printaid microscope slides		EM0112
	Frosted area on one end, both sides.		EM0107
	Frosted area on one end, one side.		EM0103
	Plain		EM0100



ROWE CODE
EM0224



ROWE CODE
GM0006



ROWE CODE
EM0114



ROWE CODE
EM0107

CITOTEST®

MICROSCOPE SLIDE Positive charged PCB series		DIMENSIONS (mm)	PACK SIZE	ROWE CODE
Super grade with fine polished edges. Similar to colour-plus PCB adhesion microscope slides	Green marking area, 90 degree corners	75 x 25 x 1.1	72	EP0026
	Pink marking area, 90 degree corners			EP0027
	White marking area, 45 degree corners			EP0011
	White marking area, 90 degree corners			EP0010
Super white glass with fine polished edges and a white marking area. Similar to colour-plus pcb adhesion microscope slides	45 degree corners	75 x 25 x 1.1	72	EP0009
	90 degree corners			EP0008



MICROSCOPE SLIDE Positive charged PCI series		DIMENSIONS (mm)	PACK SIZE	ROWE CODE
Super grade with fine polished edges and a white marking area. Similar to colour-plus PCI microscope slides	45 degree corners	75 x 25 x 1.1	72	EP0019
	90 degree corners			EP0018
Super white glass with fine polished edges and a white marking area. Similar to colour-plus PCI microscope slides	45 degree corners			EP0017
	90 degree corners			EP0016



MICROSCOPE SLIDE Positive charged PCL series		DIMENSIONS (mm)	PACK SIZE	ROWE CODE
Super grade with fine polished edges and a white marking area. Similar to colour-plus PCL microscope slides.	45 degree corners	75 x 25 x 1.1	72	EP0015
	90 degree corners			EP0014
Super white glass with fine polished edges and a white marking area. Similar to colour-plus PCL microscope slides.	45 degree corners			EP0013
	90 degree corners			EP0012



MICROSCOPE SLIDE STORAGE

MICROSCOPE SLIDE STORAGE BOX	COLOUR	ROWE CODE
Holds 50 (25 x 75mm) slides ABS plastic, Cork sheet on bottom and index list inside lid	Blue	PS0380
	Grey	PS0202
	Red	PS0381
Holds 100 (75/76 x 25/26mm) slides With steel lock, ABS plastic and mounted index card	Grey	PM4056
Holds 100 slides With snap lock closure	Blue	EM0233
	Grey	EM0231
	Metallic Grey	EM0235
	Orange	EM0232
	White	EM0234
Holds 100 (76.2 x 25.4mm) slides With steel lock, ABS plastic and mounted index card	Orange	PM4057
	Red	PM4058
	White	PM4059
Holds 100 (25 x 75mm) slides With steel lock, ABS plastic and mounted index card	Blue	PM4055
Holds 100 (25 x 75mm) slides ABS plastic with mounted index card	Red	PM4060



ROWE CODE
PM4057



ROWE CODE
PM4055

MICROSCOPE SLIDE STORAGE CABINET	COLOUR	ROWE CODE
Pathology/histology slide storage cabinet Baspath EXT DIM 485 x 480 x 146mm, steel with white powder coating, stackable/lockable, each unit contains 14 x 400 slide drawers, total capacity approx. 5600 slides	White	HP0047
Pathology/histology slide storage cabinet Baspath-N EXT DIM 485 x 480 x 146mm, steel with orange skinned powder coat, stackable/lockable, each unit contains 14 x 400 slide drawers, total capacity approx. 5600 slides	Orange	HP0049
Pathology/histology slide storage cabinet Luxpath EXT DIM 477 x 402 x 126mm, green plastic powder coated steel, 6 drawers each with 2 slots (un-divided), capacity 4500 slides/unit	Green	HP0057
Pathology/histology slide storage cabinet Luxpath EXT DIM 477 x 402 x 126mm, tan plastic powder coated steel, 6 drawers each with 2 slots (divided in 3 parts), capacity 4500 slides/unit	Tan	HP0056
Pathology/histology slide storage cabinet Luxpath, EXT DIM 477 x 402 x 126mm, tan plastic powder coated steel, 6 drawers each with 2 slots (un-divided), capacity 4500 slides/unit	Tan	HP0059
Pathology/histology slide storage cabinet Luxpath, EXT DIM 477 x 402 x 126mm, white plastic powder coated steel, 6 drawers each with 2 slots (divided in 3 parts), capacity 4500 slides/unit	White	HP0054
Pathology/histology slide storage cabinet luxpath, EXT DIM 477 x 402 x 126mm, white plastic powder coated steel, 6 drawers each with 2 slots (un-divided), capacity 4500 slides/unit	White	HP0058



ROWE CODE
HP0047

MICROSCOPE SLIDE ACCESSORIES

SLIDE TRAY	COLOUR	PACK SIZE	ROWE CODE
20 place tray for 25 x 75mm slides, with fast-read, dividers (without lid), polystyrene	Blue	EA	PS0238
	Green		PS0236
	Pink		PS0237
	White		PS0179
10 place tray for 25 x 75mm slides, with dividers and lid, cardboard	-	5	PS0178
20 place tray for 25 x 75mm slides, with dividers and lid, cardboard	-	5	PS0177
9 place tray for 25 x 75mm slides (also holds 26 x 76mm slides), without dividers or lid, cardboard	-	10	PS0221
20 place tray for 25 x 75mm slides, with single divider to make 2 sections, each section without individual dividers, no lid, (type 'E'), cardboard	-	50	HS0360
20 place tray for 25 x 75mm slides (also holds 26 x 76mm slides), with fast-read, dividers (without lid), cardboard	-	10	PS0222

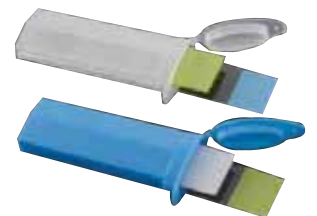


ROWE CODE
PS0238



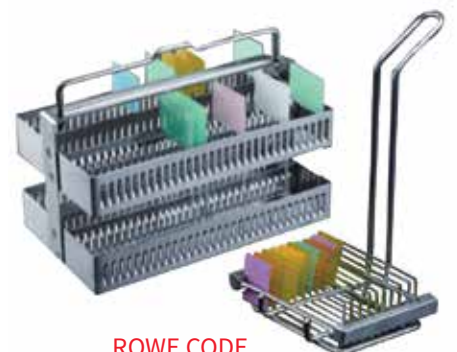
ROWE CODE
PS0178 & PS0177

SLIDE MAILERS	COLOUR	PACK SIZE	ROWE CODE
Holds 1 x (25 x 75mm) slide, horizontal type, polypropylene	Neutral	200	PS0295
Holds 2 x (25 x 75mm) slides, horizontal type, polypropylene	Neutral	100	PS0180
Holds 2 x (25 x 75mm) slides, vertical type, polypropylene	Blue	100	PS0181
	Neutral		PS0307
Holds 3 x (25 x 75mm) slides, horizontal type, polypropylene	Neutral	100	PS0182
Holds 5 x (25 x 75mm) slides, polypropylene	Neutral	10	PS0201
Holds 2 x (25 x 75mm) slides, cardboard with dividers and lid		50	PS0200
Holds 5 x (25 x 75mm) slides, polypropylene	Neutral	10	PS0183



ROWE CODE
PS0307 & PS0181

SLIDE STAINING	ROWE CODE
Schiffedercker Staining Jar (glass jar and lid), Holds 10 x (25 x 75mm) slides	PS0196
Papanicolau Staining Jar (glass jar and lid), Holds 20 x (25 x 75mm) slides	PS0198
Staining Jar (glass jar and lid), Holds 30 x (25 x 75mm) slides	PS0197
Coplin Staining Jar (glass jar and lid), Holds 5 x (25 x 75mm) slides	PS0194
Staining Jar (glass jar and lid), Holds 60 x (25 x 75mm) slides	PS0199
Hellendhal Staining Jar (glass jar and lid), Holds 9 x (25 x 75mm) slides	PS0195
Papanicolau Staining Rack - 20 place, stainless steel	PS0193
Staining Rack - 30 place, stainless steel	PS0191
Staining Rack - 60 place, stainless steel	PS0192



ROWE CODE
PS0192

ANTIBIOTIC MILK SCREENING - CHARM SCIENCES



ANTIBIOTIC SCREENING ROSA (Rapid One Step Assay) Lateral Flow Tests

The Gold Standard. Leading residue diagnostic tests used in 75% of the dairy industry worldwide.



HARDWARE/TEST STRIP	ROWE CODE
EZ-Lite	GC0474
EZ Reader 240V	GC0398
Beta Lactams, 1 minute test	GL0010
Beta Lactams, 3 minute test	GC0400
Beta Lactams, 8 minute test	GI0011
EZ Reader Lens cleaning kit	GC0183
Lateral flow bulb pipet 300µl, 500/box	GC0200
Penicillin G Standard 0.0080+/-0.00002 IU/mL, 5 x 1000mL	GP1218

Combo Strip, Beta Lactam/Tetracycline, 2 min test	GL0014
Combo Strip, Beta Lactam/Tetracycline, 8 min test	GL0013
Trio, BL/Tet/Sulpha Drugs, 3 minute test	GL0015
Upper lens only for EZ Reader, EZ-M Reader and EZ Lite units	GC0492
Daily performance test strip, Lateral Flow Low/High	GC0476
Incubator, Lateral Flow, 2 place, 8 min test, 56C	GC0472
Incubator, Lateral Flow, 3 min, 4 place digital 56°C, 230 VAC	GI0008



Is your pasteurisation effective?

- Fast-Alkaline Phosphatase Test for Dairy Products;
- Test results for milk in 45 seconds (applications available for cream and flavoured milk);
- Detection limit to 20 milliunits per litre (mU/L) phosphatase;
- Approvals Australia-wide.



HARDWARE/TEST KIT	ROWE CODE
novalUM IIX	IM0216
F-AP Kit, Fast method for detection of Alkaline Phosphatase - 100 tests.*	GC0155
F-AP, Fast Alkaline Phosphatase kit - 25 tests*	GC0188
Temperature probe for F-AP test*	GC0159

*For use with the novalUM IIX

Antibiotic testing in milk Broad Spectrum Inhibition test

HARDWARE/TEST KIT	ROWE CODE
Broad Spectrum Antibiotic text, Cowside II*	GC0401

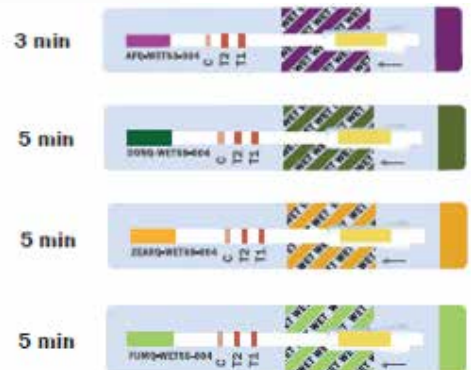
*Can be used without a reader

Aflatoxin M1 Screening (Milk)

Dairy. Aflatoxin M1

The only **quantitative** Afla M1 test that enables dairies and food manufacturers to detect at the EU MRL Level of **0.5 ppb (500 ppt)**

HARDWARE/TEST KIT	ROWE CODE
EZ Reader 240V	GC0398
Rosa EZ-Lite Reader complete with battery	GC0474
Aflatoxin M1 Test Strip, 500ppb	GC0397



ORBITAL MIXERS

RATEK - ORBITAL SHAKERS	ROWE CODE
<p>OM8 - XLarge</p> <ul style="list-style-type: none"> • Large capacity mixer with a 25mm orbital action • 700 x 530 mm platform • Digital speed and timer control • 'Motion interrupt' feature 	IO1006
<p>OM7 - Large</p> <ul style="list-style-type: none"> • 500 x 500mm platform • Digital speed and timer control • 'Motion interrupt' feature • Fitted with a non slip mat 	IO1004
<p>OM1 - Compact</p> <ul style="list-style-type: none"> • 210 x 180mm platform • Variable analogue speed control • Fitted with a non slip mat 	IO1000



ROWE CODE
IO1004

RATEK - ORBITAL SHAKING INCUBATORS	ROWE CODE
<ul style="list-style-type: none"> • Large LED digital temperature and speed display • 3 x user-preset programs for speed and time • 40 - 400 RPM 	
<p>OM25 COOLING - XLarge</p> <ul style="list-style-type: none"> • 700 x 530mm orbital mixing platform • Ambient + 7°C to 70°C (can control below ambient with external supply of cooled water) • Cold water heat exchanger for work below ambient • Insulated cabinet for temperature stability <p><i>Also available with taller cabinet. ROWE CODE II1083</i></p>	II0013
<p>OM15 HEATING - Large</p> <ul style="list-style-type: none"> • 600 x 450mm orbital mixing platform • Ambient +7 to 70°C operation • Insulated cabinet for temperature stability 	IO1011
<p>OM11 HEATING - Medium</p> <ul style="list-style-type: none"> • 400 x 400mm square orbital mixing platform • Ambient +7 to 70°C operation • Fully transparent cabinet for easy observation <p><i>Also available with RR10 - Universal Rack for Medium Mixer/Incubator. ROWE CODE IO10121</i></p>	IO1012



ROWE CODE
II1083

ROCKING PLATFORM & ROLLER TUBE MIXERS

RATEK - ROCKING PLATFORM MIXERS

ROWE
CODE

- Long-life brushless AC motor • 350mm square platform
- Super quiet operation

RPM5 - Medium - Digital

- Tilt-adjustable rocking motion
- Variable speed between 4 to 57 RPM
- Reproducible digital speed and timer control

IM2885

ERPM4 - Medium - Analogue

- Variable speed between 5 to 50 RPM

IM2884



ROWE CODE
IM2884

RATEK - ROLLER TUBE MIXERS

ROWE
CODE

- Variable speed between 10 and 60 RPM • 12V DC Input
- Ball race roller mounting for quiet operation

BTR10 - 10 Roller Tube Roller Mixer

- Mixes up to 54 x 5mL blood tubes
- Tilt & roll motion (also available without tilt)

IR0044

BTR10P - 10 Roller Tube Roller Mixer - Parallel No Tilt

- Mixes up to 54 x 5ml blood tubes
- Rolling only motion, no tilt

IR0089

BTR5 - 5 Roller Tube Roller Mixer

- Mixes up to 24 x 5mL blood tubes
- Tilt & roll motion (also available without tilt)

IR0045

BTR5P - 5 Roller Tube Roller Mixer - Parallel No Tilt

- Mixes up to 24 x 5mL blood tubes
- Rolling only motion, no tilt

IR2040



ROWE CODE
II0013

ROTARY MIXERS & SUSPENSION DISKS

RATEK - ROTARY MIXERS	ROWE CODE
RM4 - Double Length <ul style="list-style-type: none"> • End over end mixing action • 32 clips (suitable for 44mm tubes) • Includes 2 x RM4CT clip carriers 	IM0091
RM4C - With universal carrier	IR0018
ROTARY TUBE MIXER - Without disc and clips <ul style="list-style-type: none"> • Variable speed range from 10 to 60 RPM • Adjustable disc angle from horizontal to vertical 	IM2816
ROTARY TUBE MIXER - With disc and clips <ul style="list-style-type: none"> • Variable speed range from 10 to 60 RPM • Adjustable disc angle from horizontal to vertical (nominate the size of clips required (up to 20 - can be combination) 	IM2814
ROTARY TUBE MIXER - With disc and clips <ul style="list-style-type: none"> • Variable speed range from 10 to 60 RPM • Adjustable disc angle from horizontal to vertical • Includes SD1-EP disc - Fitted with 2 rows of 20 x 1.5mL tube clips 	IM0522



ROWE CODE
IR0018

RATEK - SUSPENSION DISKS FOR ROTARY MIXERS	ROWE CODE
DUAL LAYER SUSPENSION DISKS	
Lower Disc: 20 x Eppendorf clips • Upper Disc: 10 x 10mL and 10 x 50mL clips	IM2845
Lower Disc: 16 x 50mL clips • Upper Disc: 20 x 50mL clips	IM0260
Lower Disc: 20 x 15mL clips • Upper Disc: 20 x 15mL clips	IM0518
Lower Disc: 20 x 50mL clips • Upper Disc: 20 x 15mL clips	IM0523
Lower Disc: 20 x 50mL clips • Upper Disc: 20 x 50mL clips	IM0517
SINGLE LAYER SUSPENSION DISKS (Suits RSM6 + RSM7)	
Holds 25mm D tubes	IM2819
Holds 28mm D tubes	IM2809
Holds 44mm D tubes	IM2821
Holds 4 x 48mm D bottles	IM2813
Holds 20 x 10mL tubes	IM2860
Holds 40 x 1.5mL tubes	IM2865
Holds 6 x 50mL, 6 x 15mL and 6 x 1.5mL tubes (suits TSM6)	IM2867



ROWE CODE
IM2814



ROWE CODE
IM0260



ROWE CODE
IM2865

VORTEX MIXERS

RATEK

RATEK - VORTEX MIXERS **ROWE CODE**

PERSONAL VORTEX MIXER VM1 - With silicon cup
*Our top selling product from the RATEK range.
 Australian made - Australian trusted quality.*

- Manual mode for activation with downward pressure
- Automatic mode for permanent operation • 200 - 2700 RPM

IV1040

MULTI TUBE VORTEX MIXER MTV1

- Platform size of 320 x 200mm • 200 - 3000 RPM
- LCD digital timer with countdown or pulse mode
- Will accommodate a whole rack of test tubes

IV1046



**TOP
SELLER**

ROWE CODE
IV1040



ROWE CODE
IV1046

**VELP
SCIENTIFICA**

VELP - VORTEX MIXERS **ROWE CODE**

CLASSIC VORTEX MIXER

- With touch sensor or continuous mode
- Low profile • Up to 3000 RPM

IM1062

TX4 DIGITAL VORTEX MIXER - With IR Sensor

- Up to 3000 RPM • LCD display

IM1081

WIZARD IR VORTEX MIXER

- With Infrared sensor for tube detection or continuous mode
- Low profile • Up to 3000 RPM

IM1063

ZX3 ADVANCED VORTEX MIXER

- With touch sensor or continuous mode • Up to 3000 RPM

IV1085

ZX4 ADVANCED IR VORTEX MIXER

- With IR sensor tube detection or continuous mode • Up to 3000 RPM

IM0295



ROWE CODE
IM1063



**BEST
SELLER**

ROWE CODE
IV1085

**See also STIRRING section for
Magnetic Stirrers.**

VORTEX MIXER ACCESSORIES

Choose the right accessories

Vortex mixers can be connected to many different platforms and accessories, creating a versatile solution - ideal for any need.

Attachments are easily and securely fixed with simple pressure and ensure excellent performance in terms of mixing with different kinds of tubes and containers. When using platforms, do not exceed speed of 800 RPM as high speeds may cause the sample to spill.

VELP - VORTEX MIXER ACCESSORIES	ROWE CODE
<p>FOAM STAND for 19 x 1.5mL Eppendorf tubes. Suits Velp Classic and Wizard</p>	 <p>IM1064</p>
<p>FOAM STAND for 4 x 29mm test tubes</p>	 <p>IM1072</p>
<p>FOAM STAND for 5 x 16mm test tubes. Suits Velp Classic and Wizard</p>	 <p>IM1066</p>
<p>FOAM STAND for microtitre / PCR plate. Suits Velp ZX3, ZX4, TX4, Classic and Wizard models</p>	 <p>IM1067</p>
<p>FOAM STAND with customisable soft top. Suits Velp Classic and Wizard</p>	 <p>IM1065</p>
<p>FOAM SUPPORTING PLATE 94mmD. Suits Velp Classic</p>	 <p>IM1069</p>
<p>RUBBER SUPPORTING PLATE 50mmD. Suits Velp Classic and Wizard</p>	 <p>IM1068</p>

FORCED AIR CONVECTION OVENS - MMM MED CENTRE

ROWE CODE IO0128
Venticell 22 -
Eco line,
up to +250°C **22L**

Capacity Litres	22
Internal Dimensions (mm) W x D x H	240 x 320 x 300
External Dimensions (mm) W x D x H	405 x 560 x 610
Temp Range (°C)	Ambient +10 to 250
Number of trays	2 chrome plated
Weight (approx) (kg)	31
Power Supply	230V/50Hz



ROWE CODE IO0128



*ROWE CODE IO0129

ROWE CODE IO0129
Venticell 55 -
Eco line,
up to +250°C **55L**

Capacity Litres	55
Internal Dimensions (mm) W x D x H	400 x 370 x 350
External Dimensions (mm) W x D x H	620 x 640 x 680
Temp Range (°C)	Ambient +10 to 250
Number of trays	2 chrome plated
Weight (approx) (kg)	55
Power Supply	230V/50Hz

ROWE CODE IO0130
Venticell 111 -
Eco line,
up to +250°C **111L**

Capacity Litres	111
Internal Dimensions (mm) W x D x H	540 x 370 x 530
External Dimensions (mm) W x D x H	760 x 640 x 860
Temp Range (°C)	Ambient +10 to 250
Number of trays	2 chrome plated
Weight (approx) (kg)	75
Power Supply	230V/50Hz



*ROWE CODE IO0130



*Stands not included but available as an optional extra.

MMM MED CENTRE & THERMOLINE OVENS



*ROWE CODE IO0131

ROWE CODE IO0131

Venticell 222 -
Eco line,
up to +250°C

222L

Capacity Litres	22
Internal Dimensions (mm) W x D x H	540 x 520 x 760
External Dimensions (mm) W x D x H	760 x 790 x 1095
Temp Range (°C)	Ambient +10 to 250
Number of trays	2 chrome plated
Weight (approx) (kg)	100
Power Supply	230V/50Hz

ROWE CODE IO0185

Venticell 404 -
Eco line,
up to +250°C

404L

Capacity Litres	404
Internal Dimensions (mm) W x D x H	540 x 520 x 1410
External Dimensions (mm) W x D x H	760 x 790 x 1910
Temp Range (°C)	Ambient +10 to 250
Number of trays and castors	2 chrome plated
Weight (approx) (kg)	150
Power Supply	400V 3-phase power



ROWE CODE IO0185

ROWE CODE IO0186

Venticell 707 -
Eco line,
up to +250°C

707L

Capacity Litres	707
Internal Dimensions (mm) W x D x H	940 x 520 x 1410
External Dimensions (mm) W x D x H	1160 x 790 x 1910
Temp Range (°C)	Ambient +10 to 250
Number of trays and castors	2 chrome plated
Weight (approx) (kg)	215
Power Supply	400V 3-phase power



ROWE CODE IO0186



***ROWE CODE IO0134**

ROWE CODE IO0134
Natural convection,
Ecozell 55 - Eco line,
up to +250°C

55L

Capacity Litres	55
Internal Dimensions (mm) W x D x H	400 x 370 x 350
External Dimensions (mm) W x D x H	620 x 640 x 680
Temp Range (°C)	Ambient +5 to 250
Number of trays	2 chrome plated
Weight (approx) (kg)	55
Power Supply	230V/50Hz

ROWE CODE IO0258
Premium High
Temperature Oven,
up to +300°C

150L

Capacity Litres	150
Internal Dimensions (mm) W x D x H	500 x 510 x 600
External Dimensions (mm) W x D x H	620 x 670 x 930
Temperature Controller	Digital PID Controller
Temp Range (°C)	Ambient +10 to 300
Interior Material	Stainless Steel
Number of shelves	3 chrome plated
Weight (approx) (kg)	78
Electrical	2050 (8.5 amps), 240V



ROWE CODE IO0258

**Please check
out our
section on
incubators**



ROWE CODE IO0208

ROWE CODE IO0208
Premium
Dehydrating Oven,
up to +200°C

700L

Capacity Litres	700
Internal Dimensions (mm) W x D x H	650 x 650 x 1500
External Dimensions (mm) W x D x H	780 x 830 x 1940
Temperature Controller	Digital
Temp Range (°C)	Ambient +10 to 200
Number of shelves	6
Weight (approx) (kg)	170
Electrical	3100 (13 amps), 240V

**Stands not included but available as an optional extra.*

SOIL DRYING OVENS - STERIDIUM

ROWE CODE IO0283

DS-80
Soil Drying Oven,
+7°C up to 150°C

80L

Capacity Litres	80
Internal Dimensions (mm) W x D x H	435 x 375 x 502
Fan Forced	Yes
Temp Range (°C)	Ambient +7 to 150
Number of shelves	2
Chamber Material	Stainless Steel

ROWE CODE IO0289

DS-320
Soil Drying Oven,
+7°C up to 150°C

320L

Capacity Litres	320
Internal Dimensions (mm) W x D x H	700 x 600 x 756
Fan Forced	Yes
Temp Range (°C)	Ambient +7 to 150
Number of shelves	2
Chamber Material	Stainless Steel

ROWE CODE IO0188

DS-500
Soil Drying Oven,
+7°C up to 150°C

500L

Capacity Litres	500
Internal Dimensions (mm) W x D x H	700 x 600 x 1136
Fan Forced	Yes
Temp Range (°C)	Ambient +7 to 150
Number of shelves	3
Chamber Material	Stainless Steel

OVEN CONTROLLERS

ROWE CODE

RS485 Remote control (Comms module for Steridium oven) Control multiple ovens from one computer	IR0307
Sealed controller housing for Steridium oven	IS0567

OVEN SHELF

ROWE CODE

Suits model DS-500 and DS-320, stainless steel	IO0187
Suits models DS-160, DG-160 and 160L Steridium incubators	IO0298
1600L, stainless steel	IO0327



ROWE CODE
IO0188



PARAFILM® M Cutter

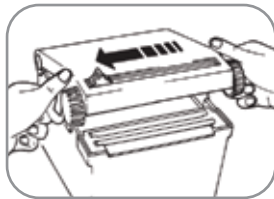
PARAFILM	ROWE CODE
5cm wide 75m long	PP1200
10cm wide 38m long	PP1250
M Cutter	CB2023

Easy to set-up!
Easy to use!
Efficient and time saving!

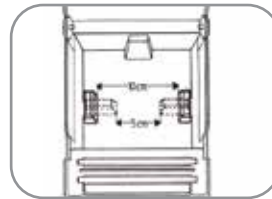


ROWE CODE CB2023

1. Before opening the cutter move the blade carriage to the stop on the left. Lift both lateral tongues to open.



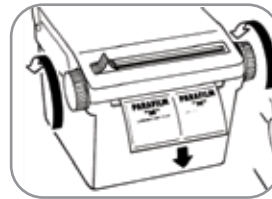
2. Adjust the fitting brackets to the width of the roll.



3. Open the film carton and pull out the film. Insert the box into the cutter.



4. Turn the handwheels backwards until desired length of film appears. Cut the film by moving the blade carriage across.



ROWE CODE PP1200
 Parafilm
 5cm wide x 75m long

ROWE CODE PP1250
 Parafilm
 10cm wide x 38m long



INTELLIGENT FLOW PERISTALTIC PUMPS

QUALITY PERISTALTIC PUMPS, HEADS AND TUBING FOR YOUR LIQUID DISPENSING NEEDS



BT101F Intelligent Dispensing Peristaltic Pump

This intelligent dispensing peristaltic pump provides a flow range from 0.006 to 570 mL/min. It's easy to operate with an intuitive clear interface together with a colour LCD touch screen. There are four operating modes available: Volume Dispense Mode, Time Dispense Mode, Copy Dispense Mode and Flow Mode. The system minimises working noise due to intelligent cooling fan control. With RS485 MODBUS communication interface, the pump is easy to connect to an external device, such as PC, HMI or PLC.

ROWE CODE IP0620



BT101F Key Features:

- Bright and clear colour LCD display, touch screen and keypad for ease of operation.
- Reversible direction, start/stop control and adjustable speed.
- Precise motor control technology improves dispense accuracy compared to the traditional time dispense mode.
- Anti-drip function ensures dispense accuracy.
- Three dispense modes available. **Time Dispense Mode:** automatically dispense by setting the duration for each dose, lag time between doses and number of cycles.
- **Volume Dispense Mode:** automatically dispense by setting the volume for each dose, lag time between doses and number of cycles. **Copy Dispense Mode:** automatically dispense by setting the total volume to dispense, lag time between doses and number of cycles.
- Store five groups of working parameters for each dispense mode (power-off memory).
- Flow rate display and control; cumulative dispense volume display.
- Flow rate calibration.
- 0.2% accuracy, high precision rotating speed control with 0.1 rpm speed resolution. Operating system incorporates an intuitive setup wizard to configure the system.
- Logic level signal can control start/stop, direction and dispense modes; external analog signals can also adjust pump rotating speed. Signals are optically isolated for safety.
- With RS485 MODBUS interface it is easy to communicate with external device.

- Internals are electrically double isolated in construction. The main circuit board is conformal coated which makes it dust-proof and moisture-proof.
- Incorporates Anti-electromagnetic interference features, together with a wide input voltage range for complex power environment.
- ABS plastic housing with a streamlined design.
- Drive multi-channels and various types of pump heads at once.
- Optional foot switch and infrared remote control.

KEY FEATURES

FLOW RANGE:	0.006-570 mL/min
SPEED RANGE:	0.1-150 rpm
SPEED RESOLUTION / ACCURACY:	0.1 rpm / 0.2%
CONTROL:	Touchscreen display
CONSUMPTION:	< 30W
WORKING ENVIRONMENT:	Environment 0 ~ 40°C Humidity <80%
DIMENSION SIZE:	(L x W x H): 257 x 182 x 1987mm
DRIVE WEIGHT:	4.5 kg



BT100F Intelligent Peristaltic Pump

This unit provides a flow range from 0.0002 to 82mL/min (with DT10-48 head). Stainless steel enclosure is easy to clean, resistant to the corrosion of acids, alkali, sodium and organic solvents. It offers an intuitive and clear interface with colour LCD touch screen, coupled with advanced features such as flow rate calibration and an anti-drip function for accurate flow transfer.

Easy Dispense Mode is available to dispense the recorded volume by pressing the DISPENSE key or using an optional foot switch.

The system minimises working noise due to the intelligent fan cooled control. With RS485 MODBUS interface, the pump is easy to communicate with an external device, such as PC, HMI or PLC.

ROWE CODE IP0665

BT100F Key Features:

- Bright and clear colour LCD display, touch screen and keypad for ease of operation.
- Reversible direction, start/stop control and adjustable speed.
- Flow rate calibration.
- Flow rate display and control; Cumulative dispense volume display for quick reference.
- Anti-drip function ensures dispense accuracy.
- 0.2% accuracy, high precision rotating speed control with 0.1 rpm speed resolution.
- Precise motor control technology improves dispense accuracy
- Easily configurable via an intuitive setup wizard.
- Intelligent temperature control to minimise noise.
- Logic level signal can control start/stop, direction and dispense modes; external analog signals can also adjust pump rotating speed. Signals are optically isolated for safety.
- The RS485 MODBUS interface, allows easy communication with an external device.
- Internals are electrically double isolated in construction. The main circuit board is conformal coated which makes it dust-proof and moisture-proof.
- Resistant to electromagnetic interference
- Stainless steel enclosure is easy to clean, resistant to the corrosion of acid, alkali, sodium and organic solvents.
- Drive multi-channels and various types of pump heads.
- Optional foot switch and infrared remote control.



KEY FEATURES

FLOW RANGE	0.0002-82mL/min
SPEED RANGE:	0.1-150 rpm
SPEED RESOLUTION:	0.1 rpm
SPEED ACCURACY:	0.2%
IP GRADE:	IP31
COMMUNICATION INTERFACE:	RS485 MODBUS
EXTERNAL LOGIC LEVEL CONTROL SIGNAL:	5V, 12V (standard), 24V (optional). External analog control signal: 0-5V (standard); 0-10V, 4-20mA (optional)
POWER/ CONSUMPTION	AC 240, 60Hz/<40watts
DIMENSION:	(L x W x H):226 x 150 x 238mm

BASIC VARIABLE SPEED PERISTALTIC PUMPS TUBES AND PUMP HEADS

BQ80S peristaltic pump with DW10-1 head (non interchangeable)
0.001 - 32mL/min flow rate. Single channel.

- Using the Cortex M3 core processor, the running speed is fast and the device speed accuracy is high.
- Mobile App remote control (optional), the remote pump operation can be controlled by using Lead Fluid APP software.
- The tube life alarm function reminds you to replace the tube.
- Soft stop function.
- Start/ Stop, adjustable speed and reversible direction functions
- Dustproof and moisture-proof circuit board design,
- RS485 communication, MODBUS protocol is available.

ROWE CODE IP2183



KEY FEATURES

FLOW RANGE:	0.0035~34mL/min
SPEED RANGE:	0.1~80 rpm
SPEED RESOLUTION:	0.1rpm
SPEED ACCURACY:	<±0.2%
IP GRADE:	IP31
COMMUNICATION INTERFACE:	RS485 communication interface, MODBUS protocol is available
EXTERNAL CONTROL:	<ol style="list-style-type: none"> 1. Start/Stop: Passive contact, external control input level (5~24V) 2. Forward/Reverse: Passive contact, external control input level (5~24V) 3. Speed Regulation: Analogue 0~5V, 0~10V, 4~20mA can be set
POWER CONSUMPTION:	<10W
DIMENSION (L x W x H):	DW10-1: 152 x 112 x 107mm • DW10-3: 164 x 112 x 107mm

BT103S peristaltic, pump with YZ15 head 0.006-380mL/min flow rate. Single channel.

- High definition lattice LCD display.
- High durability key pad.
- Start/ Stop, adjustable speed and reversible direction functions
- Can set interval and cycle running times.
- Soft stop and anti-drip function.
- Lockable Keypad.
- Conformal coating on circuit board
- RS485 communication interface, Modbus protocol is available ,
- Remote start-stop, adjust speed and timing operation can be controlled through LeadFluid APP software.
- Thermal printer can be connected



ROWE CODE IP2184

KEY FEATURES

FLOW RANGE:	0.00011~500mL/min
SPEED RANGE:	0.1~100.0rpm
SPEED RESOLUTION:	0.1rpm
SPEED ACCURACY:	<±0.2%
IP GRADE:	IP31
COMMUNICATION INTERFACE:	RS485, MODBUS protocol is available, DB15 external control interface
EXTERNAL CONTROL SIGNAL OUTPUT:	<ol style="list-style-type: none"> 1. Start/Stop: Level Signal (following input voltage) 2. Forward/Reverse: Level Signal (following input voltage)
POWER CONSUMPTION:	<30W
DIMENSION (L x W x H):	235 x 140 x 145mm



PERISTALTIC PUMP HEADS

ROWE CODE

YT15 - With 4 rollers, PPS suitable for tube sizes 13# 14# 19# 25# 17# 18#

IL0092

DG - 1 channel with 6 rollers, suitable for tube with wall: 0.8-1mm, ID: <=3.17mm

IL0136



YT15
WITH 4 ROLLERS
ROWE CODE L0092



DG
1 CHANNEL WITH 6 ROLLERS
ROWE CODE IL0136

PERISTALTIC PUMP TUBING

ROWE CODE

#13, 0.8mm ID, 4mm OD, 1.6mm wall, silicone

PT0368

#14, 1.6mm ID, 4.8mm OD, 1.6mm wall, silicone

PT0369

#15, 4.8mm ID, 9.8mm OD, 2.5mm wall, silicone

PT0373

#16, 3.1mm ID, 6.3mm OD, 1.6mm wall, silicone

PT0309

#17, 6.4mm ID, 9.6mm OD, 1.6mm wall, silicone

PT0371

#18, 7.9mm ID, 11.1mm OD, 1.6mm wall, silicone

PT0372

#24, 6.4mm ID, 11.4mm OD, 2.5mm wall, silicone

PT0374

#25, 4.8mm ID, 8mm OD, 1.6mm wall, silicone

PT0342

#19, 2.4mm ID, 5.6mm OD, 1.6mm wall, silicone

PT0370

#19, 2.4mm ID, 5.6mm OD, 1.6mm wall, silicone

PT0832

#82, 12.7mm ID., 19.3mm OD, 3.3mm wall, silicone

PT0594

#92, 25.4mm ID, 35mm OD, 4.8mm wall, platinum silicone tube 36cm, 2 x tube sleeves, for PL48 pump head only

IT0589

#92, 25.4mm ID, 35mm OD, 4.8mm wall, platinum silicone

IT0587

Rowe Scientific has a comprehensive range of gear pumps, peristaltic pumps, syringe pumps, tubing and accessories for your liquid dispensing requirements.

Contact us today for more information on your specific needs.

**Not sure?
Ask us for help.**

There are a wide variety of pump drive and pump head combinations available to solve your laboratory liquid dispensing needs.

**SPEAK TO A
ROWE SCIENTIFIC
CONSULTANT
FOR MORE
INFORMATION
AND PRICING.**

WATER JET VACUUM PUMPS - KARTELL

Material: Polypropylene

This pump will work on pressures up to 10kg/cm². Built in non-return valve to eliminate back flow. Useful for sucking to waste any spilt chemicals as well as for filter work. Easily dismantled for cleaning. Autoclavable. Evacuating nozzle tapers from 8 to 14 mm. The connector PW2900 can be pushed onto evacuating tubing to act as a quick release from the pump.

WATER JET VACUUM PUMP

PACK SIZE

ROWE CODE

Water Jet Vacuum Pump

ea

PW2850

Water Jet Pump Connectors

5

PW2900



PETROLEUM TESTING EQUIPMENT - KOEHLER

Automatic Pensky - Martens Closed Cup Flash Point Tester

For flash point determination of biodiesel, distillate fuels, new lubricating oils, residual fuel oils, cutback residual, used lubricating oils, mixtures of petroleum liquids with solids, and petroleum liquids that tend to form a surface film during testing.

- Conforms to ASTM D93 and related specifications;
- Flash point detection by thermocouple and ionization ring;
- Electric or Gas ignition: Software selectable, User Friendly Manual Switching;
- Flash point operation range between ambient and 405°C;
- Integrated Dual Fan System directly cools test cup and surrounding environment;
- 8.4" LCD Touch Screen Interface allows for easy viewing and navigation;
- Automatic Barometric Pressure Correction;
- Fire Suppression System floods instrument with inert gas in the event of a fire.

ROWE CODE: KF0003



Automatic Microscale - Continuously Closed Cup Flash Point Analyzer

- Fully Automatic:
 - Automatic determination of flash points;
 - Automatic corrections for ambient atmospheric.
- Small Sample Size:
 - Required amount of sample for each test is 1 mL or 2 mL;
 - Less sample demand, lower test cost and less pollution.
- High Performance:
 - Continuously closed cup operation with high safety and no open flame;
 - Built-in refrigeration module with high efficiency.
- Industrial Touch Screen User Interface:
 - 7-inch Integrated Colour Touch Screen;
 - Built-in standard test methods which can be correlated to other closed cup methods.
- Real-time display of temperature and pressure curves:
 - USB and Network Connections;
 - RS232 interface for connection to thermal printer.
- USB interface for connection with mouse or storage device:
 - Internet (Ethernet) connection;
 - Software Capabilities.
- Preprogrammed methods - each with its own interface:
 - User friendly, easily toggle between parameter view and graphic view;
 - When the expected flash point is entered, the initial and end temperatures are automatically calculated.

ROWE CODE: KA0053



PETROLEUM TESTING EQUIPMENT - KOEHLER

Rapid Flash Tester - Closed Cup

Verifies the flash point or the sustained burning qualities of small samples in the range of -30°C to +300°C.

- Conforms to ASTM D3278, D3828; DOT CFR 49-173.115; IATA; ISO 9038, BS3900 Part A11, A13, A14 and related specifications;
- One minute test with a 2mL sample;
- Simple to operate Fire Suppression System floods instrument with inert gas in the event of a fire;
- Electronically heated, 230V;
- Includes aluminium test cup, brass lid and shutter.

ROWE CODE: KF0004



Automatic Heated Oil Test Centrifuge

Centrifugation provides a convenient means of determining sediment and water content in crude oil, fuel oils, middle distillate fuels, and biodiesel.

It is also used in determining the precipitation number, demulsibility characteristics, trace sediments, and insolubles in used lubricating oils.

- Choice of long, short, pear, or finger rotor assembly to accommodate corresponding centrifuge tubes;
- Accommodates four (4) centrifuge tubes of 6 or 8" conical ASTM types, long, short, pear or finger tubes;
- Automatic control of acceleration ramp, centrifugation speed, and timing functions;
- 4-1/2" LCD Touch Screen Control Panel;
- Substantial Insulation for Reduced Heat Loss;
- Precise balancing, quiet operation;
- Large, clear, top opening lid;
- Class 1, Division 2 explosion resistant rating.

ROWE CODE: IC3190



Salt in Crude Analyzer

Salt content is determined by measuring the conductivity of a solution of crude oil in a polar solvent when subjected to an alternating electrical current and is obtained by comparison of the resulting conductivity to a calibration curve of known salt mixtures.

- Conforms to ASTM D3230 and related test specifications;
- Measures salt content, conductivity, and temperature of crude oil samples, and pH measurements of aqueous samples;
- Measures salt concentration in the range of 0 to 150 PTB (lb/1000 bbl);
- Portable for field or laboratory testing with a LiPo battery;
- Data storage up to 12 test results.

ROWE CODE: IA0085



Copper Strip Corrosion - Pressure Vessel Bath

The Copper Strip Tarnish Test assesses the relative degree of corrosivity of petroleum products, including aviation fuels, automotive gasoline, natural gasoline, solvents, kerosene, diesel fuel, distillate fuel oil, lubricating oil and other products.

- Fully-insulated, double-wall stainless steel construction;
- Soxhlet reflux condenser and constant water level device maintain proper working depth;
- Choice of four-pressure vessel and eight-pressure vessel models;
- Withstands test pressure of 100psi (689kPa) per specifications;
- 1/8" groove in the pressure vessel threads permits safe, gradual release of pressure when opening the pressure vessel.

ROWE CODE: IC2200



Automatic Freezing Point Analyzer with Touch Screen

Determines the temperature below which solid hydrocarbon crystals may form in aviation turbine fuels and aviation gasoline.

- KLA-5 models conform to ASTM D852, D1493, D2386, IP16 and ISO 3013 specifications;
- KLA-8 models conform to ASTM D1177 specifications;
- Stand alone system with Integrated Touch Screen Panel PC;
- Direct Cooling system eliminates the need for solvent cooling baths;
- One-stage cooling system provides temperatures as low as -45°C and a two-stage cooling system down to -80°C;
- Freezing Point measured by light pulsed emission on IR spectrum through a coaxial fiber optic with mirror;
- Safety Features: Audible alarm and displayed messages (at the end of the analysis and in case of errors and/or malfunctions);
- Pressure controller for 1st and 2nd stage motor compressor;
- Thermostat for 2nd stage activation;
- Thermo-switch for each cooling / heating jacket;
- Motor compressors equipped with internal overload devices.

ROWE CODE: IF1125

PETROLEUM TESTING EQUIPMENT - KOEHLER

KV1000 Kinematic Viscosity Bath

Kinematic viscosity is of primary importance in the design and selection of a wide range of petroleum products. Calibrated capillary viscometers are used to measure flow under gravity or vacuum at precisely controlled temperatures.

- Accommodates six capillary viscometers;
- Variable temperature limit control;
- Conforms to ASTM D445 and related specifications.

ROWE CODE: KK0018



Front View Distillation Apparatus

The sample is evaporated and condensed under controlled conditions and observations are made of the temperatures at which various percentages are recovered and/or the percentages recovered at specified temperatures.

- Conforms to ASTM D86, E133 and related ASTM and international standards;
- Choice of three different models.

ROWE CODE: KD0032

pH-FIX TEST STRIPS

- **Reliable pH tests**
- **User-friendly handling**
- **Precise colour match**

pH-Fix test strips provide precise measurement over the complete pH range and their patented technology that prevents contamination. These strips are non-bleeding so they can remain in the sample for an indefinite time without the risk of contamination.

pH-Fix test strips are used worldwide for easy and economical pH determination across a range of industries.

Classic flat box

- Fits into every pocket
- Plastic box protects test strips and colour scale
- Smart corner – avoids pinching of the test strips
- Large variety of measurement ranges available

PlopTop tube

- Simple to open and close with one hand
- Extra long tube prevents blockade of cap with jammed strips
- Tube stands firmly on its circular bottom
- Virtually unbreakable



TEST	MFR REF	ROWE CODE
CLASSIC FLAT BOX - 100 test strips (6 x 85mm)		
pH-Fix 0–14	92110	FI1100 <small>BEST SELLER</small>
pH-Fix 0.0–6.0	92115	FI1150
pH-Fix 0.3–2.3	92180	FI1125
pH-Fix 2.0–9.0	92118	FI1200
pH-Fix 4.0–7.0	92137	NI0038
pH-Fix 4.5–10.0	92120	FI1250
pH-Fix 5.1–7.2	92140	FI1265
pH-Fix 6.0–7.7	92150	FI1278
pH-Fix 7.0–14.0	92125	FI1300
PLOPTOP TUBE - 100 test strips (6 x 85mm)		
pH-Fix 0–14 PT	92111	FI1101 <small>BEST SELLER</small>



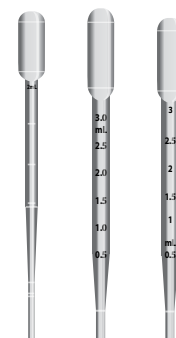
ROWE CODE
FI1100



ROWE CODE
FI1101

TRANSFER PASTEUR PIPETTE

TRANSFER (PASTEUR) PIPETTE - CITOTEST	PACK SIZE	ROWE CODE
1mL - Graduated, plastic	500	PP1920
3mL - Graduated, plastic	500	PP1930
5mL - Graduated to 1mL in 0.25mL divisions, 150mm long, 1pc/flow pk, LDPE, EO Sterile	100	PP0057
5mL - Graduated to 1mL in 0.25mL divisions, 150mm long, bulk pack, LDPE	500	PP1914
7mL - Graduated to 3mL in 0.5mL divisions, 155mm long, 1pc/flow pk, LDPE, EO Sterile	100	PP0056
7mL - Graduated to 3mL in 0.5mL divisions, 155mm long, bulk pack, LDPE	500	PP2102



TRANSFER (PASTEUR) PIPETTE - TARSON	PACK SIZE	ROWE CODE
5mL - Disposable, graduated to 1mL, non-sterile, bulk pack, LDPE	500	PP0090
7mL - Disposable, graduated to 3mL, non-sterile, bulk pack, LDPE	500	PP0093
5mL - Disposable, graduated to 1mL, sterile (individually wrapped), LDPE	500	PP0091
7mL - Disposable, graduated to 3mL, sterile (individually wrapped), LDPE	500	PP0094
5mL - Disposable, graduated to 1mL, sterile, LDPE	500	PP0092
7mL - Disposable, graduated to 3mL, sterile, LDPE	500	PP0095



GLASS PASTEUR PIPETTE	PACK SIZE	ROWE CODE
150mm long, disposable	1000	GP2550
150mm long, soda-lime glass, ISO7712, autoclavable	250	GP1220
230mm long, soda-lime glass, ISO7712, autoclavable	250	GP1221



PASTEUR PIPETTE TEAT	PACK SIZE	ROWE CODE
Teat for pasteur pipette, ribbed, orange, premium rubber	EA	HT0077

Fillers for Transfer (Pasteur) pipettes



TEAT orange ribbed premium rubber
ROWE CODE HT0077



TEAT red rubber
ROWE CODE HT1510



PI-PUMP manual pipette roller filler
0 - 2mL (Blue) ROWE CODE HP1630
0 - 10mL (Green) ROWE CODE HP1650
0 - 25mL (Red) ROWE CODE HP1700

GLASS PIPETTES

mL	GLASS PIPETTES	PACK SIZE	RANGE	ROWE CODE
A GRADE PIPETTES				
0.1	0.001mL graduations	EA	BRAND	GP4702
10	Blaubrand, 0.1mL graduations, calibrated to deliver (TD, EX)	12	BRAND	GP1186
13	Volumetric	EA	WITEG	GP3935
17.6	Volumetric, milk pipette	EA	WITEG	GP0013
25	Volumetric, blaubrand, with certificate	6	BRAND	GP3035
AS GRADE PIPETTES				
0.5	0.01mL graduations	EA	LMS	GP1980
1	Single amber mark at 1mL, milk pipette	EA	WITEG	GP3155
1	0.01mL graduations	EA	WITEG	GP9001
1	Volumetric	EA	WITEG	GP9010
2	0.02mL graduations	EA	WITEG	GP9002
2	Volumetric with individual certificate	EA	WITEG	GP9032
2	Volumetric	EA	WITEG	GP9011
3	Volumetric	EA	WITEG	GP9012
4	Volumetric	EA	WITEG	GP9013
5	Volumetric	EA	WITEG	GP9014
5	0.05mL graduations	EA	WITEG	GP9003
6	Volumetric	EA	WITEG	GP9037
7	Volumetric, conformity certified	EA	WITEG	GP3655
10	Volumetric	EA	WITEG	GP9015
10	0.1mL graduations	EA	WITEG	GP9005
11	Volumetric for milk and cream determinations	EA	WITEG	GP3910
15	Volumetric	EA	WITEG	GP9016
20	0.1mL graduations	EA	WITEG	GP2002
30	Volumetric	EA	WITEG	GP9018
40	Volumetric	EA	WITEG	GP9019
50	Volumetric	EA	WITEG	GP9020
100	Volumetric	EA	WITEG	GP9021
B GRADE PIPETTES				
5	0.05mL graduations	EA	LMS	GP1908
10	0.1mL graduations	EA	WITEG	GP9006
25	0.1mL graduations	EA	WITEG	GP9009
25	Volumetric, silberbrand	6	BRAND	GP4004
50	Volumetric, siberbrand	6	BRAND	GP4007

ROWE CODE
GP1186ROWE CODE
GP0013

Stand - Kartell

Accommodates 18 pipettes with diameters not exceeding 10mm, plus 10 pipettes with diameters not exceeding 15mm. Small holes in base allow drainage. Boss head (supplied) allows for the holder to be raised or lowered on supporting rod. Can be used with other supporting rod of 8-14mm using the olives supplied.

PIPETTE STAND (PP)	ROWE CODE
Vertical (no base)	PP1600
Base only	PP1650

ROWE CODE
PP1600

PASTEUR PIPETTE	PACK SIZE	RANGE	ROWE CODE
150mm long, soda-lime glass, ISO7712, autoclavable	250	WITEG	GP1220
230mm long, soda-lime glass, ISO7712, autoclavable	250	WITEG	GP1221

PIPETTE CONTROLLER	PACK SIZE	RANGE	ROWE CODE
0.1 to 200mL, 0.2µm filter, Accu-Jet "S", AC input, 230V, petrol colour	EA	BRAND	DP0549
0.1 to 200mL, 0.2µm filter, Accu-Jet "S", AC input, 230V, berry colour	EA	BRAND	DP0548
Macro pipette controller, membrane filter 3µm, non-sterile	10	BRAND	HP1574
Macro pipette controller, 0.1 to 200mL, grey	EA	BRAND	HP1568
Macro pipette controller, 0.1 to 200mL, blue	EA	BRAND	HP1512

PIPETTE FILLER	PACK SIZE	RANGE	ROWE CODE
3 valve for pipettes up to 25mL, red rubber	EA	DN	HP1505
3 valve long for all size pipettes, red rubber	EA	DN	HP1455
Flip, for pipettes up to 100mL, green rubber	EA	DN	HF4020
3 valve for pipettes up to 25mL, blue rubber	EA	DN	HP1508
Flip, for 0.1 to 100mL pipettes, red rubber	EA	DN	HF4000

PIPETTE STAND	PACK SIZE	RANGE	ROWE CODE
16 Position 200 x 75 x 150mm	EA	KARTELL	PP1700



ROWE CODE
HP1505

See **BRAND Accu-Jet S**
pipette fillers on page 315.



TRANSFERPETTE 'S' - BRAND

TRANSFERPETTE 'S' - BRAND	FIXED VOLUME	ROWE CODE
FIXED VOLUME (Each)	10µL	DT0110
	20µL	DT0111
	25µL	DT0112
	50µL	DT0113
	100µL	DT0114
	200µL	DT0115
	500µL	DT0116
	1000µL	DT0117
	2000µL	DT0118

ROWE CODE
DT0111ROWE CODE
DT0125

TRANSFERPETTE 'S' - BRAND	VARIABLE VOLUME	ROWE CODE
VARIABLE VOLUME Premium Quality, best selling range (Each)	0.1-1µL	DT0119
	0.1-2.5µL	DT0120
	0.5-10µL	DT0121
	2-20µL	DT0122
	5-50µL	DT0123
	10-100µL	DT0124
	20-200µL	DT0125
	100-1000µL	DT0126
	*500µL- 5mL	DT0127
	*1000µL- 10mL	DT0128

*Filter for 5mL ROWE CODE DP2142

*Filter for 10mL ROWE CODE DP2143

ANCILLARIES - BRAND (EACH)	ROWE CODE
Shelf Rack Mount for 1 Transferpette, single or multichannel	DS0014
Wall Mount for 1 Transferpette, single or multichannel	DW0009
Bench Top Rack for 6 Transferpette, single or multichannel	DB0079

ROWE CODE
DB0079

TRANSFERPETTE 'S' - BRAND

TRANSFERPETTE 'S' PIPETTE PACKAGES AND KITS - BRAND	VOLUME	ROWE CODE
Pipette Package No 1, 5 pipettes Transferpette 'S' Complete with bench top rack	2.5µL, 10µL, 20µL, 200µL and 1000µL	DP0263
Pipette Package No 2, 5 pipettes Transferpette 'S' Complete with bench top rack	10µL, 20µL, 200µL, 1000µL and 5000µL	DP0264
Starter Kit Micro, 3 pipettes Transferpette 'S' All variable volume, complete with rack/shelf mounts	2.5µL, 10µL and 100µL	DS0015
Starter Kit Midi, 3 pipettes Transferpette 'S', All variable volume, complete with rack/shelf mounts	20µL, 200µL and 1000µL	DS0016
Starter Kit Macro, 3 pipettes Transferpette 'S', All variable volume, complete with rack/shelf mounts	1000µL, 5000µL and 10000µL	DS0017
Starter Kit Standard, 3 pipettes Transferpette 'S', All variable volume, complete with rack/shelf mounts	10µL, 100µL and 1000µL	DS0018

TRANSFERPETTE S - MULTI CHANNEL - BRAND	VARIABLE VOLUME	ROWE CODE
8 CHANNEL	0.5-10µL	DT0129
	5-50µL	DT0130
	10-100µL	DT0131
	20-200µL	DT0132
	30-300µL	DT0133
12 CHANNEL	0.5-10µL	DT0134
	5-50µL	DT0135
	20-200µL	DT0137
	30-300µL	DT0138

TRANSFERPETTE ELECTRONIC - BRAND	FIXED VOLUME	ROWE CODE
Supplied with performance certificate, battery, AC adapter, silicone grease (Each)	0.5-10µL	DP0254
	10-200µL	DP0256
	50-1000µL	DP0145
	250-5000µL	DL4923



ROWE CODE
DT0132



ROWE CODE
DP0254

ROWE CODE
DP0145



ROWE CODE
DP0263



ROWE CODE
DS0017



ROWE CODE
DS0018

SEQUENTIAL DISPENSER

BRAND® HandyStep® Touch S in detail

HANDYSTEP TOUCH 'S'

ROWE CODE DH0031

CHARGING STAND

ROWE CODE DC0046

HandyStep® Touch S

with all of the features of the HandyStep® touch and the additional functions of Sequential Dispensing, Multi-Aspiration and Titration.

Handystep touch, including universal AC adaptor and sample pack of PD-Tips 0.5, 1.25, 5 and 12.5mL (includes lithium battery).

ROWE CODE DH0002

Versatile HandyStep® touch

with the standard modes Multi-Dispensing, Auto-Dispensing, Pipetting and Favorites

Easy

Automatic size detection of BRAND PD-Tips II

Simple

Automatic tip ejection by the press of a button prevents contamination

Long-lasting

Many hours of continuous operation with a single battery charge

USB-C connection

For quick charging by cable

Robust

High-quality materials provide long service life, and smooth surfaces make cleaning / disinfection easy

STEP button

Ergonomically arranged STEP button for effortless volume filling and delivery

Efficient

In addition to BRAND PD-Tips, compatible third party tips can also be used



PIPETTE TIPS FOR HANDYSTEP S - BRAND

TIPS PIPETTE FOR HANDYSTEP 'S' - BRAND	FIXED VOLUME	ROWE CODE
STERILE Handystep 'S' positive displacement (PD) Tips (II), Bio-Cert	0.1mL	DH0012
	0.5mL	DH0013
	1.0mL	DH0014
	1.25mL	DH0015
	2.5mL	DH0016
	5.0mL	CP3104
	10.0mL	DH0017
	12.5mL	CP3097



ROWE CODE CP3104

TIPS PIPETTE FOR HANDYSTEP S - BRAND	FIXED VOLUME	ROWE CODE
NON-STERILE Handystep S positive displacement (PD) tips (II)	0.1mL	CP3095
	0.5mL	DH0020
	1.0mL	DH0021
	1.25mL	CP3096
	2.5mL	DL3430
	5.0mL	DL3445
	10.0mL	DH0025
	25mL	DH0024



ROWE CODE DL3430



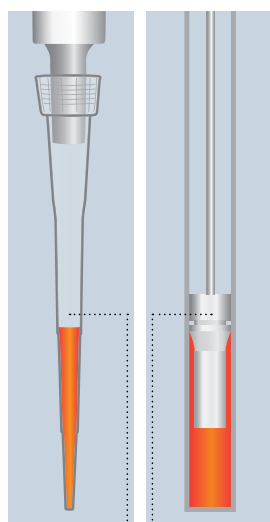
ROWE CODE DH0024

Let us help you make the correct choice. Call us!

PIPETTOR - TRANSFERPETTOR - BRAND

POSITIVE DISPLACEMENT - SPECIFICATIONS / SPARES

VOLUME (μ L)	COLOUR CODE	INSTRUMENT ROWE CODE	CAPS ROWE CODE	SEALS ROWE CODE	PISTON RODS ROWE CODE	REPAIR KIT ROWE CODE
2.5-10	Orange	DL2821	CB1944	-	DL2260	DR0014
5-25	White	CB1966	CB1949	CB1981	DP0284	DR0015
10-50	Green	CB1954	CB1950	CB1983	DP0285	DR0016
20-100	Blue	DL2820	CB1942	DL2826	DP0286	DR0017



Air-interface principle

Positive displacement principle

CONVENIENT PIPETING OF DIFFICULT MEDIA



Media which tend to foam, such as tenside solutions, pose no problem to the Transferpettor.



Even media with higher vapor pressure (up to 500 mbar) such as alcohols, ether and hydro-carbons can be pipetted simply, reliably and with the highest accuracy.



The Transferpettor is ideal for pipetting highly viscous media, such as highly concentrated protein solutions, oils, resins and fats up to a viscosity of 50,000 mm²/s.

Media with high density up to 13.6 g/cm³ such as glycerin, mercury, sulfuric acid, etc. can be pipetted without the need to recalibrate.

TRANSFERPETTOR, DIGITAL-ADJUSTABLE, MARKING

VOLUME (μ l)	A* $\leq \pm$ % μ l	CV* \leq % μ l	SUBDIV. μ l	COLOUR CODE	ROWE CODE
2.5-10	1.0 0.1	0.8 0.08	0.01	Orange	DL2821
5-25	0.8 0.2	0.5 0.125	0.1	2 x White	CB1966
10-50	0.6 0.3	0.4 0.2	0.1	Green	CB1954
20-100	0.6 0.6	0.4 0.4	0.1	Blue	DL2820
100-500	0.5 2.5	0.2 1.0	1.0	Green	DP2420
200-1000	0.5 5.0	0.2 2.0	1.0	Yellow	DP2430
1000-5000	0.5 25.0	0.2 10.0	10.0	Red	DL2055
2000-10,000	0.5 50.0	0.2 20.0	10.0	Orange	DL2105

Additionally available in a range of fixed volumes. Please enquire!

CAPS & STANDS FOR TRANSFERPETTOR - BRAND

DESCRIPTION	SUITS VOLUME	COLOUR CODE	ROWE CODE
CAPS & SEALS (1 set) COMBI PACK FOR TRANSFERPETTOR	1-5mL	Red	DC0003
	2-10mL	Orange	DC0004
SEALS (10 pack) FOR TRANSFERPETTOR	1-5mL	-	DL2255
	2-10mL	-	DL2310



ROWE CODE
DL2255

DESCRIPTION	SUITS VOLUME	COLOUR CODE	QTY	ROWE CODE
CAPS FOR TRANSFERPETTOR	10uL	Orange	100	CB1944
	50uL	Green	100	CB1950
	100-500uL	Green	10	CB1943
	1-5mL	Red	10	CB0332
	2-10mL	Orange	10	CB1948



ROWE CODE
CB1943

TRANSFERPETTOR STAND	ROWE CODE
FOR 4 INSTRUMENTS Up to 200uL volume (Each)	DT0093



ROWE CODE
DT0093



PIPETTOR - BOECO



PIPETTOR ADJUSTABLE VOLUME - BOECO	VARIABLE VOLUME	ROWE CODE
Premium GP series Adjustable with tip ejector and fully autoclavable (Each)	0.5-10µL	DP4924
	2-20µL	DP2117
	10-100µL	DP2121
	20-200µL	DP2122
	100-1000µL	DP2131
	500-5000µL	DP2132
	1000-10000µL	DP2166



ROWE CODE
DP2121

If you can't see the item you are looking for, please call us!

New South Wales & ACT

Ph: (02) 9603 1205
rowensw@rowe.com.au

Queensland

Ph: (07) 3376 9411
roweqld@rowe.com.au

South Australia & NT

Ph: (08) 8186 0523
rowesa@rowe.com.au

Victoria & Tasmania

Ph: (03) 9701 7077
rowevic@rowe.com.au

Western Australia

Ph: (08) 9302 1911
rowewa@rowe.com.au



PIPETTOR - EPPENDORF & DLAB

eppendorf

PIPETTOR RESEARCH PLUS VARIABLE VOLUME - EPPENDORF	VARIABLE VOLUME	ROWE CODE
(Each)	0.5-5mL	DL4762
	1-10mL	DL4738
	10-100µL	DP0578
	20-200µL	DL4782
	100-1000µL	DP0560
With light grey metal tip	2-20µL	DL4755
With yellow plastic tip	2-20µL	DP0535



ROWE CODE
DL4738

PIPETTOR FIXED VOLUME - EPPENDORF	FIXED VOLUME	ROWE CODE
Reference 2 (Each)	100µL	DP0038
	1000µL	DP0516
	2000µL	DP0175
Research Plus (Each)	200µL	DL4791



ROWE CODE
DP0144

DLAB

DLAB Scientific Inc.

PIPETTOR - DLAB (EACH)	VARIABLE VOLUME	ROWE CODE
Micropette Plus Single channel, adjustable volume, mechanical autoclavable	0.1-2.5µL	DP0130
	0.5-10µL	DP0131
	5-50µL	DP0142
	50-200µL	DP0143
	200-1000µL	DP0144
	2-10mL	DP0159
	1-5mL	DP0119
	0.5-10µL	DP0103
	2-20µL	DP0114
	10-100µL	DP0116
	20-200µL	DP0104
	100-1000µL	DP0105



ROWE CODE
DS0008

DS0008 Pipette Stand, Linear, Holds up to 6 pipettors

PULP DENSITY SCALES - EACH		ROWE CODE
Metal body fitted with Number 4 dial face		MM1360
Plastic body fitted with Number 4 dial face		MM1350
PULP DENSITY SCALE BUCKETS - 1 LITRE		ROWE CODE
Clear plastic with wire handle		MB1000
Stainless steel		MP0010
Stainless steel		MB1150
Stainless steel		MB1140

BEST SELLER



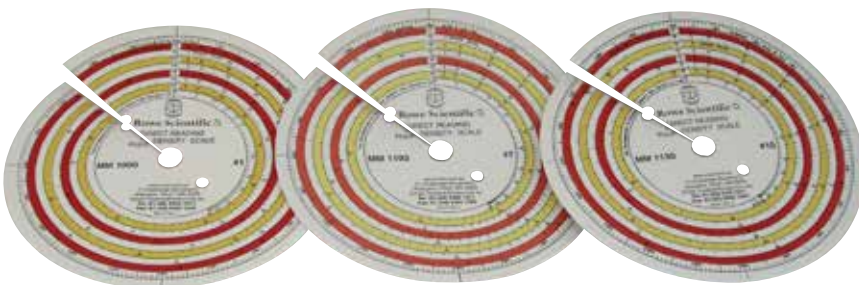
ROWE CODE
MM1360

PULP DENSITY SCALE DIAL FACE - INDIVIDUAL	SPECIFIC GRAVITY (SG)	ROWE CODE
Number 1	2.2 - 4.4	MM1000
Number 2 (RF418)	1.2 - 1.8	MM1003
Number 3	1.7 - 2.3	MM1007
Number 4 (RF423)	2.2 - 2.8	MM1010
Number 4 (RF423) (polyethylene)	2.2 - 2.8	MP0014
Number 5	2.6 - 3.2	MM1050
Number 6	3.0 - 3.6	MM1100
Number 7	3.4 - 4.0	MM1103
Number 8	3.8 - 4.4	MM1107
Number 9 (RF421)	4.2 - 4.8	MM1110
Number 10	4.6 - 5.8	MM1130
Number 11	5.6 - 6.8	MM1140
Number 12	6.6 - 7.8	MM1150
Number 1-12 (Set of 12 dial faces)	2.2 - 7.8	MM1190

PULP DENSITY SCALE SETS	ROWE CODE
Includes plastic scale, 2 clear buckets and set of dial faces	MM0900
Includes metal scale, 2 clear buckets and set of dial faces	MM0905
Includes digital scale, 8L stainless steel bucket, SG range 1 to 9.999	MM1385



ROWE CODE
MB1140



DIAL FACES: For measuring particular dry solid specific gravity in a slurry.



ROWE CODE
MB1000

REFRIGERATOR - HAIER BIOMEDICAL

Haier Biomedical

PHARMACY REFRIGERATOR, UNDERBENCH, 118L



ROWE CODE IR0226



LED Display

Microprocessor control, digital display and temperature adjustment with an increment of 0.1°C.



Multiple Alarm Functions

Capable of alerting failures due to high and low temperature, sensor error, power failure, low battery, door ajar and remote alarm.



Ergonomic Design

810mm cabinet height makes it easy to place under test bench, saving storage space.



Lockable Design

Safety lock to prevent unauthorized access.



Better Cabinet Temperature Uniformity, Auto Defrost

The test point of performance in the cabinet increased from 2 points to 9 points.



Energy Efficient Hydrocarbon (HC) Refrigeration System

Optimised refrigeration system, utilising high-efficiency HC compressor significantly reduces energy consumption.

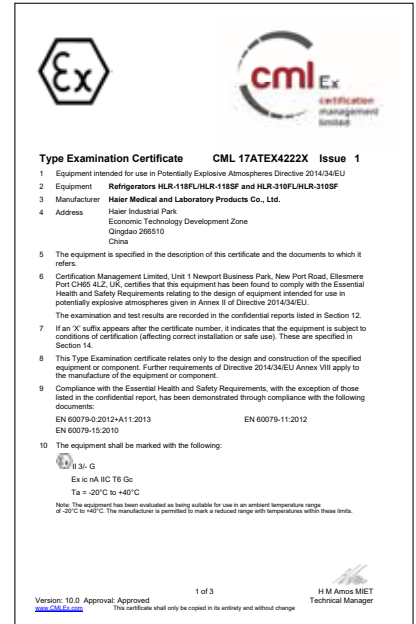
Haier Refrigerators

DESCRIPTION	VOL (L)	TEMP RANGE	DOORS	EXT DIMENSIONS (mm)	ROWE CODE
Pharmacy Refrigerator (Underbench) Alarm and key-lock	118	2 to 8°C	Glass	597 W x 635 D x 810 H	IR0227
	118	2 to 8°C	Solid	597 W x 635 D x 810 H	IR0226
Laboratory Refrigerator - 4 Glass Shelves	310	3 to 16°C	Solid	605 W x 598 D x 1840 H	IR0251
Pharmacy Refrigerator - 6 Shelves	610	2 to 8°C	Glass	780 W x 840 D x 1945 H	IR0259
Refrigerator / Freezer combination	186/97	2 to 8°C -20 to -40°C	2 Solid	736 W x 660 D x 1810 H	IR0252



310L
ROWE CODE IR0251
HLR-310F

HAIER SPARK FREE REFRIGERATORS



DESCRIPTION	VOL (L)	TEMP RANGE	DOORS	EXT DIMENSIONS (mm)	ROWE CODE
Refrigerator (Underbench) - SPARK-FREE , alarm and key-lock.	118	3 to 16°C	Solid	597 W x 635 D x 835 H	IR0225
Refrigerator (Upright) - SPARK-FREE , alarm and key-lock.	310	3 to 16°C	Solid	605 W x 598 D x 1840 H	IR0317



118L
 ROWE CODE
 IR0225
 HLR-118SF



Setting Temperature Range +3°C to +16°C
 with precise control, keeps internal temperature variation within 3°C for great temperature uniformity.



Clear and Complete Alarm System with One Key Search
 multiple alarms and data function which allows users to check and save historical data, which is useful and convenient for laboratory inspection processes.



360° Explosion Proof Interior
 with ATEX II C-T6 EU Explosion Proof Certification.



ROWE CODE IR0317
 HLR-310SF

TRANSPORT COOLER - HAIER BIOMEDICAL

Haier Transport Cooler

DESCRIPTION	POWER (V)	TEMP RANGE (°C)	DIMENSIONS (mm)	ROWE CODE
Biomedical Transport Cooler - Constant temperature active cooling, alarm	12V & 220V	2 to 10°C with 0.1°C resolution	EXTERIOR 490 W x 295 D x 265 H INTERIOR 430 W x 150 D x 180 H	IT0458

Pipette filler 0.1 to 200mL

ANTHRACITE	EA	DP0547
BERRY	EA	DP0548
PETROL	EA	DP0549
AMETHYST	EA	DP0550

ACCU-JET® S

Comfortable

Ergonomic handgrip, weight only 190 g, perfectly balanced design.

Powerful and quiet

At maximum motor speed, a 50 ml pipette is filled in less than 10 seconds.

Low Battery Alert

A flashing LED light will alert you approx. two hours in advance.

Sensitive

With the accu-jet® pro pipette controller, you have continuously variable speed control using just two buttons.



REFRIGERATORS - LIEBHERR

LIEBHERR

DESCRIPTION	VOLUME (L)	TEMP RANGE (°C)	DOORS	EXT DIMENSIONS (mm)	ROWE CODE
LKUexv 1610 Refrigerator - Spark proof	140	3°C to 8°C		600 D x 615 W x 820 H	IR0047
Pharmacy Refrigerator (underbench) - With alarm parameters	142	3°C to 16°C (Factory set to 5°C)	Single solid door	615 D x 597 W x 820 H	IR0246
Pharmacy Refrigerator - Top mounted, castor wheels, alarms, access port, door lock, adjustable shelves	583	3°C to 16°C	Single solid door	750 D x 747 W x 1844 H	IR0305
Heavy Duty Mediline Refrigerator - Top mounted, castor wheels, alarms, access port, door lock, adjustable shelves	1366	-2°C to 16°C	Double solid doors	830 D x 1430 W x 2160 H	IR0304



ROWE CODE
IR0047



ROWE CODE
IR0246



ROWE CODE
IR0304

REFRIGERATORS - NULINE



DESCRIPTION	VOLUME (L)	TEMP RANGE (°C)	DOORS	EXT DIMENSIONS (mm)	ROWE CODE
Pharmacy Refrigerator - 7 adjustable shelves, volt free contact, right opening door (handle left side)	570	2°C to 8°C	Solid door	750 D x 775 W x 1850 H	IR0346
Pharmacy Refrigerator - 7 adjustable shelves, volt free contact, left opening door (handle right side)	570	2°C to 8°C	Solid door	750 D x 775 W x 1850 H	IR0375
Pharmacy Refrigerator - 7 adjustable shelves	570	2°C to 8°C	Glass door	750 D x 775 W x 1850 H	IR0353
NLM1000/2 Series Laboratory Refrigerator - Top mounted, auto defrost, fan force, alarms, 5 adjustable shelves, castor wheels	1000	2°C to 8°C	2 Glass doors	700 D x 1200 W x 2100 H	IR0378
Laboratory Refrigerator - Automatic water disposal, castors, hi / lo alarm, 5 adjustable shelves	700	2°C to 8°C	Glass door	830 D x 740 W x 2050 H	IR0356



ROWE CODE
IR0353



ROWE CODE
IR0378

REFRIGERATORS - THERMOLINE



DESCRIPTION	VOLUME (L)	TEMP RANGE (°C)	DIMENSIONS (mm)	ROWE CODE
Refrigerator - Spark proof interior with 3 shelves and cyclic defrost	130	3°C to 10°C		IR1044
Refrigerator - Intrinsically safe	240	2°C to 6°C	1270 H x 450 W x 430 D	IR1049
Refrigerator - Intrinsically safe with 5 shelves and cyclic defrost	240	3°C to 10°C	1510 H x 550 W x 560 D	IR1043
Refrigerator - Medika 250	250		600 H x 660 W x 1640 D	IF0082
Refrigerator - Spark proof Interior with 5 shelves and 1 drawer, lockable, cyclic defrost	270	3°C to 10°C	1260 H x 460 W x 430 D	IR0017
Laboratory Refrigerator - Economy with 4 shelves	740	4°C to 10°C	Interior 850 H x 520 W x 1300 D	IR0006
Pharmacy Premium Refrigerator - TGA approved with glass doors	750		Exterior 1000 W x 720 D x 2010 H	IR0182
Refrigerator - 2 doors (solid doors)	750	4°C to 10°C	Exterior 2000 H x 1000 W x 720 D	IF1303
Refrigerator - 2 doors (glass doors), frost free, 4 shelves	950	4°C to 10°C	Interior 1460 H x 1120 W x 560 D	IF0259
Refrigerator - 2 doors (solid doors), frost free, 4 shelves	950	4°C to 10°C	Interior 1460 H x 1120 W x 560 D	IF0375



ROWE CODE
IR0006



ROWE CODE
IR0182

STIRRING RODS

STIRRING RODS - GLASS

GLASS TYPE	LENGTH (mm)	DIAMETER (mm)	STD. PACK SIZE	ROWE CODE
Soda	150	6	EA	GS1160
Soda	200	6	EA	GS1150
Borosilicate	200	8	EA	GS1200
Borosilicate	200	9	EA	GS1210
Borosilicate	300	8	EA	GS1250
Borosilicate	300	9	EA	GS1255

Glass rods in 1.5m lengths are also available



ROTARY EVAPORATOR

Rotary evaporators are commonly used for separating solvents, the Stuart® range offers simple control and a variety of glassware configurations, vertical, diagonal & cold finger condensing depending on your requirements. All configurations are available with plastic coated glass.

Stuart RE400 Series Rotary Evaporator

DESCRIPTION	ROWE CODE
Evaporator Rotary "Stuart" 10-310 rpm, 1L Evaporating and receiving Flasks, Digital Control, 240v 50hz	IE0231

A Rotary evaporator is a distillation unit that incorporates an efficient condenser with a rotating sample flask. As the flask containing the solvent is rotated, it continually transfers a thin layer of liquid over the entire inner surface. This gives a very large surface area for evaporation, the sample or Florentine flask can additionally be heated by an accessory bath to accelerate the process. The entire system has been designed to be vacuum tight, an accessory vacuum pump can be connected to reduce the overall pressure and hence the boiling point of your sample.

Each unit is also provided with an easy to use vacuum release and a continuous feed system, which allows more solvent to be drawn into the rotating Florentine flask without the need to stop the operation.

There are three orientations of condenser available depending on the application and space available:

FEATURES

- Digital control interface for ease of use
- Can be orientated for left or right hand operation
- Simple, counterbalanced lift mechanism
- PTFE/glass liquid pathway for chemical inertness
- Long life graphite impregnated PTFE vacuum seal
- Efficient flask and vapour tube ejection system
- The RE400 rotary evaporator comes with a diagonally orientated glass condenser for standard distillations.

MATERIAL	FEATURES
SPEED RANGE	10 to 310 rpm
VACUUM	3 mm Hg
LIFT DISTANCE	180 mm
DIMENSIONS (W X D X H)	385 x 335 x 470-610 mm
ELECTRICAL SUPPLY	100-240V, 50-60Hz



The Stuart Rotary Evaporator pictured with the optional RE400DB Digital Water Bath (Not included)

1 HOLE - 2 HOLES - SOLID

STOPPERS - RUBBER (EACH) BASE x TOP x HEIGHT (mm)	ROWE CODE
1 HOLE STOPPERS	
13 x 16 x 19	HR1600
16 x 19 x 19	HR1800
19 x 22 x 19	HR2000
21 x 24 x 22	HR2150
22 x 25 x 25	HR2300
25 x 29 x 25	HR2450
29 x 32 x 25	HR2600
32 x 38 x 32	HR2750
38 x 44 x 25	HS2305
41 x 48 x 25	HR3000
44 x 51 x 25	HR3060
2 HOLE STOPPERS	
13 x 16 x 19	HR1650
19 x 22 x 19	HR2050
22 x 25 x 25	HR2350
25 x 29 x 25	HR2500
29 x 32 x 25	HR2650
32 x 38 x 32	HR2800



STOPPERS - RUBBER (EACH) BASE x TOP x HEIGHT (mm)	ROWE CODE
SOLID STOPPERS	
6 x 10 x 14	HR1350
8 x 13 x 19	HR1373
10 x 14 x 19	HR1400
11 x 17 x 19	HR1965
13 x 16 x 19	HR1550
14 x 19 x 25	HR1700
16 x 19 x 19	HR1750
17 x 24 x 44	HR1900
19 x 22 x 19	HR1950
21 x 24 x 22	HR2100
21 x 32 x 43	HR2105
22 x 25 x 25	HR2250
25 x 29 x 25	HR2400
29 x 32 x 25	HR2550
32 x 38 x 32	HR2700
33 x 35 x 16	HR2810
35 x 44 x 32	HR2850
38 x 44 x 25	HR2900
41 x 48 x 25	HR2950
44 x 51 x 25	HR3050
48 x 54 x 25	HR3100
51 x 57 x 25	HR3200
57 x 63 x 25	HR3220
63 x 70 x 25	HR3250
70 x 76 x 25	HR3255
76 x 83 x 25	HR3260
94 x 100 x 25	HR3270
102 x 108 x 25	HR3280

CORK BORERS

CORK BORERS MET-APP (EACH)	NUMBER OF BORERS	DIAMETER OF BORERS	ROWE CODE
Made from plated, hard brass. Has removable handle, with a range of borers	6	4.5 - 13	HC1050
	10	4.5 - 19	HC1000
Made from polished hard brass with fixed handle	6	4.5 - 13	HC1045
	9	4.5 - 19	HC1047
Cork Borer Sharpener - 225mm long			HC1080



SAFETY GLASSES & SHIELDS - BOLLÉ

BOLLÉ SAFETY GLASSES	LENS	PACK	ROWE CODE
AXIS 2 - Anti-scratch and anti-fog	Smoke	EA	NG0012
BL30 - Anti-scratch and anti-fog	Clear	EA	NG0182
BANDIDO	Clear	EA	PS1172
BLADE	Clear	EA	PS1176
HURRICANE - Anti-scratch and anti-fog, black frame	Smoke	EA	NG0030
IRI-S DIOPTER - Anti-scratch and anti-fog, +2.5 Black/grey temple	Clear	EA	NG0046
OVERLIGHT II - Anti-scratch and anti-fog	Clear	EA	NG0050
OVERRIDE	Clear	EA	PS0091
PRISM - Anti-scratch and anti-fog	Clear	EA	NG0055
PRISM SEAL - Anti-scratch and anti-fog	Smoke	EA	NG0064
PRISM SEAL - Anti-scratch and anti-fog	Clear	EA	NG0063
RUSH+	Contrast	EA	NG0081
RUSH+	Clear	EA	PS0230
RUSH+ SEAL - PLATINUM Anti-scratch and anti-fog coating, assembled with gasket and strap	Clear	EA	NG0083
RUSH+ SMALL - PLATINUM Anti-scratch and anti-fog coating, black/blue temples	Clear	EA	NG0087
SIDEWINDER	Clear	EA	PS1177
SILEX - Anti-scratch and anti-fog	Clear	EA	NG0171
TRYON OTG PLATINUM - Anti-scratch and anti-fog	Clear	EA	NG0175

BEST SELLER

bolle
SAFETY



ROWE CODE
NG0182



ROWE CODE
NG0064



ROWE CODE
NG0083

BOLLÉ FACE SHIELD	LENS	PACK	ROWE CODE
DFS2 (over-glasses) - Anti-fog, blue protective coating, elastic headband, ARTG listed	Clear	5	HF0118
DFS4 (over-glasses) - Anti-fog, blue protective coating, elastic headband with buckle	Clear	200	HF0117
SPHERE - Complete face shield with head gear and visor	Clear	EA	NM0003

BOLLÉ ANTI-FOG KIT	PACK	ROWE CODE
B200 B-CLEAN - with 30mL anti-fog solution and one microfibre cloth	EA	NG0146



ROWE CODE
HF0117

HF PROTECTION

For first aid in HF accidents

DESCRIPTION	STD. PACK SIZE	ROWE CODE
Calcium Gluconate Ampoules	5 x 10mL	CC2340
Calcium Gluconate Gel	50g	CC2350

LONG REACH SAMPLERS



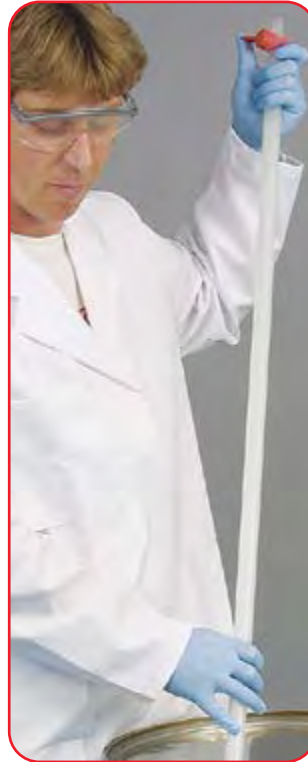
BOTTLE HOLDER
 ROWE CODE PH7102



ANGULAR BEAKER HOLDER
 ROWE CODE: PH7103

SAMPLE DIPPING RODS

ROWE CODE HS7100
 175 to 600cm
 ROWE CODE HS7101
 115 to 300cm



DIPPER PLUNGING SAMPLING SIPHON

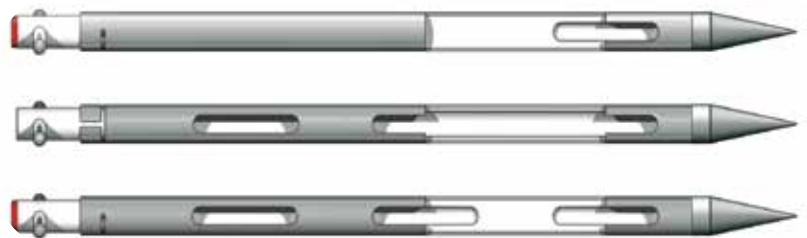
100cm to 200cm
 extendable PP.
 ROWE CODE PD0011

ALL-LAYER SAMPLE

1. Insert the sampler slowly into the liquid with the valve open.
2. Close valve.
3. Remove the sampler with sample.

POINT SAMPLING/ SOIL SAMPLE

1. Insert the sampler to the desired level with closed valve.
2. Open the valve - the sample flows in.
3. Close the valve.
4. Remove the sampler, with sample.



All layer 850 x 25mm, Aluminium Depth 710mm, 3 x chambers, 130mL each
 ROWE CODE HS0305

Zone samplers for bulk goods

The advantage of All-layer zone samplers is that samples can be collected from all levels of the container. Suitable for the fine powders to large grains such as corn or nuts. Samplers are available in different lengths: 55cm suitable for sacks & bulk bags. 85cm (for barrels, tubs, mixed containers) 150cm and 250cm (Jumbo sampler) ideal for big bags, silos, and tanks.

PRESSURE FILTER

ROWE CODE

Cloth for pressure filter - 1m x 1m	RF1063
10 - 15L (model Pf1000) bench mounted	RF10045
15L - Certified, floor mounted, swing out barrel, stainless steel	RP0085
13L - Floor mounted, mild steel frame, 316 grade stainless steel barrel	RF1089

Other sizes, models and configurations available on request.

See our Wet Strengthened filter paper on page 175.



ROWE CODE
RF1089

PULVERISER MILL

ROWE CODE

LM2-P Pneumatic, 380V 50Hz	XG2106
LM5-C Pneumatic, 415V 50Hz, 3 phase	XG2120
PV2 - 3 phase, 415V 50Hz, includes cabinet, controls, one grinding set of choice	XG2104
PV5 - 3 phase, 415V 50Hz, includes bowl, disc, lid and millmate	RP0108

Standard steel or Chrome Steel bowls & discs available in 50cc, 125cc, 800cc, 1000cc, 2000cc & 5000cc.

Tungsten Carbide and Zirconia bowls available in 40cc & 125cc.



ROWE CODE
XG2104

RIFFLES

RIFFLE SPLITTER	ROWE CODE
CARPCO	
16 x 13mm slots	RR1501
32 x 6mm slots with 2 aluminium trays	RR0011
16 x 3mm slots (stainless steel) with aluminium trays	RR1551
16 x 3mm slots (stainless steel) with two collection pans	RR1500
16 x 6mm slots (stainless steel)	RR1505
SS-24-1.5X stainless steel	RR1590
32 x 6mm slots with 2 stainless steel trays	RR1555
JONES	
6.4mm slot width, 32 slots, stainless steel frame with 2 aluminium pans	RR1217
17.1" x 9" with 64 x 1/4" chutes, stainless steel with hardened aluminium riffle bank	RR1269
9.5mm slot width, 22 slots, stainless steel frame with aluminium pans	RR0019
7" x 11" x 1/2" x 14 slots, stainless steel, 3 pans, brush and scoop	RR1219
8" x 14" x 3/4" x 14 slots, stainless steel, 3 pans, brush and scoop	RR1215
Spare Pan, aluminium, 9.5" x 5.5" x 4", seamless, to suit RR1262	RR0015
Spare Pan, stainless steel	RR1216
Precision 16 1/2" x 9", 50/50 split, 32 x 1/2" slots, stainless steel, 2 stainless steel trays	RR1261
Precision 8.5" x 8", 50/50 split, 16 x 0.5" slots, stainless steel, 2 aluminium trays (100mmH)	RR1262
Precision 9" x 8", 50/50 split, 22 3/8" slots, stainless steel with aluminium trays	RR1260
Precision, 8-3/4" x 8" hopper, 32 x 1/4" slots, with 2 pans	RR1268
ENDECOTTS	
12 x 6.35mm slots, 130 x 133 x 102mm, complete with 3 trays stainless steel	RR1230

***Other riffle splitters available on request.
Including 2 & 3 tier, mild and stainless steel,
field units and microsplitters.***



ROWE CODE
RR1219



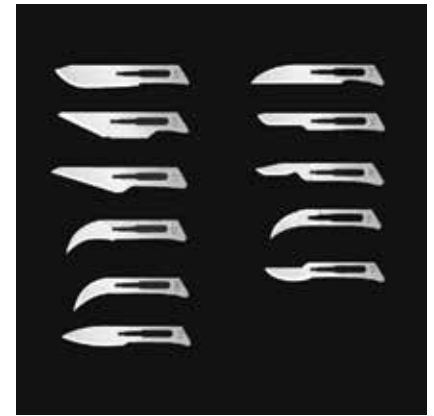
ROWE CODE
RR1230

SAMPLE PREPARATION	ROWE CODE
Air Gun - CEJN, blue	RA1003
Bottle Roller - 12 place for 4.5L bottles (adjustable rollers)	RB0057
Bottle Roller - 12 place for 4.5L bottles (variable speed, timer and adjustable rollers)	RB0113
Bottle Roller Machine - 3 tier of 5 (15 x 3m) 250 x 4.5L bottles or 2L bottle capacity	RR1901
Boyd Crusher and Rotating Sample Divider - With duplicate split and remainder Model B combo	RC2000
Hammer Mill - Laboratory Mill PX-MFC 90D Kinematica complete with 2mm sieve, tool set and stand with intercepting tubes, 3-phase and 230V / 50Hz	RM1096
Jaw Crusher JC17 - Max feed 80mm, 90% of crush <2mm, 3 phase 380 - 415V, 795kg, 895 x 555 x 1235mm, 235kg/hour, stand alone	RC0030
Jaw Crusher JC2513 - Max feed 110mm, 85% of crush <2mm, 3 phase 380 - 415V, 1100kg, 930L x 1080W x 1380mmH, 180kg/hour, stand alone	RC0031
Jaw Crusher - Model JC1250, 3 phase, 415V	RJ0008
Jaw Crusher - Model JC2000, 3 phase, 415V / 50Hz	RJ0016
Micronising Mill - Includes 2 grinding jars, pouring lid and loading device (grinding elements not included)	RM0011
Micronising Mill, Mccrone XRD complete package - Includes 2 Agate grinding sets, 2 grinding jars with screw top lid, 1 pouring lid and 1 loading device	RM0023
Mill Ring Boyd Mid - With dual split rotary sample divider	RM0028
Mill Ring - Continuous flow double stage 380-415V / 50Hz, 3 phase	RM0021
Rod Mill - 200 x 250mm SS barrel, 240V / 50Hz, variable speed, does not include rods/charge	RR0034
Rod Mill - 200 x 250mm barrel ID, includes stand, funnel+screen, rod charge, ball charge, variable speed 3 phase motor with inverter for single phase, mild steel, splash proof control box, acoustic enclosure	RR1001
Roll Crusher RC2000 - Floor mounted, 3 phase, 415V 50hz	RR0016
Rotary Sample Divider RDS/R20 - Includes stand, 20L capacity hopper, controller and vibratory feeder 240V / 50Hz	RR1920
Rotary Sample Divider Bucket Set - 8 x 2.5L segments to suit RSD/R20	RR0017
Rotary Sample Divider - RSD, 10L	RR0031
Sample Dipper (cylindrical) - 1.3L, 165H x 104mmD, mild steel	MS1314
Sample Dipper (cylindrical) - 1L, 140H x 100mmD, mild steel	MS1315
SteriWare® Jumbo Pipette - Disposable liquid sampler, 80mL, 450mmL, sterile HDPE	PS1333
SteriWare® ViscoThief Sampler - 190mL, disposable, 1000mmL, sterile HDPE	PS1334
Tag (aluminium) - 80 x 25mm with hole at one end and copper wire ties	RT1005
Tag (aluminium) - 80 x 25mm with hole at one end	RT1000
Weighing Boat (aluminium foil) - 57 DIA x 16mmH, 60mL capacity with tab, circular	RW0009
Weighing Dish (aluminium) - 80 ID x 60H x 1.5mm thick	RW0001
Work Station 1200mm - Includes extraction hood, rubberwork and light	RW1000



SCALPELS & HANDLES

SCALPEL BLADES (STERILE AND INDIVIDUALLY FOIL WRAPPED)	PACK SIZE	ROWE CODE
CARBON STEEL		
#10 for use with No. 3 handle	100	HS0177
#10A for use with No. 3 handle		HS0255
#11 for use with No. 3 handle		HS0256
#12 for use with No. 3 handle		HS0257
#13 for use with No. 3 handle		HS0259
#15 for use with No. 3 handle		HS0262
#20 for use with No. 4 handle		HS0268
#21 for use with No. 4 handle		HS0269
#22 for use with No. 4 handle		HS0271
#23 for use with No. 4 handle		HS0272
#24 for use with No. 4 handle		HS0273
STAINLESS STEEL		
#10 for use with No. 3 handle	100	HS0278
#11 for use with No. 3 handle		HS0213
#22 for use with No. 4 handle		HS0214
#23 for use with No. 4 handle		HS0295
SCALPEL HANDLES		
STAINLESS STEEL		
#3 compatible with blades from #10 to #17	10	HS0276
#4 compatible with blades from #18 to #36		HS0277



SCISSORS

SCISSORS	ROWE CODE
Dissecting, curved, sharp/sharp, 130mm	HS1730
Sharp/blunt, 100mm	HS1650
Sharp/blunt, 150mm	HS1701
Sharp/sharp, 100mm	HS1705
Surgical, straight, sharp/blunt, 180mm	HS1699
Dissecting, curved, 110mm	HS1905
Straight, pointed, 90mm	HS1900
Dressing, straight, sharp/blunt, stainless steel, 125mm	HS0473



ROWE CODE
HS1730

MAINTENANCE - REPAIRS - CALIBRATION

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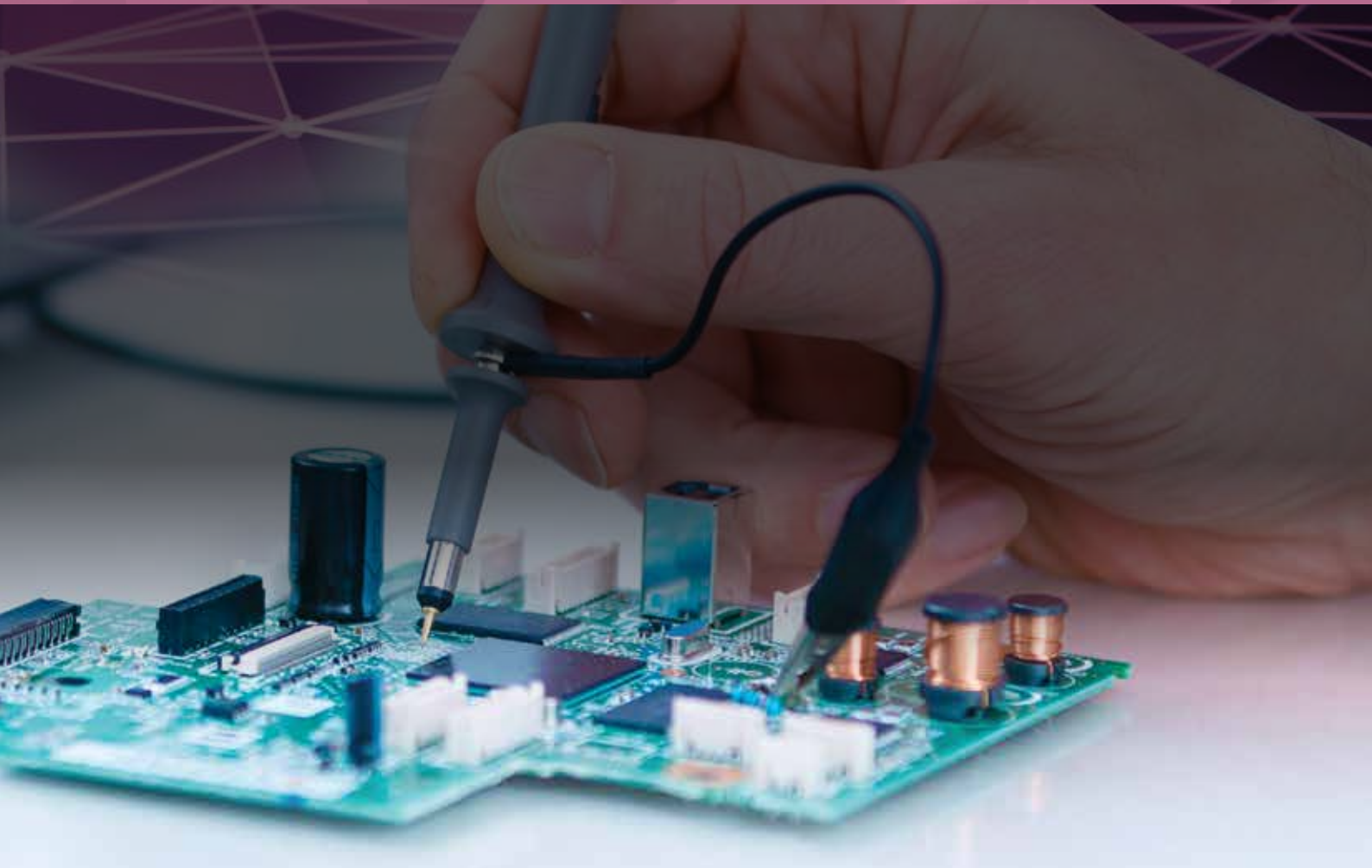
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CALIBRATION BEADS & STAINLESS STEEL SCREENS

CALIBRATION BEADS

SODA LIME GLASS (µm/mm)	ROWE CODE
For 20µm sieve	RB1956
For 38µm sieve	RB0002
For 45µm sieve	RB1957
For 53µm sieve	RB1963
For 63µm sieve	RB0047
For 75µm sieve	RB1962
For 90µm sieve	RB1966
For 106µm sieve	RB1964
For 125µm sieve	RB1968
For 150µm sieve	RB1969
For 180µm sieve	RB1970
For 212µm sieve	RB1976
For 250µm sieve	RB1978
For 300µm sieve	RB1977
For 355µm sieve	RB1971
For 425µm sieve	RB1974
For 500µm sieve	RB1972
For 600µm sieve	RB1965
For 850µm sieve	RB0111
For 1.18mm sieve	RB1967
For 1.4mm sieve	RB0121
For 1.7mm sieve	RB0126
For 2mm sieve	RB0003
For 2.36mm sieve	RB0125

100mm ELETROFORMED

STAINLESS STEEL SCREENS	ROWE CODE
5µm	RS9030
10µm	RS9031
15µm	RS9032
20µm	RS9034
25µm	RS9035
30µm	RS9036



CALIBRATION BEADS



WOVEN WIRE MESH SCREENS

100mm WOVEN WIRE MESH

STAINLESS STEEL SCREENS	ROWE CODE
425µm	RS5573
500µm	RS5561
560µm	RS1110
600µm	RS1489
630µm	RS1111
710µm	RS1140
800µm	RS1112
850µm	RS1492
900µm	RS1113
1mm	RS5585
1.12mm	RS1114
1.18mm	RS5586
1.25mm	RS1115
1.4mm	RS6561
1.7mm	RS1491
2mm	RS5581
2.8mm	RS6562
4mm	RS0374
4.75mm	RS0274
5.6mm	RS5665
7.1mm	RS0920
8mm	RS0869

100mm WOVEN WIRE MESH

STAINLESS STEEL SCREENS	ROWE CODE
20µm	RS6003
25µm	RS5525
32µm	RS0171
36µm	RS0021
38µm	RS5547
45µm	RS5551
50µm	RS5565
53µm	RS5550
63µm	RS5557
71µm	RS5537
75µm	RS5555
80µm	RS0934
90µm	RS4561
100µm	RS1102
106µm	RS1125
125µm	RS5568
150µm	RS5567
180µm	RS5569
200µm	RS0914
212µm	RS5571
250µm	RS5583
300µm	RS5540
355µm	RS5584



HALF HEIGHT SIEVES



FULL HEIGHT SIEVES

WOVEN WIRE MESH SCREENS

200mm WOVEN WIRE MESH

STAINLESS STEEL SCREENS	ROWE CODE
5µm microplate	RS5592
10µm microplate	RS5591
20µm (with reinforced backing mesh)	RS0632
20µm	RS0633
25µm	RS0643
32µm	RS0667
38µm	RS0674
40µm	RS0686
45µm	RS0693
50µm	RS0702
53µm	RS0707
63µm	RS0844
71µm	RS0747
75µm	RS0750
80µm	RS0758
90µm	RS0766
100µm	RS0585
106µm	RS0587
112µm	RS0594
125µm	RS0598
140µm	RS0608
150µm	RS0609
160µm	RS0614
180µm	RS0617
200µm	RS0636
212µm	RS0638
224µm	RS0642
250µm	RS0647
280µm	RS0654
300µm	RS0664
315µm	RS0666

200mm WOVEN WIRE MESH

STAINLESS STEEL SCREENS	ROWE CODE
355µm	RS0668
400µm	RS0688
425µm	RS0690
450µm	RS0696
500µm	RS0704
560µm	RS0710
600µm	RS0735
630µm	RS0744
710µm	RS0748
800µm	RS0761
850µm	RS0762
900µm	RS0769
1mm	RS0569
1.12mm	RS0571
1.18mm	RS0572
1.25mm	RS0574
1.4mm	RS0575
1.6mm	RS0577
1.7mm	RS0580
1.8mm	RS0581
2mm	RS0624
2.24mm	RS0626
2.36mm	RS0627
2.5mm	RS0629
26.5mm	RS0651
2.8mm	RS0630
3.15mm	RS0656
3.35mm	RS0658
3.55	RS0660
4mm	RS0677
4.5mm	RS0680
4.75mm	RS0681



200mm WOVEN WIRE MESH

STAINLESS STEEL SCREENS	ROWE CODE
5mm	RS0698
5.6mm	RS0699
6.3mm	RS0714
6.7mm	RS0721
7.1mm	RS0746
8mm	RS0757
9.5mm	RS0764
10mm	RS0584
11.2mm	RS0590
12.5mm	RS0597
13.2mm	RS0774
14mm	RS0607
16mm	RS0612
18mm	RS0616
19mm	RS0621
20mm	RS0635
22.4mm	RS0641
25mm	RS0645
28mm	RS0652
31.5mm	RS0665
37.5mm	RS0671
40mm	RS0687
45mm	RS0695
50mm	RS0703
53mm	RS0709
56mm	RS0941
63mm	RS0743
75mm	RS0753
90mm	RS0768
100mm	RS0924
125mm	RS0601

Let us help you make the correct choice. Call us!



STAINLESS STEEL SCREENS

WOVEN WIRE MESH SCREENS

300mm WOVEN WIRE MESH

STAINLESS STEEL SCREENS	ROWE CODE
25µm (with reinforced backing mesh)	RS8036
38µm (with reinforced backing mesh)	RS8008
45µm (with reinforced backing mesh)	RS8035
53µm (with reinforced backing mesh)	RS8034
63µm (with reinforced backing mesh)	RS8033
75µm (with reinforced backing mesh)	RS8032
75µm (unreinforced mesh(ur))	RS9011
75µm (with reinforced backing mesh)	RS8010
90µm (with reinforced backing mesh)	RS8012
100µm (with reinforced backing mesh)	RS8013
106µm (with reinforced backing mesh)	RS8030
125µm (with reinforced backing mesh)	RS8020
140µm (with reinforced backing mesh)	RS0325
150µm (with reinforced backing mesh)	RS8021
180µm (with reinforced backing mesh)	RS8022
200µm (with reinforced backing mesh)	RS8002
212µm	RS0545
212µm (with reinforced backing mesh)	RS2452
250µm	RS8024
300µm	RS8028
355µm	RS8027
400µm	RS0284
425µm	RS3770
450µm	RS0921
500µm	RS8025
600µm	RS8029
630µm	RS0016
710µm	RS3784
800µm	RS0281
850µm	RS8037
900µm	RS0909
1mm	RS80370
1.18mm	RS7631
1.4mm	RS8041
1.7mm	RS8042

300mm WOVEN WIRE MESH

STAINLESS STEEL SCREENS	ROWE CODE
2mm	RS8043
2.36mm	RS7633
2.5mm	RS0340
2.8mm	RS8045
3.35mm	RS3716
3.55mm	RS8055
4mm	RS8047
4.25mm	RS3724
4.75mm	RS8077
5mm	RS3708
5.6mm	RS0214
6.3mm	RS3735
6.7mm	RS7632
7.1mm	RS0261
8mm	RS3739
9.5mm	RS7635
10mm	RS8416
11.2mm	RS8414
12.5	RS7649
13.2mm	RS7637
14mm	RS8417
16mm	RS7636
19mm	RS7646
20mm	RS7664
22.4mm	RS0213
25mm	RS8413
26.5mm	RS7638
31.5mm	RS8426
37.5mm	RS7427
40mm	RS1008
50mm	RS0863
53mm	RS0298
63mm	RS8533
75mm	RS0297
80mm	RS0862



450mm WOVEN WIRE MESH

STAINLESS STEEL SCREENS	ROWE CODE
20µm (with reinforced backing mesh)	RS7680
25µm (with reinforced backing mesh)	RS8810
32µm (with reinforced backing mesh)	RS8805
38µm (with reinforced backing mesh)	RS8898
45µm (with reinforced backing mesh)	RS8896
53µm (with reinforced backing mesh)	RS7551
63µm (with reinforced backing mesh)	RS8894
71µm (with reinforced backing mesh)	RS0928
75µm (with reinforced backing mesh)	RS8861
80µm (with reinforced backing mesh)	RS0927
90µm (with reinforced backing mesh)	RS8862
106µm (with reinforced backing mesh)	RS7695
125µm (with reinforced backing mesh)	RS8878
150µm (with reinforced backing mesh)	RS7586
160µm (with reinforced backing mesh)	RS0226
180µm (with reinforced backing mesh)	RS8876
200µm (with reinforced backing mesh)	RS0527
212µm (with reinforced backing mesh)	RS7574
250µm	RS8872
300µm	RS8888
300µm (with reinforced backing mesh)	RS0164
315µm	RS8863
355µm	RS8890
425µm	RS8891
500µm	RS8880
500µm (with reinforced backing mesh)	RS0024
600µm	RS7375
710µm	RS8870
800µm	RS7387
850µm	RS7370
1mm	RS7652
1.18mm	RS7630
1.4mm	RS7642
1.7mm	RS7662
2mm	RS8864

450mm WOVEN WIRE MESH

STAINLESS STEEL SCREENS	ROWE CODE
2.24mm	RS0551
2.36mm	RS8865
2.8mm	RS7663
4mm	RS7629
4.75mm	RS7628
5mm	RS7677
5.6mm	RS8803
6.3mm	RS7667
6.7mm	RS7627
8mm	RS7626
9.5mm	RS7625
10mm	RS7568
11.2mm	RS8858
12.5mm	RS7613
13.2mm	RS7624
16mm	RS7623
18mm	RS7603
19mm	RS7622
20mm	RS7559
22.4mm	RS8845
25mm	RS7619
26.5mm	RS7621
28mm	RS0289
31.5mm	RS8835
35.5mm	RS7320
37.5mm	RS8801
40mm	RS7558
45mm	RS8838
53mm	RS0236
63mm	RS7557
75mm	RS7556
90mm	RS7555
100mm	RS7554
106mm	RS0235
112mm	RS7562
125mm	RS7553

WET WASHING SCREENS

200mm WET WASHING SCREEN

STAINLESS STEEL	HEIGHT (mm)	ROWE CODE
20µm	100	RS0824
25µm	100	RS0825
38µm	100	RS0803
38µm	100	RS0802
38µm	200	RS0791
40µm	100	RS0783
45µm	100	RS0828
45µm	200	RS0831
53µm	100	RS0816
53µm	200	RS0925
63µm	100	RS0829
75µm	100	RS0784
75µm	200	RS0792
90µm	100	RS6660
106µm	100	RS0827
150µm	200	RS0821
180µm	100	RS0798
200µm	100	RS0789
212µm	100	RS0777
250µm	100	RS0801
250µm	200	RS0823
300µm	100	RS0794
425µm	100	RS0814
425µm	100	RS6620
500µm	100	RS0815
500µm	200	RS0786
600µm	100	RS0817
600µm	200	RS0820
710µm	100	RS0795
850µm	200	RS0833
1mm	100	RS0796
1.18mm	100	RS0797
2mm	100	RS0799
2mm	200	RS0788
2.36mm	100	RS0800

450mm WET WASHING SCREEN

WOVEN WIRE MESH STAINLESS STEEL	HEIGHT (mm)	ROWE CODE
75µm (with reinforced backing mesh)	300	RS0065
106µm (with reinforced backing mesh)	300	RS0064
150µm (with reinforced backing mesh)	300	RS0063
212µm (with reinforced backing mesh)	300	RS0062
1.18mm	300	RS0061
2mm	300	RS0059
6.3mm	300	RS0058



WET WASHING SIEVES

ROUND HOLE PERFORATED PLATE

200mm ROUND HOLE PERFORATED PLATE

STAINLESS STEEL DIAMOND SCREEN	DIAM (mm)	ROWE CODE
Size 4, 50mm deep	200	RS2729
Size 12, 50mm deep	200	RS2737

450mm ROUND HOLE PERFORATED PLATE

STAINLESS STEEL SCREEN	DIAM (mm)	ROWE CODE
2.36mm RHPP	450	RS0407
3.35mm RHPP	450	RS0411
4mm RHPP	450	RS0413
16mm RHPP	450	RS0425



DIAMOND SCREENS



SQUARE HOLE PERFORATED PLATE

200mm SQUARE HOLE PERFORATED PLATE

STAINLESS STEEL SCREENS	ROWE CODE
4mm SHPP	RS0676
5.6mm SHPP	RS0701
8mm SHPP	RS0756
11.2mm SHPP	RS0592
16mm SHPP	RS0611
22.4mm SHPP	RS0640
31.5mm SHPP	RS0775
45mm SHPP	RS0694

300mm SQUARE HOLE PERFORATED PLATE

STAINLESS STEEL SCREENS	ROWE CODE
6.7mm SHPP	RS8301
9.5mm SHPP	RS8502
13.2mm SHPP	RS8320
19mm SHPP	RS8509
35.5mm SHPP	RS0939
40mm SHPP	RS8595
106mm SHPP	RS0291
125mm SHPP	RS0292

450mm SQUARE HOLE PERFORATED PLATE

STAINLESS STEEL SCREENS	ROWE CODE
4mm SHPP	RS7385
4.75mm SHPP	RS7362
5mm SHPP	RS3788
5.6mm SHPP	RS7384
6.3mm SHPP	RS7383
6.7mm SHPP	RS7364
7.1mm SHPP	RS0183
8mm SHPP	RS7382
9.5mm SHPP	RS7361
10mm SHPP	RS7336
11.2mm SHPP	RS7381
12.5mm SHPP	RS7339
13.2mm SHPP	RS7428
14mm SHPP	RS7616
15mm SHPP	RS7403
16mm SHPP	RS7352
18mm SHPP	RS3790
19mm SHPP	RS7360
20mm SHPP	RS7408
22.4mm SHPP	RS7417
25mm SHPP	RS7359
26.5mm SHPP	RS7344
31.5mm SHPP	RS7369
35.5mm SHPP	RS7351
37.5mm SHPP	RS7358
40mm SHPP	RS7372
45mm SHPP	RS7368
50mm SHPP	RS7357
53mm SHPP	RS7365
60mm SHPP	RS0544
63mm SHPP	RS7367
75mm SHPP	RS7356
90mm SHPP	RS7366
125mm SHPP	RS7354



PERFORATED PLATE SIEVES

SIEVE SHAKERS • WET SIEVING KITS • ACCESSORIES

SIEVE SHAKERS	ROWE CODE
EFL/300 Includes 2 sets of rods (775mm & 590mm long), holds 8 x 200mm or 6 x 300mm full height screens plus lid and receiver	RS0140
MINOR for 100mm & 200mm screens, holds 8 x 200mm full height screens	RS7836
OCTAGON 200CL closed loop amplitude control, holds 8 x 200mm full height screens	RS7968
OCTAGON DIGITAL D200 holds 8 x 200mm full height screens	RS7842
TITAN 450 holds 7 x 450mm full height screens	RS0155
AIR JET SIZER AS200 for benchtop includes 200mm sieve adaptor ring	RA0017

WET SIEVING KITS	ROWE CODE
SIEVE SHAKER EFL/300 WET SIEVING KIT complete for 200mm diameter screens, includes clamping plate with perspex cover and spray rose, o-ring seals and 200mm s/s receiver with drainage spout	RS0188
SIEVE SHAKER EFL 2000/2 WET SIEVING KIT Complete kit. Includes clamping plate with perspex cover and spray rose, o-ring seals and 200mm s/s receiver with drainage spout	RS7827
SIEVE SHAKER EFL/300 WET SIEVING KIT complete for 300mm diameter screens, includes clamping plate with perspex cover and spray rose and o-ring	RS7832
SIEVE SHAKER OCTAGON D200 wet sieving attachment, includes spray top and receiver	RS7828
WET SIEVING KIT FOR SIEVE SHAKER TITAN 450 complete for 450mm screens, includes clamping plate with perspex cover and spray hose, o-ring seals and 450mm s/s receiver with drainage spout	RW0003

SHAKER ACCESSORIES	ROWE CODE
Brush (sieve) with double ended nylon bristles	RB1700



EFL 300
ROWE CODE
RS0140



OCTAGON 200CL
ROWE CODE
RS7968



WET SIEVING KIT
ROWE CODE
RS0188



LIDS & RECEIVERS, SIEVE BRUSHES, RUBBER SIEVE BALLS

W.S.TYLER SIEVES

wstyler

200mm W.S. TYLER	
BRASS SCREENS	ROWE CODE
38µm	RS1502
45µm	RS1552
53µm	RS1602
90µm	RS1752
106µm	RS2002
150µm (#100)	RS1810
180µm	RS2152
250µm	RS2502
355µm	RS2652
500µm	RS2902
710µm	RS3102
1mm	RS1802
1.4mm	RS1902
2mm	RS2292
Receiver	RS6656
Screen top cover/lid, 200mm, brass with top depression (no knob)	RS3310

ROTAP SHAKERS W.S. TYLER	ROWE CODE
For 200mm sieves	RS7850
Duo-Rotap - For 200mm sieves	RS7863
Model B - For 300mm sieves	RS7855
Stand for Rotap enclosure cabinets	RS7963
Sound enclosure cabinet	RS7858
Duo-Rotap sound enclosure cabinet to suit RS7863	RS0968
Wet sieving attachment for 200mm screens only	RS7851



ROWE CODE
RS7850



ROWE CODE
RS7858



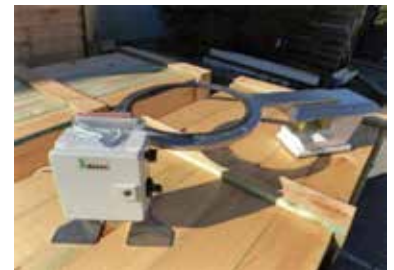
ROWE CODE
RS7863

PRECISION E FORMING & ALSTO SIEVES



200mm ELECTROFORMED

STAINLESS STEEL SCREENS WITH SUPPORT GRID	HEIGHT (mm)	ROWE CODE
10µm	50	RS0371
11µm	50	RS0895
15µm	50	RS0387
20µm	50	RS0344
45µm	50	RS9055
53µm	50	RS9075
63µm	50	RS9080
75µm	50	RS9060
90µm	50	RS9085
106µm	50	RS9062
150µm	50	RS0267
180µm	50	RS9064
200µm	50	RS0542
300µm	50	RS9033



ROWE CODE
RS7839



VIBRATORY SIEVE SHAKERS	ROWE CODE
ALSTO	
Single Sieve Shaker (wet sieving) - Benchtop, holds 1 x 200mm DIA screen, includes electronic controller	RS7839
Single Sieve Shaker (wet sieving) - Benchtop, holds 1 x 300mm DIA screen, includes electronic controller	RS7956
MARC TECHNOLOGIES	
Pneumatic Single Sieve Vibrator - Holds 1 x 200mm DIA screen, includes strap with vibrator, 2m x 6mmDIA air tubing, 6mm valve and T connector	RS0456
Pneumatic Single Sieve Vibrator - Holds 1 x 300mm DIA screen, includes strap with vibrator, 2m x 6mmDIA air tubing, 6mm valve and T connector	RS0384
Wet Screen Vibrator Platform - Holds 3 x 200mm DIA screens	RW0008
Wet Screen Vibrator Platform - Holds 3 x 300mm DIA screens	RW0007
Wet Screen Vibrator Platform - Holds 3 x 450mm DIA screens	RW0006

RAW FIBRE EXTRACTORS - VELP



ROWE CODE FIWE 3: IR0117

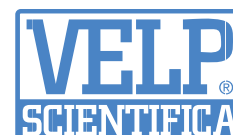
FIWE 3 & 6 Fibre Analysers

FIWE 3 and **FIWE 6** are fibre analysers suitable for raw fibre extraction, conventionally known as an indigestible residue. Rapid analysis, reliable results and high reproducibility are some of the most relevant benefits of these units which are ideal for the Weende, Van Soest and other official methods.

- Perform single or multiple extractions including boiling, rinsing and filtration steps with the maximum reproducibility available.
- An extremely efficient heating element speeds up the analysis, ensuring rapid heating of the sample.
- No transfer and sample loss as COEX ensures rapid fat extraction directly into the same glass crucibles used by the FIWE series.
- Suitable for cold and hot extractions.
- FIWE 3: 3 sample positions
FIWE 6: 6 sample positions
- Samples are individually processed.
- The sample size is between 0.5g - 3g.

ROWE CODE FIWE 3: IR0117

ROWE CODE FIWE 6: IR0118



ACCESSORIES TO SUIT VELP FIWE

RC Series Hot Plate



ROWE CODE IH1340

Crucible Glass P0



ROWE CODE IC0491



ROWE CODE FIWE 6: IR0118

SOLVENT EXTRACTORS - VELP

SER 158 Series Automatic Solvent Extractor

SER 158/3 (3 sample positions) and **SER 158/6** (6 sample positions) are fully automatic and cloud-enabled extractors that guarantee security, accuracy and precision in the determination of extractable matter according to Randall and Twisselmann.

- Analyses up to 5 times faster than traditional Soxhlet.
- The solid-liquid extraction process removes the soluble components from solids using a liquid solvent in 5 steps.
- Safe and powerful heating combined with advanced software and security processes guarantee reproducible extraction results.
- Fully automated to maximize productivity and free operator time. Just Load & Go!
- Can work with all sample types and sizes thanks to its unparalleled versatility and wide range of accessories and consumables.
- A universal solvent extractor and combining up to 4 units enables you to perform multiple applications independently and simultaneously.
- Able to connect to Velp ermes via Wi-Fi.

ROWE CODE SER 158/3: IS0169

ROWE CODE SER 158/6: IS0168



ermes enabled

ROWE CODE SER 158/3: IS0169

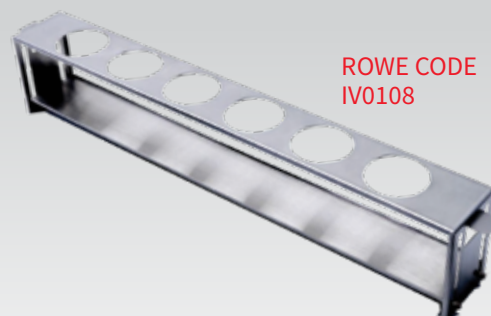


ermes enabled

ROWE CODE SER 158/6: IS0168

ACCESSORIES TO SUIT VELP SER 158

Handling Device Extraction Cups



ROWE CODE
IV0108

Extraction Cup STD



ROWE CODE IV0087

SPATULAS	PACK	ROWE CODE
Wooden handle, tapered blade - 80mm	EA	HS4050
Wooden handle, tapered blade - 100mm	EA	HS3915
Wooden handle - 150 x 20mm blade	EA	HS3800
Wooden handle - 300 x 32mm blade	EA	HS3900
Chattaway, semi-micro - 130 x 4mm	EA	HS3510
Chattaway, micro - 150 x 3mm	EA	HS3505
Chattaway - 180 x 9mm	EA	HS3350
Cranked stainless steel, wooden handle - 200mm	EA	HS0511
Double ended - 180 x 9mm	EA	HS3551
Nickel, double ended - 150 x 9mm	EA	HS3560
Semi micro - 150 x 6mm	EA	HS3580
Micro, sterile, individually wrapped - 1/0.25mL	100	PS0313
Disposable sampling spatula with cover, LaboPlast plastic, individually wrapped - 150mm	10	PS0075
Vibrating, grooved, straight length - 176 x 12mm	EA	HS3595

SPOONS	PACK	ROWE CODE
180mm - Plastic	EA	PS1370
210mm - Plastic	EA	PS1380
160mm - Stainless steel	EA	HS4200
210mm - Stainless steel	EA	HS4300
Micro weighing set	EA	PM0037
180mm - Weighing, with spoon end bent to the left	EA	HS4161

SCOOPS - ALUMINIUM	PACK	ROWE CODE
120 x 60mm - Round bottom (5oz/140mL)	EA	RS4150
140 x 85mm - Flat bottom (7oz/200mL)	EA	RS4450
160 x 80mm - Round bottom (12oz/340mL)	EA	RS4210
200 x 100mm - Round bottom (24oz/680mL)	EA	RS4220
230 x 120 - Round bottom (38oz/1080mL)	EA <td RS4230	
260 x 140mm - Round bottom (58oz/1650mL)	EA	RS4360
300 x 160mm - (85oz/2400mL)	EA	RS4400



ROWE CODE
RS4150



ROWE CODE
HS3915



ROWE CODE
PS0075



ROWE CODE
PS1380



ROWE CODE
PM0037

SPECTROPHOTOMETER - HACH**DR3900 Benchtop VIS Spectrophotometer with RFID Technology****EXPERT WATER ANALYSIS MADE SIMPLE.**

The DR3900 is a benchtop visible spectrum (320 - 1100 nm), split beam spectrophotometer with over 220 pre-programmed methods optimized for laboratory water analysis.

Key Features

- Optimized for safe processes and accurate results.
- Large colour touch screen display for easy setup and navigation.
- RFID technology eliminates sample mix-ups and provides better sample traceability.
- Built with 1 ethernet and 3 USB ports for easy connection to your computer.
- Over 35 tests available including EPA compliant parameters such as ammonia, COD, chlorine and more.

ROWE CODE IS3120

**DR6000 UV VIS Spectrophotometer with RFID Technology****THE INDUSTRY'S MOST ADVANCED LAB SPECTROPHOTOMETER.**

The DR6000 offers high-speed wavelength scanning across the UV and Visible Spectrum, and comes with over 250 pre-programmed methods including the most common testing methods used today.

Key Features

- All your water testing needs in one spectrophotometer.
- Accessories for high volume and high accuracy testing needs.
- Advanced quality assurance at your fingertips.
- Guided procedures and elimination of false readings.
- RFID technology eliminates sample mix-ups and provides better sample traceability.
- Power supply: 240V 50Hz.
- Automatically avoids errors.
- Includes printed instrument manual, power cord, universal holder, dust cover and 1 inch square matched sample cells.

ROWE CODE IS3024



SPECTROPHOTOMETER - MACHEREY-NAGEL

NANOCOLOR® Portable photometer PF-12 Plus

PERFECT HANDLING WITHOUT EXTENSIVE TRAINING.

The photometer PF-12 plus is tailored for mobile water analysis. Equipped with more than 100 pre-programmed methods, it is the ideal companion for all fields of water and wastewater analysis.

Key Features

- More than 100 preprogrammed methods.
- Compatible with NANOCOLOR® tube tests, NANOCOLOR® eco tests, VISOCOLOR® eco tests and VISOCOLOR® powder pillows.
- Holds 16mm OD tubes.
- Flexible power supply via batteries or accu pack.
- Fast and easy access to stored results and data sets.
- Testing of all wavelengths in the range of 340–800 nm.
- Includes 4 x AA batteries, 4 x tubes, funnel, beaker, syringe, USB cable, calibration cuvette, cleaning cloth and hard case.

ROWE CODE IP2068



Spectrophotometer NANOCOLOR Advance

The spectrophotometer NANOCOLOR Advance combines the most important features of the portable photometer PF-12 Plus and the high-precision spectrophotometer NANOCOLOR VIS II providing precise and reliable measurement results in the daily laboratory routine.

INTUITIVE HANDLING ENSURES FAST AND RELIABLE RESULTS

- Simple and reliable routine analysis by fully automatic cuvette recognition via the integrated 2D barcode scanner.
- Easy icon-based menu navigation (based on smartphone)
- Evaluation of NANOCOLOR® tube tests, standard tests, VISOCOLOR® ECO test kits and VISOCOLOR® Powder Pillows.
- Robust design and built-in battery allow full mobility.
- Export data to USB stick, network drives and LIMS.
- Testing of all wavelengths in the range of 340–800 nm.
- More than 200 pre-programmed tests and special methods.
- Holds 16mm and 24mm OD tubes.
- Includes cover, calibration cuvette, touchpen and cleaning cloth.

ROWE CODE IS0626



Spectrophotometers NANOCOLOR

COMBINING PREMIUM HIGH-TECH COMPONENTS WITH OUTSTANDING USABILITY.

The spectrophotometer NANOCOLOR VIS II is a high-precision instrument applicable in all areas of water and wastewater analysis.

Key Features

- Reliable touchscreen with easy icon-based menu navigation (based on smartphone).
- Universal cuvette holder without cuvette slot cover.
- Automatic test recognition via 2D barcode scanner.
- Integrated turbidity control (NTU-Check).
- Integrated inspection equipment monitoring tools.
- Intuitive operation for fast results.
- Holds 16mm and 24mm OD tubes.
- Includes cover, USB cable, calibration cuvette, touchpen and cleaning cloth.

Spectrophotometer NANOCOLOR VIS II

- Halogen lamp
- Testing of all wavelengths in the range of 320-1100nm

ROWE CODE IS0627



Spectrophotometer NANOCOLOR UV/VIS II

- Halogen lamp (visible range) deuterium lamp (UV range)
- Testing of all wavelengths in the range of 190-1100nm.

ROWE CODE IS0628



SPECTROPHOTOMETER - MIOSTECH

UV-120/160 - UV Visible Spectrophotometers

UV-120/160 - UV Visible Spectrophotometers are single beam, general purpose instruments designed to meet the analysis needs of laboratories. They are ideal for various application fields including chemistry, medicine, environmental protection, food and beverage, wine industry and quality control.

Key Features

- Large LCD display (128 x 64 dots);
- Wavelength auto setting;
- Save test results, display group data and standard curves;
- Spectral bandwidth of 4nm;
- Tungsten halogen and Deuterium lamps can be turned on/off individually;
- Pre-aligned design ensures easy lamp replacement;
- Large sample compartment to accommodate bigger cuvettes up to 100mm light path.

UV-120



- Wavelength range of 200-1000nm.

ROWE CODE IS3195

UV-160



- Wavelength range of 190-1100nm;
- Panel menu supports basic mode, standard curve and kinetics.

ROWE CODE IS0290

UV-620S - UV Visible Spectrophotometer

UV-620S series scanning UV Visible spectrophotometers are double beam and either stand-alone or PC models with variable bandwidth of 0.5, 1, 2 and 4nm, providing excellent performance for measurements in the range of 190-1100nm. It has a large graphic LCD screen for menu and spectrum display. The large sample compartment accommodates a wide range of cell holders and accessories including sipper and peltier system. Optional Advanced Windows software can fully control the instrument making it very versatile.

Key Features

- Large graphic LCD (320 x 240 dots) and easy operation;
- Automatic wavelength scanning - Wavelength range of 190-1100nm;
- Stand-alone model with full functions available - eliminating the need for a computer;
- Pre-aligned design ensures easy lamp replacement;
- Real-time clock for date and time stamping of results.



ROWE CODE IS0553

MIOSTECH

V-120/140/160 Visible Spectrophotometers

V-120/140/160 visible spectrophotometers are a single beam, general purpose instrument designed to meet the analysis needs of laboratories. They are ideal for various application fields such as chemistry, medicine, environmental protection, food and beverage, wine industry and quality control.

V-120



Key Features

- Large LCD display (128 x 64 dots);
- Wavelength manual setting and digital display;
- Wavelength range of 325-1000nm;
- Spectral bandwidth of 4nm;
- Easy to use, auto zero and blank;
- Pre-aligned design ensures easy lamp replacement;
- Large sample compartment to accommodate bigger cuvettes up to 100mm light path;
- Windows basic software expands the applications to Standard Curve and Kinetics.

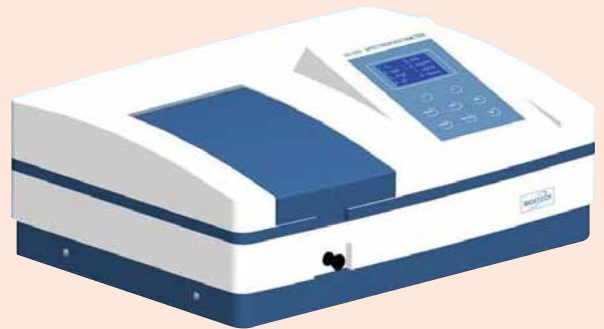
ROWE CODE IS0094

V-140

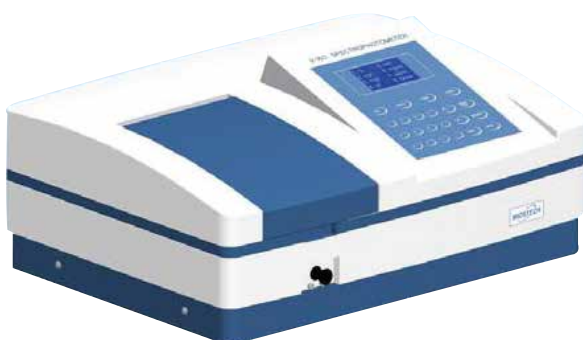
Key Features

- Large LCD display (128 x 64 dots) and digital adjustment;
- Wavelength auto setting;
- Wavelength range of 325-1000nm;
- Spectral bandwidth of 4nm;
- Save test results, display group data and standard curves;
- Tungsten halogen lamp can be turned on/off;
- Pre-aligned design ensures easy lamp replacement;
- Large sample compartment to accommodate bigger cuvettes up to 100m light path.

ROWE CODE IS0112



V-160



Key Features

- Large LCD display (128 x 64 dots);
- Wavelength auto setting;
- Wavelength range of 320-1100nm;
- Spectral bandwidth of 4nm;
- Panel menu supports basic mode, standard curve and kinetics;
- Save test results, display group data and standard curves;
- Tungsten halogen lamp can be turned on/off;
- Pre-aligned design ensures easy lamp replacement;
- Large sample compartment to accommodate bigger cuvettes up to 100mm light path.

ROWE CODE IS0274

MAGNETIC STIRRERS

RATEK

Large Magnetic Stirrer

Suitable for stirring large flasks and containers up to 20 litres. Applications include dissolving solids in liquids, stirring of volatile solutions, as well as other general Microbiology and Biochemistry applications that require light agitation or vigorous churning.

ROWE CODE IM2025

Small Magnetic Stirrer also available - ROWE CODE IM2020



300 x 300mm

Multistirrer (Digital Display) Series Magnetic Stirrers



(Digital) multi-position magnetic stirrer with 6 or 15 positions, that remains cold even after several days of continuous use.

- Adjustable reverse operation (time-controlled).
- Speed regulation from 80 to 1500 rpm.
- SpeedServo™ ensures constant speed even when the viscosity changes.
- Ergonomic - very low height.
- Excellent speed control (electronic), even at low speeds.
- Ideal for microtitration, microbiology and biochemistry.
- Soft start but rapidly reaching set speed.
- Synchronised stirring - same speed ensured.

ROWE CODE (Digital) IS0208 (6 place) & IS0209 (15 place)

ROWE CODE (Standard Analogue Model) IS2318

MST Magnetic Stirrer

- Technopolymer casing resists chemicals.
- White surface for visualization of particles and colour changes.
- Speed regulation up to 1100 rpm.
- Accepts up to 5 litre flasks.
- Remains cold, even after days of continuous use.
- Ideal for microtitration, BOD, microbiology and biochemistry.
- Excellent speed control, even at low speeds.

ROWE CODE IS0152

ROWE CODE (Digital) IM0527 & IM0257



VELP
SCIENTIFICA

STIRRING BARS MAGNETIC - PTFE



- Assured quality
- Available with Alnico or rare earth magnets
- Seamless moulded PTFE
- Polished finish
- Leak-proof design
- FDA approved materials
- High strength magnetisation
- Specified tolerance of PTFE walls

CYLINDRICAL	
SIZE (mm)	ROWE CODE
6 x 3	PM2254
8 x 3	PM2256
10 x 6	PM2264
12 x 4.5	PM2258
13 x 6	PM2262
15 x 6	PM2265
20 x 6	PM2270
25 x 5	PM2285
30 x 6	PM2275
35 x 6	PM2740
40 x 8	PM2815
40 x 7	PM2280
50 x 8	PM2900
60 x 10	PM2943
80 x 10	PM2980

OVAL	
SIZE (mm)	ROWE CODE
10 x 5	PM2358
15 x 6	PM3255
30 x 16	PM3265

PLAIN	
SIZE (mm)	ROWE CODE
15 x 4.5	PM2310
20 x 6	PM2340
25 x 8	PM2618
30 x 7	PM2620
40 x 7	PM2810
70 x 10	PM2950

WITH PIVOT RING	
SIZE (mm)	ROWE CODE
3 x 8	PM2255
12 x 4.5	PM2257
13 x 8	PM2260
15 x 4.5	PM2305
20 x 6	PM2400
25 x 6	PM2500
30 x 6	PM2630
35 x 6	PM2750
40 x 8	PM2800
50 x 8	PM2941
60 x 10	PM2946
70 x 10	PM2975

CROSS	
SIZE (mm)	ROWE CODE
20	PS0324
30 x 10	PM2984
38	PM2895

STIRRING BAR RETRIEVER MAGNETIC

ROWE CODE PR0058



Load all of the stirring bars above, pick and choose which ones you need. Scan code to load these on our webstore now or visit www.rowe.com.au

HOT PLATE STIRRERS



ROWE CODE IM0079

ARE Hot Plate Stirrer

The entry-level hotplate stirrer for general laboratory applications.

- The aluminium alloy top plate ensures temperature homogeneity and optimum heat transfer across the entire surface.
- The SpeedServo™ counter-reaction technology maintains constant speed as viscosity changes.
- Intuitive control panel to set and adjust temperature and stirring speed.
- The inclination of the frontal panel is carefully studied to protect the electronics and facilitate use (IP42 protection class).
- By turning the knobs you can adjust the temperature (up to 370°C) and the stirring speed (up to 1500 rpm).
- Maximum Protection Against Leakages thanks to the dedicated run-off groove.

AREX Heating Magnetic Stirrer

Versatile hotplate stirrer with CerAlTop plate and VTF Digital thermoregulator connection.

- The ceramic coated aluminium plate (CerAlTop™) ensures temperature homogeneity with optimum heat transfer across the entire surface and resistance to chemicals.
- By turning the knobs you can adjust the temperature (up to 370°C) and the stirring speed (up to 1500 rpm).
- The SpeedServo™ counter-reaction technology maintains constant speed as viscosity changes.
- Intuitive control panel to set and adjust temperature and stirring speed.



ROWE CODE IM0274



AREX Kit

Includes:

- AREX Heating Magnetic Stirrer
- Support Rod
- VTF Temperature Regulator
- VTF Digital Thermoregulator connection for perfect and precise thermoregulation up to 300°C, with premium accuracy of $\pm 0.5^\circ\text{C}$.

ROWE CODE IM2243

AREX-6 Digital PRO Hot Plate Stirrer

Advanced Digital Hotplate Stirrer with timer, autoreverse, CerAlTop™ plate ensuring best-in-class thermoregulation performance and maximum safety.

- Stirrer is automatically switched off when overheating occurs thanks to two independent temperature safety circuits.
- Advanced thermoregulation from fast, precise and stable temperature control with minimal overshoot.
- Excellent heat transfer with CerAlTop™ plate. Able to reach a maximum temperature of 370°C.
- The Alnico magnet provides leading magnetic coupling and guarantees superior peripheral stirring. Maximum speed of 1700 rpm, SpeedServo™ torque compensation.
- The built-in timer switches the main function off after the set running time offering unattended operations.
- The Auto-Reverse of stirring direction is a key feature for improving mixing effectiveness.
- The new icons and display ensure a clear readout of the working conditions and warning messages such as "HOT".

AREX-6 Digital PRO Kit

With Pt Probe

Includes:

- AREX-6 DIGITAL PRO Heating Magnetic Stirrer; and
- Temperature Probe.

ROWE CODE IM0566



AREX-6 Digital PRO Kit

With Support Rod

Includes:

- AREX-6 DIGITAL PRO Heating Magnetic Stirrer
- Support Rod
- Clamp
- Temperature Probe

ROWE CODE IM0557



HOT PLATE STIRRERS

AREC Digital Ceramic Hot Plate Stirrer

A safe and reliable hot plate stirrer with ceramic top guaranteeing excellent heat transfer and stirring performance for basic laboratory applications.

- Cutting-edge heating plate technology that ensures temperature homogeneity and stability from room temperature up to 550°C.
- Bright and easy-to-read digital display showing actual and setpoint temperature.
- Powerful motor stirring up to 15L volume (H₂O) from 50-1500 rpm.
- The high-quality ceramic top and technopolymer structure ensures premium resistance to chemicals.
- Hot surface safety message displayed when the temperature is above 50°C.
- Run-off groove to protect the electronics.

ROWE CODE IM0686



AREC.X Digital Ceramic Hot Plate Stirrer

Powerful digital, ceramic, square hot plate stirrer with a socket for the connection to a VTF Vertex digital thermoregulator. The ideal solution for laboratories requiring precise temperature control of the medium.

- Stirs volumes up to 15 litres (H₂O) thanks to the powerful motor and magnetic coupling.
- The AREC.X stirs aqueous solutions from 50 up to 1500 rpm.
- Inbuilt sockets allows connectivity to Velp PT100 or VTF Thermoregulator for more precise temperature control.
- Up to 550°C.

ROWE CODE IM0695



AREC.X Digital Kit With Ext Temp Probe

Includes:

- AREC.X Heating Magnetic Stirrer
- Temperature Probe
- Magnetic Stir Bar

ROWE CODE IM0690



AREC.X Digital Kit With VTF Thermoregulator

Includes:

- AREC.X Heating Magnetic Stirrer
- Support Rod
- VTF Thermoregulator Fuzzy Logic
- Magnetic stir bar

ROWE CODE IM0697



AREC Connect Ceramic Hot Plate Stirrer

An accurate ceramic hotplate stirrer with embedded Wi-Fi technology ensuring precise thermoregulation and powerful stirring for chemical, pharmaceutical and biotech laboratories.

- Stirs volumes up to 20 litres (H₂O).
- Stirs aqueous solutions from 30 up to 1700 rpm being ideal for any type of application at both low and high speed.
- Equipped with SpeedServo™ technology which maintains constant speed as viscosity changes.
- Maximum temperature 550°C.
- Made with technopolymer and is equipped with an extremely resistant ceramic plate, being ideal for high resistance to acids, bases and solvents.
- Integral timer to meet your lab workflow.
- Auto-reverse of the stirring direction.
- Intermittent mode programs for enhanced programming of unattended operations.
- Features embedded Wi-Fi technology to connect to ermes Cloud Platform.
- Using a PC, Smart-phone or Tablet you can access your instrument data and working conditions anytime and anywhere.
- Includes Pt100 probe.



ROWE CODE IM0693

Multi-HS 6/15 Digital Multi-position Hot Plate Stirrer

A safe and compact digital multiposition magnetic stirrer with heating available in 6 and 15 positions. The MULTI-HS presents exclusive features such as timer, safety lock, brushless motor guarantee maximum performance and safety.

- The VELP CerAlTop™ top plate is made of aluminium alloy that guarantees temperature homogeneity with optimum heat distribution and a high specific power.
- Maximum temperature 120°C.
- The extremely powerful brushless motors are able to stir from 100 up to 1000 rpm.
- The Timer is settable from 1 min up to 99 hours.
- Auto-reverse option.



6 position unit
ROWE CODE IM0569

AM4 Multi-positions Hot Plate Stirrer



ROWE CODE IM2224

Multiple-position hot plate stirrer with four separately controlled stirring plates.

- Uniform heat distribution with coated aluminium alloy heating plate.
- Maximum temperature 370°C.
- Accepts up to 4 x 15 litre beakers, independently controlled.
- Electronic speed regulation up to 1500 rpm.
- Distance between stirring position centres: 186 mm.

Also available with individual temperature probes and displays. ROWE CODE IM0590.

OVERHEAD STIRRERS

Whatever your application, VELP will have an overhead stirrer to suit. Select the volume and viscosity to be stirred. Decide whether you want remote control and monitoring through Ermes connectivity. Choose VELP.

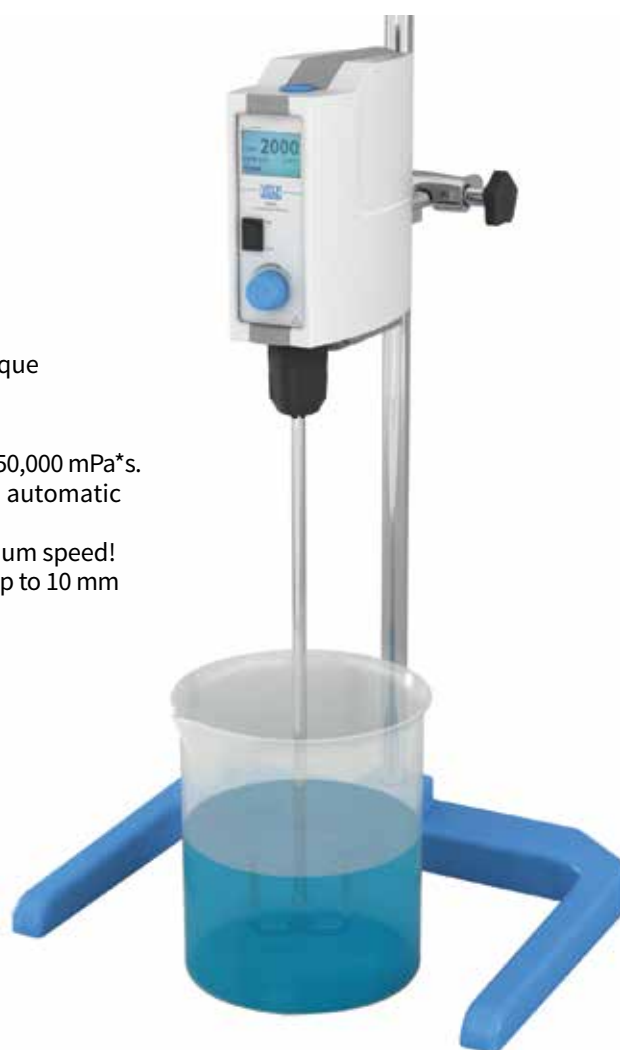
DLH Digital Overhead Stirrer

(Without stirring paddle or stand)

DLH guides the user through a bright and easy to read display. All the main parameters, including the set speed, actual speed, torque and timer are visible at a glance.

- DLH can reach speeds of 2000 rpm and stir up to 40 litres.
- The device can manage medium-high viscosity, with a maximum of 50,000 mPa*s.
- DLH has a digital timer that can be set up to 999:59 minutes with automatic switch-off.
- DLH ensures a smooth start and vigorous agitation even at maximum speed!
- The easy chuck is easy to close and can accommodate shafts with up to 10 mm diameter and does not require any tool.

ROWE CODE IS2221



*See the entire range
on page 323 - 324*

ermes Cloud Based Connectivity Software

1 YEAR SUBSCRIPTION FOR UP TO 10 INSTRUMENTS



- Improve your laboratory experience with secure ermes Cloud Platform and access to your VELP instruments working conditions and data anytime and anywhere.
- Monitor and manage multiple instruments and consumables 24/7 from your PC, tablet or smart-phone with ermes.
- Real time visualization of your analysis and of your instrument working conditions.
- ermes collects and stores your data with the maximum level of encryption following the highest cyber-security standards.
- Effortlessly connect your instrument to ermes cloud platform via secure Wi-Fi or cable.

ROWE CODE IV0171

Overhead Stirrer 100 Advance

A high-end overhead stirrer. It is the ideal solution for demanding applications operating with viscosities up to 70.000 mPa. The electronic controlled brushless motor stirs up to 100 L (H₂O) with a maximum torque of 100 Ncm.

- 3.5" display
- Set the electronic speed control from 30 to 1300 rpm.
- SmartChuck™ technology simplifies the shaft accommodation process and can be carried out with one hand and does not require any tool.
- Interact with the OHS Advance from the real-time graph showing speed, torque and temperature of your test.
- Timer settable from 1 min to 99.59 h.
- Includes a PT100 temperature probe.
- Control and monitor the OHS from PC, smart-phone and tablet through Wi-Fi connection to VELP ermes and through USB.

ROWE CODE IS0341



Stirring Shafts available separately

FLOATING BLADES
ROWE CODE IS16595



Viscosity Range: VL - L

Flow: Radial

6-HOLE PADDLE
ROWE CODE IS16592



Viscosity Range: L- M

Flow: Tangential

FIXED BLADE
ROWE CODE IS16593



Viscosity Range: VL - L - M

Flow: Radial

TURBO PROPELLER
ROWE CODE IS16597



Viscosity Range: M - H

Flow: Axial

FOLDING BLADE
ROWE CODE IS16599



Viscosity Range: VL - L

Flow: Radial

TURBINE
ROWE CODE IS16596



Viscosity Range: M - H

Flow: Radial

PROPELLER
ROWE CODE IS16594



Viscosity Range: VL - L - M

Flow: Axial

ANCHOR
ROWE CODE IS16598

















Viscosity Range: M - H

Flow: Tangential

OVERHEAD STIRRERS

VELP Scientifica Solutions for Overhead Stirring

		ANALOG		DIGITAL	
TORQUE (Ncm)	15/20	ES Up to 15L 	OHS 20 Digital Up to 25L 		
	40	LS Up to 25L 	DLS Up to 25L 	OHS 40 Digital Up to 25L 	
	60		OHS 60 Digital Up to 40L 	OHS 60 Advance Up to 40L 	
	80	LH Up to 40L 	DLH Up to 40L 		
	100		OHS 100 Digital Up to 100L 	OHS 100 Advance Up to 100L 	
	120	PW Up to 70L 			
	200		OHS 200 Digital Up to 100L 	OHS 200 Advance Up to 100L 	



OHS 200 Advance **OHS 100 Advance** **OHS 60 Advance** **OHS 200 Digital** **OHS 100 Digital** **OHS 60 Digital** **OHS 40 Digital** **OHS 20 Digital**

Stirring Speed (rpm)	from 6 to 400 from 30 to 2000	from 30 to 1300	from 30 to 2000	from 6 to 400 from 30 to 2000	from 30 to 1300	from 30 to 2000	from 30 to 2000	from 30 to 2000
Stirring Volume (L)	up to 100	up to 100	up to 40	up to 100	up to 100	up to 40	up to 25	up to 25
Operating Mode	continuous / timer	continuous / timer	continuous / timer	continuous / timer	continuous / timer	continuous / timer	continuous / timer	continuous / timer
Display	3,5" TFT Grafic	3,5" TFT Grafic	3,5" TFT Grafic	LED	LED	LED	LED	LED
Maximum Viscosity (mPa*s)	100,000	70,000	50,000	100,000	70,000	50,000	25,000	10,000
Maximum Torque (Ncm)	200	100	60	200	100	60	40	20
Chuck Capacity (mm)	from 1 to 13	from 1 to 13	from 1 to 13	from 1 to 13	from 1 to 13	from 1 to 13	from 1 to 13	from 1 to 13
Safety Vibration Sensor	•	•	•					
Timer	•	•	•					
Method Setting	•	•	•					
External Temperature Control	•	•	•					
Interfaces	USB / Wifi	USB / Wifi	USB / Wifi	USB	USB	USB	USB	USB
Counter Reaction	•	•	•	•	•	•	•	•
Dimensions (WxHxD) (mm)	90x315x235	90x285x235	90x285x235	90x315x235	90x285x235	90x285x235	90x285x235	90x285x235
	(in) (3,5x12,4x9,3)	(3,5x11,2x9,3)	(3,5x11,2x9,3)	(3,5x12,4x9,3)	(3,5x11,2x9,3)	(3,5x11,2x9,3)	(3,5x11,2x9,3)	(3,5x11,2x9,3)
Weight (Kg)	4.6	4.1	4.1	4.6	4.1	4.1	4.1	4.1
	(lb) (10,1)	(9)	(9)	(10,1)	(9)	(9)	(9)	(9)
Power Supply	230 V / 50-60 Hz 115 V / 60 Hz	230 V / 50-60 Hz 115 V / 60 Hz	230 V / 50-60 Hz 115 V / 60 Hz	230 V / 50-60 Hz 115 V / 60 Hz	230 V / 50-60 Hz 115 V / 60 Hz	230 V / 50-60 Hz 115 V / 60 Hz	230 V / 50-60 Hz 115 V / 60 Hz	230 V / 50-60 Hz 115 V / 60 Hz
Power	190 W	190 W	190 W	190 W	190 W	190 W	190 W	190 W



ES **LS** **DLS** **LH** **DLH** **PW**

Stirring Speed (rpm)	from 50 to 1300	from 50 to 2000	from 50 to 2000	from 50 to 2000	from 50 to 2000	from 20 to 1200
Stirring Volume (L)	up to 15	up to 25	up to 25	up to 40	up to 40	up to 70
Operating Mode	continuous	continuous	continuous / timer	continuous	continuous / timer	continuous
Digital Display			• (set and real speed, torque and timer)		• (set and real speed, torque and timer)	
Maximum Viscosity (mPa*s)	1,000	25,000	25,000	50,000	50,000	100,000
Maximum Torque (Ncm)	15	40	40	80	80	120
Chuck Capacity (mm)	from 1 to 10	from 1 to 10	from 1 to 10	from 1 to 10	from 1 to 10	from 1 to 10
Counter Reaction			•		•	
Dimensions (WxHxD) (mm)	80x160x200	80x215x196	80x215x196	80x230x196	80x230x196	80x230x196
	(in) (3,1x6,3x7,9)	(3,1x8,5x7,7)	(3,1x8,5x7,7)	(3,1x9,0x7,7)	(3,1x9,0x7,7)	(3,1x9,0x7,7)
Weight (Kg)	1.3	2.3	2.5	2.9	3.0	2.9
	(lb) (2,9)	(5,1)	(5,5)	(6,4)	(6,6)	(6,4)
Power Supply	110-230 V / 50-60 Hz	110-230 V / 50-60 Hz	110-230 V / 50-60 Hz	110-230 V / 50-60 Hz	110-230 V / 50-60 Hz	110-230 V / 50-60 Hz
Power	30 W	120 W	120 W	190 W	190 W	190 W

FLAMMABLE LIQUID INDOOR STORAGE CABINETS



CAPACITY	DOORS	SHELVES	WEIGHT	DIMENSIONS H x W x D		ROWE CODE
				EXTERNAL	INTERNAL	
INCLUDED BASE LEVEL				EXTERNAL	INTERNAL	
30L	1	1	53kg	770 x 515 x 465mm	525 x 420 x 370mm	HC3080
60L	1	2	62kg	1065 x 515 x 465mm	820 x 420 x 370mm	HC3090
100L	2	1	100kg	770 x 935 x 620mm	495 x 840 x 530mm	HC3100
160L	2	2	141kg	1295 x 1115 x 500mm	1015 x 1020 x 415mm	HC3000
250L	2	3	185kg	1825 x 1115 x 500mm	1545 x 1020 x 415mm	HC3200
350L	2	3	230kg	1825 x 1440 x 585mm	1545 x 1350 x 495mm	HC3300
350L	1	3	180kg	1825 x 865 x 865mm	1580 x 770 x 775mm	HC0687
205L	1	ROLLER SET	180kg	1825 x 865 x 865mm	1580 x 770 x 775mm	HC0688
425L	2	3	247kg	1825 x 1115 x 865mm	1545 x 1015 x 775mm	HC0689

OUTDOOR STORAGE CABINETS



CAPACITY	DOORS	SHELVES	WEIGHT	DIMENSIONS H x W x D		ROWE CODE
				EXTERNAL	INTERNAL	
INCLUDED BASE LEVEL				EXTERNAL	INTERNAL	
80L	1	2	70kg	1375 x 785 x 635mm	1165 x 780 x 455mm	HC0709
160L	1	2	90kg	1375 x 785 x 900mm	1165 x 770 x 720mm	HC0710
250L	1	2	130kg	1375 x 1035 x 900mm	1165 x 1025 x 720mm	HC0711
250L	1	3	140kg	1857 x 785 x 900mm	1647 x 780 x 720mm	PC0530
350L	1	3	185kg	1870 x 1185 x 900mm	1660 x 1180 x 720mm	HC0712
450L	2	6	220kg	1870 x 1535 x 900mm	1660 x 1530 x 720mm	HC0669

CAPACITY AND CONFIGURATION	DANGEROUS GOODS STORAGE CABINETS	ROWE CODE
20L - 1 door and shelf	Corrosive - Poly white	HC3225
	Flammable - Metal	HC3080
30L - 1 door and shelf	Corrosive - Metal	HC3220
	Toxic - Metal	HC3390
	Oxidising - Metal	HC3403
	Organic Peroxide - Metal	HC0696
	Class 4, Dangerous Goods - Metal	HC0701
40L - 1 door and shelf	Corrosive - Poly white	HC3205

NOTE: For Corrosive and other type of storage cabinets - Please call.

SINGLE MESH STRAINERS

Kitchen quality strainers with wooden handle

Single Mesh

DIAMETER (mm)	MESH (mm)	PACK SIZE	ROWE CODE
180	2	EA	WS1800
180	1	EA	WS1810
200	1	EA	WS1824



POCKET SWABS



The PocketSwab Plus rapid ATP (adenosine triphosphate) swab is room-temperature stable, self-contained, single service test that enables total surface hygiene verification in only 5 seconds, allowing real-time corrective action. The PocketSwab Plus ATP swab is relied on for cleaning verification and validation of sanitation and hygiene practices to help prevent cross-contamination and microbial challenges due to ineffective sanitation procedures.

Find out more



BENEFITS

- Verifies successful cleaning and sanitation in five seconds
- Detects ATP residue from microorganisms and low level biologicals (such as food or blood) which is unable to be detected by visual inspection
- Room temperature shelf life of one year
- Recycle or discard in regular waste
- Accurate readings with novaLUM luminometer

Used in

- R Dairy**
- R Food & Beverage**
- R Healthcare**
- R Pharmaceutical**



novaLUM II ATP detection system

Superior science for advance sanitation control

- Advanced sensitivity
- Cost Effective Speed in obtaining results
- PMT Detector
- Audit Compliant
- Improved Data Analytics
- Diverse Applications
- Alkaline Phosphatase detection in pasteurized milk, FAP or Paslite
- Multiple swab options
- No sodium azide

SYRINGES - CHIRANA

VOL (mL)	2 PART SYRINGES - SINGLE USE - CHIRANA	PACKING	ROWE CODE
2	<ul style="list-style-type: none"> Luer slip PP barrel PE plunger (gasket free) 	Bulk pack, non-sterile	PS0416
		Individually packed, sterile	PS0095
5		Bulk packed, non-sterile	PS0417
		Individually packed, sterile	PS1766
10		Bulk packed, non-sterile	PS0418
		Individually packed, sterile	PS1862
20		Bulk packed, non-sterile	PS0419
		Individually packed, sterile	PS0359



2 PART SYRINGES

VOL (mL)	CATHETER 3 PART SYRINGES - SINGLE USE - CHIRANA	PACKING	ROWE CODE
50	Catheter tip	Individually packed, sterile	PS0435
100	Catheter tip with luer adaptor		PS0436

VOL (mL)	3 PART SYRINGES - SINGLE USE - CHIRANA	TYPE	ROWE CODE
1	<ul style="list-style-type: none"> PP barrel PE plunger Lubricated synthetic rubber gasket Individually packed, sterile 	Luer Lock	PS0428
		Luer Slip	PS0420
2		Luer Lock	PS0429
		Luer Slip	PS0421
3		Luer Lock	PS0430
		Luer Slip	PS0422
5		Luer Lock	PS0431
		Luer Slip	PS0423
10		Luer Lock	PS0432
		Luer Slip	PS0424
20		Luer Lock	PS0433
		Luer Slip	PS0425
30		Luer Lock	PS0434
		Luer Slip	PS0426
50		Luer Lock	PS0487
		Luer Slip	PS0472



ROWE CODE
PS0435



ROWE CODE
PS0436



3 PART SYRINGES

SYRINGES - TERUMO

VOL (mL)	SYRINGES - TERUMO	ROWE CODE
1	Luer slip, single use, sterile	PS1611
3	Luer lock, single use	PS1780
3	Luer slip, single use	PS1650
5	Luer lock, single use	PS1755
5	Luer slip, single use	PS1750
10	Luer lock tip, bulk pack, non sterile	PS0473
10	Luer slip, eccentric tip, single use	PS1850
10	Plastic luer lock, single use, sterile (individually wrapped)	PS1840
10	Plastic luer slip, concentric tip	PS1845
20	Luer slip, eccentric tip, single use	PS1951
20	Plastic luer lock, single use	PS1961
30	Luer lock, plastic	PS1980
30	Luer slip, eccentric tip, single use	PS1973
50	Catheter tip, single use, plastic, (graduated to 60mL)	PS2074
50	Luer slip, eccentric tip, single use, sterile, (graduated to 60ml), individually wrapped	PS2052
50	Luer lock, single use (graduated to 60ml)	PS2061
60	luer lock, single use, plastic	PS0562



ROWE CODE
PS1780



ROWE CODE
PS1850

VOL (µL)	INSULIN SYRINGE - TERUMO	ROWE CODE
500	U100	PS1770

	AGANI SYRINGE NEEDLES - TERUMO	ROWE CODE
	18g x 38mm	PS0439
	19g x 38mm	PS0450
	19g x 50mm	PS0082
	21g x 50mm, disposable	HS0148
	23g x 32mm	PS0468
	25g x 16mm, orange	PS0532
	25g x 25mm	HS0596
	26g x 12.7mm, regular wall	PS2263
	30g x 13mm, yellow	PS0533



ROWE CODE
PS1770



TAPS

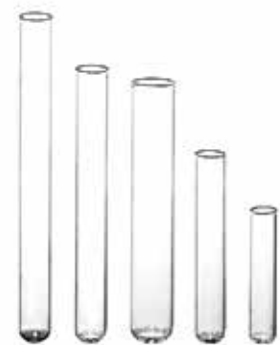
TAPS (EACH)	ROWE CODE
Black PE, 20mm thread to fit bung on 20L drums where supplied. Non-leak seal	PT1000
Tap and Cap, AeroFlo, LDPE, 48mm, self venting (in place of cap on 20L drum)	PT1007



GLASS TUBES & BRUSHES

CULTURE TUBES - CITOTEST	PACK SIZE	ROWE CODE
BOROSILICATE GLASS (DISPOSABLE)		
16 x 100mm	1000	GT2204
16 x 150mm	1000	GT2305
18 x 150mm	600	GT2495
25 x 200mm (4 x 100 piece cartons)	400	GT0135

BEST SELLER



CULTURE TUBES - KIMBLE	PACK SIZE	ROWE CODE
BOROSILICATE GLASS (DISPOSABLE)		
12 x 75mm	1000	GT2105
13 x 100mm	1000	GT2151
16 x 100mm	1000	GT2210
18 x 150mm	500	GT2485
16 x 125mm (Screw thread without cap)	1000	GT1610
18 x 150mm (Reusable - Rimmed glass)	576	GT5290
FLINT GLASS (DISPOSABLE)		
12 x 75mm	1000	GT2110



TEST TUBE BRUSHES (EACH)	DIAM x BRISTLE L x TOTAL L (mm)	CODE
Fan end	3 x 65 x 350	HB0086
Fan end	4 x 100 x 300	HB1696
Fan end	4 x 65 x 200	HB1695
Fan end	6dx100lx300	HB1698
Fan end	8 x 65 x 200	HB1700
Fan end	10 x 100 x 300	HB0069
Fan end	12 x 65 x 250	HB0088
Fan end	13 x 65 x 300	HB1790
Fan end	15 x 80 x 300	HB1850
Fan end	20 x 100 x 300	HB1930
Fan end, nylon	25 x 65 x 250	HB1949
Fan end, nylon	25 x 100 x 1m	HB2200
Fan end, hard nylon	26 x 80 x 300	HB0205
Fan end	26 x 80 x 300	HB1950
Fan end	45 x 110 x 340	HB2100
Fan end	50 x 50 x 300	HB1459



PLASTIC TUBES

PLASTIC TUBES - KARTELL	VOLUME (mL)	PACK SIZE	ROWE CODE
16 x 100mm - Polystyrene (2 x 500 piece bags)	10	1000	PT6240
35 x 100mm - Polypropylene	75	20	PT1750

FLAT BOTTOM PLASTIC TUBES - TECHNO PLAS	VOLUME (mL)	PACK SIZE	ROWE CODE
Polystyrene - With Polyethylene screw cap	2.5	3000	PT1660
Polystyrene - With Polyethylene natural screw cap	5	2000	PT1662
Polypropylene - Labelled with yellow cap (sterile)	5	2000	PT1622
Polypropylene - With yellow screw cap (sterile)	10	1600	PT0582
97 x 16mm - Polypropylene with screw cap	10	1600	PT0576
Polystyrene - Unlabelled with screw cap (sterile)	10	1000	PT1679
97 x 16mm - Polypropylene with screw cap	10	1600	PT0579
Without cap (10 x 100 piece bags)	10	1000	PT1672
Polystyrene (scramble packed)	10	1500	PT0477
100 x 17mm - Tube only - no cap, Polypropylene	10	1500	PT1689

V BOTTOM PLASTIC TUBES - TECHNO PLAS	VOLUME (mL)	PACK SIZE	ROWE CODE
Polystyrene - Unlabelled with screw cap	10	1000	PT1712
Polystyrene - Unlabelled with screw cap (sterile)	10	1000	PT1710

Other variations available. If you don't see what you're looking for here, please contact us with your request.

TEST TUBE CLOSURE CAP - KARTELL	DIAM (mm)	PACK SIZE	ROWE CODE
Polyethylene	10.5	100	PC1058
Polyethylene - To suit 18mm ID test tube	16	100	PC1200
Polyethylene	22	100	PC1065
Push-in for 16mm tube, green polyethylene	16	1000	PC6290
Push-in for 16mm tube, yellow polyethylene	16	1000	PT6270
Push-in for 16mm tube, red polyethylene	16	1000	PC6280
Push-in for 16mm tube, neutral	16	1000	PC6275

TEST TUBE CLOSURE CAP - TECHNO PLAS	DIAM (mm)	PACK SIZE	ROWE CODE
16mm - Finned push cap	16	10,000	PC6274
Overcap for 16mm tube, neutral	16	20,000	PC6276



ROWE CODE
PT1662



ROWE CODE
PT1710



ROWE CODE
PC1065

CENTRIFUGE TUBES

GLASS CENTRIFUGE TUBES	PACK SIZE	ROWE CODE
10mL - Disposable, conical, screw thread (no cap)	125	GT3269
10mL - 17D x 108H mm, graduated, Kimax	12	GT2009
25mL - 24D x 100H mm, round bottom, borosilicate glass	EA	GT3155
35mL - 29D x 100H mm, with screw cap (heavy duty)	12	GT3210
50mL - Duran	EA	GT3165
100mL - Short cone conical oil, Length: 6 Inch	12	GT3230



ROWE CODE
GT3269

POLYPROPYLENE CENTRIFUGE TUBES - 15mL

15mL CENTRIFUGE TUBES - CITOTEST	PACK SIZE	ROWE CODE
NON-STERILE		
17.4D x 120H mm, conical bottom, graduated polypropylene, grey cap	500	PT0729



ROWE CODE
PT1771

15mL CENTRIFUGE TUBES - JET BIOFIL	PACK SIZE	ROWE CODE
STERILE		
17D x 120H mm, conical bottom, polypropylene	500	PT0813



ROWE CODE
PT0223

15mL CENTRIFUGE TUBES - TARSONS	PACK SIZE	ROWE CODE
STERILE		
16D x 120H mm, conical bottom, polypropylene	500	PT1771
16D x 120H mm, conical bottom, polystyrene	500	PT0157
NON-STERILE		
Conical bottom, autoclavable polypropylene	500	PT0223
AMBER STERILE		
Conical bottom, propylene	500	PT1751



ROWE CODE
PT1751

POLYPROPYLENE CENTRIFUGE TUBES - 50mL

50mL CENTRIFUGE TUBES - CITOTEST	PACK SIZE	ROWE CODE
EO STERILE		
30D x 115H mm, skirted, polypropylene, red screw cap, individual flow wrap	500	PT0017
NON-STERILE		
115.5H x 30D mm, conical bottom, graduated polypropylene, blue cap, tubes and cap separate, DNase/RNase/pyrogen free	500	PT0730
30D x 115H mm, conical bottom/self-standing, graduated polypropylene, screw tube (leak-proof), red colour, assembled	50	PT0256
50mL CENTRIFUGE TUBES - JET BIOFIL	PACK SIZE	ROWE CODE
STERILE		
28D x 115H mm, conical bottom, PP/HDPE, DNase/RNase free, non-pyrogenic, max RCF 20,000xg	500	PT0814
NON-STERILE		
29.3D x 113.9H mm, conical bottom, graduated polypropylene, max RCF 12,000xg, green blue cap, tubes and cap separate, DNase/RNase/pyrogen free (cft310500)	500	PT0879
50mL CENTRIFUGE TUBES - SPL	PACK SIZE	ROWE CODE
STERILE		
28D x 115H mm, conical bottom, max RCF 14,000xg, PP/HDPE	500	PC0352
Conical bottom, max RCF 14,000xg, PP/HDPE	300	PT0744
50mL CENTRIFUGE TUBES - TARSONS	PACK SIZE	ROWE CODE
STERILE		
28D x 115H mm, conical bottom, polypropylene	500	PT1170
NON-STERILE		
28D x 115H mm, self standing (with skirt), conical bottom, polypropylene, blue cap	500	PT0321
AMBER STERILE		
conical bottom, polypropylene	500	PT1741



ROWE CODE
PC0352



ROWE CODE
PT1741

MICRO CENTRIFUGE TUBES

PLASTIC MICROCENTRIFUGE TUBE - TARSON	COLOUR	ROWE CODE
0.5mL		
<ul style="list-style-type: none"> • DNASE/RNASE/pyrogen free • Autoclavable polypropylene • 1000 quantity 	Amber	PT0224
	Green	PT0227
	Natural	PT0228
	Purple	PT0229
1.5mL		
<ul style="list-style-type: none"> • DNASE/RNASE/pyrogen free • Autoclavable polypropylene • 500 quantity 	Amber	PT0173
	Blue	PT0160
	Natural	PT0159
	Purple	PT0162
	Red	PT0163
	Yellow	PT0164
2mL		
<ul style="list-style-type: none"> • DNASE/RNASE/pyrogen free • Autoclavable polypropylene • 500 quantity 	Amber	PT0176
	Natural	PT0166
	*Frosted *Asstd colours	PT0174
5mL		
<ul style="list-style-type: none"> • DNASE/RNASE/pyrogen free • Autoclavable polypropylene • 100 quantity 	Amber	PT0156
	Natural	PT0235
PLASTIC MICROCENTRIFUGE TUBE - TARSON	VOLUME (mL)	ROWE CODE
• ULTRA LOW RETENTION		
<ul style="list-style-type: none"> • DNASE/RNASE/pyrogen free • Autoclavable polypropylene • 10 quantity 	1.5	PT0158
	1.5	PT0863
	1.5	PT0475
	2	PT0476
	2	PT0165



ROWE CODE
PT0228



ROWE CODE
PT0162



ROWE CODE
PT0575

PLASTIC CENTRIFUGE TUBE - TECHNO PLAS	PACK SIZE	ROWE CODE
10mL - Conical base, screw cap, graduated, gamma sterile	1600	PT0583
10mL - 16D x 103H mm, conical base, screw cap, natural, unlabelled, graduated, PP	1600	PT0575
15mL - Graduated, polypropylene, without cap	1000	PT1103

PLASTIC CENTRIFUGE TUBE - KARTELL	PACK SIZE	ROWE CODE
10mL - Conical, graduated, TPX	EA	PT1112
15mL - Conical, graduated, TPX	EA	PT1115
110mL - 40D x 120H mm, polypropylene	EA	PT1240



ROWE CODE
PT1240

STORAGE & RACKS

CRYOCHILL FREEZER BOX - TARSONS	COLOUR	PLACE HOLDERS	PACK SIZE	ROWE CODE
(-90°C) POLYPROYLENE, AUTOCLAVABLE				
Holds 1/1.8mL cryo vials or 1.5/2mL micro tubes with lift-off lid	Assorted colours*	50	5	PB0168
	Assorted colours*	81	5	PB0157
	Black	81	5	PB0159
	Blue	81	5	PB0158
	Green	81	5	PB0156
	Natural	81	5	PB0152
	Orange	81	5	PB0154
	Purple	81	5	PB0155
	Yellow	81	5	PB0153
	*Blue, Yellow, Orange, Green, Purple	Natural	81	EA
	Blue	100	EA	PT2005



FREEZER BOX - TARSONS	PLACE HOLDERS	PACK SIZE	ROWE CODE
POLYPROYLENE, AUTOCLAVABLE			
For 10mL centrifuge tubes	36	4	PB0550
For 50mL centrifuge tubes	16	4	PB0551



FREEZER BOX (CARDBOARD) - CITOTEST	COLOUR	ROWE CODE
STORAGE FOR 2" CRYO TUBES - DIMENSIONS 134 x 134 x 51mm (EA)		
81 place (9 x 9)	Orange	HF0063
81 place (9 x 9) with two drain slots at both sides of the bottom	White	HF0102
100 place (10 x 10)	Green	HF0085
100 place (10 x 10)	White	HF0084

ROWE CODE
HF0063

WIRE RACKS

These racks are made from plastic coated double wire. For a minimum order quantity of 10, other sizes can be made to suit your requirements. (Not all racks have side handles).

SUIT TUBE OD mm	NO. OF HOLES	FORMAT	STD. PACK SIZE	ROWE CODE
16	50	10 x 5	ea	HW1860
25	24	3 x 8	ea	HW1550
25	40	4 x 10	ea	HW1650
25	40	4 x 10	ea	HW1750
30	60	6 x 10	ea	HW1675



TEST TUBE RACKS

TUBE Ø (mm)	POSITIONS	PACK SIZE	ROWE CODE
WHITE PLASTIC COATED WIRE RACKS			
16	10 x 5	EA	HW1860
25	2 x (3 x 8)	EA	HW1550
25	4 x 10	EA	HW1650
30	6 x 8	EA	HW1674
30	3 x 6	EA	HW1670
40	3 x 6	EA	HW1730

COLOUR	TUBE Ø (mm)	POSITIONS	PACK SIZE	ROWE CODE
PLASTIC HALF RACKS (NYLON)				
Blue	13	6 x 6	EA	PR0111
Blue	16	6 x 6	EA	PR0114
Blue	20	4 x 5	EA	PR0117
Blue	25	4 x 4	EA	PR0120
Blue	30	3 x 3	EA	PR0123
White	13	6 x 6	EA	PR0110
White	16	6 x 6	EA	PR0113
White	20	4 x 5	EA	PR0116
White	25	4 x 4	EA	PR0119
White	30	3 x 3	EA	PR0122
Yellow	13	6 x 6	EA	PR0112
Yellow	16	6 x 6	EA	PR0115
Yellow	20	4 x 5	EA	PR0118
Yellow	25	4 x 4	EA	PR0121
Yellow	30	3 x 4	EA	PR0124



PLASTIC HALF RACKS

COLOUR / PLASTIC	TUBE Ø (mm)	POSITIONS	MATE-RIAL	ROWE CODE
PLASTIC STANDARD RACKS (NYLON) (EA)				
Blue	13	6 x 12	Nylon	PR0098
Blue	16	5 x 12	PP	PR0003
Blue	16	6 x 12	Nylon	PR0102
Blue	16	6 x 12	PP	PR0067
Blue	20	4 x 10	Nylon	PR0105
Blue	20	4 x 10	PP	PR0007
Blue	25	3 x 8	PP	PR0020
Blue	25	4 x 10	Nylon	PR0108
Blue	30	3 x 8	Nylon	PR0014
Green	16	6 x 12	Nylon	PT0599
Green	30	3 x 8	Nylon	PR0125
Magenta	30	3 x 8	Nylon	PR0126
Orange	30	3 x 8	Nylon	PR0127
Red	16	5 x 12	PP	PR0004
Red	20	4 x 10	PP	PR0008
Red	25	3 x 8	PP	PR0021
Red	30	3 x 8	Nylon	PR0015
White	13	6 x 12	Nylon	PR0097
White	16	5 x 12	PP	PR0002
White	16	6 x 12	Nylon	PR0101
White	20	4 x 10	PP	PR0006
White	20	4 x 10	Nylon	PR0104
White	25	3 x 8	PP	PR0019
White	25	4 x 10	Nylon	PR0107
White	30	3 x 8	Nylon	PR0013
Yellow	13	6 x 12	Nylon	PR0099
Yellow	16	5 x 12	PP	PR0005
Yellow	16	6 x 12	Nylon	PR0103
Yellow	20	4 x 10	Nylon	PR0106
Yellow	20	4 x 10	PP	PR0009
Yellow	25	3 x 8	PP	PR0022
Yellow	25	4 x 10	Nylon	PR0109
Yellow	30	3 x 8	Nylon	PR0016



PLASTIC STANDARD RACKS

REVERSABLE RACKS	COLOUR	PACK SIZE	ROWE CODE
• MICROCENTRIFUGE TUBES • SOLID POLYPROPYLENE CONSTRUCTION • AUTOCLAVABLE			
Holds 80 x 1.5mL or 2mL tubes and 60 x 0.5mL tubes (PCR tubes)	Assorted colours	5	PR0082
	Blue	EA	PT2101
	Green	EA	PR0084
	Natural colour	EA	PR0083
	Orange	EA	PR0087
	Pink	EA	PR0085
	Red	EA	PR0088
	Yellow	EA	PR0086



ROWE CODE PR0160

MICRO TUBE RACKS	COLOUR	MATERIAL	PACK SIZE	ROWE CODE
20 wells for 1.5 - 2.0mL micro tubes	White	Autoclavable polypropylene	EA	PR0128
24 wells for 1.5mL micro tubes	Red	Autoclavable reinforced nylon	EA	PR0077
24 wells for 1.5mL micro tubes	Yellow	Autoclavable reinforced nylon	EA	PR0078
96 wells for 1.5mL micro tubes	Red	Autoclavable reinforced nylon	EA	PR0080
96 wells for 1.5mL micro tubes	Yellow	Autoclavable reinforced nylon	EA	PR0081
96 wells with cover (reversible) for 1.5/2mL or 0.5mL micro tubes	Assorted colours	Polypropylene	5	PR0162
	Blue	Polypropylene	5	PR0163
96 wells (reversible) for 1.5/2mL or 0.5mL micro tubes	Assorted colours	Autoclavable polypropylene	5	PR0160
	Blue	Autoclavable polypropylene	5	PR0161



ROWE CODE PR0128



REVERSIBLE RACKS



MICRO TUBE RACKS

AUTOCLAVABLE POLYPROPYLENE RACKS

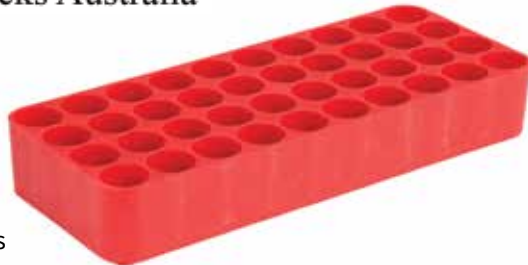
Tetra Racks Australia

40 PLACE RACK

(4 x 10)

- 18mm diam holes
- 36mm deep holes
- Low-profile solid red glass filled polypropylene
- Temp range (freezer -20°C autoclave +150°C)

ROWE CODE PR1117



40 PLACE RACK

(4 x 10)

- 18mm diam holes
- 36mm deep holes
- Low-profile solid green glass filled polypropylene
- Temp range (freezer -20°C autoclave +150°C)

ROWE CODE PT0448



40 PLACE RACK

(4 x 10)

- 18mm diam holes
- Solid red glass filled polypropylene
- Temp range (freezer -20°C autoclave +150°C)

ROWE CODE PR1115



44 PLACE RACK

(4 x 11)

- Numbered
- 16mm diam holes
- Solid red polypropylene
- Temp range (freezer -20°C autoclave +150°C)

ROWE CODE PR0025

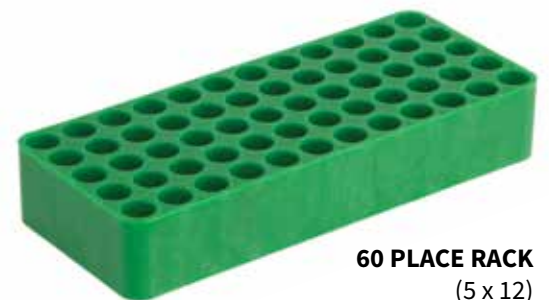


60 PLACE RACK

(5 x 12)

- 12mm diam holes
- Autoclavable red polypropylene

ROWE CODE PR0171

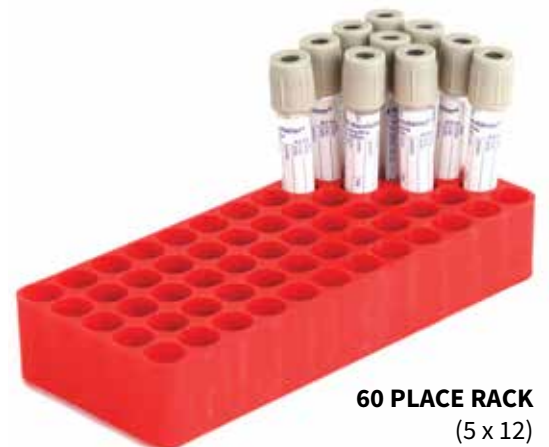


60 PLACE RACK

(5 x 12)

- 12mm diam holes
- Autoclavable green polypropylene

ROWE CODE PR0172



60 PLACE RACK

(5 x 12)

- 13 & 14mm diam tubes
- Solid red polypropylene

ROWE CODE PR1114

THERMOMETERS - VARIOUS

CERTIFIED THERMOMETERS	ROWE CODE
-199.99 to 199.99°C x 0.05°C - High accuracy, PT100 probe with 5 point UKAS Certificate of Calibration from ETI	IT0381
-80 to 20 x 1°C - ASTM 6°C, NATA certified, toluene filled, white back, 76mm immersion, 4 point calibration -50, -30, -10, 0°C	GT0394
-50 to 300 +/- 1°C - Lollipop style, waterproof, traceable certificate	IT0292
-50 to 300°C - 203mm stainless steel probe, water & shockproof, lollipop style, traceable NIST ISO17025 A2LA	IT0455
-50 to 200 x 0.1°C - 125mm probe, NATA certified at 3 points 20, 50 and 100°C	IT0056
-50 to 70°C - Indoor/outdoor with big-digit display (ambient range -5 to 50°C), 3m probe cable, NIST ISO17025 A2LA with calibration certificate	CT4845
38.6 to 41.4 x 0.05°C - ASTM S120°C, NATA certified, special blue liquid, total immersion, 310mm long, 3 calibration points 0, 40, 41°C	GT0393
-38 to 50 x 1°C - ASTM S5°C, white back, non-wetting blue special liquid, 108mm immersion, 6 points NATA certification (client to nominate)	GT0359
-10 to 300 x 1°C - Brown spirit (low tox) 76mm immersion, 305mm long	GT0180
-10 to 250 x 1°C - Mercury, 76mm immersion, 305mm long, white back	GT4100
-10 to 200 x 1°C - NATA certified, 76mm immersion, 305mm long, calibration points @ 0, 50, 100, 150 & 200°C	GT0368
Thermometer precision -10 to 110 x 0.5°C divisions, 305mm long total immersion, solid stem, red special liquid, NATA certified at three points (0, 30 & 80°C)	GT0395
-10 to 110 x 1°C - NATA calibrated @ 3 points (0, 50, 110°C)	GT0111
-10 to 110 x 0.5°C - NATA certified, red liquid, 305mm long, total immersion, calibration points @ 0, 25, 50, 75 & 100°C	GT0369
-10 to 110 x 0.5°C - NATA certified, 305mm long, total immersion, calibration at ice point	GT0345
-10 to 110 x 0.5°C - NATA certified, red special liquid, 305mm long, total immersion, calibration points @ 0, 25, 50, 75 & 100°C	GT0354
-5 to 110 x 1.5°C - ASTM, 9°C NATA certified, 4 calibration points 0, 35, 70, 105°C	GT0382
-5 to 105 x 0.2°C - NATA certified, white back, with non-wetting blue special liquid, total immersion, 350mm long, certified @ 0, 20, 40, 60, 80, 100°C	GT0374
-5 to 50 x 0.1°C, blue spirit, NATA certified, total immersion, 350mm long, calibration points 0, 10, 20, 30, 40, 50, 0°C	GT0303
-1 to 38 x 0.1°C - NATA certified, white back, with non-wetting blue special liquid, total immersion, certified @ 0,10,20,30,35°C	GT0376
Thermometer part, NATA calibration at 3 temperatures, end user to specify	IT0446



ROWE CODE
IT0292

THERMOMETERS - VARIOUS

CONTACT THERMOMETERS

ROWE
CODE

-20 to 250°C - Model 313C

IT1150

+10 to 400°C - Model 314C

IT1140



ROWE CODE
IT1150

INDOOR / OUTDOOR THERMOMETERS

ROWE
CODE

Indoor (-10 to 50°C) / Outdoor (-50 to 70°C) - Large display, outdoor sensor with 1.4m cable

IT0583

INFRARED THERMOMETERS

ROWE
CODE

-30c to 400°C - Model 830-T1

IT1201

-40 to 800°C - Non contact (not to be pointed at the face or eyes)

IS1617

-25 to 250°C - Model 805, topsafe waterproof (IPGS)

IT1206

32 to 43°C - For monitoring body, room & surface temperature (non-contact forehead)

IT0584



ROWE CODE
IT0584

RED SPIRIT THERMOMETERS

ROWE
CODE

-35 to 50 x 1°C - 76mm immersion, 305mm long

GT0390

-10 to 250 x 2°C - 76mm immersion, 305mm long

GT3910

-10 to 150 x 1°C - 305mm filled

GT3905

-10 to 110 x 1°C - 76mm immersion, 205mm long

GT4735

-10 to 110 x 1°C - 76mm immersion, 305mm long

GT4750

-10 to 50 x 0.5°C - 76mm immersion, 305mm long

GT4865

-10 to 50 x 0.5°C - 76mm immersion, 305mm long

GT4810

-10 to 50 x 0.1°C - Total immersion, 420mm long

GT4407

35 to 200°C - Oven

GT0295



ROWE CODE
IT1201



ROWE CODE
GT3910



ROWE CODE
IT1206

DIGITAL THERMOMETERS

DIGITAL THERMOMETERS	ROWE CODE
-200 to 1370°C - Type K	IT0585
-100 to 300°C - With stainless steel probe, waterproof	IT0557
-50 to 70°C +/- 1°C - With bullet probe, NIST traceable, calibration certificate	HT0338
-50 to 150°C - Checktemp, Water resistant	IT1365
-50 to 150°C - Checktemp 1, with remote probe	IT1368
-50 to 199°C & 200 to 1350°C - K Type, waterproof, dual range (probe not included)	IT1330
-50 to 200 x 0.1°C	IT1360
-50 to 220°C - T shape, waterproof with Calcheck	IT1364
-50 to 275°C - Testo 106 HACCP	IT1332
-50 to 300°C x 0.1°C - Testo 108, 0.5°C accuracy with T type probe (K Type connectable), waterproof	IM1318
-50 to 300°C - Checktemp 4, Stainless steel, fold away probe, blue, EN 13485 certified	IT0621
-50 to 300°C - Kangaroo, with probe, pocket traceable, ISO17025 certificate	IT0553
-50 to 300 x 0.1°C - Intervals, with stainless steel immersion probe and protective probe cover, IP65 water resistant	IT0337
Checkfridge	IT1380
Thermometer thermastick -49.9 to 299.9°C x 0.1°C, accuracy +/-0.5°C (between -10 and 100°C) waterproof	IT0373
-40 to 155 x 0.1°C - Lollipop style, 10cm probe, reduced tip, waterproof, Deltatrak	IT0483
-40 to 2321°C - Pocket, food safe, adjustable temperature alarm, IPX7 waterproof rating	IT0482



ROWE CODE
IT1365



ROWE CODE
IT0553

TIMER STOPWATCH /CLOCK

ROWE CODE IT0240

- Displays hours, minutes and seconds
- Stopwatch function
- Count-down timer counts up once alarm goes off to show overtime.
- Clock can be set as either 12 hour am/pm or 24 hour format
- 24 hour timer capacity with 1 second resolution
- Timer memory allows a preset time to be stored
- Magnetic back clip
 - a) adheres to metal surfaces
 - b) clips on to pockets and the like, or
 - c) operates as "easel" type stand
- Stopwatch, count-down and clock can operate simultaneously
- Battery included



ROWE CODE
IT0240



ROWE CODE
HS0681

STOPWATCH	ROWE CODE
6 DIGIT STOPWATCH - 1/100 second, water resistant, large face	HS0681
TRACEABLE STOPWATCH - Waterproof/shockproof, 24 hrs, with lanyard, NIST ISO 17025 A2LA	HS0519

PIPETTE TIPS - STANDARD & LOW RETENTION

We have so many options, that an explanation of our offer is necessary.

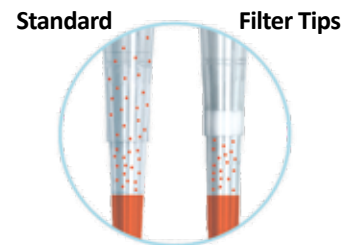
Please select by **TYPE**

Standard

Tips are typically manufactured from virgin polypropylene, free from heavy metals, lubricants and dyes. Made in a clean room, free from detectable DNase, RNase and Pyrogen free.

Filter

These tips contain a hydrophobic polyethylene filter which protects samples and pipettes from contamination. They are especially suited to sensitive PCR and real time PCR applications.



Do you require a **SURFACE TREATMENT**

Standard or

Ultra Low Retention ULT

A low retention surface is achieved by treating the polypropylene at the molecular level, modifying the surface of the polymer to have a very low co-efficient of retention.

Do you require

Loose (Bulk)

The least expensive option, tips are supplied loose in a plastic bag.

Racked

Pre-loaded into a 8x12 (or 12x8) rack in a case for ease of use. Multiple racks supplied per carton. Once used, racks are disposed of, or can be manually reloaded with loose tips (and then sterilised if required)

Refill Pack

As above, pre-loaded into a rack, but without the added plastic of the case. This is the environmentally friendly option as less plastic is used.

Racked Sterile

As above, pre-loaded for ease of use, with an additional sterilisation step performed.

STANDARD PIPETTE TIPS - JETBIO

Which brand suits your pipette?

We sell both generic tips as well as pipette specific. (a Rainin LTS pipettor can only use LTS tips).

We have economy and premium brands for you to choose from.

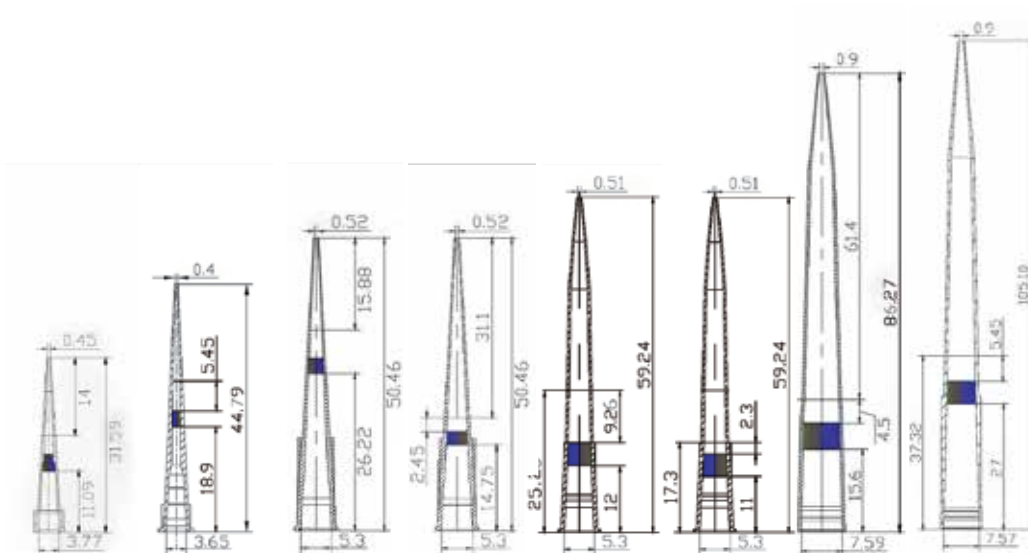
Please contact us for you best option. Some examples follow

JETBIO - Broadly stocked *(only a sample of our range)*

JETBIO - STANDARD PIPETTE TIPS	QTY	ROWE CODE
LOOSE		
1000µL - XL 105.1mm long (1250µL), bulk pack	10 x 1000	DT0337
RACKED		
200µL - 59mm long, yellow case	960	DT0291
RACKED AND STERILE		
200µL - 59mm long, yellow case	960	DT0292
1000µL - Long tips	960	DT0309
RACKED, STERILE AND ULT (ZEROTIP)		
200µL - 59mm long, yellow case	960	DT0293
RELOADING RACKS		
10µL - 10 x (10 x 96), red case	9600	DT0303
200µL - 10 x (10 x 96), yellow case	9600	DT0304
200µL - Yellow tips, 10 x (10 x 96), yellow case	9600	DT0305
300µL - 10 x (10 x 96), yellow case	9600	DT0306
1000µL - Blue tips, 10 x (5 x 96), blue case	4800	DT0308
RELOADING RACKS, NON-STERILE AND ULT (ZEROTIP)		
10µL - Natural tips, 10 x (10 x 96), red case	9600	DT0348
200µL - Natural tips, 10 x (10 x 96), yellow case	9600	DT0349
200µL - Yellow tips, 10 x (10 x 96), yellow case	9600	DT0350
300µL - Natural tips, 10 x (10 x 96), yellow case	9600	DT0351
1000µL - Natural tips, 10 x (5 x 96), blue case	4800	DT0352
1000µL - Blue tips, 10 x (5 x 96), blue case	4800	DT0353

FILTER PIPETTE TIPS - JETBIO

JETBIO - FILTER PIPETTE TIPS	QTY	ROWE CODE
LOOSE, STERILE AND ULT (ZEROTIP)		
10µL - XL (44.5mm), bulk pack, natural, universal fit	10 x 1000	DT0295
20µL - Bulk pack, natural, universal fit	10 x 1000	DT0296
200µL - Bulk pack, natural, universal fit	10 x 1000	DT0297
1000µL - XL (1250µL) (105.1mm), bulk pack, natural, universal fit	10 x 1000	DT0299
RACKED AND STERILE		
10µL - 31.6mm long	960	DT0272
10µL - XL, 44.5mm long	960	DT0273
20µL - 50.5mm long	960	DT0274
100µL - 50.5mm long	960	DT0275
200µL - 59.2mm long	960	DT0276
300µL - 59mm long	960	DT0288
1000µL - 86.3mm long	960	DT0277
1000µL - XL (1250µL), 105.1mm long	960	DT0278
RACKED, STERILE AND ULT (ZEROTIP)		
10µL - 31.6mm long	960	DT0279
10µL - XL, 44.5mm long	960	DT0280
20µL - 50.5mm long	960	DT0289
100µL - 50.5mm long	960	DT0281
200µL - 59.2mm long	960	DT0286
300µL - 59mm long	960	DT0290
1000µL - 86.3mm long	960	DT0282
1000µL - XL (1250µL), 105.1mm long	960	DT0283



STANDARD PIPETTE TIPS - TARSONS

TARSON - Broadly stocked *(only a sample of our range)*

TARSONS - STANDARD PIPETTE TIPS	QTY	ROWE CODE
LOOSE		
10µL - Graduated, suits Eppendorf, Gilson, Finnpiquette, Rainin and Biohit (Boeco), bulk pack	1000	PT0240
10µL - XL/20µl, extra long, graduated, suits Eppendorf, Gilson, Brand and Finnpiquette, bulk pack	1000	DT0063
200µL - Yellow, graduated, suits Eppendorf, Gilson, Finnpiquette, Rainin and Biohit (Boeco)	1000	DL3940
1000µL - 75mm long, bevelled, blue, suits Eppendorf, Gilson and Finnpiquette, bulk pack	500	DT0347
1000µL - Clear, graduated, suits Eppendorf, Gilson, Finnpiquette, Boeco and Witeg	500	DL3959
1000µL - Graduated, blue, suits Eppendorf, Gilson and Finnpiquette, bulk pack	500	PT0246
1000µL - Wide bore, graduated, suits Eppendorf, Gilson and Finnpiquette, bulk pack	500	PT0249
1 - 5mL - Suits Finnpiquette	250	DT0062
5mL - Clear, graduated, suits Eppendorf	250	DL3974
5mL - Extra long (150mm), clear, suits Rainin and Gilson	250	DT0005
10mL - 165mm long, clear graduated, suits Boeco (GP series only), Gilson, Eppendorf and Brand	100	DL3907
RACKED		
200µL - Graduated, yellow, suits Eppendorf, Gilson, Finnpiquette, Rainin and Biohit (Boeco)	10 x 96	PT0183
200µL - Graduated, universal reload, autoclavable, suits Biohit (Boeco), Eppendorf, Finnpiquette, Gilson, Nishiry and Rainin	10 x 96	PT0204
1000µL - Graduated, blue, suits Eppendorf, Gilson, Finnpiquette, Rainin and Biohit (Boeco)	10 x 96	PT0193
1000µL - Graduated, universal reload, autoclavable, suits Biohit (Boeco), Eppendorf, Finnpiquette and Gilson	10 x 96	PT0509
RACKED AND STERILE		
10µL - Graduated, suits Eppendorf, Gilson, Finnpiquette, Rainin and Biohit (Boeco)	10 x 96	PT0184
200µL - Graduated, yellow, suits Eppendorf, Gilson, Finnpiquette, Rainin and Biohit (Boeco)	10 x 96	PT0189
100 - 1000µL - Clear, suits Eppendorf, Gilson, Finnpiquette and Boeco	10 x 96	DL2032
1000µL - Graduated, blue, suits Eppendorf, Gilson, Finnpiquette, Rainin and Biohit (Boeco)	10 x 96	PT0192
RACKED, STERILE AND ULT (MAXIPENSE)		
10µL - Universal, graduated, suits Biohit (Boeco), Eppendorf, Finnpiquette, Gilson, Nishiry and Rainin	10 x 96	PT0197
200µL - Universal, graduated, suits Biohit (Boeco), Eppendorf, Finnpiquette, Gilson, Nishiry and rainin	10 x 96	PT0205
300µL - Universal, graduated, non-sterile, suits Biohit (Boeco), Eppendorf, Finnpiquette, Gilson, Nishiry and Rainin	10 x 96	PT0648
1000µL - Universal, graduated, suits Biohit (Boeco), Eppendorf, Finnpiquette, Gilson, Nishiry and Rainin	10 x 96	PT0195
1250µL - Universal, graduated, suits Biohit (Boeco), Eppendorf, fFinnpiquette, Gilson, Nishiry and Rainin	10 x 96	PT0202

FILTER PIPETTE TIPS - TARSONS

TARSONS - FILTER PIPETTE TIPS	QTY	ROWE CODE
RACKED AND STERILE		
10µL - Filter pipette tip, graduated, autoclavable	10 x 96	PT0213
10µL - Filter pipette tip, XL/20µL, graduated, autoclavable, fits 10µL pipettes	10 x 96	PT0214
20µL - Filter pipette tip, graduated, autoclavable	10 x 96	PT0218
200µL - Filter pipette tip, graduated, autoclavable	10 x 96	PT0216
1250µL - Filter pipette tip, XL, graduated, suits Eppendorf, Finnpiquette, Gilson, Nishiryoy and Rainin	10 x 96	DT0269
RACKED, STERILE AND ULT (MAXIPENSE)		
10µL - Filter pipette tip, universal, graduated, suits Biohit (Boeco), Eppendorf, Finnpiquette, Gilson, Nishiryoy and Rainin	10 x 96	DT0025
10µL - Filter pipette tip, XL/20µl, universal, graduated, suits Biohit (Boeco), Eppendorf, Finnpiquette, Gilson, Nishiryoy and Rainin	10 x 96	PT0198
20µL - Filter pipette tip, 53mm long, universal, graduated, suits Biohit (Boeco), Eppendorf, Finnpiquette, Gilson, Nishiryoy and Rainin	10 x 96	DT0026
200µL - Filter pipette tip, universal, graduated, suits Biohit (Boeco), Eppendorf, Finnpiquette, Gilson, Nishiryoy and Rainin	10 x 96	DT0029
300ulµL - Filter pipette tip, universal, graduated, suits Biohit (Boeco), Eppendorf, Finnpiquette, Gilson, Nishiryoy and Rainin	10 x 96	DT0030
1250µL - Filter pipette tip, XL, graduated, suits Biohit (Boeco), Eppendorf, Finnpiquette, Gilson, Nishiryoy and Rainin	10 x 96	PT0628



PIPETTE TIPS - VARIOUS

BRAND - Stocked

- Standard tips (non-filter)
- Standard treatment (not ULT)
- Loose, such as:



BRAND - PIPETTE TIPS	QTY	ROWE CODE
0.1 - 20µl - Clear, short version	10 x 1000	DP0490
0.1 - 20µL - Clear, extended length	10 x 1000	DP0491
0.1 - 20µL - Clear, extended length	2 x 1000	DP0488
0.5 - 5mL - Clear, bulk pack	200	DL3129
10mL - To suit Transferpette and Eppendorf (natural)	200	DL3088

EPPENDORF - Select tips stocked

EPPENDORF - PIPETTE TIPS	QTY	ROWE CODE
2 - 200µL - 53mm long	1000	DL3004
50 - 1,000µL - 71mm long, to suit 1mL pipettor	1000	DL3960
5mL - 120mm long, violet	50x 100	DL3975
0.5 - 10mL - 165mm long	200	DL3007
10mL - Biopur, 165mm long, sterile	5 x 24	DL3061

KARTELL - Select tips stocked

KARTELL - PIPETTE TIPS	QTY	ROWE CODE
100 - 1000µl - Blue, disposable	1000	DL3050
2 - 200µl - Yellow, disposable	1000	DL3000
1 - 5mL - Suits Finnpiquette, Treff, Brand and Boeco 'GP' series pipettors	250	DL3047

RAININ - Select tips stocked

RAININ - PIPETTE TIPS	QTY	ROWE CODE
LTS 500-5000µL RC-L5000, bulk pack	1000	DT4912
LTS 1-10mL RC-L10ML	200	DT4913

STERILE CULTURE WARE



Media Bottles PETG.

Media bottles square packed sterile in bags of 24, RNase DNase human DNA and pyrogen free, clear PETG with natural HDPE cap.

VOL (mL)	STERILE	HEIGHT WITH CAP (mm)	PACK	ROWE CODE
125mL	Yes	106.5	4 x 24	PB0591
250mL	Yes	144	4 x 24	PB0595
500mL	Yes	178.5	2 x 24	PB0592
1000mL	Yes	217	1 x 24	PB0593

Serological Pipettes sterile DNase/RNase

BIOFIL® MINI™ are designed for liquid handling in limited working spaces such as a biological safety cupboard. Only 235mm long, they're ergonomically easier to use and work with.

- Individually wrapped in an easy opening paper/plastic wrapping with lot number traceability.
- Inner boxes have been specially designed for benchtop dispensing with a removable perforated front panel.
- On average contains 13% less plastic than traditional longer serological pipettes.

BIOFIL®	VOLUME/ COLOUR	GRAD mL	PACK	ROWE CODE
MINI™ 234mm long serological pipette, individually wrapped, sterile, DNase/RNase free, non-pyrogenic, non-cytotoxic.	5mL Blue	0.1	200	PP0172
	10mL Orange	0.2	150	PP0173
	25mL Red	0.5	100	PP0174





Culture flasks from SPL Life Sciences are ergonomically designed for easy handling, while achieving minimal contamination during cell culture. Short, wide and angled neck design enables easy access of serological pipettes and cell scrapers.

Flasks are divided into 6 types, depending on the culture volume and the cap type. Each flask can be provided with plug or filter caps.



CELL FLASK **T25** **T75** **T175**
GROWTH AREA 25cm² 75cm² 175cm²

SPL		UOM	ROWE CODE
BIOREACTOR			
4 adjustable levels of air circulation, 15mL, sterile		90	PB0445
4 adjustable levels of air circulation, 50mL, sterile		90	PB0446
CELL CULTURE FLASK			
T25, 25cm ² ,	PS with HDPE filter cap (vented), TC treated, sterile, DNase/RNase free, non-cytotoxic, non-pyrogenic	200	PC0329
T75, 75cm ²		100	PC0330
T175, 175cm ²		40	PC0331
T25, 25cm ²	Plug cap, surface treated, PS/HDPE sterile	200	PC0388
T75, 75cm ²		100	PC0389
T175, 175cm ²		40	PC0391
T25, 25cm ² , PS with HDPE filter cap (vented), non TC treated, sterile, DNase/RNase free, non-cytotoxic, non-pyrogenic		200	PC0385
T75, 75cm ² , filter cap, untreated, PS/HDPE sterile		100	PC0390
T175, 175cm ² , filter cap, untreated (for suspension culture) PS/HDPE, sterile		40	PC0392
CELL STRAINER			
40µm, blue	sterile, PP/nylon fits 50mL conical tubes	50	PC0348
70µm, natural		50	PC0349
100µm, yellow		50	PC0350
CELL CULTURE			
Dish, 35 x 10mm	TC treated, external grip, sterile, PS, DNase/RNase free, non-cytotoxic, non-pyrogenic	500	PC0332
Dish, 60 x 15mm		500	PC0333
Dish, 90 x 20mm		200	PC0334
Dish, 150 x 25mm		120	PC0335
Plate, 12 well, 85.4 x 127.6mm, flat bottom	TC treated, sterile, PS, DNase/RNase free, non-cytotoxic, non-pyrogenic	50	PC0337
Plate, 24 well, 85.4 x 127.6mm, flat bottom		50	PC0381
Plate, 96 well, 85.4 x 127.6mm, flat bottom		50	PC0338
Plate, 96 well, 85.4 x 127.6mm, round bottom		50	PC0339

SPL		UOM	ROWE CODE
ERLENMEYER CELL CULTURE FLASK			
250mL	Filter cap, sterile, PC/PP (body/cap), DNase/RNase free	8	PE0135
500mL		8	PE0136
1000mL		4	PE0137
2000mL		6	PE0138
CELL SCRAPER			
300mm long, 20mm blade width, sterile, PS/LDPE, DNase/RNase free, non-cytotoxic, non-pyrogenic		100	PC0342
PCR TUBE			
0.2mL, single, dome cap, PP		1000	PP0128
SEROLOGICAL PIPETTES			
1mL - Yellow, 1/200/800	Individual, sterile, DNase/RNase free, non-cytotoxic, non-pyrogenic	800	PS0332
2mL - Green, 1/150/600		600	PS0333
5mL - Blue, 1/100/400		400	PS0334
10mL - Orange, 1/100/400		400	PS0335
25mL - Red, 1/50/200		200	PS0336
50mL - Purple, 1/40/160		160	PS0337
RODAC PLATE			
61 x 16.7mm, 25cm ² growth area, sterile, PS		500	PR0148
SPREADER BAR			
Sterile, PP, DNase/RNase free		500	PS0338



Serological pipettes (SPL), individual, sterile, DNase/RNase free, non cytotoxic, non pyrogenic



Erlenmeyer cell culture flasks (SPL), filter cap, sterile, PC/PP (body/cap), DNase/RNase free



Rodac plate (SPL), 61 x 16.7mm, growth area 25cm², sterile PS, 25 bags of 20. **ROWE CODE PR0148**



PCR tube (SPL), 0.2mL, single, dome cap, PP, 2 bags of 500. **ROWE CODE PP0128**

SPL Life Sciences provides customers with a wide range of high quality cell culture products, from basic cell culture vessels to more advanced platforms and accessories.

All SPL cell culture products meet international guidelines/regulations, such as ISO (International Organization for Standardization), ANSI (American National Standard Institute) and USP (United States Pharmacopeia, class VI). Polymer resins used to manufacture all products have followed international guidelines such as CONEG, SARA, Reach EC/1907/2006, RoHS 2002/95/EC. Biological tests (endotoxin, cytotoxicity, DNase/RNase, Human DNA) as well as cell attachment tests are regularly performed for quality control.

CRUCIBLE TONGS

CRUCIBLE TONGS	QTY	ROWE CODE
175mm, 800mm long, 16mm diameter handle with link lock loop	EA	HT0293
200mm, brass	EA	HT1150
200mm, stainless steel	EA	HT1265
200mm, stainless steel, bowed type	EA	HT0163
200mm, with bow plated steel	EA	HT1254
220mm, stainless steel	EA	HT1200
220mm, stainless steel with fibreglass sleeve	EA	HT1210
220mm, without bow, stainless steel (2511)	EA	HT1255
240mm, chemware PTFE coated stainless steel	EA	HT0327
280mm, 18/8 s/s with bow	EA	HT1256
280mm, stainless steel	EA	HT1250
280mm, with bow plated steel	EA	HT1253
280mm, without bow stainless steel	EA	HT1257
300mm, stainless steel	EA	HT1110
400mm, stainless steel	EA	HT1105
400mm, stainless steel with sleeve	EA	HT0276
400mm, stainless steel, with insulated handles (thick black coating)	EA	HT0076
400mm, with bow heavy duty, hand rest stainless steel	EA	HT1270
420mm, with radiation shield, overall length 600mm	EA	HT1300
500mm, stainless steel	EA	HT1106
500mm, with bow	EA	HT1260
560mm, Julian-Style, nickel plated steel with curved ends	EA	HT1245
620mm, with radiation shield stainless steel	EA	HT1350
700mm, with bow	EA	HT1280
720mm, with radiation shield	EA	HT1370
900mm, steel, handles with chain link lock & loop, 128mm opening	EA	YT1165



ROWE CODE
HT1254



ROWE CODE
HT1260



ROWE CODE
HT1370

TRIPODS

Cast iron top is heat resistant silver painted.
Has 3 removable Zinc plated legs

LENGTH OF SIDE (mm)	HEIGHT (mm)	ROWE CODE
120 (Triangular)	205	HT1700
150 DIA	205	HT1773



ROWE CODE
HT1700

TRAYS

TRAYS	ROWE CODE
ALUMINIUM FOIL	
Pie Dish - 105 Top OD x 96 Top ID x 60mm Base DIA (1000)	RT1243
Pie Dish - 71 Top OD x 62 Top ID x 38mm Base DIA	RT1239
Rectangular - 296D x 236W x 50mmH	RT0012
Rectangular - 314D x 254W x 38mmH, with lid	RT1221
Square - 127D x 127W x 27mmH	RT1244
Round - 160mm Base DIA x 20mmH	RT1226
Rectangular - 195D x 145W x 48mmH	RT1249
Rectangular - 220D x 156W x 45mmH	RT0023
Rectangular - 314D x 254W x 38mmH	RT1220
STAINLESS STEEL	
Rectangular (full size) - 530D x 325W x 65mmH	AM1345
Rectangular (1/6 size) - 175D x 161W x 65mmH	AM1300
Rectangular (1/6 size) - 175D x 161W x 65mmH vogue	RT0049
Rectangular (1/4 size) - 265D x 162W x 65mmH	AM1349
Rectangular (1/2 size) - 321D x 264W x 65mmH (885202)	AM1342
Rectangular (2/3 size) - 352D x 323W x 65mmH	AM1344
Square - 360D x 360W x 80mmH	RT0057
Rectangular - 530D x 325W x 100mmH	AM1355



ROWE CODE
RT1239



ROWE CODE
RT1220



TWEEZERS (FORCEPS) & DISSECTING KITS

TWEEZERS (FORCEPS)	ROWE CODE
Cover Glass Tweezers - Self locking, 130mm	HT2800
Goose Neck Tweezers - With guide pin, 160mm	HT2400
Microscopic Tweezers - Straight with guide pin, 150mm	HT2460
Microscopic Tweezers - Straight with guide pin, 180mm	HT2470
Microscopic Tweezers - Angled with guide pin, 180mm	HT2600
Microscopic Tweezers - Strongly curved with guide pin and parallel jaws, 200mm	HT0009
Needle Point Tweezers - Watchmaker type, straight, 125mm	HT2695
Needle Point Tweezers - Curved, 125mm	HT2700
Sharp Point Tweezers - Curved with guide pin, 100mm	HT2705
Sharp Point Tweezers- Straight with guide pin, 130mm	HT2750
Specimen Tweezers - stainless steel, straight/blunt/serrated tip, 160mm	HF5000
Thumb Tweezers - Straight, blunt end, 100mm	HT2240
Thumb Tweezers - Straight, blunt end, 130mm	HT2200
Thumb Tweezers - Curved, blunt, 200mm	HT2356
DISSECTING KITS - MET-APP (EA)	
Zipped pouch kit - contains 10 dissecting instruments	ED1420



ROWE CODE
HT2705



BOROSILICATE GLASS

OD (mm)	WALL (mm)	LENGTH (m)	ROWE CODE
15	1.8	1.5	GG1815
20	1.8	1.5	GG1900

SODA GLASS

OD (mm)	WALL (mm)	LENGTH (m)	ROWE CODE
8	0.5	1.5	GG1750

CAPILLARY

OD (mm)	BORE (mm)	LENGTH (m)	ROWE CODE
8	1.2	1.5	GG1450

Glass tubing can be cut into smaller lengths for transport. Please ask our sales team when you place your order.

PTFE

ID (mm)	WALL (mm)	LENGTH (m)	ROWE CODE
3	0.5	1	PT3637
4.3	0.5	1	PT3643
6	1	1	PT3690
8	0.75	1	PT3692

Many other sizes are available on request

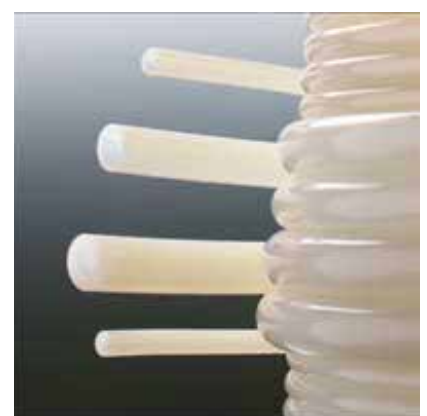
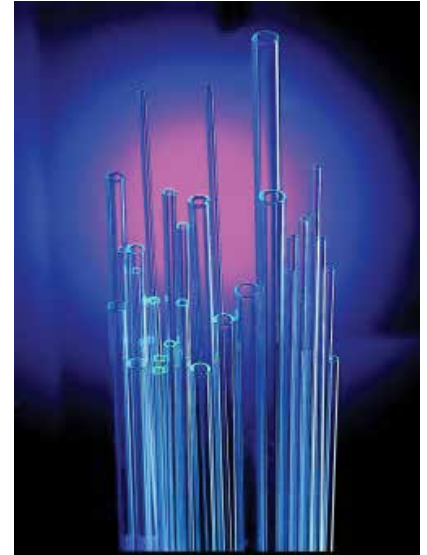
SILICONE - PLATINUM CURED

ID (mm)	WALL (mm)	LENGTH (m)	ROWE CODE
0.8	1.6	1	PT36125
1.6	1.6	1	PT36131
1.6	2.4	1	PT3624
3.2	2.4	1	PT3563
4.8	2.4	1	PT36150
6.4	2.4	1	PT36181
9.6	2.4	1	PT3720
9.6	3.2	1	PT3622
9.6	4.8	1	PT36184
12.7	3.2	1	PT36188

Only available in multiples of 3m, up to 15m maximum roll length.

VINYL

ID (mm)	WALL (mm)	LENGTH (m)	ROWE CODE
5	1.5	1	PT2750
6	1.5	1	PT2800
8	1.5	1	PT2850
10	1.5	1	PT2900
12.5	1.5	1	PT2920
16	2	1	PT2930

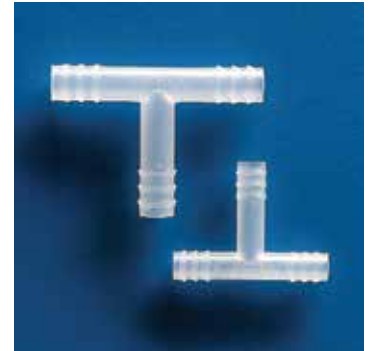


Made from autoclavable polypropylene with excellent chemical resistance.
Serrations hold tubing tightly and prevent slipping.

'T' UNTAPERED

KARTELL

NOMMINAL OD (mm)	VALLEY OD (mm)	CREST (mm)	BORE (mm)	STD. PACK SIZE	ROWE CODE
4	3.3	3.6	1.6	EA	PC2950
6	4.5	5.4	2.8	EA	PC3000
8	6.9	7.6	4.4	EA	PC3100
10	8.7	9.5	6.3	EA	PC3200
12	10.7	11.5	8.2	EA	PC3300
14	12.7	13.7	10	EA	PC3170
16	14.7	15.6	12.1	EA	PC3180



'Y' UNTAPERED

KARTELL

NOMMINAL OD (mm)	VALLEY OD (mm)	CREST (mm)	BORE (mm)	STD. PACK SIZE	ROWE CODE
4	3.2	4	2	EA	PC3400
6	4.7	5.7	2.7	EA	PC3450
8	6.6	7.6	4.6	EA	PC3550
10	8.9	9.9	5.5	EA	PC3630
12	10.5	11.6	7.3	EA	PC3700



'L' UNTAPERED

KARTELL

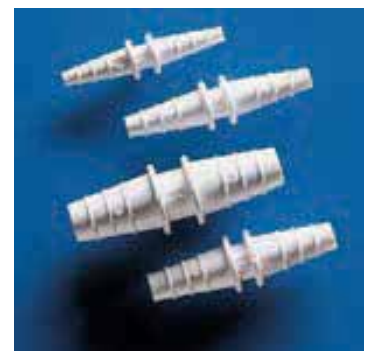
NOMMINAL OD (mm)	VALLEY OD (mm)	CREST (mm)	BORE (mm)	STD. PACK SIZE	ROWE CODE
4	3.5	4	1.3	EA	PC2240
6	5.2	5.7	2.5	EA	PC2245
8	6.9	7.8	4.5	EA	PC2250
10	8.7	9.9	6	EA	PC2300
12	10.7	11.8	8	EA	PC2310
14	12.6	13.7	10.5	EA	PC2320



STRAIGHT - TAPERED

KARTELL

NOMMINAL OD (mm)	CREST (mm)	BORE (mm)	STD. PACK SIZE	ROWE CODE
4/5/6	3/4.5/5.5	2	EA	PC2610
6/7/8	4.5/7/8.2	3.5	EA	PC2615
8/9/10	6.3/9/11	4.5	EA	PC2620
10/11/12	8.3/10.5/13	6.5	EA	PC2730
12/13/14	10/13/15	8.5	EA	PC2760
14/15/16	12/14.5/17	10.5	EA	PC2770



MECHANICAL ULTRASONIC BATHS - UNISONIC	HEATED	BASKET SIZE L x W x H (mm)	CAPACITY (L)	ROWE CODE
WITH MECHANICAL TIMER				
FXP8M	No	125 x 115 x 60	1.5	IU1395
FXP10M	No	210 x 110 x 75	3	IU1410
Heated	Yes		3	IB1200
FXP12M	No	250 x 110 x 110	5.3	IU1430
FXP14M	No	250 x 200 x 100	10	IU1440
Heated (not suitable for use with citric acid)	Yes	250 x 200 x 100	10	IU1450
Heated, fabricated from 316 marine grade stainless steel (suitable for use with citric acid and for cleaning 200mm sieves)	Yes	250 x 200 x 100	10.8	IU1507
Fabricated from 316 marine grade stainless steel (suitable for use with citric acid and for cleaning 200mm sieves)	No	250 x 200 x 100	10.8	IU1508
Fabricated from 316 marine grade stainless steel (suitable for use with citric acid and for cleaning 300mm screens)	No	250 x 200 x 100	16.3	IU1506
Heavy duty, heated, 316 grade (1.5mm) stainless steel tank with lid (suitable for use with citric acid)	Yes	280 x 280 x 100	16.3	IU0059
Heavy duty, heated, 316 grade (1.5mm) stainless steel tank with lid (suitable for use with citric acid)	Yes	450 x 250 x 100	22	IU0062
FXP20M, includes lid and basket	No	450 x 250 x 100	22	IU1460
FXP20MH, heated, includes lid and basket	Yes	450 x 250 x 100	22	IU1461
ULTRASONIC BATHS - SONOREX	HEATED	BASKET SIZE L x W x H (mm)	CAPACITY (L)	ROWE CODE
Sonorex Super RK 106, AISI 304, stainless steel	No	240 ID x 130 H	5.16	IU0103
Sonorex Technik TM 156 CH-S, made of 2mm stainless steel AISI316L	No	495 x 125 x 125		IU0039



ROWE CODE
IU1395



ROWE CODE
IU1507



ROWE CODE
IU0103

STERICUP® E AND STERITOP® E STERILE FILTRATION DEVICES EVOLVED WITH AN ECO-CONSCIENCE.

This progressive rethinking of filter design reduces your lab's environmental impact!



Design for Sustainability - Uses Less Plastic

With Merck's Design for Sustainability (DfS) scorecard, they drive sustainability improvement during the product development process through multiple product sustainability criteria divided into seven impact areas.

Stericup® E – GP Funnel-less Sterile Vacuum Filtration System, 500mL

Reliable sterile filtration – less plastic and packaging

IMPACT AREAS

RESULTS

MATERIALS

Up to 48% plastic reduction per unit thanks to elimination of plastic funnel

SUPPLIERS & MANUFACTURING

No change compared to baseline product in consideration of our DfS criteria

PACKAGING

Up to 69% reduction of plastic and corrugated packaging
Box with sustainable forestry certification (electronic documentation)

ENERGY & EMISSIONS

Less emissions from transportation thanks to lighter and smaller product

WATER

No change compared to baseline product in consideration of our DfS criteria

USABILITY & INNOVATION

Same quality and performances

CIRCULAR ECONOMY

Up to 48% reduction of the amount of hazardous waste

Baseline product: S2GPU05RE – Stericup® – GP Quick Release Sterile Vacuum Filtration System, 500mL

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DESCRIPTION	MEMBRANE/APPLICATION	PORE SIZE (µM)	RECEIVER BOTTLE (mL)	THREAD SIZE (mm)	QTY/ PK	ROWE CODE
Stericup® E-GP Sterile Vacuum Filtration System	Millipore Express® PLUS (PES)/ fast filtration of tissue culture media and buffers	0.22	500	38	12	CS7073
			500	45	12	CS7070
			1000	38	12	CS7071
			1000	45	12	CS7072
Steritop® E-GP Sterile Vacuum Filtration System	Millipore Express® PLUS (PES)/ fast filtration of tissue culture media and buffers	0.22	All Volumes	38	12	CS7074
				45	12	CS7075

Your eco-impact, by the numbers:**MERCK**

	PLASTICS*	PACKAGING*
STERICUP® E STERILE FILTER Eliminates disposable filler funnel	↓ UP TO 26%	↓ UP TO 20%
STERITOP® E STERILE FILTER Eliminates disposable filler funnel and receiver bottle	↓ UP TO 48%	↓ UP TO 69%

*Up to 26% plastic reduction (depending on receiver volume) and 20% packaging reduction for Stericup® E sterile filters and 48% plastic reduction (depending on receiver volume) and 69% packaging reduction for Steritop® E sterile filters derived from comparison to traditional Stericup® and Steritop® sterile filters.

Both Stericup® E and Steritop® E sterile filters, thread directly onto virtually any commercial media or glass bottle

Stericup® E products use significantly less packaging, made from materials that reduce environmental impact

**VACUUM ASPIRATION SYSTEM****SAFEVAC VACUUM-CONTROLLED ASPIRATION SYSTEM 4L**

- Compact, user-friendly design;
- 1-15mL/s speed;
- Level detection system prevents bottle overflow
- Control knob for vacuum setting
- The parts in contact with liquids are autoclavable
- Easy to disassemble and clean
- Continuous mode
- Ideal tool to avoid lab air contamination and protect personnel safety
- Adjustable vacuum level with indicator light is designed for various applications
- Includes: 4L bottle with tubing and lid, hydrophobic filter and a range of dispenser attachments

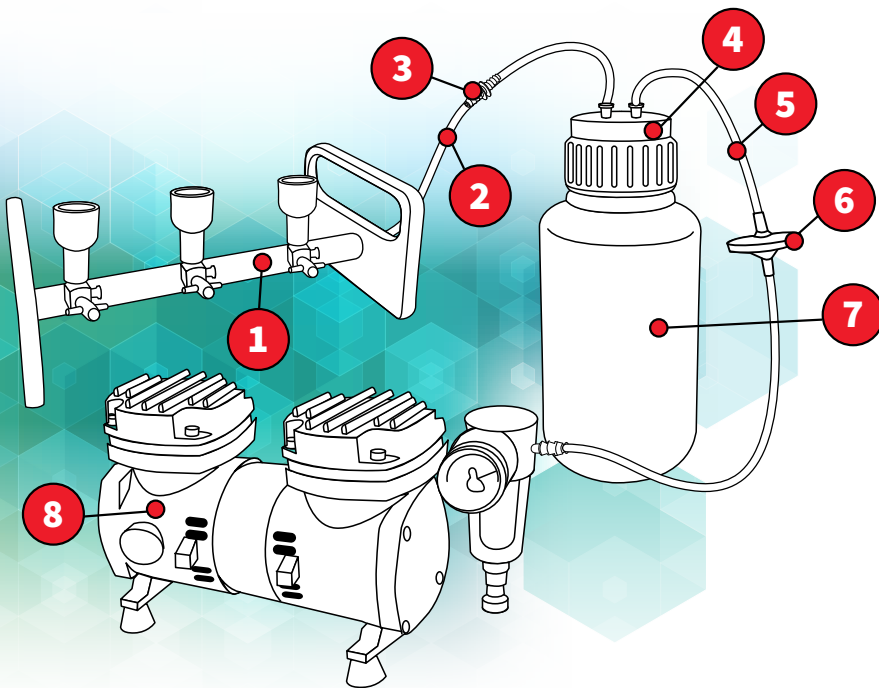
ROWE CODE CS7075

DUAB

MICROBIOLOGY & INDUSTRIAL VACUUM FILTRATION KIT SALE

3 PLACE MICROBIOLOGY FILTRATION PACKAGE

This package includes everything you need to accommodate a simple microbiological filtration scenario. Included is a **3 place manifold, 2m of tubing, vacuum bottle, pump, connector and inline filter.**



ROWE CODE
FM0039

1 3 PLACE FILTRATION MANIFOLD

- Made from stainless steel and PTFE
- Autoclavable
- Suits No. 8 stopper
- 11mm barbed hose fitting



ROWE CODE
PB0287

7 HEAVY DUTY VACUUM BOTTLE

- Made from heavy duty polypropylene
- Autoclavable
- Comes with screw cap with no holes

DESCRIPTION	ROWE CODE
1 3-place vacuum filtration manifold, stainless steel, suits size No.8 stopper, 11mm barbed fitting	FM0039
2 Vinyl tubing, clear, 10mmID, 13mm OD, 1.5mm wall	PT2900
3 Connector straight 6.3-9-11mm	PC2620
4 Cap, screw closure, 83mm neck ID for 4L heavy duty vacuum bottle with 1/4 inch barbed tubing ports for filling/venting	PC0189
5 Vinyl tubing, clear, 6mmID, 9mmOD, 1.5mm wall	PT2800
6 In-line filter unit, 50mm diameter, 0.45 micron hydrophobic PTFE membrane stepped hose barb, sterile	FF0416
7 Heavy duty vacuum bottle, 4L, polypropylene, autoclavable with screw cap (no holes)	PB0287
8 Piston vacuum pump, oil free, R-series, 34L/min, 106mbar ultimate vacuum	IP2034



6 PLACE INDUSTRIAL FILTRATION PACKAGE

This package includes everything you need to accommodate a simple industrial filtration scenario. Included is a **6 place manifold, 2m of tubing, vacuum bottle, pump and inline filter.**



ROWE CODE
FF0416

6 INLINE FILTER

- 50mm diameter
- 0.45 micron hydrophobic PTFE membrane
- Sterile and individually wrapped



ROWE CODE
PC0189

4 SCREW CAP CLOSURE

- 83mm neck I.D
- Used for 4L heavy duty vacuum bottles
- 1/4 inch barbed tubing ports



ROWE CODE
PT2800 & PT2900

2 CLEAR VINYL TUBE

- PT2800 - 6mmID, 9mmOD
- PT2900 - 10mmID, 13mmOD
- Durable vinyl
- 1.5mm wall thickness



ROWE CODE
HV1278

1 6 PLACE FILTRATION MANIFOLD

- Made from stainless steel
- Autoclavable
- 8mm barbed hose fitting



ROWE CODE
IP2034

6 PISTON VACUUM PUMP

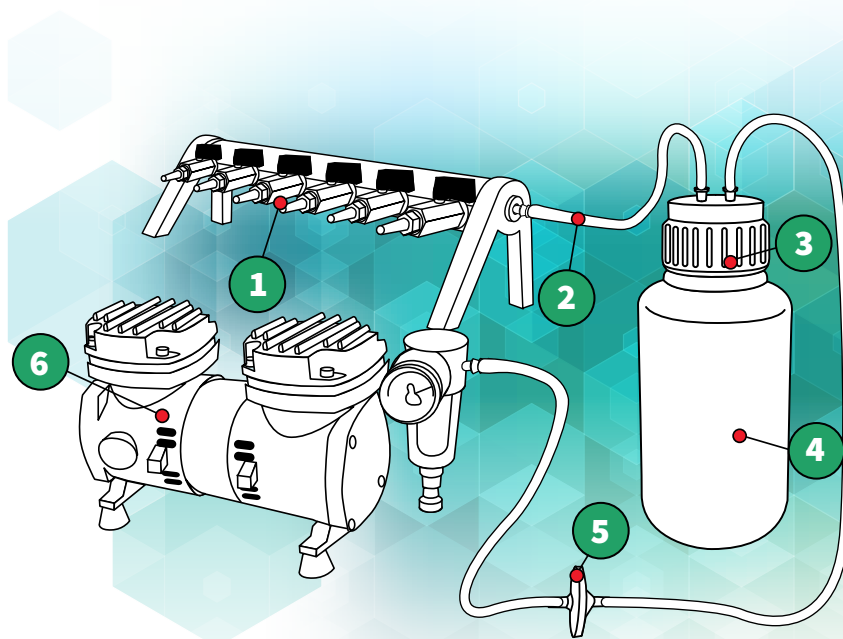
- 34L per minute capacity
- 106mbar maximum vacuum capacity
- 125 watt motor



ROWE CODE
PC2620

3 STRAIGHT BARBED CONNECTOR

- Made from polypropylene
- Serrations hold tube tightly to prevent slipping
- Autoclavable



DESCRIPTION	ROWE CODE
1 Vacuum pump manifold, stainless steel, 6 outlet square tube design without fittings	HV0017
2 Vinal Tubing, clear, 6mmID, 9mmOD, 1.5mm wall	PT2800
3 Cap, screw closure, 83mm neck ID for 4L heavy duty vacuum bottle with 1/4 inch barbed tubing ports for filling/venting	PC0189
4 Heavy duty vacuum bottle, 4L polypropylene, autoclavable with screw cap (no holes)	PB0287
5 In-line filter unit, 50mm diameter, 0.45 micron hydrophobic PTFE membrane stepped hose barb, sterile	FF0416
6 Piston vacuum pump, oil free, R-series, 34L/min, 106mbar ultimate vacuum	IP2034

VACUUM FILTER ACCESSORIES

FILTER HOLDER WITH GLASS FUNNEL



47mm INCLUDES 300mL GLASS FUNNEL, FRITTED GLASS BASE, 1L GLASS SOLVENT COLLECTION FLASK, ANODIZED ALUMINUM CLAMP, STANDARD SIZE
ROWE CODE: FV0001

A complete assembly constructed entirely of borosilicate glass with an aluminium clamp. Recommended for HPLC solvent filtration.



FUNNEL FILTER/HOLDER MAGNETIC



47mm 300mL
ROWE CODE: PF2701

These filters have a unique magnetic seal which allows for easy one handed liquid filtration. Constructed of polyphenylsulfone which is compatible with most anti-foaming agents and many other solvents. Graduated at 50mL increments for accurate sample measurement.

FILTER HOLDER FUNNEL



47mm POLYSULFONE 350mL FUNNEL, STEM & NO.8 STOPPER GRAVITY SEAL
ROWE CODE: PF1180

A two-piece polysulfone analytical funnel with a unique gravity sealing design. No clamps or locking devices to manipulate. Instead, the Gravi-Seal™ allows easy one-handed operation without danger of filter bypass or sample leakage. Takes standard 47mm membranes.

FILTER HOLDER WITH RECEIVER



47mm, 500mL FUNNEL AND RECEIVER, POLYSULFONE
ROWE CODE: PF1202

These polysulfone (PSF) filter holders have a 500mL upper chamber and 500mL receiver (all graduated in 50mL increments). The holder accepts a 47mm diameter membrane. Also available in 250mL (Rowe code PF1216) and 1000mL (Rowe code PF1209)

FILTER HOLDER GLASS FUNNEL



47mm 300mL, CLAMP, SUPPORT BASE, SIZE NO.8 STOPPER
ROWE CODE: GF1154

The 47mm glass filter holder is designed for vacuum filtration of aqueous and solvent solutions (<500mL) or for analysis of particulate or microbiological contamination. These holders have a sintered glass base which is recommended for general filtration.

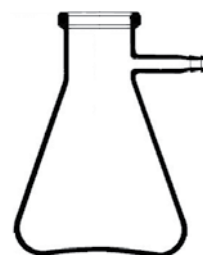
***For Membranes and Syringe Filters see
 Micro Filtration on page 264***

VACUUM FILTER FLASKS

FLASK - VACUUM

SIMAX

VOLUME (mL)	VACUUM FILTER FLASK (EACH)	ROWE CODE
250	Glass with 10mm glass side hose connection	Neck ID 35mm
500		Neck ID 35mm
1000		Neck ID 45mm
2000		Neck ID 62mm



FLASK - VACUUM

SCHOTT

VOLUME (mL)	VACUUM FLASK - HOSE CONNECTION (EACH)	ROWE CODE
250	Neck ID 34mm	GF2813
500	Neck ID 34mm	GF3280
1000	Neck ID 45mm	GF3351



FLASK - VACUUM

witeg
GERMANY

VOLUME (mL)	VACUUM FILTER FLASK (EACH)	ROWE CODE
250	Neck ID 34mm with 10mm side arm vacuum, borosilicate glass	GF3162
500	Plastic hose connection, neck ID 34mm	GF3282
1000	Plastic hose connection, borosilicate glass	GF3334
2000	Neck ID 60mm with 10mm OD barbed side arm	GF3520
3000	Bottle shape	GF3603



FLASK - VACUUM - POLYPROPYLENE

Tarsons

VOLUME (mL)	VACUUM FILTER FLASK - PP (EACH)	ROWE CODE
500	Autoclavable, 6mm-10mm OD tapered hose connection at 45° angle to prevent tipping	Neck ID 32mm
1000		Neck ID 36mm
1500		Neck ID 46mm



ViscoQC 100/300 VISCOMETERS



- Budget friendly rotational viscometers for QC (laboratory & process)
- Dynamic viscosity of liquids: from juice to gel
 - ViscoQC 100: Single point, non-storage, no date/time/user
 - ViscoQC 300: Multi point, data memory, date/time, user (groups), upgradable software packages (V-Curve, V-Comply)
- Ready to use out-of-box: already assembled when delivered
- Built-in digital leveling for proper alignment and reproducible results
- Magnetic coupling for one-hand removal/attachment of spindle
- Automatically detects spindles and guards
- TruMode™ when spindle/speed combination is unknown
- Air-cooled Peltier temperature device with T-Ready™ starts measurement when sample has reached set temperature
- Motorized Heli-Plus for convenient operation with optional T-bar spindles
- 3 years of warranty and optional on-site service

ViscoQC 100 (Single Point)

- Stand-alone with 3.5" display
- Single point rotational viscometer
- Relative spindles (L/RH, Vanes), DIN systems (CC, DG), SSA systems (SC4), ...
- Toolmaster™
- TruMode™
- Magnetic coupling
- Multi language (10 installed)
- Optional Peltier temperature control and sensing
- Main Purpose: QC

ROWE CODE IV0241

ViscoQC 300 (Multi point)

- Stand-alone with 7" touch display
- Single and multi point rotational viscometer
- Relative spindles (L/RH, Vanes), DIN systems (CC, DG), SSA systems (SC4), ...
- Toolmaster™
- TruMode™
- Magnetic coupling
- Multi language (13 installed)
- Optional Peltier temperature control and sensing
- Main Purpose: QC

ROWE CODE IV0244



BOROSILICATE GLASS	PACK SIZE	ROWE CODE
50MM	EA	GW1362
60MM	EA	GW1372
80MM	EA	GW1402
100MM	EA	GW1407
125MM	EA	GW1412
150MM	EA	GW1432
200MM	EA	GW1866

SODA GLASS	PACK SIZE	ROWE CODE
90MM	EA	GW0003
250MM	EA	GW1872
125MM	EA	GW1420
200MM	EA	GW1425

SODA GLASS WITH FUSED EDGE	PACK SIZE	ROWE CODE
40MM	EA	GW1540
50MM	EA	GW1504
60MM	EA	GW1553
70MM	EA	GW0010
80MM	EA	GW1601
100MM	EA	GW1754
150MM	EA	GW1602



WATER ANALYSIS - REAGENTS



ROWE CODE
KH1440



ROWE CODE
KA1024



ROWE CODE
KH1290



ROWE CODE
KH1113

WATER ANALYSIS - REAGENTS	ROWE CODE
ACCUVAC OZONE REAGENT Mid range 0 - 0.75mg/L	KH1352
ACID REAGENT Powder pillows	KH1440
ACID REAGENT Powder pillows 10mL sample	KA1115
ACIDITY TEST KIT Acidity as CaCO ₃ , 0 - 100mg/L and 0 - 500mg/L, 110 tests	KA1024
ALKALI SOLUTION FOR HARDNESS TEST (calcium/magnesium)	KH1089
ALKALINE IODODE-AZIDE Powder pillows	KH2013
ALKALINITY TEST KIT	KA1105
ALKALINITY total 25 - 400mg/L, TNT+, 25 tests	KH2015
ALUMINIUM 0.02 - 0.5mL /TNT plus	KH1957
AMINO ACID F REAGENT SET FOR SILICA ANALYSIS (2.9L) plus a bottle of amino acid F powder	KH1523
AMINO ACID REAGENT FOR SILICA AND PHOSPHATE	KH1450
AMMONIA ISA SOLUTION	KH2410
AMMONIA TNT + LR , 1 - 12mg/L NH ₃ -N	KH1529
AMMONIA VIALS ULR 0.015 - 2.000mg/L as N, salicylate method, TNT plus	KH1507
AMTAX SC CLEANING REAGENT	KH1851
AMTAX SC REAGENT STANDARD 10mg/L NH ₄ -N (range 2:0.05 - 20mg/L)	KH1854
AMTAX SC REAGENT STANDARD 1mg/L NH ₄ -N (range 2:0.05 - 20mg/L)	KH1853
ASCORBIC ACID Powder pillows	KH1290
BART TEST Denitrifying bacteria	KH3021
BART TEST Acid producing bacteria	KB0019
BART TEST Denitrifying bacteria	KB0013
BART TEST Iron related bacteria	KB0017
BART TEST Nitrifying bacteria	KB0014
BART TEST Slime producing bacteria	KB0016
BART TEST Sulfate reducing bacteria	KB0015
BLANKING REAGENT	KH1503
BOD NUTRIENT BUFFER PILLOWS (19mL to make 19L)	KH1367
BROMOCRESOL GREEN Methyl red mixed indicator (in Propan-2-OL) in dropper bottle	KH1113
BUFFER SOLUTION, ULR CHLORINE 1.5mL ampoules	CB3164
CALCIUM/MAGNESIUM INDICATOR SOLUTION	KH1090
CALVER 2 CALCIUM INDICATOR Powder	KC1080
CALVER 2 CALCIUM INDICATOR Powder pillows for 50mL sample	KC1050
CARTRIDGE MERCURIC NITRATE 2.256N	KH1650
CELL LOVIBOND 33mm path length optical glass	KC0093
CHEMKEY FREE CHLORINE 0.04 - 4.6mg/L for SL1000	KC0031
CHLORIDE IONIC STRENGTH ADJUSTMENT BUFFER Powder pillows	KH1919
CHLORIDE STANDARD SOLUTION C/(NIST), 100mg/L	KH1901

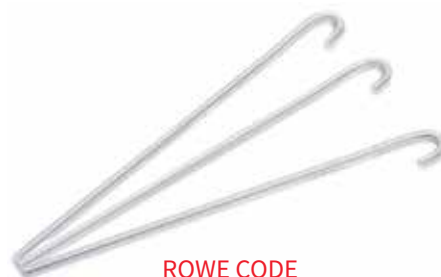
WATER ANALYSIS - REAGENTS	ROWE CODE
CHLORIDE TEST STRIPS Low range 30 - 600mg/L	KH1125
CHLORIDE TITRETS 50 - 500ppm	KT0104
CHLORINE DIOXIDE TEST KIT Reagent refill, 30 ampoules	KC1039
CHLORINE DPD COMPOUND Free and total	KH1104
CHLORINE FREE AND TOTAL REFILL PACK 0.1 - 2ppm (30 amp)	KC1004
CHLORINE FREE AND TOTAL TNT PLUS	KH1959
CHLORINE STANDARD (NIST) 25 - 30mg/L, 2mL pour rite ampoule	KH1490
CHLORINE STANDARD SOLUTION 50 - 75mg/L, 10mL "Voluette" ampoules	CC4059
CHLORINE TEST STRIPS 0 - 10ppm	KH1605
CHLORINE TOTAL "SWIFTEST" REAGENT DISPENSER 250 tests	KC1002
CITRATE BUFFER REAGENT Powder pillows	KH1207
CITRIC ACID F REAGENT SOLUTION	KH1531
CITRIC ACID Powder pillows 10mL sample	KA1090
CITRIC ACID SURFACTANT REAGENT for silica analysis	KH1532
COD DIGESTION VIALS Low range 3-150mg/L	KH1016
COD DIGESTION VIALS Ultra low range 0.7 - 40mg/L COD	KC0002
COD REAGENT TNT + LR , 3 - 150mg/L COD	KH1639
COD REAGENT VIAL High range 20 - 1500mg/L	KH1013
COD REAGENT VIAL High range plus, 200 - 15,000mg/L	KH1096
COD REAGENT VIAL , TNT plus, high range 20 - 1500mg/L	CC4033
CONDUCTIVITY STANDARD 12.88mS/cm at 25°C	KH2162
CONDUCTIVITY STANDARD 1413µS/cm at 25°C	KH2161
COPPER 0.1 - 8mg/L, TNT plus, 25 tests	KH2014
COPPER MASKING REAGENT Powder pillows	KH1275
CUVER 1 COPPER REAGENT Powder pillows 10mL sample	KH1202
CYANURIC ACID Powder pillows	KH3016
DEHA REAGENT 1 Powder pillow	KH1645
DEHA REAGENT 2 Solution	KH1538
DELIVERY TUBES Straight with J hook	KH1690
DESICCANT CARTRIDGE	KH1648
DIGITAL TITRATOR	KH1660
DISSOLVED OXYGEN TEST KIT REFILL 1 - 12ppm, 30 tests "Chemetrics"	KD1210
DISSOLVED OXYGEN TEST KIT REFILL 0 - 40ppb and 0 - 100ppb, 30 tests	KD1220
DPD 1 BUFFER SOLUTION Blue bottle (Lovibond)	KD0019
DPD 1 REAGENT SOLUTION Green bottle (Lovibond)	KD0018
DPD CHLORINE FREE, TEST 'N' TUBE 0.09 - 5mg/L CL ₂	KH1916
DPD FREE CHLORINE Powder pillows for 10mL samples, 0 - 2mg/L	CD2365
DPD FREE CHLORINE REAGENT 250 tests per vial	KH1114



ROWE CODE
KH1125



ROWE CODE
KC1002



ROWE CODE
KH1690



ROWE CODE
KD1210



WATER ANALYSIS - REAGENTS

WATER ANALYSIS - REAGENTS	ROWE CODE
DPD INDICATOR SOLUTION FOR URL CHLORINE 1.5mL ampoules	CD2368
DPD TOTAL CHLORINE Powder pillows for 5mL samples	KH1492
DPD TOTAL CHLORINE REAGENT 250 tests per vial	KH1115
DPD TOTAL CHLORINE, TEST 'N' TUBE 0.09 - 5mg/L CL2	KH1859
ECR MASKING REAGENT FOR ALUMINIUM	KH1183
EDTA CARTRIDGE 0.080m for digital titrator	KH1393
ELECTRODE, CALCIUM ISE, SENSION+ COMBINATION	KE0013
FERRIC ION SOLUTION Ferric perchlorate in dilute perchloric acid	CF0999
FERROMO IRON REAGENT 1 Powder pillows	KH1527
FERROMO IRON REAGENT 2 Powder pillows	KH1500
FERROUS IRON REAGENT Powder pillows for 25mL samples	KI1115
FLUORIDE (SPADNS2) REAGENT	KH1155
FLUORIDE (SPADNS2) REAGENT	KH1156
FLUORIDE STANDARD 0.5mg/L	KH1615
FLUORIDE STANDARD 2mg/L	KH1625
FLUORIDE STANDARD SOLUTION 1mg/L	KH1634
FREE CHLORINE REAGENT 3 bottle set for CL17 chlorine analyser	KH1608
GLYCOL TEST KIT Chemets, 0 - 15ppm, complete	KA1075
FLUORIDE STD SOLUTION 5mg/L	KH1865
HARDNESS TEST STRIPS 0, 25, 50, 120, 250, 425ppm 'Sofchek'	KH1009
HNB DILUTION SOLVENT	KH1935
HYDRAZINE KIT REFILL Chemetrics, 0 - 0.5ppm, 30 tests	KH3015
HYDRAZINE TEST KIT Chemetrics, 0 - 0.5ppm, 30 tests	KH3010
INDICATOR STRIPS AMMONIA 0 - 6mg/L NH3-N	FI1869
IRON FERROVER Powder pillows, 5mL sample for IR-18B kit	KH1220
IRON FERROVER REAGENT Powder pillows, 25mL sample	KI1110
IRON TOTAL 10mL, powder pillow, ferrover method	KH1210
IRON, TOTAL TEST STRIPS 0 - 5mg/L	KH1623
LAMP 6V 10W for DR2700, DR2800, DR3800 & DR3900 spectrophotometers	KH1815
LAMP ASSEMBLY for 2100P and 2100Q turbidimeters	KH1907
LDO SENSOR CAP WITH UPDATE MODULE for HQ30D and HQ40D meters	KH10640
LEGIONELLA DIRECT FIELD TEST KIT Hydrosense, 10 tests	KL0019
LOAN, 2100N BENCH TOP TURBIDITY METER S/N: 981100001809 with EPA filter and power lead (IEC) in transport case.	KL0046
LOVIBOND CELL 13.5mm path length, 2 - 12mL, type DB424 with stopper	IL1120
MANGANESE REAGENT SET LR 0.006 - 0.700mg/L, pan method, 50 tests	KH1633
MANGANOUS SULFATE Powder pillows	KH1914
MANVER 2 HARDNESS INDICATOR Powder pillows for 50mL sample	KM1050



ROWE CODE
CF0999



ROWE CODE
KH1608



ROWE CODE
KI1110



ROWE CODE
KH1815

WATER ANALYSIS - REAGENTS	ROWE CODE
METER MD610 PHOTOMETER IN CASE 'Lovibond'	KM0013
METER MULTI-PARAMETER DIGITAL SINGLE INPUT Model HQ2100 with USB charger and power cable	KM0041
METER SINGLE PARAMETER DIGITAL INPUT Model HQ1130 for dissolved oxygen (DO2) with USB charger and power cable (meter only)	KM0042
MINERAL STABILIZER SOLUTION	KH1416
MOLYBDATE 3 REAGENT	KH1418
MOLYBDATE 3 REAGENT FOR SILICA ANALYSIS	KH1522
MOLYBDATE 3 REAGENT SOLUTION 50mL	KH1419
MOLYBDATE NO. 3 REAGENT for Silica analysis	KM1098
MOLYBDATE REAGENT	KM1095
MOLYBDATE REAGENT	KH1658
MOLYBDATE REAGENT 5mL, powder pillow	KH1683
MOLYBDATE REAGENT Powder pillow, 25mL	KH1420
MOLYBDENUM 1 Powder pillows	KM1001
MOLYBDENUM 2 REAGENT SOLUTION	KM0018
MOLYBDOVANADATE REAGENT	KH1549
MOLYBDOVANADATE REAGENT for phosphate	KH1430
MONOCHLOR F REAGENT Powder pillows	KH1870
MONOCHLOR F REAGENT Powder pillows	KH1643
MONOCHLOROAMINE CHEMKEY 0.04 - 4.6mg/L for SL1000	KM0014
NITRATE VIALS LR 0.23 - 13.5mg/L as N, TNT plus	CN1031
NITRAVER 5 0 - 50mg/L, 5mL sample	KN2000
NITRAVER 5 Nitrate powder pillow for 25mL sample	KH1435
NITRAVER 6 Nitrate powder pillows 10mL sample	KH1444
NITRIFICATION INHIBITOR	KH1100
NITRITE HR VIALS 0.6 - 6mg/L, TNT plus, 25 tests	KH1816
NITROGEN AMMONIA LR REAGENT SET 0.02 - 2.5mg/L, 25 tests	KH1611
NITROGEN TOTAL REAGENT SET HR 10 - 150mg/L as N, persulfate method, Test 'N' tube, 50 tests (set of 2 boxes)	KH1457
NITROGEN, AMMONIA, TEST 'N' TUBE SALICYLATE METHOD Range 0 - 50mg/L, 50 test	KH1460
NITROGEN-AMMONIA STANDARD 10mg/L as N	KH1447
NITROGEN-NITRATE REAGENT SET 0 - 30mg/L, 50 tests	KH1301
PH TEST STRIPS 4-9	KH1012
PHENOL RED INDICATOR Powder pillows	KH0189
PHENOL RED TABLETS for comparator Lovibond	CP1907
PHOSPHORUS REACTIVE AND TOTAL VIALS LR, 0.15 - 4.5mg/L as PO4, 0.05 - 1.5mg/L as P, TNT plus	KH1540

ROWE CODE
KM0042ROWE CODE
KH1658ROWE CODE
CN1031ROWE CODE
KH1100

WATER ANALYSIS - REAGENTS

WATER ANALYSIS - REAGENTS	ROWE CODE
PHOSPHORUS REACTIVE AND TOTAL UHR 6 - 60mg/L as PO ₄ , 2 - 20mg/L as P, TNT plus	KH1736
PHOSPHORUS REACTIVE VIALS 5 - 90mg/L as PO ₄ , TNT plus	KH1542
PHOSPHORUS TOTAL TEST 'N' TUBE REAGENT SET 0 - 3.5mg/L, 50 tests	KH1303
PHOSPHORUS TOTAL TEST 'N' TUBE REAGENT SET 1 - 100mg/L as PO ₄ , 50 tests	KH1521
PHOSVER 3, PHOSPHATE REAGENT Powder pillow 5mL	KH1300
POLYVINYL ALCOHOL DISPERSING AGENT	KH1417
PORPHYRIN 2 10mL Powder pillow	KH1332
POTASSIUM IODIDE Powder pillows	KH1482
POTASSIUM PERSULFATE Powder pillows	KH1351
PROBE ORP , Intellical gel-filled AG/CL, 1m cable	IP5322
REAGENT 1 (TISAB) for CA610 analyser	KH1773
REAGENT SET ACIDITY 10 - 4000mg/L as CaCO ₃ , about 100 tests	KH1678
REAGENT SET, CHLORIDE for digital titrator	KH1607
REAGENT SET, POTASSIUM 0.1 - 7mg/L as K, 100 tests	KH1628
REAGENT SET, REACTIVE PHOSPHORUS, ORTHOPHOSPHATE LR, PHOSVER 3 0.06 - 5mg/L PO ₄ , 25/50 tests	KH1524
REAGENT, PHOSPHAX SC CLEANING SOLUTION	KH1862
REAGENT, PHOSPHAX SC	KH1861
RECALIBRATION FILTER ASSEMBLY For DR2000 and DR2010	KH1118
SAMPLE CELL WITH CAP 1cm/10mL, plastic	KH1078
SAMPLE CELL WITH CAP 25 x 54mm, 10mL	KH1496
SAMPLE CELL WITH CAP 25 x 95mm, 10, 20 and 25mL graduations, glass	KH1045
SAMPLE CELL 10mL inch square, matched for spectrophotometers	KH0016
SAMPLE CELL 25mL matched pair, inch path length, square FORDR2000 series spectrophotometer	KH1040
SAMPLE CELLS 25mL, glass	KH1056
SILICA HR REAGENT SET 1 - 100mg/L as SiO ₂ , 100 tests	KH1592
SILVER 1, REAGENT Powder pillow	KH0036
SILVER REAGENT SET colorimetric method	KH1259
SODIUM AND POTASSIUM IONIC STRENGTH ADJUSTER Powder pillows	KH1710
SODIUM PERIODATE REAGENT Powder pillows	KH1094
SODIUM THIOSULFATE 2.12N	KH1802
SODIUM THIOSULFATE STABILISED 0.0246N	KH1311
SODIUM THIOSULFATE STABILIZED CARTRIDGES For digital titrator 2.26N	KH1980
STABLCAL FORMAZIN PRIMARY STANDARDS CALIBRATION KIT NTU range < 0.1 20 100 800 (2100P)	KH1474



ROWE CODE
KH1417



ROWE CODE
KH1524



ROWE CODE
KH1045



ROWE CODE
KH1259

WATER ANALYSIS - REAGENTS	ROWE CODE
STANDARD COD 300mg/L	SC1225
STANDARD SULFURIC ACID SOLUTION 0.020N	KH1443
SULFAVER 4 REAGENT Pillows	KH1095
SULFITE 3 REAGENT	KH1888
SULFURIC ACID STANDARD SOLUTION 19.2N	KH1110
TABLETS, ACIDIFYING GP 'Lovibond'	KT0046
TABLETS, CHLORINE HR (KI) 'Lovibond'	KT0045
TABLETS, DPD NO.3 'Lovibond'	CT2334
TEST KIT, CHLORINE FREE AND TOTAL 0.1 - 3.5mg/L, 50 tests of each, model CN-66	KH1599
TEST KIT, DISSOLVED OXYGEN 0 - 20ppb, 30 tests	KD1202
TNT PLUS IRON 0.2 - 6mg/L	KH1742
TNT PLUS SULFATE Low range 40 - 150mg/L	KH1738
TOTAL CHLORINE REAGENT SET Rapid liquid, 0.02 - 2mg/L (set of 3 reagents)	KC1019
TOTAL CHLORINE TEST STRIP 10, 50, 100, 200ppm, 5m roll	FI1937
TOTAL HARDNESS INDICATOR TABLETS TH1	KT0034
TOTAL HARDNESS REAGENT SET For digital titrator, 10 - 160mg/L as CaCO3	KH1618
TOTAL HARDNESS TITRETS 20 - 200ppm	KT0100
TOTAL ORGANIC CARBON (TOC) HR REAGENT SET 100 - 700mg/L, 50 tests	KH1484
TOTAL ORGANIC CARBON (TOC) LR REAGENT SET 0.3 - 20mg/L, 50 tests	KH1483
TRIAZOLE REAGENT Powder pillows	KH1598
TURBIDITY STANDARD SET STABLCAL SEALED VIALS (20, 100, 800 NTU and 10 NTU verification standard) for models 2100Q/QIS	KH2455
WATER HARDNESS TEST KIT 100 tests/kit	FI1827
WATER Organic free	KH2036



ROWE CODE
KH1742



ROWE CODE
KC1019



ROWE CODE
KH1484



ROWE CODE
KH2036

WASH BOTTLES - TARSONS

SAFETY LABELLED WASH BOTTLES (LDPE) (EACH)	VOL ML	PACK SIZE	ROWE CODE
ACETONE Vented with red cap	500	EA	PW1403*
ACETONE Vented with red cap and integral side spout	250	EA	PB0066*
DEIONIZED WATER Vented with natural cap and integral side spout	250	EA	PB0067*
DISTILLED WATER Vented with natural cap	1000	EA	PB0143
DISTILLED WATER Vented with natural cap	500	EA	PW1406*
DISTILLED WATER Vented with wide neck	250	EA	PW0037
ETHANOL Vented with white cap	500	EA	PW1378*
ETHANOL Vented with white cap and integral side spout	250	EA	PB0068*
ETHYL ACETATE Vented with green cap	500	EA	PB0057*
ISOPROPANOL Vented with integral side spout	250	EA	PB0278*
ISOPROPANOL Vented with yellow cap	500	EA	PW1413*
MACHINE OIL Vented with wide neck	500	EA	PB0280
METHANOL Vented with green cap	500	EA	PW2445
METHYL ETHYL KETONE (MEK) Vented with green cap	500	EA	PW1407
SELF LABELLING Vented with white cap	500	EA	PB0056
SELF LABELLING Non vented	500	EA	PB0077
SELF LABELLING Vented with wide neck	250	EA	PB0279
SOAP With green cap	500	EA	PB0058
SODIUM HYPOCHLORITE Vented white bottle with blue cap	500	EA	PB0055*
WATER With natural cap	500	EA	PB0059

***BEST SELLERS**



WASH BOTTLES INTEGRAL SIDE SPOUT (LDPE)	VOL ML	ROWE CODE
Translucent, one-piece, wash bottles with PP closure	EACH	250 PW1100
		500 PW1302
	4 PACK	750 PW0085



WASH BOTTLES - TARSONS

WASH BOTTLE		MATERIAL (BOTTLE/CAP)	VOLUME (mL)	PACK SIZE	ROWE CODE
LDPE - NARROW MOUTH WITH COLOUR CODED CAP					
<ul style="list-style-type: none"> Closure and stem moulded in one piece hence leak proof The tip dispenses a uniform stream of liquid and can be cut back to increase flow 	Natural cap	LDPE/PP	250	6	PW2210
	Blue Cap		250	6	PB0378
	Green		500	6	PB0379
	Natural cap		500	6	PW2220
	Yellow cap		1000	4	PB0380
	Natural cap		1000	4	PW2231
LDPE - WIDE MOUTH WITH COLOUR CODED CAP					
<ul style="list-style-type: none"> Closure and stem moulded in one piece hence leak proof The tip dispenses a uniform stream of liquid and can be cut back to increase flow Wide mouth allows for easy filling of contents 	Natural cap	LDPE/PP	250	6	PW2310*
	Blue cap		250	6	PW2352*
	Red cap		250	6	PW2345*
	Yellow cap		250	6	PW2305*
	Natural cap		500	6	PW2365*
	Blue cap		500	6	PW2372*
	Red cap		500	6	PW2376*
	Yellow cap		500	6	PW2374*
	Natural cap		1000	4	PW2380



ROWE CODE PB0379



ROWE CODE PW2452

WASH BOTTLES - SP BEL-ART



WASH BOTTLES	VOLUME (mL)	PACK SIZE	ROWE CODE
ACETONE Safety-vented/labelled, wide-mouth, PE with red PP cap (includes tube)	250	3	PW2452
ACETONE GHS labelled, safety-vented, PE with red PP cap	500	4	PW0005
DICHLOROMETHANE GHS labelled, safety-vented, PE with yellow PP cap	500	4	PW0092
HIGH VISIBILITY RED COLOUR Narrow-neck, PE with red PP cap and closure (28mm) (includes tube)	500	6	PW1692
HIGH VISIBILITY RED COLOUR Wide-mouth, LDPE with red PP cap and closure (53mm)	500	6	PW0093
NATURAL Wide-mouth PE with green PP cap and closure (53mm)	500	6	PW0035
NATURAL Wide-mouth LDPE with yellow PP cap and closure (53mm)	500	6	PW0094
SODIUM HYPOCHLORITE (BLEACH) Safety-vented and labelled, PE with yellow PP cap	250	4	PW0030
SODIUM HYPOCHLORITE (BLEACH) GHS labelled, safety-vented, PE with yellow PP cap	500	4	PW0033
TECH PEN Black for labelling wash bottles		EA	PW1436
TOLUENE Safety-labelled, wide-mouth, PE with red PP cap (includes tube)	500	6	PW1425
TRIGGER SPRAYERS PP with 53mm adapters to suit 500/1000mL wash bottles		2	PT0423



ROWE CODE PT0423

WASH BOTTLES - KARTELL

WASH BOTTLES - KARTELL (EACH)		VOLUME (mL)	ROWE CODE
Easy squeeze wash bottles with integral moulded tube. Dispensing tip, which is provided with polyethylene closure cap		250	PW1000
		500	PW1200
Wide mouth, graduated, polyethylene	Neutral cap	250	PW2320
	Blue cap	250	PW2350
	Yellow cap	250	PW2300
	Red cap	250	PW2340
	Neutral cap	500	PW2360
	Blue cap	500	PW2362
	Yellow cap	500	PW2364
Round, polyethylene		100	PW1800
		250	PW1810
		500	PW2225
		1000	PW2250



ROWE CODE
PW1200



ROWE CODE
PW2340



ROWE CODE
PW2225

WATER BATHS - VARIOUS

Water Baths - Heated

RATEK

DESCRIPTION	TANK DIMENSION (mm)	CAPACITY (L)	ROWE CODE
HEATED AMBIENT +5°C to 100°C	133 x 283 x 145	7	IW0138
	218 x 278 x 145	12	IW0129
	273 x 473 x 145	24	IW0123
	602 x 483 x 135	50	IW0135

**WATER BATH**

7L, Digital control, Heated ambient +5 to 100°C, LED display, Internal dimensions 133W x 283Dx 145H mm (without lid)

ROWE CODE IW0138

Water Baths - Unheated

DESCRIPTION	TANK DIMENSION (mm)	CAPACITY (L)	ROWE CODE
INSULATED	245 x 190 x 200	11	IB1256
	440 x 240 x 200	24	IB1250

**WATER BATH - UNHEATED**

Insulated, 24L working volume

ROWE CODE IB1250

Circulating Baths - Refrigerated

DESCRIPTION	°C RANGE	TANK DIMENSION (mm)	CAPACITY	ROWE CODE
CIRCULATED AND REFRIGERATED	-20 to 200	245 x 190 x 200	7	IB0253
	-20 to 200	440 x 240 x 200	7	IB0456
	-30 to 135	212 x 276 x 140	15	IB0663
	-30 to 200	212 x 276 x 140	15	IC0433
	-30 to 170	314 x 359 x 140	28	IB0494

PolyScience®**CIRCULATING BATH - REFRIGERATED**

28L, Standard digital controller

(-30 to 170°C), 240V, 50Hz

ROWE CODE IB0494

Circulating Baths - Heated

DESCRIPTION	°C RANGE	TANK DIMENSION (mm)	CAPACITY	ROWE CODE
WITH DIGITAL CONTROLLER	Ambient +10 to 200	157 x 142 x 127	7	IB0455
	Ambient +10 to 135	212 x 276 x 140	15	IB0664

**UNCIRCULATED WATER BATH - HEATED**

20L General purpose, Colour digital display, Ambient to 99°C, Hinged clear plastic gable lid, 240V, 50Hz

ROWE CODE IB0529

Uncirculating Baths - Heated

DESCRIPTION	°C RANGE	TANK DIMENSION (mm)	CAPACITY	ROWE CODE
WITH DIGITAL CONTROLLER	up to 99	99x109x152	2L	IB0536
	up to 99	269x295x152	10L	IB0538
	up to 99	240x430x150	20L	IB0529

Shaking Baths

DESCRIPTION	PLATFORM DIMENSION (mm)	CAPACITY	ROWE CODE
WITH DIGITAL TEMPERATURE CONTROLLER	230x150x120	8L	IW1124
	330x310x140	20L	IW1112



SHAKING WATER BATH
330 x 310mm Platform, Digital temperature controller and readout 240V, 50Hz
ROWE CODE IW1112

Water Baths - Boiling

DESCRIPTION	°C RANGE	CAPACITY (L)	ROWE CODE
BOILING / STEAM 2 place, Digital display and Timer function	up to 99	2	IW0161
BOILING / STEAM 4 place (2 x 2 format), 1000w, Digital display and Timer function	up to 99	10	IW0160
BOILING 8 Ring, Digital display and Timer function, 600W x 300D x 110H mm	up to 99	19.8	IW0153
BOILING 12 holes (3 x 4 grid) with rings, Thermostat controlled, 610L x 460W x 230H mm	up to 99	10	IW0141



WATER BATHS - BOILING / STEAM
1000W, Digital display and Timer function

Thermoregulators

RATEK

DESCRIPTION	°C RANGE	POWER	ROWE CODE
With paddle	0 to 100	1kW	IT2401
DIGITAL HEAT/CIRCULATOR High flow dual outlet pump	0 to 100	1kW	IT2404
DIGITAL HEAT/CIRCULATOR High flow dual outlet pump	-30 to 150	1kW	IT0031
HEATER/STIRRER	-30 to 100	1kW	IT2402
HEATER/STIRRER Advanced digital PID controller	-30 to 100	2.2kW	IT2403
HEATER/STIRRER Advanced digital PID controller with Ramp programming	-30 to 100	2.2kW	IT0051



THERMOREGULATOR - HEATER / STIRRER
Advanced digital PID controller, -30 to 100°C, 2.2kW, with Ramp programming
ROWE CODE IT0051

Consumables

DESCRIPTION	CAPACITY	ROWE CODE
CLARIFIER SOLUTION - POLYCLEAN Keeps water bath reservoirs clean and odour-free	8oz	IC0364
COOLANT - POLYCLEAR MIX 30 PLUS With corrosion inhibitor 15 to 90°C	5 x 1.89L	IC0445



COOLANT - POLYCLEAR MIX 30 PLUS
With corrosion inhibitor, 15 to 90°C
ROWE CODE IC0445

Cascade Water Stills

WATER STILLS	ROWE CODE
3L/hour "CASCADE"	IS2160
3 or 6L/hour "DELTA"	IS2170

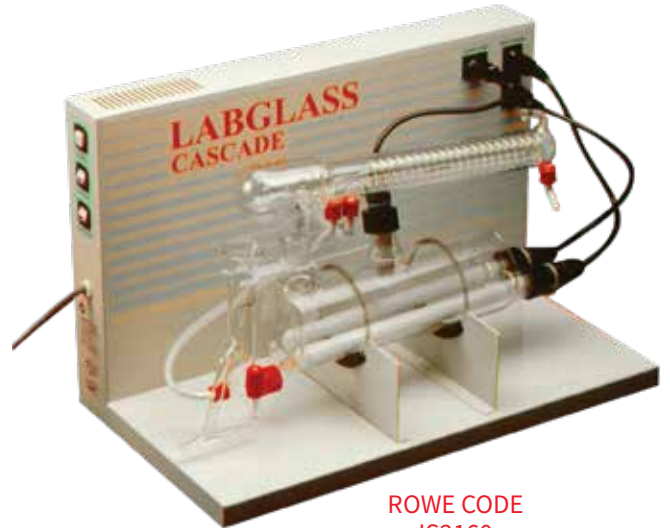
These metal still cases are attractively finished in a durable powder coating. Each Still may be wall, shelf or bench mounted.

The still monitors the water level in any reservoir, and controls the operation of the still, turning it on and off as the water level changes in the reservoir. Together with over-temperature and feed water supply failure protection, this allows 24-hour unattended operation of all stills.

The CASCADE Still produces 3 litres per hour single distilled water.

A version of the CASCADE can also be supplied as a Cascade Dual Feed Still for use with regulated pre-treated or low pressure water sources or storage tanks. It uses two water supplies, mains pressure water for cooling in the condenser, while the low pressure water to be distilled is trickle fed into the boiler.

Distillate quality may vary depending on the quality of the water source. The pH and conductivity of Distilled Water changes when exposed to the atmosphere. This is a result of Carbon Dioxide absorption that is temperature dependent, and is not an indication of a change in overall purity.



ROWE CODE
IS2160



ROWE CODE
IS2170

	CASCADE (RG1)	DELTA (RG3)
CONDUCTIVITY µS/CM	Single Distilled 2.0, Double Distilled 1.5	
PH	aproximately 5 to 6.5	
DIMENSIONS	61 x 33 x 37cm	61 x 33 x 37cm
POWER	240v, 10amp, 2000w	240v, 20amp, 4300w
WEIGHT	17kg	19kg

WATER SYSTEMS - IBIS



Ibis Plus

The Ibis plus is a low capital unit which is suitable for type 2 water or DI water. It can filter 6 or 12 L per hour and the filtered water is a binary – pass / fail. The unit is easily maintained with consumables being readily available and inexpensive to purchase making it a popular choice.

- Model - LSP06A or LSP06B (6L/hour)
- Model - LSP12A or LSP12B (12L/hour)

Ultrapure – Alpha5

The Alpha5 is suitable for type 1 water or ultrapure water. It can filter 2 L per minute and includes a 0.2um bacteria filter and resistivity read out. The unit is easily maintained with consumables being readily available and inexpensive to purchase.

- Model - Alpha5



Accessories available upon request

WATER SYSTEMS - MILLIPORE

Milli-Q® IQ 7000 Purification System

Simple and intuitive dispensing Just a twist of the new dispensing wheel lets you deliver water at the flow rate you need, from precise drop by drop up to a full 2 litres per minute. For added efficiency, you can also directly select a dispensing option from the Home screen. While dispensing, you can easily check the water quality parameters, always visible onscreen. Their values are continuously monitored by the system, so you can have full confidence in your water quality.



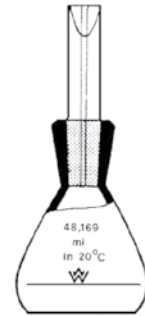
If you have a specific water filtration requirement for your laboratory, contact us to discuss your options.
Accessories available upon request



SPECIFIC GRAVITY BOTTLE/PYCNO METER



ITEM		PACK SIZE	ROWE CODE
5mL	With ground in stopper precisely adjusted	EA	GB0112
10mL		EA	GB8343
25mL		EA	GB8337
50mL		EA	GB8347
100mL		EA	GB8353
50mL	Pycnometer flask type Calibrated	EA	GP1231
50mL		EA	GP1244
100mL		EA	GP1005



ROWE CODE GB0112

WEIGHING BOATS



ANTI-STATIC WHITE SQUARE BIOLOGICALLY INERT	PACK SIZE	ROWE CODE
41 x 41mm POLYSTYRENE	EA	PB0306
89 x 89mm POLYSTYRENE	EA	PB0307
140 x 140mm POLYSTYRENE	EA	PB0308



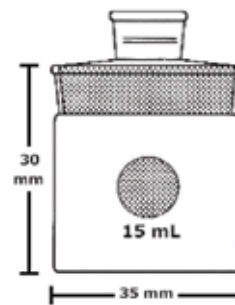
ROWE CODE PB0308

WEIGHING BOTTLE

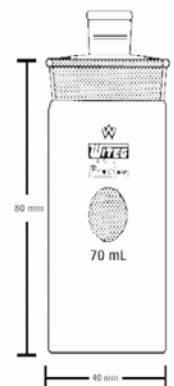


LOW FORM	PACK SIZE	ROWE CODE
15mL - 35mm DIA x 30mmH	EA	GW1048
30mL - 50mm DIA x 30mmH	EA	GW1050
45mL - 60mm DIA x 30mmH	EA	GB0030

TALL FORM	PACK SIZE	ROWE CODE
45mL - 70mm DIA x 35mmH	EA	GB0045
70mL - 80mm DIA x 40mmH	EA	GB0198
120mL - 80mm DIA x 50mmH	EA	GB0031



ROWE CODE GW1048



ROWE CODE GB0198

WEIGHING PAPER



SPOUTED	PACK SIZE	ROWE CODE
90 x 115mm	100	FW1000



ROWE CODE FW1000

DESCRIPTION	SPECS	ROWE CODE
XRF CUP (liquid) - Made by Rowe Lid: 45.7mm OD, Body: 35.5mm ID	Clear	XC1005
	Grey	XC1006
	Orange	XC1007
XRF binder capsules		XX0011
Binder powder for XRF, Somar mix		XB1050
Binder tablets for XRF, X-ray mix	500mg	XB0003
Boric acid tablets for XRF spectroscopy	500mg	XB0001
Flux XRF 12/22		XF1020
XRF pellet cups with tapered sides (aluminium)	31 DIA x 8mm H	XX0020
XRF sample cup with snap on closure	40mm OD	XS1150
XRF sample cup, low profile, single open end	42.9 DIA x 19.6mm H	XC0008
XRF sample cup with lid Double open ended (3 piece)	32mm OD	XC0006
	35mm OD	XC0004
	45mm OD	XC0002
XRF sample cup double open ended (polyethylene)	40.1 DIA x 29.1mm H	XX0001
XRF sample cup with overflow reservoir cap, double open ended	30.7 OD x 22.9mm H	XC0001
XRF cup, pre assembled spectrocup, trimless sleeve, vented cap, double open ended with 3.6µm mylar film	31.5 OD x 34.5 max OD x 29.2mm H	XX0022
XRF Cup, Oxford 1935, double open ended, vented		XC0013



ROWE CODE
XC0006

Pellet cups - Australian made by Rowe Scientific!

XRF PELLET CUPS - ALUMINIUM (OUTSIDE PAINTED WHITE)	ROWE CODE
32mm DIA x 8mm H (tapered sides)	XP1205
33mm DIA x 8mm H (straight sides)	CX0065
38mm DIA x 9mm H (straight sides)	XP1100
40mm DIA x 8mm H (straight sides)	XP1160
40mm DIA (tapered sides)	XP1200



DESCRIPTION	SPECS	ROWE CODE
Mylar 3.6µm thin film for XRF	76 x 76mm sheets	XM1100
	102mm x 92m continuous roll	XM1452
	Pre-cut circles 63.5mm DIA	XM0009
	Pre-cut circles 76.2mm DIA	XM0010
	Pre-cut circles 89mm DIA	XM0011
Mylar 6µm thin film for XRF	76.2mm x 91.4m continuous roll	XM1456
	76 x 76mm sheets	XM1370
	Pre-cut circles 76.2mm DIA	XX1009
Polypropylene 5µm thin film for XRF	76mm x 92m continuous roll	XP1500
Polypropylene 6.0µm thin film for XRF Pre-perforated every 76.2mm	76.2mm x 91.4m continuous roll	XP0025
Prolene 4µm thin film for XRF (Spectromembrane)	76.2mm x 91.4m continuous roll	XP1520
	Pre-cut circles 76.2mm DIA	XX1010
Die set for XRF press	32mm DIA cup	XD1002
	40mm DIA cup	XD0001
XRF disc tray (PVC) to hold up to 42mm DIA discs	200mm L x 45mm W	XX1050
XRF silver disc deposition (99.95% Pure) polished both sides, silver	28mm DIA x 0.2mm THICK	XX0002
Tongs, stainless steel with platinum tip and radiation shield	12g and 620mm L	XT0003
Spectropulverizer, combination grinder and pulverizer for infield preparation of XRF pellets	32mm pellets	XS0007
	35mm pellets	XS0008
	40mm pellets	XS0009



ROWE CODE
XS0008

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CHEMISTRY

Alphabetical List of the Elements

ELEMENT NAME	SYMBOL	ATOMIC NUMBER	MASS
Actinium	Ac	89	[227]
Aluminium	Al	13	26.982
Americium	Am	95	[243]
Antimony	Sb	51	121.76
Argon	Ar	18	39.95
Arsenic	As	33	74.922
Astatine	At	85	[210]
Barium	Ba	56	137.33
Berkelium	Bk	97	[247]
Beryllium	Be	4	9.0122
Bismuth	Bi	83	208.98
Bohrium	Bh	107	[270]
Boron	B	5	10.81
Bromine	Br	35	79.904
Cadmium	Cd	48	112.41
Calcium	Ca	20	40.078
Californium	Cf	98	[251]
Carbon	C	6	12.011
Cerium	Ce	58	140.12
Cesium	Cs	55	132.91
Chlorine	Cl	17	35.45
Chromium	Cr	24	51.996
Cobalt	Co	27	58.933
Copernicium	Cn	112	[285]
Copper	Cu	29	63.546
Curium	Cm	96	[247]
Darmstadtium	Ds	110	[281]
Dubnium	Db	105	[268]
Dysprosium	Dy	66	162.50
Einsteinium	Es	99	[252]
Erbium	Er	68	167.26
Europium	Eu	63	151.96
Fermium	Fm	100	[257]
Flerovium	Fl	114	[290]
Fluorine	F	9	18.998
Francium	Fr	87	[223]
Gadolinium	Gd	64	157.25
Gallium	Ga	31	69.723
Germanium	Ge	32	72.630
Gold	Au	79	196.97
Hafnium	Hf	72	178.49
Hassium	Hs	108	[269]
Helium	He	2	4.0026
Holmium	Ho	67	164.93
Hydrogen	H	1	1.0080
Indium	In	49	114.82
Iodine	I	53	126.90
Iridium	Ir	77	192.22
Iron	Fe	26	55.845
Krypton	Kr	36	83.798

ELEMENT NAME	SYMBOL	ATOMIC NUMBER	MASS
Lanthanum	La	57	138.91
Lawrencium	Lr	103	[262]
Lead	Pb	82	207.2
Lithium	Li	3	6.94
Livermorium	Lv	116	[293]
Lutetium	Lu	71	174.97
Magnesium	Mg	12	24.305
Manganese	Mn	25	54.938
Meitnerium	Mt	109	[277]
Mendelevium	Md	101	[258]
Mercury	Hg	80	200.59
Molybdenum	Mo	42	95.95
Moscovium	Mc	115	[290]
Neodymium	Nd	60	144.24
Neon	Ne	10	20.180
Neptunium	Np	93	[237]
Nickel	Ni	28	58.693
Nihonium	Nh	113	[286]
Niobium	Nb	41	92.906
Nitrogen	N	7	14.007
Nobelium	No	102	[259]
Oganesson	Og	118	[294]
Osmium	Os	76	190.23
Oxygen	O	8	15.999
Palladium	Pd	46	106.42
Phosphorus	P	15	30.974
Platinum	Pt	78	195.08
Plutonium	Pu	94	[244]
Polonium	Po	84	[209]
Potassium	K	19	39.098
Praseodymium	Pr	59	140.91
Promethium	Pm	61	[145]
Protactinium	Pa	91	231.04
Radium	Ra	88	[226]
Radon	Rn	86	[222]
Rhenium	Re	75	186.21
Rhodium	Rh	45	102.91
Roentgenium	Rg	111	[282]
Rubidium	Rb	37	85.468
Ruthenium	Ru	44	101.07
Rutherfordium	Rf	104	[267]
Samarium	Sm	62	150.36
Scandium	Sc	21	44.956
Seaborgium	Sg	106	[269]
Selenium	Se	34	78.971
Silicon	Si	14	28.085
Silver	Ag	47	107.87
Sodium	Na	11	22.990
Strontium	Sr	38	87.62
Sulfur	S	16	32.06

ELEMENT NAME	SYMBOL	ATOMIC NUMBER	MASS
Tantalum	Ta	73	180.95
Technetium	Tc	43	[97]
Tellurium	Te	52	127.60
Tennessine	Ts	117	[294]
Terbium	Tb	65	158.93
Thallium	Tl	81	204.38
Thorium	Th	90	232.04
Thulium	Tm	69	168.93
Tin	Sn	50	118.71
Titanium	Ti	22	47.867
Tungsten	W	74	183.84
Uranium	U	92	238.03
Vanadium	V	23	50.942
Xenon	Xe	54	131.29
Ytterbium	Yb	70	173.05
Yttrium	Y	39	88.906
Zinc	Zn	30	65.38
Zirconium	Zr	40	91.224

SOLUBILITY RULES FOR SALTS IN WATER

- 1) All the salts of the alkali metals (Li, Na, K, Rb and Cs) and ammonium (NH_4^+) are soluble.
- 2) All nitrate (NO_3^-) and acetate salts are soluble.
- 3) All chloride and bromide salts are soluble except those of silver (Ag), mercury (Hg) and lead (Pb). Lead chloride is soluble in hot water.
- 4) All sulphate (SO_4^{2-}) salts are soluble, except those of barium (Ba), strontium (Sr) and lead (Pb). Calcium sulphate is only slightly soluble.
- 5) All sulphides (S^{2-}) are insoluble in water except those of the alkali metals (See Rule 1) and the alkali earth metals (Mg, Ca, Sr and Ba).
- 6) All hydroxides (OH^-) are insoluble except those of the alkali metals and barium.
- 7) All phosphates (PO_4^{3-}) and carbonates (CO_3^{2-}) are insoluble except those of ammonium and the alkali metals (See Rule 1).

See notes on following page!

PERIODIC TABLE OF THE ELEMENTS & THEIR ATOMS

Periodic table of elements with columns for s-block, d-block, and p-block. Includes element symbols, names, atomic weights, and configurations. Includes a key for oxidation states and a diagram for Hydrogen.

Continuation of the periodic table, including elements from Group 13 to 18 and the f-block (lanthanoids and actinoids).

NOTES 1. Element symbols, names and spelling as recommended by IUPAC... 2. Atomic weight: Mean relative masses of naturally occurring isotopic mixtures based on 12C as recommended by IUPAC... 3. Liquid at 30°C



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THE ELECTROCHEMICAL SERIES

Standard Reduction Potential Table

Half-reaction	E° (volts)
$F_2(g) + 2e^- \rightarrow 2F^-(aq)$	+2.87
$H_2O_2(aq) + 2H^+(aq) + 2e^- \rightarrow 2H_2O(l)$	+1.78
$2HClO(aq) + 2H^+(aq) + 2e^- \rightarrow Cl_2(g) + 2H_2O(l)$	+1.63
$MnO_3^-(aq) + 8H^+(aq) + 5e^- \rightarrow Mn^{2+}(aq) + 4H_2O(l)$	+1.51
$Au^{3+}(aq) + 3e^- \rightarrow Au(s)$	+1.50
$HClO(aq) + H^+(aq) + 2e^- \rightarrow Cl^-(aq) + H_2O(l)$	+1.49
$Cl_2(g) + 2e^- \rightarrow 2Cl^-(aq)$	+1.36
$Cr_2O_7^{2-}(aq) + 14H^+(aq) + 6e^- \rightarrow 2Cr^{3+}(aq) + 7H_2O(l)$	+1.33
$MnO_2(s) + 4H^+(aq) + 2e^- \rightarrow Mn^{2+}(aq) + 2H_2O(l)$	+1.23
$O_2(g) + 4H^+(aq) + 4e^- \rightarrow 2H_2O(l)$	+1.23
$Br_2(l) + 2e^- \rightarrow 2Br^-(aq)$	+1.09
$NO_3^-(aq) + 4H^+(aq) + 3e^- \rightarrow NO(g) + 2H_2O(l)$	+0.96
$Hg^{2+}(aq) + 2e^- \rightarrow Hg(l)$	+0.85
$O_2(g) + 4H^+(aq)(10^{-7} \text{ mol L}^{-1}) + 4e^- \rightarrow 2H_2O(l)$	+0.82*
$NO_3^-(aq) + 2H^+(aq) + e^- \rightarrow NO_2(g) + H_2O(l)$	+0.80
$Ag^+(aq) + e^- \rightarrow Ag(s)$	+0.80
$Hg_2^{2+}(aq) + 2e^- \rightarrow 2Hg(l)$	+0.79
$Fe^{3+}(aq) + e^- \rightarrow Fe^{2+}(aq)$	+0.77
$O_2(g) + 2H^+(aq) + 2e^- \rightarrow H_2O_2(aq)$	+0.68
$MnO_4^-(aq) + 2H_2O(l) + 3e^- \rightarrow MnO_2(s) + 4OH^-(aq)$	+0.60
$I_2(s) + 2e^- \rightarrow 2I^-(aq)$	+0.54
$Cu^+(aq) + e^- \rightarrow Cu(s)$	+0.52
$O_2(g) + 2H_2O(l) + 4e^- \rightarrow 4OH^-(aq)$	+0.40
$Cu^{2+}(aq) + 2e^- \rightarrow Cu(s)$	+0.34
$HSO_4^-(aq) + 3H^+(aq) + 2e^- \rightarrow H_2SO_3(aq) + H_2O(l)$	+0.17
$Cu^{2+}(aq) + e^- \rightarrow Cu^+(aq)$	+0.15
$Sn^{4+}(aq) + 2e^- \rightarrow Sn^{2+}(aq)$	+0.15
$S(s) + 2H^+(aq) + 2e^- \rightarrow H_2S(aq)$	+0.14
$2H^+(aq) + 2e^- \rightarrow H_2(g)$	0.00
$Pb^{2+}(aq) + 2e^- \rightarrow Pb(s)$	-0.13
$Sn^{2+}(aq) + 2e^- \rightarrow Sn(s)$	-0.14
$Ni^{2+}(aq) + 2e^- \rightarrow Ni(s)$	-0.25
$Co^{2+}(aq) + 2e^- \rightarrow Co(s)$	-0.28
$Cr^{3+}(aq) + e^- \rightarrow Cr^{2+}(aq)$	-0.41
$2H_2O(l) + 2e^- \rightarrow H_2(g) + 2OH^-(aq)(10^{-7} \text{ mol L}^{-1})$	-0.41*
$Fe^{2+}(aq) + 2e^- \rightarrow Fe(s)$	-0.44
$2CO_2(g) + 2H^+(aq) + 2e^- \rightarrow H_2C_2O_4(aq)$	-0.49
$Cr^{3+}(aq) + 3e^- \rightarrow Cr(s)$	-0.74
$Zn^{2+}(aq) + 2e^- \rightarrow Zn(s)$	-0.76
$2H_2O(l) + 2e^- \rightarrow H_2(g) + 2OH^-(aq)$	-0.83
$Mn^{2+}(aq) + 2e^- \rightarrow Mn(s)$	-1.18
$Al^{3+}(aq) + 3e^- \rightarrow Al(s)$	-1.66
$Mg^{2+}(aq) + 2e^- \rightarrow Mg(s)$	-2.36
$Na^+(aq) + e^- \rightarrow Na(s)$	-2.71
$Ca^{2+}(aq) + 2e^- \rightarrow Ca(s)$	-2.87
$Sr^{2+}(aq) + 2e^- \rightarrow Sr(s)$	-2.89
$Ba^{2+}(aq) + 2e^- \rightarrow Ba(s)$	-2.90
$K^+(aq) + e^- \rightarrow K(s)$	-2.93
$Li^+(aq) + e^- \rightarrow Li(s)$	-3.05

* Not true E°s for these half-reactions because not measured under standard conditions (i.e. solution concentration of 1 mol L⁻¹, gas pressure of 101.3 kPa and at a temperature of 25 °C).

AS PER EDITION 4.

CHEMISTRY

The Activity (Reactivity) Series of Metals

The properties of metals can be compared with an activity series. This series is given below with a number of comments.

Potassium	K	
Sodium	Na	1) All metals above hydrogen will displace hydrogen from dilute sulphuric acid and dilute and concentrated hydrochloric acids.
Calcium	Ca	2) Metals near the top of the series will vigorously displace hydrogen from water. Magnesium will displace hydrogen from steam.
Magnesium	Mg	
Aluminium	Al	3) Metals above silver combine directly with oxygen and this action is rapid with metals at the top of the series.
Zinc	Zn	4) Metals below mercury do not combine directly with oxygen to form oxides.
Iron	Fe	5) Oxides of mercury and the metals below it may be decomposed to metals with mild heating.
Tin	Sn	6) Oxides of metals above mercury are not easily decomposed by heat alone.
Lead	Pb	7) Elements above silver are rarely found free in nature and those near the top of the series are relatively difficult to separate from the compounds in which they are found.
Hydrogen	H	8) Elements low in the series are often found free in nature.
Copper	Cu	9) The carbonates of sodium and potassium are fairly stable to heat.
Mercury	Hg	10) The carbonates below sodium form oxides and liberate carbon dioxide when heated and the oxides of the metals below copper are themselves reduced and oxygen liberated.
Silver	Ag	
Platinum	Pt	11) Under suitable conditions, each element in the series will displace from a compound any of the elements below it. The larger the interval between the elements the more vigorous will be the reaction.
Gold	Au	

Approximation of Furnace Temperature from Colour of Furnace

COLOUR OF FURNACE	APPROX TEMP (°C)
Lowest red visible in the dark	470
Dark blood red	530
Low red	560
Dark cherry red	640
Cherry red	750
Light cherry red	845
Orange	900
Light orange	940
Yellow	1000
Light yellow	1080
White	1200

Physical Properties of Kimble Borosilicate Glass

KIMBLE Glasses

KIMAX Brand KG-33 glass is a borosilicate glass with a low coefficient of expansion and a very high resistance to chemical attack. It meets the requirements for Type I Class A glass of ASTM E438, "Glasses in Laboratory Apparatus". The alkali content is low and it is made without elements of the calcium magnesium and zinc group of heavy metals. The combined total of arsenic and antimony oxides is less than 0.005%.

Amber 203 — Amber borosilicate glass developed for light sensitive pharmaceutical products. Amber 203 glass meets U.S. Pharmacopeia Type I Specifications.

N-51A — KIMAX brand N-51A glass belongs to the family of KIMBLE borosilicate glasses. It possesses the best all-around chemical durability of available commercial glasses. Because of a comparatively low coefficient of expansion, N-51A also possesses good resistance to thermal shock. N-51A meets the requirements for Type I Class B glass of ASTM E438.

Physical Properties of Glass

Glass is an inorganic product of fusion that has cooled to a rigid condition without crystallizing and, therefore, has no melting point as such. There are, however, four temperatures that are of interest to the glassblower. They are:

1. **The Working Point**—the temperature at which glass has a viscosity of 10^4 poises. At this temperature, glass is soft enough for most lampworking or sealing operations.
2. **The Softening Point**—the temperature at which glass has a viscosity of $10^{7.6}$ poises. In this temperature range glass will deform noticeably under its own weight.
3. **The Annealing Point**—the temperature at which the internal stress caused by rapid cooling from lampworking or forming temperatures may be substantially removed in a matter of minutes. It is determined by measuring the elongation rate versus temperature of a fiber of glass under conditions prescribed by ASTM Designation C 336. The values given herein are typical for production glasses.
4. **The Strain Point**—the temperature at which the internal strain in a glass is substantially relieved only after a matter of hours and not at a commercially desirable rate. It is determined by extrapolation of annealing point data for fiber elongation: ASTM C 336.

Table 2

Physical Properties of KG-33, N-51A and R-6 Glasses	KG-33	N-51A	R-6
Working Point	1260°C	1140°C	980°C
Strain Point	513°C	530°C	486°C
Annealing Point	565°C	570°C	525°C
Softening Point	827°C	785°C	700°C
Linear Coefficient of Expansion (from 0 to 300°C), in./in./°C	32×10^{-7}	55×10^{-7}	93×10^{-7}
Density grams per cm ³	2.22	2.33	2.53
Refractive Index—Sodium D line (.5893 microns)	1.47	1.49	1.52
Visible Light Transmission, 2 mm thickness	92%	91%	92%
Specific Heat (in g. cal. per g. deg.)	0.204 (25 to 175°C)	0.204 (25 to 175°C)	0.209 (25 to 175°C)
Thermal Conductivity (in cal./cm ² /°C)	0.0027	0.0026	0.0024

SIMAX GLASS

Products made of the SIMAX glass are smooth and imporous, perfectly transparent, catalytically indifferent, corrosion-resistant even in long-lasting operations, sufficiently homogeneous, and free of any heterogeneous particles. The SIMAX glass is very friendly to the environment and is absolutely acceptable from the ecological viewpoint.

The Glassworks KAVALLIER have been counted among the most important world producers supplying products from the borosilicate glass, type 3.3.

CHEMICAL COMPOSITION

(Main components in percentage by weight)

SiO_2	B_2O_3	$\text{Na}_2\text{O} + \text{K}_2\text{O}$	Al_2O_3
80.6	13	4	2.4
RESISTANCE AGA/NST			
Water at 98°C		(pursuant to ISO 719)	HGB 1
Water at 121°C		(pursuant to ISO 720)	HGA 1
Acids		(pursuant to ISO 1776)	1
Effect of water solution of alkali mixture		(pursuant to ISO 695)	A2 or better

The SIMAX borosilicate glass 3.3 is highly resistant to effects of water, neutral and acid solutions, strong acids and their mixtures, chlorine, bromine, iodine, and organic compounds. Even in long-term effects and at temperatures above 100°C, this glass outstrips, with its chemical durability, most metals and other raw materials.

Due to effects of water and acids, the glass releases only small amounts of mostly univalent ions. At the same time, a very thin permeable siliceous gel layer is formed on the glass surface, which ensures resistance to further effects. Hydrogen fluoride, hot phosphoric acid, and alkaline solutions attack the glass surface, depending on concentration and temperature.

SIMAX: PHYSICAL PROPERTIES

PHYSICAL DATA

Mean linear and thermal coefficient of expansion

α (20°C; 300°C) according to ISO 7991 $3.3 \times 10^{-6} \text{ K}^{-1}$

Transformation temperature T_g 525°C

Glass temperature at viscosity η in dPa.s 1013 (upper cooling temperature) 560°C

Glass temperature at viscosity η in dPa.s 107,6 (softening temperature) 825°C

Glass temperature at viscosity η in dPa.s 104 (working range) 1260°C

Highest short-term admissible working range 500°C

Density ρ at 20°C $2,23 \text{ g} \cdot \text{cm}^{-3}$

Modulus of elasticity E (Young modulus) $64 \times 10^3 \text{ MPa}$

Poisson ratio μ 0.20

Thermal conductivity λ (20 to 100°C) $1,2 \text{ W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$

MECHANICAL STABILITY OF SIMAX GLASS

Mechanical properties and service life of products made of the SIMAX glass are largely done by the stage of their finish, especially in their entirety, i.e. depth failure on surface in manipulation and secondary thermal treatment.

GLASS MASS SCRATCH HARDNESS OF 6° OF MOHS SCALE	
Admissible tensile stress	3.5 MPa
Admissible bending stress	7.0 MPa
Admissible compressive stress	100.0 MPa

THERMAL PROPERTIES OF SIMAX GLASS

High resistance of product made of the SIMAX glass to sudden change in temperature – heat stability – is done by low coefficient of linear thermal expansion, relatively low modulus of tensile elasticity, as well as relatively high thermal conductivity resulting in a lower thermal gradient in the product wall.

On cooling and heating the glass product, an undesirable internal stress arises. Breakage of the glass product due to temperature change is caused by tensile stress on the product surface arising due to action of linear dilatibility of the glass on quick cooling from the product surface.

With a mechanical failure in the product surface, the heat stability can be significantly reduced.

WALL THICKNESS (mm)	RESISTANCE TO HEAT SHOCK (D°C)
1	303
3	175
6	124
10	96

The manufacturer may perform an exact calculation, where necessary.

COOLING OF SIMAX GLASS

Cooling represents a thermal process the purpose of which is keeping from formation of undesirable and inadmissibly high thermal stress in the glass which would reduce the product resistance, and/or removing of stress already arisen.

Cooling cycle comprises three stages:

- **Temperature increase** (product heating) with heating rate from the inlet temperature to the upper cooling value.
- **Dwell** (pause, tempering, stabilization) of products at upper cooling temperature for certain time when the temperature differences in the product must be equalized, including stress reduction to an admissible limit.
- **Temperature decrease** (cooling and additional cooling) of the product with cooling rate from the upper to the lower cooling value (this stage is important as the permanent stress can arise), and from the lower cooling temperature to the final value or ambient temperature (important for subsequent practical manipulation with the product).

Concrete cooling cycle is specified in the table.

TEMPERATURE RANGE

MAXIMUM WALL THICKNESS	RISE	DWELL	TEMPERATURE DROP		
	20–550°C	560°C	560–490°C	490–440°C	440–40°C
3mm	140°C/min	5°C/min	14°C/min	28°C/min	140°C/min
6mm	30°C/min	10°C/min	3°C/min	6°C/min	30°C/min
9mm	15°C/min	18°C/min	1,5°C/min	3°C/min	15°C/min
12mm	8°C/min	30°C/min	0,6°C/min	1,6°C/min	8°C/min

OPTICAL PROPERTIES OF SIMAX GLASS

The Glass SIMAX is transparent and clear; it does not show substantial absorption in visible spectrum.

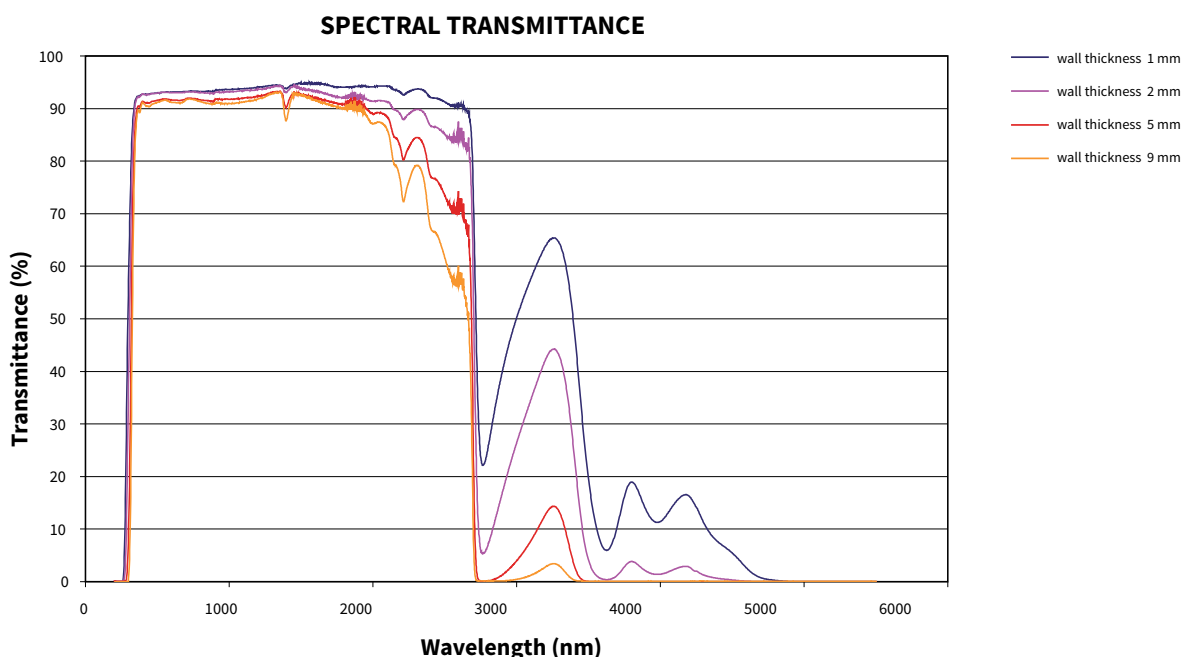
Permeability of ultra-violet rays enables the products made of the SIMAX glass to be used for photochemical reactions.

Refractive index ($\lambda = 587.6 \text{ nm}$) n_d
Photoelastic constant (DIN 52314) K

1.473
4,0.10⁻⁶mm².N⁻¹

SIMAX GLASS

LIGHT TRANSMITTANCE



ELECTRICAL PROPERTIES OF SIMAX GLASS

At usual temperatures, the SIMAX glass is a non-conducting material – it is an insulant.

- Specific resistance in damp-proof medium (20°C) higher than
- Permittivity ϵ (20°C, 1 MHz)
- Loss angle $\text{tg } \delta$ (20°C, 1 MHz)

Dielectric losses increase sharply with rising temperature and they change with frequency.

10^{13} – $10^{15} \Omega \cdot \text{cm}$
4.6
 4.9×10^{-3}

PLASTIC ACCESSORIES

The Simax laboratory glassware are complemented with various plastic accessories, the properties of which can be found in the tables below.

PLASTICS USED WITH LABORATORY GLASS

MATERIALS FOR LABORATORY GLASS ACCESSORIES		
TYPE	DESIGNATION	THERMAL STABILITY (°C)
PE	Polyethylene	-40 to +80
PP	Polypropylene	-40 to +140
PBT	Polybutylene Terephthalate	-45 to +180
PTFE	Polytetrafluoroethylene	-200 to +260
ETFE	Ethylene Tetrafluoroethylene	-100 to +180
VMQ	Silicone Rubber	-50 to +230
NR	Rubber for Food	-40 to +70
FKM	Fluorocarbon - Viton	-20 to +200
N.K.	Natural Cork	-20 to +200

Care and Cleaning of Volumetric Glassware

There are several essential rules which must be followed in order to get the best results with volumetric apparatus. These rules concern cleanliness, method of reading the meniscus and the filling and emptying of the various types of instruments.

CLEANLINESS OF APPARATUS

The usual criterion of cleanliness of glass apparatus is uniform wetting of the surface by distilled water. Certain contaminants, especially grease, adhering to the walls prevent them from being uniformly wetted, and there is a tendency for water to collect into drops.

Imperfect wetting causes irregularities in capacity of volumetric glassware by distorting the meniscus, and also by affecting the volume of the residue adhering to the walls after emptying instruments calibrated to deliver the indicated volume.

Even when the surface of the vessel is uniformly wetted, variations in the apparent capacity still may occur, due to contamination of the liquid surface by minute quantities of fatty or other organic substances which produce a change in surface tension affecting the shape of the meniscus. The cleaning, rinsing and drying, therefore, must be carried out in such a way as to prevent this from happening.

The choice of the procedure to be used in cleaning glassware depends on the nature of the contaminant. In many cases special reagents or methods must be used to remove a particular substance. Before listing the more important methods, it is desirable to make a few general statements.

Glass. Glasses used in chemical apparatus have excellent resistance to acids, except hydrofluoric. Strong alkaline solutions, such as hot caustic solutions, will attack any glass if contact is prolonged. This is true even though a particular glass may not exhibit any visible effect, due to the solubility of the reaction products. Dilute detergent solutions, up to about 2% strength, will have no serious effect on the glass, unless the glass is exposed for unnecessarily long periods or the detergent is allowed to dry on the glass.



Fig. 4 Don't leave in detergent solutions for prolonged periods



Fig. 5 Don't pipet by mouth



Fig. 6 Don't apply direct heat

Colored Graduations. The scales and inscriptions of many items of Kimble glassware are colored by staining a thin layer of the glass. Since the colored portion is of the same composition as the glass object, the resistance to chemical attack is the same as that of the rest of the glass. Here, the color can be removed only by dissolving a layer of glass from the surface.

Some Kimble volumetric glassware has fused on, ceramic enamel printed lines and inscriptions. These fused-on enamels are quite resistant to acids and alkalis. In most cases they should last as long as the piece of apparatus if cared for properly. However, by their nature, they cannot be as resistant as the ware to which they adhere.

Consequently, the graduated lines should not be subjected to prolonged immersion in acids or alkalis. Whenever the lines are wetted by reagents, they should be rinsed as soon as conveniently possible.

Safety Precautions. With many pieces of glassware, it is necessary or desirable to fill by suction when cleaning. *Do not suck up acid or other cleaners by mouth.* In fact, do not pipet by mouth at all. Use hand held, manual or electronic pipetting aids.

Abrasives. Do not use abrasives on glassware, particularly volumetric ware. The surface will be marred in time, and the resultant scratches may prevent proper drainage or act as resting places for adulterants which will be difficult to remove.

Water for Rinsing. When preparing a piece of glassware for calibration, rinsing with tap water should be followed by a thorough rinsing with distilled water. Sufficient material may be deposited on the surface by tap water to cause erratic results, particularly with small items, even though water wets the surface uniformly.

Even in ordinary cleaning processes, the use of de-ionized water is recommended.

Adherent Organic Residues. Never attempt to remove such residues by the application of direct heat. Permanent strains may be introduced and, what is more important, the calibration of volumetric apparatus may be changed.

CLEANING METHODS

Care should be exercised when using most cleaning solutions as they can cause skin irritations or severe burns on contact. Dilute solutions become concentrated as the water evaporates; therefore, always flush the exposed area immediately with large quantities of water.

The list of methods given here is by no means complete, but offers a fairly wide variety and should cover all the usual contaminants, as well as the more important special cases.

Frequently it is desirable to give glassware a preliminary rinse or soak with organic solvent such as xylene, xylol or acetone to remove grease, followed by a water rinse. The rinsing with water must be done thoroughly if acid will be used later to clean the glassware.

Unless autoclaving is necessary, glassware should be cleaned as soon as possible after use to avoid setting and caking of residues. Pipets, for example, may be placed in a convenient jar containing a weak antiseptic solution, immediately after use. Autoclaving is necessary to disinfect glassware that may have been used to contain potentially dangerous biological fluids.

A selection of general cleaning methods follows:

1. Fill with sulfuric acid-dichromate mixture and let stand. After removal of mixture rinse with distilled water at least six times. To make the cleaning mixture, dissolve 60-65 grams of sodium or potassium dichromate by heating in 30-35 mL of water, cool and slowly add concentrated sulfuric acid to make one liter of solution.

Note: Due care should be exercised in handling acidic solutions.

2. Scrub with a 1 to 2% hot solution of a detergent. Rinse well after brushing. A number of commercial washing compounds suitable for such are available.

3. An excellent cleaning agent is fuming sulfuric acid. Usually, cleaning can be accomplished by use of a comparatively small amount of acid, manipulating the vessel so that the acid comes in contact with all of the surface and immediately emptying and rinsing.

To remove particular contaminants the following special treatments are suggested:

1. **Stopcock Grease.** When a piece is badly contaminated with stopcock grease (except silicone grease), it may be necessary to fill with acetone once or twice before using one of the preceding methods. For silicone grease, the acetone can be omitted and the piece soaked for 30 minutes in fuming sulfuric acid. Warm decahydronaphthalene (decalin) also has been suggested for silicone grease. In this case, let the piece soak for 2 hours, drain and rinse once or twice with acetone.

2. **Permanganate Stains.** Use concentrated hydrochloric acid or a saturated solution of oxalic acid at room temperature. An acid solution of ferrous sulfate also has been suggested.

3. **Iron Stains.** use hydrochloric acid solution in a strength of one part hydrochloric acid to one part water.

4. **Nessler's Solution.** Wash tubes with concentrated nitric acid and rinse well.

5. **Bacteriological Material.** Soak in 2 to 4% cresol, or a weak Lysol solution. Autoclaving in steam also is recommended.

6. **Blood and Other Fluids.** Rinse as soon as possible with water. If badly contaminated, soak at room temperature in a weak solution of a detergent or the sulfuric acid-dichromate mixture.

7. **Albuminous Encrustations.** Pipets with such crusts in bulb or stem may be soaked in a number of solutions, such as nitric acid, hypochlorite solution or pepsin and 4% hydrochloric acid.

8. **Carbonaceous Materials.** Fill with permanganate solution and let stand. After removal of permanganate fill with a saturated solution of oxalic acid. Then rinse several times with hot distilled water. The permanganate solution is made by dissolving 20 grams of potassium permanganate and 50 grams of sodium hydroxide in 1 liter of water.

9. **Carbonaceous Materials.** Fill with a mixture of sulfuric and nitric acids and let stand. After removal of mixture rinse in distilled water. This method *must not* be used if the mixture will form dangerous compounds with any organic material present. The proportion of nitric acid needed depends on the cleaning job to be done, and may be as high as 50%. The mixture may be used cold or hot and sometimes the glass is boiled in the mixture. A fume hood is needed.

10. **CAUTIONS.** Some of the cleaning materials mentioned leave minute traces behind unless the rinsing process is carried out thoroughly. While such traces may not be harmful if the object of cleaning is to prepare the glassware for calibration, they can give trouble in certain laboratory operations. For example, manganese and chromium compounds even in extreme dilution may retard or inhibit growth of micro-organisms, and traces of phosphorus may interfere with delicate tests for this element. When glassware is to be calibrated, the final rinsings must be distilled water.

If an article is to be dried after cleaning, as is necessary for all vessels marked "To Contain", ethyl alcohol or acetone (American Chemical Society Specification) may be used. Drying may be hastened by blowing clean, dry air into the vessel (or sucking the air through the vessel).

Efficient air filters must be provided to remove any particles of oil or dirt from compressed air.

PLASTICWARE - PROPERTIES

Kartell Plastics Properties

BIOLOGICAL PROPERTIES OF PLASTICS

In general, we consider most of the plastics used in Kartell labware to be biologically inert. For example LDPE, HDPE, PP, PMP (TPX), PC, PS, PTFE, FEP and PFA have been shown to be non-toxic to cell cultures. Distilled water for preparing culture media is often collected and stored in polyethylene containers.

POLYCARBONATES (PC)

This is a special type of polyester, in which dihydric phenols are joined through carbonate linkages (O-CO-O). These linkages are subject to chemical reaction with bases, concentrated acids etc, and make PC soluble in various organic solvents. PC maintains its resistance to impact in a wide range of temperatures and even under very severe environmental conditions. It withstands both low and high temperature from -50°C up to +130°C and has extremely good optical properties together with a high resistance to sunlight exposure (UV radiation).

POLYPROPYLENE (PP)

It is similar to polyethylene, but each unit of the chain has a methyl group attached. It is translucent, autoclavable and has no known solvent at room temperature. It is slightly more susceptible to strong oxidizing agents than conventional polyethylene because of its many branches (methyl groups, in this case).

POLYETHYLENE (PE)

The polymerisation of ethylene results in an essentially straight-chained, high molecular weight hydrocarbon. Branching (side chain formation) occurs to some extent and can be controlled. Like other polyolefins, the polyethylenes are chemically inert. Strong oxidising agents will eventually cause oxidation and embrittlement. They have no known solvent at room temperature. Aggressive solvents will cause softening or swelling, but these effects are normally reversible. Low density polyethylene (LDPE) has more extensive branching, resulting in a less compact molecular structure. High-density polyethylene (HDPE) has minimal branching, which makes it more rigid and less permeable than LDPE. Linear low-density polyethylene (LLDPE) combines the toughness of low-density polyethylene with the rigidity of high-density polyethylene.

POLYMETHYLPENTENE (PMP OR TPX)

It is similar to polypropylene, but it has an isobutyl group instead of a methyl group attached to each monomer group of the chain. Its chemical resistance is close to that of PP. It is more easily softened by some hydrocarbons and chlorinated solvents. PMP is slightly more susceptible than PP to attack by oxidizing agents. Its excellent transparency, rigidity and resistance to chemicals and high temperatures make PMP a superior material for labware. PMP withstands repeated autoclaving, even at 150°C. It can withstand intermittent exposure to temperatures as high as 175°C. Products made of polymethylpentene are brittle at ambient temperature and may crack or break if dropped from benchtop height.

POLYTETRAFLUOROETHYLENE (PTFE)

PTFE is a high molecular weight polymer with the following fundamental characteristics: chemical resistance to all reagents and solvents, exceptional heat stability (non-flammable), superior self-lubrication and high impact characteristics, toughness and flexibility even at low temperatures. Since 1940, PTFE's have been extensively used in industry for gaskets, bearings, "O" rings etc. They can withstand temperatures from -270°C to +250°C (up to 300°C for short periods).

POLYVINYL CHLORIDE (PVC)

It is similar in structure to polyethylene but each unit contains a chlorine atom. The chlorine atom renders it vulnerable to some solvents, but also makes it more resistant in many applications (PVC has extremely good resistance to oils and very low permeability to most gases). Polyvinyl chloride is transparent and has a slight bluish cast. When blended with phthalate ester plasticizers, PVC becomes soft and pliable, providing tubings of any dimension.

TETRAFLUOROETHYLENE - PERFLUOROPROPYLENE (FEP)

FEP is translucent, flexible and feels heavy because of its high density. It resists all known chemicals except molten alkali metals, elemental fluorine precursors at elevated temperatures. It should not be used with concentrated perchloric acid. FEP withstands temperatures from -200°C to +205°C and may be sterilised repeatedly by all known chemical and thermal methods. It can even be boiled in nitric acid.

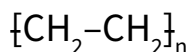
Abbreviations, Temperature and Chemical Resistance of Plastics

The table below lists commonly used abbreviations for plastics. This list covers plastics commonly employed in the manufacture of plastic laboratory ware.

DIN-ABBREV	CHEMICAL DESIGNATION	TOLERATED TEMPERATURE RANGE IN NORMAL USE	
		From	To
ABS	Acrylobutadiene-styrene copolymer	-40°C	+85 (100)°C
HDPE	High-density polyethylene	-50°C	+80 (120)°C
LDPE	Low-density polyethylene	-50°C	+75 (90)°C
PA	Polyamide (PA6)	-30°C	+80 (140)°C
PC	Polycarbonate	-100°C	+135 (140)°C
PE	Polyethylene (cf.HDPE/LDPE)	-40°C	+80 (90)°C
PMP (TPX)	Polymethypentene	0°C	+120 (180)°C
PMMA	Polymethylmethacrylate	-40°C	+85 (90)°C
POM	Polyoxymethylene	-40°C	+90 (110)°C
PP	Polypropylene	-10°C	+120 (140)°C
PS	Polystyrene	-10°C	+70 (80)°C
SAN	Styrene-acrylonitrile	-20°C	+85 (95)°C
SI	Silicone rubber	-50°C	+180 (250)°C
PVDF	Polyvinylidenfluoride	-40°C	+105 (150)°C
PTFE	Polytetrafluoroethylene	-200°C	+260°C
E-CTFE	Ethylene-chlorotrifluoroethylene	-76°C	+150 (170)°C
ETFE	Ethylene-tetrafluoroethylene	-100°C	+150 (180)°C
PFA	Perfluoroalkoxy	-200°C	+260°C
FEP	Fluorinated Ethylene Propylene	-200°C	+205°C
PVC	Polyvinylchloride	-20°C	+80°C

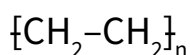
Temperatures appearing in parentheses: limits tolerated for intervals only.

POLYMERIC STRUCTURE OF PLASTICS



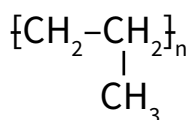
Low Density Polyethylene (LDPE)

The first of the polyolefins originally prepared some 50 years ago by the high pressure polymerisation of ethylene. Its comparatively low density arises from the presence of a small amount of branching in the chain (on about 2% of the carbon atoms). This gives a more open structure. LDPE is a most useful and widely used plastic. It is translucent to opaque, robust enough to be virtually unbreakable and at the same time quite flexible. Chemically LDPE is unreactive at room temperature although it is slowly attacked by strong oxidising agents and some solvents will cause softening or swelling. It may be used at temperatures up to 95°C for short periods and at 80°C continuously. LDPE is ideally suited for a wide range of laboratory apparatus including wash bottles, pipette washing equipment and tanks.



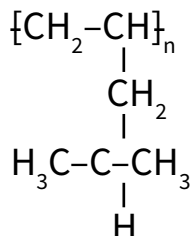
High Density Polyethylene (HDPE)

A linear polymer prepared from ethylene by a catalytic process. The absence of branching results in a more closely packed structure with a higher density and somewhat higher chemical resistance than LDPE. It is also somewhat harder and more opaque and it can withstand rather higher temperatures (120°C for short periods, 110°C continuously). It lends itself particularly well to blow moulding eg. for bottles and containers.



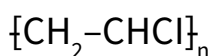
Polypropylene (PP)

A polymer prepared catalytically from propylene which differs from HDPE by having an isotactic replacement of a hydrogen atom by a methyl group on alternate carbon atoms in the main chain. Although largely unreactive chemically, the presence of the methyl groups makes it slightly more susceptible to attack by strong oxidising agents, than HDPE. A major advantage is its higher temperature resistance. It may be used up to 140°C for short periods and 130°C continuously (ie. It may be autoclaved). This makes it particularly suitable for items such as douche cans, trays and instrument jars that have to be sterilised frequently for use in a clinical environment. PP is a translucent material with excellent mechanical properties and it has gradually replaced the polyethylenes for many purposes.



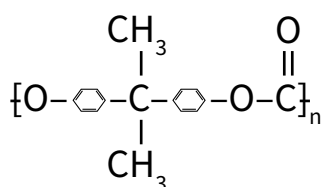
Polymethylpentene (PMP or 'TPX'*)

A polymer of 4-methylpentene-1 which is similar to PP but has an Isobutyl group in place of the methyl group on alternate C atoms. The important qualities of PMP ('TPX') as a laboratory plastic are its high transparency, its rigidity and resistance to impact and its ability to withstand temperatures of up to 200°C for short periods (180°C continuously). It is particularly suitable for volumetric apparatus such as flasks, measuring cylinders and beakers. Like other polyolefins PMP ('TPX') is susceptible to attack by strong oxidising agents over a period of time and some chlorinated solvents (eg. trichloroethylene) can cause some softening and swelling. *TPX' is a trademark of Mitsui Petrochemicals Ltd.



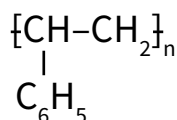
Polyvinylchloride (PVC)

PVC has a linear structure similar to polyethylene but with a chlorine atom replacing a hydrogen atom on alternate carbon atoms. PVC itself is hard and rigid but the addition of phthalate esters as plasticisers makes it soft and pliable and ideal for tubing. The material is generally transparent with a bluish tint. It is attacked by many organic solvents but it has a very good resistance to oils and it has a low permeability to gases. In its rigid form PVC is available in sheets which can readily be welded to produce tanks, trays and troughs. It is not recommended for use above 70°C although it can be taken to 80°C for short periods.



Polycarbonate (PC)

PC is a linear polycarbonate acid ester prepared from a dihydric phenol. It possesses extraordinarily good dimensional stability with a high impact strength which is maintained over a wide temperature range. This makes it ideal for the manufacture of laboratory safety shields, vacuum desiccators and centrifuge tubes. PC may be autoclaved (maximum continuous working temperature 130°C, and 140°C for short periods), but some loss in mechanical strength occurs on repeated autoclaving and the equipment should not then be used for vacuum applications. The carbonate linkages in the chain make the material subject to reaction with a variety of concentrated acids and bases and it is soluble in various organic solvents.



Polystyrene (PS)

A hard, rigid, transparent plastic with good dimensional stability. The material has good chemical resistance to many aqueous solutions but it is soluble in many aromatic and halogenated solvents. It cannot be used at elevated temperatures (maximum 60°C continuous, 70°C for short periods) and it tends to suffer from mechanical stress. It finds a wide use in disposable laboratory products.

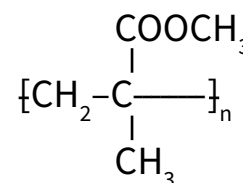
POLYMERIC STRUCTURE OF PLASTICS

The chemical resistance to non-polar solvents and aromatics can be improved by co-polymerising styrene with acrylonitrile ($\text{CH}_2 = \text{CH CN}$). The resultant product SAN usually contains 25-35% of acrylonitrile by weight. SAN also has an improved impact strength and rigidity and is much used for injection moulded articles such as bottles, boxes and food containers.

An acrylonitrile-butadiene-styrene (ABS) graft copolymer is obtained by polymerising acrylonitrile and styrene in the presence of soluble polybutadiene ($[\text{CH}_2 - \text{CH} = \text{CH} - \text{CH}_2]_n$). The physical properties of the product may be varied by changing the individual proportions. The polymer has a higher chemical resistance than PS and it will retain its stability of shape up to 100°C.

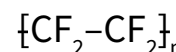
Polymethylmethacrylate (ACRYLIC)

A rigid plastic with a high degree of transparency. It is resistant to inorganic acids and alkalis but it is attacked by a wide range of organic solvents. Its clarity and stability make it very suitable for the manufacture of burettes and in sheet form it may be cemented to produce tanks, trays, etc. ACRYLIC may be used at temperatures up to 70°C continuously and to 90°C for short periods.



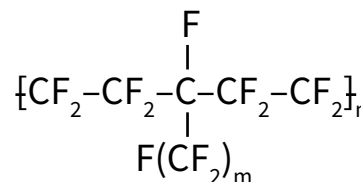
Polytetrafluoroethylene (PTFE)

PTFE shows a remarkable chemical resistance and it is insoluble in all known solvents. It is attacked only by molten alkali metals and by fluorine at high temperatures. PTFE is incombustible and may be used up to 260°C (300°C for short periods). Its coefficient of friction is extremely low and it shows the effect of self lubrication with constant mechanical properties which makes it particularly suitable for bearings, joints, O-rings, stirring bars etc. It may be shaped by compression and sintering into bottles and beakers where its chemical stability and non-wetability make it suitable for use in extreme circumstances.



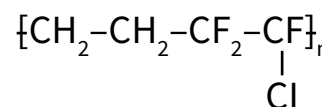
Perfluoroalkoxy PTFE (PFA)

PFA is a copolymer of tetrafluoroethylene ($\text{CF}_2 = \text{CF}_2$) with a perfluoroalkyl vinyl ether $[\text{F}(\text{CF}_2)_m \text{CF}_2 \text{OCF} = \text{CF}_2]$. The resultant polymer contains the carbon-fluorine backbone chain typical of PTFE with perfluoroalkyl side chains. The mechanical, chemical and physical properties are fundamentally attributable to the main chain and the chief effect of the side chains is to control the crystallinity of the polymer. Unlike PTFE the new polymer does not require special fabricating techniques. It has outstanding chemical and solvent resistance over a temperature range even greater than PTFE (ie. -270°C to +260°C). PFA has extremely low absorption and permeability levels even at 200°C which make it very suitable for trace element analysis, isotopic separations, sample digestions and the handling of sensitive biological solutions. The material is translucent but liquid levels can easily be seen. In short PFA approximates closely (and in some cases exceeds) the overall properties of PTFE while offering the flexibility of thermoplastic processing.



Ethylene-chlorotrifluoroethylene (E-CTFE)

This is a 1:1 co-polymer of ethylene and chlorotrifluoroethylene. It has excellent chemical resistance and barrier properties, being resistant to mineral acids and alkalis, metal etchants, liquid oxygen and most organic solvents (the major exceptions being aliphatic and aromatic amines at higher temperatures). As with other fluoropolymers E-CTFE is attacked by molten sodium and potassium. The material has a low permeability to water vapour and other gases as well as liquids. It is not wetted by water, but oils readily spread. (Wettability by water can be greatly improved by etching with sodium based etchants). E-CTFE may be employed at temperatures up to 170°C and it has a wide range of uses including containers (eg. beakers and bottles), tubing (both unsupported and flexible), valve sealings, pumps, etc.



Synthetic rubbers and other O-ring and gasket materials

Synthetic rubbers are based mainly on polymers and co-polymers of butadiene and its derivatives.

NEOPRENE

A polymer of Chloroprene (2-chlorobutadiene) ie. $\text{CH}_2 = \text{CH} - \text{CCl} = \text{CH}_2$. This material has a better oil resistance than natural rubber. The presence of chlorine deactivates the C-C bond and makes it less susceptible to oxidative attack as well as increasing its resistance to solvents. It has a higher temperature and fire resistance than natural rubber.

NITRILE RUBBER

A co-polymer of acrylonitrile ($\text{CH}_2 = \text{CHCN}$) and butadiene ($\text{CH}_2 = \text{CH} - \text{CH} = \text{CH}_2$). It has a good solvent resistance increasing with increasing acrylonitrile. Good for gaskets, oil and petrol hoses.

VITON A

A co-polymer of perfluoropropene ($\text{CF}_3\text{CF} = \text{CF}_2$) and vinylidene fluoride ($\text{CH}_2 = \text{CF}_2$). It is resistant to chemicals and solvents up to 200°C and is used for O-rings, gaskets and hose linings.

CHEMICAL RESISTANCE OF PLASTICS

Specific Reagents

- A** Excellent resistance - no attack
- B** Good resistance - minor attack
- C** Limited resistance - moderate attack suitable for short term use only
- D** Poor resistance - attacked or dissolved, not recommended
- No Information available

REAGENT/ TEMP °C	LDPE		HDPE		PP		PMP ('TPX')		PVC		PC		PS		SAN		ABS		ACRYLIC		PTFE		PFA		E-CTFE		
	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	
Acetatdehyde	B	D	B	C	C	D	B	D	D	D	C	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Acetic Acid	A	B	A	A	A	B	B	B	A	B	B	C	C	D	C	D	C	D	D	D	A	A	A	A	A	A	A
Acetic Anhydride	C	D	B	C	B	C	B	B	D	D	D	D	D	D	-	-	-	-	D	D	A	A	A	A	A	A	A
Acetone	B	C	B	B	A	A	B	B	D	D	D	D	D	D	D	D	B	C	D	D	A	A	A	A	A	A	A
Acetyl Chloride	D	D	D	D	D	D	-	-	D	D	D	D	D	D	-	-	-	-	-	-	A	A	A	A	A	A	A
Ammonium Chloride (10%)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Ammonium Hydroxide (28%)	A	B	A	A	A	A	A	B	A	A	D	D	A	A	-	-	A	C	A	A	A	A	A	A	A	A	A
Amyl Acetate	D	D	A	B	B	C	D	D	D	D	D	D	D	D	D	D	-	-	D	D	A	A	A	A	A	A	A
Aniline	B	C	A	B	A	C	A	A	C	D	C	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Aqua Regia	B	D	B	D	B	D	C	D	C	D	D	D	D	D	D	D	C	D	D	D	A	A	A	A	A	A	A
Benzaldehyde	B	D	B	D	B	D	A	B	D	D	C	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Benzene	C	D	B	B	B	C	B	C	D	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Benzoic Acid	A	A	A	A	A	A	-	-	A	B	A	B	A	A	A	A	A	A	B	B	A	A	A	A	A	A	A
Boric Acid (10%)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Bromine Gas (Dry)	D	D	C	D	D	D	D	D	C	C	C	D	D	D	D	D	D	D	-	-	A	A	A	A	C	D	D
Bromine Water	D	D	C	D	D	D	D	D	B	C	C	D	D	D	-	-	-	-	B	C	A	A	A	A	A	B	B
Butyl Acetate	B	C	A	B	B	D	B	C	C	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Butyl Alcohol	A	A	A	A	A	A	A	B	A	B	B	C	B	B	-	-	C	D	D	D	A	A	A	A	A	A	A
Butyric Acid	C	D	A	B	A	B	C	D	B	D	D	D	C	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Calcium Hydroxide (Satd)	A	A	A	A	A	A	A	A	A	A	D	D	B	B	A	A	A	B	C	D	A	A	A	A	A	A	A
Carbon Disulphide	D	D	D	D	D	D	C	D	D	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Carbon Tetrachloride	C	D	B	C	B	D	D	D	C	D	C	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Chlorine Gas (Dry)	D	D	C	D	C	D	B	D	B	B	A	B	D	D	D	D	B	B	B	C	A	A	A	A	A	A	A
Chlorine Water	D	D	D	D	B	C	C	D	B	C	A	C	D	D	D	D	B	B	C	D	A	A	A	A	A	A	A
Chloroform	D	D	C	C	C	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Citric Acid	A	A	A	A	A	A	A	A	A	A	B	B	B	B	A	A	A	A	A	A	A	A	A	A	A	A	A
m-Cresol	D	D	C	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Cyclohexane	B	C	A	B	C	D	D	D	B	D	A	A	D	D	D	D	B	B	D	D	A	A	A	A	-	-	-
Dibutyl-phthalate	B	C	A	C	A	B	C	D	D	D	D	D	D	D	D	D	D	D	C	C	A	A	A	A	A	A	A
P-Dichtoro-benzene	C	D	B	C	C	D	C	D	C	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	-	-	-
Diethyl Ether	D	D	C	D	B	D	D	D	C	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Diethylene Glycol	A	A	A	A	A	A	A	A	A	C	D	B	C	A	A	A	A	A	A	B	A	A	A	A	A	A	A
Dimethyl Formamide	A	A	A	A	A	A	A	A	A	C	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Dioxane	B	C	B	B	B	C	B	C	D	D	D	D	D	D	D	D	-	-	-	-	A	A	A	A	A	A	A

CHEMICAL RESISTANCE OF PLASTICS

REAGENT/ TEMP °C	LDPE		HDPE		PP		PMP ('TPX')		PVC		PC		PS		SAN		ABS		ACRYLIC		PTFE		PFA		E-CTFE		
	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	
Ethyl Acetate	A	A	A	A	B	B	A	C	D	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Ethyl Alcohol	A	C	A	A	A	A	A	A	A	B	B	B	B	B	C	C	B	C	C	D	A	A	A	A	A	A	A
Ethyl Chloride	C	D	C	C	C	C	D	D	D	D	D	D	D	D	-	-	-	-	D	D	A	A	A	A	A	A	A
Ethylene Chloride	B	D	B	C	C	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Ethylene Oxide	C	C	C	C	C	C	C	D	D	D	C	D	-	-	-	-	-	-	-	-	A	A	A	A	A	A	A
Fluorine Gas (Dry)	D	D	D	D	D	D	-	-	D	D	B	C	-	-	-	-	-	-	-	-	A	A	A	A	A	A	B
Formaldehyde (Formalin)	A	A	A	A	A	A	A	B	B	B	A	A	D	D	B	C	B	C	A	A	A	A	A	A	A	A	A
Formic Acid	A	A	A	A	A	B	A	B	B	C	D	D	C	D	C	D	B	C	D	D	A	A	A	A	A	A	A
Fuel Oil	C	D	B	B	A	B	B	C	A	A	B	D	C	D	-	-	-	-	D	D	A	A	A	A	A	A	A
Glycerine (Glycerol)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Hexane	C	D	B	C	C	C	B	C	B	D	C	D	C	C	B	B	C	D	B	C	A	A	A	A	A	A	A
Hydrobromic Acid (25%)	A	A	A	A	A	A	D	D	A	B	D	D	D	D	D	D	B	B	B	C	A	A	A	A	A	A	A
Hydrochloric Acid (35%)	A	B	A	A	A	B	A	B	A	B	D	D	B	C	B	C	B	C	B	C	A	A	A	A	A	A	A
Hydrofluoric Acid (35%)	A	A	A	A	A	A	A	A	B	C	C	D	C	C	C	C	C	D	B	C	A	A	A	A	A	A	A
Hydrogen Peroxide (30%)	A	C	A	A	A	C	A	C	A	A	A	A	D	D	-	-	C	D	A	A	A	A	A	A	A	A	A
Lactic Acid	A	A	A	A	A	A	A	B	B	C	A	B	C	C	A	A	A	A	A	A	A	A	A	A	A	A	A
Methyl Acetate	-	-	-	-	A	B	-	-	D	D	-	-	D	D	D	D	D	D	-	-	A	A	A	A	-	-	-
Methyl Alcohol	A	A	A	A	A	A	A	C	A	C	B	C	B	C	C	D	C	D	D	D	A	A	A	A	A	A	A
Methyl Ethyl Ketone	B	C	B	B	B	C	B	C	D	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Methylene Chloride	C	D	B	C	C	D	C	D	D	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Mineral Oil	C	D	A	B	A	C	A	B	A	B	A	B	A	A	A	A	-	-	A	-	A	A	A	A	A	A	A
Naphthalene	C	D	B	D	A	A	-	-	D	D	-	-	B	D	-	-	-	-	-	-	A	A	A	A	A	A	A
Nitric Acid (10%)	A	A	A	A	A	A	A	A	A	B	A	B	C	C	-	-	A	B	B	D	A	A	A	A	A	A	A
Nitric Acid (70%)	D	D	C	D	C	D	C	D	D	D	C	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Nitrobenzene	D	D	C	D	A	B	D	D	D	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Oleum	D	D	C	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A
Oxalic Acid	A	A	A	A	A	B	A	B	A	B	A	A	A	B	A	B	B	C	A	A	A	A	A	A	A	A	A
Perchloric Acid (20%)	A	B	A	D	B	D	B	D	B	C	D	D	D	D	-	-	D	D	A	A	A	A	A	A	A	A	A
Petrol	C	D	B	B	B	C	B	C	B	C	B	C	D	D	B	C	D	C	B	C	A	A	A	A	A	A	A
Petroleum Ether	C	D	C	D	B	C	B	C	B	C	C	C	D	D	-	-	-	-	-	-	A	A	A	A	A	A	A
Phosphoric Acid (85%)	A	C	A	B	A	A	A	B	A	B	A	B	C	D	A	B	A	B	A	B	A	A	A	A	A	A	A
Photographic Developer	A	A	A	A	A	A	-	-	A	A	A	A	A	A	C	C	-	-	-	-	A	A	A	A	A	A	A
Photographic Fixer	A	A	A	A	A	A	-	-	A	A	-	-	A	A	C	C	-	-	A	B	A	A	A	A	A	A	A
Potassium Hydroxide (50%)	A	A	A	A	A	A	A	A	A	A	D	D	A	B	A	B	A	B	B	D	A	A	A	A	A	A	A

REAGENT/ TEMP °C	LDPE		HDPE		PP		PMP (*TPX')		PVC		PC		PS		SAN		ABS		ACRYLIC		PTFE		PFA		E-CTFE	
	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50	20	50
Potassium Permanganate (20%)	A	B	A	A	A	A	A	A	A	A	A	A	B	B	B	B	C	C	B	B	A	A	A	A	A	A
Propylene Glycol	A	A	A	A	A	A	A	B	C	D	B	C	A	A	A	A	A	A	-	-	A	A	A	A	A	A
Pyridine	A	A	A	A	A	A	-	-	D	D	D	D	D	D	D	D	D	D	-	-	A	A	A	A	A	D
Salicylic Acid	A	A	A	A	A	B	-	-	A	A	A	B	B	C	A	C	-	-	-	-	A	A	A	A	A	A
Silver Nitrate	B	C	A	B	A	B	C	D	A	B	A	A	A	B	A	B	-	-	A	A	A	A	A	A	A	A
Sodium Hydroxide (50%)	A	A	A	A	A	A	A	A	A	A	D	D	B	B	A	A	A	A	D	D	A	A	A	A	A	A
Sodium Hypochlorite (20%)	B	B	B	B	B	B	B	B	A	B	B	C	B	B	B	B	B	B	A	A	A	A	A	A	A	A
Sodium Thiosulphate	A	A	A	A	A	A	-	-	A	A	A	A	A	B	C	C	A	C	-	-	A	A	A	A	A	A
Sulfuric Acid (10%)	A	A	A	A	A	A	A	A	A	B	A	A	B	C	B	B	A	A	A	C	A	A	A	A	A	A
Sulfuric Acid (98%)	C	D	C	C	C	C	C	C	D	D	D	D	D	D	D	D	C	D	D	D	A	A	A	A	A	A
Tetrahydrofuran	C	D	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A
Tetrahydro-naphthalene	D	D	C	D	C	D	-	-	D	D	D	D	D	D	D	D	D	D	-	-	A	A	A	A	-	-
Thionyl Chloride	D	D	D	D	C	D	D	D	D	D	D	D	D	D	D	D	D	D	-	-	A	A	A	A	-	-
Toluene	C	D	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A
Trichloro-ethylene	D	D	C	D	C	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A
Turpentine	C	D	C	C	C	C	C	C	B	C	C	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A
Vegetable Oil	B	C	B	C	A	A	B	B	A	A	B	B	B	B	B	D	B	D	B	D	A	A	A	A	A	A
Xylene	C	D	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D	D	D	D	A	A	A	A	A	A

PROPERTIES OF PLASTICS

Classes of Reagents (20°C)

REAGENT	LDPE	HDPE	PP	PMP ('TPX')	PVC	PC	PS	SAN	ABS	ACRYLIC	PIFE	PFA	E-CTFE
Mineral acids (concentrated)	A	A	A	A	A/B	D	B	B	B	B	A	A	A
Oxidising acids	B	B	B	B	B	D	C	C	C	D	A	A	A
Organic acids	A	A	A	A	A	B	B	B	B	A/D	A	A	A
Alkalis (concentrated)	A	A	A	A	A	D	B	B	B	B	A	A	A
Alcohols	A	A	A	A	A	A/B	B	C	B	A/D	A	A	A
Aldehydes	B/C	B/C	C	B	D	C	D	D	D	D	A	A	A
Amines	C	B	A/B	A	C	D	D	D	D	D	A	A	A/C
Esters	A	A	B	B/C	D	D	D	D	D	D	A	A	A
Ethers	C	C	C	C/D	D	D	D	D	D	D	A	A	A
Ketones	B	B	A	B	D	C/D	D	D	D	D	A	A	A
Hydrocarbons (aliphatic)	C	B	B	C	B	C	C	B	B	B	A	A	A
Hydrocarbons (aromatic)	C	B	C	C/D	D	D	D	D	D	D	A	A	A
Hydrocarbons (halogenated)	C	B	C	C/D	D	D	D	D	D	D	A	A	A
Oils (mineral)	C	B	A	A	A	A	A	A	A	A	A	A	A
Oils (vegetable)	B	B	A	B	A/C	B	B	B	B	D	A	A	A

Physical Properties

	CLARITY	RIGIDITY	MAXIMUM USE TEMP (°C)		MINIMUM USE TEMP (°C)	SPECIFIC GRAVITY (g cm ⁻³)	DIELECTRIC CONSTANT (60Hz)
			SHORT PERIOD	CONTINUOUS			
LDPE	Translucent	Flexible	95	80	-50	0.92	2.25 - 2.35
HDPE	Translucent to Opaque	Fairly rigid	120	110	-50	0.96	2.30 - 2.35
PP	Translucent	Fairly rigid	140	130	0	0.90	2.2
PMP ('TPX')	Translucent	Fairly rigid	200	180	-180	0.83	2.1
PVC	Translucent	Flexible or rigid	80	70	-25	1.35	5.0 - 6.0 (flex)
PC	Translucent	Rigid	140	130	-190	1.20	3.2 - 3.6 (rigid)
PS	Translucent	Fairly rigid	70	60	-40	1.05	3.17
SAN	Translucent	Rigid	80	70	-40	1.06 - 1.08	2.49 - 2.55
ABS	Opaque	Rigid	90	80	-30	1.05	2.79 - 3.18
ACRYLIC	Translucent	Rigid	90	70	-60	1.18	2.9 - 3.2
PTFE	Opaque	Fairly rigid	300	260	-200	2.13 - 2.20	3.3 - 4.5
PFA	Translucent	Flexible	285	260	-270	2.13 - 2.16	2.1
E-CTFE	Translucent	Fairly rigid	170	150	-100	1.68	2.1 2.6

- 1 Can be autoclaved at 120°C for 20 minutes
- 2 Autoclaving reduces mechanical strength
- 3 All plastics are effected to some extent by Ionising Radiation - the effect increasing with increasing dose
- 4 Resistance increases with increasing Styrene content

Gas Permeability and Water Transmission

MATERIAL	PERMEABILITY (mm cm ² /cm ² sec (cm Hg) x 10 ¹⁰)				WATER VAPOUR TRANSMISSION RATE g.mol/100m ² 24 hours
	WATER VAPOUR	N ₂	O ₂	CO ₂	
LDPE	800	20	59	280	1.0 - 1.5
HDPE	130	3.3	11	43	0.3 - 0.4
PP	680	4.4	23	92	0.25
PVC (RIGID)	1560	0.4	1.2	10.2	0.9 - 5.1
PC	14000	3	15	85	-
PS	12000	3	21	93	7.0 - 10.0
E-CTFE	-	0.6	1.5	6.5	0.15

Approximate Gas Permeabilities (Room Temp) and Water Vapour Transmission Rates (38°C).

MATERIAL	VOLUME RESISTIVITY	WATER ABSORPTION (%)	RESISTANCE TO IONISING RADIATION ^③	STERILISATION			
				AUTOClave	GAS (ETHYLENE OXIDE)	DRY (160°C)	CHEMICAL (eg. FORMALIN)
LDPE	>10 ¹⁵	0.01	Good	No	Yes	No	Yes
HDPE	>10 ¹⁵	0.01	Good	Yes ^①	Yes	No	Yes
PP	>10 ¹⁶	0.02	Fair, darkens	Yes	Yes	No	Yes
PMP ('TPX')	>10 ¹⁶	0.01	Fair, darkens	Yes	Yes	Yes	Yes
PVC	10 ¹¹ - 10 ¹⁴ (flex)	0.2	Poor, darkens	No	Yes	No	Yes
PC	10 ¹² - 10 ¹⁶						
PS	(rigid) 2 x 10 ¹⁶	0.5	Good	Yes ^②	Yes	No	Yes
SAN	>10 ¹⁶	0.1	Very Good	No	Yes	No	Yes
ABS					Yes	No	Yes
ACRYLIC	10 ¹¹ - 10 ¹⁷ >10 ¹⁶	0.2 0.7	Fair ^④ Fair ^④	No No	Yes Yes	No No	Yes Yes
PTFE	>10 ¹⁴	0.3	Poor, rapid darkening	No	Yes	No	Yes
PFA	10 ¹⁸	0.01	Poor	Yes	Yes	Yes	Yes
E-CTFE	10 ¹⁸ >10 ¹⁵	0.03 <0.1	Poor Good	Yes Yes	Yes Yes	Yes Yes	Yes Yes

① Can be autoclaved at 120°C for 20 minutes

② Autoclaving reduces mechanical strength

③ All plastics are effected to some extent by Ionising Radiation - the effect increasing with increasing dose

④ Resistance increases with increasing Styrene content

PORCELAIN LABORATORY

Rowe Scientific can supply several ranges of laboratory porcelain, including:

Haldenwanger (German)

Excellent quality with a high resistance to thermal and chemical shock.

Jipo (European)

High quality with a high resistance to thermal and chemical shock.

Note:

Porcelain has a temperature range from ambient to 1200°C

LABORPORZELLAN / LABORATORY PORCELAIN

Werkstoff / Material	Einheit / Unit	Hartporzellan / Hard Porcelain	Pythagoras
Typ nach DIN EN 60672-3 Type acc. to DIN EN 60672-3	–	C 110	C 610
Anwendungsbereich Range of application	–	Laborporzellan Laboratory Porcelain	Chemisch/Technische Produkte Chemical/Technical Products
Wasseraufnahmefähigkeit Water absorption capacity	%	≤ 0,2	≤ 0,2
Rohdichte Bulk density	g cm ⁻³	2,4	2,6
Biegefestigkeit 20°C (3-Punkt) Bending strength 20°C (3-point)	MPa	70 – 90	120
Wärmeausdehnung 20 – 1000°C Thermal expansion 20 – 1000°C	10 ⁻⁶ K ⁻¹	5,3	6
Wärmeleitfähigkeit 200°C Thermal conductivity 200°C	W m ⁻¹ K ⁻¹	1,4	2
Maximale Einsatztemperatur Maximal application temperature	unglasiert / unglazed glasiert / glazed	1350 1000	1500 –

Die in der Tabelle genannten Eigenschaften unserer Erzeugnisse gelten nur für Prüfkörper. Die Übertragung dieser Werte auf andere Formen und Abmessungen ist nur bedingt zulässig.

The values listed above pertain to test specimens. They are for reference purposes only and cannot be applied unconditionally to other shapes and dimensions.

ALSINT 99,7 OXIDKERAMIK / ALSINT 99.7 OXIDE CERAMICS

Werkstoff / Material	Einheit / Unit	Alsint 99,7 *	Alsint porös / porous
Al ₂ O ₃ -Gehalt / Al ₂ O ₃ content	%	99,7	99,5
Alkali-Gehalt / Alkali content	%	0,05	0,05
Typ nach DIN VDE 0335 / Type according to DIN VDE 0335	–	C799	–
Wasseraufnahmefähigkeit / Water absorption capacity	%	≤ 0,2	2 – 7
Rohdichte / Bulk density	g cm ⁻³	3,75 – 3,94	3,0 – 3,6
Biegefestigkeit 20°C (3-Punkt) / Flexural strength 20°C (3-point)	MPa	300	70 – 110
Elastizitätsmodul / Young's modulus	GPa	300 – 380	–
Härte nach Mohs / Hardness (Mohs' scale)	–	9	–
Wärmeausdehnung 20 – 700°C / Thermal expansion 20 – 700°C	10 ⁻⁶ K ⁻¹	7,8	7,8
Wärmeausdehnung 20 – 1000°C / Thermal expansion 20 – 1000°C	10 ⁻⁶ K ⁻¹	8,6	8,6
Wärmeleitfähigkeit 20 – 100°C / Thermal conductivity 20 – 100°C	W m ⁻¹ K ⁻¹	25	–
Anwendungsgrenze für tragende Teile** / Max. app. temp. for load bearing elements**	°C	1700	1700
Temperaturwechselbeständigkeit / Thermal shock resistance	–	gut / good	gut / good
Mittlerer Porendurchmesser / Average pore diameter	µm	–	1 – 3
Spezifische Wärmekapazität 20 – 100°C / Specific thermal capacity 20 – 100°C	J kg ⁻¹ K ⁻¹	900	–

Die in der Tabelle genannten Eigenschaften unserer Erzeugnisse gelten nur für Prüfkörper. Die Übertragung dieser Werte auf andere Formen und Abmessungen ist nur bedingt zulässig. In der Praxis weisen z. B. Alsint 99,7-Formteile Festigkeitswerte zwischen 160 und 300 MPa in Abhängigkeit von Wandstärke, Geometrie, Oberflächenbeschaffenheit, Nachbehandlung sowie Formgebungsverfahren auf.

* Empfehlung für Aufheizrate maximale Temperatur 30 – 50°C pro Stunde

** belastungsabhängig

The values listed above pertain to test specimens. They are for reference purposes only and cannot be applied unconditionally to other shapes and dimensions. In practice, Alsint 99.7 components show mechanical strength values between 160 and 300 MPa, depending on their wall thickness, actual shape, surface finish, shaping process, and post-processing.

* We recommend that product be heated at a rate not exceeding 30 – 50°C per hour

** dependent upon load

SILICAWARE - LABORATORY

We can supply two brands of high quality laboratory silicaware:

Vitreosil & Infusil

THERMAL PROPERTIES

Average co-efficient expansion	0° to 800°C	5.5 x 10 ⁻⁷ /°C
Thermal conductivity	Temp °C	Cal cm ⁻¹ Sec ⁻¹ °C ⁻¹
	20	36 x 10 ⁻⁴
	100	38 x 10 ⁻⁴
	250	41 x 10 ⁻⁴
	500	50 x 10 ⁻⁴
	800	57 x 10 ⁻⁴
	1000	65 x 10 ⁻⁴
Specific heat	Temp °C	Cal/g
	0	0.166
	100	0.200
	500	0.275
	1000	0.290
Softening temp	1700	
Annealing temp	1150	
Working temp	1900-2000	
Operating temp (continuous)	1050	
Operating temp (intermittent)	1350	

Vitreosil Translucent Vitreous Silica

CHEMICAL PURITY

Typical values in parts per million (p.p.m.) byweight.

ELEMENT OR RADICAL	CONTENT
Aluminium	170
Antimony	<0.05
Arsenic	<0.01
Boron	1.0
Calcium	50
Chromium	<0.5
Copper	<0.4
Gold	<0.05
Iron	50
Lithium	7
Manganese	0.1
Magnesium	15
Nickel	<0.5
Phosphorus	<0.05
Potassium	25
Silver	<0.05
Sodium	30
Titanium	80
Zirconium	35
Hydroxyl	200

ELECTRICAL PROPERTIES

Dietectric constant	3.70
Specific resistivity	Temp °C Sp. Resistivity ohm-cm (of the order of)
	20 10 ¹⁸
	200 10 ¹³
	600 10 ⁸
	1000 10 ⁶
Electrical breakdown strength at 20°C 25-400KV-cm	

PHYSICAL PROPERTIES:

Density	2.2g/cm ³
Hardness	6-7 Mohs
Poisson's ratio	0.17
Young's Modulus	7.4 x 10 ⁵ Kgs/cm ²
Tensile strength	600 to 700 Kgs/cm ²

REACTIONS

The temperatures shown are those at which reaction starts to occur.

METAL	REACTION	OXIDE	REACTION
Ag	none	Al ₂ O ₃	1000°C
Al	800°C	BaO	900°C
Au	none	CaO	900°C
C	1000°C	CuO	800°C
Ca	600°C	Fe (oxides)	900°C
Cd	none	MgO	900°C
Ce	800°C	PbO	800°C
Hg	none	ZnO	900°C
Li	250°C	Basic oxides	800°C
Mg	800°C	ACID	REACTION
Mo	none	H ₂ SO ₄	none
Pb	none	HNO ₃	none
Pt	none	HCl	none
Sn	none	HF	readily
W	none	H ₃ PO ₄	200°C
Zn	none	Organic acids	none
GAS	REACTION	Information on the reactions of VITREOSIL with other substances may be available and if so will be sent on request.	
Cl ₂ , Br ₂ , I ₂ , S	none		
F ₂	readily		
HCl, SO ₂	none		
NO ₂ , H ₂	none		
N ₂ , O ₂	none		

METRIC UNITS / CONVERSION CHARTS

Metric Units

PREFIX NAME	PREFIX SYMBOL	EQUIVALENT	UNITS OF LENGTH	UNITS OF MASS	UNITS OF CAPACITY
Kilo-	k	10 ³	kilometer (km)	kilogram (kg)	kilolitre (kl)
		1	meter (m)	gram (g)	litre (l)
Deci-	d	10 ⁻¹	decimeter (dm)	decigram (dg)	decilitre (dl)
Centi-	c	10 ⁻²	centimeter (cm)	centigram (cg)	centilitre (cl)
Milli-	m	10 ⁻³	millimeter (mm)	milligram (mg)	millilitre (ml)
Micro-	μ	10 ⁻⁵	micrometer (μm)	microgram (μg)	microlitre (μl)
Nano-	n	10 ⁻⁹	nanometer (nm)	nanogram (ng)	nanolitre (nl)
Pico-	p	10 ⁻¹²	picometer (pm)	picogram (pg)	picolitre (pl)

Conversion Charts

1. UNITS OF LENGTH

KILO-METER km	METER m	DECI-METER dm	CENTI-METER cm	MILLI-METER mm	MICRO-METER μm	NANO-METER nm	ANGS-TROM Å	PICO-METER pm	INCH in
1	10 ²	10 ⁴	10 ⁵	10 ⁶	10 ⁹	10 ¹²	10 ¹³	10 ¹⁵	39.37 x 10 ³
10 ⁻³	1	10	10 ²	10 ³	10 ⁶	10 ⁹	10 ¹⁰	10 ¹²	39.37
10 ⁻⁴	10 ⁻¹	1	10	10 ²	10 ⁵	10 ⁸	10 ⁹	10 ¹¹	39.37 x 10 ⁻²
10 ⁻⁵	10 ⁻²	10 ⁻¹	1	10	10 ⁴	10 ⁷	10 ⁸	10 ¹⁰	39.37 x 10 ⁻²
10 ⁻⁶	10 ⁻³	10 ⁻²	10 ⁻¹	1	10 ³	10 ⁵	10 ⁷	10 ⁹	39.37 x 10 ⁻³
10 ⁻⁹	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³	1	10 ³	10 ⁴	10 ⁶	39.37 x 10 ⁻⁵
10 ⁻¹²	10 ⁻⁹	10 ⁻⁸	10 ⁻⁷	10 ⁻⁶	10 ³	1	10	10 ³	39.37 x 10 ⁻⁹
10 ⁻¹³	10 ⁻¹⁰	10 ⁻⁹	10 ⁻⁸	10 ⁻⁷	10 ⁴	10 ⁻¹	1	10 ²	39.37 x 10 ⁻¹⁰
10 ⁻¹⁵	10 ⁻¹²	10 ⁻¹¹	10 ⁻¹⁰	10 ⁻⁹	10 ⁶	10 ⁻³	10 ⁻²	1	39.37 x 10 ⁻¹²
2.54 x 10 ⁻⁵	2.54 x 10 ⁻²	2.54 x 10 ⁻¹	2.54	2.54 x 10	2.54 x 10 ⁴	2.54 x 10 ⁷	2.54 x 10 ⁸	2.54 x 10 ¹⁰	1

CONVERSION CHARTS, UNITS OF MASS AND CAPACITY

2. UNITS OF MASS

Kilogram kg	Gram g	Decigram dg	Centigram cg	Milligram mg	Microgram µg	Nanogram ng	Picogram pg	Ounce (Av.) oz.	Pound (Av.) lb.
1	10 ³	10 ⁴	10 ⁵	10 ⁶	10 ⁹	10 ¹²	10 ¹⁵	35.27	2.2
10 ⁻³	1	10	10 ²	10 ³	10 ⁶	10 ⁹	10 ¹²	35.27 × 10 ⁻³	2.2 × 10 ⁻³
10 ⁻⁴	10 ⁻¹	1	10	10 ²	10 ⁵	10 ⁸	10 ¹¹	35.27 × 10 ⁻⁴	2.2 × 10 ⁻⁴
10 ⁻⁵	10 ⁻²	10 ⁻¹	1	10	10 ⁴	10 ⁷	10 ¹⁰	35.27 × 10 ⁻⁵	2.2 × 10 ⁻⁵
10 ⁻⁶	10 ⁻³	10 ⁻²	10 ⁻¹	1	10 ³	10 ⁶	10 ⁹	35.27 × 10 ⁻⁶	2.2 × 10 ⁻⁶
10 ⁻⁸	10 ⁻⁶	10 ⁻⁶	10 ⁻⁴	10 ⁻³	1	10 ³	10 ⁶	35.27 × 10 ⁻⁸	2.2 × 10 ⁻⁸
10 ⁻⁹	10 ⁻⁶	10 ⁻⁶	10 ⁻⁴	10 ⁻³	1	1	10 ³	35.27 × 10 ⁻⁹	2.2 × 10 ⁻⁹
10 ⁻¹⁸	10 ⁻⁹	10 ⁻⁶	10 ⁻⁷	10 ⁻⁶	10 ⁻³	1	10 ³	35.27 × 10 ⁻¹²	2.2 × 10 ⁻¹²
10 ⁻¹⁰	10 ⁻¹²	10 ⁻¹¹	10 ⁻¹⁰	10 ⁻⁹	10 ⁻⁶	10 ⁻³	1	35.27 × 10 ⁻¹⁵	2.2 × 10 ⁻¹⁵
28.35 × 10 ⁻³	28.35	28.35 × 10	28.35 × 10 ²	28.35 × 10 ³	28.35 × 10 ⁶	28.35 × 10 ⁹	28.35 × 10 ¹²	1	0.0625
0.454	454	454 × 10	454 × 10 ²	454 × 10 ³	454 × 10 ⁶	454 × 10 ⁹	454 × 10 ¹²	16	1

3. UNITS OF CAPACITY

Kiloliter kl	Liter l	Deciliter dl	Centiliter cl	Milliliter ml	Microliter µl	Nanoliter nl	Picoliter pl	Ounce oz.	Quart qt.
1	10 ³	10 ⁴	10 ⁵	10 ⁶	10 ⁹	10 ¹²	10 ¹⁵	33.81 × 10 ³	1.06 × 10 ³
10 ⁻³	1	10	10 ²	10 ³	10 ⁶	10 ⁹	10 ¹²	33.81	1.06
10 ⁻⁴	10 ⁻¹	1	10	10 ²	10 ⁵	10 ⁸	10 ¹¹	33.81 × 10 ⁻¹	1.06 × 10 ⁻¹
10 ⁻⁵	10 ⁻²	10 ⁻¹	1	10	10 ⁴	10 ⁷	10 ¹⁰	33.81 × 10 ⁻²	1.06 × 10 ⁻²
10 ⁻⁶	10 ⁻³	10 ⁻²	10 ⁻¹	1	10 ³	10 ⁶	10 ⁹	33.81 × 10 ⁻³	1.06 × 10 ⁻³
10 ⁻⁹	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³	1	10 ³	10 ⁶	33.81 × 10 ⁻⁶	1.06 × 10 ⁻⁶
10 ⁻¹⁰	10 ⁻⁹	10 ⁻⁸	10 ⁻⁷	10 ⁻⁶	10 ⁻³	1	10 ³	33.81 × 10 ⁻⁹	1.06 × 10 ⁻⁹
10 ⁻¹⁸	10 ⁻¹²	10 ⁻¹¹	10 ⁻¹⁰	10 ⁻⁹	10 ⁻⁶	10 ⁻³	1	33.81 × 10 ⁻¹²	1.06 × 10 ⁻¹²
29.57 × 10 ⁻⁶	29.57 × 10 ⁻³	29.57 × 10 ⁻²	29.57 × 10 ⁻¹	29.57	29.57 × 10 ³	29.57 × 10 ⁶	29.57 × 10 ⁹	1	3.125 × 10 ⁻²
0.946 × 10 ⁻³	0.946	0.946 × 10	0.946 × 10 ²	0.946 × 10 ³	0.946 × 10 ⁶	0.946 × 10 ⁹	0.946 × 10 ¹²	32	1

Greek Alphabet

GREEK ALPHABET (UPRIGHT AND SLOPING TYPES)

alpha	Α	α	Α	α	nu	Ν	ν	Ν	ν
beta	Β	β	Β	β	xi	Ξ	ξ	Ξ	ξ
gamma	Γ	γ	Γ	γ	omicron	Ο	ο	Ο	ο
delta	Δ	δ	Δ	δ	pi	Π	π	Π	π
epsilon	Ε	ε, ε	Ε	ε, ε	rho	Ρ	ρ	Ρ	ρ
zeta	Ζ	ζ	Ζ	ζ	sigma	Σ	σ	Σ	σ
eta	Η	η	Η	η	tau	Τ	τ	Τ	τ
theta	Θ	θ, θ	Θ	θ, θ	upsilon	Υ	υ	Υ	υ
iota	Ι	ι	Ι	ι	phi	Φ	φ, φ	Φ	φ, φ
kappa	Κ	κ, κ	Κ	κ, κ	chi	Χ	χ	Χ	χ
lambda	Λ	λ	Λ	λ	psi	Ψ	ψ	Ψ	ψ
mu	Μ	μ	Μ	μ	omega	Ω	ω	Ω	ω

Temperature Conversions

(Celsius-Fahrenheit)

$$^{\circ}\text{C} = 5/9 \times (^{\circ}\text{F} - 32)$$

$$^{\circ}\text{F} = (9/5 \times ^{\circ}\text{C}) + 32$$

Temp. °C	0	1	2	3	4	5	6	7	8	9
-10	14.0	12.2	10.4	8.6	6.8	5.0	3.2	1.4	-0.4	-2.2
-0	32.0	30.2	28.4	26.6	24.8	23.0	21.2	19.4	17.6	15.8
0	32.0	33.8	35.6	37.4	39.2	41.0	42.8	44.6	46.4	48.2
10	50.0	51.8	53.6	55.4	57.2	59.0	60.8	62.6	64.4	66.2
20	68.0	69.8	71.6	73.4	75.2	77.0	78.8	80.6	82.4	84.2
30	86.0	87.8	89.6	91.4	93.2	95.0	96.8	98.6	100.4	102.2
40	104.0	105.8	107.6	109.4	111.2	113.0	114.8	116.6	118.4	120.2
50	122.0	123.8	125.6	127.4	129.2	131.0	132.8	134.6	136.4	138.2
60	140.0	141.8	143.6	145.4	147.2	149.0	150.8	152.6	154.4	156.2
70	158.0	159.8	161.6	163.4	165.2	167.0	168.8	170.6	172.4	174.2
80	176.0	177.8	179.6	181.4	183.2	185.0	186.8	188.6	190.4	192.2
90	194.0	195.8	197.6	199.4	201.2	203.0	204.8	206.6	208.4	210.2
100	212.0	213.8	215.6	217.4	219.2	221.0	222.8	224.6	226.4	228.2

Boiling Points of Commonly Used Solvents

Name	Additional Names	Molecular Mass	Boiling Point* (°C)
Acetic acid	Ethanoic acid	60.05	118.5 ⁷⁶⁰
Acetoacetic acid	3-Oxobutanoic acid	102.09	<100 d†
Acetone	2-Propanone	58.08	56.2
Aniline	Aminobenzene	93.13	184.3 ⁷⁶⁰
Benzene		78.11	80.1
<i>n</i> -Butanol	1-Butanol	74.12	117.5 ⁷⁶⁰
Carbon disulfide		76.14	45 ⁷⁶⁰
Carbon tetrachloride	Tetrachloromethane	153.82	76.8 ⁷⁶⁰
Chloroform	Trichloromethane	119.38	61.2 ⁷⁶⁰
Ethanol	Ethyl alcohol	46.07	78.5
Ethyl acetate	Acetic acid ethyl ester	88.11	77.1 ⁷⁶⁰
Ethyl ether	Diethyl ether	74.12	34.6
Ethylene dichloride	1,2-Dichloroethane	98.96	84 ⁷⁶⁰
Heptane		100.21	98.4
Isoamyl acetate	Acetic acid 3-methylbutyl ester	130.2	142
Isoamyl alcohol	3-Methyl-1-butanol	88.15	131 ⁷⁶⁰
Isobutyl alcohol	2-Methyl-1-propanol	74.12	108.4
Isopropyl alcohol	2-Propanol	60.09	82.4
Methanol	Carbinol; Methyl alcohol	32.04	65.0 ⁷⁶⁰
Methyl isobutyl ketone	4-Methyl-2-propanone	100.16	116.9
Methylene chloride	Dichloromethane	84.93	40
Nitrobenzene		123.11	210.8 ⁷⁶⁰
Petroleum ether		Varies with fraction	Appr. 40 to 120 Varies with fraction
Pyridine		79.10	115.5
Toluene	Methylbenzene	92.13	110.6
<i>p</i> -Xylene	1,4-Dimethylbenzene	106.16	138
<i>m</i> -Xylene	1,3-Dimethylbenzene	106.16	139
<i>o</i> -Xylene	1,2-Dimethylbenzene	106.16	144

* Superscript indicates the barometric pressure at which the boiling point was measured. If no figure is given, the barometric pressure was measured at approximately 1 atmosphere.

† *d* = decomposes.

Primary and Secondary Standards

PRIMARY STANDARDS

Formula	Molecular Mass (also, g quantity needed for 1 liter of solution containing 1 mole)	Equivalent Mass (also, g quantity needed for 1 liter of solution containing 1 equivalent)	
Sodium carbonate	Na ₂ CO ₃	105.989	52.994
Sodium oxalate	Na ₂ C ₂ O ₄	134.000	67.000
Sodium chloride	NaCl	58.443	58.443
Potassium iodate	KIO ₃	214.005	35.67
Potassium dichromate	K ₂ Cr ₂ O ₇	294.192	49.04
Potassium hydrogen phthalate	KHC ₈ H ₄ O ₄	204.229	204.229
Succinic acid	HOOC-(CH ₂) ₂ -COOH	118.090	59.045
Sodium tetraborate, decahydrate	Na ₂ B ₄ O ₇ ·10 H ₂ O	381.373	190.686
Tris(hydroxymethyl)-aminomethane (Tromethamine, THAM, or Tris)	NH ₂ C(CH ₂ OH) ₃	121.14	121.14

SECONDARY STANDARDS

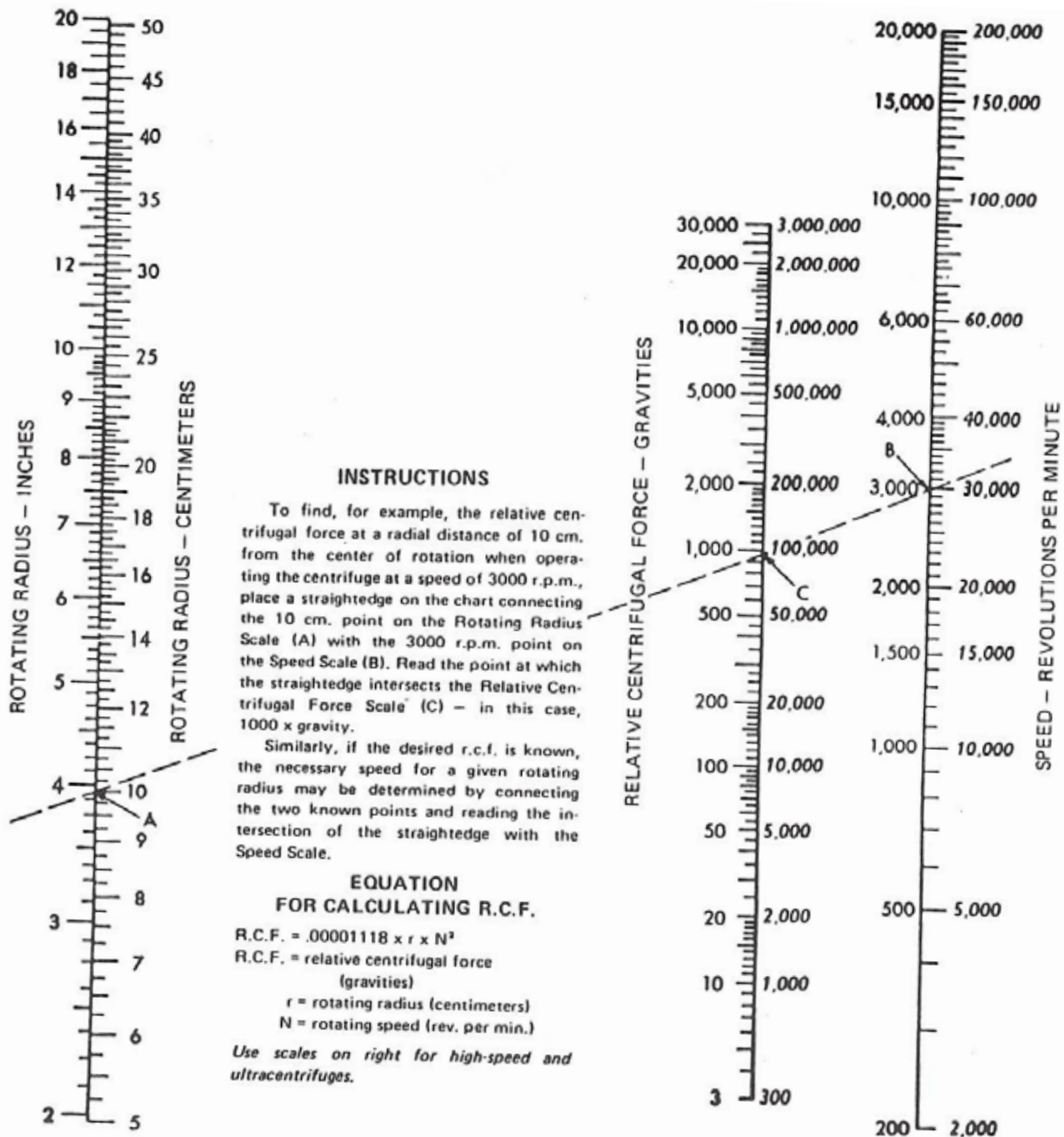
Formula	Molecular Mass (also, g quantity needed for 1 liter of solution containing 1 mole)	Equivalent Mass (also, g quantity needed for 1 liter of solution containing 1 equivalent)	
Oxalic acid	H ₂ C ₂ O ₄	90.035	45.018
Oxalic acid, dihydrate	H ₂ C ₂ O ₄ ·2 H ₂ O	126.067	63.038
Nitric acid	HNO ₃	63.013	*
Hydrochloric acid	HCl	36.461	*
Sulfuric acid	H ₂ SO ₄	98.077	*

* Calculate from specific gravity and assay of acid and establish exact concentration by titration against primary standard.

AS PER EDITION 4.

RELATIVE CENTRIFUGAL FORCE NOMOGRAPH

The IEC Relative Centrifugal Force Nomograph



GOLD ANALYSIS

MEASURING GOLD

Systems of Weighing

There are three systems of weighing; Avoirdupois, Troy and Metric. Gold is weighed in Troy or metric units.

Troy Conversions

1 pound (lb) troy	=	12 ounces (oz) troy
1 ounce	=	480 grains
24 grains	=	1 pennyweight (dwt)
1 ounce	=	20 pennyweights

Metric Conversions

1 troy ounce	=	31.1035 grams
1 avoirdupois ounce	=	28.34954 grams
1000 grams (g)	=	1 kilogram (kg)
1000 Kg	=	1 tonne

Measuring gold in rock

The concentration (grade) of gold in rock is expressed as follows:

Grams per tonne (g/t), or parts per million (ppm);

which means 1gm of gold in 1 tonne of rock, or 1 microgram of gold in 1 gram of rock.

Therefore: 1 g/t = 1 ppm

Measuring gold in solution

The concentration of dissolved gold in solution is expressed as parts per million (ppm), which means:

1 milligram (mg) of gold dissolved in 1 litre of solution, or

1 microgram (ug) of gold dissolved in 1 millilitre (mL) of solution.

Therefore: 1 mg/litre = 1 ppm

1 ug/mL = 1 ppm

Measuring gold in bullion

The purity of gold bars is usually expressed as "fineness" which means parts of gold per thousand parts of gold bar. (Note: percent means parts per 100).

Example: 1000 "fine" gold is pure gold

A 900 fine bar is 90% gold and 10% other metals

Measuring gold in alloys

The purity of gold when it is alloyed with other metals is measured in "carats", which means parts of gold per 24 parts of alloy.

Example: 24 carat gold is pure gold (100% or 1000 fine).

12 carat gold jewellery is half gold and half other metals (usually copper) (50% pure gold or 500 fine).

NOTE: The word "carat" is also a measure of weight used for precious gems (e.g. diamonds).

Where: 1 carat = 0.200 grams.

TYPICAL GEOCHEMICAL ATOMIC ABSORPTION PARAMETERS

Element	High Ni	Low Ni	Cu	Co	Fe	Pb	Zn	Mg	Ca	Cr	Na	K	Au
Wavelength (nm)	352.4	232.0	324.8	240.7	372.0 248.3	217.0 283.3	213.9	202.5 285.2	422.7	357.8	589.6	769.9	242.8
Lamp Current (mA)	6	6	4	6	5	6	6	4	4	6	5	5	6
Slit (nm)	0.5	0.5	0.5	0.2	0.2	1.0	1.0	0.5	0.5	1.0	1.0	1.0	1.0
Background Correction	-	-	-	-	-	J	-	-	-	-	-	-	J
Beam	S	S	S	S	D	D	S	S	S	S	S	S	S
Sensitivity ABS 2ppm >	0.50	0.11	0.25	0.17	0.25	0.04	0.89			0.09			
Approximate Burner angle 20ppm =	0.143		0.300					0.295					
Oxidant/ Fuel	A/A	A/A	A/A	A/A	A/A	A/A	A/A	N/A	N/A	N/A	A/A	A/A	A/A
Fuel cond.	NORM	NORM	NORM	NORM	RICH	RICH	NORM	NORM	NORM	NORM	NORM	NORM	LEAN
Burner Height	ADJUST TO RETURN VALUE OF PULP STANDARD												

METALLURGICAL TESTING

Selection of Bond Work Indices

MATERIAL	WORK INDEX	MATERIAL	WORK INDEX
Barite	4.73	Granite	15.13
Bauxite	8.78	Graphite	43.56
Coal	13.00	Limestone	12.74
Dolomite	11.27	Mica	134.5
Emery	56.70	"Nickel Ore"	11.88
Ferro-silicon	10.01	Quartzite	9.58
Fluorspar	8.91	Quartz	13.57

Conversions from A.S.T.M. Mesh Numbers to Aperture Size

ASTM MESH NUMBER	APERTURE SIZE (mm)
3.5	5.6
4	4.75
5	4.00
6	3.35
7	2.80
8	2.36
9	2.00
10	1.70
12	1.40
14	1.18
16	1.00
20	850 microns
24	710
28	600
32	500

ASTM MESH NUMBER	APERTURE SIZE (MICRONS)
35	425
42	355
48	300
60	250
65	212
80	180
100	150
115	125
150	106
170	90
200	75
250	63
270	53
325	45
400	38

PREPARATION OF DILUTE SOLUTIONS

SLOWLY STIR THE STATED QUANTITY OF CONCENTRATED SOLUTION OR SOLID KOH OR NaOH, RESPECTIVELY, INTO WATER.

Caution: Strong development of heat may occur! Cool to room temperature, then make up to 1 litre with water. Alkaline solutions attack glass, store in polyethylene bottles.

As a rule of thumb, more concentrated solutions can be prepared by taking a multiple of the stated quantity.

EXAMPLE:

6 mol/L HNO₃ from 6/2 x 140 mL = 420 mL 65% HNO₃.

	SOLUTION TO BE PREPARED			ORIGINAL QUANTITY TO PREPARE 1L OF DILUTE SOLUTION	
	WEIGHT %	DENSITY	mol/L	WEIGHT %	mL
Acetic Acid	12	1.01	2	100	115
Nitric Acid	12	1.07	2	65	140
Hydrochloric Acid	7	1.03	2	36	165
Sulfuric Acid	9.5	1.06	1	96	56
Ammonia	3.5	0.98	1	30	115
Potassium Hydroxide Solution	10.5	1.09	2	113g solid KOH	(85%)
Sodium Hydroxide Solution	7.5	1.08	2	80g solid NaOH	(100%)

Freezing Mixtures

THE NUMBERS REPRESENT WEIGHT PROPORTION		LOWERING TEMPERATURE FROM (°C) TO
4 water	+1 potassium chloride	+10 - 12
1 water	+1 ammonium nitrate	+10 - 15
1 water	+1 sodium nitrate + 1 ammonium chloride	+8 - 24
3 ice ground	+1 sodium chloride	0 - 21
1,2 ice ground	+1 magnesium chloride (MgCl ₂ • 7 H ₂ O)	0 - 34
1,2 ice ground	+2 calcium chloride (CaCl ₂ • 6 H ₂ O)	0 - 39
1,4 ice ground	+2 calcium chloride (CaCl ₂ • 6 H ₂ O)	0 - 55
Methanol or acetone	+ dry ice	+15 - 77
Diethyl ether	+ dry ice	+15 - 100

GENERAL FORMULAS FOR MIXING LIQUIDS

Dilution Formulas

$$C1 * V1 = C2 * V2$$

Where C1 is the starting concentration and C2 is the required concentration
V1 is the starting volume and V2 is the required volume

So an example would be to make 2000mL of 5 ppm Cu solution from a 500 ppm Cu concentrate

Let C1 = 500 Let C2 = 5 Let V2 = 2000

Using the formula $C1 * V1 = C2 * V2$

$$\begin{aligned} V1 &= (C2 * V2) / C1 \\ &= (5 * 2000) / 500 \\ &= 20 \text{ ml} \end{aligned}$$

ie Dilute 20.00 mL of your 500ppm concentrate into 2L std flask and make up to volume. The resultant concentration will be 5ppm Cu.

$$A = C - B$$

$$B = \frac{C(a - c)}{a - b}$$

$$C = B \frac{(a - b)}{a - c}$$

With:

A = weight of the original liquid
B = weight of the diluent
C = weight of the prepared mixture
For water as diluent: b = 0

a = its content in % by weight
b = its content in % by weight
c = its content in % by weight

EXAMPLE:

10 L of battery sulfuric acid with a density of $D_{40}^{20} = 1.28$. 1.28 is required. Available: concentrated

SULFURIC ACID WITH A DENSITY OF $D_{40}^{20} = 1.84$ (= 97.5 WEIGHT%)

How much sulfuric acid and how much water are needed to prepare 10 L (= 12.8 kg) of battery sulfuric acid?

CALCULATION:

$D_{40}^{20} = 1.28$. equivalent to 37.36 weight%.

$$B = \frac{C(a - c)}{a - b} = \frac{12.80 (97.50 - 37.36)}{97.50 - 0} = 7.895 \text{ KG DILUENT (WATER)}$$

Consequently, 4.905 kg (= 2.666 L) of concentrated sulfuric acid with a density of $D_{40}^{20} = 1.84$
must be added to 7.895 kg (= L) of water to yield 10 L of battery acid with a density of $D_{40}^{20} = 1.28$.

**Care! Always add an acid to the water SLOWLY, while stirring, wearing appropriate PPE.
Localised boiling may occur.**

ACKNOWLEDGMENT: MERCK LAB TOOLS

HEATING BATHS

MEDIA	MELTING POINT (°C)	BOILING POINT (°C)	WORKING RANGE (°C)	FLASH POINT (°C)	REMARKS
Water	0	100	0 - 80	-	within the ideal stated range
Ethylene Glycol	-12	198	-10 - 180	111	Flammable, difficult to remove from equipment
Silicon Oil	-60	-	20 - 250	300	Becomes viscid at lower temperatures - noncorrosive
Triethylene Glycol	-7	287	0 - 250	56	Water-soluble, stable
Glycerol	18	290	20 - 260	160	Water-soluble, nontoxic, viscid
Paraffin, Liquid	-	300 - 500	20 - 200	230	Flammable
Paraffin Viscous	-	300 - 500	20 - 200	230	Flammable
Oil Bath Filling	-5	-	0 - 250	300	Flammable
Heating Bath Fluid	-40	-	0 - 170	280	Miscible with water, nontoxic
Potassium Nitrate (51.3%)	219	-	230 - 500	-	Stable in air, strong oxidizing agent, nonflammable
Sodium Hydroxide (40%)	167	-	200 - 800	-	Corrosive and harmful

DRYING AGENTS

NAME	FORMULA	WATER CONTENT OF AIR IN EQUILIBRIUM IN mg/L (AT 25°C)
Aluminium Oxide	Al ₂ O ₃	0.003
Calcium Chloride	CaCl ₂	< 0.00001
Calcium Hydride	CaH ₂	0.14
Calcium Oxide	CaO	0.003
Calcium Sulfate	CaSO ₄	0.004 - 0.07
Copper Sulfate	CuSO ₄	1.4
Dessicant Sachets	SiO ₂	0.003
Magnesium Oxide	MgO	0.008
Magnesium Perchlorate	Mg(ClO ₄) ₂	0.0005 - 0.002
Magnesium Sulphate	MgSO ₄	1.0
Molecular Sieves	-	0.0001 - 0.5
Phosphorus Pentoxide	P ₂ O ₅	0.00002
Potassium Hydroxide	KOH	0.002
Sicacide®	H ₂ SO ₄ * [†]	0.003 - 0.3
Sicapent®	P ₂ O ₅ * [†]	< 0.000025
Silica Gel (Blue Gel)	(SiO ₂) _x	0.003
Silica Gel (Orange Gel)	SiO ₂	0.003
Sodium Hydroxide	NaOH	0.002
Sodium Sulfate	Na ₂ SO ₄	1.0
Sulfuric Acid	H ₂ SO ₄	0.005 - 0.3

*on siliceous supporting material

Vapour pressure of water over H₂SO₄ (At 20°C)

%H ₂ SO ₄	10	20	30	40	50	55	60
p [mbar]	22.9	20.5	17.6	13.0	8.2	5.9	3.7
%H ₂ SO ₄	65	70	75	80	85	90	
p [mbar]	2.1	1.1	0.4	0.1	0.04	0.007	

ACKNOWLEDGMENT: MERCK LAB TOOLS

TERMS & CONDITIONS

The applicants agree to the following:

1. DEFINITIONS AND INTERPRETATION

In the following Conditions of Sale

- a. "Seller" means Rowe Scientific Pty Ltd (ABN 63 009 437 790).
- b. "Buyer" means the Person, the Company or Party whose Order for the purchase of Goods is accepted by the Seller.
- c. "Goods" means the goods and services sold or supplied by the Seller to the Buyer.
- d. "Order" means an order for the purchase of Goods from the Seller.
- e. "PPS Act" means the Personal Property Securities Act 2009 (Cth) and its associated Regulations as varied from time to time.
- f. "PPSR" means the Personal Property Security Register established under the PPS Act.
- g. "PMSI" means Personal Money Security interest as defined under the PPS Act.

2. RETENTION OF TITLE OF GOODS

- a. Property and title in the Goods supplied by the Seller to the Buyer will not pass to the Buyer until such time as the Goods the subject of the Order and all other Goods supplied by the Seller to the Buyer have been paid for in full. Until that time, the Buyer shall store the Goods, including goods into which the supplied Goods have been mixed, in such a manner as to show clearly that they are the property of the Seller and shall upon the Seller's demand deliver up such goods to the Seller. In default of such delivery the Seller may by its servants and agents enter the Buyer's premises at any time without notice to repossess the Goods.
- b. Subject to the PPS Act, until such time as the Goods have been paid for in full, the Buyer is at liberty to sell the Goods, including goods into which Seller's Goods have been mixed, in the ordinary course of its business, and the Buyer shall hold the proceeds thereof in trust for the Seller and promptly account to the Seller for those proceeds in payment of the purchase price for the Goods.
- c. The Buyer and the Seller agree that the provisions of this clause apply notwithstanding any agreement between the parties under which the Seller grants the Buyer credit.

3. PASSING OF RISK

Except as otherwise provided herein, the Goods supplied by the Seller to the Buyer shall be at the Buyer's sole risk immediately upon their delivery to the Buyer.

4. CREDIT POLICY

Payment Terms are Nett 30 Days. Any overdue amount in excess of 30 days may attract a rate of two and a half (2.5%) per centum interest per month on any balance owing to the Seller. The Seller reserves the right to withhold further supplies to the Buyer until any outstanding amount is paid in full. In the event that the Buyer is in default of payment terms the Buyer agrees that any expenditure or cost that the Seller has incurred in recovering the debt will be passed on to the Buyer. No responsibility is accepted for incorrectly ordered Goods.

5. RETURN OF GOODS

Subject to the Australian Consumer Law, no returns are recognised unless made in writing within seven days. Delivery charges for return of Goods will be at the Buyer's expense unless otherwise agreed upon in writing. Credit on returns is subject to goods being returned in the condition that they were originally supplied. No direct payment will be made for returns by the Seller to the Buyer, however a credit in favour of the Buyer's account will be provided. Goods may not be cancelled from an Order except by mutual consent in writing. A re-stocking fee may be imposed on the Buyer subject to the Seller's discretion. This clause will be of no effect to the extent that it contravenes (or the application of this clause would result in any contravention of) a mandatory provision of the Australian Consumer Law.

6. CHARGE FOR AND RETURN OF CONTAINERS

- a. Some Goods supplied by the Seller may attract a container charge as determined by the Seller. Cost of containers may vary or change without notice and containers are considered as sold by the Seller to the Buyer, however, credit on returned containers may be extended to the Buyer subject to condition 6 b) below.
- b. Buyers may return containers to the Seller subject to the following:
 - Containers must be in reusable condition and must conform to Government and Statutory Regulations.
 - Containers must not be used for any other purpose other than to contain the Goods that are detailed on the label of the container.
 - Any containers that have deteriorated or do not pass approved testing will not be credited.
 - Credits to the Buyer will only be extended by the Seller on the basis of continuance of trade with the Seller.
 - No direct payment will be made for returns by the Seller to the Buyer, however a credit in favour of the Buyer's account will be provided.

7. PALLETS

Some Goods are supplied by the Seller on pallets. The Seller prefers that pallets are exchanged at point of delivery to the Buyer's store or transport company of the Buyer. Should exchange pallets not be available then the Seller reserves the right to apply a fee as determined by the Seller for the supply of pallets to the Buyer. The Seller shall be happy to accept pallet returns subject to returned pallets being in good and reusable condition. Credits to the Buyer will only be extended by the Seller on the basis of continuance of trade with the Seller. No direct payment will be made for returns by the Seller to the Buyer, however a credit in favour of the Buyer's account will be provided.

8. PRODUCT LIABILITY

Subject to the Australian Consumer Law, the Seller will not accept any responsibility whatsoever for any consequential loss or damage arising from use or consumption of Goods sold by the Seller to the Buyer other than responsibility for the merchantable quality of the Goods and such responsibilities mandatorily imposed by Statutes applicable to the sale or supply of the relevant Goods. To the extent allowed by such Statutes, the liability of the Seller is limited to the replacement of the Goods, or at the option of the Seller, the refund of the price paid by the Buyer conditional upon a claim being made in writing and where possible sufficient part of the Goods to enable proper examination being returned to the Seller within 30 days of delivery.

9. DELIVERY AND HANDLING

All Goods sold by the Seller to the Buyer are sold on the basis that the Goods are available ex works for the Buyer's collection unless otherwise arranged by prior written agreement between the Seller and Buyer for the goods to be delivered by the Seller to the Buyer or to the Buyer's nominated delivery point. The Seller will apply a delivery fee to the Buyer's account for Goods delivered and will also apply a fee if the Buyer requests the Seller to collect Goods for return to the Seller from the Buyer unless otherwise arranged by prior written agreement. The Seller will only accept responsibility for Goods lost or damaged in transit whilst in the care of the Seller and will not accept any responsibility whatsoever for Goods lost or damaged in transit by the Buyer's nominated transport.

10. WARRANTIES AND LIABILITIES

- a. All implied conditions and warranties are excluded except any implied condition or warranty the exclusion of which would contravene any statute or cause any part of this clause to be void ('Non-excludable Condition').
- b. To the extent permitted by law, the Seller's liability for breach of a Non-excludable Condition is limited, at the Seller's option, to refunding the price of the Goods or to replacing or repairing those Goods and/or providing those Goods again. Except for liability for breach of any Non-excludable Condition and to the extent permitted by law;
 - i. the Seller excludes liability for loss of profits or consequential or indirect loss or damage; and
 - ii. the Seller's total liability to the Buyer is limited to the amount paid or payable by the Buyer to the Seller for those Goods.

11. BUYER WARRANTIES AND INDEMNITY

- a. The Buyer warrants to the Seller that:
 - i. the Buyer possess the relevant knowledge and all necessary licenses, permits or approvals to receive, handle and store the Goods; and
 - ii. the Buyer will comply with all laws and the conditions of any licenses, permits or approvals relating to the handling and storage of the goods.
- b. To the extent permitted by law, the Buyer indemnifies the Seller against all losses, damages or costs (whether incurred by or awarded against the Seller) that the Seller may incur as a result, whether directly or indirectly, of:
 - i. the Buyer's use, sale and /or handling of the Goods;
 - ii. any loss of or damage to any property or injury to or death of any person caused by any negligent act or omission or willful misconduct by the Buyer or its officers, agents or employees in relation to the goods;
 - iii. any claim that the Buyer's use of the Goods infringes the intellectual property rights of any person and/or entity; or
 - iv. repossessing the Goods or enforcing any rights that the Seller has against the buyer under clauses 2 or 15 or at law, including without limitation, any claims from parties whose properties have been incorporated into the Goods.

12. PPS ACT

- a. The terms "Collateral", "Debtor", "Financing Change Statement", "Financing Statement", "Grantor", "Proceeds", "Secured Party", "Security Agreement" and "Security Interest" have the meanings given in the PPS Act.
- b. The Buyer acknowledges and agrees that these terms and conditions form part of the Contract and constitute this Contract as a Security Agreement that covers the Collateral for the purposes of the PPS Act. The Buyer and the Seller further agree that:
 - i. the Seller holds (as Secured Party) a Security Interest over all of the present and after acquired goods supplied by the Seller to the Buyer and any Proceeds of the sale of those goods ("Collateral");

- ii. any purchase by the Buyer on credit terms from the Seller or retention of title supply pursuant to clause 2 hereof will constitute a purchase money security interest as defined under section 14 of the PPS Act ("PMSI");
- iii. the PMSI granted herein will continue to apply to any goods coming into existence or proceeds of sale of Goods coming into existence;
- iv. the Seller will continue to hold a Security Interest in the Goods in accordance with and subject to the PPS Act, notwithstanding that the Goods may be processed, commingled or become an accession with other Goods.
- v. any Security Interest held by the Seller will be a continuing and subsisting interest in the Collateral with priority to the fullest extent permitted by law over all over registered or unregistered Security Interest;
- vi. until title in the Goods pass to the Buyer, the Buyer will keep all goods supplied by the Seller free of any charge, lien or other Security Interest and not otherwise deal with the Goods in a way that will or may prejudice any rights of the Seller under the Contract or the PPS Act; and
- vii. in addition to any other rights under these terms and conditions or otherwise arising, the Seller may exercise any and all remedies afforded to it as a Secured Party under Chapter 4 of the PPS Act including, without limitation, entry into any building or premises owned, occupied or used by the Buyer, to search for and seize, dispose of or retain those goods in respect to which the Buyer has granted a Security Interest to the Seller.
- c. The Buyer undertakes to:
 - i. sign any further documents and provide such information which the Seller may reasonably require to register, amend or update a Financing Statement or Financing Change Statement in relation to a Security Interest on the PPS Register;
 - ii. indemnify and upon demand reimburse the Seller for all expenses incurred in registering a Financing Statement or Financing Change Statement on the PPS Register or releasing any Security Interests;
 - iii. not register or permit to be registered a Financing Change Statement in the Collateral without the prior written consent of the Seller; and
 - iv. provide the Seller not less than 7 days prior written notice of any proposed change in the Buyer's name, address, contact numbers, business practice or such other change in the Buyer's details registered on the PPSR to enable the Seller to register a Financing Change Statement if required.
 - v. The Seller and the Buyer agree that sections 95, 96, 125 and 132(3) (d) and 132(4) of the PPS Act do not apply to the Security Agreement created under this Contract.
 - vi. The Buyer hereby waives its rights to received notices under sections 95, 118, 121(4), 130, 132(3)(d) and 132(4) of the PPS Act.
 - vii. The Buyer waives its rights as a Grantor and/or a Debtor under sections 142 and 143 of the PPS Act.
 - viii. Unless otherwise agreed in writing by the Seller, the Buyer waives its right to receive a verification statement in accordance with section 157 of the PPS Act.
13. PRICE
The price of the Goods shall be as agreed in writing between the parties or otherwise the Seller's published price or where there is no agreed price or published price such an amount as indicated on invoices provided by the Seller to the Buyer regarding Goods ordered. Prior to acceptance of an Order the Seller may change its published prices at any time without notice.
14. GOODS AND SERVICES TAX (GST)
Goods and Services Tax (GST) will be charged on those products that attract GST at the applicable rate in accordance with the requirements of the A New Tax System (Goods and Services Tax (GST)) Act 1999 (Cth).
15. SPECIAL ORDER
Any stock procured, ordered, imported, brought in or manufactured by the Seller, at the specific request of the Buyer (known as indent stock or special order) cannot be cancelled and is not returnable for credit unless there has been an error by the Seller or the Goods are defective.
16. CURRENCY
Payments must be made in Australian dollars. Payments remitted in foreign currency must include all relevant bank charges and currency conversion costs applied by both the paying bank and receiving bank.
17. SET OFF
The Buyer is not entitled to set off against or deduct from the price of the Goods purchased any sums owed or claimed to be owed to the Buyer by the Seller.
18. HEALTH AND SAFETY
It is the Buyer's responsibility to ensure that all applicable health and safety regulations are observed and other appropriate steps taken in relation to the storage, handling and the use of the goods and, where information is supplied to the Buyer on potential hazards relating to the goods, to bring such information to the attention of its employees, agents, sub-contractors, visitors and customers. Without prejudice to the foregoing, it is also the Buyer's responsibility to provide safe facilities for the reception of goods into storage.
19. PRIVACY CONSENT
The Seller may give information to third parties about the Buyer, its Guarantors, Directors or Proprietors for the following purposes;
 - a. to obtain a consumer credit report about the Buyer, its Guarantors, Directors or Proprietors;
 - b. to allow the credit reporting agency to create or maintain a credit information file containing information about the Buyer, its Guarantors, Directors or Proprietors;
 - c. for registration on the PPSR or other public records, or registers; and
 - d. to obtain commercial credit information about the Buyer, its Guarantors, Directors or Proprietors from a credit reporting agency.
20. FORCE MAJEURE
The Seller will have no liability whatsoever to the Buyer in relation to any loss, damage or expense caused by the Seller's failure to complete an order or delivery or contract as a result of fire, flood, tempest, earthquake, riot, civil disturbance, theft, crime, trade dispute, lock-out, Government action, war or the inability of the Seller's suppliers to supply necessary materials or any other cause whatsoever, whether or not of a like nature to those specified above, outside the reasonable control of the Seller.
21. WAIVER OF TERMS OF AGREEMENT
The failure or indulgences by the Seller to exercise, or delay in exercising, any right, power or privilege available to it under this agreement will not operate as a waiver thereof or preclude any other or further exercise thereof or the exercise of any right or power.
22. PROPER LAW
 - a. This agreement is governed by and will be construed in accordance with the laws of the State of Western Australia.
 - b. The parties agree to submit to the exclusive jurisdiction of the Courts of the State of Western Australia and the parties consent to the non-exclusive jurisdiction of the Local Court closest to the Seller's place of business in Western Australia.
 - c. An agreement formed pursuant to the terms and conditions will be deemed to have been entered into at the Seller's place of business.
23. GENERAL
 - a. The Seller may serve any notice or Court document on the Buyer by hand or by forwarding it by post to the address of the Buyer last known to the Seller, or where a fax number or an email address has been supplied by the Buyer, by sending it to that number or address. Such notices shall be deemed to be given:
 - i. where delivered by hand, on the day of delivery;
 - ii. where sent by post, two (2) business days after the day of posting; and
 - iii. where sent by fax or email on the day of despatch, provided that a clear transmission report is obtained.
 - b. If any term of this agreement shall be invalid, void, illegal or unenforceable, it shall be severed from the agreement and the remaining provisions shall not be affected, prejudiced or impaired by such severance.
 - c. The Seller reserves the right to review these terms and conditions at any time. If following any such review there is to be a change in the terms and conditions, that change will take effect from the date on which the Seller notifies the Buyer of that change. Notice is deemed to have occurred on the date that the Seller uploads the new Terms and Conditions to its website www.rowe.com.au.
 - d. This document represents the entire agreement between the parties and no agreement or understanding varying or extending the terms of the terms and conditions shall be legally binding upon either party unless in writing and signed by both parties or permitted by the terms and conditions.
 - e. The Seller may assign or licence or subcontract all or any part of its rights and obligations under the terms and conditions without the Buyer's agreement or consent.
 - f. If the Buyer sells or otherwise disposes of its business (or any part thereof) (Disposal), the Buyer must immediately notify the Seller in writing of such Disposal to enable the Buyer's account to be closed. If the Buyer fails to notify the Seller of such Disposal, then the Buyer will be jointly and severally liable with the third party acquiring the business (or part thereof) to the Seller for the payment of Goods subsequently sold to the third party on the Buyer's account before the Seller received such notice as if the Buyer had ordered the Goods itself.



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The purpose of Rowe Scientific Pty. Ltd. is to keep our clients supplied with the scientific items they need to do their work.

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