



catalogue





Message from the Managing Director's Desk

S. KHERUKA
Managing Director

Dear Stakeholders,

Warm greetings for the new financial year. It is always my great pleasure to present to you our Catalogue.

I am excited to announce some changes in the format of our Catalogue this year. As you may notice, we have added high resolution color images of all our products in addition to the line diagrams that was traditionally depicted. Moreover, the format and content of our Catalogue has been updated and is now best in class and will stand as a benchmark for the laboratory consumables industry. The idea is to ensure that our customers can interact with our product, understand its look and have many of their questions answered even before they place orders.

Our continuous efforts to upgrade and improve the quality of our product range has resulted in some further product introductions. These can be found on page 26 to 31 of this catalogue.

One of the most important announcements for our organization is the starting up of our second manufacturing unit in Tarapur, India. This unit has been established in order to cater to the growing needs of our worldwide customers. I am confident that with the support of all our valued customers, this unit will achieve a high level of success!

It has always been Borosil's focus to enhance repeatability, traceability and performance across the product range. To this end, we have invested in machinery to further automate our production, calibration and certification facilities. With these improvements, we are confident that we will further consolidate our leadership position in the laboratory consumables industry. Moreover, further enhancements in our warehousing capabilities will help ensure our high quality products will reach our consumers faster than ever before.

For any comments or feedback on how we could serve you better, please feel free to contact me on borosil@borosil.com.

I take this opportunity to wish all of you the very best for the year ahead.

Best regards,

S. Kheruka

Borosil Glass Works Ltd.
an ISO 9001: 2008 certified company

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Corporate Profile

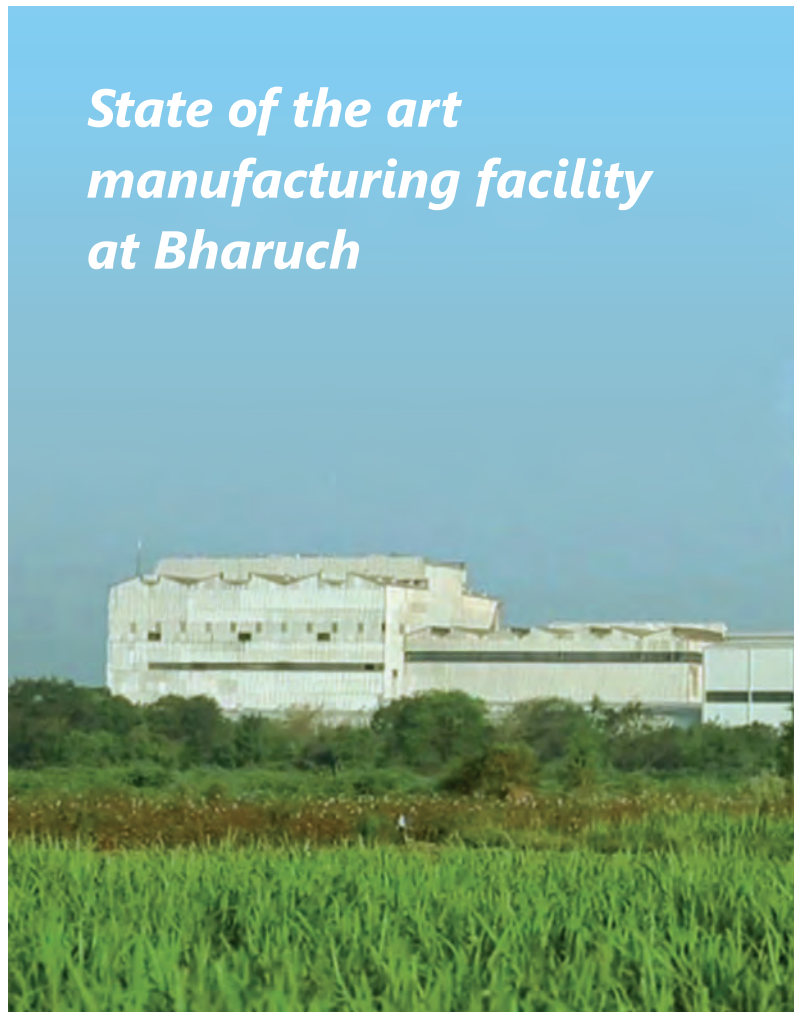
The Borosil Group comprises two independent companies – Borosil Glass Works Ltd. and Gujarat Borosil Ltd.

Borosil Glass Works Ltd. (BGWL) was established in December 1962 in collaboration with Corning Glass Works, USA, to manufacture borosilicate low expansion glass. In December 1988, Corning divested its shareholding to the current Indian promoters, who have been leading manufacturers of sheet glass in India, since 1961.

Borosil is the market leader in laboratory glassware and microwavable kitchenware in India.

Borosil's Scientific and Industrial Products (SIP) Division offers a wide range of equipment including laboratory glassware, instruments, disposable plastics, liquid handling systems and explosion-proof lighting glassware, through a network of 150 dealers spread across the length and breadth of the country. Quality, accuracy and dependability have become the hallmarks of the Borosil brand. For 50 years, Borosil has enjoyed the trust of its loyal customers that include leading pharmaceutical companies, R&D laboratories, scientific, health and educational institutions. Borosil glass is used in over 2,000 different products and applications, as diverse Microbiology, Biotechnology, Photo Printing, Process Systems and Lighting.

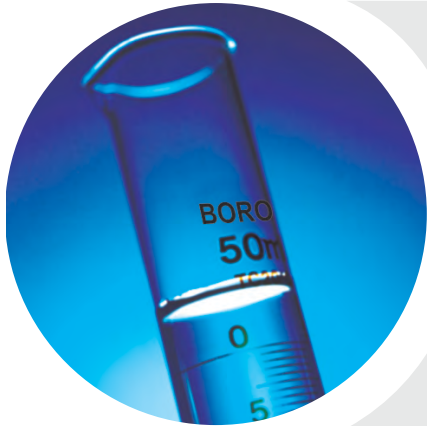
State of the art manufacturing facility at Bharuch





Borosil's Consumer Products Division sells microwavable and flameproof kitchenware, glass tumblers, melamine dinner and serveware, home appliances, and home décor products through over 10,000 retail outlets. Our products are synonymous with elegance, dependability, safety and ease of use. In the kitchenware segment in India, Borosil is a generic term for microwavable glassware. BOROSIL continues to remain amongst India's best known and most trusted brands for the last 50 years.

Gujarat Borosil Ltd. (GBL) was established in 1994 for the production of sheet glass using the Updraw Pittsburg process. Gujarat Borosil's 230 ton-per-day sheet glass furnace has the ability to manufacture glass that ranges from 3 mm to 12 mm thickness. Borosil sheet glass is used all over India for a variety of architectural applications. Recently, Gujarat Borosil has established a 150 ton-per-day low iron patterned glass furnace for the manufacture of high transmission glass that is used in the solar industry. The manufacturing unit comprises top-of-the-line European equipment. Leading solar module manufacturing companies worldwide are customers of this product. This plant is the first and only one of its kind in India, and has been developed specifically for the fast-growing solar industry.



ACCURACY

- Computer Controlled Calibration
- Reliability in experiments through individually certified volumetric glassware
- Facilitates audit procedures in the laboratory
- Enhanced production from new facility



MECHANICAL STRENGTH

- Optimum wall thickness
- Annealed glassware imparts better mechanical strength
- Ideal for vacuum application, wet and dry sterilization
- Harder, hence lasts longer



THERMAL SHOCK RESISTANCE

- Safely withstands thermal shock
- Annealed to remove residual thermal Stress
- Thinner, uniform wall, hence lasts longer



CHEMICAL DURABILITY

- High resistance to attack from acids, salt solutions and organic solvents
- Low alkalinity, hence less leaching
- Low alkalinity makes glass harder, hence lasts longer

certification

ISO certificate



Individual calibration certificate

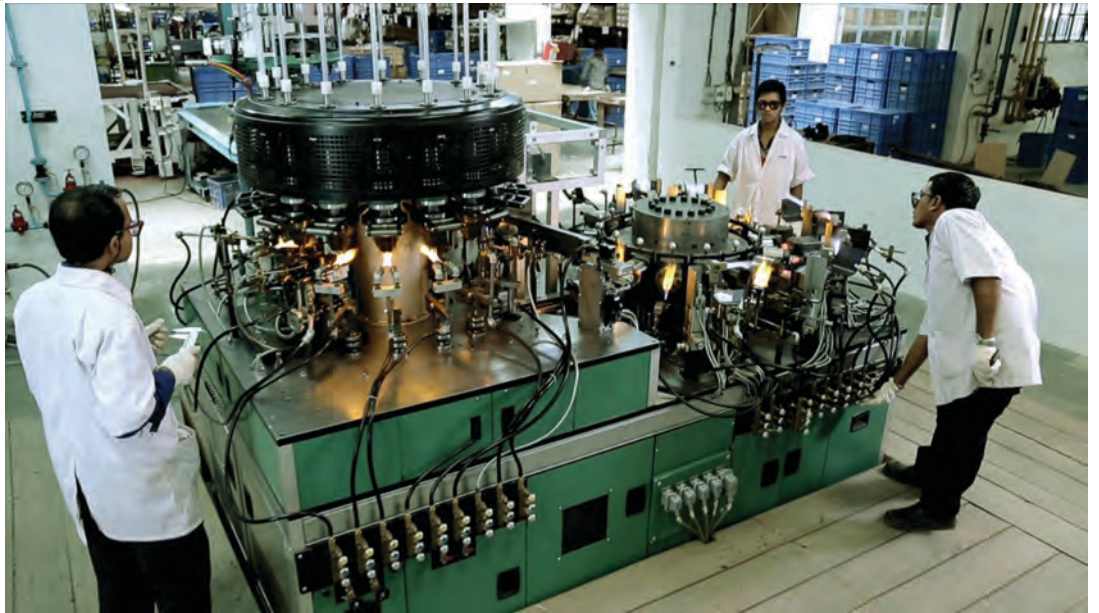


Gost-R Certificate



**Individual Calibration Certificate
will be available on our website shortly**

automatic blank production facility



- State-of-art auto blowing facility used to produce blanks with uniform wall thickness and ensure exact shape and dimension according to the standards.
- All the blanks are manufactured from 3.3 Low Expansion Borosilicate Glass with controlled Internal Diameter tubing.



unique annealing facility



- All **Borosil** glasswares pass through annealing Lehr chamber where the stresses are eliminated under controlled heating and cooling process
- This annealing process ensures the long lasting printing quality. In order to get highest level of precision, carefully controlled gradual heating and cooling procedures are essential



petri dish manufacturing facility





Borosil is India's single largest manufacturer of a complete range of Volumetric Glassware. Borosil's Volumetric products are used in all laboratories from high-end pharmaceutical production companies to high schools and colleges.

Borosil adheres to the highest quality standards, right from the raw material used to the measurement and calibration of the finished product. Visual and physical quality checks are undertaken at each stage of production, in order to ensure the highest quality product for customers.

Borosil ensures that every Volumetric Glassware product is of the highest quality in the following parameters:

1. **Accuracy:** Please see 'Calibration Process' for a detailed understanding of how Borosil Volumetric Glassware is the most accurate in the world.
2. **Mechanical Strength:** All Borosil laboratory glassware products are annealed in a special chamber wherein the stress developed during the manufacturing process is eliminated with a controlled heating and cooling process. Moreover, Borosil's production processes ensure uniform wall thickness across all products, thereby enhancing their mechanical strength.
3. **Thermal Shock Resistance:** The annealing process further ensures that Borosil products are free of residual stress. The uniform wall thickness of Borosil products prevents damage owing to repeated heating and cooling in laboratories.
4. **Chemical Durability:** All Borosil laboratory glassware products are manufactured using 3.3 low expansion ASTM E-438 Type 1 Class A borosilicate glass. This glassware, by nature, is resistant to attack from acids, salt solutions and organic solvents.

calibration process



Computer controlled automatic calibration machine with optical laser beams to prevent human error and ensure highest level of accuracy and precision

Borosil performs the calibration process with fully automatic state-of-the-art calibration machines that eliminate any possibility of human error. This also ensures a high degree of repeatable measurements for all Borosil Volumetric products.

Borosil has an in-house set-up of a well-equipped temperature-controlled calibration laboratory with precision electronic balances, thermometers and stopwatches that are traceable to national standards. Calibration of Volumetric Glassware is entrusted to only trained and experienced technicians.

The following steps are carried out by highly precise, fully automated computer-controlled machines:

1. Filling the Volumetric blanks with a precisely-defined amount of de-mineralized water under controlled temperature.
2. The meniscus is determined with a laser-controlled camera at the exact lowest point of the water level, and the calibration mark is made with a fine diamond wheel. This gives accuracies that cannot be achieved by manual calibration.
3. Cylinders, Burettes and Pipettes are marked at a minimum of two calibration points.
4. The wet surface area factor is always taken into account, throughout the process.
5. The calibration laboratory is temperature, light controlled and temperature is maintained at $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$.

All Volumetric Glassware is calibrated either as

To contain TC / In

The contained quantity of liquid corresponds exactly to the capacity indicated on the article (e.g. graduated cylinders and volumetric flasks).

To deliver TD / Ex

The delivered quantity of liquid corresponds exactly to the capacity indicated on the article. (e.g. pipette and burettes).

These steps ensure that each and every Volumetric product leaving the **Borosil** facility meets the highest international standards and can be used for various purposes with the highest degree of repeatability and accuracy.





Rain water harvesting has been deployed in our 110 acre facility in Gujarat, since 2003.

Wind energy is the source of 48% of all the electricity that we consume.

Our Borosolar water heating systems are used to heat the water supplied in all Borosil Guesthouses and Colonies.

Our other energy efficient measures include advanced waste heat recovery systems and solar lighting.

Our in-house 9 hole par 36 Golf Course is maintained by using the water from our rain water harvesting initiative.

Borosil supports and runs a school, for children from neighbouring villages and employees' children.

Borosil proposes to open a hospital in the near future.

We nurture





Description	Cat No.	Pg No.
Technical Data		19
Care & Maintenance		20
Cleaning Specific Types Of Glassware		22
Autoclaving Laboratory Glassware		25
New Introduction	26-31	
NABL Products	32-37	



Beakers

Low Form, With Spout	1000	39
Beaker Tablet Distintegration	1006	39
Tall Form, Without Spout	1040	40
Tall Form, With Spout	1060	40
Conical, With Spout	1080	41



Bottles

Aspirator, Outlet For Tubing	1220	43
Aspirator, Outlet For Stopper	1240	43
Aspirator With i/c Stopper	1245	44
B.O.D. With i/c Interchangeable Stopper	1250	44
Culture, Roux, Offset Neck	1290	45
Milk Dilution, Plain With Screw Cap	1367	45
Milk Dilution, Graduated With Screw Cap	1370	46
Reagent, Narrow Mouth, With i/c Flat Head Stopper	1500	46
Reagent, Wide Mouth, With Screw Cap	1501	47
Reagent, Narrow Mouth, With i/c Flat Head		
Screw Cap with Pouring Ring	1503	48
Pouring Ring Blue Colour	1504	48
Bottle Reagent Square	1506	48
Stopper Amber	1509	49
Reagent, Wide Mouth With Screw Cap	1519	49
Solution, Plain Tooled Neck	1585	50
Solution, Amber, Tooled Neck	1589	50
Relative Density, Capillary Bore, i/c Teflon Stopper, Certified	1624	51
Relative Density, Capillary Bore, i/c Teflon Stopper, Certified	1625	51

Description	Cat No.	Pg No.
Specific Gravity Bottle with Thermometer	1627	52
Weighing, With i/c Stopper	1630	52
Dropping with Pipette & Rubber Teat	1640	53
Dropping with Pipette & Rubber Teat Amber	1650	53
Wash, With i/c Stopper	1660	54
Stoppers Only For Wash Bottles	1661	54
Bottles Only For Wash Bottles	1662	55
Wash Bottle, Plastic	166P	55
Gas Washing With i/c Stopper	1760	56
Stopper For Gas Washing Bottles	1761	56
Bottles Only For Gas Washing Bottles	1762	56
Tubes, Gas Sampling	1764	57
Impinger	1765	57



Burettes

Pinchcock	2118	60
Boroflo, Class A	2121	61
Boroflo, Class B	2122	61
Straight Bore Stopcock, Class A	2123	62
Straight Bore Stopcock, Class B	2124	62
Double Oblique Bore Stopcock, Class A	2125	63
Double Oblique Bore Stopcock, Class B	2126	63
Double Oblique Bore, Boroflo Stopcock, Class A	2127	64
Double Oblique Bore, Boroflo Stopcock, Class B	2128	64
Straight Bore PTFE Stopcock Class A	2129	65
Straight Bore, PTFE Stopcock, Class B	2130	65
Automatic Zero, Double Oblique		
Boroflo Stopcock Amber Colour Class A	2131	66
Boroflo Stopcock Amber Colour Class B	2132	66
Bore Boroflo s/c Class A	2145	67
Automatic Zero, Double Oblique		
Bore Boroflo s/c Class B	2146	67
Bore Glass s/c Class A	2147	68
Automatic Zero, Double Oblique		
Bore Glass s/c Class B	2148	68
Automatic Zero, Mounted On Reservoir, Glass s/c Class A	2149	69
Automatic Zero, Mounted On Reservoir, Glass s/c, Class B	2150	69



Description	Cat No.	Pg No.
Automatic Zero, Mounted On Reservoir, PTFE s/c, Class A	2153	70
Automatic Zero, Mounted On Reservoir PTFE s/c, Class B	2154	70
Automatic Zero, Mounted On Reservoir, Boroflo s/c, Class A	2155	71
Automatic Zero, Mounted On Reservoir, Boroflo s/c, Class B	2156	71



Cones

Sediment, Imhoff, Sharp Tip	2160	73
Sediment, Imhoff, Blunt Tip	2180	73



Condensers

Liebig	2340	75
Liebig With i/c Joints	2400	75
Allihn With i/c Joints	2480	76
Graham Coiled Distillate Type, With i/c Joints	2560	76
Friedrich With i/c Joints	2640	77
Double Surface	2641	77



Cylinders

Colour Comparison, Nessler	2975	80
Graduated With i/c Stopper, Class A	2981	81
Graduated With i/c Stopper, Class B	2982	81
Graduated With Pour Out, Class A	3021	82
Graduated With Pour Out, Class B	3022	82
Graduated as per ASTM D 86	3023	83
Graduated With Pour Out Schellbach Type	3024	83

Description	Cat No.	Pg No.
Graduated With i/c Stopper Class A, ASTM	3026	84
Graduated With i/c Stopper Class B, ASTM	3027	84
Karsten tube Horizontal	3030	85
Karsten Tube Vertical	3031	85
Tapped Density Cylinder	3032	86
Tapped Density Cylinder	3033	86
Tapped Density Cylinder	3034	86
Rain Measure, Graduated	3070	87



Dessicators

With Cover Plastic Knob	3082	89
With PTFE Spindle (Vacuum)	3083	89
With Cover Plastic Knob, Amber	3084	90
With PTFE Spindle Amber (Vacuum)	3085	90



Dishes

Crystallizing	3140	93
Culture, Petri	3160	93
Culture Petri S-line	3165	94
Trays, Drying	3170	95
Evaporating	3180	95



Distilling Apparatus

Ammonia With Graham Condenser i/c joints	3340	97
With Graham Condenser i/c joints and i/c stopper	3360	97
With Friedrichs Condenser i/c joint	3380	98
With Friedrichs Condenser i/c joint (compact)	3440	98
Essential Oil Determination Apparatus	3450	99



Description	Cat No.	Pg No.
Clevenger Apparatus	3451	99
Alcohol Distillation Unit	3452	100
R M Value Apparatus	3454	100
Dean And Stark	3602	101



Water Distillation Unit

All Glass, Single Distillation unit	3361	103
All Glass, Double Distillation unit	3362	104
Mono Quartz Distillation unit		
with Quartz Boiler and Borosilicate Condenser	3363	106
Mono Quartz Distillation unit		
with Quartz Boiler and Quartz Condenser	3364	107
All Quartz Double Distillation unit,		
Demountable Bolier Panel Series	3365	109
Water Softener	3367	111
Aqua Therm Heat Exchanger	3368	111
Silicon Tubing	3369	112
Cabinet Still	3370	113



Extraction Appratus

Soxhlet Extractor	3740	114
Condenser, Allihn For Soxhlet Apparatus	3741	114
Extraction Apparatus, complete		
Allihn Condenser with i/c joint	3840	115

Description	Cat No.	Pg No.
-------------	---------	--------



Flasks

Boiling, Flat Bottom	4060	117
Boiling Flat Bottom With i/c Joint	4100	117
Boiling Round Bottom	4260	118
Dissolution Flask	4265	119
Flask with Side Cut	4266	119
Flask As per USP, Amber	4267	120
Flask with side cut, As per USP, Amber	4268	120
Dissolution apparatus without side cut as per USP	4270	121
Boiling, Pear Shaped With i/c Joint	4315	121
Pear Shape Suitable for Rotary Evaporators		
With Ground Socket	4320	122
Reaction, Wide Mouth, Flat Flange	4330	123
Lids For Reaction Flask	4331	123
Boiling Round Bottom Short Neck With i/c Joint	4380	124
Round Bottom Two Neck, Center Neck,		
And One Angled Side Neck With i/c Joint	4381	125
Round Bottom Two Neck, Center Neck,		
And One Parallel Neck With i/c Joint	4382	126
Round Bottom Three Necks, Center Neck		
And Two Angled Side Neck With i/c Joint	4383	127
Round Bottom Three Necks, Center Neck		
And Two Parallel Side Neck With i/c Joint	4384	128
Round Bottom Four Necks, Center Neck		
And Three Angled Side Neck With i/c Joint	4385	129
Round Bottom Four Necks, Center Neck		
And Three Parallel Side Neck With i/c Joint	4386	130
Culture, Haffkine	4422	131
Distilling, With Side Arm	4620	131
Distilling, With i/c joint as per ASTM D86	4621	132
Erlenmeyer, Conical, Narrow Mouth	4980	133
Erlenmeyer, Conical, Long Neck, Without Rim	4981	134
Conical Without Rim	4982	134
Erlenmeyer, Conical, Amber	4989	135
Erlenmeyer, Conical, Narrow Mouth With i/c Joint	5000	135
Chromatography sprayers	5010	136
Chromatography sprayers head	5011	136
Tilt Measure	5015	137
Erlenmeyer, Conical, Narrow Mouth With i/c		
Stopper, Amber	5019	137



Description	Cat No.	Pg No.
Erlenmeyer, Conical, Narrow Mouth With i/c Stopper	5020	138
Conical With Screw Cap	5021	138
Erlenmeyer, Conical, Wide Mouth	5100	139
Arsenic determination apparatus as per USP	5200	139
Arsenic determination apparatus Gutzeit	5201	140
Arsenic determination apparatus as per BP	5202	140
Arsenic determination apparatus as per IP	5203	141
Arsenic determination apparatus as per IS	5204	141
Filtering, Bolt Neck With Tubulation	5340	142
Iodine Determination With i/c Stopper	5400	142
Kjeldahl, Round Bottom	5420	143
Kjeldahl, With i/c Joint	5430	143



Filtration Assembly

All Glass Filter Holder	5350	145
Glass filter holder with silicon stopper	5360	146
Glass holder with silicon stopper	5370	147



Volumetric Flasks

Petroleum Jars	5639	150
Volumetric With i/c Stopper, Class A	5640	151
Volumetric With i/c LDPE Stopper, Class B	5642	152
Volumetric Wide Mouth with i/c Stopper Class A	5643	153
Volumetric With i/c LDPE Stopper, USP Class A	5645	154
Volumetric With i/c LDPE Stopper Class A	5646	155
Volumetric With i/c Stopper, Amber, Class A	5648	156
Volumetric With i/c Stopper, Amber, Class B	5649	157
Volumetric, Sugar Estimation Without Stopper	5650	158
Volumetric, Class A with Red Mark	5651	159
Volumetric, Class A with Blue Mark	5652	160
Volumetric, Wide Mouth, Class A, Amber	5653	161
Volumetric, Wide Mouth, Class A, Amber	5655	162

Description	Cat No.	Pg No.
-------------	---------	--------



Chromatography Columns

Plain With Glass Stopcock	6100	164
Plain With Boroflo Stopcock	6110	165
Plain With PTFE Stopcock	6120	165
Plain With Sintered Disc And Glass Stopcock	6101	166
Plain With Sintered Disc And Boroflo Stopcock	6111	167
Plain With Sintered Disc And PTFE Stopcock	6121	167



Funnels

Plain, 60° Angle, Long Stem	6140	169
Tubes funnel test tubes	6150	169
Powder	6220	170
Powder stem with cone	6230	170
Separating, Globe Shape	6340	171
Separating, Pear Shape	6400	172
Separating, Pear Shape Boroflo s/c, i/c Glass Stopper	6402	172
Separating, Pear Shape PTFE s/c	6403	173
I/c Glass Stopper	6403	173
Pressure Equilising Cylindrical With PTFE Stopcock	6405	173



Gas Generator

6550 174



Jars

Jars, Rectangular, Museum with Cover	6910	175
S-Line Museum Jar	6920	175



Description	Cat No.	Pg No.
-------------	---------	--------



Kettles

Resin Reaction	6947	176
Bottoms Only For Kettles No. 6947	6948	177
Covers Only For Kettles No. 6947	6949	177



Pipettes

Artificial Insemination	7040	180
Drum Sampling	7041	180
Bacteriological Graduated	7056	181
Milk Gerber Tests	7057	181
Measuring (Mohr Type) Class A	7059	182
Measuring (Mohr Type) Class B	7060	182
Measuring (Mohr Type) Class B White Marking	7062	183
Serological, Class A	7079	183
Serological, Class B	7080	184
Serological, Class B White Marking	7082	184
Transfer, Volumetric, Class A	7100	185
Transfer, Volumetric Class A as per ASTM	7101	185
Transfer, Volumetric, Class B	7102	186
Transfer, Volumetric, Class B as per ASTM	7103	186
Ostwald - Folin	7105	187



Weighing Scoop

Weighing Scoop	7200	188
----------------	------	-----

Description	Cat No.	Pg No.
-------------	---------	--------



Tubes

Blood Sugar, Folin-wu	7840	189
Digestion, Folin-wu	7920	189
Centrifuge, Conical Bottom, Plain	8060	189
Centrifuge Conical Bottom, Graduated	8080	190
Centrifuge, Conical Graduated i/c Stopper	8084	190
Stoppers interchangeable ground joint solid Penny head	8100	190
Centrifuge, Short Conical Bottom, Heavy Duty Plain	8320	191
Centrifuge, Short Conical Bottom, Heavy Duty Graduated	8340	191
Stoppers interchangeable ground joint solid penny head amber	8400	191



Adapters

Adapter, Enlarging With i/c Joints	8800	192
Adapter, Reducing With i/c Joints	8820	192
Receiver Bent With Vacuum Connection	8830	193
Slopping Plane Still Head	8841	193



Test Tubes / Culture Tubes

Melting Tube, Thiel	9540	194
With Rim	9800	195
For culture collection	9801	195
Without Rim	9820	196
Tube Flat Bottom Without RIM	9821	196
Tube Flat Bottom with RIM	9822	197
Test Tubes, Graduated, With i/c Stopper	9830	197
COD Digestion Tube	9835	198
Stirrer	9850	198
Stirrer with PTFE Blade	9860	199



Description	Cat No.	Pg No.
Culture, Media, Round Bottom, With Screw Cap	9900	200
Culture Amber Media Round Bottom, With Screw Cap	9901	200
Culture Media, Flat Bottom, With Screw Cap	9910	201
Culture Media, Flat Bottom, With Screw Cap And Rubber Liner	9911	201



Watch Glasses

Watch Glasses S-line	9986	202
----------------------	------	-----



Sintered Ware

Technical Data		203
Cleaning Of Sintered Ware		204
Crucibles, Gooch Type With Sintered	32060	206
Tubes, Filter For Gooch Crucibles	32061	206
Funnels, Buchner Type With Sintered Disc	36060	207
Tubes, Sealed, Reduced Ends (Pipeline Filter), With Sintered Disc	39580	208



Quartz Ware

Beakers, Low Form, With Spout	1002	209
Muffle Trays	3175	210
Dishes / Basins, Round With Spout	3185	210
Combustion, Boat With Handle	3186	210
Crucible, Without Lid	3190	211
Lids For Crucible	3191	211
Volatile Matter Crucible		212
Silica, Triangle On Nichrome (Translucent)	3198	212
Kjeldahl With Round Bottom Quartz	5435	213
Volumetric Flasks	5644	213
Leco Tube	8500	213

Description	Cat No.	Pg No.
-------------	---------	--------



Chromatography Vials

9mm or Universally Compatible Screw Cap Vials	216
8mm or Narrow Neck Screw Cap Vials	217
10 mm or Wide Mouth Screw Cap Vials	217
11mm Snap Cap Vials	218
11mm Crimp Cap Vials	219
13mm or Screw Cap Rinse Vials	220
22mm Headspace GC Vials	221



Microscope Slides


Microscope Slides	9100	223
Cover glass	9115	224



Vetroclean

Vetroclean	9001	225
------------	------	-----



Description	Pg No.
	
Premium Pipettes Tips	
Bulk	
10 µl Universal Graduated Tips	228
20 µl Universal Graduated Tips with filter only	228
50 µl Universal Graduated Tips with filter only	228
100 µl Universal Graduated Tips With Filter only	229
200 µl Universal Graduated Tips	229
1000 µl Universal Graduated Tips	229
Rack	
10 µl Universal Graduated Tips	230
20 µl Universal Graduated Tips with filter only	230
50 µl Universal Graduated Tips with filter only	230
100 µl Universal Graduated Tips With Filter only	231
200 µl Universal Graduated Tips	231
1000 µl Universal Graduated Tips	231
Reloading stack	232
Empty Tips Boxes	232
Caution Notice	233



from **BOROSIL**



1506 - Bottles Reagent, Square With DIN Thread, Graduated, With PP Screw Cap (GL 80) and PP Pouring Ring

Pg No. 48



3084 - Desiccators, With Cover and Porcelain Plate, Plastic Knob, Amber

Pg No. 90



3085 - Desiccators, Vacuum, stopcock with PTFE spindle and Porcelain plate, Amber

Pg No. 90



4270 - D - Flasks for Dissolution Apparatus without side cut, as per USP

Pg No. 121



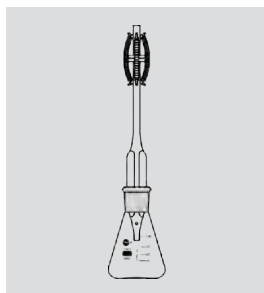
5200 - Arsenic Determination Apparatus as per USP

Pg No. 139



5201 - Arsenic Determination Apparatus Gutzeit

Pg No. 140



5202 - Arsenic Determination Apparatus as per BP

Pg No. 140



5203 - Arsenic Determination Apparatus as per IP

Pg No. 141



5204 - Arsenic Determination Apparatus as per IS

Pg No. 141



5653 - Flasks, Wide Mouth Volumetric With Interchangeable Solid Glass Stopper, Amber, Class A, With Certificate

Pg No. 161



9822 - Tube Flat Bottom with RIM

Pg No. 197



technical data

Borosil Low Expansion Borosilicate Glass:

From the 16th century to the present day, chemical research teams have been using glass containers for a very simple reason... As the glass container is transparent, the contents and the reaction are clearly visible. However, since chemists need to heat, cool and mix chemical substances, ordinary glass is not always appropriate for laboratory work.

Laboratory work requires apparatus made of glass that can readily be moulded into any desired shape or form. It requires glass that offers maximum inertness when in contact with the widest range of chemical substances. The glass should have the capability to withstand thermal shock without fracture, and it should facilitate high temperature work without deforming. It should be resilient enough to survive the everyday knocks to which it will be subjected in normal laboratory handling, washing and sterilising processes.

Borosil is the trade name of such a glass.

The products represent optimum mechanical, thermal and chemical behaviour. This glass is used in laboratories as well as for industrial applications, where thermal shock resistance, mechanical resistance as well as unusual chemical resistance are required.

Borosil glass is a low alkali borosilicate Type 3.3 glass. Its typical chemical composition is given below. It is virtually free of the Magnesia-Lime-Zinc group, and is also completely free of arsenic and other heavy material.

	Approx % by weight
SiO ₂	81
B ₂ O ₃	13
Na ₂ O / K ₂ O	4
Al ₂ O ₃	2

Thermal Properties

Borosil glass has a low co-efficient of thermal expansion. Consequently, the thermal stresses under a given temperature gradient are also low. The glass can withstand higher temperature gradients and also sudden temperature changes / thermal shocks. Minute scratching of the glass surface can, however, reduce its thermal resistance.

'Strain Point' should be regarded as the maximum safe operating temperature for Borosil glassware. When heated above 500°C, the glass may acquire permanent stresses on cooling.

All Borosil laboratoryware is annealed in a modern Lehr, under strictly controlled conditions to ensure minimal residual stresses in the products.

The typical thermal properties of Borosil glassware are mentioned below :

Coefficient of Linear Expansion	32.5 x10 ⁻⁷ /°C
Strain Point	515°C
Annealing Point	565°C
Softening Point	820°C
Specific Heat	0.2
Thermal Conductivity (Cal / cm ³ / °C / sec)	0.0027

Chemical Durability

Borosil is highly resistant to water, neutral and acid solutions, concentrated acids and their mixtures, as well as to chlorine, bromine, iodine and organic substances. Even during an extended period of reaction and at temperatures above 100°C, its chemical resistance exceeds that of most metals and other materials. It can withstand repeated dry and wet sterilisation without surface deterioration and subsequent contamination. The resistance to attack by various chemicals is shown below. Only hydrofluoric acid, very hot phosphoric acid and alkaline solutions damage the glass surface with rising concentration and temperature.

Contact chemical	Duration In Hr	Loss in Wt mg / m ²
Water distilled at 100°C	6	10
Water Vapour Steam at 121°C	1	75
Acid HCL	6	100
80% H ₂ SO ₄ at 130°C	12	140
Alkali-1N soln. of Na ₂ CO ₃ boiling	6	4000
Infusion Fluids Isotonic		
NaCl (0.85%) 121°C	2½	70
Glucose (5%) 121°C	2½	50

Fabricating with Borosil Glass

As it has low expansion and is workable, **Borosil** glass can be shaped, formed or joined into complex apparatus. Analysts can even do so in their own laboratory and keep modifying until the desired apparatus is developed. In cases where annealing in a controlled oven is difficult, the analyst can perform flame annealing.

Optical Properties: Laboratory glassware made from **Borosil** glass shows no noticeable absorption in the visible region of the spectrum. Consequently, it appears clear and colourless.



Safe Use of Glassware

Borosil laboratory apparatus is designed to perform efficiently and last long, provided it is used with proper care. The following notes are presented to assist users in deriving the maximum life and performance from their Borosil apparatus. Our representatives will be happy to offer you advice on any aspect concerning the safe use of our products.

Heating and Cooling

Glass may suffer damage in three ways.

- It may break under thermal stress in the 'Steady State', that is when a constant thermal gradient is established through the glass.
- It may break under the transient stress of a thermal shock, which may be sudden heating or cooling.
- If heated beyond a certain temperature, it may acquire a permanent stress which, on cooling, could subsequently cause failure.

The following precautions will assist in preventing failures during heating and cooling procedures.

- Do not leave the vessel unattended when evaporation work is being carried out. The vessel may crack or explode as the 'dryness' condition approaches and if the heat source is not adjusted correctly. Decrease the temperature gradually as the liquid level drops.
- Always stay cautious when removing glassware from a heat source. Avoid placing it on a cold or damp surface.
- Even though glassware can withstand extreme temperatures, please keep in mind that sudden temperature changes may cause the vessel to break.
- Always cool vessels slowly to prevent thermal breakage.
- Never apply heat to badly scratched or etched vessels as their thermal strength would have been greatly reduced.
- Never apply point source heating to a vessel; it increases the possibility of breakage.
- Always diffuse the heat source by using a metal gauze or air/water bath. Alternatively, move the vessel slowly in relation to the heat source to ensure even heating.
- Adjust the Bunsen Burner to get a large, soft flame. It will heat slowly, but uniformly. Uniform heat is a critical factor for some chemical reactions.
- Ensure that the flame is in contact with the vessel below the liquid level. Heating above this level may result in breakage of the vessels.
- Always use anti-bumping devices in the vessel, such as powdered pumice or glass wool, when the vessel and its contents are required to be heated rapidly.

- Never use any material with sharp edges, such as broken porcelain, as an anti-bumping device. This will cause internal abrasions and reduce the mechanical and thermal strength of the vessel.
- Thick-walled glassware should not be subjected to direct flame or any other localised heat source. An electric immersion heater is ideally used for heating vessels of this type.
- Avoid heating glassware over electric heaters with open elements. Uneven heat of this type can induce localised stress and increase the possibility of breakage.
- Always keep in mind that a hot plate will retain heat long after the appliance has been switched off.
- Always ensure that the surface of the hot plate is larger in area than the base of the vessel being heated. A plate that is under-sized for the job at hand will result in uneven heating and may even cause breakage of the glassware.
- Always ensure that manufacturer's instructions are followed when using electrical heat sources.

Mixing and Stirring

- Always use a teflon sleeve or a similar device on stirring rods, to prevent scratching of the inside of the vessel.
- When using a glass vessel with a magnetic stirrer, always use a covered follower. This prevents abrasion of the inside of the vessel.
- When using a glass or metal mechanical stirrer in a glass vessel, always pre-determine the height of the stirrer before use, to ensure that the stirrer blade does not come in contact with the base or sides of the vessel.
- Never mix sulphuric acid and water inside a glass measuring cylinder. The heat caused by the reaction can break the base of the cylinder.

Vacuum and Pressure

- Never use glassware beyond the recommended safe limit.
- Always use a safety screen when working with glassware subjected to pressure or vacuum.
- Never subject glassware to sudden pressure changes. Apply and release positive or negative pressures gradually.



Joining and Separating Glass Apparatus

- When storing glass stopcocks and joints, insert a thin strip of paper between the joint surfaces to prevent them from sticking.
- Do not store stopcocks with lubricants on the ground surfaces for long durations.
- Glass stopcocks on Burettes and Separating Funnels require frequent lubrication to prevent them from sticking.
- If a ground joint sticks, separation can usually be achieved by carefully rocking the Cone in the socket, or gentle tapping the socket flange on a wooden surface, or by heating the socket and not the Cone in a localised flame. Using penetrating oil facilitates separation.
- When using lubricants, it is advisable to apply a light coat of grease all around the upper part of the joint. Use only a small amount, and avoid greasing the part of the joint that comes in contact with the inside of the apparatus.
- Three types of lubricants are commonly used on standard taper joints.
 - (a) Hydrocarbon grease is the most widely used. It can be removed easily by most laboratory solvents, including acetone.
 - (b) As hydrocarbon grease is easy to remove, silicon grease is usually preferred for higher temperature or high vacuum applications. It can be removed with chloroform easily.
 - (c) For long-term reflux or extraction reactions, a water-soluble, organic and insoluble grease such as glycerin, is suitable. Glycerin can be removed by means of water.
- When inserting glass tubing into a bung, it is recommended to use water, oil or glycerol on both, the tubing as well as the rubber bung. Always wear heavy protective gloves or similar protection when carrying out this operation.
- Always fire-polish the rough ends of the glass tubing before attempting to insert it into flexible tubing. The lubricants recommended above may also prove useful.
- Never attempt to pull a thermometer out of a rubber bung; always cut the bung away.

Personal Safety

- Use tongs or asbestos gloves to remove any glassware from heat. Hot glass can cause severe burns.
- Protective gloves, safety shoes, aprons and goggles should be worn to safeguard against chemical accidents, spilling or splattering.
- Always flush the outside of the acid bottle with water before opening it. Do not place the stopper on the counter top, where someone else may come in contact with acid residue.
- Care should be taken when handling mercury. Even a miniscule amount of mercury in the base of a drawer can poison the atmosphere in an entire room. Mercury toxicity is cumulative and the element's ability to amalgamate with a number of metals is well known. Following any accident involving mercury, the area should be checked thoroughly to ensure that there are no globules remaining. All mercury containers should be kept well stoppered.
- Never drink from a beaker. A beaker intended specifically for the use of drinking is a hazard in the laboratory. Do not taste chemicals to identify them. Smell chemicals only when necessary, and only by wafting a small amount of vapour towards the nose.
- Avoid using a Pipette with the mouth, particularly when using concentrated acids, alkalis or potentially bio-hazardous materials. Use mechanical means, such as a rubber bulb or an automatic dispenser.
- Do not fill the receptacle with any material other than that mentioned on the label. Label all containers before filling. Discard the contents of any unlabelled containers.
- To prevent breakage when clamping glassware, do not permit glass-to-metal contact, and do not use excessive force to tighten the clamps.
- Do not look down into a Test Tube being heated or containing chemicals, and do not point its open end at another person. A reaction could cause the contents to be ejected suddenly, resulting in injury.
- Splattering from acids, caustic materials and strong oxidising solutions on the skin or clothing should be washed off immediately with large quantities of water.
- When working with chlorine, hydrogen sulphide, carbon monoxide, hydrogen cyanide and other highly toxic substances, always use a protective mask. Alternatively, perform these experiments under a fume hood in a well ventilated area.
- In working with volatile materials, please keep in mind that heat causes expansion and confinement of such expansion results in explosion. Also remember that this danger exists even if external heat is not applied.



- ◆ Perchloric acid is particularly dangerous as it explodes when brought in contact with organic materials. Do not use perchloric acid around wooden benches or tables.
- ◆ Keep perchloric acid bottles on glass or ceramic trays with capacity that is adequate to hold all the acid in case the bottle breaks.
- ◆ When using perchloric acid, always wear protective clothing.
- ◆ When using hot plates and other electrical equipment, always ensure that the wire and plugs are in good condition. Do not handle an electrical connection with damp hands.

Cleaning:

Clean glassware is an essential of good laboratory technique, because even the most carefully executed process may produce an erroneous result if the glassware used is dirty. Glassware must always be physically clean as well as chemically clean, in many cases it must be sterile. All glassware must be absolutely grease-free. The safest indicator of cleanliness is uniform wetting of the surface with distilled water. This is particularly important in glassware used for measuring the volume of liquids. Grease and other contaminants prevent the glass from becoming wet uniformly. This, in turn, alters the volume of residue that adheres to the walls of the glass container, thus affecting the volume of liquid measured or delivered. Abrasive cleaners and abrasive sponges should not be used on laboratory glassware as these may damage the surface of the glass. Such damage to the surface can affect the properties of the glass, and limit further use of the product.

- ◆ Cleaning of glassware that has contained hazardous materials must be undertaken only by experienced personnel.
- ◆ Most new glassware is slightly alkaline in reaction. For precision chemical tests, new glassware should be soaked for several hours in acid water (1% solution hydrochloric acid or nitric acid) before washing.
- ◆ Glassware that has been contaminated with blood clots, culture media, etc., must be sterilised before cleaning.
- ◆ If the glassware becomes unduly clouded or dirty, or contains coagulated organic matter, it must be cleaned with chromic acid cleaning solution. The dichromates should be handled with extreme care as it is a powerful corrosive.
- ◆ Wash glassware as quickly as possible after use, but if delay is unavoidable, the articles should be kept to soak in water.
- ◆ Grease can be removed by means of weak sodium carbonate solution, acetone or fat solvents. Never use strong alkalis.
- ◆ Hot water, along with recommended detergents, should be used. If the glass is extremely dirty, a cleaning powder with a mild abrasive action may be applied, provided the surface is not scratched.
- ◆ During the washing, all parts of the article should be thoroughly scrubbed with a brush selected for the shape and size of the glassware. Brushes should always be in good condition to avoid any abrasion of the glassware.
- ◆ When chromic acid solution is used, the item may be rinsed with the cleaning solution or it may be filled and allowed to stand the amount of time depending on amount of contamination on the glassware.
- ◆ Special types of precipitate material may require removal with nitric acid, aqua regia or fuming sulphuric acid. These are very corrosive substances and should be used only when required.
- ◆ It is imperative that all soap detergents and other cleaning fluids be removed from glassware before use. This is especially important with the detergents, slight traces of which will interfere with serologic and culture reactions. After cleaning, thoroughly rinse with tap water ensuring that containers are partly filled with water, shaken and emptied several times. Finally rinse with deionised or distilled water.
- ◆ Drying can be undertaken either in baskets or on pegs in air or at a temperature not exceeding 120°C.
- ◆ Always Protect clean glassware from dust by use of temporary closures or by placing in a dustfree cabinet. For Cleaning Specific types of glassware, please refer below.



glassware cleaning tips



Pipettes cleaning :

- ◆ Place Pipettes with their tips down, in a cylinder or tall jar of water, immediately after use. Do not drop them into the jar as this may break or chip the tips and render the Pipettes useless for taking accurate measurements. A pad of cotton or glass wool at the base of the jar will help to prevent breaking of the tips. Please ensure that the water level is high enough to immerse the greater portion of all or each of the Pipettes. At a convenient time, the Pipettes may then be drained and placed in a cylinder or jar of dissolved detergent or, if extremely dirty, in a jar of chromic acid cleaning solution. After soaking them for several hours, or overnight, drain the Pipettes and run tap water over and through them until all traces of dirt are removed. Soak the Pipettes in distilled water for at least one hour. Remove them from the distilled water, dry the external surface with a cloth, shake out the water and dry.
- ◆ In laboratories where a large number of Pipettes are used everyday, it is convenient to use an automatic Pipette washer. Polyethylene baskets and jars may be used for soaking and rinsing Pipettes in chromic acid cleaning solution. Electrically heated metallic Pipette driers are also available.
- ◆ After drying, place the Pipettes in a dust-free drawer. Wrap serological and bacteriological Pipettes in paper or place them in Pipette cans and sterilise them in the dry air steriliser at 160°C for two hours. A Pipette used for transferring infectious material should have a plug of cotton placed in its mouth end before sterilising.

Burettes cleaning (with glass stopcock)

- ◆ Remove stopcock key and wash the burette with detergent and water.
- ◆ Rinse with tap water until all the dirt is removed. Then rinse with distilled water and dry.
- ◆ Wash the stopcock key separately. Before the stopcock key is replaced in the burette, lubricate the joint with a small amount of lubricant. Remember that burette stopcock keys are not interchangeable.
- ◆ Always cover burettes when not in use.
- ◆ Glass stopcocks are not interchangeable.
- ◆ The glass key and burette bore should be marked properly to avoid mixup.



Culture Tubes

- Culture tubes which have been used previously must be sterilized before cleaning. The best general method for sterilising culture tubes is by autoclaving for 30 minutes at 121°C (15 lb pressure). Media which solidify on cooling should be poured out while the tubes are hot. After the tubes are emptied, brush with detergent and water, rinse thoroughly with tap water, rinse with distilled water, place in a basket and dry.
- If tubes are to be filled with a medium which is sterilized by autoclaving, do not plug until the medium is added. Both medium and tubes are thus sterilized with one autoclaving.
- If the tubes are to be filled with a sterile medium or if they are to be sterilized by the fractional method sterilize the tubes in the autoclaves or dry air sterilizer before adding the medium.

Serological Tubes

- Serological Tubes should be chemically clean but need not be sterile. However, specimens of blood which are to be kept for some time at room temperature should be collected in a sterile container. It may be expedient to sterilize all tubes as routine.
- To clean and sterilize tubes containing blood, discard the clots in a waste container and place the tubes in a large basket. Put the basket with others, in a large bucket or boiler. Cover with water, add a fair quantity of soft soap or detergent and boil for 30 minutes. Rinse the tubes and clean with brush, rinse and dry with the usual precautions.
- It is imperative when washing serological glassware that all acid, alkali and detergent be completely removed. Both acid and alkali in small amounts destroy complement and in larger amounts produce hemolysis. Detergents interfere with serologic reactions.
- Serological tubes and glassware should be kept separate from all other glassware and used for nothing except serologic procedures.

Dishes And Culture Bottles

- Sterilize and clean as detailed under Culture Tubes.
- Wrap in heavy paper or place in a petri dish can.
- Sterilize in the autoclave or dry air sterilizer.



autoclaving laboratory glassware

Application Note

Autoclaves are widely used to sterilise instruments, glassware and plasticware, solutions and media, and to decontaminate biological wastes. Due to the physical hazards (e.g. heat, steam and pressure) associated with autoclaving, extra care must be taken to use them safely. Each Autoclave has unique characteristics and operating requirements. Please review and understand the owner's manual before using any Autoclave for the first time, and every time thereafter. Also, please follow all the safety regulations for autoclaving, laid down by your institution.

Autoclaving Borosil Glassware

- Borosil recommends the following safety practices when autoclaving laboratory glassware:
- Never autoclave items containing corrosives (e.g. acids, bases, phenol), solvents or volatiles (e.g. ethanol, methanol, chloroform) or radioactive materials.
- Place individual glassware vessels within a heat-resistant plastic or metal tray on a shelf or rack. Never place them directly on the Autoclave base or floor. Always maintain space (>5 cm) between glass vessels to give them room to expand while heating, and to prevent them from hitting other vessels when entering or leaving the Autoclave.
- Add water rising up to 1/4 to 1/2 inch in the tray, so that the glassware will heat more evenly.
- Check any plastic caps, tubing or other items to ensure they can be safely autoclaved with the glassware.
- Fill the glassware only half full with the liquids to be sterilised. Take into account, the volume of liquid to be autoclaved. A 2-litre flask containing 1 litre of liquid takes much longer to sterilise than four 500 ml flasks, each containing 250 ml of liquid.
- Do a test run when autoclaving larger volumes of liquid, to make sure that the liquid has reached 121°C.
- Large heavy glassware, such as 3L or larger spinner flasks, 5L or larger bottles and carboys should have a small amount of distilled water placed inside them to help generate steam when they are being sterilised dry in an Autoclave.
- Suspend an Autoclave thermometer with a thin wire, in the middle of the liquid-filled container to record the highest temperature reached. Then, check its reading after the Autoclave run is complete. If the temperature is too low, then the run-time will need to be increased or the volume will need to be reduced.
- To prevent bottles from getting shattered during pressurisation, the caps of the vessels with liquids must be loosened completely before loading. Always use the slow exhaust or liquid cool cycle when autoclaving liquids, to prevent the liquid from boiling over, causing loss of the contents.
- Never autoclave a sealed vessel containing liquids as this may result in an explosion of the super-heated liquid and steam during the cycle, or when the vessel is opened.
- Wear heat-resistant gloves when opening the Autoclave door after a cycle. When removing items from an Autoclave, at least a rubber apron, rubber sleeve protectors and heat-resistant gloves should be worn.
- Wait for 5 minutes before removing dry glassware from the Autoclave, and wait for 10 to 20 minutes before removing glassware containing liquids. The larger the volume of liquid, the longer you should wait. Liquids removed too soon may boil and overflow from the vessel, causing burns to the operator.
- Do not tighten caps on the vessels immediately after autoclaving as the cap or the vessel may get shattered due to the vacuum resulting from the cooling of the steam in the vessel. This is particularly important for larger vessels. Caps with liners may have their liner sucked into the vessel if the cap on the vessel opening is not loose enough.
- Do not put hot glassware, especially large bottles, from an Autoclave (or any other heat source) on to a cold bench top. The stress that is induced will often cause the base of the vessel to crack or fall off, releasing its hot contents.
- For non-liquid loads, please allow the glassware to cool for 15 minutes before touching it with ungloved hands.
- For liquid loads, please allow the liquid to stand for a full hour before touching the glassware with ungloved hands. Ensure that others in the vicinity are aware of the presence of a heat hazard.



BOROSIL®

Unique square shape GL-80 Bottles



Manufactures from 3.3 borosilicate glass for better chemical and thermal resistance

The 80mm wide neck is a special thread design for easy opening and closing, which enables easy pouring of powders, granules and liquids

The large and stable base area enables safe and easy storage

Square shapes allows easy gripping and handling

Smooth edges provide easy clean and handling

Bottles are provided with the printed white panel for labelling of contents

1506 - Bottles Reagent, Square With DIN Thread, Graduated, With PP Screw Cap (GL 80) And PP Pouring Ring

Product Code	Capacity ml	Approx W x B x H mm	Neck Specification	Quantity Per Case
1506024	500	94 x 94 x 141	GL-80	10
1506029	1000	105 x 105 x 187	GL-80	10
1506030	2000	115 x 115 x 260	GL-80	10
1506033	5000	160 x 160 x 357	GL-80	1

Amber colour bottles are available on request.



3084 - Desiccators, With Cover And Porcelain Plate, Plastic Knob, Amber

- Complies with IS 6128
- Suitable for light sensitive products

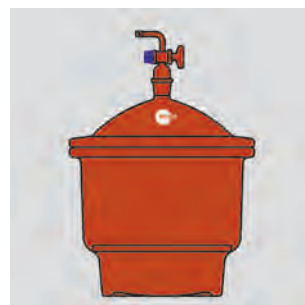
Product Code	Approx ID Ground Flange mm	Quantity Per Case
3084041	100	1
3084042	150	1
3084043	200	1
3084044	250	1
3084045	300	1



3085 - Desiccators, Vacuum, stopcock with PTFE spindle and Porcelain plate, Amber

- Complies with IS 6128
- Suitable for light sensitive products

Product Code	Approx ID Ground Flange mm	Quantity Per Case
3085041	100	1
3085042	150	1
3085043	200	1
3085044	250	1
3085045	300	1

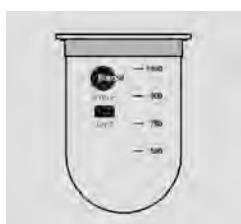




4270 - D - Flasks for Dissolution Apparatus without side cut

- Vessels confirms to all requirements of USP
- Smooth hemispherical base with no flaws or defects, straight sides and a flat flange
- Graduated in intervals of 50ml
- Ideal for determining the dissolution characteristics of drugs in capsules and tablets

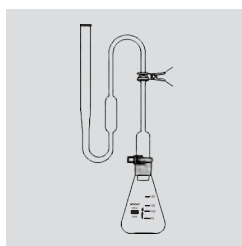
Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
4270029	1000	107 x 161	10



5200 - Arsenic Determination Apparatus as per USP

- Designed for the estimation of Arsenic

Product Code	Quantity Per Case
5200001	1

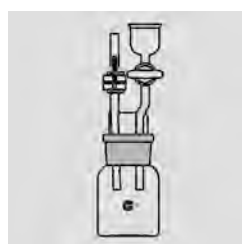




5201 - Arsenic Determination Apparatus Gutzeit

- Designed for the estimation of Arsenic

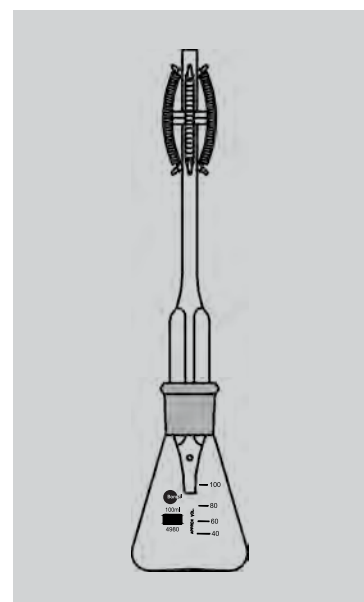
Product Code	Quantity Per Case
5201001	1



5202 - Arsenic Determination Apparatus as per BP

- Designed for the estimation of Arsenic

Product Code	Quantity Per Case
5202001	1

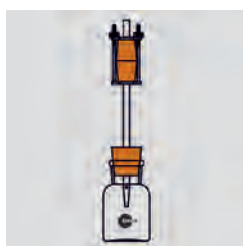




5203 - Arsenic Determination Apparatus as per IP

- Designed for the estimation of Arsenic

Product Code	Quantity Per Case
5203001	1



5204 - Arsenic Determination Apparatus as per IS

- Designed for the estimation of Arsenic

Product Code	Quantity Per Case
5204001	1



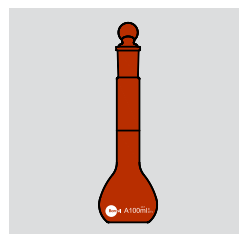


5653 - Flasks, Wide Mouth Volumetric With Interchangeable Solid Glass Stopper, Amber, Class A, With Batch Certificate

- Complies with ISO / DIN 1042
- Calibration at 20°C
- Specially designed wide mouth for testing bigger dia. Tablets without making it in powder form
- Manufactured from 3.3 borosilicate glass with an amber coating on exterior surfaces to facilitate use with light sensitive solutions

Product Code	Capacity ml	Tolerance \pm ml	Stopper Size	Quantity Per Case
5653009D	25	0.06	14 / 23	5
5653012D	50	0.10	14 / 23	10
5653016D	100*	0.02	19 / 26	10
5653020D	200*	0.15	19 / 26	10

* Not covered under standards



9822 - Tube Flat Bottom with RIM

- Made of 3.3 borosilicate glass, designed with a flat bottom
- High thermal shock resistance
- Designed without a rim
- Used for pathological tests and disintegration apparatus

Product Code	Approx O.D. x Length mm	Quantity Per Case
9822U06	18 x 138	400
9822U07	18 x 55	100
9822U04	14 x 110	800



NABL accredited laboratory



Our NABL-accredited laboratory for calibration and testing of Glass Volumetric products including Burettes, Cylinders, Volumetric Flasks and Pipettes (both Graduated and Volumetric), is now operational.

In this catalogue, we present the complete range of Borosil products that are available with a Calibration Certificate issued by the NABL-accredited laboratory.

In certain critical areas, it is mandatory that representative samples of Volumetric products used by the laboratories be sent to NABL-accredited laboratories for testing of the calibration.

With the establishment of our own facility, our customers can now get the products certified by our laboratory directly, without sending them to other laboratories, saving a considerable amount of time and cost.

Borosil
Borosil Glass Works Ltd.
Bandra Kurla Complex
Bandra East Mumbai

VYLINE GLASS WORKS LTD.
CALIBRATION LABORATORY

Calibration No. C-4491
1211191
No. : 1211191
Date : 13.12.2012

Customer Code : E 30 429P
Customer Ref. : SRP No 008

Calibrated for : Borosil Glass Works Ltd
Bandra Kurla Complex
Bandra East Mumbai

Sample Description : 2020 - Volumetric Flask
Capacity : 1000 ± 0.4 ml at 27 °C
Lab Sr. No./ID No. : V1211191
Date of calibration : 13.12.2012

Date of receipt : 10.11.2012
Measurement of Volume : (20 ± 2) °C
Calibration Purpose : Temperature : 68.0 ± 15.0% RH
Environmental conditions : Relative Humidity : 68.0 ± 15.0% RH

Nominal capacity (ml) : 1000 ml
Actual capacity (ml) : 998.821 ml
Expanded uncertainty (k=2) : 0.300 ml

Calibration Method : VGL Calibration Laboratory Procedure No. PM/VGL/S 42/A
Traceability of major equipments / materials / standards used : Certificate No. : WMLC/2011-C480
ID No. : WMLC/2011-C480
Equipment : VGL/W/1701
Set of Weights : VGL/W/1701

All the above equipments are traceable to National Standards through NABL accredited Laboratory.

Note :
• The calibration results in this certificate are valid at the time of and under the stated conditions of measurement for the particular sample identified above.
• This calibration certificate shall not be reproduced except in full without written permission of laboratory.

Authorized Signatory : Pradeep Jagtap
Checked by : Satish Chitambar
Calibrated by : Rishabh Dohery

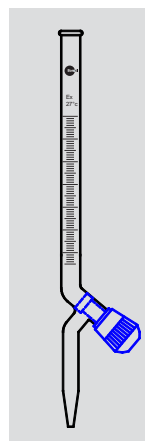
VYLINE
Plot No. 22 & 24 Bokhachar Bagicha Road,
Village : Dumala, Borunda, Post : Borunda,
Taluka : Rajapada, Bhavnagar - 383116, Gujarat
Email : cal@vylineglass.com
Phone : (02645) 254382
Fax : (02645) 229116
Page 1 of 1



2000 - Burettes, Boroflo GP (General Purpose), Screw Thread Stopcocks With PTFE Keys, Accuracy As Per Class A, With Certificate, NABL Certified

- Complies with IS 1997, ISO / DIN 385

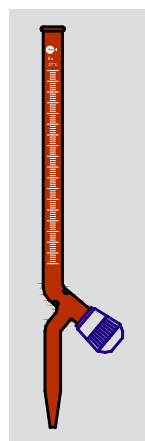
Product Code	Capacity ml	Graduation Interval	Tolerance \pm ml	Quantity Per Case
2000006	10	0.05	0.02	1
2000009	25	0.1	0.05	1
2000012	50	0.1	0.05	1
2000016	100	0.2	0.1	1



2001 - Burettes, Boroflo GP (General Purpose), Screw Thread Stopcocks PTFE Keys, Accuracy As Per Class A, With Certificate, NABL Certified, Amber

- Complies with IS 1997, ISO / DIN 385

Product Code	Capacity ml	Graduation Interval	Tolerance \pm ml	Quantity Per Case
2001009	25	0.1	0.05	1
2001012	50	0.1	0.05	1

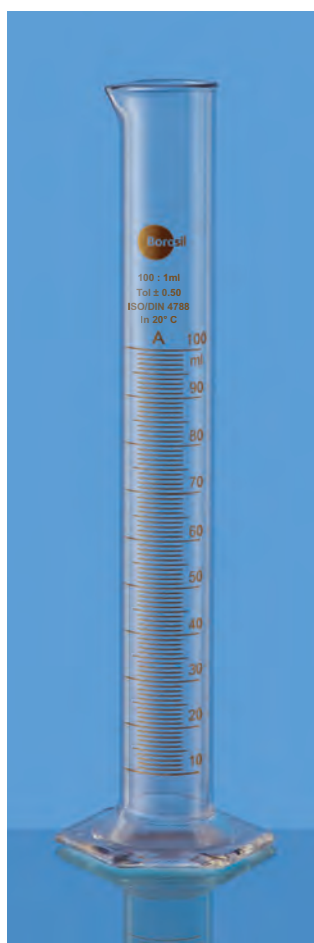
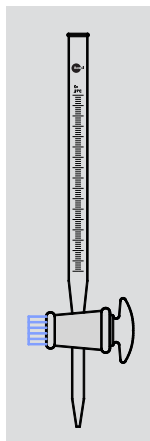




2002 - Burettes, Straight Bore Stopcock, Accuracy As per Class A, With Certificate, NABL Certified

- Complies with IS 1997, ISO / DIN 385

Product Code	Capacity ml	Graduation Interval	Tolerance \pm ml	Quantity Per Case
2002006	10	0.05	0.02	1
2002009	25	0.1	0.05	1
2002012	50	0.1	0.05	1
2002016	100	0.2	0.1	1



2010 - Cylinders, Graduated, Single Metric Scale, With Pour Out, With Hexagonal Base, Class A, With Certificate, NABL Certified

- Complies with IS 878, ISO / DIN 4788

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2010005	5	0.1	0.05	1
2010006	10	0.2	0.1	1
2010009	25	0.5	0.25	1
2010012	50	1.0	0.5	1
2010016	100	1.0	0.5	1
2010018	150	2.0	1.0	1
2010021	250	2.0	1.0	1
2010024	500	5.0	2.5	1
2010029	1000	10.0	5.0	1
2010030	2000	20.0	10.0	1



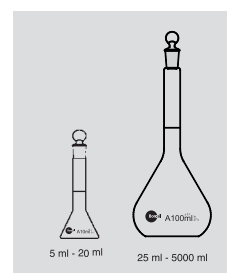


2020 - Flasks, Volumetric, With Interchangeable Solid Glass Stopper, Accuracy As Per Class A, With Certificate, NABL Certified

- Complies with IS 915, ISO / DIN 1042
- 5 to 20 ml supplied with Trapezoidal Shape for better stability
- Each flask engraved with individual serial number and supplied with NABL certificate of calibration traceable to National standards
- Manufactured from borosilicate glass for corrosion-free performance
- Amber enamel inscriptions

Product Code	Capacity ml	Tolerance \pm ml	Stopper Size	Quantity Per Case
2020001	1*	0.015	7 / 16	1
2020002	2*	0.015	7 / 16	1
2020005	5	0.025	7 / 16	1
2020006	10	0.025	7 / 16	1
2020008	20	0.04	10 / 19	1
2020009	25	0.04	10 / 19	1
2020012	50	0.06	12 / 21	1
2020016	100	0.10	14 / 23	1
2020020	200	0.15	14 / 23	1
2020021	250	0.15	14 / 23	1
2020024	500	0.25	19 / 26	1
2020029	1000	0.40	24 / 29	1
2020030	2000	0.60	29 / 32	1

* 1ml and 2 ml sizes are of test tube shape.

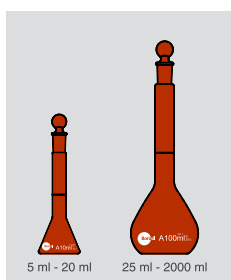




2021 - Flasks, Volumetric, With Interchangeable Solid Glass Stopper, Accuracy As Per Class A, With Certificate, NABL Certified

- Complies with IS 915, ISO / DIN 1042
- 5 to 20 ml supplied with Trapezoidal Shape for better stability
- Each flask engraved with individual serial number and supplied with NABL certificate of calibration traceable to National standards
- Manufactured from borosilicate glass with an amber coating on exterior surfaces to facilitate use with light sensitive solutions
- White enamel inscriptions

Product Code	Capacity ml	Tolerance \pm ml	Stopper Size	Quantity Per Case
2021005	5	0.025	7 / 16	1
2021006	10	0.025	7 / 16	1
2021008	20	0.04	10 / 19	1
2021009	25	0.04	10 / 19	1
2021012	50	0.06	12 / 21	1
2021016	100	0.10	14 / 23	1
2021020	200	0.15	14 / 23	1
2021021	250	0.15	14 / 23	1
2021024	500	0.25	19 / 26	1
2021029	1000	0.40	24 / 29	1
2021030	2000	0.60	29 / 32	1

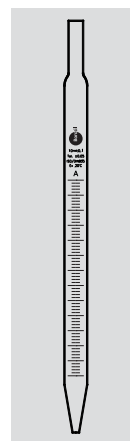




2030 - Pipettes, Measuring (Mohr Type), Accuracy As Per Class A, With Certificate, NABL Certified

- Complies with IS, ISO / DIN 835
- These Pipettes are graduated for delivery from zero mark to the last graduation mark
- Sturdy designed to last long
- Markings are made in permanent amber stain diffused into the surface of the glass for better visibility and durability
- Supplied with individual NABL calibration certificate showing actual volume dispensed and providing traceability to national standards

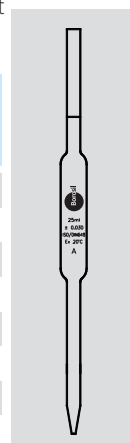
Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity per Case
2030P41	0.1	0.01	0.006	1
2030P42	0.2	0.01	0.006	1
2030P01	1	0.01	0.006	1
2030P11	1	0.1	0.006	1
2030P02	2	0.02	0.01	1
2030P22	2	0.1	0.01	1
2030P05	5	0.05	0.03	1
2030P55	5	0.1	0.05	1
2030P06	10	0.1	0.05	1
2030P09	25	0.2	0.1	1



2040 - Pipettes, Transfer, Volumetric, Accuracy As Per Class A, With Certificate, NABL Certified

- Complies with ISO / DIN 648
- Calibrated for delivery (TD, Ex)
- Generally used for accurate measurement and decanting of liquid
- Each pipette coded with unique no. supplied with NABL calibration certificate giving exact volume with traceability to national standards

Product Code	Capacity ml	Tolerance \pm ml	Quantity per Case
2040001	1	0.007	1
2040002	2	0.010	1
2040005	5	0.015	1
2040006	10	0.020	1
2040008	20	0.030	1
2040009	25	0.030	1
2040012	50	0.050	1
2040016	100	0.080	1



Beaker

Whether it is research, industry or education the Beaker has a wide range of applications. This simple container used for stirring and mixing liquids is also ideal for heating them. Controlled wall thickness at the sides, radius and the base ensures a fine balance between the thermal resistance and mechanical strength, to enable effective heating. Many Beakers also have a spout that makes pouring easier and more precise.

Borosil Glassware are best-in-class product with several advantages. It has a high level of thermal shock resistance ($\Delta T = 100\text{ K}$) and a high operating temperature. Besides using quality glass of a particular type, constant quality control checks are conducted throughout the production process to ensure uniformity of the wall thickness. Such uniform wall thickness distribution prevents uneven expansion and stressing of the glass that often result in a failure.

Beakers are mainly used as heating vessels. The tall-shape design of the Beaker is ideal for heating in a liquid bath, especially when the contents need to be kept distinctly apart from the surrounding medium or materials.

The No. 1000 **Borosil**[®] brand Beaker and the No. 1060 **Borosil**[®] brand Tall Form are two popular styles used for storage and mixing.





1000 - Beakers, Griffin, Low Form , with spout

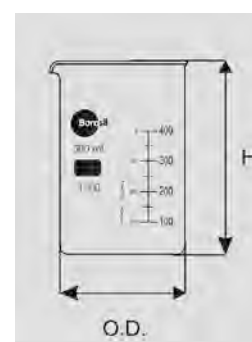
- Complies with IS 2619 / ISO 3819 and DIN 12331
- The spout design enables clean and precise pouring
- Uniform wall thickness distribution makes it ideal for heating liquids
- The easy-to-read scale and large labelling field make marking easier
- High resistance to chemical attack
- Double graduation metric scale for convenience

Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
1000005	5*	22 x 30	20
1000006	10*	26 x 35	20
1000009	25	34 x 50	60
1000D12	50	42 x 60	120
1000D16	100	50 x 70	60
1000D18	150	60 x 80	90
1000D21	250	70 x 95	60
1000D23	400	80 x 110	50
1000D24	500	83 x 115	50
1000D25	600	90 x 125	40
1000D29	1000	105 x 145	45
1000D30	2000	131 x 185	6
1000D31	3000	150 x 210	4
1000D33	5000	170 x 270	4
1000D38	10000**	220 x 350	1

25ml to 10000ml Graduated.

* 5 ml and 10 ml Beakers are not graduated.

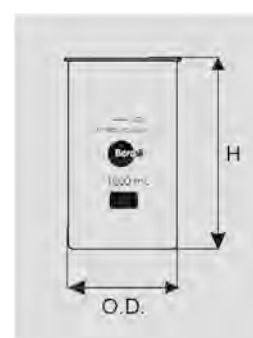
**10000 ml not covered in IS, ISO and DIN standards.

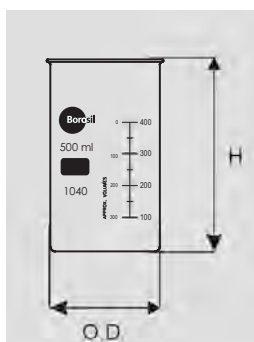


1006 - Beaker, Tablet Disintegration

- It has a large labelling field that enables easy marking
- Specially designed for Tablet disintegration machine

Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
1006029	1000	105 x 145	10



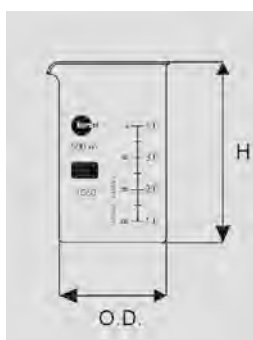


1040 - Beakers, Tall form, Without Spout

- Complies with IS 2619 / ISO 3819 and DIN 12331
- Graduated to indicate the approximate content
- The easy-to-read scale and large labelling field make marking easier
- Uniform wall thickness distribution makes it ideal for heating liquids
- This beaker is designed without a pouring spout

Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
1040012	50	38 x 70	40
1040016	100	48 x 80	50
1040021	250	60 x 120	40
1040024	*500	77 x 137	20
1040029	1000	95 x 180	20

* 500 ml not covered in IS, ISO and DIN.



1060 - Beakers, Tall Form, With Spout

- Complies with IS 2619 / ISO 3819 and DIN 12331
- Uniform wall thickness distribution makes it ideal for heating liquids
- Graduated to indicate the approximate content
- All sizes are equipped with a durable matt-finished enameled space for marking
- This Beaker is designed without a pouring spout

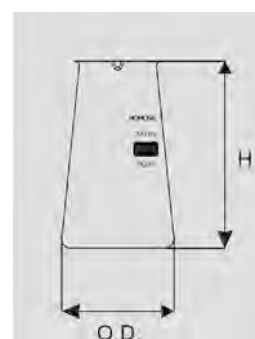
Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
1060012	50	38 x 70	40
1060D16	100	48 x 80	50
1060D21	250	60 x 120	40
1060D24	500	77 x 137	20
1060D29	1000	95 x 180	20



1080 - Beakers, Philips (Conical) with Spout

- Its mouth is smaller in diameter than its base
- The Phillips Beaker is ideal for measuring, containment, mixing and decanting
- Conical shape (Phillips pattern) with spout
- Excellent thermal performance and chemical resistance

Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
1080021	250	68 x 110	50
1080024	500	88 x 145	40





Cat No. : 9001

Available in Convenient Sizes:
500 ml
5000 ml
25000 ml



The Ultimate Cleaning Agent for Laboratory Glassware

- ✦ Excellent cleaning performance
- ✦ Totally Bio-degradable
- ✦ Non-Toxic ingredients
- ✦ Free from scents
- ✦ Free from phosphates

Bottles

Bottles have multiple uses. As the Aspirator, Reagent and Solution Bottles are not used for direct heating purposes, they are designed with heavier wall thickness, making them mechanically stronger to withstand wet or dry sterilisation. The high chemical durability of the glass ensures that most reagents can be stored in these bottles for long durations in almost the same condition. Plain Neck Solution Bottles are designed to have a uniform rubber stopper fit. Roux Bottles and Milk Dilution Bottles have flat surfaces and are widely used for culture growth.

The outstanding **Borosil**[®] quality provides capabilities for a wider range of functions, from long-term storage to the most demanding applications in the pharmaceutical industry.



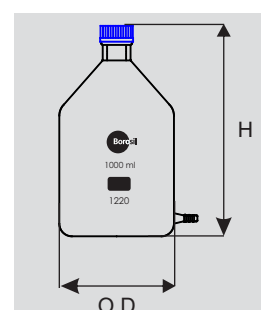
1220 - Bottle, Aspirator, With GL 45 Cap And Outlet For tubing

- Complies with IS 1388 (Part III), ISO / DIN 4796 (Part III)
- Large labelling field
- Complete with PP screw cap and pouring ring
- Suitable for storage of aggressive media that can damage plastic parts
- Dosing of liquids via tubing
- All sizes have a durable matt-finished enamelled area for marking

Product Code	Capacity ml	Approx O.D. x Height* mm	Neck size	Quantity Per Case
1220021	250**	70 x 138	GL 45	10
1220024	500**	86 x 176	GL 45	10
1220029	1000	101 x 225	GL 45	10
1220030	2000	136 x 260	GL 45	5

**Not covered in ISO / DIN standards.

*Height indicated is of Bottle only

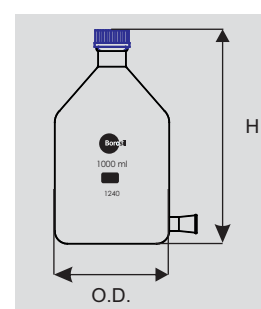


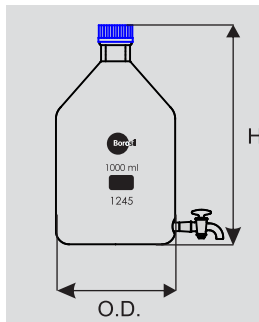
1240 - Bottle, Aspirator, with GL-45 Cap and outlet for stopper

- Complies with IS 1388 (Part III), ISO / DIN 4796 (Part III)
- Large labelling field
- Complete with PP screw cap and pouring ring
- Suitable for storage of aggressive media that can damage plastic parts
- All sizes have a durable matt-finished enamelled area for marking

Product Code	Capacity ml	Approx O.D. X Height* mm	Neck size	Approx I.D. Outlet mm	Quantity Per Case
1240029	1000	101 x 225	GL 45	23	10
1240030	2000	136 x 260	GL 45	28	5
1240033	5000	180 x 330	GL 45	28	2
1240038	10000	227 x 410	GL 45	28	1

*Height indicated is of Bottle only



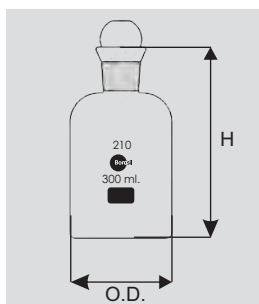


1245 - Bottle, Aspirator, With GL 45 Cap With Interchangeable Stopcock

- Complies with IS 1388 (Part III), ISO / DIN 4796 (Part III)
- Large labelling field
- Complete with PP screw cap and pouring ring
- Suitable for storage of aggressive media that can damage plastic parts
- All sizes have a durable matt-finished enamelled area for marking
- Dosing of liquids via stopcock

Product Code	Capacity ml	Approx O.D. x Height* mm	Neck Size	Approx I. D. Outlet mm	Quantity Per Case
1245029	1000	101 x 225	GL 45	24 / 29	10
1245030	2000	136 x 260	GL 45	29 / 32	4
1245033	5000	181 x 330	GL 45	29 / 32	2
1245038	10000	227 x 410	GL 45	29 / 32	1
1245040	20000	288 x 505	GL 45	29 / 32	1

*Height indicated is of Bottle only



1250 - Bottles, B.O.D. With Interchangeable Stopper

- Complies with IS 9213
- Used for determination of B.O.D. in industrial effluents, waste and water
- Individual number printed on the bottle

Product Code	Capacity ml	Approx O. D. x Height* mm	Quantity Per Case
NEW 1250013	60	42 x 100	10
1250017	125	55 x 120	10
1250022	300	70 x 143	30

*Height indicated is of Bottle only

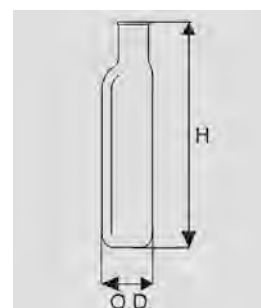
300ml is for determination of B.O.D. in Industrial effluents, wastes and water as per method specified by the American Public Health Association and is numbered individually.



1290 - Bottles, Culture, Roux, Off-Set Neck

- Complies with IS 6942
- Designed to hold approximately half of the stated capacity of solution, when the Bottle is laid flat
- The offset neck is tool-finished for greater strength and uniform stopper fit
- These bottles facilitate the growing of mass cultures and single or monolayer cultures
- It withstands repeated sterilisation (wet or dry)

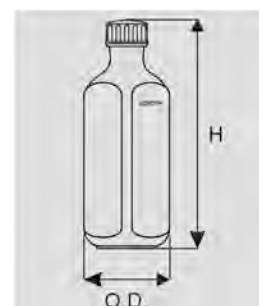
Product Code	Capacity ml	Approx b x w x h mm	Approx Neck I. D. mm	Quantity Per Case
1290029	1000	126 x 56 x 265	26	20

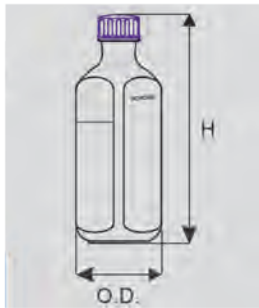


1367 - Bottles, Milk Dilution, Plain, With Screw Cap & Liner

- The screw caps and liner can withstand repeated autoclaving
- These glass bottles meet the requirements for Milk Dilution Bottles stated in the Standard Methods for the Examination of Dairy Products
- Square in shape

Product Code	Capacity ml	Approx O.D. x Height mm	Approx Neck I. D. mm	Quantity Per Case
1367019	160	150	19	10



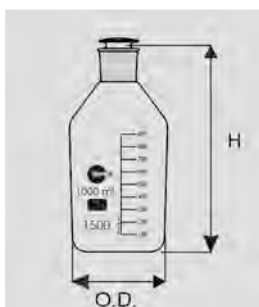


1370 - Bottles, Milk Dilution, Graduated, Screw Cap & Liner

- The screw caps and liner can withstand repeated autoclaving
- These glass bottles meet the requirements for Milk Dilution Bottles stated in the Standard Methods for the Examination of Dairy Products
- Square in shape

Product Code	Capacity ml	Approx O.D. x Height mm	Approx Neck I. D. mm	Quantity Per Case
1370019	160	150	19	10

Similar to No. 1367 but with a graduation mark at 99 ml capacity



1500 - Bottles Reagent , Plain Narrow Mouth, Graduated with Interchangeable Flat Head Stopper

- Complies with IS 1388 (Part II), ISO / DIN 4796 (Part II)
- These narrow mouth reagent storage bottles have a sturdy ground neck
- All sizes have a durable matt-finished enamelled area for marking
- These bottles are mechanically strong and chemical resistant
- Supplied with solid glass stopper

Product Code	Capacity ml	Approx O.D. x Height* mm	Approx Neck I. D. mm	Quantity Per Case
1500013	60	45 x 90	14 / 23	40
1500016	100	56 x 100	19 / 26	10
1500017	125	55 x 120	19 / 26	50
1500021	250	70 x 145	19 / 26	10
1500024	500	86 x 177	24 / 29	10
1500029	1000	101 x 225	29 / 32	10
1500030	2000	136 x 260	34 / 35	10

*Height indicated is of Bottle only

Borosil Reagent Bottle

Borosil Laboratory bottles are chemically resistant and stable. When fitted with a plastic pouring ring dripping can be totally eliminated. As there is only one size of screw thread for all bottles from 100 ml onwards, the screw caps and pouring rings are fully interchangeable. The bottles, pouring rings and caps are autoclavable and sterilizable.

Properties:

Light protection :

- Amber bottle upto 500 ml

Safe closure ensures storage of products as

- Dairy products
- Serums are kept sterile

High resistance to thermal shock

HANDLING :

Sterilization :

Bottles can be steam sterilized after washing. Following are recommendation and guidelines.

- Soiled bottle must be clean first, otherwise microorganism cannot be effectively destroyed and chemicals adhering to surface can damage it as a result of high temperature involved.

- To avoid a buildup of pressure the screw cap should be left loose on the bottle neck (one turn maximum). It should not be closed tight as the pressure then cannot be balanced and consequent in pressure can result in bottle bursting.
- Ensure that saturated steam is used and that it has unhindered access to all contaminated places. This is the only way to achieve effective steam sterilization.

Thawing frozen substances :


The frozen material can be thawed by immersing the bottle in liquid bath taking care that the temperature differences does not exceed 100 degree C. this will ensure that the frozen material heated uniformly from all sides without damaging the bottle. It can however also be thawed slowly so that the surface melts first, allowing the material to expand.

Freezing substances

Recommendation: When freezing, always place the bottles at an angle approx. 45°C and do not fill to more than $\frac{3}{4}$ capacity (to increase surface area). Temperature limit - 40°C as the plastic caps and pouring ring do not withstand lower temperatures.

1501 - Bottles, Reagent, Wide Mouth, Graduated With Screw Cap And Pouring Ring

- Complies with IS 1388 (Part I), ISO / DIN 4796 (Part I)
- These bottles are mechanically strong and chemical resistant
- Designed with plastic pouring ring for drip-free operation
- The screw caps and pouring ring are made of PP
- The bottles, screw caps and pouring rings can be sterilized and autoclavable
- Printed with a Retrace Code
- 100 ml to 20000 ml Bottles have uniform GL 45 thread

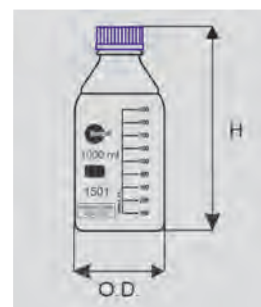
Product Code	Capacity ml	Approx O.D. x Height* mm	Approx Neck I. D. mm	Quantity Per Case
1501009	25 [#]	36 x 70	GL 25	20
1501012	50 [#]	46 x 87	GL 32	20
1501016	100	56 x 100	GL 45	10
 1501018	150 ^{**}	60 x 120	GL 45	10
1501021	250	70 x 138	GL 45	10
1501024	500	86 x 176	GL 45	10
1501029	1000	101 x 225	GL 45	10
1501030	2000	136 x 260	GL 45	10
1501031	3000 ^{**}	158 x 295	GL 45	2
1501033	5000 ^{***}	183 x 323	GL 45	2
1501038	10000 ^{***}	235 x 405	GL 45	1
1501040	20000 ^{***}	296 x 500	GL 45	1

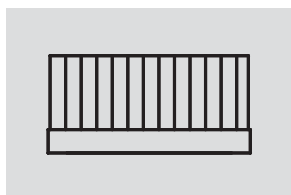
*Height indicated is of Bottle only

Without Pouring rings

**Not covered in any standard

***As per BOROSIL dimensions

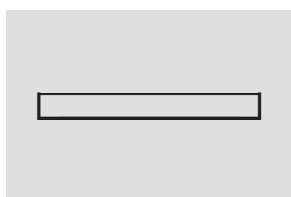




1503 - Screw Cap, with Pouring ring for Screw Cap Bottles

- Caps and pouring rings are made of PP (Polypropylene) and are autoclavable upto 140°C

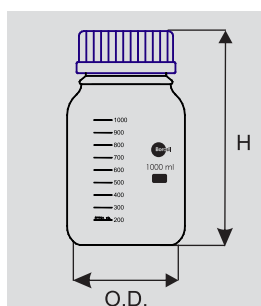
Product Code	Colour Description	Neck Specification	Quantity Per Case
1503C01	Blue	GL 45	10
1503C02	Orange	GL 45	10
1503C03	Yellow	GL 45	10
1503C04	Green	GL 45	10
1503C05	Grey	GL 45	10



1504 - Pouring Ring, Blue Colour

- Pouring rings are made of PP (Polypropylene) and are autoclavable

Product Code	Colour Specification	Neck Specification	Quantity Per Case
1504R01	Blue	GL - 45	10



1506 - Bottles Reagent, Square With DIN Thread, Graduated, With PP Screw Cap (GL 80) And PP Pouring Ring

Product Code	Capacity ml	Approx W x B x H mm	Neck Specification	Quantity Per Case
1506024	500	94 x 94 x 141	GL-80	10
1506029	1000	105 x 105 x 187	GL-80	10
1506030	2000	115 x 115 x 260	GL-80	10
1506033	5000	160 x 160 x 357	GL-80	1

Amber colour bottles are available on request.

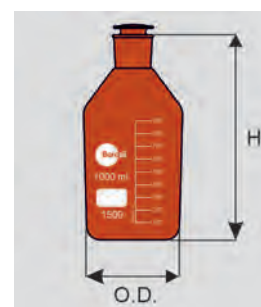


1509 - Bottles, Reagent, Amber, Narrow Mouth, Graduated, With Interchangeable Flat Head Stopper

- Complies with IS 1388 (Part II), ISO / DIN 4796 (Part II)
- These narrow mouth reagent storage bottles have a sturdy ground neck
- All sizes have a durable matt-finished enamelled area for marking
- These bottles are mechanically strong and chemical resistant
- The uniform Amber colour is highly durable and has high chemical resistance
- Properties within the bottle remain unchanged, as the colour is applied only on the external surface
- Protects media from light radiation with a wave-length between 300 nm and 500 nm
- Ideal for use with light-sensitive media and for the long-term storage of substances
- Supplied with solid glass stopper

Product Code	Capacity ml	Approx O.D. x Height* mm	Size Interchangeable Stopper	Quantity Per Case
1509013	60	45 x 90	14 / 23	20
1509016	100	56 x 100	19 / 26	10
1509017	125	55 x 120	19 / 26	20
1509021	250	70 x 145	19 / 26	10
1509024	500	86 x 177	24 / 29	10
1509029	1000	101 x 225	29 / 32	5
1509030	2000	136 x 260	34 / 35	5

*Height indicated is of Bottle only
Similar in design to cat no. 1500



1519 - Bottles, Reagent, Amber, Wide Mouth, Graduated, With Screw Cap And Pouring Ring

- Complies with IS 1388 (Part I), ISO / DIN 4796 (Part I)
- These bottles are mechanically strong and chemical resistant
- Designed with plastic pouring ring for drip-free operation
- The screw caps and pouring are made of PP and autoclavable
- Printed with a Retrace Code
- The uniform Amber colour is highly durable and has high chemical resistance
- Properties within the bottle remain unchanged, as the colour is applied only on the external surface
- Ideal for use with light-sensitive media and for long-term storage of substances
- 100 ml to 20000 ml have uniform GL 45 thread

Product Code	Capacity ml	Approx O.D. x Height* mm	Neck Specification	Quantity Per Case
1519009	25 [#]	36 x 70	GL 25	20
1519012	50 [#]	46 x 87	GL 32	20
1519016	100	56 x 100	GL 45	10
1519021	250	70 x 138	GL 45	10
1519024	500	86 x 176	GL 45	10
1519029	1000	101 x 225	GL 45	10
1519030	2000	136 x 260	GL 45	10
1519031	3000 ^{**}	158 X 295	GL 45	2
1519033	5000 ^{***}	183 x 323	GL 45	2
1519038	10000 ^{***}	235 x 405	GL 45	1
1519040	20000 ^{***}	299 x 500	GL 45	1

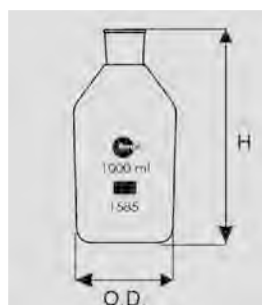
*Height indicated is of Bottle only

[#] Without Pouring rings

^{**}Not covered in any standard

^{***}As per BOROSIL dimensions

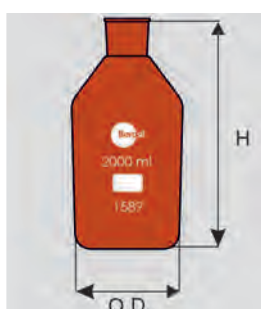




1585 - Bottles, Solution, Plain, Tooled Neck

- These bottles are mechanically strong and chemical resistant
- 10, 20 & 50 litre bottles specially designed for handling and storing culture media
- All sizes have a durable matt-finished enamelled area for marking

Product Code	Capacity ml	Approx O.D. x Height mm	Size Interchangeable Stopper	Quantity Per Case
1585021	250	70 x 140	18	20
1585024	500	86 x 177	23	20
1585029	1000	101 x 225	28	10
1585030	2000	136 x 260	33	10
1585031	3000	158 x 260	44	4
1585033	5000	183 x 320	44	2
1585038	10000	235 x 430	54	1
1585040	20000	299 x 530	54	1
1585046	50000	417 x 665	89	1



1589 - Bottles, Solution, Amber, Tooled Neck

- These bottles are mechanically strong and chemical resistant
- All sizes have a durable matt-finished enamelled area for marking
- The uniform Amber colour is highly durable and has high chemical resistance
- Properties within the bottle remain unchanged, as the colour is applied only on the external surface
- Protects media from light radiation with a wave-length between 300 nm and 500nm
- Ideal for use with light-sensitive media and for long-term storage of substances

Product Code	Capacity ml	Approx O.D. x Height mm	Approx Neck I. D. mm	Quantity Per Case
1589021	250	70 x 140	18	10
1589024	500	86 x 177	23	20
1589029	1000	101 x 225	28	5
1589030	2000	136 x 260	33	5

Similar in design to Cat No. 1585

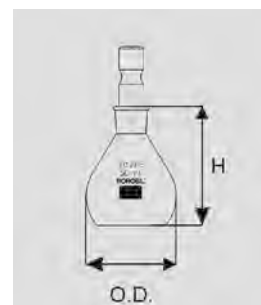
For Higher Capacities please contact our Sales Offices & our Authorised Dealers



1624 - Bottles, Relative Density, With Capillary Bore Interchangeable Teflon Stopper

- These bottles are mechanically strong and chemical resistant
- All sizes have a durable matt-finished enamelled area for marking
- Come with a Works Certificate

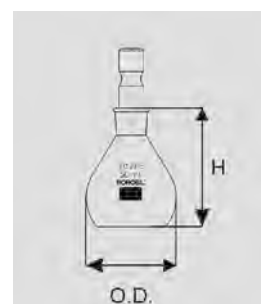
Product Code	Capacity ml	Capacity Tolerance +ml	Max. Body Dia x Height mm	Size of Inter-Changeable Stopper	Quantity Per Case
1624006	10	0.3	28 x 46	10 / 15	5
1624009	25	0.8	38 x 55	10 / 15	5
1624012	50	1.0	49 x 65	10 / 15	5

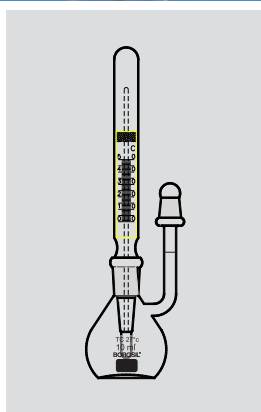


1625 - Bottles Relative density, with Capillary bore Interchangeable Teflon stopper

- Complies with IS 5711, ISO / DIN 3507
- These bottles are mechanically strong and chemical resistant
- All sizes have a durable matt-finished enamelled area for marking

Product Code	Capacity ml	Capacity Tolerance +ml	Max. Body Dia x Height mm	Size of Inter-Changeable Stopper	Quantity Per Case
1625006	10	1	28 x 46	10 / 15	10
1625009	25	2	38 x 55	10 / 15	10
1625012	50	3	49 x 65	10 / 15	5



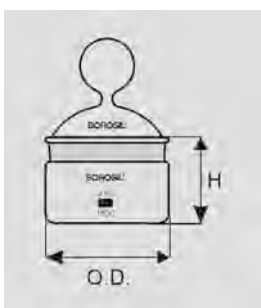


1627 - Bottles Specific , Gravity Bottle with thermometer(Pyknometer)

- Complies with IS 5717, ISO / DIN 3507
- These bottles are mechanically strong and chemical resistant
- All sizes have a durable matt-finished enamelled area for marking
- Supplied with thermometer (10°C to 30°C) alongwith certificate for thermometer

Product Code	Capacity ml	Quantity Per Case
1627006	10	5
1627009	25	5
1627012	50	5

Suitable for determining the density with built in thermometer & thermometer pocket.



1630 - Bottles, Weighing, With Interchangeable Stopper

- Complies with IS 1574
- These bottles are mechanically strong and chemical resistant
- All sizes have a durable matt-finished enamelled area for marking

Product Code	Capacity ml	Approx O.D. x Height* mm	Quantity Per Case
1630005	5	20 x 40	30
1630007	15	25 x 65	10
1630008	20**	50 x 35	10
1630009	25	30 x 65	10
1630011	40**	60 x 40	10
1630013	60	40 x 90	5

*Height indicated is of Bottle only

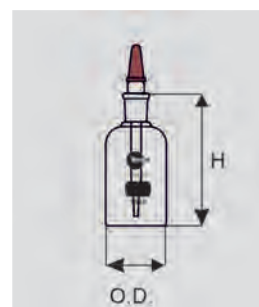
**Squat Form



1640 - Bottles, Dropping With Pipette & Rubber Teat

- Made from 3.3 borosilicate glass
- Highly chemical resistance
- Supplied with interchangeable ground joint transparent pipette with rubber teat

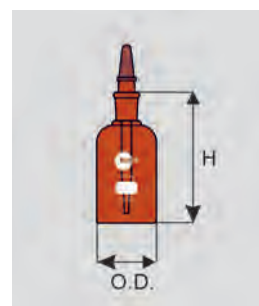
Product Code	Capacity ml	Approx O.D. x Height mm	Socket Size	Quantity Per Case
1640010	30	35 x 84	14 / 19	10
1640013	60	42 x 100	14 / 19	10
1640017	125	55 x 120	19 / 26	10
1640021	250	65 x 147	19 / 26	10

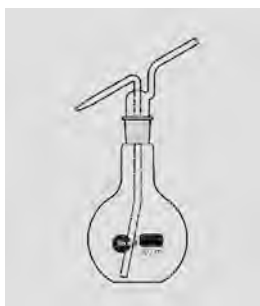


1650 - Bottles, Dropping with Pipette & Rubber Teat, Amber

- Made from 3.3 borosilicate glass
- Highly chemical resistance
- Supplied with interchangeable ground joint transparent pipette with rubber teat
- Ideal for light sensitive material

Product Code	Capacity ml	Approx O.D. x Height mm	Socket Size	Quantity Per Case
1650010	30	35 x 84	14 / 19	10
1650013	60	42 x 100	14 / 19	10
1650017	125	55 x 120	19 / 26	10
1650021	250	65 x 147	19 / 26	10

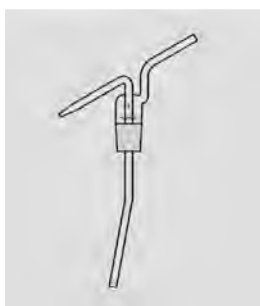




1660 - Bottles, Wash, Complete With Interchangeable Stopper

- These bottles are mechanically strong and chemical resistant
- All sizes have a durable matt-finished enamelled area for marking

Product Code	Capacity ml	Size of Inter-changeable Stopper	Quantity Per Case Set
1660021	250	24 / 29	5
1660024	500	24 / 29	5
1660029	1000	29 / 32	5

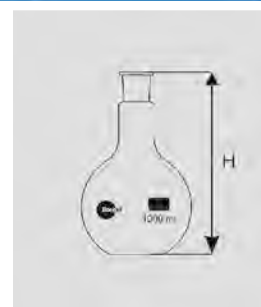


1661 - Stoppers, Only For Wash Bottles Cat. No. 1660

Product Code	Capacity ml	Size of Inter-changeable Stopper	Quantity Per Case Set
1661021	250	24 / 29	5
1661024	500	24 / 29	5
1661029	1000	29 / 32	5

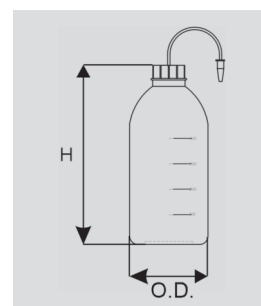
**1662 - Bottles, Only for Wash Bottles Cat No. 1660**

Product Code	Capacity ml	Approx Height mm	Size Interchangeable Stopper	Quantity Per Case
1662021	250	130	24 / 29	5
1662024	500	165	24 / 29	5
1662029	1000	190	29 / 32	5

**166P - Bottles, Wash, LDPE Plastic, Squeeze type, Screw Cap, Fitted With Stoppers And Delivery Tubes**

- Bottles and delivery tube made of chemically resistant, low density polyethylene
- Flexible, tough, light weight, and practically unbreakable in use
- Squeezing the bottle produces a steady controllable stream or a few drops.
- Delivery tubes are mounted in polypropylene screw caps
- Tips on delivery tubes are removable

Product Code	Capacity ml	Approx Diameter mm	Bottle Height mm	Quantity Per Case
0166024	500	75	167	36





1760 - Bottles, Gas Washing (Dreschel), Complete with interchangeable Stopper

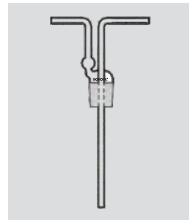
- Complies with IS 11990
- These bottles are mechanically strong and chemical resistant
- All sizes have a durable matt-finished enamelled area for marking

Product Code	Capacity ml	Size of Inter-changeable Stopper	Quantity Per Case Set
1760017	125	24 / 29	5
1760021	250	24 / 29	5
1760024	500	24 / 29	5



1761 - Stoppers, Only For Gas Washing Bottles

Product Code	Capacity ml	Quantity Per Case
1761017	125	5
1761021	250	5
1761024	500	5



1762 - Bottles, Only For Gas Washing Bottles

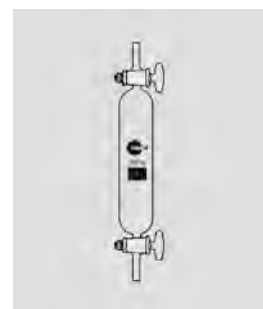
Product Code	Capacity ml	Approx O. D. x Height mm	Quantity Per Case Set
1762017	125	50 x 155	5
1762021	250	60 x 190	5
1762024	500	70 x 245	5





1764 - Tubes, Gas Sampling, With Stopcocks

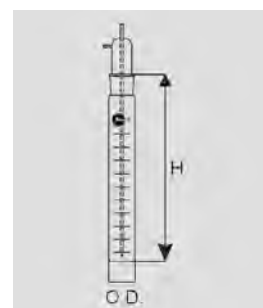
Product Code	Capacity ml	Quantity Per Case
1764017	125	10
1764021	250	10
1764024	500	10



1765 - Impinger

- Complies with IS 5182 (Part-VI)
- These bottles are mechanically strong and chemical resistant

Product Code	Capacity ml	Approx O. D. x Height mm	Quantity Per Case Set
1765058	35	26 x 180	10





Burettes

- Manufactured from 3.3 Low Expansion Borosilicate precision bore tubing
- Individually calibrated on automatic calibration machine for precision and high accuracy
- Graduation and inscriptions are printed with white enamel for increased visibility with dark solutions
- Choice of PTFE stopcock, Boroflo stopcock and Straight Bore Glass Stopcock
- Amber and blue enamel printed Burette can be supplied on request
- Compliance with highest quality standards according to **ISO/DIN 385**

Accuracy, reliability and durability are the essentials of a Burette. Only Borosil brand Burettes offer you these three benefits even after repeated usage, as they are made with a combination of the best material and workmanship. The highest quality precision bore tubing is selected to provide uniform and accurate graduations. Each Burette is individually calibrated on a fully automatic machine for precision and high accuracy. All graduations are marked in durable white enamel. The stopcock plugs are not interchangeable.

Boroflo Burettes fitted with Boroflo GP (General Purpose) screw thread stopcocks with PTFE keys offer the following operational advantages:

- Lubrication is never required, ensuring no seizure and no contaminating greases
- Excellent flow control that is important for Burettes
- The unique Fluon/glass seal ensures no leakage
- No springs or retaining devices makes it easy to dismantle and clean them
- Absence of ground surfaces results in low absorption of radioactivity
- Consistent performance between 0°C and 50°C

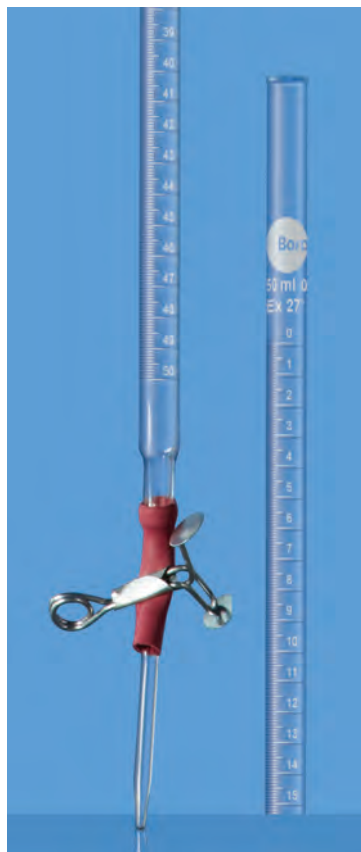
Borosil offers Class A Burettes for accurate work



- Boroflo stopcocks have PTFE keys which do not require greasing
- This PTFE keys provide best drop control during titration process
- Due to unique needle shape of PTFE key, valve can be closed with gentle turn

- PTFE stopcocks have identical keys, hence matching the pairs is not require during cleaning
- PTFE is self lubricating hence keys do not require greasing

- Specially designed solid glass stopcocks are manufactured from 3.3 Low expansion borosilicate glass
- Glass stopcocks are perfectly grind, hence no leakage occur



2118 - Burettes, Pinchcock with Tip, Accuracy As Per Class B

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Generally used in Titration process
- The volume content tolerances conform to Class B of ISO
- Supplied without Pinchcock and rubber tube

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2118006	10	0.05	0.05	10
2118009	25	0.1	0.1	10
2118012	50	0.1	0.1	20



* Blue and Amber graduations can be supplied on request.



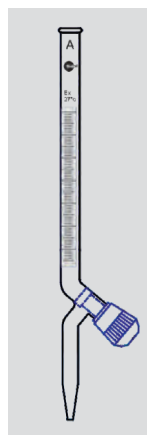
2121 - Burettes, Boroflo, Fitted With Boroflo GP (General Purpose), Screw Thread Stopcocks With PTFE Keys, Accuracy As Per Class A, With Batch Certificate

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Generally used in Titration process
- Supplied with Boroflo stopcock with PTFE key that is highly resistant to chemical attack
- Individually tested for exact volume dispensed at 3 points on the scale
- No need to lubricate it as PTFE key is used

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2121006D	10	0.05	0.02	5
2121009D	25	0.1	0.05	5
2121012D	50	0.1	0.05	10
2121016D	100	0.2	0.1	5

* Blue and Amber graduations can be supplied on request.

* Individual calibration certificate can be provided on request



2122 - Burettes, Boroflo, Fitted With Boroflo GP (General Purpose), Screw Thread Stopcocks With PTFE Keys, Accuracy As per Class B

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Supplied with Boroflo with PTFE key that is highly resistant to chemical attack
- No need to lubricate it as PTFE key is used
- Easy to dismantle and clean

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2122006D	10	0.05	0.05	10
2122009D	25	0.1	0.1	10
2122012D	50	0.1	0.1	10
2122016D	100	0.2	0.2	5

* Blue and Amber graduations can be supplied on request.





2123 - Burettes, Straight Bore Stopcock, Accuracy As Per Class A, With Batch Certificate

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Generally used in Titration process
- Designed with straight bore stopcock that increases the life, compared to PTFE key stopcocks
- The glass stopcock enhances control and enables smoother action

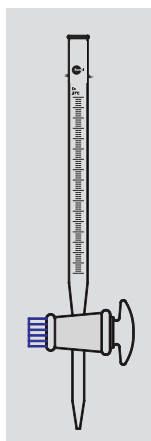
Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2123001D	1*	0.01	0.006	5
2123002D	+2*	0.02	0.01	5
2123005D	5*	0.02	0.01	5
2123006D	10	0.05	0.02	5
2123009D	25	0.1	0.05	5
2123012D	50	0.1	0.05	5
2123016D	100	0.2	0.1	5

+ not covered in IS

* with cup top

* Blue and Amber graduations can be supplied on request.

* Individual calibration certificate can be provided on request



2124 - Burettes, Straight Bore Stopcock, Accuracy as per Class B

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Designed with straight bore stopcock that increases the life, compared to PTFE key stopcocks
- The glass stopcock enhances control and enables smoother action

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2124001D	1*	0.01	0.01	5
2124002D	2*	0.02	0.02	5
2124005D	5*	0.02	0.02	5
2124006D	10	0.05	0.05	10
2124009D	25	0.1	0.1	10
2124012D	50	0.1	0.1	10
2124016D	100	0.2	0.2	5

* with cup top

* Blue and Amber graduations can be supplied on request.



2125 - Burettes, Double Oblique Bore Stopcock, 3-Way, Accuracy As Per Class A, With Batch Certificate

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Designed with double oblique bore stopcock
- Generally used in Titration process
- Individually tested for exact volume dispensed at 3 points on the scale
- Designed with a straight bore stopcock that increases the life, compared to PTFE key stopcocks
- The glass stopcock enhances control and enables smoother action

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2125006	10	0.05	0.02	5
2125009	25	0.1	0.05	5
2125012	50	0.1	0.05	5
2125016	100	0.2	0.1	5

* Blue and Amber graduations can be supplied on request.

* Individual calibration certificate can be provided on request



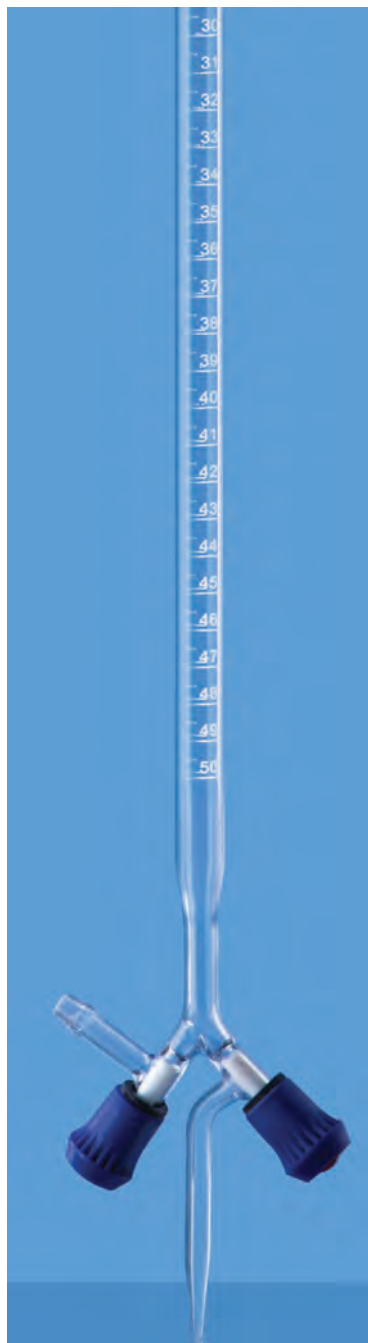
2126 - Burettes, Double Oblique Bore Stopcock, 3-Way, Accuracy As Per Class B

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Designed with double oblique bore stopcock
- Generally used in Titration process
- Designed with a straight bore stopcock that increases the life, compared to PTFE key stopcocks
- The glass stopcock enhances control and enables smoother action
- The volume content tolerances conform to Class B of IS and ISO

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2126006	10	0.05	0.05	5
2126009	25	0.1	0.1	5
2126012	50	0.1	0.1	5
2126016	100	0.2	0.2	5

* Blue and Amber graduations can be supplied on request.





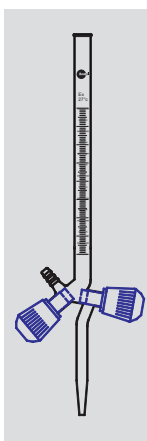
2127 - Burettes, Double Oblique Bore Boroflo Stopcock, 3-Way, Accuracy As Per Class A, With Batch Certificate

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Designed with a double oblique bore Boroflo stopcock
- Generally used in Titration process
- Individually tested for exact volume dispensed at 3 points on the scale
- Comes with PTFE key that is highly resistant to chemical attack
- No need to lubricate it as PTFE key is used

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2127006	10	0.05	0.02	5
2127009	25	0.1	0.05	5
2127012	50	0.1	0.05	5
2127016	100	0.2	0.1	5

* Blue and Amber graduations can be supplied on request.

* Individual calibration certificate can be provided on request



2128 - Burettes, Double Oblique Bore Boroflo Stopcock, 3-Way, Accuracy As Per Class B

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Designed with a double oblique bore Boroflo stopcock
- Generally used in Titration process
- Comes with PTFE key that is highly resistant to chemical attack
- No need to lubricate it as PTFE key is used

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2128006	10	0.05	0.05	5
2128009	25	0.1	0.10	5
2128012	50	0.1	0.10	5
2128016	100	0.2	0.2	5

* Blue and Amber graduations can be supplied on request.



2129 - Burettes, Straight Bore PTFE Key Stopcock, Accuracy As Per Class A, With Batch Certificate

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Generally used in Titration process
- Individually tested for exact volume dispensed at 3 points on the scale
- Alpha numeric serial number on the article and certificate provide complete traceability the standards
- Comes with PTFE key that is highly resistant to chemical attack
- No need to lubricate it as PTFE key is used

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2129006D	10	0.05	0.03	5
2129009D	25	0.1	0.05	5
2129012D	50	0.1	0.05	10
2129016D	100	0.2	0.1	5

* Blue and Amber graduations can be supplied on request.

* Individual calibration certificate can be provided on request



2130 - Burettes, Straight Bore PTFE Key Stopcock, Accuracy As Per Class B

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Generally used in Titration process
- Comes with PTFE key that is highly resistant to chemical attack
- No need to lubricate it as PTFE key is used

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2130006D	10	0.05	0.05	10
2130009D	25	0.1	0.1	10
2130012D	50	0.1	0.1	10
2130016D	100	0.2	0.2	5

* Blue and Amber graduations can be supplied on request.





2131 - Burettes, Boroflo, Fitted With Boroflo GP (General Purpose), Screw Thread Stopcocks With PTFE Keys, Accuracy As Per Class A, With Batch Certificate, Amber

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Generally used in Titration process
- Individually tested for exact volume dispensed at 3 points on the scale
- Supplied with Boroflo with PTFE key that is highly resistant to chemical attack
- No need to lubricate it as PTFE key is used
- Easy to dismantle and clean
- Amber colour is applied to the external surface to prevent contamination with the testing material

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2131009D	25	0.1	0.05	5
2131012D	50	0.1	0.05	5



2132 - Burettes, Boroflo, Fitted With Boroflo GP (General Purpose), Screw Thread Stopcocks With PTFE Keys, Accuracy As Per Class B, Amber

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Generally used in Titration process
- Comes with Boroflo with PTFE key that is highly resistant to chemical attack
- No need to lubricate it as PTFE key is used
- The volume content tolerances conform to Class B of IS and ISO
- Amber colour is applied to the external surface to prevent contamination with the testing material

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2132009	25	0.1	0.1	5
2132012	50	0.1	0.1	5



2145 - Burettes, Double Oblique Bore Boroflo Stopcock, 3-Way, Automatic Zero, Accuracy As per Class A, With Batch Certificate

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Comes with double oblique bore Boroflo stopcock
- Generally used in Titration process
- Individually tested for exact volume dispensed at 3 points on the scale
- Comes with PTFE key that is highly resistant to chemical attack
- No need to lubricate it as PTFE key is used
- Meniscus is automatically set to Zero

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2145006	10	0.05	0.02	1
2145009	25	0.1	0.05	1
2145012	50	0.1	0.05	1

* Blue and Amber graduations can be supplied on request.

* Individual calibration certificate can be provided upon request



2146 - Burettes, Double Oblique Bore Boroflo Stopcock, 3-Way, Automatic Zero, Accuracy As Per Class B

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Designed with double oblique bore Boroflo stopcock
- Generally used in Titration process
- Comes with PTFE key that is highly resistant to chemical attack
- No need to lubricate it as PTFE key is used
- Meniscus is automatically set to Zero

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2146006	10	0.05	0.05	1
2146009	25	0.1	0.1	1
2146012	50	0.1	0.1	1

* Blue and Amber graduations can be supplied on request.



2147 - Burettes, Double Oblique Bore Glass Stopcock, 3-Way, Automatic Zero, Accuracy As Per Class A, With Batch Certificate

- Complies with IS ISO / DIN 385
- Calibrated at 20°C
- Designed with double oblique bore stopcock
- Generally used in Titration process
- Individually tested for exact volume dispensed at 3 points on the scale
- Designed with a straight bore stopcock that increases the life, compared to PTFE key stopcocks
- The glass stopcock enhances control and enables smoother action
- Meniscus is automatically set to Zero

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2147006	10	0.05	0.02	1
2147009	25	0.1	0.05	1
2147012	50	0.1	0.05	1

* Blue and Amber graduations can be supplied on request.

* Individual calibration certificate can be provided on request



2148 - Burettes, Double Oblique Bore Glass Stopcock, 3-Way, Automatic Zero, Accuracy As Per Class B

- Complies with ISO / DIN 385
- Calibrated at 20°C
- Designed with double oblique bore stopcock
- Generally used in Titration process
- Designed with a straight bore stopcock that increases the life, compared to PTFE key stopcocks
- The glass stopcock enhances control and enables smoother action
- Meniscus is automatically set to Zero

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2148006	10	0.05	0.05	1
2148009	25	0.1	0.1	1
2148012	50	0.1	0.1	1

* Blue and Amber graduations can be supplied on request.

2149 - Burettes, Automatic Zero, Accuracy as per Class A, With Reservoir, Rubber Bellow, Glass Stopcock, With Batch Certificate

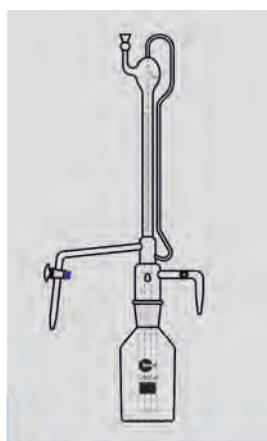
- Complies with ISO / DIN 385
- Calibrated at 20°C
- With automatic zero facility
- Individually tested for exact volume dispensed at 3 points on the scale
- Simple operation
 - To fill burette apply a slight positive pressure to lower side arm
 - To set zero, release pressure to allow excess liquid to siphon back into the bottle
- Burettes manufactured from chemically resistant 3.3 borosilicate glass
- White enamel graduations
- With Glass stopcock

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2149006	10	0.05	0.02	1
2149009	25	0.1	0.05	1
2149012	50	0.1	0.05	1
2149016	100	0.2	0.1	1

Reservoir Capacity : 500 ml for 10 ml size and 2000 ml for 25, 50 and 100 ml sizes

* Blue and Amber graduations can be supplied on request.

* Individual calibration certificate can be provided on request



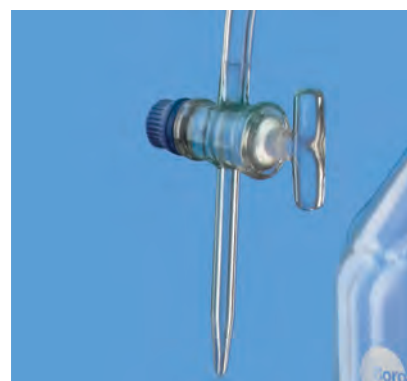
2150 - Burettes, Automatic Zero, Accuracy as per Class B, With Reservoir, Rubber Bellow And Glass Stopcock

- Complies with ISO / DIN 385
- Calibrated at 20°C
- With automatic zero facility
- Simple operation
 - To fill burette apply a slight positive pressure to lower side arm
 - To set zero, release pressure to allow excess liquid to siphon back into the bottle
- Burettes manufactured from chemically resistant 3.3 borosilicate glass
- White enamel graduations
- With Glass stopcock

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2150006	10	0.05	0.05	1
2150009	25	0.1	0.1	1
2150012	50	0.1	0.1	1
2150016	100	0.2	0.2	1

Reservoir Capacity : 500 ml for 10 ml size and 2000 ml for 25, 50 and 100 ml sizes

* Blue and Amber graduations can be supplied on request.



Auto Burettes in Amber Colour are available on request

2153 - Burettes, Automatic Zero, Accuracy as per Class A, With Reservoir, Rubber Bellow, PTFE Stopcock, With Batch Certificate

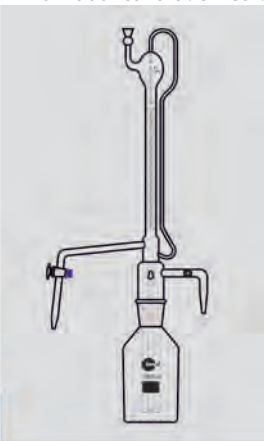
- Complies with ISO / DIN 385
- Calibrated at 20°C
- With automatic zero facility
- Individually tested for exact volume dispensed at 3 points on the scale
- Simple operation
 - To fill burette apply a slight positive pressure to lower side arm
 - To set zero, release pressure to allow excess liquid to siphon back into the bottle
- Burettes manufactured from chemically resistant 3.3 borosilicate glass
- White enamel graduations
- With PTFE stopcock

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2153006	10	0.05	0.02	1
2153009	25	0.1	0.05	1
2153012	50	0.1	0.05	1
2153016	100	0.2	0.10	1

Reservoir Capacity : 500 ml for 10 ml size and 2000 ml for 25, 50 and 100 ml sizes

* Blue and Amber graduations can be supplied on request.

* Individual calibration certificate can be provided on request



2154 - Burettes, Automatic Zero, Accuracy as per Class B, With Reservoir, Rubber Bellow, PTFE Stopcock

- Complies with ISO / DIN 385
- Calibrated at 20°C
- With automatic zero facility
- Simple operation
 - To fill burette apply a slight positive pressure to lower side arm
 - To set zero, release pressure to allow excess liquid to siphon back into the bottle
- Burettes manufactured from chemically resistant 3.3 borosilicate glass
- White enamel graduations
- With PTFE stopcock

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2154006	10	0.05	0.05	1
2154009	25	0.1	0.1	1
2154012	50	0.1	0.1	1
2154016	100	0.2	0.2	1

Reservoir Capacity : 500 ml for 10 ml size and 2000 ml for 25, 50 and 100 ml sizes

* Blue and Amber graduations can be supplied on request.

Auto Burettes in Amber Colour are available on request



2155 - Burettes, Automatic Zero, Accuracy as per Class A, With Reservoir, Rubber Bellow And Boroflo Stopcock With Batch Certificate

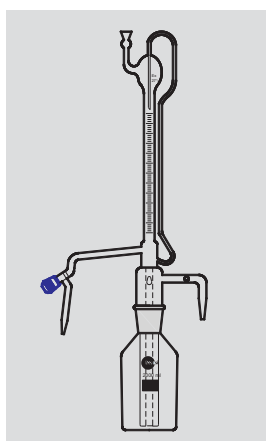
- Complies with ISO / DIN 385
- Calibrated at 20°C
- With automatic zero facility
- Individually tested for exact volume dispensed at 3 points on the scale
- Simple operation
 - To fill burette apply a slight positive pressure to lower side arm
 - To set zero, release pressure to allow excess liquid to siphon back into the bottle
- Burettes manufactured from chemically resistant 3.3 borosilicate glass
- White enamel graduations
- With Boroflo stopcock

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2155006	10	0.05	0.02	1
2155009	25	0.1	0.05	1
2155012	50	0.1	0.05	1
2155016	100	0.2	0.10	1

Reservoir Capacity : 500 ml for 10 ml size and 2000 ml for 25, 50 and 100 ml sizes

* Blue and Amber graduations can be supplied on request.

* Individual calibration certificate can be provided on request



2156 - Burettes, Automatic Zero, Accuracy as per Class B, With Reservoir, Rubber Bellow, Boroflo Stopcock

- Complies with ISO / DIN 385
- Calibrated at 20°C
- With automatic zero facility
- Simple operation
 - To fill burette apply a slight positive pressure to lower side arm
 - To set zero, release pressure to allow excess liquid to siphon back into the bottle
- Burettes manufactured from chemically resistant 3.3 borosilicate glass
- White enamel graduations
- With Boroflo stopcock

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
2156006	10	0.05	0.05	1
2156009	25	0.1	0.1	1
2156012	50	0.1	0.1	1
2156016	100	0.2	0.2	1

Reservoir Capacity : 500 ml for 10 ml size and 2000 ml for 25, 50 and 100 ml sizes

* Blue and Amber graduations can be supplied on request.

Auto Burettes in Amber Colour are available on request



Cones

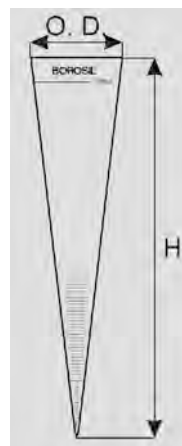
Cones are used to determine small amounts of suspended matter in sewage by the Imhoff Sedimentation Method.



2160 - Cones, Imhoff, Sediment, Sharp Tip

- Complies with IS 7232
- Graduated from 0 to 1 ml in 0.1 ml divisions
- Graduated from 1 to 10 ml in 0.5 ml divisions
- 10 to 40 ml in 1 ml divisions also marked at 1000 ml
- Facilitates the determination of the amount of sediment in sewage or industrial waste

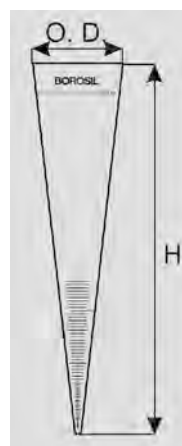
Product Code	Approx Total Height mm	Approx Top Diameter mm	Quantity Per Case
2160094	454	110	1



2180 - Cones, Imhoff, Sediment, Blunt Tip

- Complies with IS 7232
- The blunt tip increases its ruggedness and cleaning ease
- Ideal for use with heavy sediments where the ability to read small volumes is unimportant
- Facilitates the determination of the amount of sediment in sewage or industrial waste

Product Code	Approx Total Height mm	Approx Top Diameter mm	Quantity Per Case
2180093	439	110	1



Condensers

A Condenser is designed to facilitate the cooling of hot vapours and liquids. It is structured in the form of a large glass tube, containing a smaller glass tube running through its entire length. Hot fluids pass through this small inner tube.

Typically, the outer glass tube has two hose connections to aid the passing of a coolant (usually tap water or chilled water/anti-freeze mixture). The coolant is introduced through the lower fitting, while the higher fitting serves as the exit point. Entering the coolant at the cooler point is a critical aspect as it helps maintain a smooth and correctly directed thermal gradient. This in turn, maximises efficiency and minimises the risk of thermal shock to adjacent glassware. Multiple Condensers may be connected in a series. Usually, a high flow rate is not essential for maintaining a cooling surface.

Special care should be taken while choosing Condensers keeping in mind their distillation rates, reflux rates and temperature gradients.

Borosil offers you the choice of a wide range of Condensers.

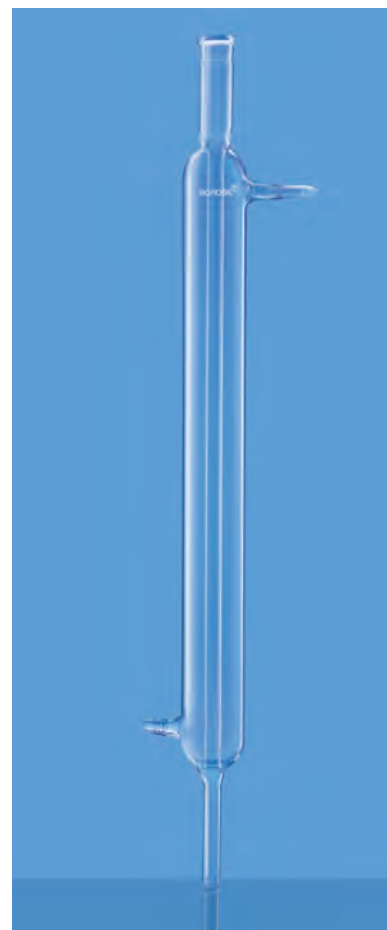




2340 - Condensers, Liebig, With Sealed Inner Tube

- Simple design
- The light wall of the inner tube facilitates efficient heat transfer
- Low cooling capacity
- Used for distillate separation

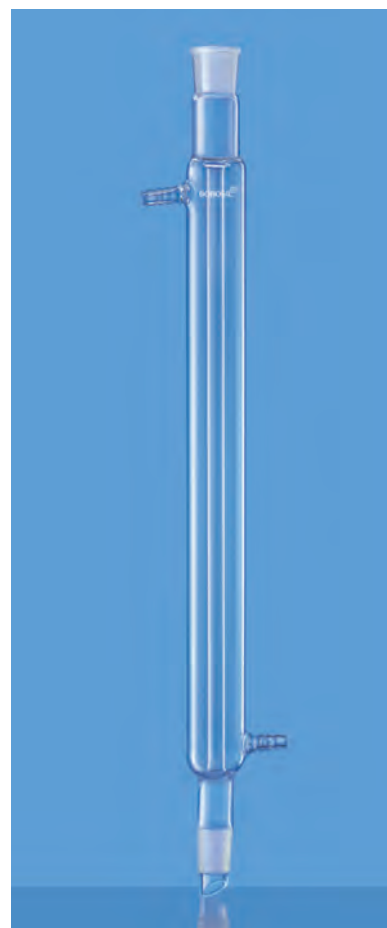
Product Code	Approx Jacket Length mm	Approx Overall Height mm	Interchangeable Joints	Quantity Per Case
2340087	200	350	19 / 15	5
2340090	300	450	19 / 15	5
2340092	400	550	19 / 15	5
2340095	500	660	19 / 15	5



2400 - Condensers, Liebig, Drip Tip, Interchangeable Inner And Outer Joint

- Simple design
- The light wall of the inner tube facilitates efficient heat transfer
- Low cooling capacity
- Used for distillate separation

Product Code	Approx Jacket Length mm	Approx Overall Height mm	Interchangeable Joints		Quantity Per Case
			Inner	Outer	
2400087	200	355	19 / 26	19 / 26	5
2400090	300	445	24 / 29	24 / 29	5
2400092	400	550	24 / 29	24 / 29	5

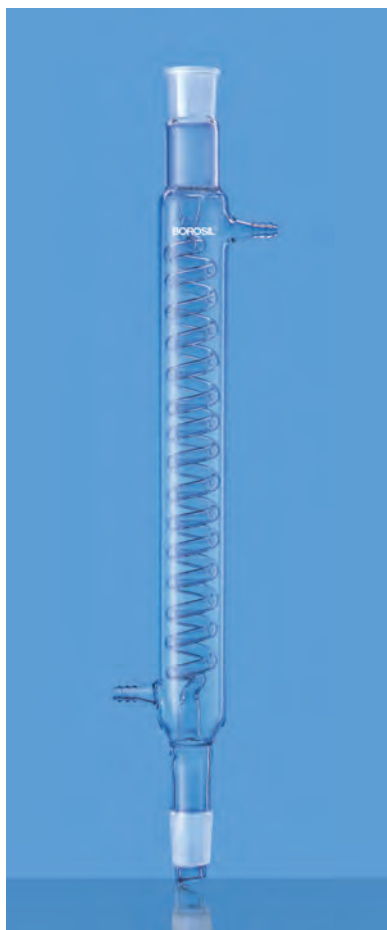
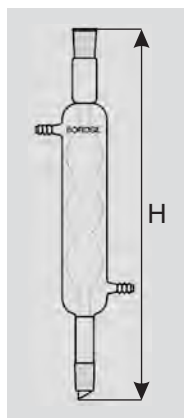




2480 - Condensers, Allihn, Drip Tip, Interchangeable Inner and Outer Joint

- Greater surface area than the Liebig Condenser owing to a series of bulbs, resulting in higher cooling capacity
- Ideal for laboratory scale refluxing

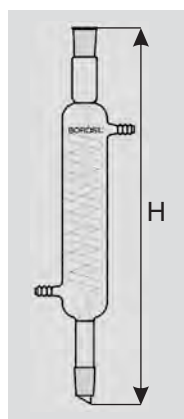
Product Code	Approx Jacket Length mm	Approx Overall Height mm	Interchangeable Joints		Quantity Per Case
			Inner	Outer	
2480087	200	355	19 / 26	19 / 26	5
2480090	300	445	24 / 29	24 / 29	5
2480092	400	550	24 / 29	24 / 29	5
2480096	600	740	29 / 32	29 / 32	5



2560 - Condensers, Graham, Coiled Distillate Type, Drip Tip, Interchangeable Inner and Outer Joint

- The coiled condensation tubes result in greater surface area for cooling
- Designed with top standard taper outer and lower inner drip tip joint

Product Code	Approx Jacket Length mm	Approx Overall Height mm	Interchangeable Joints		Quantity Per Case
			Inner	Outer	
2560090	300	450	24 / 29	24 / 29	5
2560092	400	550	24 / 29	24 / 29	5
2560095	500	650	24 / 29	24 / 29	5

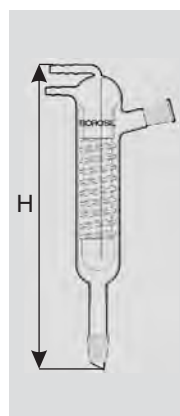




2640 - Condensers, Friedrichs, Drip Tip, Interchangeable Inner and Outer Joint

- Specially designed inner spiral tubes ensure a long vapour path
- Offer better heat transfer and anti-flooding capabilities

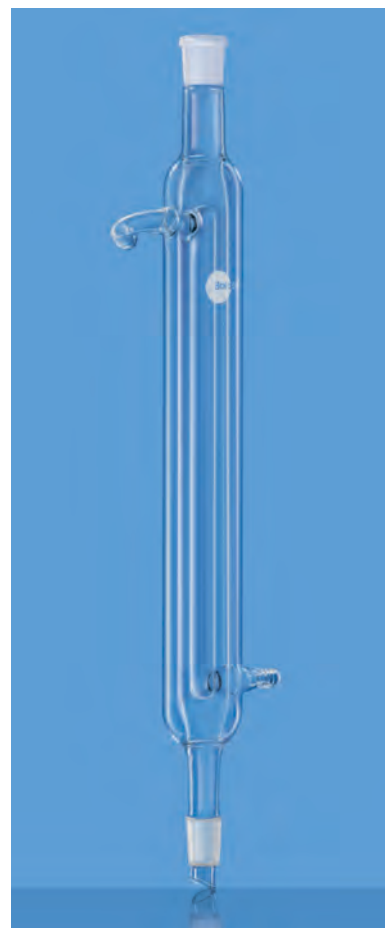
Product Code	Approx Overall Height mm	Interchangeable Joints		Quantity Per Case
		Inner	Outer	
2640097	350	24 / 29	24 / 29	5



2641 - Condensers, Double Surface

Product Code	Length of Height mm	Ground Joint	Quantity Per Case
2641087	200	19 / 26	5
2641187	200	24 / 29	5
2641090	300	19 / 26	5
2641190	300	24 / 29	5

The above condensers are widely used in research labs. A double-surface condenser has a water jacket both on the outside and through the centre of the condensing tube. It is needed where the condensed liquid is very volatile. Hence for distilling ethers, alcohols, esters, aromatics, petroleum products, and essential oils these condensers are widely used.



Cylinders

Measuring cylinders serve simultaneously to receive and measure different amounts of liquids. Made from specially drawn 3.3 Borosilicate glass tubing with durable, easy to read graduations for assured accuracy.

Borosil Brand Cylinders are built to last. We have built strength features into every cylinder. Heavy uniform wall tubing and strong stable hexagonal base contribute to sturdiness. Hexagonal base also prevents them from rolling off a laboratory bench. They are available in capacities from 5 ml to 2000 ml.

For accurate work, Class A certified cylinders are available.

Our range also includes Nessler Colour Comparison and Rain Measure Cylinders.



- Complies with highest quality standards according to ISO / DIN 4788
- Manufactured From 3.3 Low expansion borosilicate glass with precision bore tubing
- Individually calibrated on automatic calibration machine for precision and high accuracy
- Strict quality control through all steps eradicate possible deviations
- All measuring cylinders are calibrated to contain (TC, In) and all tolerances are according to ISO / DIN / ASTM class " A" Standards
- Supplied with Batch certificate and can be download from our website
- Specially designed hexagonal base provides sturdiness to the cylinder
- Perfect spout designed assures pouring without any drips
- Graduations and Inscriptions are printed in amber / white enamel
- Cylinders are also available with penny head stopper

meniscus reading





2975 - Cylinders, Colour Comparison, Nessler, Flat Bottom, Graduated

- Complies with IS 4161
- Calibration at 20°C
- Facilitates colour comparison of water samples
- Manufactured from precision bore 3.3 borosilicate tubing selected for freedom from colour or visible defects
- White enamel inscriptions

Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
2975012	50	25 x 150	20
2975016	100	34 x 180	30

100 ml Cylinder is marked at 50 ml and 100 ml

50 ml Cylinders is marked at 25 ml and 50 ml

* Blue enamel inscriptions can be supplied upon request



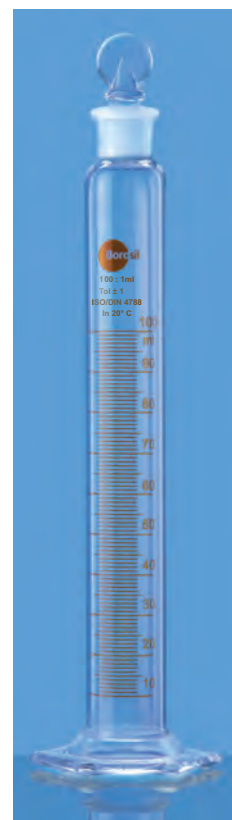
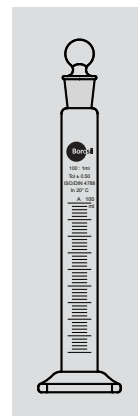
2981 - Cylinders, Graduated, Single Metric Scale, With Penny Head Interchangeable Stopper With Hexagonal Base, Class A, With Batch Certificate

- Complies with ISO / DIN 4788
- Calibration at 20°C
- Each cylinder is engraved with a unique serial number, and comes with a Certificate of Calibration traceable to national standards
- Graduations in Amber enamel
- Sturdy hexagonal base prevents roll-over and ensures greater stability
- Solid glass stopper

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Stopper Size	Quantity Per Case
2981005D	5	0.1	0.05	10 / 19	5
2981006D	10	0.2	0.10	10 / 19	5
2981009D	25	0.5	0.25	14 / 23	10
2981012D	50	1.0	0.50	14 / 23	10
2981016D	100	1.0	0.50	19 / 26	10
2981021D	250	2.0	1.00	24 / 29	5
2981024D	500	5.0	2.50	24 / 29	5
2981029D	1000	10.0	5.00	34 / 35	4
2981030D	2000	20.0	10.0	34 / 35	4

* Blue enamel inscriptions can be supplied upon request

* Individual calibration certificate can be provided on request

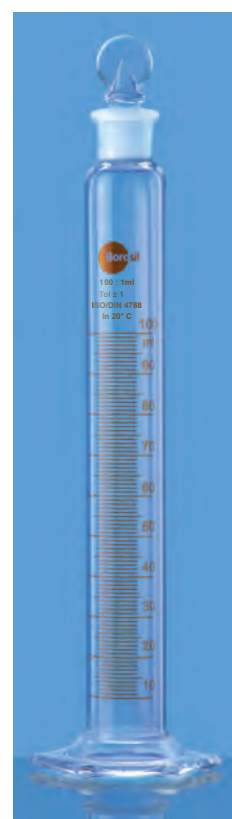
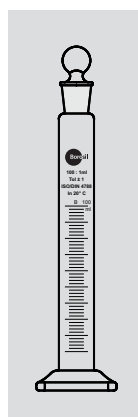


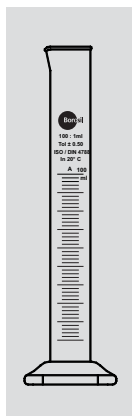
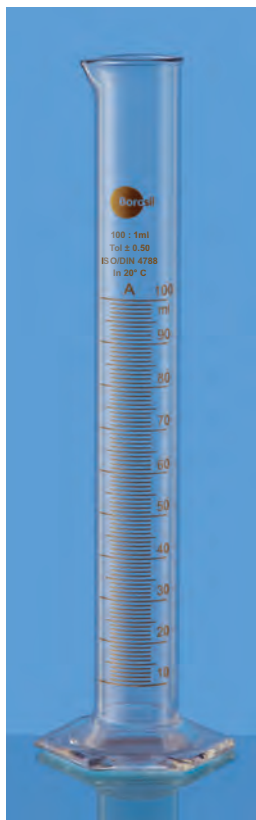
2982 - Cylinders, Graduated, Single Metric Scale, With Penny Head Interchangeable Stopper With Hexagonal base, Class B

- Complies with ISO / DIN 4788
- Calibration at 20°C
- Graduations in Amber enamel
- Sturdy hexagonal base prevents roll-over and ensures greater stability
- Solid glass stopper

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Stopper Size	Quantity Per Case
2982005D	5	0.1	0.1	10 / 19	5
2982006D	10	0.2	0.2	10 / 19	10
2982009D	25	0.5	0.5	14 / 23	10
2982012D	50	1.0	1.0	14 / 23	10
2982016D	100	1.0	1.0	19 / 26	10
2982021D	250	2.0	2.0	24 / 29	10
2982024D	500	5.0	5.0	24 / 29	5
2982029D	1000	10.0	10.0	34 / 35	4
2982030D	2000	20.0	20.0	34 / 35	4

* Blue enamel inscriptions can be supplied on request





3021 - Cylinders, Graduated, Single Metric Scale, With Pour Out, With Hexagonal Base, Class A, With Batch Certificate

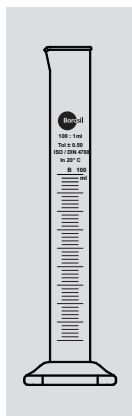
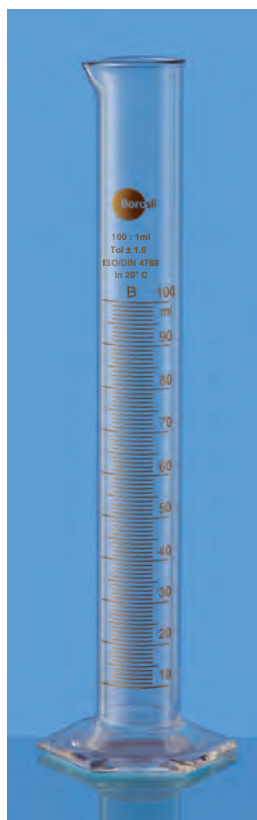
- Complies with ISO / DIN 4788
- Calibration at 20°C
- Each cylinder is engraved with a unique serial number, and comes with a Certificate of Calibration traceable to national standards
- Graduations in Amber enamel
- Sturdy hexagonal base prevents roll-over and ensures greater stability

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
3021005D	5	0.1	0.05	5
3021006D	10	0.2	0.1	5
NEW 3021008D	20*	1.0	0.25	10
3021009D	25	0.5	0.25	10
3021012D	50	1.0	0.5	10
3021016D	100	1.0	0.5	10
3021018D	150*	2.0	1.0	5
3021021D	250	2.0	1.0	10
3021024D	500	5.0	2.5	5
3021029D	1000	10.0	5.0	4
3021030D	2000	20.0	10.0	4

*Not covered in any standards.

* Blue enamel inscriptions can be supplied upon request

* Individual calibration certificate can be provided upon request



3022 - Cylinders, Graduated, Single Metric Scale, With Pour out, With Hexagonal Base, Class B

- Complies with ISO / DIN 4788
- Calibration at 20°C
- Graduations in Amber enamel
- Sturdy hexagonal base prevents roll-over and ensures greater stability

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
3022005D	5	0.1	0.1	10
3022006D	10	0.2	0.2	10
3022009D	25	0.5	0.5	20
3022012D	50	1.0	1.0	20
3022016D	100	1.0	1.0	20
3022018D	150*	2.0	2.0	5
3022021D	250	2.0	2.0	20
3022024D	500	5.0	5.0	10
3022029D	1000	10.0	10.0	4
3022030D	2000	20.0	20.0	4

*Not covered in any standards.

* Blue enamel inscriptions can be supplied upon request



3023 - Cylinders, Measuring as per ASTM D86 - for Petroleum Industry

- Complies with ASTM D 86
- Calibration at 20°C
- Each cylinder is graduated with a unique serial number and comes with a certificate of calibration traceable to national standards
- Graduation in amber enamel
- Sturdy hexagonal base prevents roll over and ensures greater stability

Product Code	Capacity ml	Graduation Interval ml	Tolerance +_ ml	Quantity Per Case
3023016	100	1	1	5

* Blue enamel inscriptions can be supplied upon request

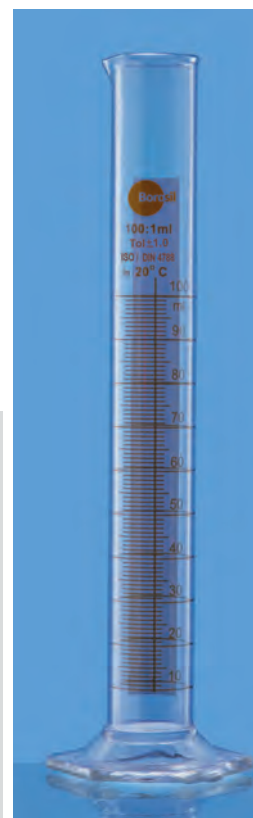
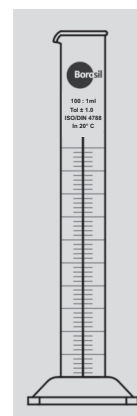


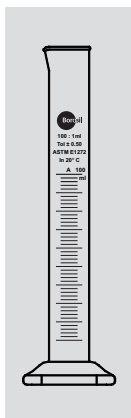
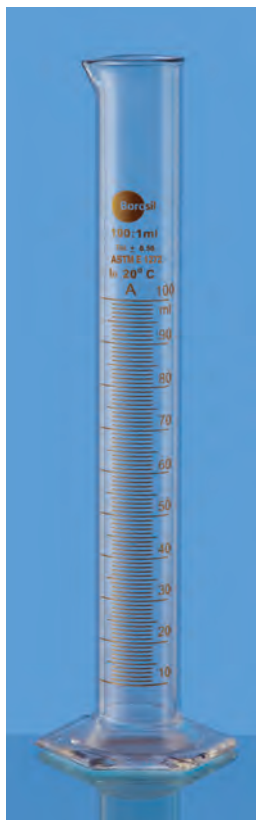
3024 - Cylinders, Single Metric Scale, With Pour Out, Schelbach type, With Hexagonal Base, Class B

- Complies with ISO / DIN 4788
- Calibration at 20°C
- Graduations in Amber enamel
- Sturdy hexagonal base prevents roll-over and ensures greater stability
- Proper visibility to read the meniscus

Product Code	Capacity ml	Graduation Interval ml	Tolerance +_ ml	Quantity Per Case
3024012	50	1.0	1.0	5
3024016	100	1.0	1.0	5

* Blue enamel inscriptions can be supplied upon request





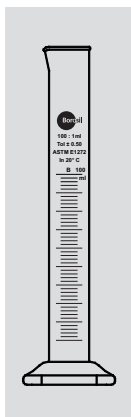
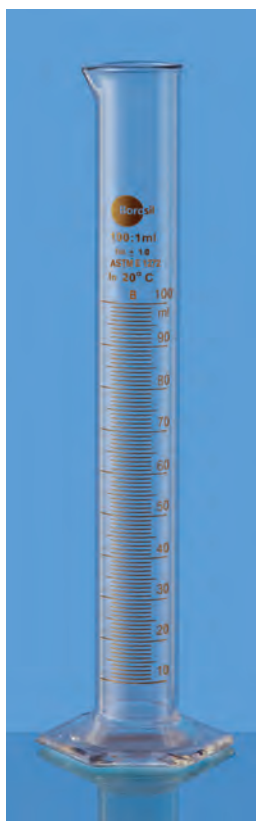
3026 - Cylinders, Graduated, Single Metric Scale, With Pour Out, With Hexagonal Base, Accuracy as per ASTM, Class A With Batch Certificate

- Complies with ASTM E 1272
- Calibration at 20°C
- Calibrated as per Class A tolerances required by the United States Pharmacopoeia (USP) that are tighter than those of ISO / DIN standards
- Each cylinder is engraved with a unique serial number, and comes with a Certificate of Calibration traceable to national standards
- Graduations in Amber enamel
- Manufactured with chemically resistant 3.3 borosilicate glass
- Sturdy hexagonal base prevents roll-over and ensures greater stability

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
3026005	5	0.1	0.05	5
3026006	10	0.2	0.1	5
3026009	25	0.5	0.17	5
3026012	50	1.0	0.25	5
3026016	100	1.0	0.5	5
3026021	250	2.0	1.0	5
3026024	500	5.0	2.0	4
3026029	1000	10.0	3.0	4
3026030	2000	20.0	6.0	4

* Blue enamel inscriptions can be supplied upon request

* Individual calibration certificate can be provided upon request



3027 - Cylinders, Graduated, Single Metric Scale, With Pour Out, With Hexagonal Base, accuracy as per ASTM, Class B

- Complies with ASTM E 1272
- Calibration at 20°C
- Calibrated as per Class B tolerances required by the United States Pharmacopoeia (USP) that are tighter than those of ISO / DIN standards
- Graduations in Amber enamel
- Manufactured with chemically resistant 3.3 borosilicate glass
- Sturdy hexagonal base prevents roll-over and ensures greater stability

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity Per Case
3027005	5	0.1	0.1	10
3027006	10	0.2	0.2	10
3027009	25	0.5	0.34	10
3027012	50	1	0.5	10
3027016	100	1	1.0	10
3027021	250	2	2	10
3027024	500	5	4	10
3027029	1000	10	6	4
3027030	2000	20	12	4

These cylinders are suitable to use as per USP tolerance for pharma industry

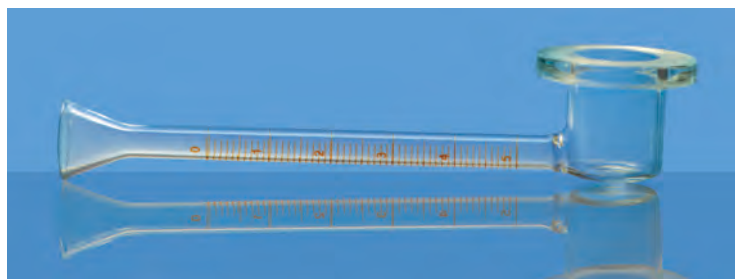
* Blue enamel inscriptions can be supplied upon request



3030 - Karsten Tube Horizontal, As Per USP

- Application in Cement Industry

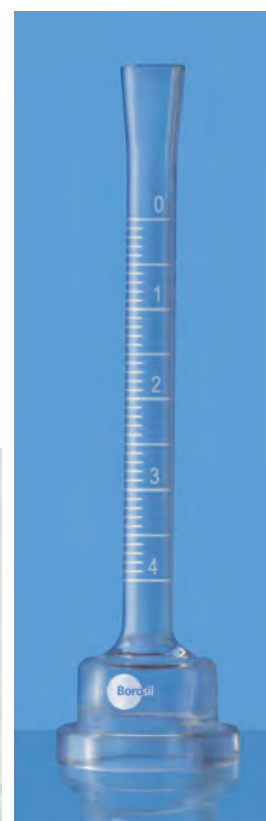
Product Code	Flange Dia x Height mm	Quantity Per Case
3030004	40 x 160	5
3030005	52 x 200	5



3031 - Karsten Tube Vertical

- Application in Cement Industry

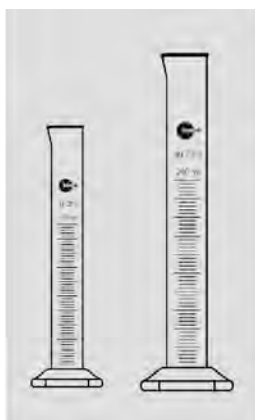
Product Code	Flange Dia x Height mm	Quantity Per Case
3031004	40 x 147	5



3032 - Tapped Density Cylinder, As Per USP 616

- Used in tapped density apparatus to measure bulk density of powders

Product Code	Capacity (Set) ml	Quantity Per Case (Set)
3032041	100 & 250	1

**3033 - Tapped Density Cylinder, As Per USP 616**

Product Code	Capacity (Set) ml	Quantity Per Case (Set)
3033016	100	2

**3034 - Tapped Density Cylinder, As Per USP 616**

Product Code	Capacity (Set) ml	Quantity Per Case (Set)
3034021	250	2





3070 - Cylinders, Rain Measure, Metric Scale, Graduated, With Round Base

- Complies with IS 4849
- Manufactures with with chemically resistance 3.3 borosilicate glass
- Graduation in white enamel
- The cylinders are graduated to indicate rainfall in mm when used with appropriate rain collector

Product Code	Size mm	Used For Collector Area cm ²	Graduation Interval mm	Tolerance ± mm	Quantity Per Case
3070096	20	200	0.2	0.05	5
3070098	20	100	0.2	0.1	10



Desiccators

Borosil brand Desiccators are equipped with bodies and covers that have great strength and utility. The body is designed with a streamlined contour that facilitates easy cleaning of the used desiccant. Any desiccant such as sulphuric acid, phosphoric pentoxide, calcium chloride or silica gel may be used in Borosil brand Desiccators.

For your convenience, all Borosil brand Plain Desiccators of the same size have interchangeable covers and bodies.

When the ground surface is cleaned and greased, Vacuum type Desiccators hold a vacuum of 500 mm of mercury.





3082 - Desiccators, With Cover And Porcelain Plate, Plastic Knob

- Complies with IS 6128
- Robust Desiccator base and cover made of borosilicate glass
- Simple design for drying under atmospheric pressure
- Ground glass flanges
- Plates are positioned on an internal ledge within the base
- Generally used for drying of moist products, and for storage of moisture-sensitive substances

Product Code	Approx ID Ground Flange mm	Quantity Per Case
3082041	100	1
3082042	150	1
3082043	200	1
3082044	250	1
3082045	300	1



3083 - Desiccators, Vacuum, Stopcock With PTFE Spindle, And Porcelain Plate

- Complies with IS 6128
- Designed for use under vacuum
- Sturdy construction of borosilicate glass
- Ground glass flanges
- Plates are positioned on an internal ledge within the base
- Comes with PTFE stopcock at the top
- Generally used for drying of moist products, and for storage of moisture sensitive substances

Product Code	Approx ID Ground Flange mm	Quantity Per Case
3083041	100	1
3083042	150	1
3083043	200	1
3083044	250	1
3083045	300	1





3084 - Desiccators, With Cover And Porcelain Plate, Plastic Knob, Amber

- Complies with IS 6128
- Suitable for light sensitive products

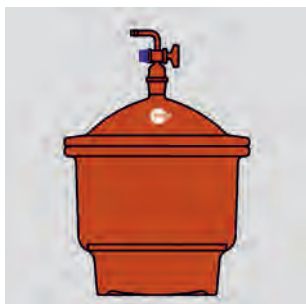
Product Code	Approx ID Ground Flange mm	Quantity Per Case
3084041	100	1
3084042	150	1
3084043	200	1
3084044	250	1
3084045	300	1



3085 - Desiccators, Vacuum, stopcock with PTFE spindle and Porcelain plate, Amber

- Complies with IS 6128
- Suitable for light sensitive products

Product Code	Approx ID Ground Flange mm	Quantity Per Case
3085041	100	1
3085042	150	1
3085043	200	1
3085044	250	1
3085045	300	1



India's most Trusted Laboratory Brand



www.borosil.com

BOROSIL group is the leading manufacturer of specialty glassware in India today. In the scientific arena with over 50 years of experience, BOROSIL currently caters to the most demanding needs of the Research & Development, Industrial, Pharma, Health Care & Education segments of the market with their most comprehensive range of laboratory glass and glass ware products manufactured from 3.3 expansion borosilicate glass. BOROSIL today gives, amongst a diverse range of products, a wide option of certified products as per ISO / DIN / ASTM / IS standards and ground joint items to ensure that the customers' requirements are catered to.

The recent addition of the NABL accreditation facility, where NABL is a signatory to International Laboratory Accreditation Co-operation (ILAC) and Asia Pacific Laboratory Accreditation Co-operation (APLAC) speaks about the standards maintained.

It's export to over 40 countries, itself is a testimonial of the quality and service standards provided.

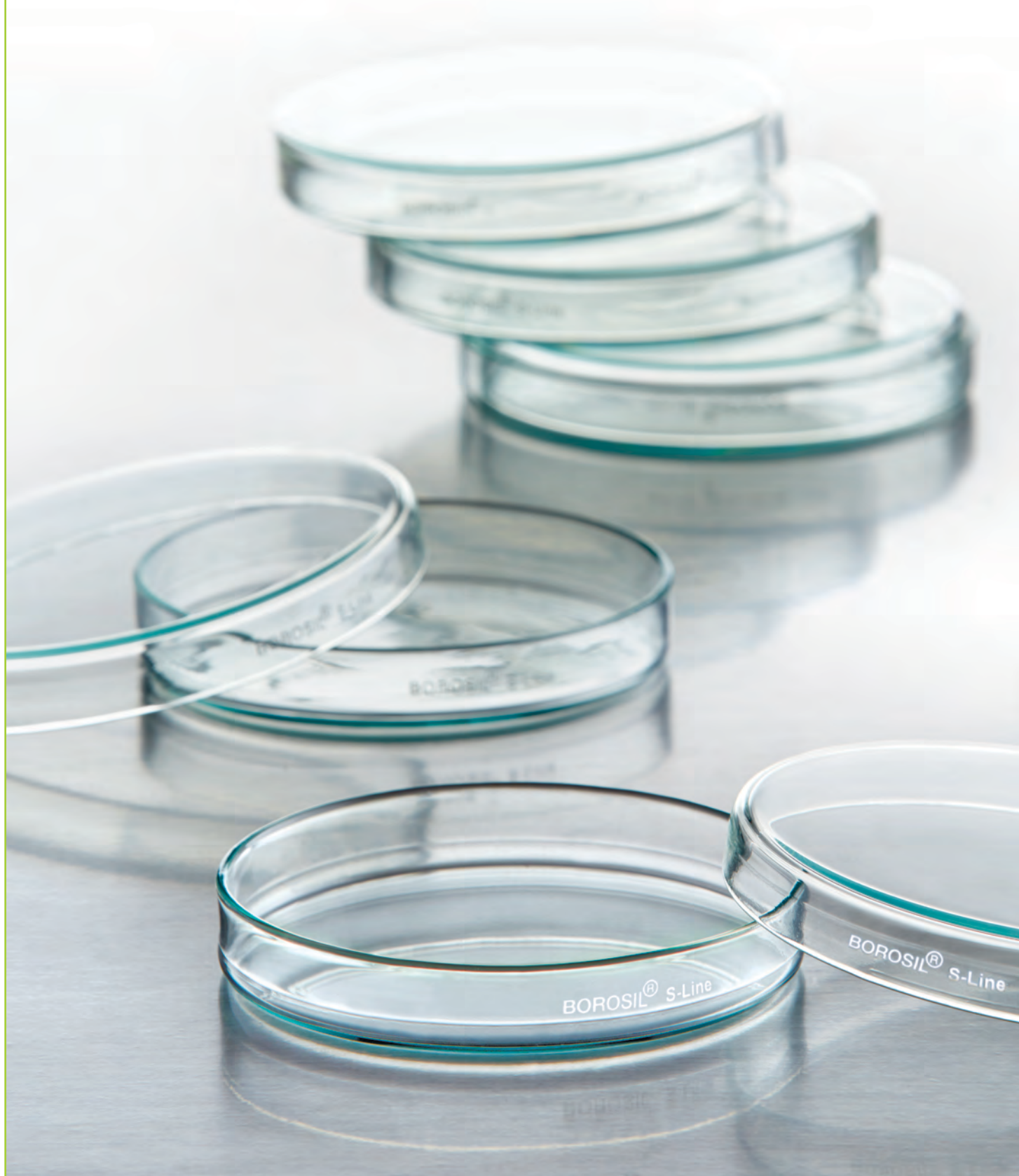


Pioneers in speciality glass

Dishes

Borosil® brand Dishes are designed to fulfil your wide-ranging needs - Crystallizing, Evaporating, Drying, Storing, Petri dishes for culture, assay and micro-biological works. All **Borosil®** brand Dishes are safe, durable and economical.

Borosil® brand Dishes are inert, can be sterilised and remain clear even after repeated use and washing. With each subsequent use, the cost per Dish decreases.

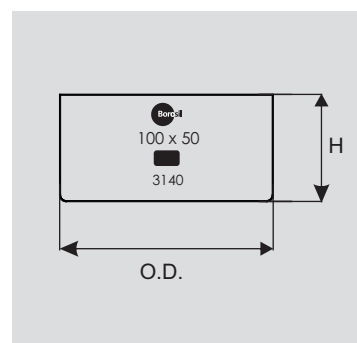




3140 - Dishes, Crystallizing

- Reinforced and fire-polished rims reduce chipping
- Large labelling field for easy marking
- Very high chemical resistance
- High resistance to thermal shocks

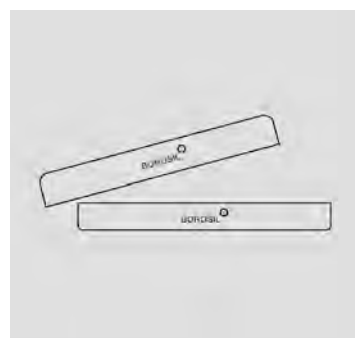
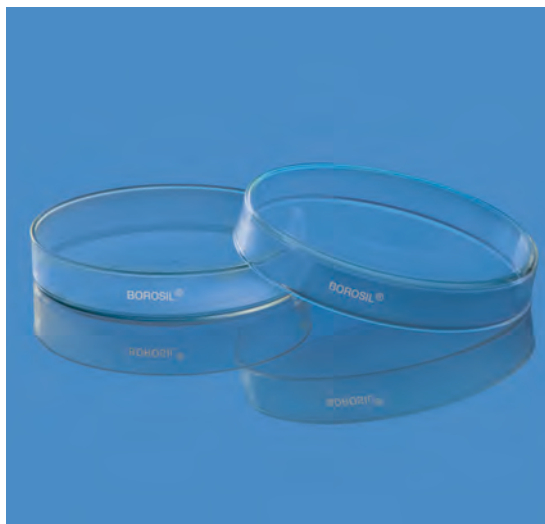
Product Code	Approx O.D. x Height mm	Quantity Per Case
3140077	100 x 50	10
3140081	150 x 75	10
3140086	190 x 100	4

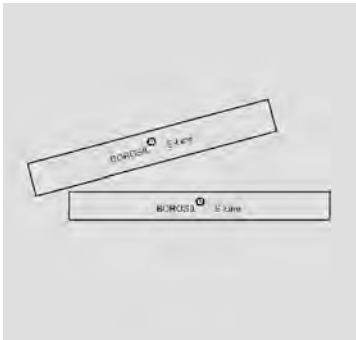
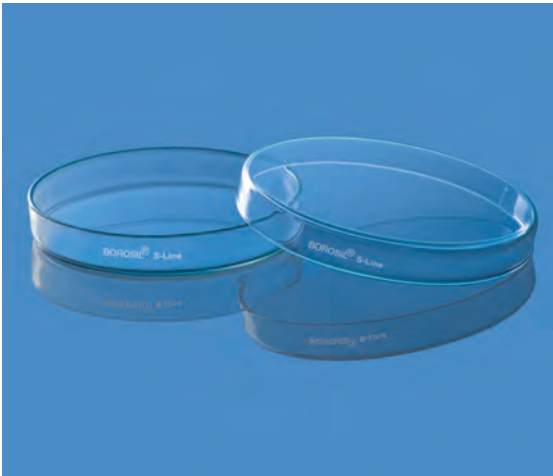


3160 - Dishes, Culture, Petri

- Complies with IS 2626
- These Dishes are clear and withstand repeated sterilisation (wet or dry)
- Made of 3.3 borosilicate glass using a special manufacturing process
- Beaded edges impart greater mechanical strength
- Ideal for use in routine work
- Specially form to ensure even wall thickness and consistent optical performance

Product Code	Approx O.D. x Height mm	Quantity Per Case
3160065	50 x 17	100
3160072	80 x 17	100
3160077	100 x 17	100
3160081	150 x 20	40
3160087	200 x 20	10





3165 - Dishes, Culture Petri, Borosil S-Line

- The inner surface of these Dishes has a very close flatness tolerance
- The accuracy of many biological assays depends on the flatness of the inside base of the Petri dish
- Made of soda lime glass ensuring that the inner surface of the top and base are absolutely flat
- These Dishes have high clarity and are free of bubbles
- Ideal for use in routine work

Product Code	Approx O.D. x Height mm	Quantity Per Case
3165065	50 x 12	100
3165072	80 x 15	100
3165077	100 x 15	100
3165081	150 x 25	40
3165087	200 x 30	10





S-LINE PETRI DISHES

Certified | Type I Glass | USP & EP Compliant | Easy Ordering | Wide Compatibility



3170 - Trays, Drying, Heavy Wall

- The trays withstand hot air or stream sterilization
- Facilitates paper chromatography
- Dimensions are approximate, representing the inside length x width x height in mm

Product Code	Approx Dimension mm	Approx Capacity ml	Quantity Per Case
3170044	320 x 180 x 51	1500	5
3170043	350 x 200 x 58	2400	5
3170042	386 x 217 x 63	3000	5
3170041	404 x 257 x 61	3500	5



3180 - Dishes, Evaporating, Flat Bottom, With Pour Out

- Made of 3.3 borosilicate glass
- Very high chemical resistance
- High resistance to thermal shocks
- Designed with a spout to facilitate clean pouring
- Withstand to repeated sterilisation (Wet or dry)
- Beaded edge give greater mechanical strength
- Ideal for use in routine work

Product Code	Approx O.D. x Height mm	Quantity Per Case
3180072	80 x 45	10
3180078	105 x 55	10
3180081	150 x 80	10
3180087	200 x 100	8



Distilling Apparatus

Most of the distillation equipment required in an average laboratory can be constructed using standard Borosil components. Distillation assemblies for specific applications are available as complete units, as listed herein.

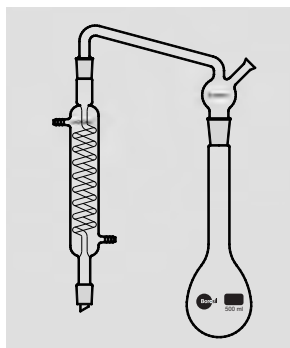




3340 - Distilling Apparatus, Ammonia, With Graham Condenser, Interchangeable Joints

- Ideal for determining nitrogen in organic compounds
- Digestion and distillation stages can be performed in this apparatus
- The inlet tube allows permanganate solution to be introduced after distillation

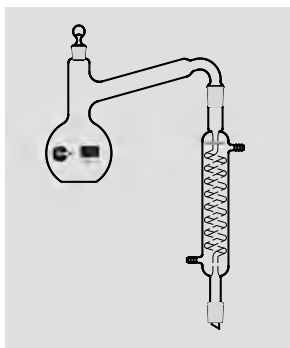
Product Code	Capacity ml	Quantity Per Case
3340024	500	2 Set



3360 - Distilling Apparatus, With Graham Condenser, Interchangeable Joints, Interchangeable Stopper

- Ideal for batch production of high purity distilled water
- General purpose Batch Distillation Assembly equipped with an interchangeable stoppered neck that facilitates addition
- The Flask has a flat base with a delivery tube on the side

Product Code	Capacity ml	Condenser Jacket mm	Interchangeable Joint	Quantity Per Case
3360024	500	200	19 / 26	2 Set

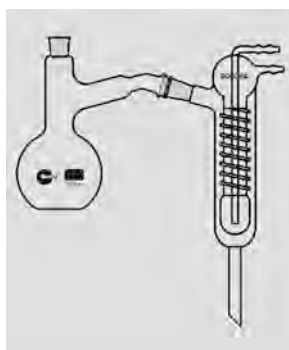




3380 - Distilling Apparatus, With Friedrichs Condenser, Interchangeable Joint, Interchangeable Stopper

- Ideal for batch production of high purity distilled water
- General purpose Batch Distillation Assembly equipped with an interchangeable stoppered neck that facilitates addition
- The Flask has a flat base with a delivery tube on the side
- Comes with Friedrich's Spiral Condenser for higher distillation rates

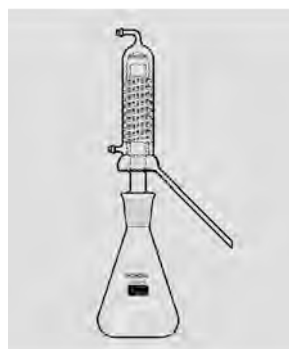
Product Code	Capacity ml	Interchangeable Joint	Quantity Per Case
3380030	2000	24 / 29	1 Set



3440 - Distilling Apparatus, Compact With Friedrichs Condenser, Interchangeable Joint

- A compact distillation assembly with specially designed Friedrichs Condensers
- This Condenser is designed with vapour tubing rising at the top
- A 1000 ml Erlenmeyer Flask is provided with an interchangeable 34/35 joint

Product Code	Capacity ml	Interchangeable Joint	Quantity Per Case
3440029	1000	34 / 35	2 Set

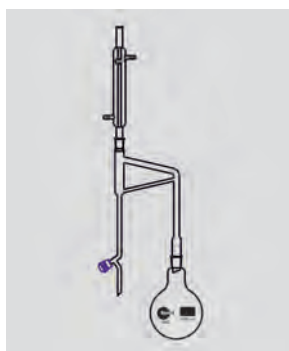




3450 - Essential Oil Determination Apparatus (Clevenger Apparatus), For Oil Heavier Than Water

- This apparatus is ideal for estimation of volatile oil that is heavier than water
- Comes with a 5 ml Receiver with stopcock, an Oil Separator Tube, a condenser and 1000 ml flask

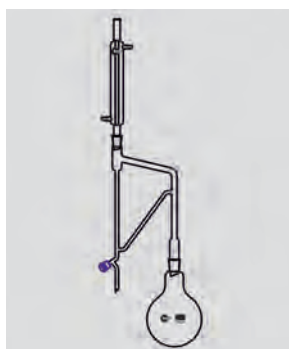
Product Code	Capacity ml	Quantity Per Case
3450029	1000*	1 Set
3450030	2000	1 Set
3450033	5000	1 Set
3450038	10000	1 Set
3450040	20000	1 Set



3451 - Essential Oil Determination Apparatus (Clevenger Apparatus), For Oil Lighter Than Water

- Ideal for estimation of volatile oil that is lighter than water
- Comes with a 5 ml Receiver with stopcock, an Oil Separator Tube, a condenser and 1000 ml flask

Product Code	Capacity ml	Quantity Per Case
3451029	1000*	1 Set
3451030	2000	1 Set
3451033	5000	1 Set
3451038	10000	1 Set
3451040	20000	1 Set

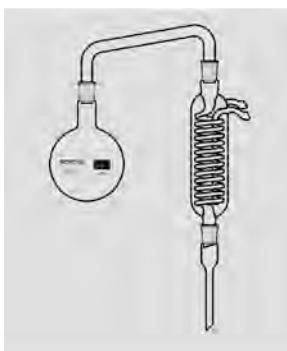




3452 - Alcohol Distillation Unit

- Ideal for distilling alcohol in the laboratory to produce the purest grade
- Thorpe's revenue still for purification of ethyl alcohol popularly used in pharmaceutical industries

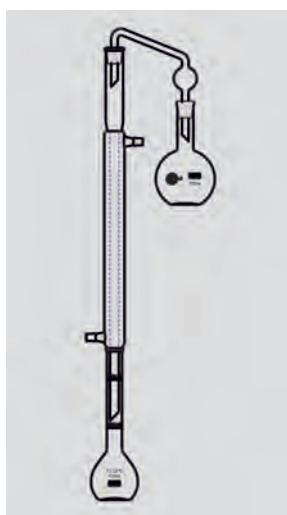
Product Code	Capacity ml	Quantity Per Case
3452029	1000	1 Set



3454 - R M Value Apparatus

- Ideal for use in dairy industries
- Facilitates the determination of butter fat, and the analysis of oil, fat and waxes

Product Code	Capacity ml	Quantity Per Case
3454022	300	1

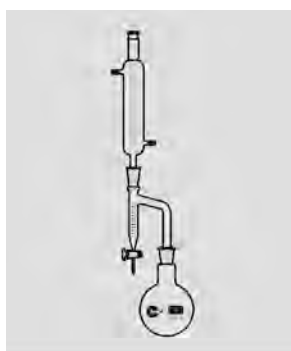


3602 - Distilling Apparatus, Dean And Stark, Moisture Test, (As Per I.P. Specifications)

- Made of 3.3 borosilicate glass
- Uniform wall distribution of the Flask makes it suitable for heating
- Consists of a graduated 10 ml Receiver with 0.1 intervals

Product Code	Capacity of Receiver ml	Quantity Per Case
3602006	10	2 Set

Consists of receiver 10 ml graduated with 19 / 26 outer joint and 24 / 29 inner joint, round bottom flask 1000 ml with 24 / 29 outer joint and Liebig condenser 200 mm with 19 / 26 joint. The 10 ml receiver is graduated from 1 ml to 10 ml in 0.1 ml intervals.



Water Distillation Purification Systems

Economy Water Stills

Distillation removes water miscible organics and ionisable inorganic impurities, as well as colloidal solids from water.

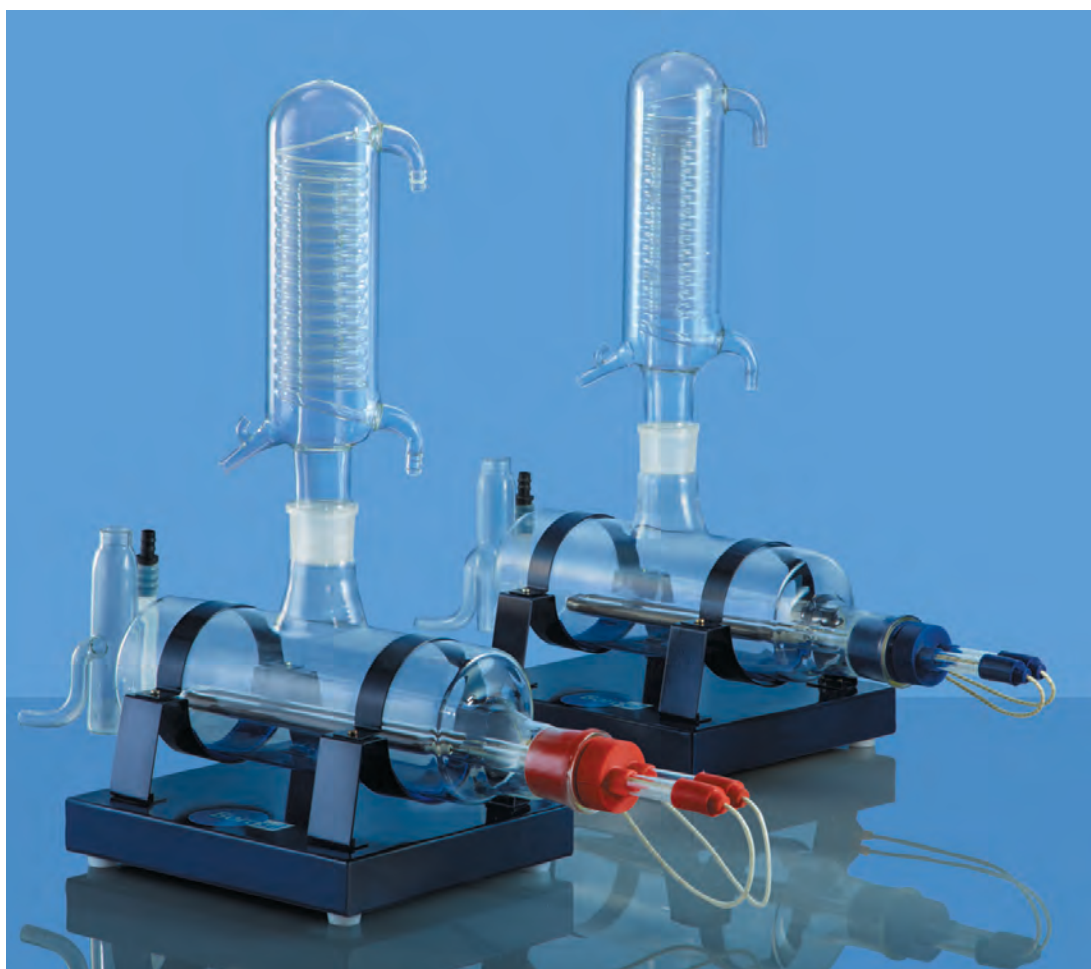
Borosil Glass Distillation Units continue to be the most effective and economical method of producing ultra pure water for laboratory use.

By contrast, De-ionisers are effective only in removing those substances that are ionised. Moreover, the resins contribute organic impurities to water, resulting in an environment conducive to bacterial growth in course of time.

Borosil Distillation Units are designed to produce a distillate of consistent purity. The Unit consists of horizontal Borosilicate Boilers, Condensers and a Quartz Heater. All the parts are replaceable.

Advantages

- Compact and easy to use
- Economical and ideal for colleges and general laboratory use
- Powder-coated stand for rust-free operation
- Provision for easy cleaning of the Boiler





3361 - All Glass Single Distillation Unit, With Borosilicate Boiler, Borosilicate Condenser & Quartz Heater, Horizontal Type

Cat No.	3361 - 1.5 L	3361 - 4.0 L
Dist. Water Output Cap.(Approx)	1.5 lt/hr.	4 lt/hr
Electrical requirements	230-250 volts Single phase 1.5kw Quartz heater	230-250 volts Single phase 3.5 kw Quartz heater
Minimum Cooling		
Water requirement	1 Lit / min	2 Lit / min
Biological Activity	Pyrogen Free	Pyrogen Free
Conductivity S/cm	$<3 \times 10^{-6}$	$<3 \times 10^{-6}$
Distillate Temp.	65-75°C	65-75°C

Product Code	Cat No.	Output Capacity (Lt/Hr)	Total Power Consumed (kw)	Quantity per case
3361041	3361	1.5	1.5	1
3361032	3361	4.0	3.5	1

Standard Accessories for Cat No. 3361

Distillation Apparatus Power Supply (DAPS) enables the Distillation Unit to function automatically by switching off the heater in case the water level falls below the heating coil, thereby safeguarding the heaters.

- The sensor rods are adjusted above the heater levels, and operate on 12 Volt power supply
- DAPS emits a buzzer sound alert to indicate low water level
- The Unit is unique for each model

Product Code	Cat No.	Output Capacity (Lt/Hr)	Description
3366141	3361	1.5	Distillation Appartus Power Supply (DAPS)
3366132	3361	4.0	Distillation Appartus Power Supply (DAPS)

Spares for Distillation unit for Cat No. 3361

Product Code	Cat No.	Output Capacity (Lt/Hr)	Description
0336011	3361	1.5	Borosilicate Boiler with Water Leveller
0361021	3361	1.5	Condenser
0336012	3361	1.5	Quartz new type heater B-34
0336021	3361	4.0	Borosilicate Boiler with Water Leveller
0362021	3361	4.0	Condenser
0336022	3361	4.0	Quartz new type heater B-50



3362 - All Glass Double Distillation Unit, With Borosilicate Boiler, Borosilicate Condenser & Quartz Heater, Horizontal Type

Cat	3362 1.5 L	3362 - 4.0 L
Dist. Water Output cap.(Approx)	1.5 lt/hr	4 lt/hr
Electrical Requirements	230-250 volts Single phase 1.5x2 kw Quartz heater	230-250 volts single phase 3.5x 2kw Quartz heater
Minimum Cooling Water requirement	2 Lit / min (EA)	2.5 Lit / min (EA)
Biological Activity	Pyrogen Free	Pyrogen Free
Conductivity S/cm	$<1 \times 10^{-6}$	$<1 \times 10^{-6}$
Distillate Temp	65-75°C	65-75°C

Product Code	Cat No.	Output Capacity (Lt/Hr)	Total Power Consumed (kw)	Quantity per case
3362041	3362	1.5	$1.5 \times 2 = 3$	1
3362032	3362	4.0	$3.5 \times 2 = 7$	1

Standard Accessories for Cat No. 3362

Distillation Apparatus Power Supply (DAPS) enables the Distillation Unit to function automatically by switching off the heater in case the water level falls below the heating coil, thereby safeguarding the heaters.

- The sensor rods are adjusted above the heater levels, and operate on 12 Volt power supply
- DAPS emits a buzzer sound alert to indicate low water level
- The Unit is unique for each model

Product Code	Cat No.	Output Capacity (Lt/Hr)	Description
3366241	3362	1.5	Distillation Appartus Power Supply (DAPS)
3366232	3362	4.0	Distillation Appartus Power Supply (DAPS)

Spares for Distillation unit for Cat No. 3362

Product Code	Cat No.	Output Capacity (Lt/Hr)	Description
0336011	3362	1.5	Borosilicate Boiler with Water Leveller
0361021	3362	1.5	Condenser
0336012	3362	1.5	Quartz new type heater B-34
0336021	3362	4.0	Borosilicate Boiler with Water Leveller
0362021	3362	4.0	Condenser
0336022	3362	4.0	Quartz new type heater B-50

MONO QUARTZ DISTILLATION UNIT

The supply of pyrogen-free distilled water is a basic requisite for Research, Analytical and Industrial Laboratories. Distilled water from metallic units does not meet the required standards. Moreover, such units are bulky and cumbersome.

Borosil Mono Quartz Distillers are very compact and are constructed of high purity quartz, thereby meeting the standard of analytical laboratories, where the purity of distilled water that is free from metallic ions and bacteria, is the chief criterion.

The Boiler is made of high purity quartz and the Condenser is made of borosilicate/quartz material. The built-in heater ensures minimum loss of heat, and production of distilled water in 2 to 3 minutes. The Unit is mounted on a powder-coated metal stand with electrical connections, and is easy to dismantle and assemble. The fibre glass insulated wire and silicone rubber boot resist high temperatures.

Advantages

- Instant output of distilled water
- Free of pyrogen and heavy metals
- Efficient borosilicate/quartz Coil Condenser
- Powder-coated stand for rust-free operation





3363 - Mono Quartz Distillation Unit, Panel Mounted with Quartz Boiler & Borosilicate Condenser, Vertical Model

Cat No.	3363 - 2.5 L	3363 - 5 L	3363 - 10 L
Dist. Water Output Cap.(Approx)	2.5 lt/ hr	5 lt/hr	10lt/hr
Electrical Requirements	230-250 volts single phase 2.2 kw	230-250 volts single phase 4.4 kw	440 volts 3phase 8.8 kw
Minimum Cooling Water requirement	1 Lit / min	2 Lit / min	2.5 Lit / min
Biological Activity	Pyrogen Free	Pyrogen Free	Pyrogen Free
Conductivity S/cm	<3 x 10 ⁻⁶	<3 x 10 ⁻⁶	<3 x 10 ⁻⁶

Product Code	Cat No.	Output Capacity (Lt/Hr)	Total Power Consumed (kw)	Quantity per case
3363042	3363	2.5	2.2 x 1 = 2.2	1
3363033	3363	5.0	2.2 x 2 = 4.4	1
3363038	3363	10	2.93 x 3 = 8.8	1

Standard Accessories for Cat No. 3363

Distillation Apparatus Power Supply (DAPS) enables the Distillation Unit to function automatically by switching off the heater in case the water level falls below the heating coil, thereby safeguarding the heaters.

- The sensor rods are adjusted above the heater levels, and operate on 12 Volt power supply
- DAPS emits a buzzer sound alert to indicate low water level
- The Unit is unique for each model

Product Code	Cat No.	Output Capacity (Lt/Hr)	Description
3366342	3363	2.5	Distillation Appartus Power Supply (DAPS)
3366333	3363	5.0	Distillation Appartus Power Supply (DAPS)
3366338	3363	10.0	Distillation Appartus Power Supply (DAPS)

Spares for Distillation unit for Cat No. 3363

Product Code	Cat No.	Output Capacity (Lt/Hr)	Description
0363012	3363	2.5	Quartz Boiler
0362022	3363	2.5	Borosilicate Condenser
0363032	3363	5.0	Quartz Boiler
0363S00	3363	5.0	Borosilicate Condenser
0363S02	3363	10.0	Quartz Boiler
0363S03	3363	10.0	Borosilicate Condenser

3364 - Mono Quartz Distillation Unit, Panel Mounted with Quartz Boiler And Quartz Condenser, Vertical Model

Cat No.	3364 - 2.5L	3364 - 5L
Dist.Water Output.cap (Approx)	2.5lt/hr	5lt/hr
Electrical Requirements	230-250 volts single phase 2.2kw	230-250 volts single phase 4.4kw
Minimum Cooling water requirement	1Lit / min	2 Lit / min
Biological Activity	Pyrogen Free	Pyrogen Free
Conductivity S/cm	<2 x 10 ⁻⁶	<2 x 10 ⁻⁶

Product Code	Cat No.	Output Capacity (Lt/Hr)	Total Power Consumed (kw)	Quantity per case
3364042	3364	2.5	2.2	1
3364033	3364	5.0	2.2 x 2 = 4.4	1

Standard Accessories for Cat No. 3364

Distillation Apparatus Power Supply (DAPS) enables the Distillation Unit to function automatically by switching off the heater in case the water level falls below the heating coil, thereby safeguarding the heaters.

- The sensor rods are adjusted above the heater levels, and operate on 12 Volt power supply
- DAPS emits a buzzer sound alert to indicate low water level
- The Unit is unique for each model

Product Code	Cat No.	Output Capacity (Lt/Hr)	Description
3366442	3364	2.5	Distillation Appartus Power Supply (DAPS)
3366433	3364	5.0	Distillation Appartus Power Supply (DAPS)

Spares for Distillation unit for Cat No. 3364

Product Code	Cat No.	Output Capacity (Lt/Hr)	Description
0363012	3364	2.5	Quartz Boiler
0364023	3364	2.5	Quartz Condenser
0363032	3364	5.0	Quartz Boiler
0364S01	3364	5.0	Quartz Condenser



ALL QUARTZ DOUBLE DISTILLATION UNIT

The supply of pyrogen-free distilled water is a basic requisite for research, analytical and industrial laboratories. Moreover, care should be taken while choosing the materials of the Distillation Apparatus and storage vessels, so as to prevent diffusion of impurities into the distillate.

Quartz Distillation Units are manufactured with imported fused quartz tubes. The exceptionally high chemical purity and very low solubility of this material result in the production of a very high performance system. The greatest possible attention has been taken to ensure good technical performance, simplicity of use and efficiency.



3365 - All Quartz Double Distillation Unit, Demountable Boiler Panel series, Vertical Model

Cat No.	3365 1.5L	3365 2.5 L	3365 5 L
Dist.Water Output Cap.(Approx)	1.5 lt/hr	2.5 lt/hr	5 lt/hr
Electrical Requirements	230-250 volts single phase 3 kw	230-250 volts single phase 4.4 kw	440 volts 3 phase 8.8 kw
Minimum Cooling Water requirement	1 Lit / min	2 Lit / min	2.5 Lit / Min (EA)

Distillate Quality Specifications

Biological Activity	Pyrogen Free
Conductivity S/cm	<1x10 ⁻⁶
Total Organic Carbon (TOC) µg/l	<500
Organic Matter mg/lit	Nil
Total Solids mg/lit	< 0.1
Distillate Temp.	65-75°C
Total plate count	0
Standard Plate Count	0
Yeast and Mould	0
KMnO 4 color retention	1 hr
UV absorbance at 254 nm	0.007

**** The results mentioned in specifications are obtained under standard laboratory conditions**

Product Code	Cat No. No.	Output Capacity (Lt/Hr)	Total Power Consumed (kw)	Quantity per case
3365041	3365	1.5	1.5 x 2 = 3.0	1
3365042	3365	2.5	2.2 x 2 = 4.4	1
3365033	3365	5.0	2.2 x 4 = 8.8	1

NOTE : Because of difficulties associated with measurement of the pH value of high purity water and the doubtful significance of the values obtained, limits for the pH value of grade 1 and grade 2 water have not been specified.



Water Distillation Unit

Standard Accessories for Cat No. 3365

Distillation Apparatus Power Supply (DAP) enables the Distillation Unit to function automatically by switching off the heater in case the water level falls below the heating coil, thereby safeguarding the heaters.

- The sensor rods are adjusted above the heater levels, and operate on 12 Volt power supply
- DAPS emits a buzzer sound alert to indicate low water level
- The Unit is unique for each model

Product Code	Cat No.	Output Capacity (Lt/Hr)	Description
3366541	3365	1.5	Distillation Apparatus Power Supply (DAPS)
3366542	3365	2.5	Distillation Apparatus Power Supply (DAPS)
3366533	3365	5.0	Distillation Apparatus Power Supply (DAPS)

Spares for Distillation unit for Cat No. 3365

Product Code	Cat No.	Output Capacity (Lt/Hr)	Description
0362013	3365	1.5	Primary Boiler
0362015	3365	1.5	Secondary Boiler
0362063	3365	1.5	Receiving Adapter with spring
0362014	3365	2.5	Primary Boiler
0362016	3365	2.5	Secondary Boiler
0362063	3365	2.5	Receiving Adapter with spring
0362S04	3365	5.0	Primary Boiler
0363S05	3365	5.0	Secondary Boiler
0362063	3365	5.0	Receiving Adapter with spring
0362052	3365		Silicon 'O' Ring

Whether obtained through distillation, the De-ioniser or reverse osmosis, pure water is an excellent solvent and will readily dissolve carbon dioxide from the atmosphere to form a very dilute solution of carbonic acid with pH below 7.

The pH of high purity water cannot be measured by simply dipping the electrodes of a pH meter into a beaker full of water. Such measurement is challenging due to the quasi-absence of ions that would enable electron transport between the measuring and reference sides of the pH electrode. This often results in erratic and meaningless pH readings. However, using water high resistivity ($18.2\Omega \text{ M cm}$ at 25°C) ensures that the pH is close to 7.0. A slightly acidic pH value does not mean that the water is grossly contaminated, as CO_2 level of less than 1 ppm will display pH in acidic range.

It is recommended to use pre-treated water with TDS less than 50 ppm to prevent scale formation in the boiler and improve the quality of distillate.

3367 - Water Softener

The newly designed Water Softener works on the Ion Exchange principle, and is used along with Quartz or Glass distillers. The Water Softener prevents the accumulation of sludge (i.e. deposits of Calcium and Magnesium salts that make the water hard). Tap water / borewell water is introduced through the inlet and softened water is drawn at the outlet. The softened water is sent into the Boiler of the Distillation Unit. The Unit can be recharged again with a saturated solution of Sodium Chloride. The Unit delivers approximately 2000 litres of soft water for one cycle of regeneration. The output is based on 100 ppm input hardness as CaCO₃.

During regeneration, 20 litres of sodium chloride solution is passed through the Water Softener gradually, for 1 hour.

Product Code	Cat No.	Quantity Per case
3367000	3367	1



Water Distillation Unit

3368 - Aquatherm Heat Exchanger

Aquatherm Heat Exchangers can be used with Distillation Units. The hot water released from the Condenser outlet is usually let into the Sink, thereby wasting precious water. However, Aquatherm Heat Exchanger is equipped with Cooling Coils and a Fan that cool the hot water as it comes out, and then pump it back into the Condenser inlet, thus saving water.

Advantages: It can be mounted on a table to occupy less space. The power consumption is minimal. It takes only 15 litres of water to run the Distillation Unit (Single or Double).

Product Code	For Cat No.	Total Power Consumed (kw)	Quantity per case
3368000	3361 - 1.5 / 4L	365 watts	1
	3362 - 1.5 L		1
	3364 - 2.5 / 5 L		1
	3365 - 1.5 / 2.5 L		1
	3363 - 2.5 / 5 L		1
3368001	3362 - 4 L	730 watts	1
	3365 - 5 L		1
	3363 - 10 L		1



3369 - Silicone tubing for distillation unit & laboratory application



*Heat Resistance Temperature Range : -40°C To +205°C

The technical data given by Borosil must be used as a guide only. Borosil does not guarantee the accuracy of information and is not responsible for its end use.

Silicone tubing is used for laboratory and industrial applications only. It should not be used for implants , human reproductive system and other medical applications.

3369003 - 8mm x 12mm is used for 3361-1.5, 3362-1.5, 3363-2.5 series

3369004 - 10mm x 14mm is used for 3361-4l, 3362-4l, 3364-2.5l, 5l, 3365-1.5l,2.5l,5l, 3363-5l,10l.

Product Code	For Cat No.	Size	Quantity per case in mtr
3369001	3369	4mm ID x 7mm OD	10
3369002	3369	6 mm ID x 9 mm OD	10
3369003	3369	8 mm ID x 12 mm OD	10
3369004	3369	10 mm ID x 14 mm OD	10



3370 - Cabinet Still



- Compact
- Economical
- Ease Of Maintenance
- Made From Borosilicate Glass
- High Purity Yield
- Automatic operation

- Designed with an inbuilt level sensor and cut-off device in case the water in the Boiler drops below the desired level
- Cleaning is easier due to the integral funnel that facilitates addition of acid to the Boiler and rota-flow stopcock for draining out sediments
- Available in Single Distillation model with output capacity of 4 lit/hr
- Conductivity is 1-3 μS in case of Single Distillation
- The unique design of the Condenser ensures effective cooling and low distillate temperature
- Pyrogen-free output
- The acrylic safety screen and cabinet lid are removable, enabling easy access to the glassware components

Cat No.	3370 - 4.0 L
Dist. Water Output Cap.(Approx)	4 lt/hr
Electrical requirements	230-250 volts Single phase 3 kw Quartz heater
Cooling	
Water consumption	2 Lit / Min
Biological Activity	Pyrogen Free
Conductivity S/cm	$<3 \times 10^{-6}$
Distillate Temp.	65-75°C

Product Code	Cat No.	Output Capacity (Lt/Hr)	Total Power Consumed (kw)	Quantity per case
3370032	3370	4	3	1

Spares for Cabinet Still Cat No. 3370

Product Code	Cat No.	Output Capacity (Lt/Hr)	Description
3370S01	3370	4	Borosilicate Boiler With Leveller - Cabinet 4L
3370S02	3370	4	Borosilicate Condenser - Cabinet 4L
3370S03	3370	4	Quartz B - 50 Heater - Cabinet 4 L
3370S04	3370	4	DAPS - Cabinet 4 L

Extractors

Liquid Solid Extraction involves the elution of a solid sample with pure solvent vapour. The sample is held in the Extractor body either directly or in a thimble. The siphoning type of Soxhlet Extractor finds the widest application in laboratory work.

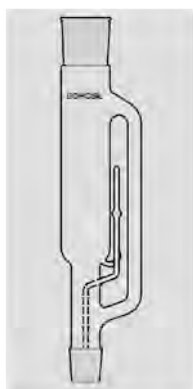
Borosil Soxhlet Extraction Apparatus is available in six sizes. The component parts of the apparatus are provided with interchangeable joints for greater flexibility.



3740 - Extractors, Soxhlet, Interchangeable Joint

- Complies with IS 10640
- Made of borosilicate glass
- Designed with a bulb in the siphon tube near the top, to aid the siphoning action
- The vapour tube also protects the siphon tube from accidental damage

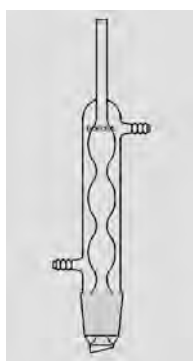
Product Code	Capacity ml	Interchangeable Joints		Quantity Per Case
		Top	Bottom	
3740013	60	34 / 35	24 / 29	5
3740016	100	40 / 38	24 / 29	5
3740020	200	50 / 42	24 / 29	5



3741 - Condensers, Allihn Only For Extraction Apparatus

- Made of borosilicate glass
- Greater surface area than the Liebig Condenser owing to a series of bulbs, resulting in higher cooling capacity
- Ideal for laboratory scale refluxing

Product Code	Capacity ml	Interchangeable Joints	Quantity Per Case
		Bottom	
3741013	Small	34 / 35	5
3741016	Medium	40 / 38	5
3741020	Large	50 / 42	5



3840 - Extraction Apparatus Soxhlet Complete With Allihn Condenser, Interchangeable Joint

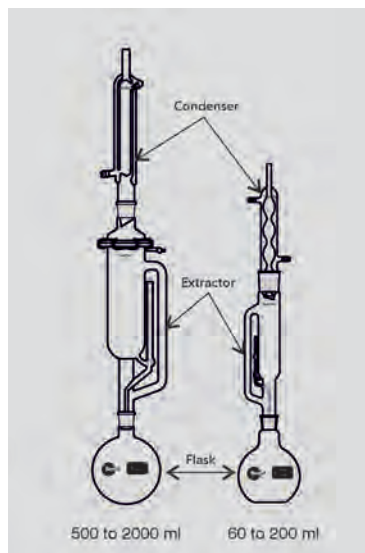
- Complies with IS 10640
- Used for separation of the extract from the liquid or solid
- Greater surface area than the Liebig Condenser owing to a series of bulbs, resulting in higher cooling capacity
- This method enables effective separation, with relatively small quantities of solvent
- Ideal for laboratory scale refluxing

Product Code	Capacity ml	Flask Size	Quantity Per Case Set
3840013	60*	150	1
3840016	100*	250	1
3840020	200*	500	1
3840024	500**	2000	1
3840029	1000**	3000	1
3840030	2000**	5000	1

*For flask refer Cat No. 4100

**Extractor Supplied are supplied with double surface condenser for higher cooling capacity.

Loose spares can be provided on request.



Flasks

All laboratories need Flasks of different types. **Borosil** offers a wide range of Flasks for a variety of applications such as boiling, culture, distilling, Erlenmeyer, Filtering, Iodine and Kjeldahl. Choose one to suit your needs.

Borosil brand Flasks are designed to deliver the best combination of thermal shock resistance, physical strength and resistance to chemical attack. They are made so as to withstand the demands of the modern laboratory. Flasks with interchangeable joints are particularly suitable for all glass apparatus assemblies. **Borosil** offers the interchangeable joints most commonly specified for a particular capacity. Tube Adaptors Category Nos. 8800 and 8820 can be used to connect the Flask with a particular size joint to any other apparatus having a different size joint.



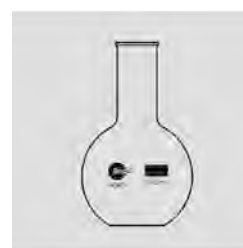


4060 - Flasks, Boiling, Florence, Flat Bottom

- Complies with IS 1381 (Part - I), ISO 1773
- Uniform wall thickness distribution makes these Flasks ideal for heating
- All sizes have a durable matt-finished enamelled area for marking with an ordinary pencil

Product Code	Capacity ml	Approx O.D. x Height mm	Approx Neck O.D. mm	Quantity Per Case
4060009	25	42 x 90	20	50
4060012	50	51 x 90	26	50
4060016	100	64 x 105	26	80
4060018	150	75 x 132	28	10
4060021	250	85 x 140	34	80
4060022	*300	87 x 160	24	20
4060024	500	105 x 165	34	40
4060029	1000	131 x 190	42	20
4060030	2000	167 x 237	50	2
4060031	3000	186 x 300	50	4
4060033	5000	223 x 317	57	2
4060034	6000	250 x 340	65	1
4060038	10000	279 x 400	65	1
4060040	20000	350 x 495	75	1

* Suitable for use in Polenske Apparatus

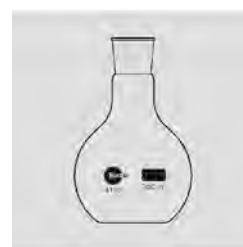


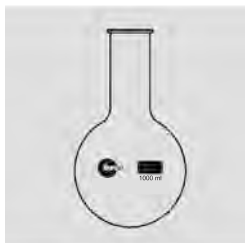
4100 - Flasks, Boiling, Flat Bottom, Short Neck, Interchangeable Joint

- Complies with IS 1381 (Part II), ISO 4797
- Uniform wall thickness distribution makes these Flasks ideal for heating
- All sizes have a durable matt-finished enamelled area for marking with an ordinary pencil
- Equipped with interchangeable joint
- The flat base ensures that the Flask can be placed down even without the supporting ring

Product Code	Capacity ml	Interchangeable Joint	Approx Height mm	Quantity Per Case
4100018	150	24 / 29	115	5
4100021	250	24 / 29	130	5
4100024	500	24 / 29	148	5
4100029	1000	34 / 35	288	2
4100030	2000	34 / 35	321	2
4100031	3000	34 / 35	345	2
4100033	5000	34 / 35	381	2

NEW
NEW
NEW
NEW





4260 - Flasks, Boiling, Round Bottom

- Complies with IS 1381 (Part I), ISO 1773
- Uniform wall thickness distribution makes these Flasks ideal for heating
- All sizes have a durable matt-finished enamelled area for marking with an ordinary pencil

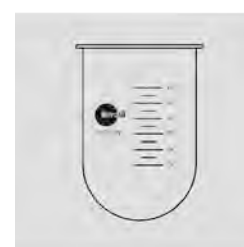
Product Code	Capacity ml	Approx O.D. x Height mm	Approx Neck O.D. mm	Quantity Per Case
4260009	25	42 x 90	22	50
4260012	50	51 x 95	26	70
4260016	100	64 x 110	26	50
4260018	150	75 x 137	28	10
4260021	250	85 x 145	34	80
4260024	500	105 x 175	34	40
4260029	1000	131 x 205	42	20
4260030	2000	166 x 243	51	2
4260031	3000	190 x 305	50	4
4260033	5000	225 x 350	60	2
4260034	6000	236 x 350	65	1
4260038	10000	285 x 420	65	1
4260040	20000	350 x 505	87	1



4265 - E - Flask Without Side Cut For Dissolution Apparatus As per USP, with Certificate

- Vessels confirms to all requirements of U.S.P
- Smooth hemispherical base with no flaws or defects, straight sides and a flat flange
- Graduated in intervals of 50ml
- Ideal for determining the dissolution characteristics of drugs in capsules and tablets

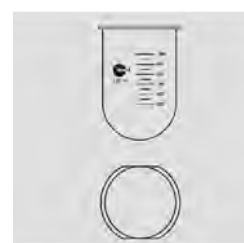
Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
4265029	1000	131 x 173	10



4266 - L - Flask With Side Cut For Dissolution Apparatus, with Certificate

- These vessels conform to all the requirements of USP
- Smooth hemispherical base with no flaws or defects, straight sides and a flat flange
- Two side-cuts at the flange
- Graduated in intervals of 50ml
- Ideal for determining the dissolution characteristics of drugs in capsules and tablets

Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
4266029	1000	124 X 173	10

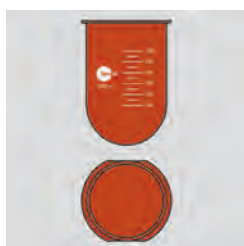




4267 - E - Flask For Dissolution Apparatus As per USP, Amber, with Certificate

- These vessels conform to all the requirements of USP
- Smooth hemispherical base with no flaws or defects, straight sides and a flat flange
- Graduated in intervals of 50 ml
- Ideal for determining the dissolution characteristics of drugs in capsules and tablets
- Coloured in Amber to protect light-sensitive material
- The Amber colour is applied only to the external surface to prevent contamination with the testing material

Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
4267029	1000	131 X 173	10



4268 - L - Flask With Side Cut For Dissolution Apparatus As per USP, Amber, With Certificate

- These vessels conform to all the requirements of USP
- Smooth hemispherical base with no flaws or defects, straight sides and a flat flange
- Two side-cuts at the flange
- Graduated in intervals of 50 ml
- Ideal for determining the dissolution characteristics of drugs in capsules and tablets
- Coloured in Amber to protect light-sensitive material
- The Amber colour is applied only to the external surface to prevent contamination with the testing material

Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
4268029	1000	124 X 173	10



4270 - D - Flasks for Dissolution Apparatus without side cut

- Vessels confirms to all requirements of USP
- Smooth hemispherical base with no flaws or defects, straight sides and a flat flange
- Graduated in intervals of 50ml
- Ideal for determining the dissolution characteristics of drugs in capsules and tablets

Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
4270029	1000	107 x 161	10

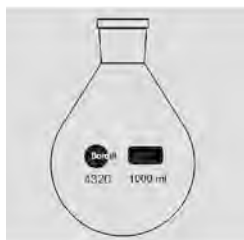


4315 - Flasks, Boiling, Pear Shaped, Short Neck, With Interchangeable Joint

- Made of 3.3 borosilicate glass
- The conical shape makes them ideal for small scale reaction
- Large labelling field

Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
4315005	5	10 / 19	10
4315105	5	14 / 23	10
4315006	10	10 / 19	10
4315106	10	14 / 23	10
4315009	25	14 / 23	5
4315012	50	14 / 23	10





4320 - Flasks, Pear Shape Suitable For Rotary Evaporators With Ground Socket

- Rota Vapour Flasks are used along with Rotary Evaporators
- Ideal for heating sensitive solvent solute combinations
- Facilitate the extraction of key components like odour, oil, drugs, natural extract and fragrance

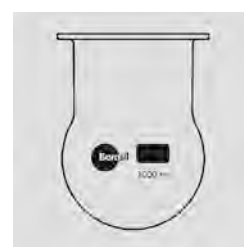
Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
4320112	50	24 / 29	2
4320012	50	29 / 32	2
4320116	100	24 / 29	2
4320016	100	29 / 32	2
4320121	250	24 / 29	2
4320021	250	29 / 32	2
4320124	500	24 / 29	2
4320024	500	29 / 32	2
4320129	1000	24 / 29	2
4320029	1000	29 / 32	2
4320130	2000	24 / 29	2
4320030	2000	29 / 32	2



4330 - Flasks, (Vessels) Reaction, Wide Mouth, With Flat Flange, 100 mm ID, 150mm OD

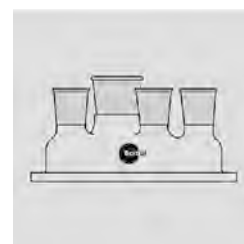
- These Flasks have a spherical body with a neck of inner diameter 4 inches (approx 100 mm)
- The top is finely ground to ensure a leak-resistant fit with the cover

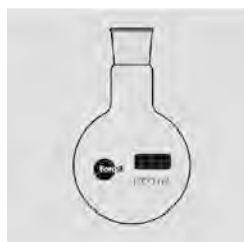
Product Code	Capacity ml	Approx Height mm	Quantity Per Case
4330029	1000	170	2
4330030	2000	205	2
4330033	5000	260	2
4330038	10000	335	1
4330040	20000	400	1



4331 - Lids, For Flasks Reaction Cat No. 4330, Flat Flange and Interchangeable Joint

Product Code	Interchangeable Joint Size					Quantity Per Case
	Centre	Parellel	Side 5°	Side 10°	Side 15°	
4331Z97	19 / 26	19 / 26	24 / 29	19 / 26	-	2
4331Z98	19 / 26	14 / 23	14 / 23	14 / 23	29 / 32	2
4331Z99	29 / 32	14 / 23	14 / 23	14 / 23	29 / 32	2





4380 - Flasks, Boiling, Round Bottom, Short Neck, With Interchangeable Joint

- Made of 3.3 borosilicate glass
- Uniform wall thickness distribution and the round - bottom shape make them ideal for heating
- Generally used in distillation and extraction processes
- Large labelling field

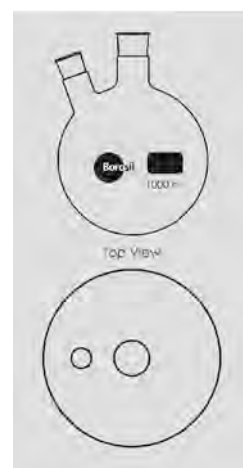
Product Code	Capacity ml	Approx Height	Interchangeable Joint	Quantity Per Case
4380A05	5	60	14 / 23	10
4380A06	10	65	14 / 23	10
4380A09	25	73	14 / 23	10
4380B09	25	76	19 / 26	10
4380A12	50	95	14 / 23	5
4380B12	50	95	19 / 26	5
4380C12	50	95	24 / 29	5
4380D12	50	95	29 / 32	5
4380E12	50	95	34 / 35	5
4380A16	100	120	14 / 23	2
4380B16	100	120	19 / 26	20
4380C16	100	120	24 / 29	20
4380D16	100	120	29 / 32	20
4380E16	100	120	34 / 35	20
4380A21	250	140	14 / 23	20
4380B21	250	140	19 / 26	20
4380C21	250	140	24 / 29	20
4380D21	250	140	29 / 32	20
4380E21	250	140	34 / 35	20
4380A24	500	170	14 / 23	10
4380B24	500	170	19 / 26	10
4380C24	500	170	24 / 29	10
4380D24	500	170	29 / 32	10
4380E24	500	170	34 / 35	10
4380A29	1000	205	19 / 26	10
4380B29	1000	205	24 / 29	10
4380C29	1000	205	29 / 32	10
4380D29	1000	205	34 / 35	10
4380E29	1000	205	45 / 40	10
4380F29	1000	205	55 / 44	10
4380A30	2000	228	24 / 29	4
4380B30	2000	228	29 / 32	4
4380C30	2000	228	34 / 35	4
4380D30	2000	228	45 / 40	4
4380A31	3000	265	24 / 29	4
4380B31	3000	265	29 / 32	4
4380C31	3000	265	34 / 35	4
4380D31	3000	265	45 / 40	4
4380E31	3000	265	55 / 44	4
4380A33	5000	300	24 / 29	2
4380B33	5000	300	29 / 32	2
4380C33	5000	300	34 / 35	2
4380D33	5000	300	45 / 40	2
4380E33	5000	300	55 / 44	2
4380A38	10000	385	34 / 35	1
4380B38	10000	385	55 / 44	1
4380C38	10000	385	55 / 44	1
4380A40	20000	435	55 / 44	1

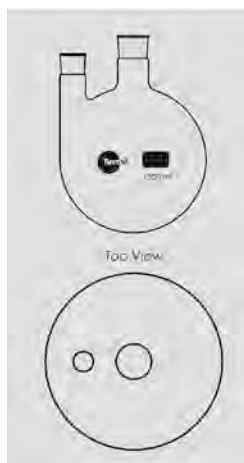


4381 - Flasks, Round Bottom, Two Necks, Centre Neck and One Angled Side Neck, With Interchangeable Joints

- Uniform wall thickness distribution and the round-bottom shape make them ideal for heating
- The shape facilitates uniform heating
- Accessories, thermometer, column, dropping funnels, boiling capillaries, etc., can be fitted depending upon the application
- Generally used in distillation and extraction processes
- One neck is centred and vertical. The side neck is inclined at an angle of 20° to the vertical neck

Product Code	Capacity ml	Interchangeable Joint Size		Quantity Per Case
		Centre Neck	Side Neck	
4381A16	100	19 / 26	14 / 23	4
4381B16	100	24 / 29	14 / 23	4
4381C16	100	24 / 29	19 / 26	4
4381A21	250	24 / 29	14 / 23	4
4381B21	250	24 / 29	19 / 26	4
4381A24	500	24 / 29	14 / 23	4
4381B24	500	24 / 29	19 / 26	4
4381A29	1000	24 / 29	14 / 23	2
4381B29	1000	24 / 29	19 / 26	2
4381A30	2000	24 / 29	14 / 23	2
4381B30	2000	24 / 29	19 / 26	2
4381C30	2000	34 / 35	19 / 26	2
4381A31	3000	34 / 35	19 / 26	2
4381B31	3000	34 / 35	24 / 29	2
4381A33	5000	34 / 35	19 / 26	1
4381B33	5000	34 / 35	24 / 29	1
4381A38	10000	34 / 35	24 / 29	1
4381B38	10000	55 / 44	24 / 29	1
4381A40	20000	55 / 44	24 / 29	1





4382 - Flasks, Round Bottom, Two Necks, Centre Neck and One Parallel Side Neck, With Interchangeable Joints

- Uniform wall thickness distribution and the round-bottom shape make them ideal for heating
- The shape facilitates uniform heating
- Accessories, thermometer, column, dropping funnels, boiling capillaries, etc., can be fitted depending upon the application
- Generally used in distillation and extraction processes
- Both the necks are vertical. One neck is centred, while the other is the side neck

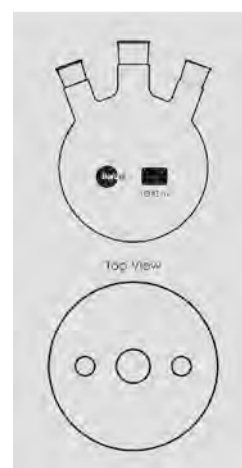
Product Code	Capacity ml	Interchangeable Joint Size		Quantity Per Case
		Centre Neck	Side Neck	
4382A16	100	19 / 26	14 / 23	4
4382B16	100	24 / 29	14 / 23	4
4382C16	100	24 / 29	19 / 26	4
4382A21	250	24 / 29	14 / 23	4
4382B21	250	24 / 29	19 / 26	4
4382A24	500	24 / 29	14 / 23	4
4382B24	500	24 / 29	19 / 26	4
4382A29	1000	24 / 29	14 / 23	2
4382B29	1000	24 / 29	19 / 26	2
4382A30	2000	24 / 29	14 / 23	2
4382B30	2000	24 / 29	19 / 26	2
4382C30	2000	34 / 35	19 / 26	2
4382A31	3000	34 / 35	19 / 26	2
4382B31	3000	34 / 35	24 / 29	2
4382A33	5000	34 / 35	19 / 26	1
4382B33	5000	34 / 35	24 / 29	1
4382A38	10000	34 / 35	24 / 29	1
4382B38	10000	55 / 44	24 / 29	1
4382A40	20000	55 / 44	24 / 29	1

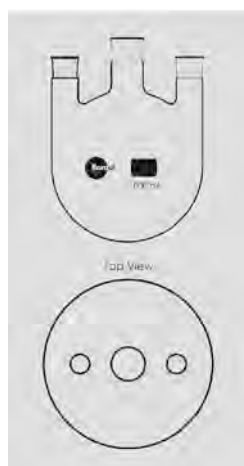


4383 - Flasks, Round Bottom, Three Necks, Centre Neck and Two Angled Side Necks, With Interchangeable Joints

- Uniform wall thickness distribution and the round-bottom shape make them ideal for heating
- The shape facilitates uniform heating
- Accessories, thermometer, column, dropping funnels, boiling capillaries, etc., can be fitted depending upon the application
- Generally used in distillation and extraction processes
- The centred neck is vertical. The two side necks are 180° apart and are inclined at an angle of 20° to the vertical neck

Product Code	Capacity ml	Interchangeable Joint Size			Quantity Per Case
		Centre Neck	Side Neck	Side Neck	
4383A16	100	19 / 26	14 / 23	14 / 23	4
4383B16	100	14 / 23	14 / 23	14 / 23	4
4383C16	100	24 / 29	14 / 23	14 / 23	4
4383D16	100	24 / 29	19 / 26	19 / 26	4
4383A21	250	19 / 26	14 / 23	14 / 23	4
4383B21	250	19 / 26	19 / 26	19 / 26	4
4383C21	250	24 / 29	14 / 23	14 / 23	4
4383D21	250	24 / 29	19 / 26	19 / 26	4
4383A24	500	19 / 26	14 / 23	14 / 23	4
4383B24	500	19 / 26	19 / 26	19 / 26	4
4383C24	500	24 / 29	14 / 23	14 / 23	4
4383D24	500	24 / 29	19 / 26	19 / 26	4
4383A29	1000	24 / 29	14 / 23	14 / 23	2
4383B29	1000	24 / 29	19 / 26	19 / 26	2
4383C29	1000	34 / 35	24 / 29	24 / 29	2
4383D29	1000	34 / 35	19 / 26	19 / 26	2
4383A30	2000	24 / 29	14 / 23	14 / 23	2
4383B30	2000	24 / 29	19 / 26	19 / 26	2
4383C30	2000	34 / 35	19 / 26	19 / 26	2
4383D30	2000	34 / 35	24 / 29	24 / 29	2
4383A31	3000	34 / 35	19 / 26	19 / 26	2
4383B31	3000	34 / 35	24 / 29	24 / 29	2
4383A33	5000	34 / 35	19 / 26	19 / 26	1
4383B33	5000	34 / 35	24 / 29	24 / 29	1
4383C33	5000	45 / 40	24 / 29	24 / 29	1
4383A38	10000	34 / 35	19 / 26	16 / 26	1
4383B38	10000	34 / 35	24 / 29	24 / 29	1
4383C38	10000	45 / 40	24 / 29	24 / 29	1
4383A40	20000	55 / 44	24 / 29	24 / 29	1





4384 - Flask, Round Bottom, Three Necks, Centre Neck and Two Parallel Side Necks With Interchangeable Joints

- Uniform wall thickness distribution and the round-bottom shape make them ideal for heating
- The shape facilitates uniform heating
- Accessories, thermometer, column, dropping funnels, boiling capillaries, etc., can be fitted depending upon the application
- Generally used in distillation and extraction processes
- All the three necks are vertical. The two side necks are 180° apart

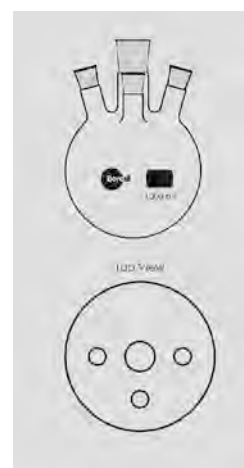
Product Code	Capacity ml	Interchangeable Joint Size			Quantity Per Case
		Centre Neck	Side Neck	Side Neck	
4384A16	100	19 / 26	14 / 23	14 / 23	4
4384B16	100	14 / 23	14 / 23	14 / 23	4
4384C16	100	24 / 29	14 / 23	14 / 23	4
4384D16	100	24 / 29	19 / 26	19 / 26	4
4384A21	250	19 / 26	14 / 23	14 / 23	4
4384B21	250	19 / 26	19 / 26	19 / 26	4
4384C21	250	24 / 29	14 / 23	14 / 23	4
4384D21	250	24 / 29	19 / 26	19 / 26	4
4384A24	500	19 / 26	14 / 23	14 / 23	4
4384B24	500	19 / 26	19 / 26	19 / 26	4
4384C24	500	24 / 29	14 / 23	14 / 23	4
4384D24	500	24 / 29	19 / 26	19 / 26	4
4384A29	1000	24 / 29	14 / 23	14 / 23	2
4384B29	1000	24 / 29	19 / 29	19 / 26	2
4384C29	1000	34 / 35	24 / 29	24 / 29	2
4384D29	1000	34 / 35	19 / 26	19 / 26	2
4384A30	2000	24 / 29	14 / 23	14 / 23	2
4384B30	2000	24 / 29	19 / 26	19 / 26	2
4384C30	2000	34 / 35	19 / 26	19 / 26	2
4384D30	2000	34 / 35	24 / 29	24 / 29	2
4384A31	3000	34 / 35	19 / 26	19 / 26	2
4384B31	3000	34 / 35	24 / 29	24 / 29	2
4384A33	5000	34 / 35	19 / 26	19 / 26	1
4384B33	5000	34 / 35	24 / 29	24 / 29	1
4384C33	5000	45 / 40	24 / 29	24 / 29	1
4384A38	10000	34 / 35	19 / 26	16 / 26	1
4384B38	10000	34 / 35	24 / 29	24 / 29	1
4384C38	10000	45 / 40	24 / 29	24 / 29	1
4384A40	20000	55 / 44	24 / 29	24 / 29	1

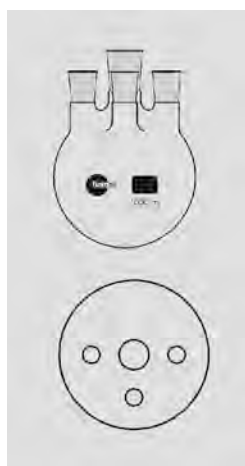


4385 - Flasks, Round Bottom, Four Necks, Centre Neck and Three Angled Side Neck, With Interchangeable Joints

- Uniform wall thickness distribution and the round-bottom shape make them ideal for heating
- The shape facilitates uniform heating
- Accessories, thermometer, column, dropping funnels, boiling capillaries, etc., can be fitted depending upon the application
- Generally used in distillation and extraction processes
- The centred neck is vertical. All the three side necks are inclined at an angle of 20° to the vertical neck
- The two side necks are 180° apart, and a third side neck is at from the other two necks

Product Code	Capacity ml	Interchangeable Joint Size		Quantity Per Case
		Centre Neck	Side Neck	
4385A12	50	24 / 29	24 / 29	4
4385A16	100	24 / 29	14 / 23	4
4385B16	100	24 / 29	19 / 26	4
4385A21	250	24 / 29	14 / 23	4
4385B21	250	24 / 29	19 / 26	4
4385A24	500	24 / 29	14 / 23	4
4385B24	500	24 / 29	19 / 26	4
4385C24	500	24 / 29	24 / 29	4
4385D24	500	34 / 35	24 / 29	4
4385A29	1000	24 / 29	14 / 23	2
4385B29	1000	24 / 29	19 / 26	2
4385C29	1000	24 / 29	24 / 29	2
4385D29	1000	34 / 35	24 / 29	2
4385A30	2000	24 / 29	14 / 23	2
4385B30	2000	24 / 29	19 / 26	2
4385C30	2000	34 / 35	19 / 26	2
4385D30	2000	34 / 35	24 / 29	2
4385A31	3000	34 / 35	19 / 26	2
4385B31	3000	34 / 35	24 / 29	2
4385A33	5000	34 / 35	19 / 26	1
4385B33	5000	34 / 35	24 / 29	1
4385A38	10000	55 / 44	24 / 29	1
4385B38	10000	34 / 35	24 / 29	1
4385A40	20000	55 / 44	24 / 29	1





4386 - Flasks, Round Bottom, Four Necks, Centre Neck and Three Parallel Side Neck, With Interchangeable Joints

- Uniform wall thickness distribution and the round-bottom shape make them ideal for heating
- The shape facilitates uniform heating
- Accessories, thermometer, column, dropping funnels, boiling capillaries, etc., can be fitted depending upon the application
- Generally used in distillation and extraction processes
- All the four necks are vertical. The two side necks are 180° apart
- The third neck is at 90° from the other two necks

Product Code	Capacity ml	Interchangeable Joint Size		Quantity Per Case
		Centre Neck	Side Neck	
4386A12	50	24 / 29	24 / 29	4
4386A16	100	24 / 29	14 / 23	4
4386B16	100	24 / 29	19 / 26	4
4386A21	250	24 / 29	14 / 23	4
4386B21	250	24 / 29	19 / 26	4
4386A24	500	24 / 29	14 / 23	4
4386B24	500	24 / 29	19 / 26	4
4386C24	500	24 / 29	24 / 29	4
4386D24	500	34 / 35	24 / 29	4
4386A29	1000	24 / 29	14 / 23	2
4386B29	1000	24 / 29	19 / 26	2
4386C29	1000	24 / 29	24 / 29	2
4386D29	1000	34 / 35	24 / 29	2
4386A30	2000	24 / 29	14 / 23	2
4386B30	2000	24 / 29	19 / 26	2
4386C30	2000	34 / 35	19 / 26	2
4386D30	2000	34 / 35	24 / 29	2
4386A31	3000	34 / 35	19 / 26	2
4386B31	3000	34 / 35	24 / 29	2
4386A33	5000	34 / 35	19 / 26	1
4386B33	5000	34 / 35	24 / 29	1
4386A38	10000	55 / 44	24 / 29	1
4386B38	10000	34 / 35	24 / 29	1
4386A40	20000	55 / 44	24 / 29	1



4422 - Flasks, Culture, Haffkine

- Complies with IS 7183
- The large, flat bottom surface ensures uniform culture thickness
- Typically used for the preparation of culture in nutrient media

Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
4422031	3000	245 x 273	2
4422032	4000	246 x 310	2

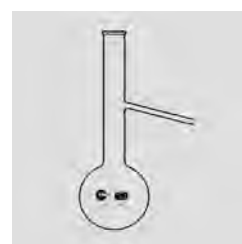
* Suitable for use in Polenske Apparatus

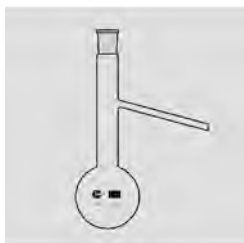


4620-Flasks, Distilling, With Side Arm

- Complies with IS 2620
- Uniform wall thickness distribution makes these Flasks ideal for heating
- Suitable for distillation process
- Specification as per the Institute of Petroleum Standard No. IP 123 / 64

Product Code	Capacity ml	Approx O.D. x Height mm	Approx Neck O.D. mm	Quantity Per Case
4620016	100	64 x 210	21	4
4620017	*125	70 x 215	21	4
4620021	250	88 x 230	25	4
4620024	500	110 x 250	28	4
4620029	1000	130 x 305	31	4



**4621 - Flasks, Distilling with i/c joint 19/26 as per ASTM D86**

Product Code	Capacity ml	Approx O.D. x Height mm	Approx Neck I. D.	Inter-changeable Joint	Quantity Per Case
4621017	125	70 x 215	19	19 / 26	20

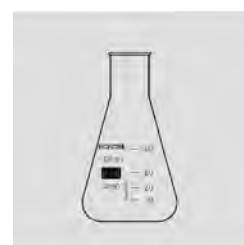


4980 - Flasks, Erlenmeyer, Conical, Narrow Mouth

- Complies with IS 1381(Part II),ISO / DIN 1773
- Uniform wall thickness distribution makes these Flasks ideal for heating
- The conical form makes them suitable for mixing liquids
- The easy-to-read scale and large labelling field facilitate easy marking
- Graduated from 25 ml to 5000 ml

Product Code	Capacity ml	Approx O.D. x Height mm	Approx Neck O.D. mm	Quantity Per Case
4980006	10	37 x 60	15	30
4980009	25	40 x 70	22	40
4980012	50	51 x 82	22	100
4980016	100	64 x 105	22	100
4980018	150	72 x 124	28	100
4980021	250	85 x 140	34	40
4980024	500	105 x 185	38	40
4980029	1000	131 x 220	42	20
4980030	2000	168 x 280	52	20
4980031	3000	185 x 315	48	4
4980033	5000	220 x 367	50	2

25 ml to 5000 ml Graduated



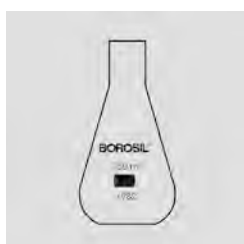


4981 - Flasks, Erlenmeyer, Conical, Long Neck, Without Rim

- Uniform wall thickness distribution makes these Flasks ideal for heating
- Ideal for culture work
- Long neck designed for cotton plugs and metal caps
- The conical form makes them suitable for mixing liquids
- The easy-to-read scale and large labelling field facilitate easy marking

Product Code	Capacity ml	Approx O.D. x Height mm	Approx Neck O.D. mm	Quantity Per Case
4981021	250	78 x 154	27	10

Suitable for culture work, designed for cotton plug or metal caps



4982 - Flasks, Conical, Without Rim

- Uniform wall thickness distribution makes these Flasks ideal for heating
- Ideal for culture work
- Designed without a rim for use in the shaker machine
- The conical form makes them suitable for mixing liquids
- The easy-to-read scale and large labelling field facilitate easy marking

Product Code	Capacity ml	Approx O.D. x Height mm	Approx Neck O.D. mm	Quantity Per Case
4982027	750	114 x 210	42	10

Suitable for culture work, designed for use in shaker machine



4989 - Flasks, Erlenmeyer, Graduated, Conical, Amber, With Narrow Mouth

- Complies with IS 1381 (Part II), ISO / DIN 1773
- Uniform wall thickness distribution makes these Flasks ideal for heating
- The conical form makes them suitable for mixing liquids
- The easy-to-read scale and large labelling field facilitate easy marking
- Graduated from 25 ml to 5000 ml
- Coloured in Amber to protect light-sensitive material
- The Amber colour is applied only to the external surface to prevent contamination with the testing material

Product Code	Capacity ml	Approx O.D. x Height mm	Approx Neck O.D. mm	Quantity Per Case
4989016	100	64 x 105	25	10
4989018	150	72 x 124	28	10
4989021	250	85 x 140	34	10
4989024	500	104 x 185	38	10
4989029	1000	131 x 220	42	10

Similar in design to Cat. No. 4980

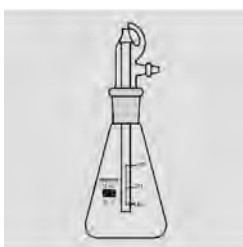


5000 - Flasks, Erlenmeyer, Conical, Narrow Mouth, Interchangeable Joint

- Complies with IS 1381 (Part II), ISO / DIN 4797
- Uniform wall thickness distribution makes these Flasks ideal for heating
- The conical form makes them suitable for mixing of liquids
- The easy-to-read scale and large labelling field facilitate easy marking
- Equipped with interchangeable joints

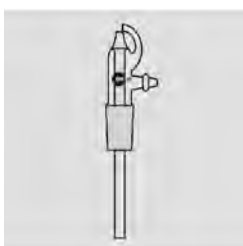
Product Code	Capacity ml	Interchangeable Joint	Quantity Per Case
5000009	25	14 / 23	10
5000012	50	19 / 26	10
5000016	100	24 / 29	10
5000021	250	24 / 29	10
5000024	500	24 / 29	5





5010 - Flask Chromatography Sprayers With Rubber Bulb

Product Code	Capacity ml	Approx O.D. x Height mm	Approx Neck I.D. mm	Quantity Per Case
5010009	25	44 x 78	19	5
5010012	50	51 x 91	19	5
5010016	100	64 x 110	19	5



5011 - Chromatography Sprayer Head

Product Code	Capacity ml	Quantity Per Case
5011009	25	5
5011012	50	5
5011016	100	5



5015 - Flasks, Tilt Measure

- Ideal for dispensing fixed volume of liquid
- Easy to use
 - Tilt the unit backward to fill
 - Tilt the unit forward to dispense
- Accuracy $\pm 5\%$ can be achieved
- Manufactured from chemically resistance 3.3 borosilicate tubing

Product Code	Capacity ml	Flask Capacity ml	Quantity Per Case
5015005	5	100	5
5015006	10	250	5
5015008	20	250	10
5015009	25	250	10
5015012	50	250	10



5019 - Flasks, Erlenmeyer, Conical, Narrow Mouth, With Interchangeable Stopper, Amber

- Uniform wall thickness distribution makes these Flasks ideal for heating
- The conical form makes them suitable for mixing of liquids
- These Flasks can be closed with a glass stopper
- Coloured in Amber to protect light-sensitive material
- The Amber colour is applied only to the external surface to prevent contamination with the testing material

Product Code	Capacity ml	Interchangeable Joint	Quantity Per Case
5019009	25	14 / 23	10
5019012	50	19 / 26	10
5019016	100	24 / 29	20
5019021	250	24 / 29	20
5019024	500	24 / 29	10





5020 - Flasks, Erlenmeyer, Conical, Narrow Mouth, With Interchangeable Stopper

- Uniform wall thickness distribution makes these Flasks ideal for heating
- The conical form makes them suitable for mixing of liquid
- These Flasks can be closed with a glass stopper

Product Code	Capacity ml	Interchangeable Joint	Quantity Per Case
5020009	25	14 / 23	10
5020012	50	19 / 26	10
5020016	100	24 / 29	20
5020021	250	24 / 29	20
5020024	500	24 / 29	10
NEW 5020029	1000	29 / 32	10
NEW 5020030	2000	29 / 32	10



5021 - Flasks, Conical, With Screw Cap

- Uniform wall thickness distribution makes these Flasks ideal for heating
- The conical form makes them suitable for mixing of liquids
- These Flasks can be closed with a screw cap
- The caps are made of PP

Product Code	Capacity ml	Neck Specification	Quantity Per Case
5021016	100	GL 25	20
5021018	150	GL 25	20
5021021	250	GL 32	20
5021024	500	GL 32	10
5021029	1000	GL 45	10
5021030	2000	GL 45	10
5021033	5000	GL 45	2



5100 - Flasks, Erlenmeyer, Conical, Wide Mouth

- Complies with IS 1381
- Uniform wall thickness distribution makes these Flasks ideal for heating
- The conical form makes them suitable for mixing of liquids
- The easy-to-read scale and large labelling field facilitate easy marking
- Designed with a wide neck that makes cleaning and filling easier

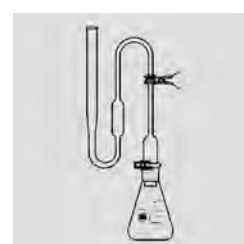
Product Code	Capacity ml	Approx O.D. x Height mm	Approx Neck O.D. mm	Quantity Per Case
5100016	100	70 x 110	34	20
5100021	250	85 x 142	50	30
5100024	500	105 x 175	50	20
5100029	1000	130 x 220	56	10

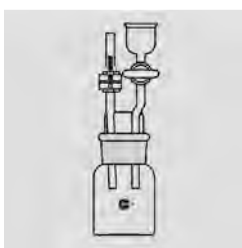


5200 - Arsenic Determination Apparatus as per USP

- Designed for the estimation of Arsenic

Product Code	Quantity Per Case
5200001	1

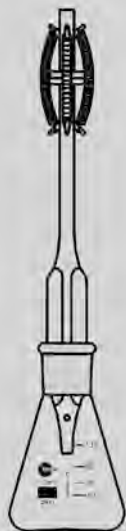
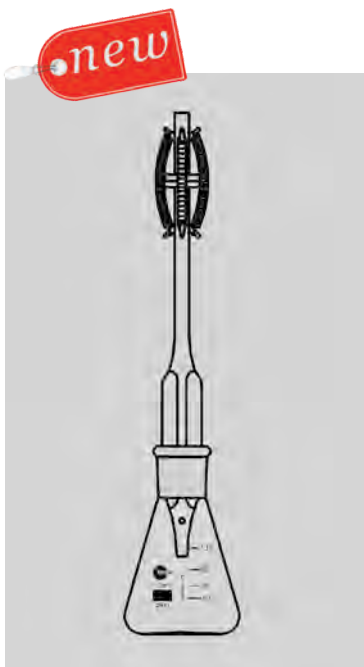




5201 - Arsenic Determination Apparatus Gutzeit

- Designed for the estimation of Arsenic

Product Code	Quantity Per Case
5201001	1



5202 - Arsenic Determination Apparatus as per BP

- Designed for the estimation of Arsenic

Product Code	Quantity Per Case
5202001	1

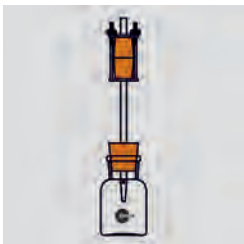


Flasks

5203 - Arsenic Determination Apparatus as per IP

- Designed for the estimation of Arsenic

Product Code	Quantity Per Case
5203001	1



5204 - Arsenic Determination Apparatus as per IS

- Designed for the estimation of Arsenic

Product Code	Quantity Per Case
5204001	1





5340 - Flasks, Filtering, Bolt Neck, With Tubulation

- These Flasks are blown in special moulds
- The shape is designed to impart maximum mechanical strength
- The neck finish is designed for strength and to ensure good stopper fit
- Ideal for use with Buchner Funnel Category No. 36060 and Gooch Crucible No. 32060 with Sintered Discs that have different porosities

Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
5340012	50	52 x 86	30
5340016	100	64 x 108	20
5340021	250	85 x 155	10
5340024	500	105 x 184	20
5340029	1000	136 x 227	10
5340030	2000	168 x 270	5
5340033	5000	237 x 390	2
5340038	10000**	230 x 488	1
5340040	20000**	290 x 580	1

** These flasks are bottle shaped



5400 - Flasks, Iodine Determination, Interchangeable Stopper

- These Flasks are blown especially for the determination of Iodine value according to the
- Methods of ASTM D-29
- Large labelling field for easy marking
- The handle of the stopper projects above the liquid seal, facilitating its removal

Product Code	Capacity ml	Interchangeable Joint	Quantity Per Case
5400016	100	24 / 29	10
5400021	250	24 / 29	10
5400024	500	24 / 29	10



5420 - Flasks, Kjeldahl, Round Bottom, Long Neck

- These Flasks are specially designed for nitrogen/protein determination as per the Kjeldahl method
- Designed with a tooled neck for greater strength and a better stopper fit

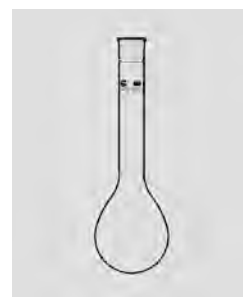
Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
5420006	10	30 x 180	10
5420010	30	40 x 180	10
5420016	100	61 x 210	10
5420022	300	80 x 298	10
5420024	500	100 x 325	10
5420028	800	113 x 375	10



5430 - Flasks, Kjeldahl, Round Bottom, Interchangeable Joint

- These Flasks are specially designed for nitrogen/protein determination as per Kjeldahl method.
- Designed with a tooled neck for greater strength and better stopper fit
- The Flask with 500ml capacity is a part of Ammonia Distilling Apparatus Category No. 3340

Product Code	Capacity ml	Approx O.D. x Height mm	Interchangeable Joint	Quantity Per Case
5430024	500	100 x 320	24 / 29	10
5430028	800	113 x 375	24 / 29	10



Filtration Assembly

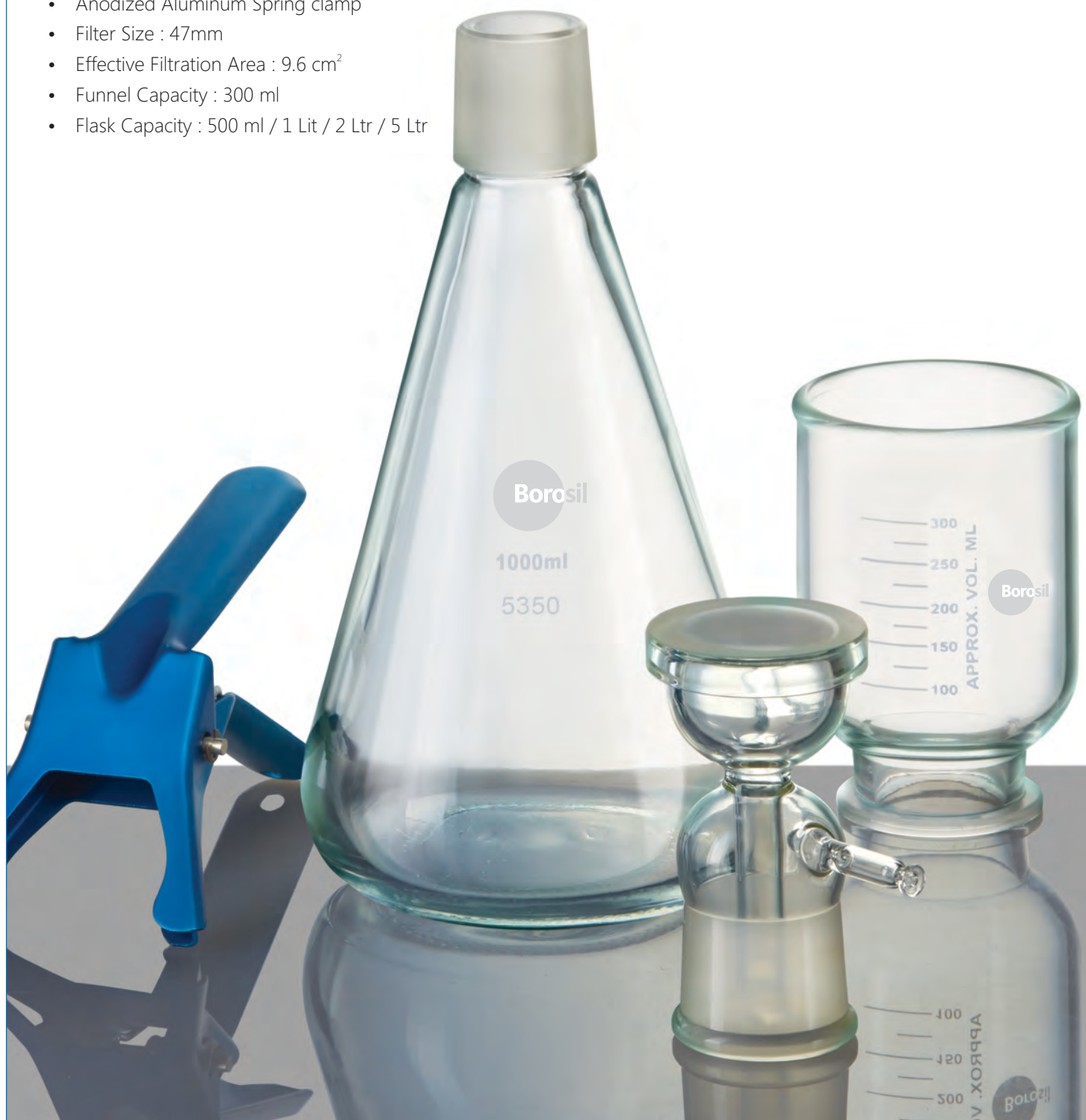
- HPLC Mobile Phase Filtration
- Analysis of Particulate / bacterial contamination & general laboratory micro-filtration
- Units have G1 coarse porosit Frits & accomodate 47 mm filters / 25 mm filters
- All glass design ensures Chemical Compatibility with Most of the Organic Solvents.

Application :

Used for Filtration of HPLC solvents and aqueous mobile phase solutions and buffers.

Specifications

- 100% Borosilicate Glass with fritted glass filter base. Base design has integral vacuum connection located above filtrate drip to prevent contamination of vacuum line with droplets.
- Anodized Aluminum Spring clamp
- Filter Size : 47mm
- Effective Filtration Area : 9.6 cm²
- Funnel Capacity : 300 ml
- Flask Capacity : 500 ml / 1 Lit / 2 Ltr / 5 Ltr





5350 - All Glass Filter Holder - 47mm, Filtration Assembly

- Made of borosilicate glass with fritted glass filter base
- The base design has an integral vacuum connection located above the filtrate drip to prevent contamination of the vacuum line from droplets
- Anodised aluminium spring clamp
- The filter size is 47 mm
- The effective filtration area is 9.6 cm²
- Used for filtration of HPLC solvents and aqueous mobile phase solutions and buffers
- The scaled funnels simplify dosing and analysis

Product Code	Capacity ml	Filtration Base Size mm	Quantity Per Case
5350024	500	47	1
5350029	1000	47	1
5350030	2000	47	1

Spares For All Glass Filter Holder - 47mm

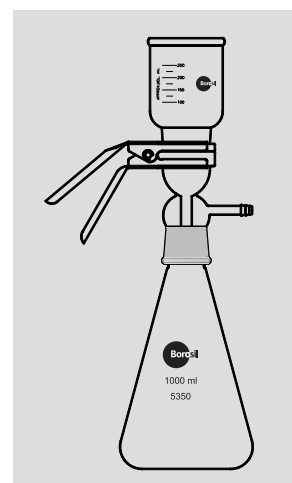
Product Code	Capacity ml	Description
5350124	500 ml	Flask For Filter Holder
5350129	1000 ml	Flask For Filter Holder
5350130	2000 ml	Flask For Filter Holder
5350501	300 ml	Funnel For Filter Holder
5350502	47 mm	Filter Support Base For Filter Holder
5350503	47 mm	Aluminium Clamp for Filter Holder

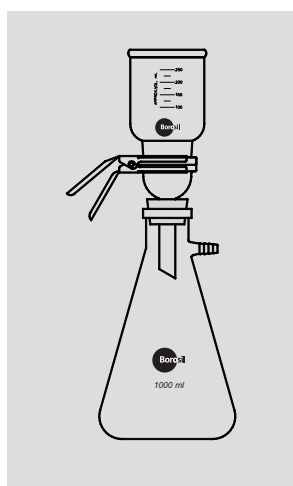
5350-All Glass Filter Holder Assembly - 90mm

Product Code	Capacity ml	Filtration Base Size mm	Quantity Per Case
5350033	5000	90	1

Spares For All Glass Filter Holder - 90mm

Product Code	Capacity ml	Description
5350133	5000 ml	Flask For Filter Holder With B 55 Cone
5350233	1000 ml	Funnel For Filter Holder Flask
5350333	90 mm	Filter Support Base For Filter Holder
5350433	90 mm	Aluminium Clamp for Filter Holder





5360 - All Glass Filter Holder - 47mm, Filtration Assembly

- Made of borosilicate glass with fritted glass filter base
- The base design has an integral vacuum connection located above the filtrate drip to prevent contamination of the vacuum line from droplets
- The filtration base has a silicon stopper
- Anodised aluminium spring clamp
- The filter size is 47mm
- The effective filtration area is 9.6 cm²
- Facilitates analysis of particulate or biological contamination of vacuum filtering liquid
- The scaled funnels simplify dosing and analysis

Product Code	Capacity ml	Filtration Base Size mm	Quantity Per Case
5360029	1000	47	1
5360030	2000	47	1

Spares For All Glass Filter Holder - 47mm

Product Code	Capacity ml	Description
5360129	1000 ml	Flask For Filter Holder
5360130	2000 ml	Flask For Filter Holder
5350S01	300 ml	Funnel For Filter Holder
5360S02	47 mm	Filter Support Base For Filter Holder With Silicon
5350S03	47 mm	Aluminium Clamp for Filter Holder



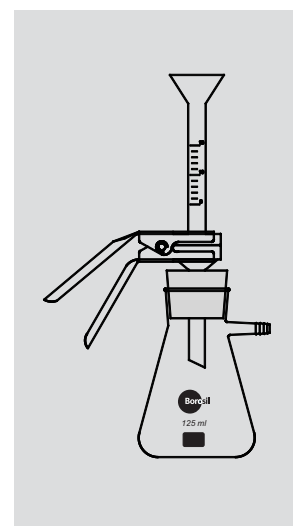
5370 - Glass Filter Holder With Silicon Stopper - 25 mm

- Made of borosilicate glass with fritted glass filter base
- The base design has an integral vacuum connection located above the filtrate drip to prevent contamination of the vacuum line from droplets
- The filtration base has a silicon stopper
- Anodised aluminium spring clamp
- The filter size is 25 mm
- The effective filtration area is 9.6 cm²
- Facilitates analysis of particulate or biological contamination of vacuum filtering liquid
- The scaled funnels simplify dosing and analysis

Product Code	Capacity ml	Filtration Base Size mm	Quantity Per Case
5370017	125	25	1

Spares For Glass Filter Holder With Silicon Stopper - 25 mm

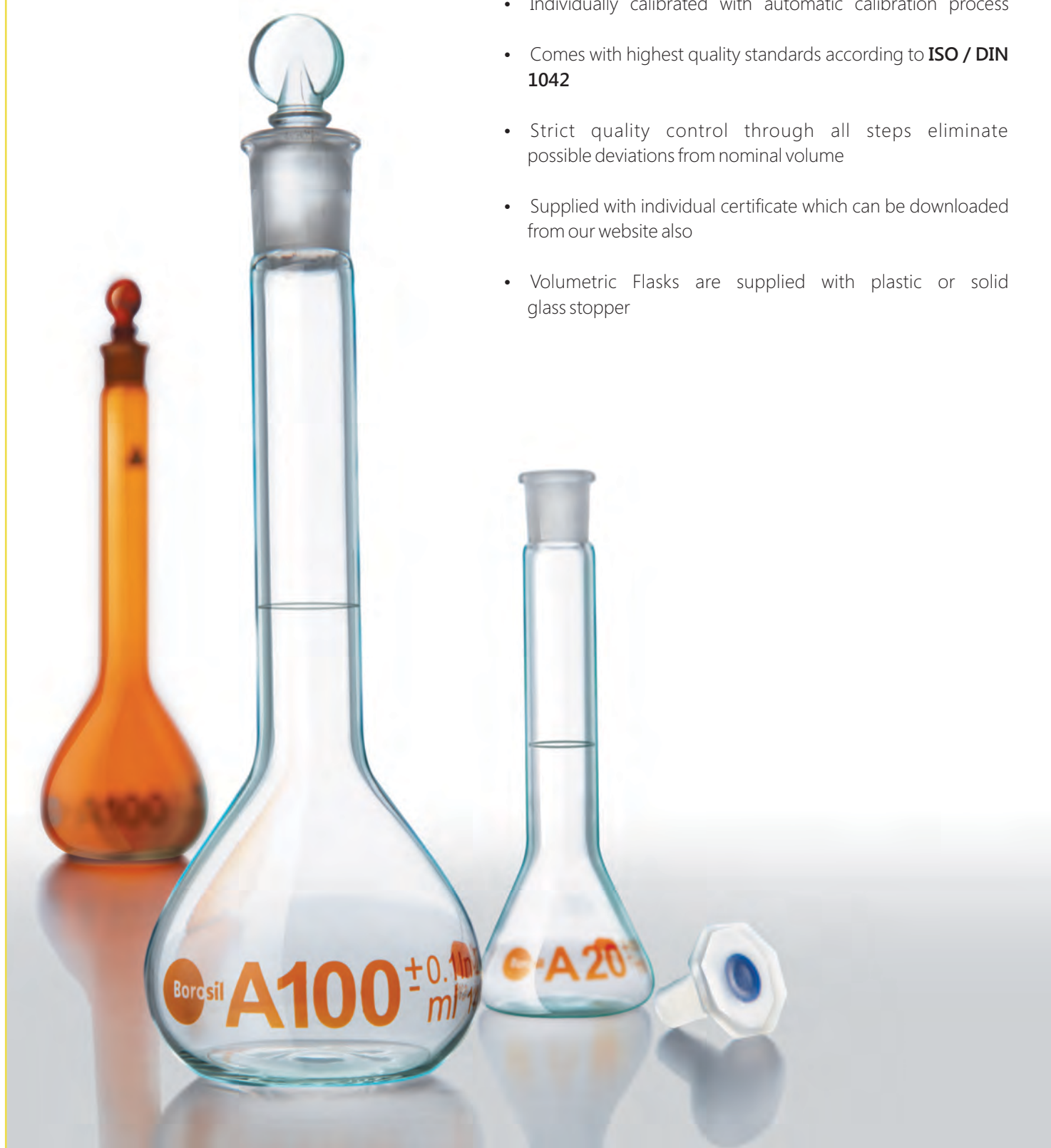
Product Code	Capacity ml	Description
5370S01	125 ml	Flask For Filter Holder
5370S02	15 ml	Funnel For Filter Holder
5370S03	25 mm	Filter Support Base For Filter Holder With Silicon
5370S04	25mm	Aluminium Clamp for Filter Holder



Volumetric Flask

As the field of chemistry evolves with more research & educational institutions as well as industrial applications expanding day by day, the need for high quality glassware has been felt more than ever before. Be it the preparation of standard solutions or making the right volume with appropriate calibration, Volumetric Glassware offers the right mix of quality and efficiency for numerous objectives.

- Manufactured from 3.3 Low Expansion Borosilicate I. D. control tubing
- Individually calibrated with automatic calibration process
- Comes with highest quality standards according to **ISO / DIN 1042**
- Strict quality control through all steps eliminate possible deviations from nominal volume
- Supplied with individual certificate which can be downloaded from our website also
- Volumetric Flasks are supplied with plastic or solid glass stopper





It is a laboratory glassware that is designed to hold a certain volume at a particular temperature and indicates the nominal volume, tolerance, precision class, relevant manufacturing standard etc. The Volumetric Flasks are manufactured in a range of sizes that is capable of containing 1 to 5,000 ml of liquid.

It is very important to understand that for analysis that demands high precision, the selection of instruments is very vital. And in cases where precision analysis is expected, only high accuracy instruments give the desired results. Most sophisticated automatic instruments can deliver high precision results, only if the volumetric ware used to prepare samples is accurate.

Borosil volumetric flasks are designed to give the best combination of thermal shock resistance, physical strength and resistance to chemical attack. They are made to withstand the demands of the modern laboratory and are particularly suitable for all glass apparatus assemblies.

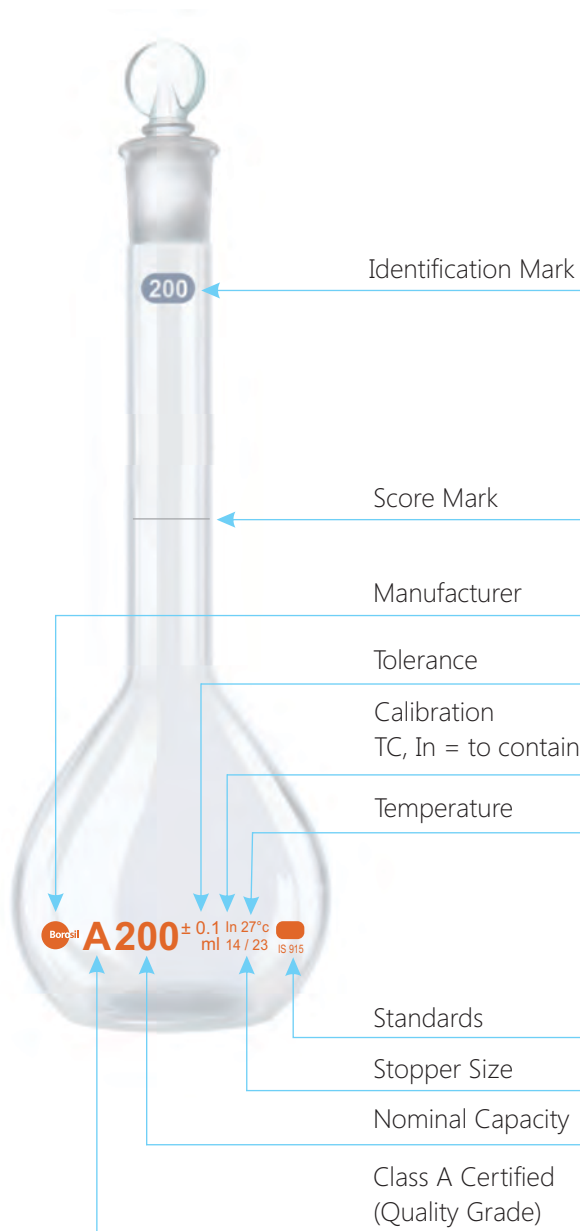
Calibration:

- Every Volumetric Flask is calibrated on fully automatic computer controlled calibration machine, eliminating the manual error in reading the meniscus, thereby giving more accurate volume
- Each Volumetric Flask is individually calibrated, provided with unique Code No. and supplied with individual Certificate

Printing:

- All Volumetric Flasks are printed with silk screen in permanent amber
- Printing in blue colour can also be supplied on request
- The amber Volumetric Flasks are printed with white ceramic enamel

At **Borosil** we understand that different needs require different solutions. Hence we offer our clients a wide range of flasks, designed to meet their individual requirements, while ensuring optimum quality.

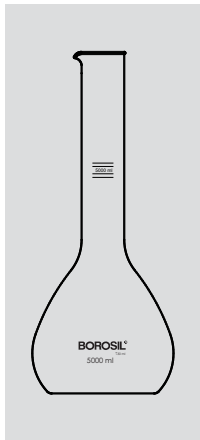




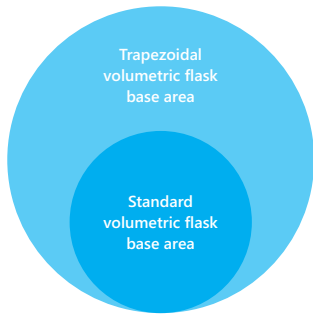
5639 - Jars, Measuring, With Pour Out, With Works Certificate

- Suitable for measurement of petrol
- Calibrated as per weight and measure guidelines

Product Code	Capacity ml	Quantity per Case
5639033	5000	1



Trapezoidal Volumetric Flask



Volumetric flasks with small capacities can be topple down more easily due to their higher centre of gravity.

Trapezoidal volumetric flasks have much larger base area which ensures higher stability. It has atleast twice base area compare to standard volumetric flask of the same capacity.





5640 - Flasks, Volumetric, With Interchangeable Glass Solid Stopper, Accuracy As Per Class A, With Batch Certificate

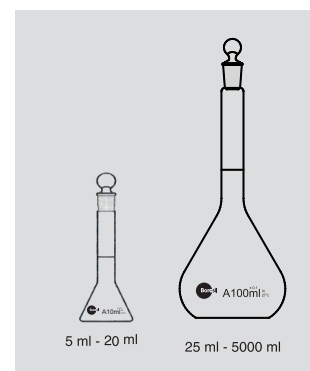
- Complies with ISO / DIN 1042
- Calibrated at 20°C
- Manufactured from borosilicate glass for corrosion-free performance
- Amber enamel inscriptions
- 4 ml to 20 ml supplied with trapezoidal shape for better stability

Product Code	Capacity ml	Tolerance \pm ml	Stopper Size	Quantity Per Case
5640001D	1*	0.015	7 / 16	5
5640002D	2*	0.015	7 / 16	5
5640005D	5	0.025	7 / 16	5
5640006D	10	0.025	7 / 16	5
5640008D	20	0.04	10 / 19	5
5640009D	25	0.04	10 / 19	5
5640012D	50	0.06	12 / 21	10
5640016D	100	0.10	14 / 23	10
5640020D	200	0.15	14 / 23	10
5640021D	250	0.15	14 / 23	10
5640024D	500	0.25	19 / 26	10
5640029D	1000	0.40	24 / 29	10
5640030D	2000	0.60	29 / 32	2
5640033D	5000	1.20	34 / 35	1

* 1ml and 2 ml sizes are of test tube shape.

* Blue enamel inscriptions can be supplied on request.

* Individual certificate can be supplied on request.





5642 - Flasks, Volumetric, With Interchangeable Plastic Stopper, Accuracy As per Class B

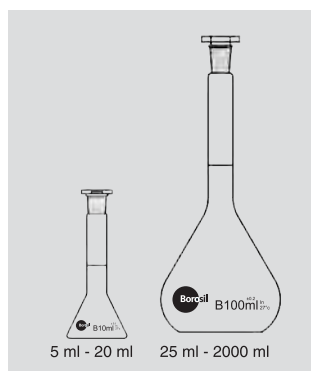
- Complies with ISO / DIN 1042
- Calibrated at 20°C
- Amber enamel inscriptions
- Manufactured from 3.3 borosilicate glass for corrosion-free performance
- 5 ml to 20 ml supplied with trapezoidal shape for better stability

Product Code	Capacity ml	Tolerance ±ml	Stopper Size	Quantity Per Case
5642001D	1*	0.03	7 / 16	10
5642002D	2*	0.03	7 / 16	10
5642005D	5	0.05	7 / 16	10
5642006D	10	0.05	7 / 16	10
5642008D	20	0.08	10 / 19	10
5642009D	25	0.08	10 / 19	10
5642012D	50	0.12	12 / 21	20
5642016D	100	0.20	14 / 23	20
5642020D	200	0.30	14 / 23	20
5642021D	250	0.30	14 / 23	20
5642024D	500	0.50	19 / 26	20
5642029D	1000	0.80	24 / 29	20
5642030D	2000	1.20	29 / 32	4

* 1ml and 2 ml sizes are of test tube shape.

* Blue enamel inscriptions can be supplied on request.

* Individual certificate can be supplied on request.





5643 - Flask, Wide Mouth Volumetric with interchangeable Solid Glass Stopper, Class A, With Batch Certificate

- Complies with ISO / DIN 1042
- Calibrated at 20°C
- Manufactured from 3.3 borosilicate glass for corrosion-free performance
- Specially designed wide mouth for testing bigger dia. Tablet without making it in powder form

Product Code	Capacity ml	Tolerance \pm ml	Stopper Size	Quantity Per Case
5643009D	25	0.06	12 / 21	5
5643012D	50	0.1	14 / 23	10
5643016D	100*	0.2	19 / 26	10
5643020D	200*	0.2	19 / 26	10

* Not covered in the standards

* Blue enamel inscriptions can be supplied on request.

* Individual certificate can be supplied on request.





5645 - Flasks, Volumetric, With Interchangeable Glass Solid Stopper Accuracy, Class A, USP (US Pharmacopoeia), With Batch Certificate

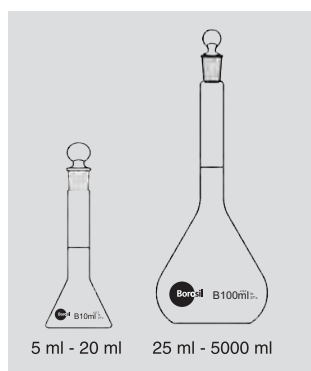
- Complies with ASTM E 288
- Calibrated at 20°C
- Manufactured from 3.3 borosilicate glass for corrosion-free performance
- Amber enamel inscriptions
- 5 ml to 20 ml supplied with trapezoidal shape for better stability

Product Code	Capacity ml	Tolerance ±ml	Stopper Size	Quantity Per Case
5645005	5	0.02	7 / 16	5
5645006	10	0.02	7 / 16	5
5645008	20	0.03	10 / 19	5
5645009	25	0.03	10 / 19	5
5645012	50	0.05	12 / 21	10
5645016	100	0.08	14 / 23	10
5645020	200	0.10	14 / 23	10
5645021	250	0.12	14 / 23	10
5645024	500	0.20	19 / 26	10
5645029	1000	0.30	24 / 29	10
5645030	2000	0.50	29 / 32	2

* Blue enamel inscriptions can be supplied on request.

* Individual certificate can be supplied on request.

* 20 ml not covered in standard.





5646 - Flasks, Volumetric, With Interchangeable Plastic Stopper, Accuracy As per Class A, With Batch Certificate

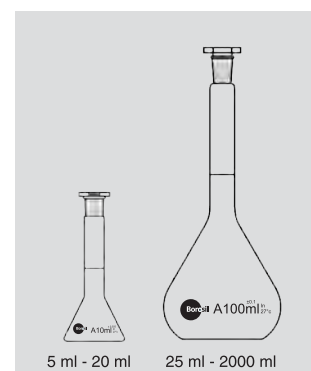
- Complies with ISO / DIN 1042
- Calibrated at 20°C
- Manufactured from 3.3 borosilicate glass for corrosion-free performance
- Amber enamel inscriptions
- 5 ml to 20 ml supplied with trapezoidal shape for better stability

Product Code	Capacity ml	Tolerance \pm ml	Stopper Size	Quantity Per Case
5646001D	1*	0.015	7 / 16	5
5646002D	2*	0.015	7 / 16	5
5646005D	5	0.025	7 / 16	5
5646006D	10	0.025	7 / 16	5
5646008D	20	0.04	10 / 19	5
5646009D	25	0.04	10 / 19	5
5646012D	50	0.06	12 / 21	10
5646016D	100	0.10	14 / 23	10
5646020D	200	0.15	14 / 23	10
5646021D	250	0.15	14 / 23	10
5646024D	500	0.25	19 / 26	10
5646029D	1000	0.40	24 / 39	10
5646030D	2000	0.60	29 / 32	2

* 1ml and 2 ml sizes are of test tube shape.

* Blue enamel inscriptions can be supplied on request.

* Individual certificate can be supplied on request.



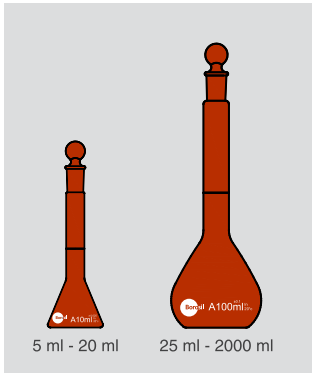


5648 - Flasks, Volumetric, With Interchangeable Stopper, Amber, Accuracy As per Class A , With Batch Certificate

- Complies with ISO / DIN 1042
- Calibrated at 20°C
- Manufactured from 3.3 borosilicate glass with an amber coating on exterior surfaces to facilitate use with light sensitive solutions
- White enamel inscriptions
- 5 ml to 20 ml supplied with trapezoidal shape for better stability

Product Code	Capacity ml	Tolerance ± ml	Stopper Size	Quantity Per Case
5648005D	5	0.025	7 / 16	5
5648006D	10	0.025	7 / 16	5
5648008D	20	0.04	10 / 19	5
5648009D	25	0.04	10 / 19	5
5648012D	50	0.06	12 / 21	10
5648016D	100	0.10	14 / 23	10
5648020D	200	0.15	14 / 23	10
5648021D	250	0.15	14 / 23	10
5648024D	500	0.25	19 / 26	10
5648029D	1000	0.40	24 / 29	10
5648030D	2000	0.60	29 / 32	2

Similar in design to cat No. 5640



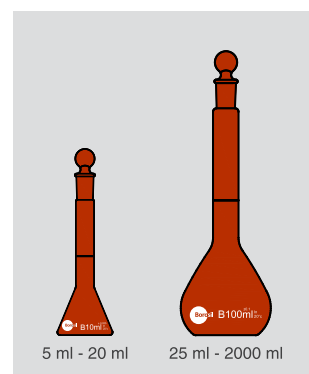


5649 - Flasks, Volumetric, With Interchangeable Stopper, Amber, Accuracy As per Class B

- Complies with ISO / DIN 1042
- Calibrated at 20°C
- White enamel inscriptions
- Manufactured from 3.3 borosilicate glass with an amber coating on exterior surfaces to facilitate use with light sensitive solutions
- 5 ml to 20 ml supplied with trapezoidal shape for better stability

Product Code	Capacity ml	Tolerance \pm ml	Stopper Size	Quantity Per Case
5649005D	5	0.05	7 / 16	10
5649006D	10	0.05	7 / 16	10
5649008D	20	0.08	10 / 19	10
5649009D	25	0.08	10 / 19	10
5649012D	50	0.12	12 / 21	20
5649016D	100	0.20	14 / 23	20
5649020D	200	0.30	14 / 23	20
5649021D	250	0.30	14 / 23	20
5649024D	500	0.50	19 / 26	20
5649029D	1000	0.80	24 / 29	20
5649030D	2000	1.20	29 / 32	4

Similar in design to cat No. 5641





5650 - Flasks, Volumetric, Sugar Estimation, Without Stopper

- Complies with BS 675
- A two mark flask designed for the analysis of sugar solutions. The two graduation marks provide a dilution of 1 in 10

Product Code	Capacity ml	Tolerance ±ml	Quantity Per Case
5650016	100 / 110	0.15	20



5651 - Flask, Volumetric, With Interchangeable Solid Glass Stopper, Accuracy Class 'A', with Amber Mark, with Batch Certificate

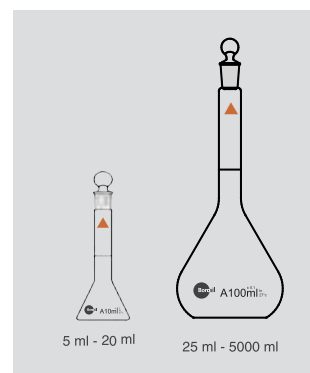
- Complies with ISO / DIN 1042
- Calibrated at 20°C
- Manufactured from 3.3 borosilicate glass for corrosion-free performance
- Amber enamel inscriptions
- 5 ml to 20 ml supplied with trapezoidal shape for better stability
- Special amber colour triangle at neck for easy differentiation. They are also suitable for Cytotoxic test where flasks to be isolated from other glassware

Product Code	Capacity ml	Tolerance \pm ml	Stopper Size	Quantity Per Case
5651001D	1*	0.015	7 / 16	4
5651002D	2*	0.015	7 / 16	4
5651005D	5	0.025	7 / 16	5
5651006D	10	0.025	7 / 16	5
5651008D	20	0.04	10 / 19	5
5651009D	25	0.04	10 / 19	5
5651012D	50	0.06	12 / 21	10
5651016D	100	0.1	14 / 23	10
5651020D	200	0.15	14 / 23	10
5651021D	250	0.15	14 / 23	10
5651024D	500	0.25	19 / 26	10
5651029D	1000	0.4	24 / 29	10
5651030D	2000	0.6	29 / 32	2

* 1ml and 2 ml sizes are of test tube shape.

* Blue enamel inscriptions can be supplied on request.

* Individual certificate can be supplied on request.



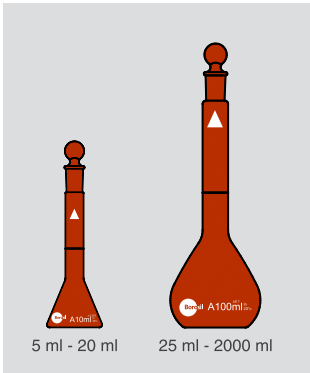


5652 - Flask, Volumetric, With Interchangeable Solid Glass Stopper, Accuracy Class 'A' , with White Mark, with Batch Certificate

- Complies with ISO / DIN 1042
- Calibrated at 20°C
- Manufactured from 3.3 borosilicate glass with an amber coating on exterior surfaces to facilitate use with light sensitive solutions
- White enamel inscriptions
- 5 ml to 20 ml supplied with trapezoidal shape for better stability
- Special white colour triangle at neck for easy differentiation. They are also suitable for Cytotoxic test where flasks to be isolated from other glassware.

Product Code	Capacity ml	Tolerance ±ml	Stopper Size	Quantity Per Case
5652005	5	0.025	7 / 16	5
5652006	10	0.025	7 / 16	5
5652008	20	0.04	10 / 19	5
5652009	25	0.04	10 / 19	5
5652012	50	0.06	12 / 21	10
5652016	100	0.1	14 / 23	10
5652020	200	0.15	14 / 23	10
5652021	250	0.15	14 / 23	10
5652024	500	0.25	19 / 26	10
5652029	1000	0.4	24 / 29	10
5652030	2000	0.6	29 / 32	2

* Individual certificate can be supplied on request.

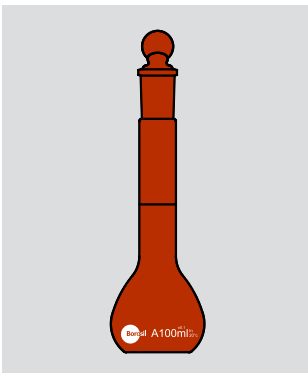


5653 - Flasks, Wide Mouth Volumetric With Interchangeable Solid Glass Stopper, Amber, Class A, With Batch Certificate

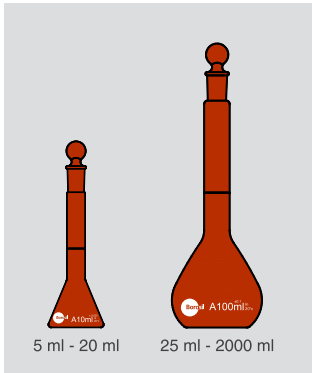
- Complies with ISO / DIN 1042
- Calibrated at 20°C
- Manufactured from 3.3 borosilicate glass with an amber coating on exterior surfaces to facilitate use with light sensitive solutions
- Specially designed wide mouth for testing bigger dia. Tablet without making it in powder form

Product Code	Capacity ml	Tolerance ±ml	Stopper Size	Quantity Per Case
5653009D	25	0.06	12 / 21	5
5653012D	50	0.10	14 / 23	10
5653016D	100*	0.2	19 / 26	10
5653020D	200*	0.2	19 / 26	10

* Not covered under standards



Volumetric Flasks



5655 - Flasks, Volumetric with Interchangeable Solid Glass stopper Accuracy As Per Class A, USP (US Pharmacopoeia), Amber, With Batch Certificate

- Complies with ASTM E 288
- Calibrated at 20°C
- Manufactured from borosilicate glass for corrosion-free performance
- 5 ml to 20 ml supplied with trapezoidal shape for better stability
- Manufactured from 3.3 borosilicate glass with an amber coating on exterior surfaces to facilitate use with light sensitive solutions

Product Code	Capacity ml	Tolerance ± ml	Stopper Size	Quantity Per Case
5655005	5	0.02	7 / 16	5
5655006	10	0.02	7 / 16	5
5655008	20	0.03	10 / 19	5
5655009	25	0.03	10 / 19	5
5655012	50	0.05	12 / 21	10
5655016	100	0.08	14 / 23	10
5655020	200	0.10	14 / 23	10
5655021	250	0.12	14 / 23	10
5655024	500	0.20	19 / 26	10
5655029	1000	0.30	24 / 29	10
5655030	2000	0.50	29 / 32	2

* Individual certificate can be supplied on request.
* 20 ml not covered in standard.

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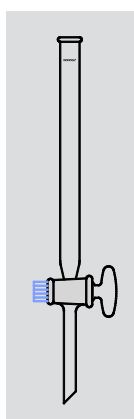
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Chromatography Columns

Column chromatography in chemistry is a method used to purify individual chemical compounds from mixtures of compounds. It is often used for preparative applications on scales from micrograms up to kilograms. The main advantage of column chromatography is the relatively low cost and disposability of the stationary phase used in the process. The latter prevents cross-contamination and stationary phase degradation due to recycling.



6100 - Columns, Chromatography, Plain With Glass Stopcock

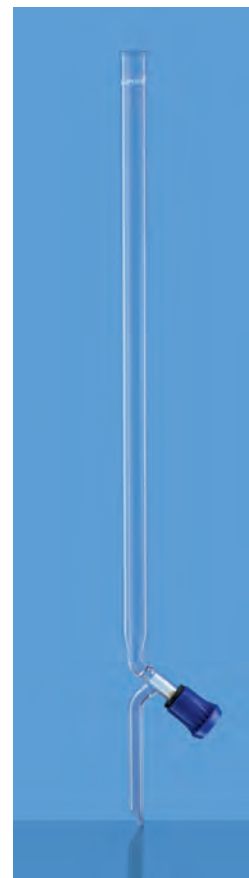
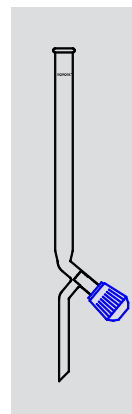
- Designed with straight bore stopcock that increases the life as compared to PTFE key stopcocks
- The glass stopcock enhances control and facilitates smoother action.
- Generally used for purification of individual compounds from mixtures of compounds

Product Code	Extrator Length mm	Bore mm	Quantity Per Case
6100060	200	10	5
6100061	300	10	5
6100062	300	18	5
6100063	450	30	5
6100064	500	10	5
6100065	500	18	5
6100066	600	30	5
6100067	600	40	5
6100068	1000	40	4

6110 - Columns, Chromatography, Plain With Boroflo Stopcock

- Generally used for purification of individual compounds from mixtures of compounds
- Columns are added with a sintered disk (Grade I) for good result

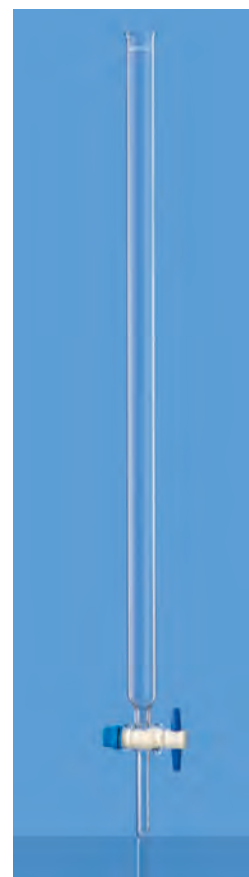
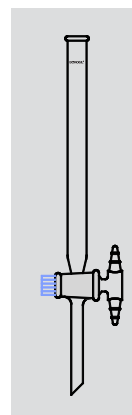
Product Code	Extractor Length mm	Bore mm	Quantity Per Case
6110060	200	10	5
6110061	300	10	5
6110062	300	18	5
6110063	450	30	5
6110064	500	10	5
6110065	500	18	5
6110066	600	30	5
6110067	600	40	5
6110068	1000	40	4

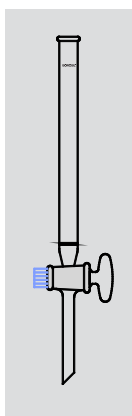
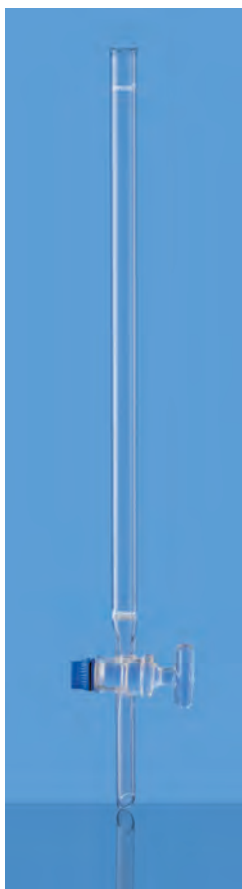


6120 - Columns, Chromatography, Plain With PTFE Stopcock

- Equipped with PTFE key that is highly resistant to chemical attack
- No lubrication required as PTFE key is used
- Generally used for purification of individual compounds from mixtures of compounds
- Columns are added with a sintered disk (Grade I) for good result

Product Code	Extractor Length mm	Bore mm	Quantity Per Case
6120060	200	10	5
6120061	300	10	5
6120062	300	18	5
6120063	450	30	5
6120064	500	10	5
6120065	500	18	5
6120066	600	30	5
6120067	600	40	5
6120068	1000	40	4





6101 - Columns, Chromatography, Plain With Sintered Disc And Glass Stopcock

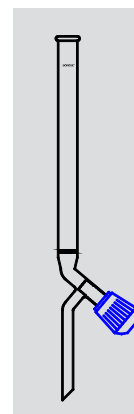
- Designed with straight bore stopcock that increases the life as compared to PTFE key stopcocks
- The glass stopcock enhances control and facilitates smoother action.
- Columns are added with a Sintered Disc for good results.
- Generally used for purification of individual compounds from mixtures of compounds
- Columns are added with a sintered disk (Grade I) for good result

Product Code	Extractor Length mm	Bore mm	Quantity Per Case
6101060	200	10	5
6101061	300	10	5
6101062	300	18	5
6101063	450	30	5
6101064	500	10	5
6101065	500	18	5
6101066	600	30	5
6101067	600	40	5
6101068	1000	40	4

6111 - Columns, Chromatography, Plain With Sintered Disc And Boroflo Stopcock

- Equipped with PTFE key that is highly resistant to chemical attack
- No lubrication required as PTFE key is used
- Columns are added with a Sintered Disc for good results.
- Generally used for purification of individual compounds from mixtures of compounds

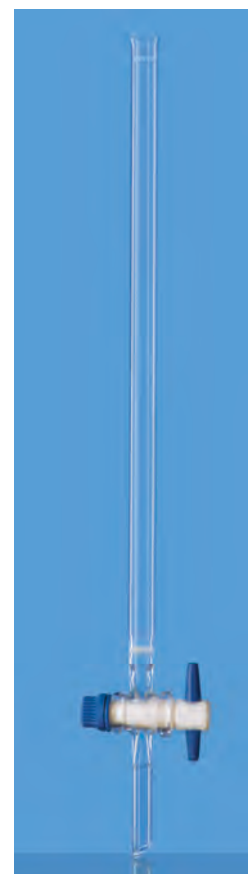
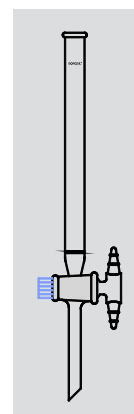
Product Code	Extractor Length mm	Bore mm	Quantity Per Case
6111060	200	10	5
6111061	300	10	5
6111062	300	18	5
6111063	450	30	5
6111064	500	10	5
6111065	500	18	5
6111066	600	30	5
6111067	600	40	5
6111068	1000	40	4



6121 - Columns, Chromatography, Plain With Sintered Disc And PTFE Stopcock

- Equipped with PTFE key that is highly resistant to chemical attack
- No lubrication required as PTFE key is used
- Columns are added with a Sintered Disc for good results.
- Generally used for purification of individual compounds from mixtures of compounds

Product Code	Extractor Length mm	Bore mm	Quantity Per Case
6121060	200	10	5
6121061	300	10	5
6121062	300	18	5
6121063	450	30	5
6121064	500	10	5
6121065	500	18	5
6121066	600	30	5
6121067	600	40	5
6121068	1000	40	4



Funnels

Funnels may be used for separating solids from liquids, liquids from liquids and occasionally, for pouring something into a container.

Borosil brand Funnels are available in a comprehensive range for a variety of such applications. Sintered Glass Funnels are also available.

Separating Funnels come in globe, pear and cylindrical shapes with ground glass stopcocks and interchangeable stoppers. These Funnels are made of specially moulded blanks. Stopcock bores, body openings and stems are carefully aligned to facilitate the smooth and even flow of liquid with fast cut-off.

The sturdy design of Borosil brand Funnels makes them ideal for rack work.

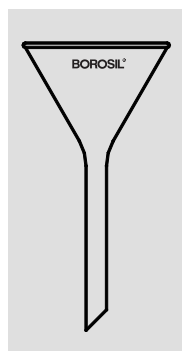




6140 - Funnels, Plain, 60° Angle, Short Stem

- Complies with IS 1591, ISO / DIN 4798
- Made 3.3 borosilicate glass
- Designed with a 60° bowl angle to ensure precise fitting of the filter paper
- High thermal shock resistance and chemical resistance
- Generally used for filtering and decanting liquids of varied densities

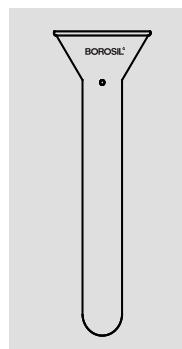
Product Code	Diameter mm	Quantity Per Case
6140057	25	30
6140058	35	30
6140065	50	20
6140069	65	20
6140071	75	20
6140077	100	40

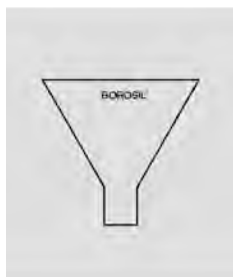


6150 - Tubes Funnel Test Tubes

- Specially Designed for Soil testing laboratory

Product Code	Capacity ml	Quantity Per Case
6150007	15	10
6150010	30	10

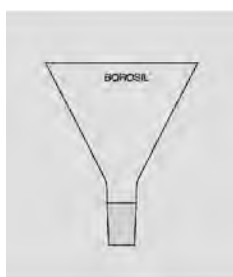




6220 - Funnels, Powder

- Ideal for transferring powders
- Designed with a short wide stem to facilitate smooth flow
- Made of chemically resistant 3.3 borosilicate glass

Product Code	Diameter mm	Quantity Per Case
6220080	125	30
6220081	150	20
6220087	200	4
6220089	250	4



6230 - Funnels, Powder, Stem, With Cone

- Ideal for transferring powders
- Designed with a short wide stem to facilitate smooth flow
- Made of chemically resistant 3.3 borosilicate glass
- Supplied with ground glass cone for easy fitting on flask
- Joint size 24 / 29 for all capacities

Product Code	Diameter mm	Quantity Per Case
6230080	125	20
6230081	150	20
6230087	200	4
6230089	250	4

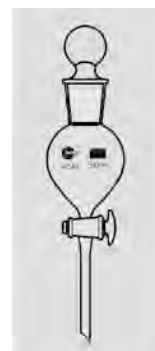


6340 - Funnels, Separating, Globe Shape, With Stopcock and Interchangeable Stopper

- Made of 3.3 borosilicate glass
- Equipped with a standard ground glass stopcock
- Globe shape, with a stem
- Generally used in the separation phase

Product Code	Capacity ml	Stopper Size	Quantity Per Case
6340017	125	19 / 26	10
6340021	250	24 / 29	10
6340024	500	24 / 29	10
6340029	1000	29 / 32	5
6340030	2000	29 / 32	10
6340033	5000	34 / 35	1

* Plastic stopper can be supplied on request.





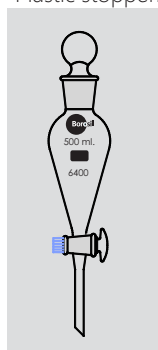
6400 - Funnels, Separating, Pear Shape, With Stopcock And Interchangeable Stopper

- Complies with ISO / DIN 4800
- Made of borosilicate glass
- Equipped with a standard ground stopcock
- Pear shape, with a stem
- Generally used in the separation phase

Product Code	Capacity ml	Stopper Size	Quantity Per Case
6400013	60*	14 / 23	10
6400017	125*	19 / 26	10
6400021	250	24 / 29	10
6400024	500	24 / 29	10
6400029	1000	29 / 32	10
6400030	2000	29 / 32	10

* Not covered in any standards.

*Plastic stoppers can be supplied on request



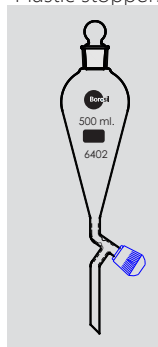
6402 - Funnels, Separating, Pear Shape, Fitted With Boroflo Stop-cock With PTFE Key And Glass Stopper

- Complies with ISO / DIN 4800
- Made of borosilicate glass
- Equipped with a Boroflo stopcock with PTFE key
- Pear shape, with a stem
- Generally used in the separation phase

Product Code	Capacity mm	Quantity Per Case
6402013	60	10
6402017	125	10
6402021	250	10
6402024	500	10
6402029	1000	10

* Not covered in any standards.

*Plastic stoppers can be supplied on request



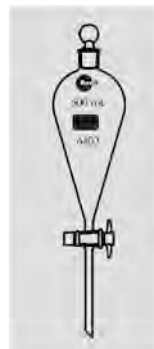


6403 - Funnels, Separating, Pear Shape, With PTFE Key Stopcock, Interchangeable Stopper

- Complies with IS 1575, ISO / DIN 4800
- Made of borosilicate glass
- Equipped with a PTFE key stopcock
- Pear shape, with a stem
- Generally used in the separation phase

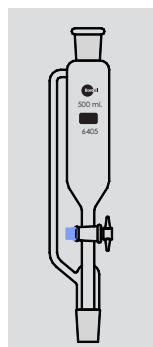
Product Code	Capacity ml	Stopper Size	Quantity Per Case
6403021	250	24 / 29	10
6403024	500	24 / 29	10
6403029	1000	29 / 32	10

* Plastic stoppers can be supplied on request.



6405 - Funnel, Pressure Equilising Cylindrical, With PTFE Stopcock

Product Code	Capacity ml	Socket	Cone	Quantity Per Case
6405012	50	19 / 26	19 / 26	5
6405016	100	19 / 26	19 / 26	5
6405021	250	24 / 29	24 / 29	5
6405024	500	24 / 29	24 / 29	5



Gas Generator

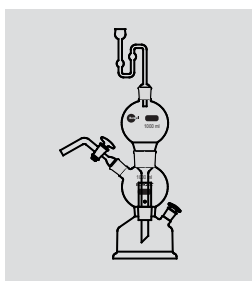
Any scientific lab is incomplete without Gas Generator, an instrument that supports a multitude of scientific experiments across institutions and industries. It is a rapid, inexpensive and effective apparatus to produce controllable amounts of common gases such as hydrogen sulphide, carbon dioxide etc.

Borosil® Gas Generator is an ideal choice with the promise of high quality and precision, thus making it the perfect solution for scientific purposes.

6550-Gas Generator, Kipps

- Manufactured from 3.3 Borosilicate glass for corrosion-free performance
- Used to produce common gases
- Simple to operate and quickly charged as well as assembled

Product Code	Extractor Length mm	Quantity Per Case
6550024	500	1
6550029	1000	1



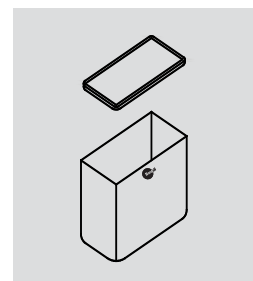


The cover of Museum Jar is provided with a small orifice for easy filling of the preservative without unsealing the lid. The excellent resistance to chemical attack and good optical clarity of Borosil® brand jars gives them a clear advantage over others.

6910-Jars, Rectangular, Museum, With Cover, 3.3 Borosilicate glass

- Made from borosilicate glass
- Specially blown to give sturdiness and long life
- Top edges are flat ground to close tolerances
- Not recommended for use over a direct flame or on a hot plate
- Covers are made from Soda glass

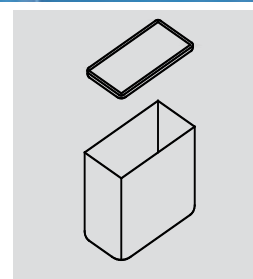
Product Code	Approx Height x Length x Breadth mm	Quantity Per Case
6910M41	200 x 125 x 125	4
6910M42	200 x 150 x 100	4
6910M43	220 x 195 x 80	4
6910M44	250 x 165 x 140	4
6910M45	250 x 250 x 120	4
6910M46	360 x 150 x 100	4



6920 - S-Line Museum Jar, clear glass

- Made from soda lime glass
- Specially blown to give sturdiness and long life
- Top edges are flat ground to close tolerances
- Not recommended for use over a direct flame or on a hot plate

Product Code	Approx Height x Length x Breadth mm	Quantity Per Case
6920M41	140 x 215 x 100	4
6920M42	210 x 170 x 130	4
6920M43	220 x 140 x 140	4
6920M44	225 x 225 x 125	4
6920M45	250 x 250 x 150	4



Kettles

Borosil brand Resin Reaction Kettles are designed for organic reactions involving viscous materials. The wide mouth enables easy access for cleaning the interior. The covers are of heavy construction, while the lower sections are mould-blown to ensure maximum resistance to mechanical breakage. The covers have openings with interchangeable joints to facilitate rapid assembly with Condensers, Stirrers, etc. Flanges of the covers and base are finely ground to ensure a tight seal.

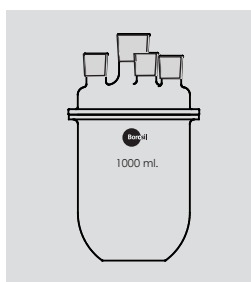


6947-Kettles, Resin Reaction

- Made of 3.3 Borosilicate glass
- Designed for viscous reaction materials
- The wide mouth enables easy access for cleaning the interior
- Flanges of the covers and base are finely ground to ensure a tight seal
- Equipped with interchangeable covers with four openings

Product Code	Capacity ml	Body Dia mm	Height mm	Quantity Per Case Set
6947024	500	95	178	1
6947029	1000	108	178	1
6947030	2000	140	190	1
6947032	4000	140	343	1

The 500 ml and 1000 ml kettles have interchangeable covers with four openings to accommodate 24 / 29 interchangeable joints. Kettles of 2000 ml and 4000 ml capacity have interchangeable covers with openings to accommodate three 24 / 29 interchangeable joints and one 34 / 35 interchangeable joint.





6948-Bottoms, Only for Kettles Cat no. 6947

- Made of 3.3 borosilicate glass to ensure maximum resistance to mechanical breakage
- The base has a wide mouth that enables easy access for cleaning the interior
- Flanges of the base are finely ground to ensure a tight seal

Product Code	Capacity ml	Quantity Per Case
6948024	500	2
6948029	1000	2
6948030	2000	2
6948032	4000	2

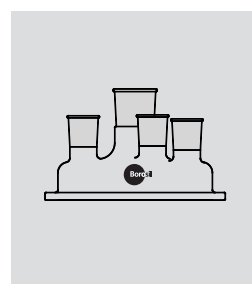


6949-Covers, Only for Kettles Cat No. 6947

- Made of 3.3 borosilicate glass, and made of heavy construction
- The covers have openings with interchangeable joints to facilitate rapid assembly with Condensers and Stirrers
- Flanges of the covers are finely ground to ensure a tight seal

Product Code	Capacity ml	Quantity Per Case
6949041	500 / 1000	2
6949042	2000 / 4000	2

The 500 ml and 1000 ml kettles have interchangeable covers with four openings to accommodate 24 / 29 interchangeable joints. Kettles of 2000 ml and 4000 ml capacity have interchangeable covers with openings to accommodate three 24 / 29 interchangeable joints and one 34 / 35 interchangeable joint.



Pipettes

Borosil brand Pipettes are made of specially-selected heavy wall machine-drawn borosilicate accurate bore glass tubing. They have precision formed jets, and bevel ground ends that resist chipping. The graduation marks are made in durable white enamel or amber stain, resistant to normal laboratory reagents and repeated washing. All the Pipettes are individually measured, and then marked. The uniformity of bore ensures accuracy between any two readings. The Pipettes can be autoclaved and, if necessary, can be flamed for sterilisation.

All **Borosil** Pipettes are colour-coded at the top in accordance with ISO Standards, to facilitate easy identification. The graduation marks are screen printed. The mouth piece of Pipettes of 5 ml and above are tooled with uniform OD for easy sucking. Such tooling also imparts additional strength. Borosil Brand Pipettes are truly dependable in terms of their accuracy. They are available in both, Class A with Works Certificate as well as Class B tolerances.

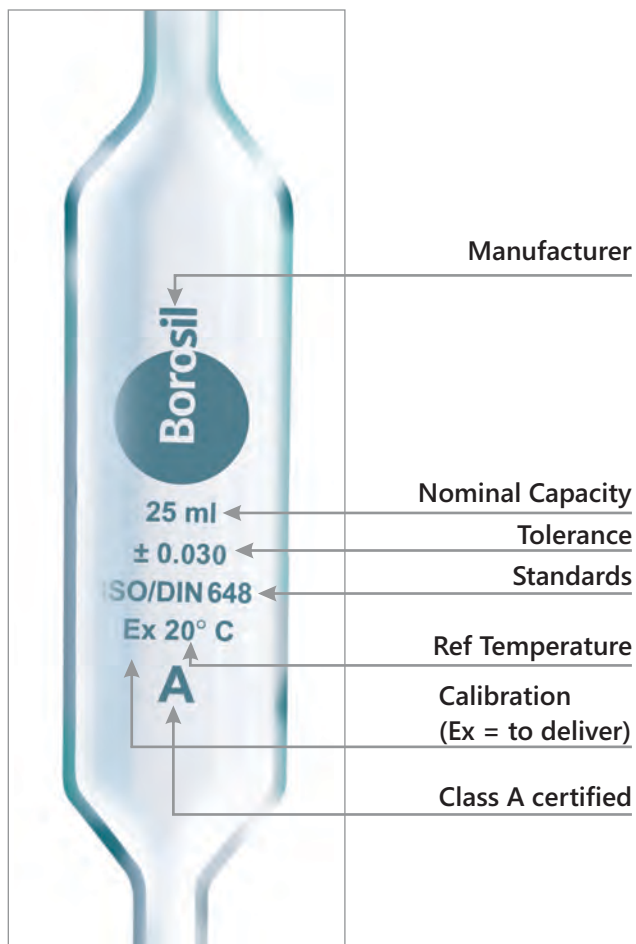
Details of Colour Coding on graduated pipettes.

Capacity of Pipette	Colour code used
0.1 x 0.01 ml	White
0.2 x 0.01 ml	Black
1 x 0.01 ml	Yellow
1 x 0.1 ml	Red
2 x 0.02 ml	Black
2 x 0.1 ml	Green
5 x 0.05 ml	Red
5 x 0.1 ml	Blue
10 x 0.1ml	Orange

Details of Colour Coding on one mark pipette

Capacity of Pipette	Colour code used
1 / 8 / 25 ml	Blue
2 ml	Orange
6 ml	2 Orange rings
3 / 9 / 30 ml	Black
5 / 40 ml	White
10 / 50 ml	Red
4 ml	2 Red rings
15 ml	Green
7 ml	2 Green rings
20 / 100 ml	Yellow





Mohr Type

Delivery from zero mark to the last graduation mark

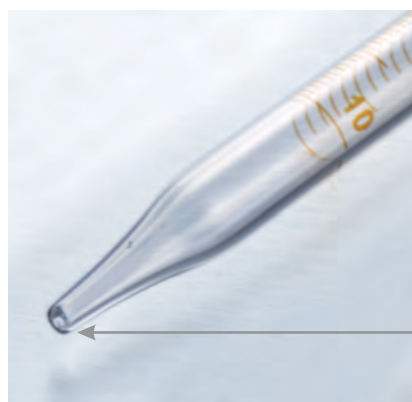


Serological Type

Delivery from zero mark to the tip

Two Rings

Two rings at the top indicate that these pipettes are calibrated to deliver their total capacity

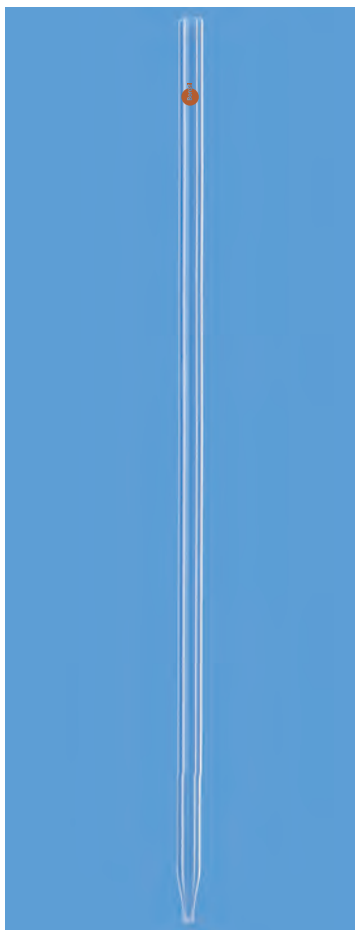


Tips are carefully tooled and ensure proper flow rates

Tips edges are fire polish



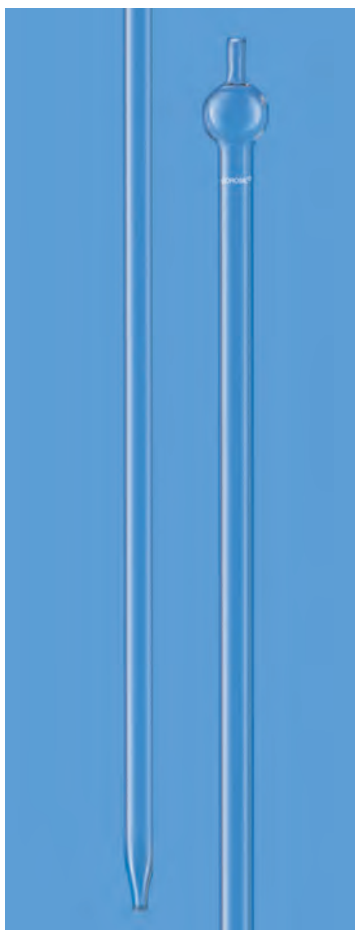
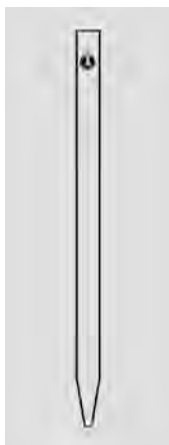
All pipettes are colour coded at the top to allow fast identification



7040 - Pipettes, Artificial Insemination, Cattle, Taper Tip

- Made of machine-drawn high quality tubing
- Sturdy, strong and safe for repeated use
- It can be sterilised and cleaned easily

Product Code	Length mm	Quantity per Case
7040162	450	60



7041 - Drum Sampling, Pipette

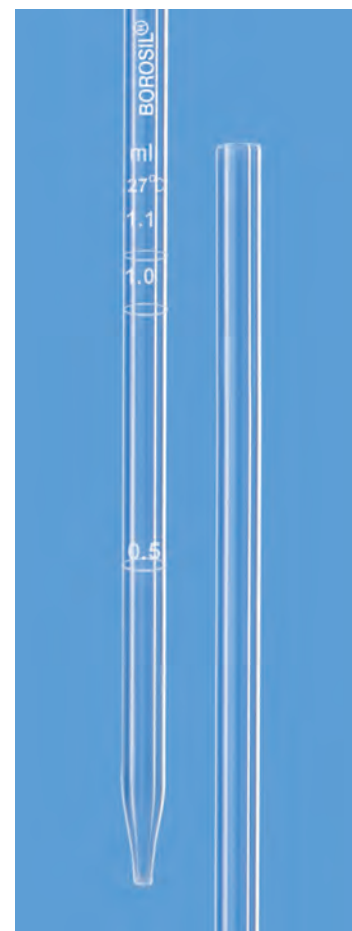
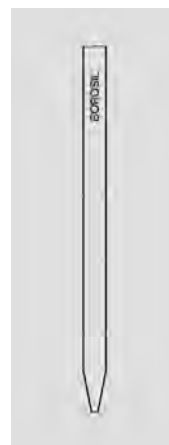
Product Code	Length mm	Quantity per Case
7041041	1000	4



7056 - Pipettes, Bacteriological, Graduated

- Complies with IS 2025
- Calibrated at 20°C
- These Pipettes are used for the bacteriological examination of milk
- 1.1 ml is graduated at 0.5 to 1.1 ml
- 2.2 ml is graduated at 1.0, 2.0 , 2.1 and 2.2 ml

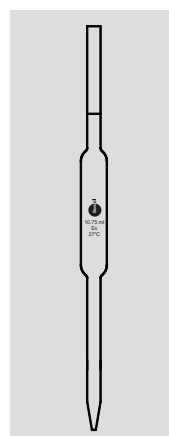
Product Code	Capacity ml	Tolerance \pm ml	Quantity per Case
7056101	1.1	0.025	10
7056102	2.2	0.04	10

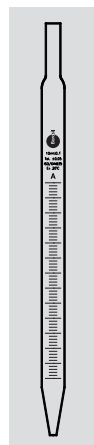


7057 - Pipettes, Gerber, Milk

- Complies with IS 1223 (Part II)
- These Pipettes are used for testing milk by the Gerber method.
- Sturdy, designed to last long
- Gerber Milk Pipettes are one-mark transfer Pipettes for measuring 10.75 ml
- They can be also be used in rural Milk Collection Centres

Product Code	Capacity ml	Tolerance \pm ml	Quantity per Case
7057P10	10.75	0.03	10





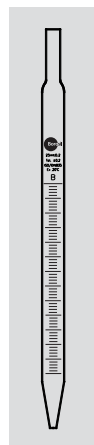
7059 - Pipettes, Measuring (Mohr Type), Class A, With Batch Certificate

- Complies with IS, ISO / DIN 835
- Calibrated at 20°C
- These Pipettes are graduated for delivery from zero mark to the last graduation mark
- Sturdy, designed to last long
- Markings are made in permanent amber stain diffused into the surface of the glass for better visibility and durability
- Supplied with individual calibration certificate showing actual volume dispensed and providing traceability to national standards

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity per Case
7059P41D	0.1	0.01	0.006	10
7059P42D	0.2	0.01	0.006	10
7059P01D	1	0.01	0.007	10
7059P11D	1	0.1	0.007	10
7059P02D	2	0.02	0.01	10
7059P22D	2	0.1	0.01	10
7059P05D	5	0.05	0.03	10
7059P55D	5	0.1	0.03	10
7059P06D	10	0.1	0.05	10
7059P09D	25	0.2	0.1	10

* Blue graduations can be supplied on request.

* Individual calibration certificate can be provided on request.



7060 - Pipettes, Measuring (Mohr Type), Class B

- Complies to ISO / DIN 835
- Calibrated at 20°C
- These Pipettes are graduated for delivery from zero mark to the last graduation mark
- Sturdy, designed to last long
- Markings are made in permanent amber stain diffused into the surface of the glass for better visibility and durability

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity per Case
7060P41D	0.1	0.01	0.01	20
7060P42D	0.2	0.01	0.01	20
7060P01D	1	0.01	0.01	20
7060P11D	1	0.1	0.01	20
7060P02D	2	0.02	0.02	20
7060P22D	2	0.1	0.02	20
7060P05D	5	0.05	0.05	20
7060P55D	5	0.1	0.1	20
7060P06D	10	0.1	0.1	20
7060P09D	25	0.2	0.2	20

* Blue graduations can be supplied on request.



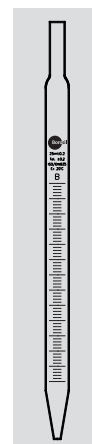
7062 - Pipettes, Measuring (Mohr Type), Class B, White Marking

- Complies with ISO / DIN 835
- Calibrated at 20°C
- These Pipettes are graduated for delivery from zero mark to the last graduation mark.
- Sturdy, designed to last long
- Markings are made in permanent amber stain diffused into the surface of the glass for better visibility and durability

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity per Case
7062P41D	0.1	0.01	0.01	20
7062P42D	0.2	0.01	0.01	20
7062P01D	1	0.01	0.01	20
7062P11D	1	0.1	0.01	20
7062P02D	2	0.02	0.02	20
7062P22D	2	0.1	0.02	20
7062P05D	5	0.05	0.05	20
7062P55D	5	0.1	0.05	20
7062P06D	10	0.1	0.1	20
7062P09D	25	0.2	0.2	20

* Blue graduations can be supplied on request.

* Individual calibration certificate can be provided on request

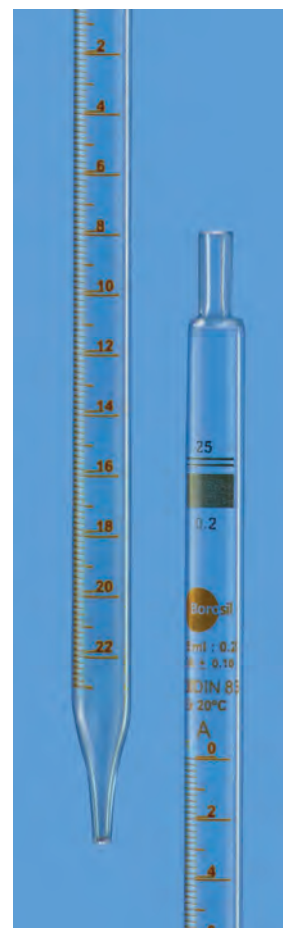
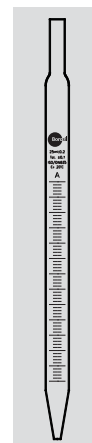


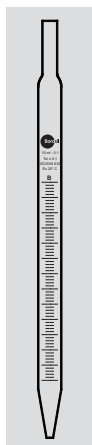
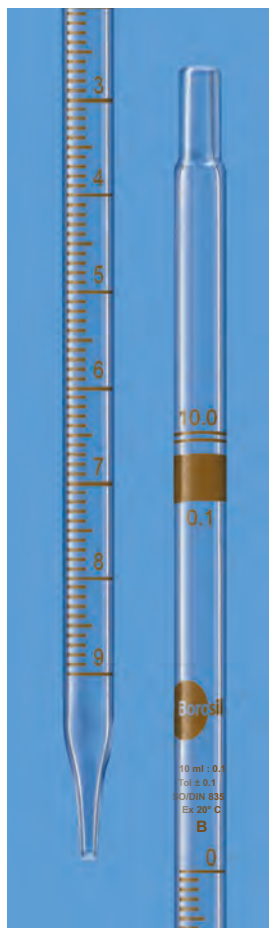
7079 - Pipettes, Serological, Class A, With Batch Certificate

- Complies with ISO / DIN 835
- Calibrated at 20°C
- These Pipettes are graduated to the tip
- Two rings at the top indicate that the Pipette is calibrated to deliver from any graduation line down to tip
- Markings are made in permanent amber stain diffused into the surface of the glass for better visibility and durability

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity per Case
7079P41D	0.1	0.01	0.006	10
7079P42D	0.2	0.01	0.006	10
7079P01D	1	0.01	0.007	10
7079P11D	1	0.1	0.007	10
7079P02D	2	0.02	0.01	10
7079P22D	2	0.1	0.01	10
7079P05D	5	0.05	0.03	10
7079P55D	5	0.1	0.03	10
7079P06D	10	0.1	0.05	10
7079P09D	25	0.2	0.1	10

* Blue graduations can be supplied on request.





7080 - Pipettes, Serological Class B

- Complies with ISO / DIN 835
- Calibrated at 20°C
- These Pipettes are graduated to the tip
- Two rings at the top indicate that the Pipette is calibrated to deliver from any graduation line down to tip
- Markings are made in permanent amber stain diffused into the surface of the glass for better visibility and durability

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity per Case
7080P41D	0.1	0.01	0.01	20
7080P42D	0.2	0.01	0.01	20
7080P01D	1	0.01	0.01	20
7080P11D	1	0.1	0.01	20
7080P02D	2	0.02	0.02	20
7080P22D	2	0.1	0.02	20
7080P05D	5	0.05	0.05	20
7080P55D	5	0.1	0.05	20
7080P06D	10	0.1	0.1	20
7080P09D	25	0.2	0.2	20

* Blue graduations can be supplied on request



7082 - Pipettes, Serological, (White Marking), Class B

- Complies with ISO / DIN 835
- Calibrated at 20°C
- These Pipettes are graduated to the tip
- Two rings at the top indicate that the Pipette is calibrated to deliver from any graduation line down to tip
- Graduation in white enamel increases the visibility with dark solution

Product Code	Capacity ml	Graduation Interval ml	Tolerance \pm ml	Quantity per Case
7082P41D	0.1	0.01	0.01	20
7082P42D	0.2	0.01	0.01	20
7082P01D	1	0.01	0.01	20
7082P11D	1	0.1	0.01	20
7082P02D	2	0.02	0.02	20
7082P22D	2	0.1	0.02	20
7082P05D	5	0.05	0.05	20
7082P55D	5	0.1	0.1	20
7082P06D	10	0.1	0.1	20
7082P09D	25	0.2	0.2	20

* Blue graduations can be supplied on request

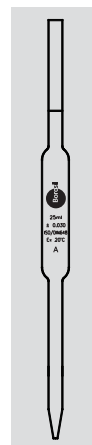
7100 - Pipettes, Transfer, Volumetric, Class A Accuracy, With Batch Certificate

- Complies with ISO / DIN 648
- Calibrated at 20°C
- Calibrated for delivery (TD, Ex)
- Generally used for accurate measurement and decanting of liquid
- Each pipette coded with unique no. supplied with calibration certificate giving exact volume with traceability to national standards

Product Code	Capacity ml	Tolerance \pm ml	Quantity per Case
7100001D	1	0.007	10
7100002D	2	0.010	10
7100005D	5	0.015	10
7100006D	10	0.020	10
7100008D	20	0.030	10
7100009D	25	0.030	10
7100012D	50	0.050	10
7100016D	100	0.080	10

* Blue graduations can be supplied on request.

* Individual calibration certificate can be provided on request

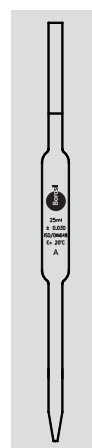


7101 - Pipettes, Transfer, Volumetric, Class A, Accuracy As Per USP

- Complies with ASTM E-969-02
- Calibrated at 20°C
- Calibrated for delivery (TD, Ex)
- Generally used for accurate measurement and decanting of liquid
- Each pipette coded with unique no. supplied with calibration certificate giving exact volume with traceability to national standards

Product Code	Capacity ml	Tolerance \pm ml	Quantity per Case
7101001	1	0.006	10
7101002	2	0.006	10
7101003	3	0.01	10
7101004	4	0.01	10
7101005	5	0.01	10
7101706	6	0.01	10
7101707	7	0.01	10
7101708	8	0.02	10
7101709	9	0.02	10
7101006	10	0.02	10
7101007	15	0.03	10
7101008	20	0.03	10
7101009	25	0.03	10
7101010	30	0.03	10
7101011	40	0.05	10
7101012	50	0.05	10
7101016	100	0.08	10

* Blue graduations can be supplied on request.





7102 - Pipettes, Transfer, Volumetric, Class B

- Complies with ISO / DIN - 648
- Calibrated at 20°C
- Calibrated for delivery
- Generally used for accurate measurement and decanting of liquid

Product Code	Capacity ml	Tolerance \pm ml	Quantity per Case
7102001D	1	0.015	10
7102002D	2	0.02	10
7102005D	5	0.03	10
7102006D	10	0.04	10
7102008D	20	0.06	10
7102009D	25	0.06	10
7102012D	50	0.10	10
7102016D	100	0.16	10

* Blue graduations can be supplied on request.



7103 - Pipettes, Transfer, Volumetric, Class B

- Complies with ASTM E-969-02
- Calibrated at 20°C
- Calibrated for delivery
- Generally used for accurate measurement and decanting of liquid

Product Code	Capacity ml	Tolerance \pm ml	Quantity per Case
7103001	1	0.012	10
7103002	2	0.012	10
7103003	3	0.02	10
7103004	4	0.02	10
7103005	5	0.02	10
7103706	6	0.03	10
7103707	7	0.03	10
7103708	8	0.04	10
7103709	9	0.04	10
7103006	10	0.04	10
7103007	15	0.06	10
7103008	20	0.06	10
7103009	25	0.06	10
7103010	*30	0.06	10
7103011	*40	0.10	10
7103012	50	0.10	10
7103016	100	0.16	10

*Not covered in ASTM standards

* Blue graduations can be supplied on request.

7105 - Pipette, Ostwald - Folin

- Complies with IS 5155 : 2009

Product Code	Capacity ml	Quantity per Case
7105P45	0.5	10
7105001	1	10

These pipettes are generally used for blood serum tests. They are calibrated to deliver by blowing out the last drop.

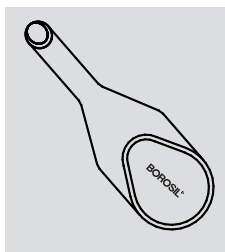


Pipettes



Weighing Scoop

Borosil Weighing Scoops are primarily used when small quantities of powder, liquid or semi-solid material need to be weighed. The powder can be introduced into the receiving vessel through the tubular stem.



7200 – Weighing Scoop

- Weighing Scoops have an open tubular arm.
- Ideal for weighing small quantities of dyes and powders

Product Code	Capacity ml	Quantity per Case
NEW 7200001	1	10
NEW 7200002	2	10
7200003	3	10
7200076	6	10
7200006	10	10

Based on your needs, we offer an assortment of centrifuge tubes, Folin-Wu Tubes. All are made from uniformly drawn high quality tubing for extended service life and your safety.

Tubes

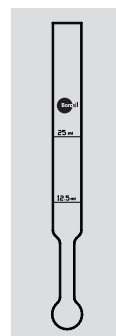


Tubes

7840 - Tubes, Blood Sugar, Folin-Wu

- Complies with IS 3740
- Made of uniformly drawn high quality tubing for extended service life
- The tube is calibrated at 12.5 ml and 25 ml

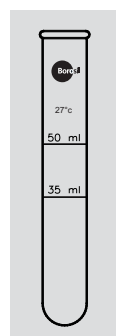
Product Code	Capacity ml	Approx O.D. x Length mm	Quantity Per Case
7840009	25	20 x 220	20



7920 - Tubes, Digestion, Folin - Wu

- Made from uniformly drawn high quality tubing for extended service life
- The tube is calibrated at 35 ml and 50 ml

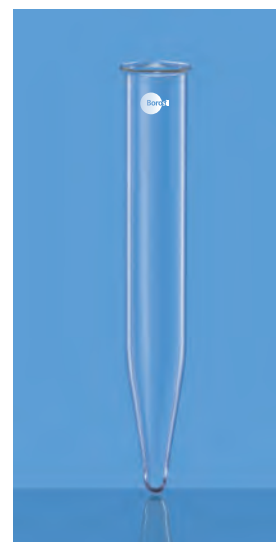
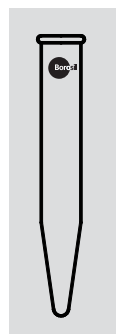
Product Code	Approx O.D. x Length mm	Quantity Per Case
7920057	25 x 200	20

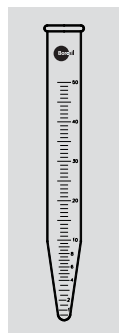


8060 - Tubes, Centrifuge, Conical Bottom Plain

- Made of uniformly drawn high quality tubing for extended service life
- The higher density fraction collects in the pointed centre of the base
- Consequently, even small amounts of solids can be collected and separated

Product Code	Capacity ml	Approx O.D. x Length mm	Quantity Per Case
8060007	15	17 x 120	100

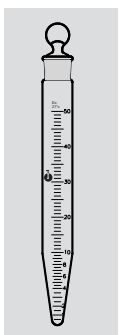




8080 - Tubes, Centrifuge, Conical Bottom Graduated

- Made of uniformly drawn high quality tubing for extended service life
- The higher density fraction collects in the pointed centre of the base
- Consequently, even small amounts of solids can be collected and separated
- Graduated for greater precision

Product Code	Capacity ml	Approx O.D. x Length mm	Quantity Per Case
8080007	15	17 X 120	30
8080012	50	29 X 135	20



8084 - Tubes, Centrifuge, Conical Bottom, Graduated, With Stopper

- Made of uniformly drawn high quality tubing for extended service life
- The higher density fraction collects in the pointed centre of the base
- Consequently, even small amounts of solids can be collected and separated
- Graduated tubes for greater precision
- Equipped with a stopper

Product Code	Capacity ml	Approx O.D. x Length mm	Quantity Per Case
8084007	15	17 x 139	30
8084012	50	29 x 161	10



8100 - Stoppers, Interchangeable Ground Joint, Solid, Penny Head

Product Code	Interchangeable Joint	Quantity Per Case
8100010	10 / 19	20
8100014	14 / 23	20
8100019	19 / 26	20
8100024	24 / 29	20



8320 - Tubes, Centrifuge, Short Conical Bottom, Pour Out, Heavy Duty, Plain

- Made of uniformly drawn high quality tubing for extended service life
- The higher density fraction collects in the pointed centre of the base
- Consequently, even small amounts of solids can be collected and separated

Product Code	Capacity ml	Approx O.D. x Length mm	Quantity Per Case
8320011	40	29 x 116	20

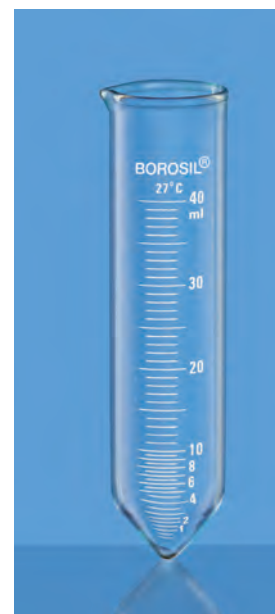
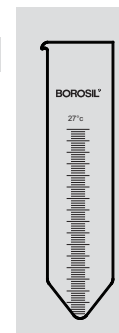


8340 - Tubes, Centrifuge, Short Conical Bottom, Pour Out, Heavy Duty, Graduated

- Made of uniformly drawn high quality tubing for extended service life
- The higher density fraction collects in the pointed centre of the base
- Consequently, even small amounts of solids can be collected and separated
- Graduated tubes for greater precision

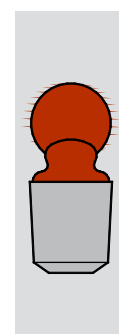
Product Code	Capacity ml	Approx O.D. x Length mm	Quantity Per Case
8340011	40	29 x 116	20

Graduated upto 10 ml in 0.5 ml and from 10 ml to 40 ml in 1ml divisions



8400 - Stoppers, Interchangeable Ground Joint, Solid, Penny Head, Amber

Product Code	Interchangeable Joint	Quantity Per Case
8400010	10 / 19	20
8400014	14 / 23	20
8400019	19 / 26	20
8400024	24 / 29	20



Adapters

The Adapter tubes listed below are the most widely used ones, and will enable a laboratory to assemble its own apparatus using the Flasks and Condensers listed earlier. The joints are fully interchangeable and made to the same precision as all Borosil ground joints.

8800 - Adapter, Enlarging, Interchangeable Joints

- Made of borosilicate glass
- An outer interchangeable joint at the top and a smaller inner interchangeable joint at the base
- These joints are made to the same precision as all Borosil ground joints

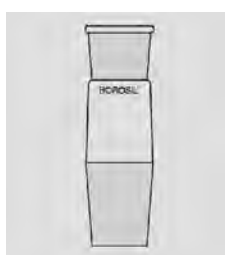
Product Code	Joint Size Outer	Joint Size Inner	Quantity Per Case
8800A01	19 / 26	14 / 23	5
8800A02	24 / 29	14 / 23	5
8800A03	24 / 29	19 / 26	5
8800A04	29 / 32	19 / 26	5
8800A05	29 / 32	24 / 29	5
8800A06	34 / 35	19 / 26	5
8800A07	34 / 35	24 / 29	5
8800A08	34 / 35	29 / 32	5



8820 - Adapter, Reduction, Interchangeable Joints

- Made of borosilicate glass
- An outer interchangeable joint at the top and a smaller inner interchangeable joint at the base
- These joints are made to the same precision as all Borosil ground joints.

Product Code	Joint Size Outer	Joint Size Inner	Quantity Per Case
8820A10	14 / 23	19 / 26	5
8820A11	14 / 23	24 / 29	5
8820A18	19 / 26	24 / 29	5
8820A13	19 / 26	29 / 32	5
8820A14	19 / 26	34 / 35	5
8820A15	24 / 29	29 / 32	5
8820A16	24 / 29	34 / 35	5
8820A09	29 / 32	34 / 35	5
8820A17	29 / 32	40 / 38	5





8830 - Adapter, Receiver Bent With Vacuum Connection

- Made of borosilicate glass
- Equipped with a vacuum connection at the receiver bent
- The joints are made to the same precision as all Borosil ground joints

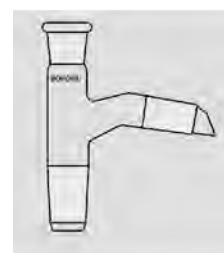
Product Code	Joint Size Outer	Joint Size Inner	Quantity Per Case
8830614	14 / 23	14 / 23	5
8830714	14 / 23	19 / 26	5
8830619	19 / 26	19 / 26	5
8830719	19 / 26	24 / 29	5
8830624	24 / 29	24 / 29	5
8830629	29 / 32	29 / 32	5



8841 - Slopping Plane Still Head

- Made from borosilicate glass
- The joints are made to the same precision as all Borosil ground joints

Product Code	Flask Cone	Cond. Cone	Thermometer Socket	Quantity Per Case
8841610	10 / 19	10 / 19	10 / 19	5
8841614	14 / 23	14 / 23	14 / 23	5
8841619	19 / 26	19 / 26	14 / 23	5
8841819	19 / 26	19 / 26	19 / 26	5
8841724	24 / 29	19 / 26	14 / 23	5
8841624	24 / 29	24 / 29	19 / 26	5
8841729	29 / 32	19 / 26	14 / 23	5
8841629	29 / 32	29 / 32	14 / 23	5
8841634	34 / 35	19 / 26	14 / 23	5
8841734	34 / 35	24 / 29	14 / 23	5
8841834	34 / 35	34 / 35	14 / 23	5

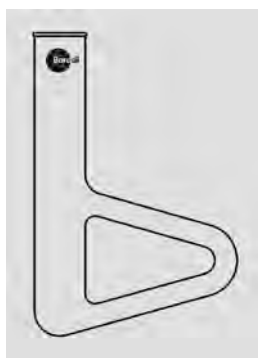


Test Tubes And Culture Tubes

Borosil Test Tubes and Culture Tubes are made of machine-drawn, uniform thickness, low expansion borosilicate glass tubing. The base has uniform thickness to withstand both, mechanical as well as thermal shocks. The rims, where provided, are strong. Test Tubes (Culture Tubes) without a rim have heavy, fire-polished ends that are resistant to mechanical shocks of daily use. You will find that in the long run, it is economical to use Borosil Tubes only.

Culture Tubes facilitate cell growth.

The caps and washers provided on screw cap Culture Tubes can withstand repeated autoclaving.



9540 - Melting Tube, Thiel

Product Code	Approx O.D. x Length mm	Quantity Per Case
9540U06	18 x 150	5
9540U08	25 x 150	5

9800 - Tubes, Test, With Rim

- Complies with IS 2618, ISO / DIN 4142
- Made of borosilicate glass, designed with a round bottom
- Made thick-walled, mechanically very resistant
- High thermal shock resistance
- Designed with a rim

Product Code	Capacity ml	Approx O.D. x Length mm	Quantity Per Case
9800U01	3	10 x 75	800
9800U02	5	12 x 75	800
9800U03	7	12 x 100	800
9800U15	4	13 x 55*	800
9800U04	13	15 x 125	800
9800U05	15	15 x 150	800
9800U06	27	18 x 150	400
9800U07	38	25 x 100	200
9800U08	55	25 x 150	200
9800U09	70	25 x 200	100
9800U10	100	32 x 200	50
9800U11	170	38 x 200	50

* IS : 3740 for tube widal

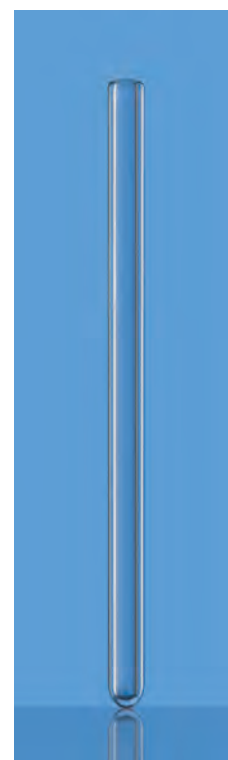
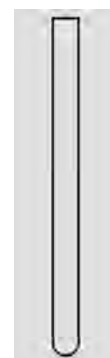


9801 - Tube for Culture collection

- Made of borosilicate glass, designed with a round bottom
- Made thick-walled, mechanically very resistant
- High thermal shock resistance
- Used for pathological tests

Product Code	Approx O.D. x Length mm	Quantity Per Case
9801U01	7 x 127	200

Used for pathological tests





9820 - Tubes, Test (Culture), Without Rim

- Complies with IS 2618, ISO / DIN 4142
- Made of borosilicate glass, designed with a round bottom
- Made thick-walled, mechanically very resistant
- High thermal shock resistance
- Designed without a rim

Product Code	Capacity ml	Approx O.D. x Length mm	Quantity Per Case
9820U16	1	7 x 60*	400
9820U01	3	10 x 75***	800
9820U02	5	12 x 75**/***	800
9820U03	7	12 x 100***	800
9820U17	8	12 x 125***	800
9820U04	13	15 x 125	800
9820U05	15	15 x 150	400
9820U12	12	16 x 100***	800
9820U18	20	16 x 150***	400
9820U06	27	18 x 150	400
9820U19	25	19 x 125***	400
9820U07	38	25 x 100	200
9820U08	55	25 x 150***	200
9820U09	70	25 x 200	100
9820U10	100	32 x 200	50
9820U11	170	38 x 200	50

* IS:3740 - 1966 for DURHAM FERMENTATION

** IS:3740 - 1966 for KAHN & WASSERMAN TEST

*** IS:3740 - 1966 for BACTERIOLOGICAL TEST



9821 - Tube Flat Bottom without RIM

- Made of borosilicate glass, designed with a flat bottom
- High thermal shock resistance
- Designed without a rim
- Used for pathological tests and disintegration apparatus

Product Code	Approx O.D. x Length mm	Quantity Per Case
9821U42	12 x 75	800

9822 - Tube Flat Bottom with RIM

- Made of borosilicate glass, designed with a flat bottom
- High thermal shock resistance
- Designed without a rim
- Used for pathological tests and disintegration apparatus

Product Code	Approx O.D. x Length mm	Quantity Per Case
9822U06	18 x 138	400
9822U07	18 x 55	100
9822U04	14 x 110	800



9830 - Tubes, Test Graduated, With Interchangeable Stopper

- Made of borosilicate glass, designed with a round bottom
- Made thick-walled, mechanically very resistant
- High thermal shock resistance
- These Test Tubes are graduated for greater precision

Product Code	Capacity ml	Approx O.D. x Length mm	Stopper Size	Quantity Per Case
9830006	10	15 x 130	10 / 15	10
9830007	15	15 x 150	14 / 15	10
9830008	20	18 x 150	14 / 15	10
9830010	30	25 x 155	19 / 23	10
9830012	50	25 x 200	19 / 23	10
9830016	100	34 x 210	24 / 25	10

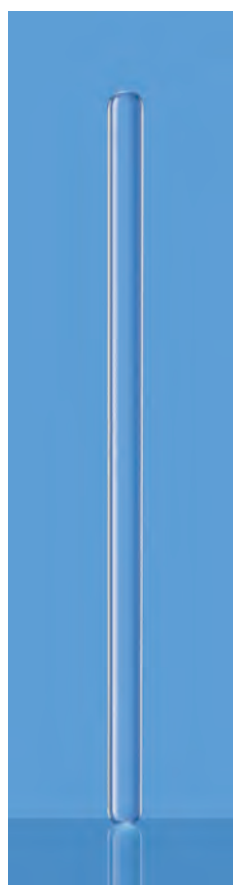




9835 - Tubes, COD Digestion Tube

- Made from thick walled, mechanically very resistance borosilicate glass
- Used in COD Disintegration

Product Code	Approx O. D. x Height mm	Quantity Per Case
9835001	39 x 205	10



9850 - Stirrer

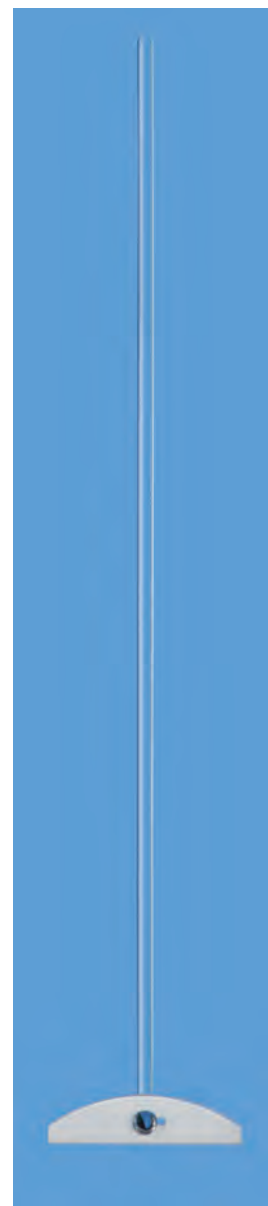
- Ideal for very sensitive samples
- Made of polished 3.3 borosilicate glass

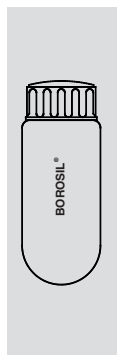
Product Code	Approx O.D. x Length mm	Quantity Per Case
9850107	7 x 150	20
9850207	7 x 205	20
9850307	7 x 255	20
9850407	7 x 305	20
9850109	9 x 150	20
9850209	9 x 205	20
9850309	9 x 255	20
9850409	9 x 305	20

9860 - Stirrers, with PTFE Blade

- Ideal for very sensitive samples
- Made of polished 3.3 borosilicate glass
- Provided with chemically y inert PTFE blade
- Application in synthetic laboratory

Product Code	Description	Quantity Per Case
9860065	Shaft Dia 6 mm & Length 450 mm Blade Width 50 mm, Suitable for 500 ml Flask, Socket 19 / 26	10
9860071	Shaft Dia 6 mm & Length 450 mm Blade Width 75 mm, Suitable for 1000 ml Flask, Socket 24 / 29	10
9860077	Shaft Dia 8 mm & Length 600 mm Blade Width 100 mm, Suitable for 2000 ml Flask, Socket 34 / 35	5
9860080	Shaft Dia 8 mm & Length 600 mm Blade Width 125 mm, Suitable for 5000 ml Flask, Socket 34 / 35	5
9860081	Shaft Dia 10 mm & Length 750 mm Blade Width 150 mm, Suitable for 10000 ml Flask, Socket 55 / 44	5
9860087	Shaft Dia 10 mm & Length 750 mm Blade Width 200 mm, Suitable for 20000 ml Flask, Socket 55 / 44	5





9900 - Tubes, Culture, Media, Round Bottom, With Screw Cap And Liner

- Made of borosilicate glass, designed with a round bottom
- The ideal replacement for media culture bottles
- Designed with special caps to facilitate handling and sealing
- The caps have a PTFE liner

Product Code	Capacity ml	Approx O.D. x Length mm	Quantity Per Case
9900005	5	16 x 75	100
9900006	10	16 x 125	100
9900010	30	25 x 100	100
9900012	50	25 x 150	50
9900013	60	25 x 200	50
9900018	150	38 x 200	50

NEW



9901 - Tubes, Culture, Amber, Media, Round Bottom, With Screw Cap And Liner

- Made of borosilicate glass, designed with a round bottom
- The ideal replacement for media culture bottles
- The uniform Amber colour is highly durable and has high chemical resistance.
- Designed with special caps to facilitate handling and sealing
- The caps have a PTFE liner

Product Code	Capacity ml	Approx O.D. x Length mm	Quantity Per Case
9901005	5	16 x 75	100
9901006	10	16 x 125	100
9901010	30	25 x 100	100
9901013	60	25 x 200	50
9901018	150	38 x 200	50

9910 - Tubes, Culture, Media, Flat Bottom, With Screw Cap And Liner

- Made of borosilicate glass, designed with a flat bottom for convenient storage
- The ideal replacement for Bijou, Mc Cartney and universal bottles
- Designed with special caps to facilitate handling and sealing
- The caps have a PTFE liner

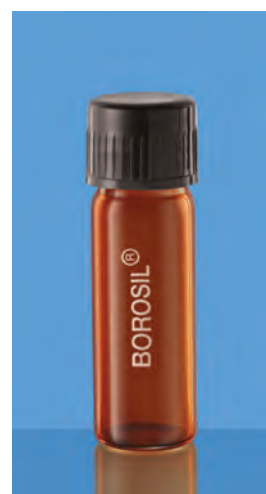
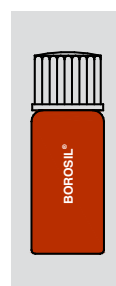
Product Code	Capacity ml	Approx O.D. x Length mm	Quantity Per Case
9910005	5	16 x 50	100
NEW 9910006	10	25 x 50	100
9910007	15	25 x 57	100
9910010	30	25 x 95	100
NEW 9910012	50	25 x 145	50



9911 - Tubes, Culture, Amber, Media, Flat Bottom, With Screw Cap And Liner

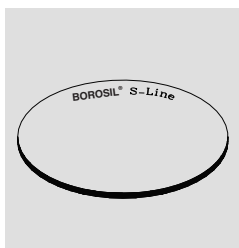
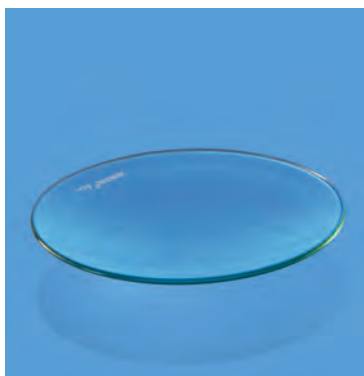
- Made of borosilicate glass, designed with a flat bottom for convenient storage
- The ideal replacement for Bijou, Mc Cartney and universal bottles
- Designed with special caps to facilitate handling and sealing
- The uniform Amber colour is highly durable and has high chemical resistance.
- The caps have a PTFE liner

Product Code	Capacity ml	Approx O.D. x Length mm	Quantity Per Case	Price / Piece ₹
9911005	5	16 x 50	100	75.00
NEW 9911006	10	25 x 50	100	100.00
9911007	15	25 x 57	100	100.00
9911010	30	25 x 95	100	125.00





Watch Glasses



9986 - Watch Glasses, Borosil S - Line

- Made of soda glass
- A special process is used that results in an absolutely flat curved surface
- High clarity, free of bubbles
- All of them are moulded to the same radius of curvature for convenient stacking

Product Code	Capacity ml	Quantity per Case
9986072	80	50
9986077	100	50
9986079	120	20
9986081	150	20

Technical Data

Sintered Ware

Borosil Sintered Glassware is used for filtration of liquids and gases in the laboratory. It has a non-corrosive and reusable porous glass disc as the filter media. It is also used for gas washing, dispersion and absorption.

The Sintered Disc is manufactured by crushing Borosil glass, and then powdering, cleaning and separating it into various mesh sizes, and finally, fusing it together in the form of a Disc. Sintered Discs are classified into 5 grades - G1, G2, G3, G4 and G5. The grades are defined in terms of the maximum pore size that is obtained by measuring the pressure at which the first air bubble breaks away from the filter, under specified conditions. The pressure differential is then used to calculate the equivalent capillary diameters in microns. The desired pore size is obtained by controlling the grain size, firing time, temperature and thickness of the Disc. Each Disc is tested and graded individually.

The pore diameters are reasonably uniform, which ensures the required flow rate through the filter. The flow rate further depends on the pressure differential between the two sides of the Disc, the free area of the Disc, viscosity of the fluid being filtered, and other factors. There is a fair amount of uniformity in the pore size of different Discs of the same size and grade. Hence, the results from two or more Discs of the same size and grade will be uniform, thereby ensuring reproducible analytical results.

The Discs have maximum surface hardness and hence, the glass powder does not get scraped off while cleaning or with chemicals. The filters do not shed particles during usage.

The Discs are sealed to tubing without blocking the pores. They are then annealed properly in automatically controlled Lehrs.

Porosity Grades And Their General Use

Porosity Grade	Pore Size (Microns)	General use
1	90-150	Filtration of coarse materials / precipitates, gas dispersion, gas washing, extractor bed, support for other filter materials.
2	40-90	Filtration of medium precipitates gas disperation, gas washing.
3	15-40	Filtration of fine grain precipitates. Anayical work with medium precipitates. Mercury filtration
4	5-15	Analytical work with fine and very fine precipitates. Non return mercury valves.
5	1-2	Bacteriological filtration.

Chemical Durability

Borosil Sintered Ware is manufactured with the same high quality material of which all Borosil brand borosilicate laboratory glassware is made, ensuring excellent resistance to chemical attack.

Operating Pressure

Sintered Discs, and the glassware that incorporates them, are designed mainly for the application of vacuum or for passage of gases at relatively low pressure. In all cases, the differential pressure must not exceed 100 KN / m² (15 psi).

Thermal Limitations

Sintered Ware has a lower level of resistance to thermal shock as compared to standard Borosil glassware. Therefore, articles of Sintered Ware should not be subjected to excessive temperature changes or direct flames.

Borosil Sintered Crucibles are especially suitable for drying to constant weight. Dry Sintered Crucibles at room temperature, can be placed directly into a drying oven. Sintered Ware may safely be heated in a furnace to 500°C without any adverse effects, while ensuring that the cycle of heating and cooling is gradual. It is recommended that the rate of heating does not exceed 20°C/min. This prevents internal strains caused by excessive temperature differences between the surrounding glass vessel and the Sintered Disc that, in turn, can lead to fracture of the apparatus.

When cold and damp, Sintered Ware of porosity grades 4 and 5 should never be subjected to a sudden temperature change as the evolution of steam may generate pressure within the filter, sufficient to crack it.

Filtration Apparatus should be kept on its rim (stem upwards) in an oven or steriliser. A perforated support base is advantageous for air convection in case of pipeline filters. By using heat insulating material such as asbestos, care should be taken to avoid premature heating near the filter seal. The apparatus should remain in the oven or steriliser during cooling, to prevent excessively fast cooling.

Cleaning Of Sintered Ware

New Sintered Filters should be washed carefully with hot hydrochloric acid, and then rinsed with distilled water before use. Such treatment ensures that all loose particles are removed from the Filter.

It is advisable to clean all Sintered Filters thoroughly, immediately after use, as cleaning is easiest at this time, and it also reduces the risk of contamination in the next use.

Many precipitates can be removed from the filter by back-flushing with water. However, great care must be taken with large diameters and fine filters, as positive pressures on the reverse side may break the filter.

Under no circumstances should Sintered Apparatus be subjected to mains water pressure when back-flushing, as in most instances this leads to fractured filters.

Drawing water through the filter from the reverse side, by means of a vacuum pump, is also effective.

Filters clogged with dust and dirt during gas filtration can be restored by treatment with warm detergent solution, followed by blowing clean air through, from the clean side of the filter. Dirt particles are brought to the surface by the foam, and removed by rinsing with water.



Some precipitates that clog the filter may be removed by chemical cleaning, as indicated below:

 **Fats and grease**

Carbon tetrachloride or suitable organic solvent

 **Albumen glucose:**

Hot ammonia or hydrochloric acid, mixture of hot concentrated sulphuric and nitric acids

 **Organic substances :**

'Chromic' acid cleaning solution* or concentrated sulphuric acid containing a little potassium nitrate or perchlorate (0.5%) (may need to be soaked overnight)

 **Copper or iron oxide :**

Hot concentrated hydrochloric acid with potassium chlorate.

 **Barium sulphate :**

Hot concentrated sulphuric acid

 **Mercury Residues :**

Hot concentrate nitric acid

 **Mercury Sulphide :**

Hot aqua regia

 **Silver chloride :**

Ammonia or sodium hyposulphite

 **Stannic oxide :**

Boiling sulphuric acid**

Alumina or silica residues :

2% hydrofluoric acid followed by concentrated sulphuric acid. Rinse immediately with distilled water and then with acetone. Continue rinsing until no trace of acid remains.

High concentrations of hydrofluoric acid, hot phosphoric acid or caustic alkali solutions should never be used for cleaning. Using these causes a rapid deterioration in the filter and an increase in pore size.

* For bacteriological, pharmaceutical and biological work, 'chromic' acid cleaning solution should be avoided in view of the biological effect of chromium ions.

** Boiling sulphuric acid may introduce undue thermal strain. It is therefore advisable to leave the item in the acid to cool.



32060 - Crucible, Gooch Type, Low Form, With Sintered Disc

- Made of 3.3 borosilicate glass
- Particularly adapted to analytical work where precipitates are dried to constant weight at 110°C
- Crucibles should not be subjected to sudden temperature changes
- In order to avoid strain, they should not be removed from the furnace until the temperature has dropped to 250°C
- Gooch Crucible is used for metal casting and analysis

Product Code	Capacity ml	Porosity Grade mm	Dia of Disc mm	Approx Height	Quantity Per Case
3206007	15	1	20	44	10
3206607	15	2	20	44	10
3206707	15	3	20	44	10
3206807	15	4	20	44	10
3206907	15	5	20	44	10
3206010	30	1	30	50	10
3206610	30	2	30	50	10
3206710	30	3	30	50	10
3206810	30	4	30	50	10
3206910	30	5	30	50	10
3206012	50	1	40	60	10
3206612	50	2	40	60	10
3206712	50	3	40	60	10
3206812	50	4	40	60	10
3206912	50	5	40	60	10



32061 - Tubes, Filter, For Gooch Crucibles

- Made of 3.3 borosilicate glass
- Suitable for use with Borosil's Filtering Crucibles Gooch type with Sintered Disc

Product Code	Approx O.D. x Length mm	Quantity Per Case
3206027	27 x 150	5
3206036	36 x 160	5
3206156	56 x 170	10

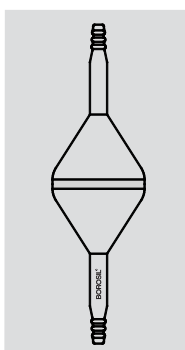
These are suitable for use with our filtering crucibles Gooch Type with sintered disc, No. 32060 lower part 8 mm O.D. x 75 mm length in all sizes.

36060 - Funnels, Buchner Type, With Sintered Disc

- Made of 3.3 borosilicate glass
- Especially useful where the filter paper may be attacked by filtered material
- Generally used in qualitative inorganic analysis and preparative chemistry
- Resistant to corrosion and heat

Product Code	Capacity ml	Porosity Grade	Dia of Disc mm	Approx Height mm	Stem Dia mm	Quantity Per Case
3606058	35	1	30	137	8	5
3606658	35	2	30	137	8	5
3606758	35	3	30	137	8	5
3606858	35	4	30	137	8	5
3606958	35	5	30	137	8	5
3606072	80	1	40	149	8	5
3606672	80	2	40	149	8	5
3606772	80	3	40	149	8	5
3606872	80	4	40	149	8	5
3606972	80	5	40	149	8	5
3606020	200	1	65	205	13	5
3606620	200	2	65	205	13	5
3606720	200	3	65	205	13	5
3606820	200	4	65	205	13	5
3606920	200	5	65	205	13	5
3606024	500	1	90	255	17	2
3606624	500	2	90	255	17	2
3606724	500	3	90	255	17	2
3606824	500	4	90	255	17	2
3606924	500	5	90	255	17	2
3606029	1000	1	120	275	19	2
3606629	1000	2	120	275	19	2
3606729	1000	3	120	275	19	2
3606829	1000	4	120	275	19	2
3606929	1000	5	120	275	19	2





39580 - Tubes, Sealed, With Reduced Ends, With Sintered Disc, (Pipeline Filters)

- Made of 3.3 borosilicate glass
- Generally used in inline filtration of gas lines to remove solid impurities

Product Code	Capacity ml	Porosity Grade	Dia of Disc mm	Approx Height mm	Stem Dia mm	Quantity Per Case
3958010	30	1	30	125	9	5
3958610	30	2	30	125	9	5
3958710	30	3	30	125	9	5
3958810	30	4	30	125	9	5
3958910	30	5	30	125	9	5
3958014	65	1	65	210	13	5
3958614	65	2	65	210	13	5
3958714	65	3	65	210	13	5
3958814	65	4	65	210	13	5
3958914	65	5	65	210	13	5
3958015	90	1	90	320	17	5
3958615	90	2	90	320	17	5
3958715	90	3	90	320	17	5
3958815	90	4	90	320	17	5
3958915	90	5	90	320	17	5

Borosil Fused Silica 99.95% SiO₂ surpasses all of the desirable chemical and weathering durability properties usually associated with opaque Silica ware. We manufacture as per IS and BS Standards.

- a) There is little or no visible surface change or damage to silica with prolonged exposure to water, atmospheric gases, contaminants, oxide of nitrogen and ozone.
- b) Attack does occur, on exposure to alkaline solution and acids at very high temperatures.
- c) Low expansion and hence excellent dimensional stability and thermal shock resistance.

Resistant to chemical attack

Virtually unaffected by sulphuric, nitric and hydrochloric acids. Hot alkalies and certain metal oxides react on silica. It is attacked by hydrofluoric acid. At high temperatures, it is also attacked by phosphoric acid.

Continuous use of fused silica above 1000°C leads to devitrification with formation of cristobalite which is a crystalline phase and will lead to breakage on repeated use. For accurate and long use, it is advisable to wash the articles in distilled water and alcohol to remove trace impurities.

Heating fused quartz to elevated temperatures causes SiO₂ to undergo dissociation. Consequently, when flame-working fused quartz, there is a brand of haze or smoke which forms just outside the intensely heated region. This haze presumably forms because the SiO₂ recombines with oxygen from the air (and perhaps water) and condenses as extremely small particles of amorphous SiO₂.

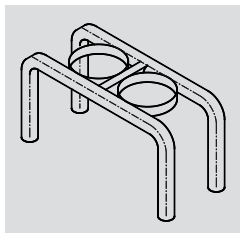
Electrical resistivity (at 350°C)		7 x 10 ⁷ ohm cm	
Low Expansion and constancy of Weight		Average co-efficient of expansion 0°C to 800°C 5.5 X 10 ⁻⁷ / °C	
Softening Point	1685°C	Annealing Point	1200°C
Operating Temp (continuous)	1050°C	Strain Point	1120°C
Operating Temp (intermittent)	1350°C	Working Temp	1950°C

1002 - Beakers, Low Form, With Spout

- Beaker with Spout for Clean Pouring
- Dimensional accuracy
- Tough construction
- Durability

Product Code	Capacity ml	Approx O.D. x Length mm	Quantity Per Case
1002009	25	35 x 45	5
1002012	50	40 x 58	5
1002016	100	50 x 75	5
1002018	150	55 x 88	5
1002021	250	70 x 95	1
1002024	500	85 x 115	1
1002029	1000	105 x 145	1





3175 - Muffle Trays

- Perfect finish
- Sturdiness
- Durability
- Holes: 2/4

Product Code	Capacity ml	Approx O.D. x Length mm	Quantity Per Case
3175041	2 Holes	39	1
3175042	4 Holes	76	1



3185 - Dishes / Basins, Round with Spout

- Perfect finish
- Accurate dimensions
- Longer life span

Product Code	Approx O.D. x Height mm	Nominal Capacity ml	Quantity Per Case
3185008	55 x 23	20	10
3185042	75 x 27	45	5
3185044	85 x 35	70	5
3185045	95 x 36	85	1
3185016	100 x 38	100	1
3185046	115 x 47	200	1

3186 - Combustion Boats with Handle

- Light in weight
- Longer life span
- Accurate dimensions
- Sturdiness



Product Code	Approx O.D. x Length mm	Quantity Per Case
3186Q01	12 x 77	1

Prices for other sizes on request



**3190 - Crucibles, Without Lid**

- Accurate dimensions
- Longer life span
- Fine finish
- Sturdiness
- Capacity: 5-200 ml

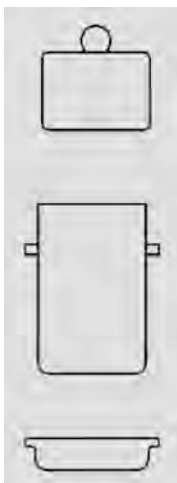
Product Code	Capacity ml	Approx O.D. x Height mm	Quantity Per Case
3190007	15	40 x 26	10
3190009	25	47 x 30	10
3190012	50	57 x 35	10
3190015	80	69 x 45	10
3190018	150	80 x 54	5

**3191 - Lids For Crucibles**

- Accurate dimension
- Longer life span
- Fine finish
- Sturdiness

Product Code	Capacity ml	Quantity Per Case
3191007	15	10
3191009	25	10
3191012	50	10
3191015	80	10





Volatile Matter Crucibles

- Dimensional accuracy
- Tough construction
- Durability
- Comes with Lid and Plunger

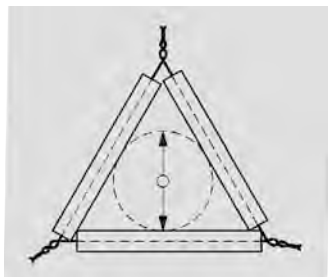
Product Code	Catalogue No.	Item	Dimension mm	Quantity Per Case
3195041	3195	Crucible	25 x 38	5
3196041	3196	Plunger	12.5	5
3197041	3197	Lid		5



3198 - Silica Triangles on Nichrome (Translucent)

- Longer life span
- Sturdiness
- Seamless finish

Product Code	Capacity ml	Quantity Per Case
3198007	15	10
3198009	25	10
3198012	50	10
3198015	80	5



**5435 - Flask, Kjeldahl Round Bottom, Quartz**

- Durability
- Dimensional accuracy
- Sturdiness
- Perfect finish

Product Code	Capacity ml	Ground Joint	Quantity Per Case
5435024	500	24 / 29	1

**5644 - Flasks Volumetric, Quartz**

- Dimensional accuracy
- Sturdiness
- Durability
- Perfect finish

Product Code	Capacity ml	Quantity Per Case
5644005	5	1
5644006	10	1
5644009	25	1
5644012	50	1
5644016	100	1
5644021	250	1
5644024	500	1
5644029	1000	1

**8500 - Carbon-Sulphur Combustion Tube - Leco Type**

- Dimensional accuracy
- Sturdiness
- Durability
- Perfect finish
- Compatible with Carbon Sulphur Combustion analyser

Product Code	Type	Quantity Per Case
8500Q02	CS244	1



The Quartz articles listed in the catalogue are only some of the standard items manufactured by us. For any customised article which are not listed in the catalogue please refer to us with designs or detailed description of your requirement.

BOROSIL[®]

Chromatography Vials & Closures

At Borosil, we understand that selecting the right **Chromatography Vial** is not simple and easy. That is why, following some insightful interaction and discussions with users in the industry, we now introduce a wide range of Vials and Closures to fulfil your requirements.

To reduce downtime caused by out-of-specification Vials, these Vials and Closures are made to stringent dimensional tolerances and are certified.



Certified

Sample Vials & Closures

Borosil certified Vials are manufactured in an ISO 9001 certified facility, in accordance with US and European Pharmacopoeia.

Borosil certified Caps and Septa are engineered for superior sealing and hassle-free operation with instruments. Borosil Septa are extensively tested for ensuring extreme levels of purity, in order to prevent sample errors.

Vial Closure Guide

Three types of closures : Crimp, Snap and Screw cap.

Cap Type	Sealing Characteristics	Remarks
Screw	Excellent seal	Universal
Snap	Moderate seal	Fast, no tools
Crimp	Excellent seal	Requires tools



Septa Recommendation

- **PTFE / Silicone**
 - Recommended for multiple injection and sample storage
 - Excellent resealing capability
 - PTFE chemical resistance until punctured, after which it has the chemical compatibility of silicone
- **Pre-slit PTFE / Silicone**
 - Prevent vacuum formation in vials
 - Eliminate coring from bottom draw-port needles
 - Good resealing capability
 - Recommended for multiple injections
 - PTFE chemical resistance until punctured, after which it has the chemical compatibility of silicone.

CERTIFIED
TYPE - I GLASS
USP & EP COMPLIANT
WIDE COMPATIBILITY





Sample Vials & Closures

9mm or Universally Compatible

VIAL : 2ml, 12 X 32mm Screw Top Vial. Clear or Amber Glass

9 mm screw thread Vials are the most popular ones. They are also known as universally compatible Vials. 9 mm screw top Vials combine the excellent autosampler handling of a crimp cap profile with the ease of a screw cap. This means that they can be used in almost any autosampler.

THE CLOSURE : BOROSIL certified pre-assembled PP screw caps & Septa.

Choose the best combination for your application.

- PP Screw Cap with PTFE/ SILICONE Septa
- PP Screw Cap with Pre-slit PTFE/ SILICONE Septa
- PP Screw Cap with bonded PTFE/ SILICONE Septa
- PP Screw Cap with bonded Pre-slit PTFE/ SILICONE Septa



Product Code	Description
VO02C10900S000	9mm, 2ml, 12 X 32 Clear Glass Screw Top Vial
VO02A10900S000	9mm, 2ml, 12 X 32 Amber Glass Screw Top Vial
CS000009PBS011	9mm Blue Screw Cap with PTFE-SILICONE Septa
CS000009PBS012	9mm Blue Screw Cap with Pre-slit PTFE-SILICONE Septa
CS000009PBS111	9mm Blue Screw Cap with Bonded PTFE-SILICONE Septa
CS000009PBS112	9mm Blue Screw Cap with Type A Bonded Pre-slit PTFE-SILICONE Septa
CS000009PBS113	9mm Blue Screw Cap with Type B Bonded Pre-slit PTFE-SILICONE Septa
VC02C109PBS011	9mm, 2ml, 12 X 32, Clear Glass Screw Vial & 9mm Blue Screw Cap with PTFE-SILICONE Septa
VC02C109PBS012	9mm, 2ml, 12 X 32, Clear Glass Screw Vial & 9mm Blue Screw Cap with Pre-slit PTFE-SILICONE Septa
VC02C109PBS111	9mm, 2ml, 12 X 32, Clear Glass Screw Vial & 9mm Blue Screw Cap with Bonded PTFE-SILICONE Septa
VC02C109PBS112	9mm, 2ml, 12 X 32, Clear Glass Screw Vial & 9mm Blue Screw Cap with Type A Bonded Pre-slit PTFE-SILICONE Septa
VC02C109PBS113	9mm, 2ml, 12 X 32, Clear Glass Screw Vial & 9mm Blue Screw Cap with Type B Bonded Pre-slit PTFE-SILICONE Septa
VC02A109PBS011	9mm, 2ml, 12 X 32, Amber Glass Screw Vial & 9mm Blue Screw Cap with PTFE-SILICONE Septa
VC02A109PBS012	9mm, 2ml, 12 X 32, Amber Glass Screw Vial & 9mm Blue Screw Cap with Pre-slit PTFE-SILICONE Septa
VC02A109PBS111	9mm, 2ml, 12 X 32, Amber Glass Screw Vial & 9mm Blue Screw Cap with Bonded PTFE-SILICONE Septa
VC02A109PBS112	9mm, 2ml, 12 X 32, Amber Glass Screw Vial & 9mm Blue Screw Cap with Type A Bonded Pre-slit PTFE-SILICONE Septa
VC02A109PBS113	9mm, 2ml, 12 X 32, Amber Glass Screw Vial & 9mm Blue Screw Cap with Type B Bonded Pre-slit PTFE-SILICONE Septa

8mm or Narrow Neck

VIAL: 2ml, 12 X 32mm, 8mm Screw Top Vial. Clear or Amber Glass

Borosil's 8 mm screw thread Vials or narrow neck Vials are designed to function in a variety of autosamplers that require narrow neck Vials.

Product Code	Description
VO02C10800S000	8mm, 2ml, 12 X 32 Clear Glass Screw Top Vial
VO02A10800S000	8mm, 2ml, 12 X 32 Amber Glass Screw Top Vial
CS000008PKS011	8mm Black Screw Cap with PTFE-SILICONE Septa
CS000008PKS012	8mm Black Screw Cap with Pre-slit PTFE-SILICONE Septa
VC02C108PKS011	Combipack 8mm, 2ml, 12 X 32, Clear Glass Screw Vial & 8mm Black Screw Cap with PTFE-SILICONE Septa
VC02C108PKS012	Combipack 8mm, 2ml, 12 X 32, Clear Glass Screw Vial & 8mm Black Screw Cap with Pre-slit PTFE-SILICONE Septa
VC02A108PKS011	Combipack 8mm, 2ml, 12 X 32, Amber Glass Screw Vial & 8mm Blue Screw Cap with PTFE-SILICONE Septa
VC02A108PKS012	Combipack 8mm, 2ml, 12 X 32, Amber Glass Screw Vial & 8mm Blue Screw Cap with Pre-slit PTFE-SILICONE Septa



Vials

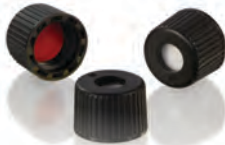
Screw Cap

10 mm or Wide Mouth

VIAL: 2ml, 12 X 32mm, 10mm Screw Top Vial. Clear or Amber Glass

Borosil's 10 mm screw thread Vials are designed with a wide opening. The increased target area makes sample preparation easier. It also reduces the chance of needle incidents during sampling.

Product Code	Description
VO02C11000S000	10mm, 2ml, 12 X 32 Clear Glass Screw Top Vial
VO02A11000S000	10mm, 2ml, 12 X 32 Amber Glass Screw Top Vial
CS000010PKS011	10mm Black Screw Cap with PTFE-SILICONE Septa
CS000010PKS012	10mm Black Screw Cap with Pre-slit PTFE-SILICONE Septa
VC02C110PKS011	Combipack 10mm, 2ml, 12 X 32, Clear Glass Screw Vial & 10mm Black Screw Cap with PTFE-SILICONE Septa
VC02C110PKS012	Combipack 10mm, 2ml, 12 X 32, Clear Glass Screw Vial & 10mm Black Screw Cap with Pre-slit PTFE-SILICONE Septa
VC02A110PKS011	Combipack 10mm, 2ml, 12 X 32, Amber Glass Screw Vial & 10mm Blue Screw Cap with PTFE-SILICONE Septa
VC02A110PKS012	Combipack 10mm, 2ml, 12 X 32, Amber Glass Screw Vial & 10mm Blue Screw Cap with Pre-slit PTFE-SILICONE Septa



8 mm / 10 mm

2 ml



Vials

Snap Cap

11 mm

2 ml

11mm Snap Cap Vials

VIAL: 2ml, 12 X 32mm Snap Top Vial. Clear or Amber Glass

Snap top Vials and caps are the simple, efficient way to ensure a secure seal without crimping. Snap caps provide a secure seal that minimises evaporation even with volatile samples. Snap caps are often more convenient than crimp caps as they can easily be applied and removed by hand. An audible 'click' reinforces that a secure seal has been ensured, and that the cap is correctly aligned.

THE CLOSURE:

For quick and easy use, Borosil caps and septa are pre-assembled. This saves your time and reduces the risk of contamination during assembly. As easy as 'push-on, pull-off', the secure seal Borosil snap caps have are clearly advantages over the loose fit of other snap caps. Crimp caps can also be used with Borosil's wide opening snap top Vials.



Product Code	Description
VO02C11100N000	11mm, 2ml, 12 X 32mm, Clear Glass Snap Vial
VO02A11100N000	11mm, 2ml, 12 X 32mm, Amber Glass Snap Vial
CS000011PCN011	11mm Clear Snap Cap with PTFE-SILICONE Septa
CS000011PCN012	11mm Clear Snap Cap with Pre-slit PTFE-SILICONE Septa
VC02C111PCN011	Combipack of 11mm, 2ml, 12 X 32mm, Clear Glass Snap Top Vial & 11mm Clear Snap Cap with PTFE-SILICONE Septa
VC02C111PCN012	Combipack of 11mm, 2ml, 12 X 32mm, Clear Glass Snap Top Vial & 11mm Clear Snap Cap with Pre-slit PTFE-SILICONE Septa
VC02A111PCN011	Combipack of 11mm, 2ml, 12 X 32mm, Amber Glass Snap Top Vial & 11mm Clear Snap Cap with PTFE-SILICONE Septa
VC02A111PCN012	Combipack of 11mm, 2ml, 12 X 32mm, Amber Glass Snap Top Vial & 11mm Clear Snap Cap with Pre-slit PTFE-SILICONE Septa



11mm Crimp Cap Vials

VIAL : 2ml, 12 X 32mm Crimp Top Vial. Clear or Amber Glass

Borosil Crimp Vials are made to exacting dimensions for unparalleled autosampler compatibility, including a precision-formed crown for better crimping.

THE CLOSURE :

Crimp caps ensure the tightest seal, reducing the possibility of sample evaporation. The 12 x 32 mm Crimp Vials and 11 mm aluminium crimp caps are economical and easy to use. The wide opening crimp cap provides a larger target area for enhanced autosampler needle accuracy.

Choose from Septa best suited to your application.
PTFE-Silicone or Pre-slit PTFE Silicone

Product Code	Description
VO02C11100C000	11mm, 2ml, 12 X 32mm, Clear Glass Crimp Vial
VO02A11100C000	11mm, 2ml, 12 X 32mm, Amber Glass Crimp Vial
CS000011ASC011	11mm Aluminum Crimp Cap with PTFE-SILICONE Septa
CS000011ASC012	11mm Aluminum Crimp Cap with Pre-slit PTFE-SILICONE Septa
VC02C111ASC011	Combipack of 11mm, 2ml, 12 X 32mm, Clear Glass Vial & 11mm Silver Aluminum Crimp Cap with PTFE-SILICONE Septa
VC02C111ASC012	Combipack of 11mm, 2ml, 12 X 32mm, Clear Glass Vial & 11mm Silver Aluminum Crimp Cap with Pre-slit PTFE-SILICONE Septa
VC02A111ASC011	Combipack of 11mm, 2ml, 12 X 32mm, Amber Glass Vial & 11mm Silver Aluminum Crimp Cap with PTFE-SILICONE Septa
VC02A111ASC012	Combipack of 11mm, 2ml, 12 X 32mm, Amber Glass Vial & 11mm Silver Aluminum Crimp Cap with Pre-slit PTFE-SILICONE Septa



Vials

Crimp Cap

11 mm

2 ml



Vials

Rinse



13 mm



2 ml



13mm or Rinse Vials

VIAL: 4ml 15 X 45mm Screw Vial, Clear or Amber Glass

These 15 x 45 mm Vials can hold up to 4ml of sample. They are used by the Waters 48-position autosampler, Agilent's (G2880A) autosampler tray used with the Agilent 6850, in 7673 and 7683 autosamplers. These Vials can also be used in the Perkin-Elmer Autosystem GC, Shimadzu AOC-14/1400, LC-10A, and SIL-2AS. They can be used as sample or wash Vials, or even as waste Vials.

With 13 x 425 caps and septa they are used as sample Vials. These Vials can also be used as storage Vials.

THE CLOSURE :

13mm Pre-assembled Black Screw Cap with un-slit or pre-slit PTFE - SILICONE Septa.

Product Code	Description
VO04C11300S000	13mm, 4ml, 15 X 45mm, Clear Glass Screw Vial
VO04A11300S000	13mm, 4ml, 15 X 45mm, Amber Glass Screw Vial
CS000013PKS011	13mm Black Screw Cap with PTFE-SILICONE Septa
CS000013PKS012	13mm Black Screw Cap with Pre-slit PTFE-SILICONE Septa
VC04C113PKS011	Combipack of 4ml 15 X 45mm Clear Screw Vial & 13mm Black Screw Cap with PTFE-SILICONE Septa
VC04C113PKS012	Combipack of 4ml 15 X 45mm Clear Screw Vial & 13mm Black Screw Cap with Pre-slit PTFE-SILICONE Septa
VC04A113PKS011	Combipack of 4ml 15 X 45mm Amber Screw Vial & 13mm Black Screw Cap with PTFE-SILICONE Septa
VC04A113PKS012	Combipack of 4ml 15 X 45mm Amber Screw Vial & 13mm Black Screw Cap with Pre-slit PTFE-SILICONE Septa



Vials

Headspace

22 mm

20 ml

22mm Headspace GC Vials

THE VIALS: Headspace 20ml GC Crimp Vials - Flat or Round Bottom

In Headspace Chromatography, the sealing of the Vial and its ability to withstand pressure are critical.

Borosil Headspace Vials have a bevelled neck offering a superior and more secure seal. The uniform thickness of the glass allows for even distribution of heat.

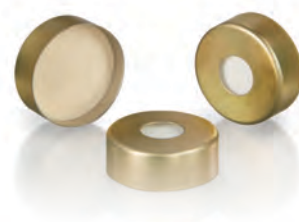
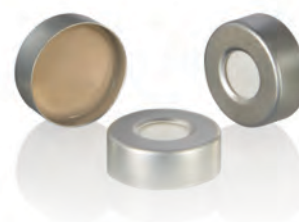
They are available with **flat** or **round** bottom profiles, for instrument compatibility.

THE CLOSURES:

20mm Pre-assembled Headspace Aluminum or Magnetic Crimp Caps with Ultra Clean, Ultra Low Bleed PTFE - SILICONE Septa.

Magnetic Crimp Caps are ideal for autosamplers that use magnetic transportation.

Product Code	Description
VC20F020ASC041	Combipack of 20ml Clear Glass Flat Bottom Headspace Crimp Vials and 20mm Silver Aluminum Caps with Ultra-Clean, Ultra-Low Bleed PTFE-SILICONE Septa
VC20R020ASC041	Combipack of 20ml Clear Glass Round Bottom Headspace Crimp Vials and 20mm Silver Aluminum Caps with Ultra-Clean, Ultra-Low Bleed PTFE-SILICONE Septa
VC20F020MSC041	Combipack of 20ml Clear Glass Flat Bottom Headspace Crimp Vials and 20mm Silver Magnetic Caps with Ultra-Clean, Ultra-Low Bleed PTFE-SILICONE Septa
VC20R020MSC041	Combipack of 20ml Clear Glass Round Bottom Headspace Crimp Vials and 20mm Silver Magnetic Caps with Ultra-Clean, Ultra-Low Bleed PTFE-SILICONE Septa

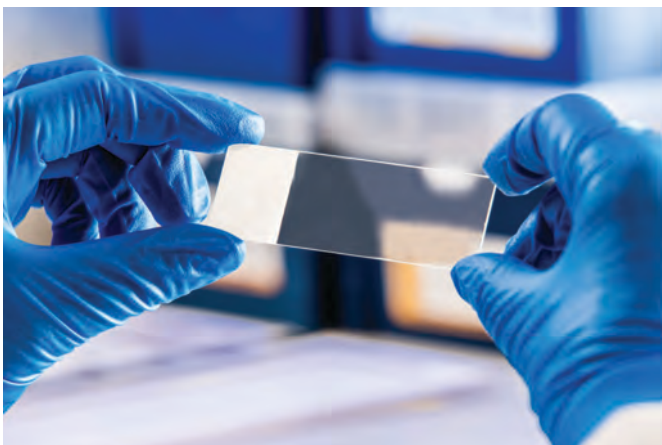


Borosil Microscope Slides & Cover Glasses



Conforms to ISO 8037 standard

- Fine ground edges slide are manufactured by state-of-art manufacturing process which results in a high quality and polished ground edges.
- Refractive index of 1.53 ± 0.02
- From extremely uniform, thin and flat glass sheets which are very resistant to corrosion and fogging.
- The slide is used for routine microscopy application.





9100 - Microscope Slides

- Made from the finest white glass
- Uniform quality
- High- Precision ground edges on all four sides
- Thin, Flat and resistant to corrosion or fogging
- Pre-cleaned and ready to use
- Subjected to strict quality control checks, examined individually and environmentally controlled dry before packaging
- Specially designed for meeting the stringent needs of users
- Free from all visual defects

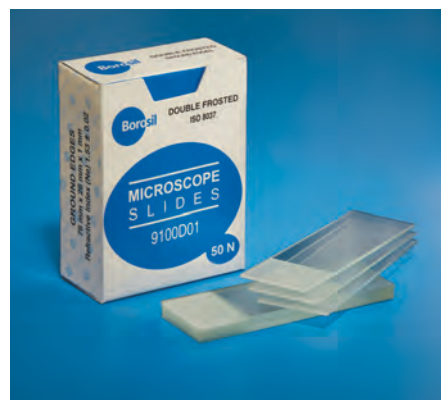
9100P01 - Plain



9100P02 - Plain



9100D01 - Double Frosted



Product Code	Description	Pack Size mm L x B x WT	Quantity Per Packet No.	Packets / Case
9100P01	Plain, Ground Edges	76 x 26 x 1.25	50	25
9100P02	Plain, Ground Edges	76 x 26 x 1	50	25
9100D01	Double Frosted, Ground Edges	76 X 26 X 1	50	25

L : Length x B : Breadth x WT : Wall Thickness



9115 - Cover glass

- Made from the finest white glass with excellent quality
- Uniform quality
- Available in both square and rectangular shape
- Cover glass is cut, cleaned, sorted and weighed
- Resistance to corrosion and fogging
- Free from ragged edges, oily film and finger prints
- Packed in reclosable plastic boxes for protection during storage
- Pre cleaned and ready to use
- Subjected to strict quality control checks, examined individually and environmentally controlled to dry before packaging

9115S01 - Square



9115S02 - Square



9115S03 - Square



Product Code	Description	Pack Size mm	Quantity Per Packet gm	Packets / Case
9115S01	Square	18 x 18	10	50
9115S02	Square	22 x 22	10	50
9115S03	Square	24 x 24	10	50

9115R01 - Rectangular



9115R02 - Rectangular



9115R03 - Rectangular



Product Code	Description	Pack Size mm	Quantity Per Packet gm	Packets / Case
9115R01	Rectangular	22 x 40	10	50
9115R02	Rectangular	22 x 50	10	50
9115R03	Rectangular	22 x 60	10	50

"**VETROCLEAN** is a Phosphate FREE alkaline detergent made up of high quality anionic & non-ionic surfactants with total solid content between 17% - 20%"

- This is special cleaner for glass, quartz and sensitive metals.
- Bio-degradable.
- pH 6-8, for 2% – 5% solution.
- Foam Tendency – Non foaming at 2%-5% concentrations.
- Best suited for Manual Cleaning, Soak & CIP, Machine Washers.
- No residue after proper cleaning.
- Non hazardous.
- Free from scents/toxic ingredients.



9001 - Vetroclean

Product Code	Capacity ml	Quantity Per Case
9001024	500	6
9001033	5000	1
9001041	25000	1

MSDS available on request

Premium Pipettes Tips

Borosil Glass Works Ltd. has always been the pioneer in developing speciality products which would significantly benefit the scientific community.

BOROSIL now introduces premium quality Pipette Tips manufactured with supreme precision.





All **BOROSIL** tips are.....

- Certified DNase, RNase and Pyrogen Free
- Free of PCR inhibitors, lubricants and heavy metals
- Produced from special diamond polish mould using medical grade virgin polypropylene which provides very high transparency
- With graduations for visual control of liquid transfer
- Available in both standard as well as low retention
- With no secondary treatment and with no silicone additives for low retention
- With special PE filters for prevention of aerosols and contamination
- Specifically configured to fit major Pipette Brands available worldwide

BOROSIL's pipette tips range includes

- Sterile
- Non sterile
- Low retention
- Filter

in capacities of 10 μ l, 20 μ l, 50 μ l, 100 μ l, 200 μ l and 1000 μ l and are available in **Bulk, Rack and Reload system**

FILTER TIPS

BOROSIL filter tips are manufactured using specifically developed Polyethylene filters to block aerosols from entering into the pipette.

This helps in prevention of cross contamination.

Ideal for use in applications like sequencing, DNA amplification, Tissue culture, RT-PCR and other critical protocols.



Filter Tips



ISO 9001:2008



ISO 13485:2003

LOW RETENTION TIPS

BOROSIL low retention tips are manufactured from a specific resin in combination with high quality diamond finish moulds to give super hydrophobic internal surface. This results in tips having minimum retention with maximum accuracy.

Further since no silicone treatment is given, there is absolutely no leaching effect.



Regular tips

Low Retention tips

BULK



- Easy tearing
- Self Standing PET bag
- Double sealed bag to prevent contamination

10 µl Universal Graduated Tips

1000 Tips / Pack (10 Packs / Case)

Catalogue No.	Sterile	Low Retention	Filter
BGT-10B	-	-	-
BGT-10LB	-	●	-
BGT-10FB	-	-	●
BGT-10LFB	-	●	●

20 µl Universal Graduated Tips (With Filter only)

1000 Tips / Pack (10 Packs / Case)

Catalogue No.	Sterile	Low Retention	Filter
BGT-20FB	-	-	●
BGT-20LFB	-	●	●

50 µl Universal Graduated Tips (With Filter only)

1000 Tips / Pack (10 Packs / Case)

Catalogue No.	Sterile	Low Retention	Filter
BGT-50FB	-	-	●
BGT-50LFB	-	●	●

**BULK****100 µl Universal Graduated Tips
(With Filter only)**

1000 Tips / Pack (10 Packs / Case)

Catalogue No.	Sterile	Low Retention	Filter
BGT-100FB	-	-	●
BGT-100LFB	-	●	●

**200 µl Universal Graduated Tips**

1000 Tips / Pack (10 Packs / Case)

Catalogue No.	Sterile	Low Retention	Filter
BGT-200B	-	-	-
BGT-200BC*	-	-	-
BGT-200LB	-	●	-
BGT-200FB	-	-	●
BGT-200LFB	-	●	●

* C indicates **YELLOW** Colour**1000 µl Universal Graduated Tips**

1000 Tips / Pack (5 Packs / Case)

Catalogue No.	Sterile	Low Retention	Filter
BGT-1000B	-	-	-
BGT-1000BC*	-	-	-
BGT-1000LB	-	●	-
BGT-1000FB	-	-	●
BGT-1000LFB	-	●	●

* C indicates **BLUE** Colour

RACK



- Fully autoclavable and stackable
- Hinge rack allows single hand operation

10 µl Universal Graduated Tips

96 Tips x 10 Racks / Pack (10 Packs / Case)

Catalogue No.	Sterile	Low Retention	Filter
BGT-10R	-	-	-
BGT-10SR	●	-	-
BGT-10LR	-	●	-
BGT-10FR	-	-	●
BGT-10SLR	●	●	-
BGT-10SFR	●	-	●
BGT-10LFR	-	●	●
BGT-10SLFR	●	●	●



20 µl Universal Graduated Tips (With Filter only)

96 Tips x 10 Racks / Pack (10 Packs / Case)

Catalogue No.	Sterile	Low Retention	Filter
BGT-20FR	-	-	●
BGT-20SFR	●	-	●
BGT-20LFR	-	●	●
BGT-20SLFR	●	●	●



50 µl Universal Graduated Tips (With Filter only)

96 Tips x 10 Racks / Pack (10 Packs / Case)

Catalogue No.	Sterile	Low Retention	Filter
BGT-50FR	-	-	●
BGT-50SFR	●	-	●
BGT-50LFR	-	●	●
BGT-50SLFR	●	●	●





RACK

100 µl Universal Graduated Tips (With Filter only)

96 Tips x 10 Racks / Pack (10 Packs / Case)

Catalogue No.	Sterile	Low Retention	Filter
BGT-100FR	-	-	●
BGT-100SFR	●	-	●
BGT-100LFR	-	●	●
BGT-100SLFR	●	●	●



200 µl Universal Graduated Tips

96 Tips x 10 Racks / Pack (10 Packs / Case)

Catalogue No.	Sterile	Low Retention	Filter
BGT-200R	-	-	-
BGT-200SR	●	-	-
BGT-200RC*	-	-	-
BGT-200SRC*	●	-	-
BGT-200LR	-	●	-
BGT-200FR	-	-	●
BGT-200SLR	●	●	-
BGT-200SFR	●	-	●
BGT-200LFR	-	●	●
BGT-200SLFR	●	●	●



* C indicates **YELLOW** Colour

1000 µl Universal Graduated Tips

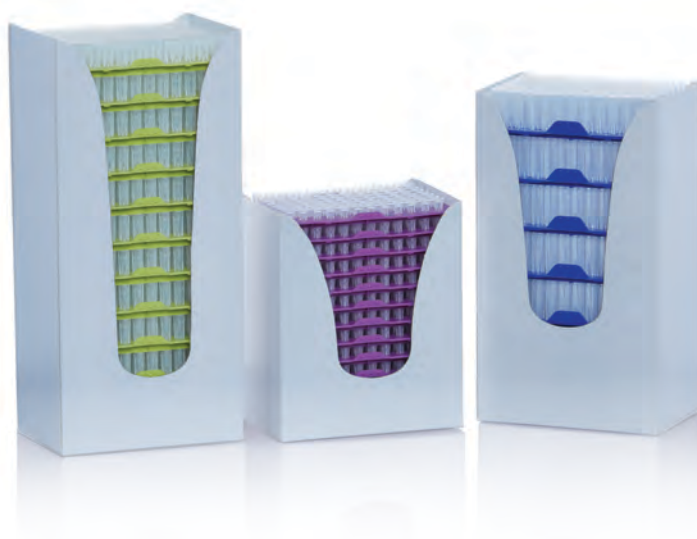
96 Tips x 6 Racks / Pack (10 Packs / Case)

Catalogue No.	Sterile	Low Retention	Filter
BGT-1000R	-	-	-
BGT-1000SR	●	-	-
BGT-1000RC*	-	-	-
BGT-1000SRC*	●	-	-
BGT-1000LR	-	●	-
BGT-1000FR	-	-	●
BGT-1000SLR	●	●	-
BGT-1000SFR	●	-	●
BGT-1000LFR	-	●	●
BGT-1000SLFR	●	●	●



* C indicates **BLUE** Colour

RELOADING STACK



- Easy to operate
- Require less storage space
- Minimizes wastage and reduces carbon footprint

10 µl Universal Graduated Tips

96 Tips x 10 Plates / Pack (10 Packs / Case)

Catalogue No.	Sterile	Low Retention	Filter
BGT-10Z	-	-	-
BGT-10SZ	● -	-	-
BGT-10LZ	-	-	●
BGT-10SLZ	●	-	●

200 µl Universal Graduated Tips

96 Tips x 10 Plates / Pack (10 Packs / Case)

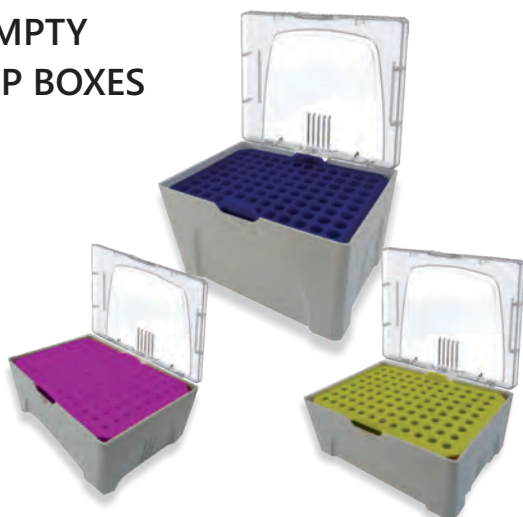
Catalogue No.	Sterile	Low Retention	Filter
BGT-200Z	-	-	-
BGT-200SZ	● -	-	-
BGT-200LZ	-	-	●
BGT-200SLZ	●	-	●

1000 µl Universal Graduated Tips

96 Tips x 10 Plates / Pack (10 Packs / Case)

Catalogue No.	Sterile	Low Retention	Filter
BGT-1000Z	-	-	-
BGT-1000SZ	● -	-	-
BGT-1000LZ	-	-	●
BGT-1000SLZ	●	-	●

EMPTY TIP BOXES



Empty Tip Boxes

Pack (10 Packs / Case)

Catalogue No.

BGT-10ETR

BGT-200ETR

BGT-1000ETR

BOROSIL®





CAUTION NOTICE


We, **Borosil Glass Works Ltd.**, a company registered under the Companies Act, 1956 and having its registered office at Khanna Construction House, 44, Dr. R. G. Thadani Marg, Worli, Mumbai 400 018, are the registered proprietor's of the Trademark **BOROSIL®** and also the owners and proprietors of the artistic work which subsists in the BOROSIL logo appearing above, which has been registered under the provisions of the Copyright Act, 1957 under no. – A88861/2010.

The said trademark **BOROSIL®** has been used by us to market, sell and export a wide variety of glassware products since more than 5 (five) decades throughout India as well as several countries across the globe.

The Trademark **BOROSIL®** has acquired a very high reputation and goodwill by virtue of long, extensive and continuous use. The said trademark is associated and identified exclusively with the goods manufactured, marketed and sold by **Borosil Glass Works Ltd.**

It has, from time to time come to our notice that some persons occasionally try to sell spurious goods by copying the **BOROSIL®** trademark and/or copyright, and by making their products look like products manufactured, marketed or sold by **Borosil Glass Works Ltd.**, hence **Borosil Glass Works Ltd.**, has taken appropriate legal action whereby the seized spurious goods have been destroyed and damages have been paid by those who were found to be dealing or involved in the manufacture or sale of spurious products bearing the **BOROSIL®** trademark and/or logo .

The trade and public are cautioned that only products manufactured, marketed and sold by **Borosil Glass Works Ltd.**, are permitted to carry the Trademark **BOROSIL®** or 'Borosil Logo' .

Those who are deceiving the public by copying the Trademark **BOROSIL®** or the BOROSIL logo  or using it wrongly on products not made, marketed and/or sold by **Borosil Glass Works Ltd.**, are hereby warned that **Borosil Glass Works Ltd.**, will adopt all legal recourse available to it, which may be Civil or Criminal in nature and may include police raids, to prevent such unauthorized use without giving any further notice.

The Trade and Public are cautioned that they should always request for a bill on purchase of their products, as spurious goods are harmful and have dangerous and adverse effects to the life of the user as well as the nation.


We request you to bring to our attention any instances of such nefarious activities, which you may come across, we shall maintain the secrecy of your identity.

Correspondence in this connection may please be made at registered office address of the company.

COLOUR CODING

One Mark Pipettes (Volumetric)



Capacity (ml)	Colour Code
1	 Blue
2	 Orange
3	 Black
4	 2 Red Rings
5	 White
6	 2 Orange Rings
7	 2 Green Rings
8	 Blue
9	 Black
10	 Red
15	 Green
20	 Yellow
25	 Blue
30	 Black
40	 White
50	 Red
100	 Yellow

As per







ISO - 1769

IS - 11468

ASTM - 1273

G FOR PIPETTES

Graduated Pipettes

Capacity (ml)	Colour Code
0.1 x 0.01	 White
0.2 x 0.01	 Black
1 x 0.01	 Yellow
1 x 0.1	 Red
2 x 0.02	 Black
2 x 0.1	 Green
5 x 0.05	 Red
5 x 0.1	 Blue
10 x 0.1	 Orange



Mohr Type

Delivery from zero mark to the last graduation mark



Serological Type

Delivery from zero mark to the tip

Two Rings

Two rings at the top indicate that these pipettes are calibrated to deliver their total capacity

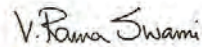
QUALITY POLICY

IT IS THE POLICY OF BOROSIL GLASS WORKS LTD.
TO SUPPLY HIGH QUALITY SPECIALITY GLASS PRODUCTS AND
TO PROVIDE ACCREDITED CALIBRATION SERVICES
TO ITS EXTERNAL AND INTERNAL CUSTOMERS AND
TO ACHIEVE TOTAL QUALITY PERFORMANCE IN MEETING
THEIR REQUIREMENTS BY :

- * UNDERSTANDING WHO THE CUSTOMER IS
- * KNOWING THE CUSTOMERS REQUIREMENTS
- * MEETING THOSE REQUIREMENTS,
WITHOUT ERROR, ON TIME, EVERY TIME
- * CONTINUALLY IMPROVING EFFECTIVENESS OF
RELATED PROCESSES AND QUALITY SYSTEMS.

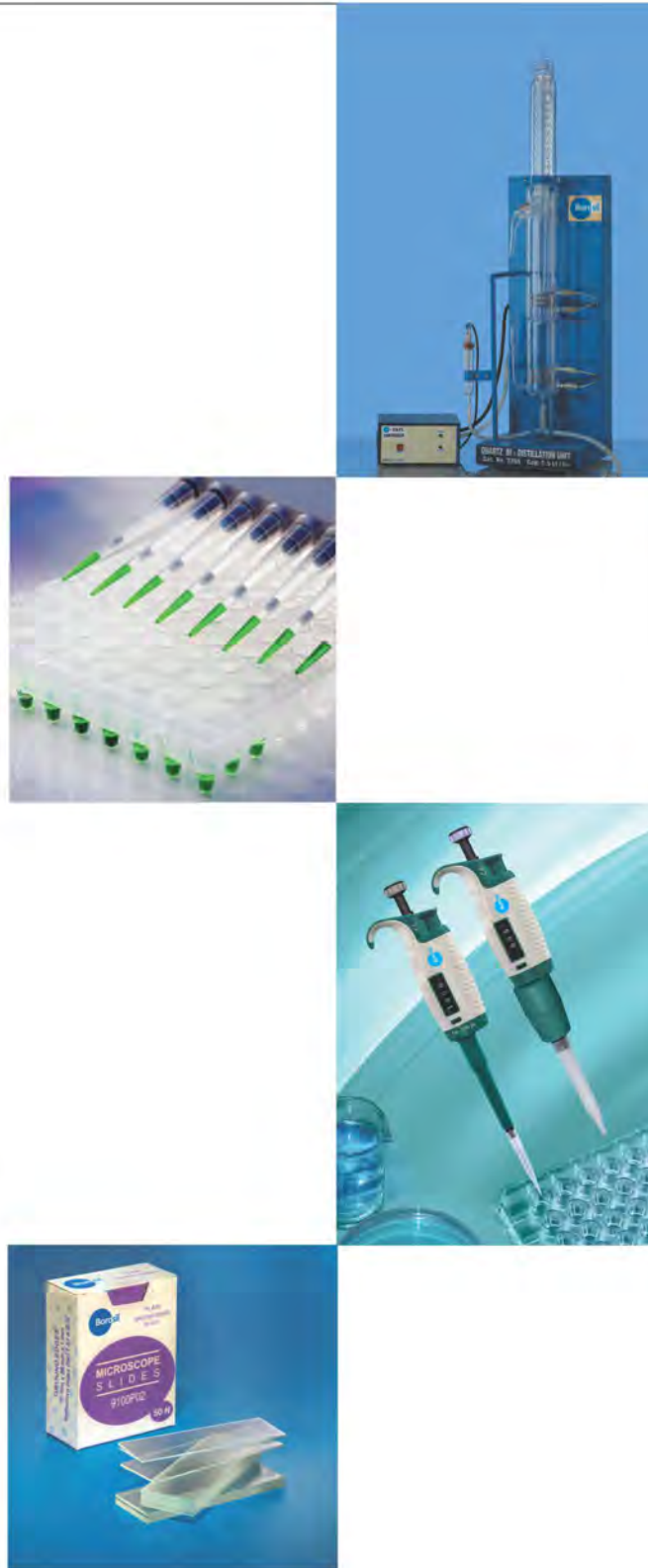


B. L. KHERUKA
Chairman



V. RAMASWAMI
Director

1st SEP. 2006



Borosil Glass Works Ltd.

an ISO 9001: 2008 certified company

CIN: L99999MH1962PLC012538

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