

### General Catalogue



# YOUR ONE STOP FOR ASTM / ISO STANDARD GLASSWARE





















We are pleased to introduce our 2015 edition of GLASSWARE catalogue.

This new catalogue consists of not only glass products but also a lot of allied line of items, which are added to this catalogue from our catalogue of GLASSCO LABORATORY INSTRUMENTS, which is now merged into this company, and thus a new catalogue with more than 3100 products is covered in this new catalogue. This catalogue covers vast range of products that includes interchangeable glassware, volumetric glassware, filtration glassware, general glassware, plastic ware, metal ware, rubber ware, ceramic ware and a lot of accessories used in laboratory.

We have also introduced a lot of new products in glass with ASTM STANDARDS and are the only company in the world now offering DIN EN ISO and ASTM standard products from one production facility.

Producing high quality of lab ware according to international standard and excellent customer service has helped us to achieve the brand recognition worldwide in more than 75 countries. We are committed in providing high quality labware products to our customers through strict quality control and timely deliveries.

In the last 18 months we have added more than 7500 square meter of warehousing facility which will help us to deliver the goods worldwide with the shortest lead times. With constant increasing demand we have also invested in new automatic machines for flasks making and joint making which has helped to increase our production capacity more new automation is in the pipeline for 2015  $\,$ .

Being close to our customers enables us to understand there needs and deliver the right solution in the shortest possible time. In case you don't find the information that you need you can contact us and we will do our best to help you.





### **GLASSCO LABORATORY EQUIPMENTS**

Having a history of more than 45 years in the field of manufacturing lab glass. Glassco is the biggest exporter of scientific lab ware from India, shipping more than 400 containers of glassware every year mainly Interchangeable, Volumetric, Filtration and General lab ware manufactured in ISO / ASTM Standards. Along with glassware a lot of allied line of products and accessories that are used in laboratory application such as Plastic ware, Rubber ware, Metal ware, Liquid Handling Instruments, Hot Plate & Stirrers.







Volumetric Glassware



Filtration Glassware

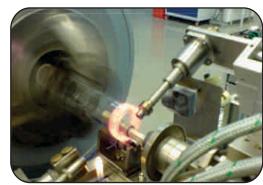


General Glassware

### **GLASSCO LABORATORY EQUIPMENTS PLANT**

Glassco employees more than 85 glassblowers working on Automatic & Semi Automatic machine, making products of different shape & sizes. We have a complete line of production for making Test Tubes, Beakers, Flasks, Joints and Flanges. More than 20 glassblowers are involved in making high precision glass like, Condensers, Adapters and Assemblies various kind.

ii







**Automatic Cylinder Forming Machine** 

### **ALLIED PRODUCTS & ACCESSORIES**



Plastic Ware



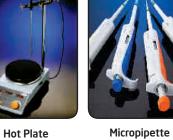
Metal Ware



Rubber Ware

Misc.







**Automatic Joint Forming Machine** 



**Automatic Flask Forming Machine** 









### Labware















#### **RAW MATERIAL**

Glassco makes all its products from tubing of ASTM E-438 TYPE I, CLASS A BORO 3.3 GLASS.

Glassco imports 400 MT of glass tubes per annum. Glassco normally keeps a stock for 3 months at any point of time which amounts to more than 80 tonnes of glass tubing.



Raw Material

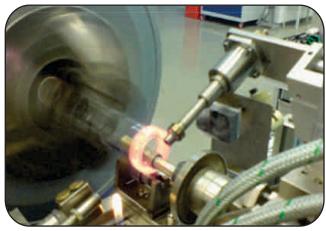
### COMPUTERISED GLASS FORMING MACHINE

A computer controlled joint making machine installed at the plant gives added leverage to produce precise dimensions of sockets, cones, rims and flanges.

An automatic joint making machine ensures consistent quality of joints. All the products travel through conveyor ovens for annealing / de-stressing that runs round the clock.







**CNC Machine** 













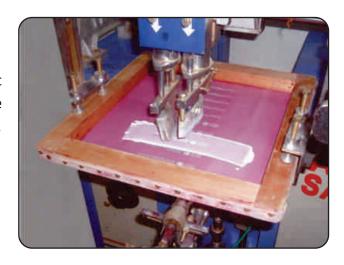






#### **PRINTING MACHINE**

For the printing process Glassco employs an automatic Printing Machine. Due to this, it is possible to handle huge volumes of glassware for printing with consistent quality.



### **ULTRASONIC WASHING MACHINE**

For the washing of glassware after grinding, Glassco uses state-of-the-art ultrasonic washing machine which is developed and designed in-house and can wash upto 5,000 pieces in 8 hours.

For running the complete manufacturing facility, a custom-made software is used.

Glassco intends to use RFID technology in coming future.



**Grinding Machine** 



Hand Polishing being done



Washing Machine



















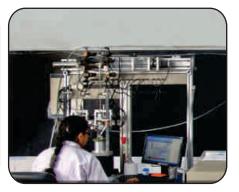


#### **CALIBRATION LABORATORY**

Glassco has automatic facility for calibrating volumetric flasks and cylinders, Glassco uses machines imported from Germany. These machines help to get an accuracy of 0.003%, so every product that Glassco make is within A-Class tolerance. For the burettes and pipettes Glassco use an automatic QUALITY CONTROL CENTER FOR verification of the calibration results.







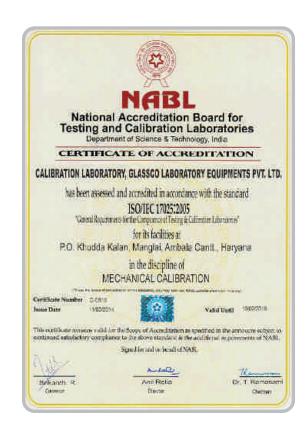
Glassco's Calibration Laboratory has undertaken accreditation for its system for calibration and testing as per ISO 17025:2005.

Glassco's Calibration Laboratory is NABL approved. NABL has a MRA under the Asia Pacific Laboratory Accreditation Cooperation (APLAC) and the International Laboratory Accreditation Cooperation (ILAC), which means the calibration provided to customers for volumetric ware is acceptable in calibration laboratories worldwide.

Results of calibration are guaranteed for precision as per the DIN, ISO, USP & ASTM standards.

The calibrations performed by Glassco calibration laboratory are essential done under ISO 17025:2005.

Please visit our website www.glasscolabs.com to see list of accreditation bodies.





















#### **QUALITY POLICY**

Glassco shall endeavor to produce and supply laboratory products at attractive pricings that meet or exceed customer's expectations, with stress on timely deliveries.

This shall be achieved by obtaining customer feedbacks of our performance and making relevant changes in our management system for continual improvement.

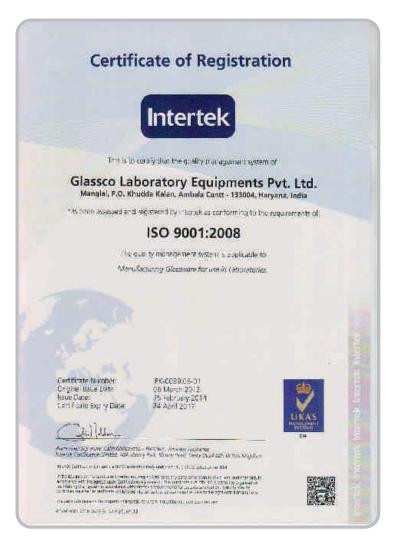
#### **QUALITY MANAGEMENT SYSTEM**

Glassco believes in delivering world class quality to all its clients globally and is recognized in International market for a quality brand.

The Quality Management system at Glassco is ISO 9001:2008 certified by Moody ICL; accredited to UKAS.

Glassco maintains Quality System manual for all its business processes and at all manufacturing and post – manufacturing levels, quality system is strictly adhered to.

People supervising work affecting quality at Glassco, are trained internal auditors and carry out internal audits in routine practice

























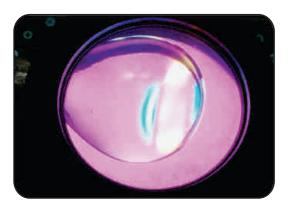
## For GLASSCO, Quality Assurance has the foundation in Quality planning in all function

- Quality plan for communication with you
- Quality in translating your requirements to our objectives
- Quality of raw material, not excluding those of semi finished and in process
- Quality in plant setup, including, trained manpower, latest machinery & technology
- Quality in calibration of volumetric glassware
   Quality in services
- Analysis of data of all processes

### **Dimensional Checks**

Glassco carries out dimensional check with gages and calipers for all the material produced in the company, while in process and also before further processing





#### Glass stress-free checks

Glassco has four on line annealing furnaces where all the products are annealed to remove manufacturing stress from glass to ensure that product has long use life. Glassco has four stress viewers installed at several locations for this purpose.

#### Wall strength, thickness checks

Glassco has two very sophisticated thickness testers for viewing the thickness of glass in the glassware manufactured by blowing. This helps to ensure that the thickness is always over the norms in the standards like ASTM/DIN/ISO. This ensures that product has long use life and is safe to use.





















### **Optical Clarity Checks**

Glassco verifies the optical clarity of all the products 100% of them twice...! Once when the product is first produced and secondly before the product is to be packed to ship.





### Fit testing for joints

The taper of the male(cones) and female(sockets) are verified by gages and taper test tools before further processing, this ensures that the joints are secured of leaks.

### Vacuum testing of mating joints

Mating joints are tested under a vacuum to verify that the taper are even and no leaks exist.





#### Print color adhesion test

All the prints on the glass are verified for colour adhesion by subjecting them to acid boiling, scratch and tape peel off test.





















Now ...

**Product Certifications including** 

### **Calibration and Conformance**

available at your fingertips!

### **QR CODES!**

Now On Cartons Of All Glassco Wares!



Scan For Certificates



















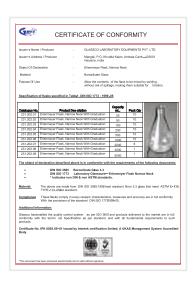
Use your Smartphone to scan the QR Code on the box labels ...

Just select the Certificate you wish to see...

Conformity...

Calibration ... (Individual or Batch)





Certificate of conformity

### Calibration **Certificates**

Batch / Lot





### Glassco Recommends...

On I Phone Quickscan

On Nokia Symbian ... NeoReader

Windows... QR Code Reader

Asha... Upcode

On Android Barcode Scanner

On Blackberry : BeBeOs Mobile App























## Interchangable Glassware

## **Tubes & Vials**





## **Volumetric Labware**

## Separating Funnels

**79 - 88** 





## **Condensers/Assemblies**

89 - 98

## General Labware





### Filtration Glassware

123 - 134

## **Bottles & Stopcocks**

























## **Standard Joints**

### **JOINTS**

- In compliance with ISO 383/DIN 12249 Standards.
  Unprinted sockets to avoid getting printed charred
- Smooth grinding surface finish to avoid leakage

### **Conical Joints**

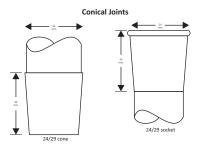
Size	Actual Dia of Wide End (mm)	Actual Dia of Narrow End (mm)	Nominal Length of Engagement (mm)
10 / 19	10.0	8.1	19
12 / 21	12.5	10.4	21
14 / 23	14.5	12.2	23
19 / 26	18.8	16.2	26
24 / 29	24.0	21.1	29
29 / 32	29.2	26.0	32
34 / 35	34.5	31.0	35
40 / 38	40.0	36.2	38
45 / 40	45.0	41.0	40
50 / 42	50.0	45.8	42
55 / 44	55.0	50.6	44

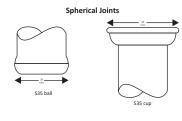




Item Code	Cone Size	Approx. O.D. of tube mm	Total Length mm	Pcs/ Pack
002.202.02	10 / 19	8	120±10	10
002.202.03	12 / 21	9	120±10	10
002.202.04	14 / 23	13	120±10	10
002.202.05	19 / 26	16	120±10	10
002.202.06	24 / 29	22	150±15	10
002.202.07	29 / 32	26	150±15	10
002.202.08	34 / 35	30	150±15	10
002.202.09*	40 / 38	36	150±15	10
002.202.10	45 / 40	40	150±15	10
002.202.11*	50 / 42	45	150±15	10
002.202.12*	55 / 44	50	150±15	10

<sup>\*</sup> Non DIN





Item Code	Socket Size	Approx. O.D. of tube mm	Total Length mm	Pcs/ Pack
001.202.02	10 / 19	13	120±10	10
001.202.03	12 / 21	16	120±10	10
001.202.04	14 / 23	18	120±10	10
001.202.05	19 / 26	22	125±10	10
001.202.06	24 / 29	28	135±10	10
001.202.07	29 / 32	32	135±10	10
001.202.08	34 / 35	38	150±15	10
001.202.09*	40 / 38	45	150±15	10
001.202.10	45 / 40	50	150±15	10
001.202.11*	50 / 42	55	150±15	10
001.202.12*	55 / 44	60	150±15	10

<sup>\*</sup> Non DIN

































Item Code	Cone Size	Approx. O.D. of tube mm	Total Length mm	Pcs/ Pack
003.202.03	12 / 21	9	120±10	10
003.202.04	14 / 23	13	120±10	10
003.202.05	19 / 26	16	120±10	10
003.202.06	24 / 29	22	150±15	10
003.202.07	29 / 32	26	150±15	10
003.202.08	34 / 35	30	150±15	10
003.202.09*	40 / 38	36	150±15	10
003.202.10	45 / 40	40	150±15	10
003.202.11*	50 / 42	45	150±15	10
003.202.12*	55 / 44	50	150±15	10

<sup>\*</sup> Non DIN

### As per ASTM Standard E 676

•				
Item Code	Socket Size	Approx. O.D. of tube mm	Total Length mm	Pcs/ Pack
004.202.03	10 / 30	13	120±10	10
004.202.04	12 / 32	16	120±10	10
004.202.05	14 / 35	18	120±10	10
004.202.06	19 / 38	22	125±10	10
004.202.07	24 / 40	28	135±15	10
004.202.08	29 / 42	32	135±15	10
004.202.09	34 / 45	38	150±15	10
004.202.10	45 / 50	50	150±15	10













### As per ASTM Standard E 676

Item Code	Cone Size	Approx. O.D. of tube mm	Total Length mm	Pcs/ Pack
005.202.03	10 / 30	8	120±10	10
005.202.04	12 / 32	10	120±10	10
005.202.05	14 / 35	13	120±10	10
005.202.06	19 / 38	16	120±10	10
005.202.07	24 / 40	22	150±15	10
005.202.08	29 / 42	26	150±15	10
005.202.09	34 / 45	30	150±15	10
005.202.10	45 / 50	40	150±15	10











Approx. O.D. of tube mm Total Length mm Socket Size Pcs/ Pack Item Code 135±2 006.202.02\* 10 / 19 14 10 135±2 006.202.03 14 / 23 18 10 006.202.04 19/26 22 140±2 10 006.202.05 24 / 29 170±5 10 28 006.202.06 29/32 32 170±5 10 006.202.07 34 / 35 38 180±5 10

<sup>\*</sup> Non DIN



















- Spherical Joint
  Unprinted sockets to avoid getting printed charred
- · Smooth grinding surface finish to avoid leakage

### **DIN 12264**

Item Code	Cup Joint (male)	Code Approx. Bore	Manimum Shank Length mm	Pcs/ Pack
008.202.02	S13	5	100	10
008.202.03	S19	9	100	10
008.202.04	S29	15	100	10
008.202.05*	S35	19	100	10
008.202.06*	S41	27	100	10

\* Non DIN





### **Clips for Spherical Joint**

- · Manufactured from metal which is resistant to corrosion.
- $\cdot$  Used for retaining of the spherical joint

Item Code	To fit flat spherical Joint size	To fit flat flange Joint size	Pcs/ Pack
010.202.01	S13	-	10
010.202.02	S19	-	10
010.202.03	S29	-	10
010.202.04	S35	-	10
010.202.05	S41	-	10

### Keck Clips for Joints

- · Manufactured from PP · Outstanding chemical resistant.
- · Autoclavable with maximum operating temp of 135°C.

Item Code	N/S	Colour	Pcs/ Pack
007.204.03	14/23	Yellow	100
007.204.04	19/26	Blue	100
007.204.05	24/29	Green	100
007.204.06	29/32	Red	100





### **DIN 12264**

Item Code	Cup Joint (Female)	Code Approx. Bore	Manimum Shank Length mm	Pcs/ Pack
009.202.02	S13	5	100	10
009.202.03	S19	9	100	10
009.202.04	S29	15	100	10
009.202.05*	S35	19	100	10
009.202.06*	S41	27	100	10

<sup>\*</sup> Non DIN

























### Stoppers

## Stoppers

#### Stoppers, Hollow with Flat bottom

- · In compliance with Din 12252 standard
- $\cdot \ Used \ on \ different \ kind \ of \ jointed \ products \ like \ bottles, \ stoppered \ cylinder \ and \ jointed \ flasks \ mainly \ volumetric \ flasks.$
- · Hexagonal head if placed on at head end avoids contamination of ground surface, with hexagonal form head it also helps in preventing the rolling of the stopper and provides a good grip.
- The stoppers below comes in drip tip form also which if placed on the flask helps liquid to return to the flask till the last drop.



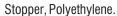
#### **DIN 12252**

Item Code	N/S	Bottom Type	Pcs/ Pack
011.202.01	10 / 19	Flat	100
011.202.02	12 / 21	-	100
011.202.02A	14 / 23	-	100
011.202.03	19 / 26	-	100
011.202.04	24 / 29	-	100
011.202.05	29 / 32	-	100
011.202.06	34 / 35	-	100
011.205.01	10 / 19	Tip	100
011.205.02	12 / 21	-	100
011.205.03	14 / 23	-	100
011.205.04	19 / 26	-	100
011.205.05	24 / 29	-	100
011.205.06	29 / 32	-	100
011.205.07	34 / 35	-	100

PS: Hollow Stoppers can be provided in Amber color. Prices can be sent on request.







- · Manufactured from polyethylene .
- · In compliance with Din 12254 standard
- · Used mainly with volumetric flasks the hexagonal form large head provides good grip and also protects flasks from breaking if it drops accidentally.





### White & Blue **DIN 12254**

Item Code	N/S	Pcs/ Pack
011.232.01	10 / 19	100
011.232.02	12 / 21	100
011.232.03	14 / 23	100
011.232.04	19 / 26	100
011.232.05	24 / 29	50
011.232.06	29 / 32	50
011.232.07*	34 / 35	50

<sup>\*</sup> Non DIN



















## **Stoppers & Adapters**

#### Stopper Solid Penny Head

- · Used on different kind of jointed products like bottles, stoppered cylinder and jointed flasks mainly volumetric flasks.
- · The stopper provides a good grip.
- · Stoppers mentioned below come in two forms one is DIN STANDARD joint sizes and ASTM standard joint sizes which is mainly used on Volumetric Flasks.





Item Code	N/S	Pcs/ Pack
012.202.01	10/19	100
012.202.02	14/23	100
012.202.03	19/26	100
012.202.04	24/29	100
012.202.05*	29/32	100
012.202.06*	34/35	100

<sup>\*</sup> Non DIN

### Solid Penny Head Glass Stoppers for ASTM Standard Flasks

The Flasks with ASTM E 288 Standard can also be provided with Penny Head Stoppers

Item Code	Description	Pack Size
012.269.02	STOPPER NUMBER 13	100
012.269.02A	STOPPER NUMBER 16	100
012.269.03	STOPPER NUMBER 19	100
012.269.04	STOPPER NUMBER 22	100
012.269.05	STOPPER NUMBER 27	100

PS: Penny Head Stoppers can be provided in Amber color. Prices can be sent on request.











#### **Bushing Adapters with Drip Tip**

- · Thick wall and reinforced rim.
- · Outside of the bushing has full length and inside has smaller length.

Item Code	Socket Size	Cone Size	Pcs/ Pack
013.230.01	14 / 23	19 / 26	100
013.230.02	19 / 26	29 / 32	100























Adapters

## **Adapters**

All adapters come in different shapes and sizes and are manufactured from ASTM E 438 TYPE 1 CLASS A BORO 3.3 GLASS.

PS: All these adapter are made as per DIN standard joint sizes but on special request can also be provided with ASTM joint sizes.

DIN 12257

Item Code	Sockets size	Cone size	Pcs/ Pack
013.202.01*	14 / 23	14 / 23	10
013.202.01A	14 / 23	19 / 26	10
013.202.02*	14 / 23	24 / 29	10
013.202.03	14 / 23	29 / 32	10
013.202.04	19 / 26	24 / 29	10
013.202.05	19 / 26	29 / 32	10
013.202.06	19 / 26	34 / 35	10
013.202.07	19 / 26	40 / 38	10
013.202.08	19 / 26	45 / 40	10
013.202.09	19 / 26	55 / 44	10
013.202.10*	24 / 29	29 / 32	10
013.202.11*	24 / 29	34 / 35	10
013.202.12*	24 / 29	40 / 38	10
013.202.13*	24 / 29	45 / 40	10
013.202.14*	24 / 29	50 / 42	10
013.202.15*	24 / 29	55 / 44	10
013.202.16	29 / 32	34 / 35	10
013.202.17	29 / 32	40 / 38	10
013.202.18	29 / 32	45 / 40	10
013.202.19*	34 / 35	40 / 38	10
013.202.20*	34 / 35	45 / 40	10
013.202.21*	34 / 35	50 / 42	10











### DIN 12257

Item Code	Sockets size	Cone size	Pcs/ Pack
014.202.01	19 / 26	14 / 23	10
014.202.02*	24 / 29	14 / 23	10
014.202.03*	24 / 29	19 / 26	10
014.202.03A	29 / 32	14 / 23	10
014.202.04	29 / 32	19 / 26	10
014.202.05*	29 / 32	24 / 29	10
014.202.06*	34 / 35	19 / 26	10
014.202.07*	34 / 35	24 / 29	10
014.202.08*	34 / 35	29 / 32	10
014.202.09*	40 / 38	24 / 29	10
014.202.10*	45 / 40	29 / 32	10

<sup>\*</sup> Non DIN























### Multiple Adapters With two parallel necks, DIN 12594

Item Code	Socket Size	Cone Size	Pcs/ Pack
015.202.01	14 / 23	14 / 23	1
015.202.01A*	14 / 23	19 / 26	1
015.202.02	19 / 26	19 / 26	1
015.202.03 *	19 / 26	24 / 29	1
015.202.04 *	24 / 29	24 / 29	1
015.202.05 *	19 / 26	34 / 35	1
015.202.06	29 / 32	29 / 32	1

<sup>\*</sup> Non DIN



with two necks, one vertical & one at 45°

Item Code	Socket Size	Cone Size	Pcs/ Pack
016.202.01	14 / 23	14 / 23	1
016.202.01A	14 / 23	19 / 26	1
016.202.01B	14 / 23	24 / 29	1
016.202.02	19 / 26	19 / 26	1
016.202.03	19 / 26	24 / 29	1
016.202.04	14 / 23	29 / 32	1
016.202.05	29 / 32	29 / 32	1









### **Multiple Adapters**

with three necks, two parallel & one at 45°

Item Code	Socket Size	Cone Size	Pcs/ Pack
017.202.01	19 / 26	19 / 26	1
017.202.01A	19 / 26	24 / 29	1
017.202.02	19 / 26	29 / 32	1
017.202.03	24 / 29	24 / 29	1
017.202.04	29 / 32	29 / 32	1





















Adapters

### **Swan Neck Adapter** with screw thread to accept thermometers, air leak tubes etc

Item Code	Socket Size	Cone Size	Pcs/ Pack
018.202.01	14 / 23	19 / 26	1
018.202.01A	19 / 26	19 / 26	1
018.202.02	19 / 26	24 / 29	1
018.202.03	24 / 29	24 / 29	1
018.202.04	29 / 32	29 / 32	1







### **Short Stem**

Item Code	Socket Size	Approx. length mm	Pcs/ Pack
019.202.01	14 / 23	65	1
019.202.02	19 / 26	65	1
019.202.03	24 / 29	65	1
019.202.04	29 / 32	65	1

### Long Stem

Item Code	Socket Size	Approx. length mm	Pcs/ Pack
019.202.05	14 / 23	190	1
019.202.06	19 / 26	200	1
019.202.07	24 / 29	200	1
019.202.08	29 / 32	200	1





### **Receiver Adapters** Straight

Item Code	Socket Size	Pcs/ Pack
020.202.01	14 / 23	1
020.202.02	19 / 26	1
020.202.03	24 / 29	1
020.202.04	29 / 32	1

























### **Receiver Adapters Bend** with Vent

Item Code	tem Code Socket Cone Size Size		Pcs/ Pack
021.202.01	14 / 23	14 / 23	1
021.202.02	19 / 26	19 / 26	1
021.202.03	19 / 26	24 / 29	1
021.202.04	24 / 29	24 / 29	1
021.202.05	29 / 32	29 / 32	1



Item Code	Socket Size	Cone Size	Pcs/ Pack
022.202.01	14 / 23	14 / 23	1
022.202.02*	14 / 23	19 / 26	1
022.202.02A	19 / 26	19 / 26	1
022.202.03*	19 / 26	24 / 29	1
022.202.04*	24 / 29	24 / 29	1
022.202.05*	24 / 29	29 / 32	1
022.202.06	29 / 32	29 / 32	1

<sup>\*</sup> Non DIN









**Bend** with Vacuum Connection & Screw Thread Adapter, DIN 12594

Item Code	Socket Size	Cone Size	Pcs/ Pack
022.201.01	14 / 23	14 / 23	1
022.201.02*	14 / 23	19 / 26	1
022.201.03	19 / 26	19 / 26	1
022.201.04*	19 / 26	24 / 29	1
022.201.05*	24 / 29	24 / 29	1
022.201.06*	24 / 29	29 / 32	1
022.201.07	29 / 32	29 / 32	1

<sup>\*</sup> Non DIN























Adapters

### Receiver Adapter with One Side Inclined at an angle of $105^{\circ}$

Item Code	Socket Size	Cone Size	Pcs/ Pack
023.202.01	14 / 23	14 / 23	1
023.202.02	19 / 26	19 / 26	1
023.202.03	19 / 26	24 / 29	1
023.202.04	24 / 29	24 / 29	1
023.202.05	29 / 32	29 / 32	1









### **Receiver Adapter** with **Multiple Connection** & Screw Thread

Item Code	Socket Size	Cone Size	Pcs/ Pack
024.202.01	14 / 23	14 / 23	1
024.202.02	14 / 23	19 / 26	1
024.202.03	19 / 26	19 / 26	1



Item Code	Socket Size	Cone Size	Pcs/ Pack
025.202.00	14 / 23	14 / 23	1
025.202.00A	14 / 23	19 / 26	1
025.202.01	19 / 26	19 / 26	1
025.202.02	19 / 26	24 / 29	1
025.202.03	24 / 29	24 / 29	1
025.202.04	29 / 32	29 / 32	1



























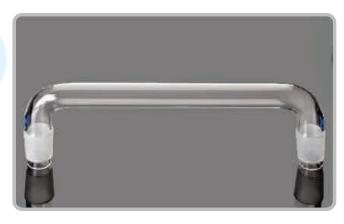
### Recovery Bend with Sloping End

Item Code	Cone Size to fit flask  Cone size to fit condenser		Pcs/ Pack
026.202.01	14 / 23	14 / 23	1
026.202.02	24 / 29	14 / 23	1
026.202.03	19 / 26	19 / 26	1
026.202.04	24 / 29	19 / 26	1
026.202.05	29 / 32	19 / 26	1
026.202.06	29 / 32	29 / 32	1
026.202.07	24 / 29	24 / 29	1
026.202.08	34 / 35	24 / 29	1
026.202.09	29 / 32	24 / 29	1
026.202.10	34 /35	34 / 35	1



### Vertical

Item Code	Cone Size to fit flask	Cone size to fit condenser	Pcs/ Pack
027.202.01	14 / 23	14 / 23	1
027.202.02	19 / 26	19 / 26	1
027.202.03	24 / 29	19 / 26	1
027.202.04	24 / 29	24 / 29	1
027.202.05	29 / 32	29 / 32	1







### with Thermometer Socket

Item Code	Socket Size	Cone size to fit flask	Cone size to fit condenser	Pcs/ Pack
028.202.01	14 / 23	14 / 23	14 / 23	1
028.202.02	14 / 23	19 / 26	19 / 26	1
028.202.03	14 / 23	24 /29	19 / 26	1
028.202.04	14 / 23	29 / 32	19 / 26	1
028.202.05	14 / 23	34 / 35	19 / 26	1
028.202.06	14 / 23	24 / 29	24 / 29	1
028.202.07	14 / 23	34 / 35	24 / 29	1
028.202.08	14 / 23	29 / 32	24 / 29	1
028.202.09	14 / 23	29 / 32	29 / 32	1
028.202.10	14 / 23	34 / 35	29 / 32	1





















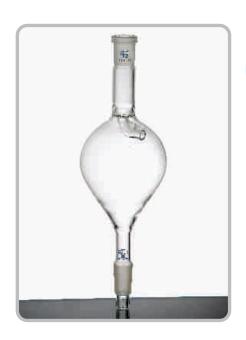
### Adapters

### **Sloping** with 2 x B14 Socket

Item Code	Socket Size	Cone Size to fit flask	Cone size to fit condenser	Pcs/ Pack
029.202.01	14 / 23	14 / 23	14 / 23	1
029.202.02	14 / 23	19 / 26	19 / 26	1
029.202.03	14 / 23	24 /29	19 / 26	1
029.202.04	14 / 23	24 / 29	24 / 29	1
029.202.05	14 / 23	29 / 32	29 / 32	1
029.202.06	14 / 23	34 / 35	24 / 29	1









### Vertical

Item Code	tem Code Socket Cone Size Size		Pcs/ Pack
030.202.01	14 / 23	14 / 23	1
030.202.02	19 / 26	24 / 29	1
030.202.03	29 / 32	29 / 32	1





Item Code	Cone Size to fit flask	Cone size to fit condenser	Pcs/ Pack
031.202.01	14 / 23	14 / 23	1
031.202.02	19 / 26	19 / 26	1
031.202.03	24 / 29	19 / 26	1
031.202.04	24 / 29	24 / 29	1
031.202.05	29 /32	29 / 32	1









### Adapters





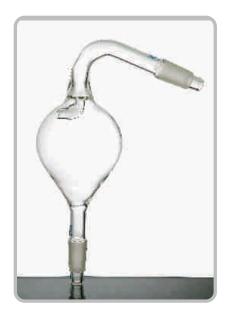














### Sloping Pear Shape

Item Code	Cone Size to fit flask	Cone size to fit condenser	Pcs/ Pack
032.202.01	14 / 23	14 / 23	1
032.202.02	19 / 26	19 / 26	1
032.202.03	24 / 29	19 / 26	1
032.202.04	24 / 29	24 / 29	1
032.202.05	29 /32	29 / 32	1



Item Code	Cone Size to fit flask	Cone size to fit condenser	Pcs/ Pack
033.202.01	24 / 29	19 / 26	1
033.202.02	34 / 35	19 / 26	1
033.202.03	34 / 35	24 / 29	1









### Stopcock Cone with Glass stopcock

•	· · · · · · · · · · · · · · · · · · ·		
Item Code	Cone	Stop cock Bore	Pcs/ Pack
034.202.01	14 / 23	3	1
034.202.02	19 / 26	3	1
034.202.03	24 / 29	3	1
034.202.04	29 / 32	3	1

PS: The above Adapter can be supplied with PTFE key or PTFE Needle valve Stopcock also. Please ask for prices separately.























### Stopcock Socket with Glass stopcock

Item Code	Socket	Stop cock Bore	Pcs/ Pack
035.202.01	14 / 23	3	1
035.202.02	19 / 26	3	1
035.202.03	24 / 29	3	1
035.202.04	29 / 32	3	1

PS: The above Adapter can be supplied with PTFE key or PTFE Needle valve Stopcock also. Please ask for prices separately.









**Adapter Cone to Rubber Tubing**Right angle connection with screw thread

Item Code	Cone	Pcs/ Pack
036.202.01	14 / 23	1
036.202.02	19 / 26	1
036.202.03	24 / 29	1
036.202.04	29 / 32	1



Right angle connection

Item Code	Cone	Pcs/ Pack
037.202.01	14 / 23	1
037.202.02	19 / 26	1
037.202.03	24 / 29	1
037.202.04	29 / 32	1





























**Adapter Sockets to Rubber Tubing** connection with Screw Thread

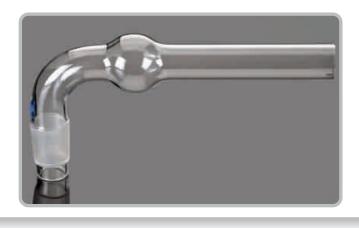
Item Code	Cone	Pcs/ Pack
038.202.01	14 / 23	1
038.202.02	19 / 26	1
038.202.03	24 / 29	1
038.202.04	29 / 32	1

**Socket to Cone** with side arm & screw thread

Item Code	Socket	Cone	Pcs/ Pack
039.202.01	14 / 23	14 / 23	1
039.202.02	14 / 23	19 / 26	1
039.202.03	14 / 23	24 / 29	1
039.202.04	14 / 23	29 / 32	1
039.202.05	19 / 26	19 / 26	1
039.202.06	19 / 26	24 / 29	1
039.202.07	19 / 26	29 / 32	1
039.202.08	24 / 29	24 / 29	1
039.202.09	24 / 29	29 / 32	1
039.202.10	29 / 32	29 / 32	1









### **Drying Tube**

Item Code	Cone	Pcs/ Pack
041.202.01	14 / 23	10
041.202.02	19 / 26	10
041.202.03	24 / 29	10
041.202.04	29 / 32	10



























### Air Leak Tube/Gas Inlet Tube

Item Code	Cone	Pcs/ Pack
044.202.01	14 / 23	10
044.202.02	19 / 26	10
044.202.03	24 / 29	10
044.202.04	29 / 32	10





### Screw Thread

Item Code	Thread GL	Pack
056.470.01	14	100





### **Thermometer Pocket**

Item Code	Cone	Approx. Stem Length	Pcs/ Pack
042.202.01	14 / 23	45mm	10
042.202.02	19 / 26	45mm	10

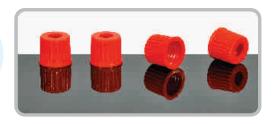




### **Adapter Cone Screw Thread**

Item Code	Cone	Acceptable Dia Through Screw Thread mm	Pcs/ Pack
056.202.01	14 / 23	6mm	10
056.202.02	19 / 26	6mm	10
056.202.03	24 / 29	6mm	10
056.202.04	29 / 32	6mm	10





### Plastic Hose Connection

Item Code	Thread GL	Туре	Pack	
056.474.01	14	Straight	100	





















All the Flasks Mentioned in this section are manufactured from ASTM  $438\,\mathrm{type}$  1 Class BORO  $3.3\,\mathrm{Heat}$  Resistant Glass.

All the Flasks come with Thick Uniform wall thickness and are printed with white enamel.

All the Flasks comply to their respective DIN / ISO / ASTM & UPS standards. As defined against each product.





### These flasks are as per DIN / ISO 4797 and USP standard

Item Code	Nominal capacity ml	Socket Size	Approx. overall height mm.	Dia mm	Pcs/ Pack
057.202.05	25	14 / 23	85	41	10
057.202.06 *	25	19 / 26	85	41	10
057.202.07 *	25	24 / 29	85	41	10
057.202.08	50	14 / 23	90	51	10
057.202.09	50	19 / 26	90	51	10
057.202.10	50	24 / 29	115	51	10
057.202.10A	50	29 / 32	115	51	10
057.202.11	100	14 / 23	105	64	10
057.202.12	100	19 / 26	105	64	10
057.202.13	100	24 / 29	105	64	10
057.202.14	100	29 / 32	105	64	10
057.202.20	250	14 / 23	140	85	10
057.202.21	250	19 / 26	140	85	10
057.202.22	250	24 / 29	140	85	10
057.202.23	250	29 / 32	140	85	10
057.202.25*	500	19 / 26	163	105	10
057.202.26	500	24 / 29	163	105	10
057.202.27	500	29 / 32	163	105	10
057.202.29*	1000	19 / 26	200	131	10
057.202.30	1000	24 / 29	200	131	10
057.202.31	1000	29 / 32	200	131	10
057.202.32*	1000	34 / 35	200	131	10
057.202.33	2000	24 / 29	240	166	6
057.202.34	2000	29 / 32	240	166	6
057.202.35*	2000	34 / 35	240	166	6
0.57.202.36*	3000	29 / 32	260	185	1
0.57.202.37*	3000	45 / 40	260	185	1
0.57.202.40*	5000	29 / 32	305	223	1
0.57.202.41*	5000	45 / 40	305	223	1
0.57.202.44*	10000	29 / 32	380	279	1
0.57.202.45	10000	45 / 40	380	279	1

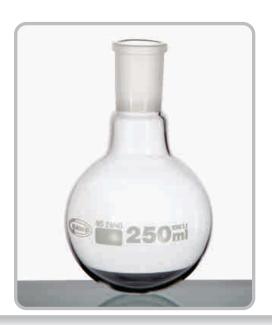
<sup>\*</sup> Non DIN

Round Bottom Flask with Joint.
These Flasks comes with Ground Joint manufactured as per ASTM E 1403 type 1 specifications.
The Flasks are printed in white colour enamel.

Item Code	Capacity ml	Socket Size	Approx. overall height mm.	Dia mm	Pcs/ Pack
057.202.57	50	24 / 40	100	51	2
057.202.58	100	24 / 40	115	64	2
057.202.58A	200	24 / 40	128	75	2
057.202.59	250	24 / 40	140	85	2
057.202.59A	300	24 / 40	148	88	2
057.202.60	500	24 / 40	158	105	2
057.202.61	1000	24 / 40	185	131	1
057.202.62	2000	24 / 40	215	166	1



































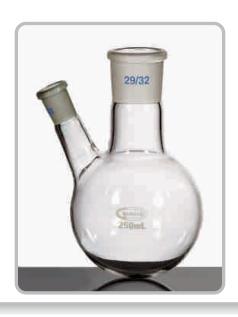
Flat Bottom Flask with Joint.

These Flasks comes with Ground Joint manufactured as per ASTM E 1403 type 1 specifications.

The Flasks are printed in white colour enamel.

Item Code	Nominal capacity ml	Socket Size	Approx. overall height mm.	Dia mm	Pcs/ Pack
058.202.56	50	24 / 40	103	51	2
058.202.58	100	24 / 40	103	64	2
058.202.58C	200	24 / 40	122	75	2
058.202.59	250	24 / 40	130	85	2
058.202.59A	300	24 / 40	140	88	2
058.202.60	500	24 / 40	160	105	2
058.202.61	1000	24 / 40	187	131	1
058.202.62	2000	24 / 40	230	166	1

All type of 2 Neck & 3 Neck Flasks comes in uniform wall thickness and is used mainly where different kind of Columns, Condensers and Dropping Funnels can be fitted.



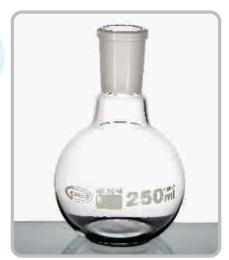


### These flasks are as per DIN / ISO 4797 and **USP** standard

Item Code	Nominal capacity ml	Socket Size	Approx. overall height mm.	Dia mm	Pcs/ Pack
058.202.01	50	19 / 26	85	51	10
058.202.02	50	24 / 29	85	51	10
058.202.02A	50	29 / 32	85	51	10
058.202.03	100	19 / 26	103	64	10
058.202.04	100	24 / 29	103	50	10
058.202.05	100	29 / 32	103	64	10
058.202.07*	150	19 / 26	115	74	10
058.202.08*	150	24 / 29	115	74	10
058.202.09*	150	29 / 32	115	74	10
058.202.11	250	19 / 26	130	85	10
058.202.12	250	24 / 29	130	85	10
058.202.13	250	29 / 32	130	85	10
058.202.15*	500	19 / 26	160	103	10
058.202.16	500	24 / 29	160	103	10
058.202.17	500	29 / 32	160	160	10
058.202.19	1000	24 / 29	187	131	10
058.202.20	1000	29 / 32	187	131	10
058.202.21*	1000	34 / 35	187	131	10
058.202.22	2000	24/29	230	166	6
058.202.23	2000	29 / 32	230	166	6
058.202.24*	2000	34 / 35	230	166	6

<sup>\*</sup> Non DIN







**Two Neck** All these flasks are as per DIN 12394 & USP Standard

		<u>'</u>			
Item Code	Nominal Capacity ml	Socket Size	Side Sockets	Approx. overall height mm.	Pcs/ Pack
059.202.01	50	24 / 29	14 / 23	105	1
059.202.02	50	29 / 32	14 / 23	105	1
059.202.03	100	24 / 29	14 / 23	105	1
059.202.04	100	24 / 29	19 / 26	105	1
059.202.05	100	29 / 32	14 / 23	105	1
059.202.06	250	24 / 29	14 / 23	140	1
059.202.07	250	24 / 29	19 / 26	140	1
059.202.08	250	29 / 32	14 / 23	140	1
059.202.09	500	24 / 29	14 / 23	163	1
059.202.10	500	24 / 29	19 / 26	163	1
059.202.11	500	29 / 32	14 / 23	163	1
059.202.12	1000	24 / 29	14 / 23	200	1
059.202.13	1000	24 / 29	19 / 26	200	1
059.202.14	1000	29 / 32	14 / 23	200	1
059.202.15	2000	34 / 35	19 / 26	240	1

PS: These flasks can also be provided in other joint sizes.













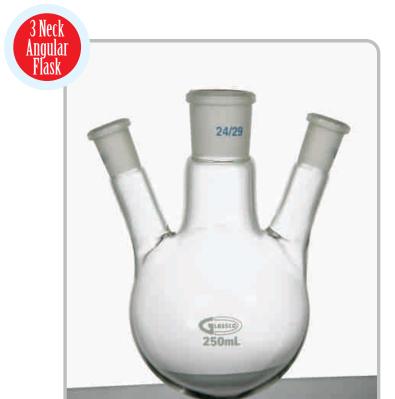






### Three Angular Neck These flasks are as per ISO 838 standard & USP

Item Code	Nominal capacity ml	Centre socket	Side Sockets	Approx. overall height mm.	Pcs/ Pack
060.202.01	100	19 / 26	14 / 23	105	1
060.202.02	100	24 / 29	14 / 23	105	1
060.202.03	100	24 / 29	19 / 26	105	1
060.202.03A	100	29 / 32	14 / 23	105	1
060.202.04	250	19 / 26	19 / 26	140	1
060.202.05	250	24 / 29	14 / 23	140	1
060.202.06	250	24 / 29	19 / 26	140	1
060.202.07	250	29 / 32	14 / 23	140	1
060.202.08	250	29 / 32	19 / 26	140	1
060.202.08A	250	29 / 32	29 / 32	140	1
060.202.09	500	24 / 29	14 / 23	163	1
060.202.10	500	24 / 29	19 / 26	163	1
060.202.11	500	29 / 32	14 / 23	163	1
060.202.12	500	29 / 32	19 / 26	163	1
060.202.12A	500	29 / 32	29 / 32	163	1
060.202.13	1000	24 / 29	14 / 23	200	1
060.202.14	1000	24 / 29	19 / 26	200	1
060.202.15	1000	29 / 32	14 / 23	200	1
060.202.16	1000	29 / 32	19 / 26	200	1
060.202.17	1000	29 / 32	29 / 32	200	1
060.202.18	2000	24 / 29	19 / 26	240	1
060.202.19	2000	29 / 32	24 / 29	240	1
060.202.20	2000	29 / 32	29 / 32	240	1





These flasks can also be provided in other joint sizes

### Three Parallel Neck These flasks are as per DIN 12392 & USP Standard

Item Code	Nominal capacity ml	Centre socket	Side Sockets	Approx. overall height mm.	Pcs/ Pack	
061.202.01	250	24 / 29	19 / 26	140	1	
061.202.02	250	29 / 32	14 / 23	140	1	
061.202.02A	250	29 / 32	29 / 32	140	1	
061.202.03	500	24 / 29	19 / 26	163	1	
061.202.04	500	29 / 32	14 / 23	163	1	
061.202.05	500	29 / 32	19 / 26	163	1	
061.202.05A	500	29 / 32	29 / 32	163	1	
061.202.06	1000	24 / 29	19 / 26	200	1	
061.202.07	1000	29 / 32	14 / 23	200	1	
061.202.08	1000	29 / 32	19 / 26	200	1	
061.202.09	1000	29 / 32	24 / 29	200	1	
061.202.10	1000	29 / 32	29 / 32	200	1	
061.202.11	2000	24 / 29	19 / 26	240	1	
061.202.12	2000	29 / 32	19 / 26	240	1	
061.202.13	2000	29 / 32	29 / 32	240	1	
061.202.14	2000	34 / 35	19 / 26	240	1	
061.202.15	2000	34 / 35	24 / 29	240	1	

PS: All 2 Neck and 3 Neck Flasks can be provided in ASTM joint sizes on request.





























with Two Neck, side neck at an angle of 25°, DIN 12383

Item Code	Nominal capacity ml	Centre socket	Side Socket	Approx. overall height mm.	Pcs/ Pack
063.202.01	50	14 / 23	14 / 23	110	1
063.202.02	100	14 / 23	14 / 23	125	1





### Jointly used for the Determination of Nitrogen DIN 12360

Determination of Mill oyen, DIN 12300							
Item Code	Nominal capacity ml	Socket Size	Approx. overall height mm.	Pcs/ Pack			
070.202.01	50	19 / 26	162	2			
070.202.02	100	19 / 26	162	2			
070.202.03	100	24 / 29	265	2			
070.202.04*	300	24 / 29	295	2			
070.202.05	500	24 / 29	305	2			
070.202.06*	800	24 / 29	325	2			

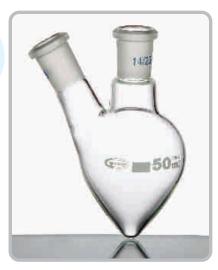
<sup>\*</sup> Non DIN

### To be used for **Semi Micro Distillation** Manufactured as per DIN 12383 & USP standard

Item Code	Nominal capacity ml	Socket	Approx. diametr mm.	Approx. overall height mm.	Pcs/ Pack
062.202.06*	25	14 / 23	38	90	10
062.202.07	50	14 / 23	48	110	10
062.202.09	100	14 / 23	58	125	10

<sup>\*</sup> Non DIN





### To be used in **Rotary Evaporator**

• •							
Item Code	Nominal capacity ml	Socket Size	Approx. overall height mm.	Pcs/ Pack			
069.202.01	50	29 / 32	94	10			
069.202.03	100	29 / 32	110	10			
069.202.05	250	29 / 32	140	10			
069.202.07	500	29 / 32	170	10			
069.202.09	1000	29 / 32	210	10			
069.202.10	2000	29 / 32	250	6			



























### Flask Erlenmeyer with Joint.

These Flasks comes with Ground Joint manufactured as per ASTM E 1404 type 2 Class 1 requirement. The Flasks are printed in white colour enamel.

Item Code	Capacity ml	Sub Division ml	Graduation Range	Joint Size	Pcs/ Pack
071.202.50	50	10	20 - 50	19 / 38	2
071.202.51	125	25	50 - 125	24 / 40	2
071.202.52	250	25	50 - 225	24 / 40	2
071.202.52A	300	25	100 - 300	24 / 40	2
071.202.53	500	50	100 - 500	24 / 40	2
071.202.54	1000	50	250 - 1000	24 / 40	1
071.202.55	2000	100	600 - 2000	24 / 40	1



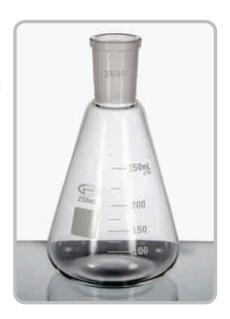


### These Flasks are as per ISO 4797 & USP Standards and is ideal for mixing liquids

Item Code	Nominal capacity ml	Socket Size	Approx. overall height mm.	Approx. overall diameter mm.	Pcs/ Pack
071.202.06 *	25	14 / 23	75	42	10
071 .202.07 *	25	19 / 26	75	42	10
071.202.08 *	50	14 / 23	85	51	10
071.202.09	50	19 / 26	85	51	10
071.202.10 *	50	24 / 29	85	64	10
071.202.10A	50	29 / 32	85	64	10
071.202.11 *	100	14 / 23	105	64	10
071.202.12	100	19 / 26	105	64	10
071.202.13 *	100	24 / 29	105	64	10
071.202.14	100	29 / 32	105	64	10
071.202.17A*	200	29 / 32	131	79	10
071.202.18	250	19 / 26	140	85	10
071.202.19	250	24 / 29	140	85	10
071.202.20	250	29 / 32	140	85	10
071.202.21A*	300	29 / 32	156	87	10
071.202.22 *	500	19 / 26	175	105	10
071.202.22A*	500	24 / 29	175	105	10
071.202.23	500	29 / 32	175	105	10
071.202.25 *	1000	24 / 29	220	131	10
071.202.26	1000	29 / 32	220	131	10
071.202.27 *	1000	34 / 35	220	131	10
071.202.28	2000	29 / 32	280	166	6
071.202.29 *	2000	34 / 35	280	166	6
071.202.30 *	3000	45 / 40	310	187	1
071.202.31 *	5000	45 / 40	365	220	1

<sup>\*</sup> Non DIN







### **Determination of Iodine** with ground joint and stopper

Item Code	Nominal capacity ml	Joint Size	Min. Cup Capacity ml.	Pcs/ Pack
072.202.01	250	24 / 29	20	2
072.202.02	250	29 / 32	20	2
072.202.03	500	24 / 29	20	2
072.202.04	500	29 / 32	20	2

























Flasks

# As per ASTM E 133 standard. Intended to use in ASTM D 86, D 233, D 801 & D 802

Item Code	Nominal capacity ml	Dia mm	Height mm	Side Dia mm	Arm Lenght	Pk/ Size
073.205.01	125	68	215	7	7	2

#### Distillation Flasks with 19/26 Joint

073.206.01	125	68	215	7	7	2











#### Flask Filter with Glass Connector.

These Flasks are made from heavy wall which can withstand high vacuum. The flasks are printed the white colour enamel and is made as per ISO 6556 & USP Standards

Item Code	Nominal capacity ml	Pcs/ Pack
074.202.01	100	2
074.202.02	250	2
074.202.03	500	2
074.202.04	1000	2
074.202.05	2000	1

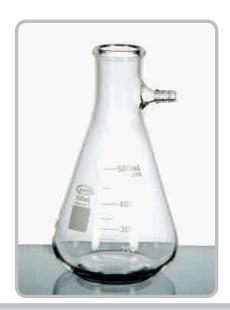
#### Flask Filter with Glass Connector.

These Flasks are made from heavy wall which can withstand high vacuum. The flasks are printed the white colour enamel and is made as per ASTM E-1406, type 2 specifications.

Item Code	Capacity ml	Sub Division ml	Graduation Range	Pcs/ Pack
074.402.01	25	5	10 - 25	6
074.402.02	50	10	20 - 50	6
074.402.03	125	25	50 - 125	6
074.402.04	250	25	50 - 225	6
074.402.04A	300	25	100 - 300	6
074.402.05	500	50	100 - 500	6
074.402.06	1000	50	250 - 1000	6
074.402.07	2000	100	600-2000	1
074.402.09	4000	250	1000-4000	1













# Flasks











Conical Flask with Screw Cap. The screw cap is made from Polypropelene which is Autoclavable and comes with PTFE Liner.

Item Code	Capacity	Thread GL	Dim mm	Pcs/ Pack
075.202.01	50	25	51	2
075.202.02	100	25	64	2
075.202.04	250	32	85	2
075.202.05	500	32	105	2
075.202.06	1000	32	131	2









**Conical Flask** with ground joint and hollow glass stopper

J			
Item Code	Capacity	Dim mm	Pcs/ Pack
076.202.01	100	29 / 32	2
076.202.02	250	29 / 32	2
076.202.03	500	29 / 32	2
076.202.04	1000	29 / 32	2
076.202.05	2000	29 / 32	1



is suitable for determination of Nitrogen. **DIN 12360** 

Item Code	Capacity	Dia mm	Height mm	Pcs/ Pack
077.202.01	100	58	240	2
077.202.02*	300	81	300	2
077.202.03	500	101	325	2
077.202.04*	800	115	350	2

<sup>\*</sup> Non DIN





















Item Code	O.D.x Lenght (mm)	Bottom Type	Pcs/ Pack
082.204.01	12 x 100	Round	100
082.204.02	16 x 100	Round	100
082.204.03	16 x125	Round	100
082.204.04	16 x 160	Round	100
082.204.05	18 x 180	Round	100
082.204.06	20 x 100	Round	100
082.204.07	20 x 200	Round	100
082.204.08	22 x 200	Round	100
082.202.05	25 x 100	Round	100
082.202.07	25 x 200	Round	50







# Tubes & Vials













Item Code	Capacity	O.D.x Lenght (mm)	Bottom Type	Pcs/ Pack
083.202.01	5	18 x 45	Flat	100
083.202.02	10	25 x 57	Flat	100
083.202.03	30	25 x 95	Flat	100
083.202.04	40	25 x 145	Flat	50

PS: Test Tubes in other sizes can be provided on request









# **Conical Bottom** Graduated

Item Code	Capacity (ml)	Height x O.D. (mm)	Pcs/ Pack
088.202.01	5	100 x 13	50
088.202.02	10	110 x 15	50
088.202.03	15	120 x17	50
088.202.04	25	125 x 22	50
088.202.05	50	125 x 28	50



Item Code	Capacity (ml)	Height x O.D. (mm)	Pcs/ Pack
089.202.02	5	100 x 13	50
089.202.03	10	110 x 15	50
089.202.05	15	120 x17	50
089.202.06	25	125 x 22	50
089.202.07	50	125 x 28	50













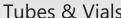












### Micro Centrifuge Tube

these Micro Centrifuge Tubes, moulded in Polypropylene, have built in plugs which snap fit and make these tubes leakproof. These tubes can be used for transmitting samples for micro analysis.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
130.303.01	0.5 ml	1000
130.303.02	1.5 ml	1000









#### **Float Rack**

moulded in Polypropylene is quite compact, autoclavable and can hold 16 micro centrifuge tubes for incubation in water baths. Easy to load, these are essential in microbiology & immunology labs. The surface of the rack has raised alpha - numeric index for easy identification and has a ventral rod handle for convenient lifting.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
131.303.01	16 MCT'S of 1.5 ml.	12

#### **MCT Twin Rack**

provides this Twin Purpose Rack for both 0.5 ml & 1.5 ml. micro centrifuge tubes. Each side has 108 holes for 0.5 & 1.5 ml. MCT'S, respectively. The transparent top provides an excellent view as well as a protection cover for the tubes stored. Each face of the base has a unique alpha- numeric index for easy identification of the tube.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
132.303.01	Rack for 0.5 ml & 1.5 ml MCTS	4







#### **PCR Tube Rack**

this rack, as the name suggests, is used for keeping PCR Tubes. Top & base of this rack are made of tough & transparent polycarbonate while the middle portion is made of polypropylene. The tube holding spaces are uniformly placed so as to facilitate the use of multipipet tes. A no. of racks can be stacked together to save shelf space.

Material: Polycarbonate / Polypropylene

Cat. No.	Capacity	Pcs/Pack
133.303.01	Rack for 96 OCR Tubes of 0.2 ml	4







# **Tubes & Vials**

















#### **MCT Box**

are moulded in polycarbonate and are therefore strong as well as autoclavable. One size can hold 64 MCT'S of 1.5 ml. & and the other can hold 100 MCT's of 0.5 ml.. These boxes are designed to work at temperatures ranging from -190°C to +121°C. The transparent cover provides a good view of the contents inside & is numbered for bet ter inventory control.

Material: Polycarbonate

Cat. No.	Capacity	Pcs/Pack
134.303.01	Rack for 100 MCT's of 0.5 ml	4
134.303.02	Rack for 64 MCT's of 1.5 ml	4

#### **Centrifuge Tube Conical Bottom**

centrifuge tube with conical bottom are available in two sizes i.e.  $15\,\text{ml.}\ \&\,50\,\text{ml.}$  Moulded in Polypropylene, these tubes are clear, strong & safe. These autoclavable tubes are provided with printed graduations on the outer surface. The built in seal ring in the cap makes these tubes absolutely leak proof. These tubes can withstand forces up to 7500x G & 12000xG for 15 ml. & 50 ml. tubes respectively. These tubes are available sterilized.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
135.303.01	15 ml	100
135.303.02	50 ml	100
135.303.03	15 ml. Sterile	100
135.303.04	50 ml. Sterile	100







## **Centrifuge Tube Round Bottom**

centrifuge tube with round bottom are moulded in Polypropylene & Polycarbonate These tubes have excellent clarity and are strong enough to be used up to 50,000x G. These tubes can be autoclaved, however, repeated autoclaving in PC tubes reduces their mechanical

Material: Polypropylene / Polycarbonate

Centrifuge

Cat. No.	Capacity	Pcs/Pack
136.303.01	16 ml. Tube PP.	50
136.303.02	50 ml. Tube PP.	50
136.303.03	16 ml. Tube PC.	50
136.303.04	50 ml. Tube PC.	50
136.303.05	Cap for 16 ml. Tube	100
136.303.06	Cap for 50 ml. Tube	100



made of Polypropylene, have excellent contact clarity and can be used up to 50,000xG. The screw cap is fitted with silicon O-Ring making it totally leakproof. These tubes should not be used below 4°C.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
137.303.01	30 ml	12
137.303.02	50 ml	12
137.303.03	100 ml	12



























#### **Test Tube with Screw Cap**

polypropylene tubes provide excellent option for RIA, Coagulation & Bacteriology etc. available with screw cap.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
142.303.01	16x 100 mm, Ext, thread	500









#### Storage Vial

as the name suggests, these vials are commonly used for storage of biological material, human & animal cells at temperature as low as -190°C. The Cap is provided with a built in seal ring making the vial leakproof. The base of the vial has longitudinal grooves which give it a non-twisting character when placed in a vial rack.

Material: Polyethylene

Cat. No.	Capacity	Pcs/Pack
144.303.01	1.0 ml	500
144.303.02	2.0 ml	500
144.303.03	5.0 ml	500

#### SV10-SV5

polypropylene vials add to the existing range of Glassco storage vials. Available in 5 ml. & 10 ml. capacities, these vials have polypropylene cap with built in seal ring making it a leak proof vial. Just like others storage vials these are also used for the storage of biological material, animal & human cells etc.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
147.303.01	SV - 10 ml	500
147.303.02	SV - 5 ml	500











# **Tubes & Vials**

















#### **Scintillation Vial**

these unbreakable vials, moulded in Polyethylene, are fitted with leakproof screw caps. These vials can be used with standard counting equipment for liquid scintillation system and are excellent for low activity count.

Material: High Density Polyethylene

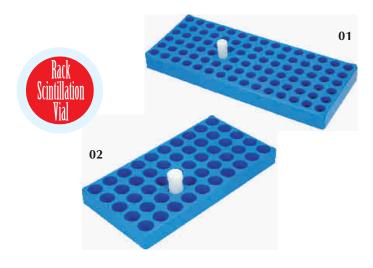
Cat. No.	Capacity	Pcs/Pack
148.303.01	8 ml	100
148.303.02	20 ml	100

#### **Rack for Scintillation Vial**

moulded in Polypropylene, are autoclavable & corrosion resistant. There is an individual rack for both 8 ml. & 20 ml. vials. These rugged & stable racks can hold scintillation vials for convenient storage, handling & sample preparations.

Material: polypropylene

Cat. No.	Capacity	Pcs/Pack
149.303.01	Rack for 90 vials of 8 ml	2
149.303.02	Rack for 50 vials of 20 ml	2







# Cryo Vial

are normally used for storage of Biological material, human & animal cells at temperature as low as -190°C. These sterilized tubes are provided with white, prominent graduations and a long marking area for sample identification. The cap of these vials is provided with a seal ring inside to make it completely leakproof. The longitudinal grooves in the base give a non-twisting feature to these vials when placed in a cryo rack.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
151.303.01	1.0 ml	1000
151.303.02	1.8 ml	1000
151.303.03	4.5 ml	500

#### **Cryo Coders**

available in different colours can easily fit into the cap of Cryo vials for colour identification of different samples.

Material: Polystyrene

Cat. No.	Туре	Pcs/Pack
152.303.01	Cryo Coders	100























#### Cryo Rack

moulded in Polycarbonate making it tough, durable & auto clavable. This handy rack can hold 50 vials at a time. The unique feature of this rack is that vials can be unscrewed without actually picking them up as the vial will lock in every well and hence will not twist. This rack is provided with four anti skid rubbers & each well is identified with an alpha-numeric index.

Material: Polycarbonate

Cat. No.	Туре	Pcs/Pack
153.303.01	50 places for 1, 1.8 and 4.5 ml Cryo vials	2

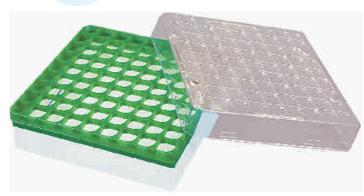
### Cryo Box (PC)

moulded in Polycarbonate making it extra strong and autoclavable. These can accommodate Cryo Vials of up to 4.5 ml. capacity and are designed to be used at temperatures ranging from -190°C to +121°C. The transparent cover of the box gives a good view of the contents inside and is numbered for better inventory control.

Material: Polycarbonate

Cat. No.	Capacity	Pcs/Pack
154.303.01	50 Places for 1 ml. or 1.8 ml. Cryo Vials	4
154.303.02	81 Places for 1 ml. or 1.8 ml. Cryo Vials	4
154.303.03	81 Places for 4.5 ml. Cryo Vials	4
154.303.04	100 Places for 1 ml. or 1.8 ml. Cryo Vials	4







# Cryo Box (PP)

moulded in polypropylene, the top of the box is attached to the bottom through well designed built in hinges. The bottom has built- in spaces to hold vials up to 2 ml. capacity. Available in two different sizes, these autoclavable boxes bear alpha numeric index for easy identification of different vials placed inside.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
155.303.01	81 Places for 1 ml. or 1.8 ml. Cryo Vials	4
155.303.02	100 Places for 1 ml. or 1.8 ml. Cryo Vials	4























# **Round Bottom** Graduated

Item Code	Capacity (ml)	Height x O.D. (mm)	Pcs/ Pack
094.202.01	12	16 x 110	100
094.202.02	30	24 x 110	100
094.202.03	40	28 x 110	100
094.202.04	50	30 x 110	100
094.202.05	100	45 x 110	100
094.202.07	200	55 x 116	100





# with joint & stopper Graduated

Item Code	Size (mm)	Capacity (ml)	Stopper size	Pcs/ Pack
095.202.01	100 x 12	5	10 / 19	100
095.202.02	125 x 16	10	12 / 21	100
095.202.03	150 x 22	25	19 / 26	100
095.202.04	200 x 25	50	19 / 26	100





# with Interchangeable Stopper Plain

Item Code	Height x O.D. (mm)	Stopper Size	Pcs/ Pack
096.202.01	100 x 12	10 / 19	100
096.202.02	125 x 15	12 / 21	100
096.202.03	150 x 18	14 / 23	100
096.202.04	150 x 25	19 / 26	100
096.202.05	200 x 25	19 / 26	100
096.202.06	200 x 32	24 / 29	100
096.202.07	200 x 38	24 / 29	100























Manufactured from ASTM E 438 TYPE 1 CLASS A BORO 3.3 GLASS. These tubes come with uniform wall thickness for maximum heat transfer and chemical resistance

#### **EN ISO-4142**

Item Code	Approx. O.Dx Height	Thickness	Pcs/ Pack
097.202.01	10 x 75	1.0	100
097.202.02	12 x 75	1.0	100
097.202.03	12 x 100	1.0	100
097.202.04	15 x 125	1.2	100
097.203.05	15 X 150	1.2	100
097.202.05	18 x 150	1.2	100
097.203.06	20 X 150	1.2	100
097.202.06	25 x 150	1.2	100
097.202.07	25 x 200	1.2	100









Manufactured BORO 6.1 GLASS. These tubes come with uniform wall thickness for maximum heat transfer and chemical resistance, EN ISO-4142

Item Code	Approx. O.Dx Height	Thickness	Pcs/ Pack
099.202.01	10 x 75	1.0	100
099.203.02	12 x 75	1.0	100
099.202.02	12 x 100	1.0	100
099.202.03	15 x 125	1.0	100
099.202.04	15 X 150	1.0	100
099.202.05	18 x 150	1.0	100
099.203.06	20 X 150	1.0	100
099.202.06	25 x 150	1.0	100
099.203.07	25 x 200	1.0	100

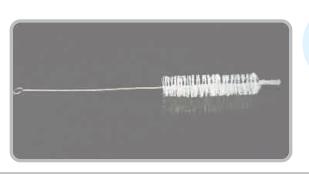






# Made of Polypropylene Autoclavable which is

Item Code	Size for tube	Pcs/ Pack
100.202.01	12mm	100
100.202.02	15mm	100
100.202.03	18mm	100
100.202.04	20mm	100
100.202.05	25mm	100





Brush, Test Tube

Cat. No.	Туре	Material	Pcs/Pack
593.303.02	Test Tube Brush	Nvlon	50







# **Tube Stands**













# **Test Tube Stand**

this autoclavable stand is perhaps the most commonly used Test Tube Stand in various laboratories. For better visibility, this 6 place rack is end supported by 2 columns. The top plate has 2 holes for holding 25 mm dia test tubes, four holes to hold 16 mm dia tubes where as the base has corresponding hemispherical wells. It also has six vertical pins for drying tubes.

Material: Polypropylene

Cat. No.	Size	Pcs/Pack
161.303.01	16 mm. & 25 mm ø Tubes	12
161.303.02	25 mm. Tubes	12





#### Test Tube Stand (3 TIER)

these ingenious racks with a 3-tier design provide clear view of the tube contents & convenient insertion & removal of tubes. The PC rack has transparent upper & middle plates where as in PP racks, every part is coloured & opaque. These autoclavable Racks can withstand sub-freezing temperatures.

#### Material: Polypropylene

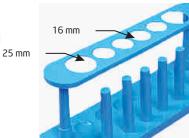
Cat. No.	Size/Capacity	Pcs/Pack
163.303.01	13 mm x 31 Tubes	2
163.303.02	16 mm x 31 Tubes	2
163.303.03	20 mm x 20 Tubes	2
163.303.04	25 mm x 12 Tubes	2
163.303.05	25 mm x 18 Tubes	2
163.303.06	32 mm x 12 Tubes	2
163.303.07	25 mm x 36 Tubes	2
163.303.08	13 mm x 18 Tubes	4
163.303.09	15 mm x 18 Tubes	4
163.303.10	18 mm x 12 Tubes	4
163.303.11	13 mm x 62 Tubes	2
163.303.12	16 mm x 62 Tubes	2
163.303.13	20 mm x 40 Tubes	2
163.303.14	13 mm x 48 Tubes	2
163.303.15	13 mm x 72 Tubes	2



# Material: Polycarbonate

Cat. No.	Size/Capacity	Pcs/Pack
164.303.01	13 mm x 31Tubes	2
164.303.02	16 mm x 31Tubes	2
164.303.03	20 mm x 20 Tubes	2
164.303.04	25 mm x 12 Tubes	2
164.303.05	13 mm x 62 Tubes	2
164.303.06	16 mm x 62 Tubes	2
164.303.07	20 mm x 40 Tubes	2
164.303.08	25 mm x 24 Tubes	2
164.303.09	25 mm x 18 Tubes	2
164.303.10	25 mm x 36 Tubes	2
164.303.11	32 mm x 12 Tubes	2





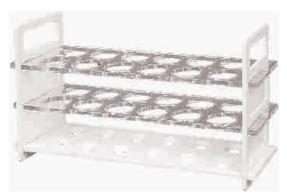
#### Test Tube Stand (Round)

a handy, little, space saver, this circular twelve place Polypropylene Test Tube Stand has four 25 mm. dia holes & eight 19 mm dia holes in its top plate. The base has matching hemispherical wells & 16 vertical pins for drying tubes surrounded by a trough to catch drippings. This autoclavable rack can be easily disassembled for cleaning purpose.

# Material: Polypropylene

Cat. No.	Size	Pcs/Pack
162.303.01	19 mm, & 25 mm, Tubes	2





























# **Rack For Micro Centrifuge Tube**

moulded in Polycarbonate, this autoclavable rack is made for holding twenty four 1.5 ml. micro centrifuge tubes. This rack has a unique stacking feature which prevents movement in any direction. The holes are numbered & lettered for easy identification.

Material: Polycarbonate

Cat. No.	Quantity	Pcs/Pack
165.303.01	24 Tubes	4
165.303.02	48 Tubes	4
165.303.03	100 Places for 1.5 ml (Folding) Polypropylene	2









#### Test Tube Stand (Wire Pattern)

an economical substitute for wire racks, here are these submersible, autoclavable racks which are stackable when empty. These are available in different colours and are made of a special blend of Polypropylene that makes it sink in a water bath and maintain their stability even in agitated water. These space saving racks can easily be disassembled for cleaning purpose. The base is in the form of a grid with square openings and has fold up sides and end bars that lock in to rack tops.

Material: Polypropylene

Cat. No.	Size/Capacity	Pcs/Pack
166.303.01	13 mm. x 90 Tubes	6
166.303.02	16 mm. x 60 Tubes	6
166.303.03	20 mm. x 40 Tubes	6
166.303.04	25 mm. x 24 Tubes	6
166 303 05	30 mm v 21 Tubos	6

#### **Test Tube Baskets**

are made of Polypropylene. These autoclavable, unbreakable and non-corrosive Baskets are ideal for rinsing & draining glassware. These are also useful for storage of test tubes or culture tubes during sterilization or incubation.

Material: Polypropylene

Cat. No.	Size	Pcs/Pack
167.303.01	140 x 120 x 110 mm	6
167.303.02	160 x 160 x 160 mm	6
167.303.03	400 x 400 x 100 mm	6











# Your One Stop for ISO / USP / ASTM Standard Glassware

- All Volumetric Glassware comes in two forms Serialized and Un-serialized Glassware.

A GLASS APART

- Tolerance of ASTM are similar to USP tolerances which is more tighter than ISO standards.
- Wide range of Volumetric Flasks from Narrow Mouth to Wide Mouth Heavy Wall, these are supplied in three kind of stoppers Polyethylene, PTFE and Penny head.















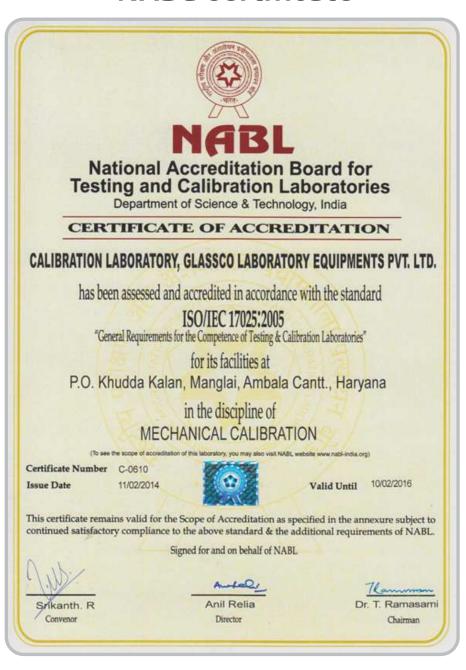
# **Volumetric Glassware**

All volumetric glassware requires very high precision and accuracy which requires controlled conditions for calibrating volumetric glassware go through automatic calibration machines which is state of the art technology imported from germany. Glassco's Calibration Laboratory has undertaken accreditation for its system for calibration and testing as per ISO 17025:2005.

Glassco's Calibration Laboratory is NABL approved. NABL has a MRA under the Asia Pacific Laboratory Accreditation Cooperation (APLAC) and the International Laboratory Accreditation Cooperation (ILAC), which means the calibration provided to customers for volumetric ware is acceptable in calibration laboratories worldwide.

The calibrations performed by Glassco calibration laboratory are essential done under ISO 17025:2005

# **NABL** Certificate



Please see list of Accreditation Bodies Worldwide from Page 148-151







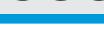












#### TYPES OF CALIBRATION & HOW TO USE

Burettes and pippets which is calibrated to deliver TD, EX which means the delivered quantity of the liquid corresponds to the capacity indicated on the instrument.

#### **Burettes**

These are calibrated "to deliver". Fill the burette a bit higher than the zero mark at the top. Check for trapped air bubbles, tap the burettes lightly to remove these; drain the solution once carefully to level of zero mark. Fill more solution up if the meniscus has gone below the zero mark. Drain the solution to the exact zero level. Wipe off the drops at the tip of the burette. Open the stopcock very slowly and start the titration. Do not touch the tip to the container wall you use. When the color begins to change, stop the titration and wait for 30 seconds as the waiting time of Class "AS" burettes. Check the meniscus for changes and add little volume to get complete titration.

#### **Pipettes**

These are calibrated "to deliver". Fill the liquid little above the volume mark. Wipe off the tip and wet area. Hold the pipette at the eye level and place the tip of the pipette to the wall of a vessel with a slight Angle between contact point. Discharge the excess volume until meniscus reaches the calibration mark of the pipette. To use the pipette volume, place the tip to the wall of the vessel with a slight angle. Pay attention to clear the pipette completely. When the level of the liquid reaches the tip of the pipette, you have to wait a little as the waiting time (if the pipette is Class "AS") for say 5 seconds. When the waiting time is over, wipe off the pipette tip by pulling it upwards along the wall of the vessel. If there is still any residual liquid left in the tip, leave it as it is

Flasks and cylinders is calibrated to contain TC, IN which means the contained quantity of the liquid corresponds to the capacity indicated on the instrument .

#### Volumetric flasks

These are calibrated "to contain". These are very precisely calibrated. Fill the volumetric flask with distilled water with a funnel to ensure that water is discharged below the meniscus line.. Fill more distilled water until it reaches a bit below of the calibration ring mark. Add some more water in small volumes so that the meniscus will be exactly at the same level of the ring mark. To make accurate standard solution put precise weight of the substance into the flask. Shake the flask with stopper on.

#### **Measuring Cylinders**

These are calibrated "to contain" and graduated to show different levels. Cylinders are mainly used for the exact measurement of liquids. First fill the liquid carefully, so that meniscus level will reach the desired volume mark. Add the precise weight of the substance and dissolve the substance by shaking the measuring cylinder. In ASTM standards cylinders are now calibrated "to deliver" (TD), which has been recently introduce in Cylinder section.

Results of calibration are guaranteed for precision as per the DIN, ISO, USP & ASTM standards.



















# GLASSCO VOLUMETRIC GLASSWARE WITH CERTIFICATE



All Glassco Volumetric Glassware now comes with new sign. Glassco Glassware are conformity certified which confirms that all Class A Glassware are manufactured according to "EICH OR DNUNG" THE GERMAN FEDERAL WEIGHTS & MEASURES REGULATIONS. This sign of conformity is printed directly on the product according to DIN 12600

#### **TYPES OF CERTIFICATES**

#### **BATCH CERTIFICATE**

Volumetric flasks comes with a batch certificate in which mean value, standard deviation is incorporated along with batch number like which signifies the month 01 and 10 is the year This comes in a pack of 1 and comes along with the flask in the box you can also download it from www.glasscolabs.com and by scanning the QR Code from the label of the box.

## **QR CODES!**

Now On Cartons Of All Glassco Wares!



Scan For Certificates

Use your **Smartphone** to scan the QR Code on the box labels ...



Conformity...

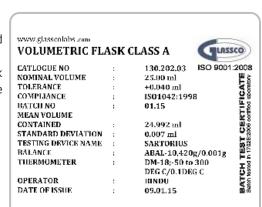
Calibration ...
(Individual or Batch)





These flasks comes with a certificate on which individual serial number, mean value, standard deviation and measured uncertainty is given along with the batch number and serial number like 01.10 (Month and year of manufacturing) 505 (serial number) **01.10 505** This comes in a pack of one and each flask is having a certificate with it in the box you can also download it from www.glasscolabs.com and by scanning the QR Code from the label of the box.







All the volumetric glassware or measuring instruments to be used in laboratories which are under surveillance of US authorities such as Food and Drug Administration (FDA), have a mandatory requirement to use products which adhere to standards set by US PHARMACOPEIA. The USP standard has some deviation from DIN, ISO standards. The products that fall under this category are

- Measuring Pipettes
- Volumetric Pipettes
- Measuring Cylinder
- Volumetric Flasks

All the products mentioned above have tighter tolerances compared to ISO standards.











# **USP INDIVIDUAL CERTIFICATE**

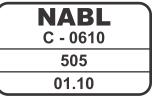
GLASSCO has recently launched its USP grade (UNITED STATES PHARMACOPIA) standard flasks with also comes with a certificate on which individual serial number, mean value, standard deviation and measured uncertainty is given along with the batch number and serial number like 01 .10 (Month and year of manufacturing) 605 (serial number). This comes in a pack of one and comes along with the flask in the box you can also download it from www.glasscolabs.com and by scanning the QR Code from the label of the box.





#### **NABL Calibration Certificate**

This certificate is issued by NABL calibration Laboratory at Glassco NABL by virtue of its collaboration with (APLAC) Asia Pacific Laboratory Accrediting Cooperation & (ILAC) International Laboratory Accreditation. NABL Calibration Certificate is internationally recognized. Both the instrument & Certificate shows the individual serial number & the Certificate no.









<sup>\*</sup>For ordering all NABL certified glassware, please use middle number 405.





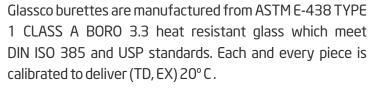












All A CLASS burettes are manufactured from precision bore tubing for accuracy. These Burettes also come with Schell batch tubes which helps in accurate reading of meniscus.

The burettes are calibrated on computer controlled machines to give the most accurate results and then are rechecked on the quality control centre.

The burettes made in A class come with conformity batch certificate and with individual work certificate.

All A Class burettes are printed in amber colour and have a waiting time of 30 seconds, the B CLASS burettes are printed in blue colour and have no waiting time.

The conformity Batch Certificates and individual work certificate are packed with each piece, however it can also be downloaded through our website www.glasscolabs.com

The burettes come with 4 different kind of stopcocks Glass Stopcock, PTFE Needle Valve Stopcock, PTFE Key Stopcock and Detachable Stopcock.

**Burettes with glass stopcock** in Schellbach stripe printed in blue colour in compliance with DIN **ISO 385 and USP standard** 

Schellbach Class AS with Batch	Schellbach Class A with Individual Work				
Certificate Cat No.	Certificate Cat No.	Cap. ml.	Division	Tolerance ( <u>+</u> ml)	Pcs/ Pack
110.202.01A	110.223.01	10ML	0.05	0.03	1
110.202.02A	110.223.02	25ML	0.1	0.05	1
110.202.03A	110.223.03	50ML	0.1	0.05	1
110.202.04A	110.223.04	100ML	0.2	0.1	1



























**Burettes** 

**Burettes with glass stopcock** in clear glass printed in blue colour in compliance with **DIN ISO 385 and USP standard** 

Class AS with Batch Certificate	Class A with Individual Work Certificate				
Cat No.	Cat No.	Cap. ml.	Division	Tolerance ( <u>+</u> ml)	Pcs/ Pack
111.202.01	111.223.01	10ML	0.05	0.03	1
111.202.02	111.223.02	25ML	0.1	0.05	1
111.202.03	111.223.03	50ML	0.1	0.05	1
111.202.04	111.223.04	100ML	0.2	0.1	1











Burettes with PTFE needle valve stopcock in Schellbach stripe printed in blue colour in compliance with DIN ISO 385 and USP standard

Schellbach Class AS with Batch	Individual Work				
Certificate Cat No.	Certificate Cat No.	Cap. ml.	Division	Tolerance ( <u>+</u> ml)	Pcs/ Pack
112.202.01A	112.223.01A	10ML	0.05	0.03	1
112.202.02A	112.223.02A	25ML	0.1	0.05	1
112.202.03A	112.223.03A	50ML	0.1	0.05	1
112.202.04A	112.223.03A	100ML	0.2	0.1	1







	Class AS with Batch Certificate	Class A with Individual Work Certificate				
	Cat No.	Cat No.	Cap. ml.	Division	Tolerance ( <u>+</u> ml)	Pcs/ Pack
1	113.202.01	113.223.01	10ML	0.05	0.03	1
	113.202.02	113.223.02	25ML	0.1	0.05	1
	113.202.03	113.223.03	50ML	0.1	0.05	1
	113.202.04	113.223.04	100ML	0.2	0.1	1



























# **Burettes with PTFE key stopcock** in Schellbach stripe printed in blue colour to meet **DIN ISO 385** and **USP standard**

Schellbach Class AS with Batch	Schell bach Class A with Individual Work				
Certificate Cat No.	Certificate Cat No.	Cap. ml.	Division	Tolerance ( <u>+</u> ml)	Pcs/ Pack
114.202.04A	114.223.04A	10ML	0.05	0.03	1
114.202.05A	114.223.05A	25ML	0.1	0.05	1
114.202.06A	114.223.06A	50ML	0.1	0.05	1
114.202.07A	114.223.06A	100ML	0.2	0.1	1



Class AS with Batch Certificate	Class A with Individual Work Certificate				
Cat No.	Cat No.	Cap. ml.	Division	Tolerance ( <u>+</u> ml)	Pcs/ Pack
115 .202.01	115.223.01	10ML	0.05	0.03	1
115.202.02	115.223.02	25ML	0.1	0.05	1
115.202.03	115.223.03	50ML	0.1	0.05	1
115.202.04	115.223.04	100ML	0.2	0.1	1













Schellbach Class AS with Batch	Schellbach Class A with Individual Work				
Certificate Cat No.	Certificate Cat No.	Cap. ml.	Division	Tolerance ( <u>+</u> ml)	Pcs/ Pack
117.202.01A	117.223.01A	10ML	0.05	0.03	1
117.202.02A	117.223.02A	25ML	0.1	0.05	1
117.202.03A	117.223.03A	50ML	0.1	0.05	1

























#### Burettes with PTFE detachable stopcock clear class printed in blue colour in compliance with DIN ISO 385 and USP standards

Class AS with Batch Certificate	Class A with Individual Work Certificate				
Cat No.	Cat No.	Cap. ml.	Division	Tolerance ( <u>+</u> ml)	Pcs/ Pack
117.202.01	117.223.01	10ML	0.05	0.03	1
117.202.02	117.223.02	25ML	0.1	0.05	1
117.202.03	117.223.03	50ML	0.1	0.05	1





# **Burettes Class B with Amber Graduation, DIN ISO 385**

With glass stopcock Cat No.	With PTFE needle valve stopcock Cat No.	With PTFE KEY STOPCOCK Cat No.	With detachable PTFE KEY STOPCOCK Cat No.
110.224.01	112.224.01	114.224.01	117.224.01
110.224.02	112.224.02	114.224.02	117.224.02
110.224.03	112.224.03	114.224.03	117.224.03

Burette **B** Class with Stopcock

Cap. ml.	Division	Tolerance ( <u>+</u> ml)	Pcs/ Pack
10ML	0.05	0.05	1
25ML	0.10	0.10	1
50ML	0.10	0.10	1

(Economy model) With detachable				
PTFE KEY STOPCOCK Cat No.	Cap. ml.	Division	Tolerance ( <u>+</u> ml)	Pcs/ Pack
109.224.03	50ML	0.10	0.10	1











# Burette

this Buret te has a transparent acrylic body and a leakproof stopcock made fit ted with a self lubricating PTFE plug. Each Burette is individually calibrated to give maximum accuracy. Acrylic body is unaffected by dilute mineral acids & bases except Hydrofloric Acid & Ammonium Hydroxide. The pH range of 1-14 is ideal and can be used up to 5% wt/wt of acids or 30 % bases.

Material: Polymethyl Methacrylate / TPX

Cat. No.	Capacity	Pcs/Pack
103.303.01	25 ml	10
103.303.02	50 ml	10
103.303.03	100 ml	10



























# Burette Serilaized/Certified CLASS A, with PTFE Key Stopcock

All burettes are calibrated to meet ASTM E 287 Specifications. Each burette is individually serialized and supplied with certificate of identification and capacity, traceable to NIST standards. The burettes is printed in blue enamel.

Catalogue No.	Capacity	Grad Interval (ml)	Tolerance (± ml)	Qty Per Pack
115.451.01	10ml	0.05	0.02	1
115.451.02	25ml	0.1	0.03	1
115.451.03	50ml	0.1	0.05	1
115.451.04	100 mL	0.2	0.1	1



**ASTM** 

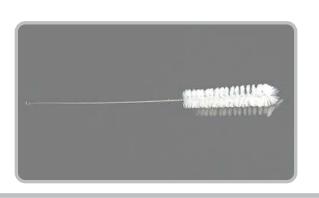
**Burette Unserialized Class A**, With PTFE Key Stopcock All burettes are calibrated to meet ASTM E 287 Specifications. All Burette are calibrated according to class A norms and accordingly a batch certificate is issued. The burettes is printed in blue enamel.

Catalogue No.	Capacity	Grad Interval (ml)	tolerance (± ml)	Qty Per Pack
115.452.01	10ml	0.05	0.02	1
115.452.02	25ml	0.1	0.03	1
115.452.03	50ml	0.1	0.05	1
115.452.04	100ml	0.2	0.1	1



These Burettes are suitable for use in schools and institutional laboratories not requiring the accuracy of CLASS A. These are printed in amber colour enamel.

Catalogue No.	Capacity	Grad Interval (ml)	Tolerance (± ml)	Qty Per Pack
114.424.01	10ml	0.05	0.04	1
114.424.02	25ml	0.1	0.06	1
114.424.03	50ml	0.1	0.1	1





# Brush, Burette

Cat. No.	Туре	Material	Pcs/Pack
593.303.07	Burette Brush	Nylon	50







02













Fisher

Clamp



# **Burette Clamps**

#### **Fisher Clamp**

are moulded in Polypropylene making it completely corrosion proof. The spring loaded jack in the middle provides a vice like grip to the Burette and prevents it from slipping. Two tapered wedges are provided to ensure firm grip on rods having dia 1/2" or 3/8".

Material: Polypropylene

Cap. ml.	Туре	Pcs/Pack
112.303.01	Fisher Clamp- Single	12
112.303.02	Fisher Clamp- Double	6





# **Burette Clamp**

- Made of Aluminium, die casted, blue painted, black rubber sleeves for firm gripping of burettes.
- With adjustable clamps to hold upto 30 mm, spring type, thumb screw key for retort rods upto 16 mm dia.

Cap. ml.	Туре	Pcs/Pack
394.303.01	Single	12
301 303 03	Double	6



# **Burette Clamp, Mild Steel**

Material: Mild Steel, Chrome Plated, Fisher Type with Boss Head, Single.

Cat. No.	Туре	Max. Temp.	Pcs/Pack
318.303.01	PVC Sleeve	80°C	12
318.303.02	Silicon Sleeve	280°C	12





#### **Burette Clamp, Mild Steel**

Material: Mild Steel, Chrome Plated, Fisher Type with Boss Head, Double

Cat. No.	Туре	Max. Temp.	Pcs/Pack
320.303.01	PVC Sleeve	80℃	6
320.303.02	Silicon Sleeve	280℃	6





#### Burette Clamp, Mild Steel

Material: Mild Steel, Black Powder Coated, Fisher Type with Boss Head, Single.

Cat. No.	Туре	Max. Temp.	Pcs/Pack
319.303.01	PVC Sleeve	80°C	12
319.303.02	Silicon Sleeve	280℃	12



## **Burette Clamp, Mild Steel**

Material: Mild Steel, Powder Coated, Fisher Type with Boss Head, Double

Cat. No.	Туре	Max. Temp.	Pcs/Pack
321.303.01	PVC Sleeve	80°C	6
321.303.02	Silicon Sleeve	280℃	6

















# **Automatic Burettes**

Glassco burettes are manufactured from ASTM E-438 TYPE 1 CLASS A BORO 3.3 heat resistant glass which meet DIN ISO 385 standards. Each and every piece is calibrated to deliver (TD, EX)  $\pm$ 20°C. All A CLASS burettes are manufactured from precision bore tubing for accuracy.

These burettes come with PTFE Needle Valve Stopcock and Intermediate PTFE Key Stopcock. These all A class burettes come with Batch Certificate, and Accessories like Bottle and Rubber below. The printing of the burettes is done in blue colour for better visibility. These Burettes are also offered in Schellbach printing which helps in accurate reading of meniscus.









Automatic Burette Schellbach in compliance with DIN ISO 385 standard Class AS, conformity certified.

SCHELL BACH WITH INTERMEDIATE STOPCOCK PTFE KEY AND WITH NEEDLE	SCHELL BACH WITHOUT INTERMEDIATE STOPCOCK AND WITH NEEDLE	:				
VALVE STOPCOCK	VALVE STOPCOCK	Cap. ml.	Division	Tolerance ( <u>+</u> ml)	BOTTLE CAPACITY IN ML	Pcs/ Pack
118.240.01	118.240.01A	10ML	0.05	0.03	500	1
118.240.02	118.240.02A	25ML	0.1	0.05	2000	1
118.240.03	118.240.03A	50ML	0.1	0.05	2000	1























**Burette Automatic** 

Automatic Burette in compliance with DIN ISO 385 and USP standard Class AS, conformity certified.

CLEAR GLASS WITH INTERMEDIATE STOPCOCK PTFE KEY	CLEAR GLASS WITHOUT INTERMEDIATE PTFE KEY AND WITH					
AND WITH NEEDLE VALVE STOPCOCK	PTFE NEEDLE VALVE STOPCOCK CAT NO.	Cap. ml.	Division	Tolerance (±ml)	BOTTLE CAPACITY IN ML	Pcs/ Pack
118.201.01	118.202.01	10ML	0.05	0.03	500	1
118.201.02	118.202.02	25ML	0.1	0.05	2000	1
118.201.03	118.202.03	50ML	0.1	0.05	2000	1











# **Automatic Burette in Compliance with ASTM Standard**

With Intermediate PTFE Key Stopcock And With Needle Valve Stopcock, Unserialized, Class A. All burettes come with rubber bulb and bottle.

Catalogue No.	Capacity	Grad Interval (ml)	Tolerance (± ml)	Qty Per Pack
118.401.01	10ml	0.05	0.02	1
118.401.02	25ml	0.1	0.03	1
118.401.03	50ml	0.1	0.05	1

























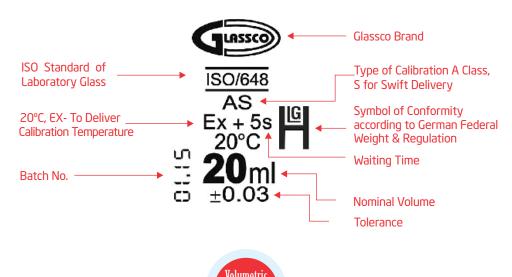
# **Volumetric Pipettes**

Glassco volumetric pipettes are manufactured in compliance with DIN ISO 648 standards. These pipettes are calibrated to deliver (TD, EX)  $+ 20^{\circ}$  C.

All volumetric pipettes are calibrated by automatic machine and then the final quality check is done on the quality control centre. The volumetric pipettes come in AS Class with conformity batch certificate and Class A in individual work certificate which is printed in amber colour which fuses into the glass .

Each pipette is accompanied with a batch or individual certificate in the pack you can also download the certificate from our website: www.glasscolabs.com and by scanning the QR Code from the label of the box.

Below is the overview of the one mark pipette explaining in detail the content printed on it.



**Pipettes** 

# Volumetric Pipettes, 1 mark, with Individual Certificate, Class A, in compliance with DIN ISO 648 Standard

Cat no.	Cap. ml.	COLOUR CODE	Tolerance ( <u>+</u> ml)	Pcs/ Pack		
123.223.02A*	0.5ml	2 BLACK	0.005	5		
123.223.01	1ml	BLUE	0.008	5		
123.223.02	2ml	ORANGE	0.010	5		
123.223.02A*	3ml	BLACK	0.01	5		
123.223.02B*	4ml	2 RED	0.015	5		
123.223.03	5ml	WHITE	0.015	5		
123.223.03A*	6ml	2 ORANGE	0.015	5		
123.223.03B*	7ml	2 GREEN	0.015	5		
123.223.03C*	8ml	BLUE	0.02	5		
123.223.03D*	9ml	BLACK	0.02	5		
123.223.04	10ml	RED	0.020	5		
123.223.04A*	15	GREEN	0.03	5		
123.223.05	20ml	YELLOW	0.030	5		
123.223.06	25ml	BLUE	0.030	5		
123.223.06E*	30ml	BLACK	0.03	5		
123.223.060*	40ml	WHITE	0.05	5		
123.223.07	50ml	RED	0.050	5		
123.223.08	100ml	YELLOW	0.080	5		

\*NON-DIN

Volumetric Pipettes, 1 mark, with Batch Certificate, Class AS in compliance with DIN ISO 648 Standard

Cat No.	Cap. ml.	COLOUR CODE	Tolerance ( <u>+</u> ml)	Pcs/ Pack
123.202.00*	0.5ml	2 BLACK	0.005	5
123.202.01	1ml	BLUE	0.008	5
123.202.02	2ml	ORANGE	0.010	5
123.202.02A*	3ml	BLACK	0.01	5
123.202.02B*	4ml	2 RED	0.015	5
123.202.03	5ml	WHITE	0.015	5
123.202.03A*	6ml	2 ORANGE	0.015	5
123.202.03B*	7ml	2 GREEN	0.015	5
123.202.03C*	8ml	BLUE	0.02	5
123.202.03D*	9ml	BLACK	0.02	5
123.202.04	10ml	RED	0.020	5
123.202.04A*	15ml	GREEN	0.03	5
123.202.05	20ml	YELLOW	0.030	5
123.202.06	25ml	BLUE	0.030	5
123.202.06E*	30ml	BLACK	0.03	5
123.202.060*	40ml	WHITE	0.05	5
123.202.07	50ml	RED	0.050	5
123.202.08	100ml	YELLOW	0.080	5

\*NON-DIN











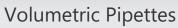












**Volumetric Pipettes, 2 mark**, with Batch Certificate, Class AS in compliance with **DIN ISO 648 Standard**, Amber printed.

Cat No.	Cap. ml.	COLOUR CODE	Tolerance ( <u>+</u> ml)	Pcs/ Pack
123.252.00*	0.5ml	2 BLACK	0.005	5
123.252.01	1ml	BLUE	0.008	5
123.252.02	2ml	ORANGE	0.010	5
123.252.02A*	3ml	BLACK	0.010	5
123.252.02B*	4ml	2 RED	0.010	5
123.252.03	5ml	WHITE	0.015	5
123.252.03A*	6ml	2 ORANGE	0.015	5
123.252.03B*	7ml	2 GREEN	0.015	5
123.252.03C*	8ml	BLUE	0.020	5
123.252.03D*	9ml	BLACK	0.020	5
123.252.04	10ml	RED	0.020	5
123.252.04A*	15ml	GREEN	0.030	5
123.252.05	20ml	YELLOW	0.030	5
123.252.06	25ml	BLUE	0.030	5
123.252.06E*	30ml	BLACK	0.030	5
123.252.060*	40ml	WHITE	0.050	5
123.252.07	50ml	RED	0.050	5
123.252.08	100ml	YELLOW	0.080	5

<sup>\*</sup> Non DIN





# Volumetric Pipette 1 mark Class B

Cat no.	Cap. ml.	COLOUR CODE	Tolerance ( <u>+</u> ml)	Pcs/ Pack
122.222.01	1ML	BLUE	0.015	5
122.222.02	2ML	ORANGE	0.020	5
122.222.03	5ML	WHITE	0.030	5
122.222.04	10ML	RED	0.040	5
122.222.05	20ml	YELLOW	0.060	5
122.222.06	25ml	BLUE	0.060	5
122.222.07	50ml	RED	0.100	5
122.222.08	100ml	YELLOW	0.150	5





























## PIPETTE VOLUMETRIC, CLASS A SERIALIZED

These Pipettes are manufactured from ASTM E 438 TYPE 1 CLASS A BORO 3.3 GLASS, which meet **ASTM E 969 Class A** specifications. The Pipettes are manufactured to deliver and comes in amber colour enamel printing.

Catalogue No.	Capacity	Tolerance (± ml)	Colour Coding Band	Qty Per Pack
123.454.00D	0.5	0.006	2 BLACK	6
123.454.01	1	0.006	BLUE	6
123.454.02	2	0.006	ORANGE	6
123.454.02A	3	0.01	BLACK	6
123.454.02B	4	0.01	2 RED	6
123.454.03	5	0.01	WHITE	6
123.454.03A	6	0.01	2 ORANGE	6
123.454.03B	7	0.01	2 GREEN	6
123.454.03C	8	0.02	BLUE	6
123.454.03D	9	0.02	BLACK	6
123.454.04	10	0.02	RED	6
123.454.04E	15	0.03	GREEN	6
123.454.05	20	0.03	YELLOW	6
123.454.06	25	0.03	BLUE	6
123.454.06E	30	0.03	BLACK	6
123.454.060	40	0.05	WHITE	6
123.454.07	50	0.05	RED	6
123.454.08	100	0.08	YELLOW	2

# PIPETTE VOLUMETRIC, CLASS A UNSERIALIZED

These Pipettes are manufactured from ASTM E 438 TYPE 1 CLASS A BORO 3.3 GLASS, which meet **ASTM E 969 Class A** specifications. The Pipettes are manufactured to deliver and comes in amber colour enamel printing.

Catalogue No.	Capacity	Tolerance (± ml)	Colour Coding Band	Qty Per Pack
123.450.00D	0.5	0.006	2 BLACK	6
123.450.01	1	0.006	BLUE	6
123.450.02	2	0.006	ORANGE	6
123.450.02A	3	0.01	BLACK	6
123.450.02B	4	0.01	2 RED	6
123.450.03	5	0.01	WHITE	6
123.450.03A	6	0.01	2 ORANGE	6
123.450.03B	7	0.01	2 GREEN	6
123.450.03C	8	0.02	BLUE	6
123.450.03D	9	0.02	BLACK	6
123.450.04	10	0.02	RED	6
123.450.04E	15	0.03	GREEN	6
123.450.05	20	0.03	YELLOW	6
123.450.06	25	0.03	BLUE	6
123.450.06E	30	0.03	BLACK	6
123.450.060	40	0.05	WHITE	6
123.450.07	50	0.05	RED	6
123.450.08	100	0.08	YELLOW	2

#### PIPETTE, VOLUMETRIC CLASS B

These Pipettes are manufactured from ASTM E 438 TYPE 1 CLASS A BORO 3.3 GLASS, which meet **ASTM E 969 Class B** specifications. The Pipettes are manufactured to deliver and comes in amber colour enamel printing.

Catalogue No.	Capacity	Tolerance (± ml)	Colour Coding Band	Qty Per Pack
122.422.00D	0.5	0.012	2 BLACK	6
122.422.01	1	0.012	BLUE	6
122.422.02	2	0.012	ORANGE	6
122.422.02A	3	0.02	BLACK	6
122.422.02B	4	0.02	2 RED	6
122.422.03	5	0.02	WHITE	6
122.422.03A	6	0.03	2 ORANGE	6
122.422.03B	7	0.03	2 GREEN	6
122.422.03C	8	0.04	BLUE	6
122.422.03D	9	0.04	BLACK	6
122.422.04	10	0.04	RED	6
122.422.04E	15	0.06	GREEN	6
122.422.05	20	0.06	YELLOW	6
122.422.06	25	0.06	BLUE	6
122.422.06E*	30	0.06	BLACK	6
122.422.060*	40	0.10	WHITE	6
122.422.07	50	0.10	RED	6
122.422.08	100	0.16	YELLOW	2

<sup>\*</sup> Non ASTM













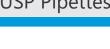












**USP** Pipette



All the volumetric glassware or measuring instruments to be used in laboratories which are under surveillance of US authorities such as Food and Drug Administration (FDA), have a mandatory requirement to use products which adhere to standards set by US PHARMACOPEIA. The USP standard has some deviation from DIN, ISO standards.

The products that fall under this category are

- Measuring Pipettes
- Volumetric Pipettes
- Measuring Cylinder
- Volumetric Flasks

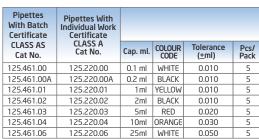
All the products mentioned above have tighter tolerances compared to ISO standards.

USP Volumetric Pipettes

### Volumetric Pipettes 1 mark in compliance with USP standard

Cat No. PIPETTES WITH BATCH	Cat no. PIPETTES WITH INDIVIDUAL WORK				
CERTIFICATE CLASS AS	CERTIFICATE CLASS A	Cap. ml.	COLOUR CODE	Tolerance ( <u>+</u> ml)	Pcs/ Pack
123.461.00	123.220.00	0.5ml	2 BLACK	0.006	5
123.461.01	123.220.01	1ml	BLUE	0.006	5
123.461.02	123.220.02	2ml	ORANGE	0.006	5
123.461.02A	123.220.02A	3ml	BLACK	0.010	5
123.461.02B	123.220.02B	4ml	2 RED	0.010	5
123.461.03	123.220.03	5ml	WHITE	0.010	5
123.461.03A	123.220.03A	6ml	2 ORANGE	0.010	5
123.461.03B	123.220.03B	7ml	2 GREEN	0.010	5
123.461.03C	123.220.03C	8ml	BLUE	0.020	5
123.461.03D	123.220.03D	9ml	BLACK	0.020	5
123.461.04	123.220.04	10ml	RED	0.020	5
123.461.04E	123.220.04E	15ml	GREEN	0.030	5
123.461.05	123.220.05	20ml	YELLOW	0.030	5
123.461.06	123.220.06	25ml	BLUE	0.030	5
123.461.06E	123.220.06E	30ml	BLACK	0.030	5
123.461.060	123.220.060	40ml	WHITE	0.050	5
123.461.07	123.220.07	50ml	RED	0.050	5
123.461.08	123.220.08	100ml	YELLOW	0.080	5









#### Pipet te Box

made of polypropylene, this Pipette Box is designed is such a way that it can hold Pipettes of different lengths. The top of the box screws on the bottom and the height can be adjusted by screwing the top.

Material: Polypropylene

Cat. No.	Туре	Pcs/Pack
171.303.01	Pipette Box	4

























# Graduated Pipettes

Glassco Graduated Pipettes now comes in Type 1 (Mohr) and Type 3 (Serological).

- $\blacksquare$  Type 1 : These pipettes are for partial delivery having 0 point at top.
- Type 3: These pipettes are for complete delivery having 0 Point at top.

All are manufactured to meet ISO 835 Standards. These pipettes are calibrated to deliver (TD, EX)  $\pm$  20° C. All graduated pipettes are calibrated by automatic machine and then the final quality check is done on the quality control centre. The graduated pipettes come in AS class with conformity batch certificate and individual work certificate which is printed in amber colour which fuses into the glass. Each pipette is accompanied with a batch or individual certificate in the pack. You can also download the certificate at www.glasscolabs.com. All A Class pipettes have a waiting time of 5 seconds.



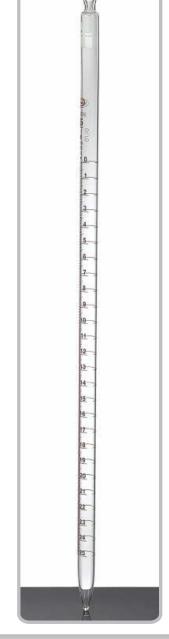
**Graduated Pipettes** Type 3 (Serological) in compliance with **DIN ISO 835, EN ISO 835 Standard** 

Pipettes With Batch Certificate	Pipettes With Individual Work Certificate CLASS A				
CLASS AS Cat No.	Cat No.	Cap. ml.	COLOUR CODE	Tolerance ( <u>+</u> ml)	Pcs/ Pack
125.202.00	125.223.00	0.1 ml	WHITE	0.006	5
125.202.00A	125.223.00A	0.2 ml	BLACK	0.006	5
125.202.01	125.223.01	1ml	YELLOW	0.007	5
125.202.02	125.223.02	2ml	BLACK	0.010	5
125.202.03	125.223.03	5ml	RED	0.030	5
125.202.04	125.223.04	10ml	ORANGE	0.050	5
125.202.06	125.223.06	25ml	WHITE	0.100	5





7.6 por Em 100 000 ctarradia							
Pipettes With Batch Certificate	Pipettes With Individual Work Certificate						
CLASS AS Cat No.	CLASS A Cat No.	Cap. ml.	Colour Code	Tolerance ( <u>+</u> ml)	Pcs/ Pack		
125.453.00	125.416.00	0.1 ml	WHITE	0.006	5		
125.453.00A	125.416.00A	0.2 ml	BLACK	0.006	5		
125.453.00B	125.416.00B	1ml	YELLOW	0.007	5		
125.453.01A	125.416.01A	2ml	BLACK	0.010	5		
125.453.02A	125.416.02A	5ml	RED	0.030	5		
125.453.04	125.416.04	10ml	ORANGE	0.050	5		
125.453.06	125.416.06B	25ml	WHITE	0.100	5		







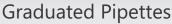












# Graduated Pipette (Serological), CLASS A SERIALIZED

These pipettes are manufactured which are calibrated to deliver as per ASTM E 1044 and is printed in amber colour enamel.

Catalogue No.	Capacity	Sub Division	Tolerance (± ml)	Colour Coding Band	Qty Per Pack
125.423.01	1 ML	0.1	0.01	RED	6
125.423.01A	1 ML	0.01	0.01	YELLOW	6
125.423.02	2 ML	0.1	0.01	GREEN	6
125.423.03	5 ML	0.1	0.02	BLUE	6
125.423.04	10 ML	0.1	0.03	ORANGE	6
125.423.06	25 ML	0.1	0.05	WHITE	2







### Graduated Pipette (Serological), CLASS A UNSERIALIZED

These pipettes are manufactured which are calibrated to deliver as per ASTM E 1044 and is printed in amber colour enamel.

Catalogue No.	Capacity	Sub Division	Tolerance (± ml)	Colour Coding Band	Qty Per Pack
125.402.01	1 ML	0.1	0.01	RED	6
125.402.01A	1 ML	0.01	0.01	YELLOW	6
125.402.02	2 ML	0.1	0.01	GREEN	6
125.402.03	5 ML	0.1	0.02	BLUE	6
125.402.04	10 ML	0.1	0.03	ORANGE	6
125.402.06	25 ML	0.1	0.05	WHITE	2

















# Graduated Pipettes (Mohr), CLASS A SERIALIZED

These Pipettes are manufactured which are calibrated to deliver as per ASTM E 1293 and is printed in amber colour enamel.

Catalogue No.	Capacity	Sub Division	Tolerance (± ml)	Colour Coding Band	Qty Per Pack
125.452.01	1 ML	0.1	0.01	RED	6
125.452.01A	1 ML	0.01	0.01	YELLOW	6
125.452.02	2 ML	0.1	0.01	GREEN	6
125.452.03	5 ML	0.1	0.02	BLUE	6
125.452.04	10 ML	0.1	0.03	ORANGE	6
125.452.05	25 ML	0.1	0.05	WHITE	2

# Graduated Pipettes (Mohr), CLASS A UNSERIALIZED

These Pipettes are manufactured which are calibrated to deliver as per ASTM E 1293 and is printed in amber colour enamel.

Catalogue No.	Capacity	Sub Division	Tolerance (± ml)	Colour Coding Band	Qty Per Pack
125.455.01	1 ML	0.1	0.01	RED	6
125.455.01A	1 ML	0.01	0.01	YELLOW	6
125.455.02	2 ML	0.1	0.01	GREEN	6
125.455.03	5 ML	0.1	0.02	BLUE	6
125.455.04	10 ML	0.1	0.03	ORANGE	6
125.455.05	25 ML	0.1	0.05	WHITE	2























These Pipettes are manufactured which are calibrated to deliver as per **ASTM E 1044** and is printed in amber colour enamel.

Catalogue No.	Capacity	Sub Division	Tolerance (± ml)	Colour Coding Band	Qty Per Pack
124.418.00	0.1ML	0.01	0.005	WHITE	6
124.418.00A	0.2ML	0.01	0.008	BLACK	6
124.418.01	1 ML	0.1	0.02	RED	6
124.418.01A	1 ML	0.01	0.02	YELLOW	6
124.418.02	2 ML	0.1	0.02	GREEN	6
124.418.03	5 ML	0.1	0.04	BLUE	6
124.418.04	10 ML	0.1	0.06	ORANGE	6
124.418.06B	25 ML	0.1	0.1	WHITE	2





SIGN SECOND



# **Graduated Pipettes (Mohr), CLASS B**

These Pipettes are manufactured which are calibrated to deliver as per **ASTM E 1293** and is printed in amber colour enamel.

Catalogue	Capacity	Sub Division	tolerance	Colour	Qty
No.			(± ml)	Coding Band	Per Pack
124.125.00	0.1ML	0.01	0.005	WHITE	6
124.125.00A	0.2ML	0.01	0.008	BLACK	6
124.125.01	1 ML	0.1	0.02	RED	6
124.125.01A	1 ML	0.01	0.02	YELLOW	6
124.125.02	2 ML	0.1	0.02	GREEN	6
124.125.03	5 ML	0.1	0.04	BLUE	6
124.125.04	10 ML	0.1	0.06	ORANGE	6
124.125.05	25 ML	0.1	0.1	WHITE	2





















- Can fill 25 ml pipet te under 4 seconds
- Safety valve and hydrophobic filters provide double protection against fluid penetration
- Two different speed modes High & Low along with Gravity drain
- The pump speed can also be fine-tuned by varying finger pressure on operating knobs for better control of speed
- Cadmium free environment friendly NiMH batteries
- · Batteries can be changed very easily by the user
- The intelligent charger prevents over charging / heating of batteries
- · Low battery indicator
- The specially designed Desktop Stand enables the Pipette Controller to be charged while resting on it.
- The Pipette Controller can hold the serological pipette while resting on Desktop Stand.

#### **Technical Data**

Power Battery Service Life Battery Charging Time Volumetric Range 2x1.2V/1000 mAh NiMH bat teries

Eight hours continuous use 2 - 3 hours to charge fully

Volumetric Range Plastic or Glass pipette from 0.1 ml up to 200 ml
Safety System Replaceable hydrophobic 0.45 pm PTFE filter

Safety check valve
Standard Accessory Battery charger (UK plug)

Desktop Stand

Hydrophobic PTFE membrane filter 0.45  $\mu$ m 1Pc Hydrophobic PTFE membrane filter 0.20  $\mu$ m 1Pc



## **Pipettes Bulb**

A normal pressure on the bulb permits the intake of the required quantity. Used for repeated sampling.

Cat. No.	Size	Cap.	Pcs/Pack
411.303.01	Small	5 ml	6
411.303.02	Medium	10 ml	6
411.303.03	Large	15 ml	6
411.303.04	XX Large	25 ml	6
411.303.05	XXX Large	50 ml	6







### **Ordering Information**

Cat. No.	Description	Pcs/Pack
501.404.01	Pipette Controller - Blue	1
501.404.02	Desktop Stand	1

# **Pipette Pump**

presenting a fast release pipetting device for precise pipetting & zip quick emptying. The Knurled thumbwheel can be rotated to draw up or dispense liquids while the releaser may be pushed in for zip-quick emptying. The moulded chuck has a silicon rubber collet inside to hold various pipettes of standard sizes. It resists acids & alkalies and can be easily disassembled for thorough cleaning.

Material: Acrylonit vile Butandiene Styrene

Cat. No.	Capacity	Pcs/Pack
104.303.01	2 ml	12
104.303.02	10 ml	12
104.303.03	25 ml	12



### **Pipette Filler**

50 ml, with a release valve to allow adjustment of liquid.

Cat. No.	Туре	Pcs/Pack
415.303.01	red colour, made of natural rubber	4
415.303.02	blue colour, made of silicon rubber	4

























# **Pipet te Stand (Horizontal)**

this detachable stand can hold 12 pipettes, 6 on each side, in a horizontal position. Moulded in Polypropylene, this autoclavable stand has two sides which are attached to each other with three metallic rods coated with Polypropylene. This stand can be easily disassembled for space saving storage.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
168.303.01	For 12 Pipettes	6

# Pipet te Stand (Vertical)

is a stable, non-corrosive, detachable stand which can hold 28 pipettes with maximum dia 14 mm. The heavy base measures 225 mm in diameter and a Polypropylene coated square rod measuring 375 mm in length is screwed into the base. The top disc that can be fixed on the rod has holes for holding pipet tes while the lower one has pilot holes where the pipet test ips rest and liquids drain down to the base. These discs can be adjusted on the rod according to the length of the pipet te. The arrows provided on the discs should be kept parallel to ensure that corresponding holes are being centered.

Material: Polypropylene

	Cat. No.	Capacity	Pcs/Pack
I	169.303.01	For 28 Pipettes	1





# Pipette Stand (94 Pipettes-Rotary)

moulded in Polypropylene, this unique Stand holds a maximum of 94 pipet tes and rotates on a central vertical axis for convenient selection of any particular pipette. The lower rotating disc has four concentric troughs with tapered sides and open bottom which cradle the pipet te tips protectively and permit water drops to run off. The upper disc has a grid pattern concentric with the bottom disc and keeps the pipettes vertical. Liquids draining off the pipettes are retained on the top of the stationary base by the outer ring. This stand can be easily disassembled & reassembled.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
170.303.01	For 94 Pipettes	1















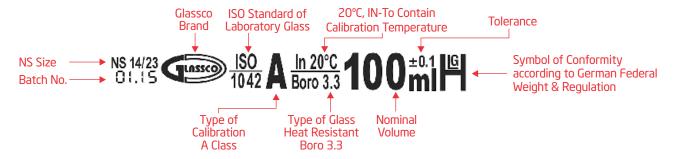




### **Volumetric Flasks**

Volumetric Flasks CLASS A are made from ASTM E 438 TYPE 1 CLASS A heat resistant BORO 3.3 Glass that meet ISO 1042 standard. The calibration is done on automatic computer controlled machine and are calibrated to contain (TC, In) according to the ISO tolerance standards. These are supplied with PP stoppers or glass stoppers in both amber and clear glass. All A Class flasks are printed in Blue colour & B Class in White colour, Amber Glass is marked in white colour the meniscus mark is diamond grinded for longer persistence and better accuracy. All Class A Volumetric Flask comes with Conformity Batch Certificate or Individual Work Certificate and have H mark printed on the Flask.

Overview of the Printing:



Volumetric Flasks Class A in compliance with DIN ISO 1042 Standards with conformity batch certified

BATCH CERTIFICATE WITH PP	BATCH CERTIFICATE WITH GLASS				
STOPPER	STOPPER	Cap. ml.	N/S	Tolerance ( <u>+</u> ml)	PCS/ PACK
130.202.01	130.234.01	5ML	10/19	0.040	2
130.202.02	130.234.02	10ML	10/19	0.040	2
130.202.02A	130.234.03	20ML	10/19	0.040	2
130.202.03	130.234.04	25ML	10/19	0.040	2
130.202.04	130.234.05	50ML	12/21	0.060	2
130.202.04B	130.234.06	50ML	14/23	0.100	2
130.202.05B	130.234.07	100ML	12/21	0.100	2
130.202.05	130.234.08	100ML	14/23	0.100	2
130.202.06	130.234.09	200ML	14/23	0.150	2
130.202.07	130.234.10	250ML	14/23	0.150	2
130.202.08	130.234.11	500ML	19/26	0.250	2
130.202.09	130.234.12	1000ML	24/29	0.400	2
130.202.10	130.234.13	2000ML	29/32	0.600	1
130.202.11	130.234.14	5000ML	34/35	1.200	1













Amber Volumetric Flasks Class A in compliance with DIN ISO 1042 Standards with conformity batch certified

AMBER GLASS BATCH CERTIFICATE	AMBER GLASS BATCH CERTIFICATE				
WITH PP STOPPER	WITH GLASS STOPPER	Cap. ml.	N/S	Tolerance ( <u>+</u> ml)	PCS/ PACK
130.202.01A	130.234.01A	5ML	10/19	0.040	2
130.202.02AB	130.234.02A	10ML	10/19	0.040	2
130.202.03A	130.234.03A	20ML	10/19	0.040	2
130.202.04A	130.234.04A	25ML	10/19	0.040	2
130.202.05A	130.234.05A	50ML	12/21	0.060	2
130.202.05AB	130.234.06A	50ML	14/23	0.100	2
130.202.06AB	130.234.07A	100ML	12/21	0.100	2
130.202.06A	130.234.08A	100ML	14/23	0.100	2
130.202.07A	130.234.09A	200ML	14/23	0.150	2
130.202.08A	130.234.10A	250ML	14/23	0.150	2
130.202.09A	130.234.11A	500ML	19/26	0.250	2
130.202.10A	130.234.12A	1000ML	24/29	0.400	2
130.202.11A	130.234.13A	2000ML	29/32	0.600	1



























**Volumetric Flask Class** A in compliance with **DIN ISO 1042 Standards** with Individual Work Certificate and Serial Number.

INDVIDUAL WORK CERTIFICATE	INDVIDUAL WORK CERTIFICATE				
WITH PP STOPPER	WITH GLASS STOPPER	Cap. ml.	N/S	Tolerance ( <u>+</u> ml)	PCS/ PACK
130.223.01	130.236.01	5ML	10/19	0.040	1
130.223.02	130.236.02	10ML	10/19	0.040	1
130.223.02A	130.236.03	20ML	10/19	0.040	1
130.223.03	130.236.04	25ML	10/19	0.040	1
130.223.04	130.236.05	50ML	12/21	0.060	1
130.223.04B	130.236.06	50ML	14/23	0.100	1
130.223.05B	130.236.07	100ML	12/21	0.100	1
130.223.05	130.236.08	100ML	14/23	0.100	1
130.223.06	130.236.09	200ML	14/23	0.150	1
130.223.07	130.236.10	250ML	14/23	0.150	1
130.223.08	130.236.11	500ML	19/26	0.250	1
130.223.09	130.236.12	1000ML	24/29	0.400	1
130.223.10	130.236.13	2000ML	29/32	0.600	1
130.223.11	130.236.14	5000ML	34/35	1.200	1



Batch Code

Individual Serialized No.

For more information see Page: 40



AMBER GLASS WITH INDVIDUAL WORK CERTIFICATE WITH	AMBER GLASS WITH INDVIDUAL WORK CERTIFICATE WITH GLASS	Can and	1160	Tolerance	PCS/
PP STOPPER	STOPPER	Cap. ml.	N/S	( <u>+</u> ml)	PACK
130.223.01A	130.236.01A	5ML	10/19	0.040	1
130.223.02AB	130.236.02A	10ML	10/19	0.040	1
130.223.03A	130.236.03A	20ML	10/19	0.040	1
130.223.04A	130.236.04A	25ML	10/19	0.040	1
130.223.05A	130.236.05A	50ML	12/21	0.060	1
130.223.05AB	130.236.06A	50ML	14/23	0.100	1
130.223.06AB	130.236.07A	100ML	12/21	0.100	1
130.223.06A	130.236.08A	100ML	14/23	0.100	1
130.223.07A	130.236.09A	200ML	14/23	0.150	1
130.223.08A	130.236.10A	250ML	14/23	0.150	1
130.223.09A	130.236.11A	500ML	19/26	0.250	1
130.223.10A	130.236.12A	1000ML	24/29	0.400	1
130.223.11A	130.236.13A	2000ML	29/32	0.600	1

with **DIN ISO 1042 Standards** with Individual Work

Certificate and Serial Number.

































Cat. No. WITH PP	Cat. No. WITH Glass				
STOPPER	STOPPER	Cap. ml.	N/S	Tolerance ( <u>+</u> ml)	PCS/ PACK
129.222.01	128.234.01	5ML	10/19	0.080	2
129.222.02	128.234.02	10ML	10/19	0.080	2
129.222.02A	128.234.02A	20ML	10/19	0.080	2
129.222.03	128.234.03	25ML	10/19	0.080	2
129.222.04	128.234.04	50ML	12/21	0.120	2
129.222.04A	128.234.04A	50ML	14/23	0.200	2
129.222.11	128.234.11	100ML	12/21	0.200	2
129.222.05	128.234.05	100ML	14/23	0.200	2
129.222.06	128.234.06	200ML	14/23	0.300	2
129.222.07	128.234.07	250ML	14/23	0.300	2
129.222.08	128.234.08	500ML	19/26	0.500	2
129.222.09	128.234.09	1000ML	24/29	0.800	2
129.222.10	128.234.10	2000ML	29/32	1.200	1













Volumetric Flasks, Amber Glass, Class B, DIN ISO-1042

Cat. No. WITH PP STOPPER	Cat. No. WITH GLASS STOPPER	Cap. ml.	N/S	Tolerance ( <u>+</u> ml)	PCS/ PACK
130.222.01A	130.422.01A	5ML	10/19	0.08	1
130.222.02AB	130.422.02AB	10ML	10/19	0.08	1
130.222.03A	130.422.03A	20ML	10/19	0.08	1
130.222.04A	130.422.04A	25ML	10/19	0.08	1
130.222.05A	130.422.05A	50ML	12/21	0.120	1
130.222.05AB	130.422.05AB	50ML	14/23	0.200	1
130.222.06AB	130.422.06AB	100ML	12/21	0.200	1
130.222.06A	130.422.06A	100ML	14/23	0.200	1
130.222.07A	130.422.07A	200ML	14/23	0.300	1
130.222.08A	130.422.08A	250ML	14/23	0.300	1
130.222.09A	130.422.09A	500ML	19/26	0.500	1
130.222.10A	130.422.10A	1000ML	24/29	0.800	1
130.222.11A	130.422.11A	2000ML	29/32	1.200	1



























**Volumetric Flask PP Stopper Class A** in compliance with USP (United States Pharmacopia) Standard with Individual work Certificate and Serial Number.

WITH PP STOPPER CLEAR	WITH PP STOPPER AMBER				
GLASS	GLASS	Cap. ml.	N/S	Tolerance ( <u>+</u> ml)	PCS/ PACK
130.220.01	130.220.01A	5ML	10/19	0.020	1
130.220.02	130.220.02AB	10ML	10/19	0.020	1
130.220.02A	130.220.03A	20ML	10/19	0.030	1
130.220.03	130.220.04A	25ML	10/19	0.030	1
130.220.04	130.220.05A	50ML	12/21	0.050	1
130.220.04B	130.220.05AB	50ML	14/23	0.050	1
130.220.05B	130.220.06AB	100ML	12/21	0.080	1
130.220.05	130.220.06A	100ML	14/23	0.080	1
130.220.06	130.220.07A	200ML	14/23	0.100	1
130.220.07	130.220.08A	250ML	14/23	0.120	1
130.220.08	130.220.09A	500ML	19/26	0.150	1
130.220.09	130.220.10A	1000ML	24/29	0.300	1
130.220.10	130.220.11A	2000ML	29/32	0.500	1







**Volumetric Flask, PP Stopper Class A** In Compliance with USP Standard with Conformity Batch Certificate

•					
WITH PP STOPPER CLEAR	WITH PP STOPPER AMBER				
GLASS	GLASS	Cap. ml.	N/S	Tolerance ( <u>+</u> ml)	PCS/ PACK
130.461.01	130.462.01	5ML	10/19	0.020	2
130.461.02	130.462.02	10ML	10/19	0.020	2
130.461.03	130.462.03	20ML	10/19	0.030	2
130.461.04	130.462.04	25ML	10/19	0.030	2
130.461.05	130.462.05	50ML	12/21	0.050	2
130.461.06	130.462.06	50ML	14/23	0.050	2
130.461.07	130.462.07	100ML	12/21	0.080	2
130.461.08	130.462.08	100ML	14/23	0.080	2
130.461.09	130.462.09	200ML	14/23	0.100	2
130.461.10	130.462.10	250ML	14/23	0.120	2
130.461.11	130.462.11	500ML	19/26	0.150	2
130.461.12	130.462.12	1000ML	24/29	0.300	2
130.461.13	130.462.13	2000ML	29/32	0.500	1











Catalogue

134.236.00\*

134.236.00B<sup>2</sup>

134.236.01

131,236,01

134.236.02

131.236.02

134 236 039

131.236.03\*

134.236.04

131,236,04

134.236.05

131.236.05

134.236.06

131.236.06

134.236.07

131.236.07

134.236.08

131,236,08

131.236.09

131,236,10

131.236.11

131.236.13

131.236.15

134.276.00\*

134.276.00B<sup>2</sup>

134.276.01

131.276.01

134.276.02

131.276.02

134.276.03\*

131.276.03

134.276.04

131.276.04

134.276.05

131.276.05

134.276.06

131.276.06

134.276.07

131.276.07

134.276.08

131.276.08

131.276.09

131.276.10

131.276.11

131.276.13

131.276.15\*

134.479.00\*

134.479.00B<sup>2</sup>

134.479.01

131.479.01

131.479.02

134.479.02

131.479.03

134.479.03

134.479.04

131.479.04

134.479.05

131.479.05

134.479.06

131.479.06

134.479.07

131.479.07

134.479.08

131.479.08

131.479.09

131.479.10

131.479.11

131.479.13\*



Tolerance

(± ml)

+/- 0.01 mL

+/- 0.015 mL

+/- 0.02 mL

+/- 0.08 ml

+/- 0.02 mL

+/- 0.08 mL

+/- 0.03 mL

+/- 0.08 mL

+/- 0.03 mL

+/- 0.08 mL

+/- 0.05 mL

+/- 0.08 mL

+/- 0.08 mL

+/- 0.10 mL

+/- 0.10 mL

+/- 0.20 mL

+/- 0.12 mL

+/- 0.20 mL

+/- 0.20 mL

+/- 0.30 mL

+/- 0.50 mL

+/- 1.20 mL

+/- 1.50 mL

+/- 0.01 mL

+/- 0.02 mL

+/- 0.08 mL

+/- 0.02 mL

+/- 0.08 mL

+/- 0.03 mL

+/-0.08 m

+/- 0.03 mL

+/- 0.08 mL

+/- 0.05 ml

+/- 0.08 mL

+/- 0.08 mL

+/- 0.10 mL

+/- 0.10 ml

+/- 0.20 mL

+/- 0.12 mL

+/- 0.20 mL

+/- 0.20 ml

+/- 0.30 mL

+/- 0.50 mL

+/- 1.20 mL

+/- 1.50 mL

+/- 0.01 mL

+/- 0.015 mL

+/- 0.02 mL

+/- 0.08 ml

+/- 0.08 mL

+/- 0.02 mL

+/- 0.08 ml

+/- 0.03 mL

+/- 0.03 mL

+/- 0.08 mL

+/- 0.05 mL

+/- 0.08 mL

+/- 0.08 mL

+/- 0.10 mL

+/- 0.10 ml

+/- 0.20 mL

+/- 0.12 mL

+/- 0.20 mL

+/- 0.20 mL

+/- 0.30 ml

+/- 0.50 mL

+/- 1.20 mL

+/- 1.50 mL

+/- 0.015 mL

Capacity

1ml

2ml

5ml

5ml

10ml

10ml

20ml

20ml

25ml

25ml

50ml

50ml

100ml

100ml

200ml

200ml

250ml

250ml

500ml

1000ml

2000ml

4000ml

6000ml

1ml

2ml

5ml

5ml

10ml

10ml

20ml

20ml

25ml

25ml

50ml

50ml

100ml

100ml

200ml

200ml

250ml

250ml

500ml

1000ml

2000ml

4000ml

6000ml

1<sub>m</sub>l

2ml

5ml

5ml

10ml

10ml

20ml

20ml

25ml

25ml

50ml

50ml

100ml

100ml

200ml

200ml

250ml

250ml

500ml

1000ml

2000ml

4000ml

6000ml

Stopper

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Stopper

PENNY HEAD GLASS

PENNY HEAD GLASS PENNY HEAD GLASS

PENNY HEAD GLASS

PENNY HEAD GLASS

PENNY HEAD GLASS

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PENNY HEAD GLASS

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POLYTHELENE STOPPER

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PTFE STOPPER

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PTFE STOPPER

PTFE STOPPER

PTFE STOPPER



Per Pack

1

1

1

1

1

1

1

1

1

1

1

1



### Volumetric Flask, CLASS A, SERIALIZED

These flasks are made as per **ASTM E 288 Class A** Serialized specification. The flasks have diamond graduated line and are calibrated TC (To Contain). These comes in white colour enamel printing.















159

Serialized











### Volumetric Flasks













**Volumetric Flask, CLASS A, UNSERIALIZED**These flasks are made as per **ASTM E 288 Class A** Serialized specification. The flasks have diamond graduated line and are calibrated TC (To Contain). These comes in white colour enamel printing.













134.234.009	Catalogue No.	Capacity	Tolerance (± ml)	Stopper Size	Stopper Type	Qty Per Pack
134.234.01   Sml	134.234.00*	1ml	, ,	8		2
131.234.01   5ml	134.234.00B*	2ml	+/- 0.015 mL	8	PENNY HEAD GLASS	2
134.234.02						_
13123402				-		
134.234.03*   20ml						
131.234.03*   20ml   +/- 0.08 mL   13   PENNY HEAD GLASS   2   134.234.04   25ml   +/- 0.03 mL   9   PENNY HEAD GLASS   2   134.234.05   50ml   +/- 0.08 mL   13   PENNY HEAD GLASS   2   134.234.05   50ml   +/- 0.08 mL   13   PENNY HEAD GLASS   2   134.234.06   100ml   +/- 0.08 mL   13   PENNY HEAD GLASS   2   134.234.06   100ml   +/- 0.08 mL   13   PENNY HEAD GLASS   2   134.234.06   100ml   +/- 0.10 mL   16   PENNY HEAD GLASS   2   131.234.06   100ml   +/- 0.10 mL   16   PENNY HEAD GLASS   2   131.234.07   200ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.07   200ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.08   250ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.09   500ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.09   500ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.13   2000ml   +/- 0.30 mL   22   PENNY HEAD GLASS   2   131.234.13   4000ml   +/- 0.30 mL   27   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.20 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.20 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.20 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.10 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.20 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.20 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.20 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 0.01 mL   8   POLYTHELENE STOPPER   2   134.232.00*   1ml   +/- 0.01 mL   8   POLYTHELENE STOPPER   2   134.232.00*   2ml   +/- 0.01 mL   8   POLYTHELENE STOPPER   2   134.232.00*   2ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   134.232.00*   2ml   +/- 0.03 mL   9   POLYTHELENE STOPPER   2   134.232.00*   2ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.00*   2ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.00*   2ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.00*   2ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.00*   2ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2				_		_
134.234.04   25ml   +/- 0.03 mL   9   PENNY HEAD GLASS   2				_		
131.234.04   25ml						
134.234.05   50ml   +/- 0.05 mL   9   PENNY HEAD GLASS   2						
131.234.05   50ml   +/- 0.08 mL   13   PENNY HEAD GLASS   2   134.234.06   100ml   +/- 0.08 mL   13   PENNY HEAD GLASS   2   134.234.07   200ml   +/- 0.10 mL   16   PENNY HEAD GLASS   2   134.234.07   200ml   +/- 0.10 mL   16   PENNY HEAD GLASS   2   134.234.07   200ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.08   250ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.08   250ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.09   500ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.11   1000ml   +/- 0.30 mL   22   PENNY HEAD GLASS   2   131.234.11   2000ml   +/- 0.30 mL   22   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   134.232.00*   1 ml   +/- 0.01 mL   8   POLYTHELENE STOPPER   2   134.232.00*   2 ml   +/- 0.015 mL   8   POLYTHELENE STOPPER   2   134.232.00*   2 ml   +/- 0.00 mL   9   POLYTHELENE STOPPER   2   134.232.01   5 ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   134.232.03*   2 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.03*   2 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.03*   2 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.03*   2 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.04   2 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   2 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.06   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.07   2 0 ml   +/- 0.08 mL   13   POL				-		
134.234.06   100ml   +/- 0.08 mL   13   PENNY HEAD GLASS   2   131.234.06   100ml   +/- 0.10 mL   16   PENNY HEAD GLASS   2   131.234.07   200ml   +/- 0.10 mL   16   PENNY HEAD GLASS   2   131.234.08   250ml   +/- 0.12 mL   16   PENNY HEAD GLASS   2   131.234.08   250ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.09   500ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.09   500ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.10   1000ml   +/- 0.30 mL   22   PENNY HEAD GLASS   2   131.234.11   2000ml   +/- 0.30 mL   27   PENNY HEAD GLASS   2   131.234.13   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 0.00 mL   8   POLYTHELENE STOPPER   2   134.232.00*   2ml   +/- 0.00 mL   8   POLYTHELENE STOPPER   2   134.232.00*   10ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   131.232.01   5ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.02   10ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.03*   20ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.07   200ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.07   200ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.09   250ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.09   250ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.09   250ml   +/- 0.08 mL   13				_		
134.234.07   200ml   +/- 0.10 mL   16   PENNY HEAD GLASS   2   131.234.07   200ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.08   250ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.09   500ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.09   500ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.10   1000ml   +/- 0.30 mL   22   PENNY HEAD GLASS   2   131.234.13   4000ml   +/- 1.50 mL   27   PENNY HEAD GLASS   2   131.234.13   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.13   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.13   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.13   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.13   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.13   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.00   1 ml   +/- 0.01 mL   8   POLYTHELENE STOPPER   2   134.232.00   1 ml   +/- 0.015 mL   8   POLYTHELENE STOPPER   2   134.232.00   5 ml   +/- 0.08 mL   9   POLYTHELENE STOPPER   2   134.232.00   1 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.00   1 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.03   2 ml   +/- 0.03 mL   9   POLYTHELENE STOPPER   2   131.232.03   2 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.03   2 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 ml   +/- 0.08 mL   13   POLYTHELENE		100ml	+/- 0.08 mL	_		
131.234.07   200ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   134.234.08   250ml   +/- 0.12 mL   19   PENNY HEAD GLASS   2   131.234.09   500ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.10   1000ml   +/- 0.30 mL   22   PENNY HEAD GLASS   2   131.234.11   2000ml   +/- 0.30 mL   27   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.15*   6000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.15*   6000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.15*   6000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.15*   6000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.15*   6000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.232.00*   1ml   +/- 0.01 mL   8   POLYTHELENE STOPPER   2   134.232.00*   2ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   134.232.00*   2ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   134.232.00   10ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.02   10ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.03*   20ml   +/- 0.03 mL   9   POLYTHELENE STOPPER   2   131.232.04   25ml   +/- 0.03 mL   9   POLYTHELENE STOPPER   2   131.232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   PO	131.234.06	100ml	+/- 0.10 mL	16	PENNY HEAD GLASS	2
134.234.08   250ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.09   500ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.10   1000ml   +/- 0.30 mL   22   PENNY HEAD GLASS   2   131.234.11   2000ml   +/- 0.50 mL   27   PENNY HEAD GLASS   2   131.234.11   2000ml   +/- 0.50 mL   27   PENNY HEAD GLASS   1   131.234.115   6000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   131.234.115   6000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   134.232.00   1 ml   +/- 0.01 mL   8   POLYTHELENE STOPPER   2   134.232.00   2 ml   +/- 0.01 mL   8   POLYTHELENE STOPPER   2   134.232.01   5 ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   134.232.01   5 ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   134.232.02   1 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.03   2 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.03   2 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.03   2 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.03   2 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.03   2 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.04   2 5 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   5 0 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 0 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 0 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   5 0 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.06   10 0 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.06   10 0 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.06   10 0 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.06   10 0 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.07   2 0 0 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.07   2 0 0 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.07   2 0 0 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.07   2 0 0 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.07   2 0 0 ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2	134.234.07	200ml	+/- 0.10 mL	16	PENNY HEAD GLASS	2
131.234.08   250ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.09   500ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.11   2000ml   +/- 0.50 mL   22   PENNY HEAD GLASS   2   131.234.13*   4000ml   +/- 1.20 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.20 mL   38   PENNY HEAD GLASS   1   131.234.13*   4000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   134.232.00*   1ml   +/- 0.01 mL   8   POLYTHELENE STOPPER   2   134.232.00*   1ml   +/- 0.015 mL   8   POLYTHELENE STOPPER   2   134.232.00*   5ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   134.232.01   5ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   131.232.02   10ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   131.232.02   10ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.02   10ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.03*   20ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.00 mL   16   POLYTHELENE STOPPER   2   131.232.07   200ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131.232.07   200ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131.232.11   2000ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131.232.11   2000ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131.232.11   2000ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131.232.11   2000ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131.2478.03   20ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131.2478.03   20ml   +/-	131.234.07	200ml	+/- 0.20 mL	19	PENNY HEAD GLASS	2
131.234.09   500ml   +/- 0.20 mL   19   PENNY HEAD GLASS   2   131.234.10   1000ml   +/- 0.30 mL   22   PENNY HEAD GLASS   2   131.234.13   4000ml   +/- 0.50 mL   27   PENNY HEAD GLASS   1   131.234.13   4000ml   +/- 1.20 mL   38   PENNY HEAD GLASS   1   131.234.15   6000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   134.232.00*   1ml   +/- 0.01 mL   8   POLYTHELENE STOPPER   2   134.232.00   2 ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   134.232.01   5ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   131.232.01   5ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   131.232.01   5ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.02   10ml   +/- 0.08 mL   9   POLYTHELENE STOPPER   2   134.232.03   2 0ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.03   2 0ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.04   2 5ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.04   2 5ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.04   2 5ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.04   2 5ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.00 mL   16   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.00 mL   16   POLYTHELENE STOPPER   2   131.232.06   2 50ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131.232.07   2 00ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131.232.09   500ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131.232.15   6000ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131.232.15   6000ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131.232.15   6000ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131.478.00   50ml   +/- 0.00 mL   19   PTEE STOPPER   2   131.478.00   50ml   +/- 0.00	134.234.08	250ml	+/- 0.12 mL	16	PENNY HEAD GLASS	2
131.234.11   2000ml	131.234.08	250ml	+/- 0.20 mL	19	PENNY HEAD GLASS	2
131.234.11   2000ml	131.234.09	500ml		19	PENNY HEAD GLASS	
131.234.13*   4000ml   +/- 1.20 mL   38   PENNY HEAD GLASS   1   131.234.15*   6000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   134.232.00*   1ml   +/- 0.01 mL   8   POLYTHELENE STOPPER   2   134.232.00*   2   1/- 0.02 mL   9   POLYTHELENE STOPPER   2   134.232.01   5ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   131.232.01   5ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.02   10ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.03   2   10ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.03*   2   2   2   2   2   2   2   2   2	131.234.10	1000ml	+/- 0.30 mL		PENNY HEAD GLASS	_
131.234.15*   6000ml   +/- 1.50 mL   38   PENNY HEAD GLASS   1   134.232.00*   1ml   +/- 0.01 mL   8   POLYTHELENE STOPPER   2   134.232.00*   5ml   +/- 0.01 sml   8   POLYTHELENE STOPPER   2   134.232.01   5ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   134.232.02   10ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   134.232.02   10ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.03*   20ml   +/- 0.03 mL   9   POLYTHELENE STOPPER   2   134.232.03*   20ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.03*   20ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.05 mL   9   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   131.232.07   200ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   131.232.07   200ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.08   250ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.09   500ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.13*   4000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.13*   4000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.13*   4000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.15*   6000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.15*   6000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.15*   6000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.478.00*   1ml   +/- 0.01 mL   8   PTEE STOPPER   2   131.478.00*   1ml   +/- 0.01 mL   8   PTEE STOPPER   2   131.478.00*   1ml   +/- 0.03 mL   29   PTEE STOPPER   2   131.478.00*   1ml   +/- 0.03 mL   9   PTEE STOPPER   2   131.478.00*   20ml   +/- 0.03 mL   9   PTEE STOPPER   2   131.478.00*   20ml   +/- 0.03 mL   9   PTEE ST						
134.232.00						
134,232.008*   2ml   +/- 0.015 mL   8   POLYTHELENE STOPPER   2   134,232.01   5ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   134,232.02   10ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.02   10ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.03*   20ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.03*   20ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.03*   20ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.07   200ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   134,232.07   200ml   +/- 0.02 mL   19   POLYTHELENE STOPPER   2   134,232.08   250ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131,232.09   500ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131,232.09   500ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131,232.10   1000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131,232.11   2000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131,232.15   6000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131,232.15   6000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   2   134,478.00*   2ml   +/- 0.01 mL   8   PTEE STOPPER   2   134,478.00*   2ml   +/- 0.03 mL   9   PTEE STOPPER   2   134,478.00*   2ml   +/- 0.08 mL   13   PTEE STOPPER   2   134,478.00*   2ml   +/- 0.08 mL   13   PTEE STOPPER   2   134,478.00*   2ml   +/- 0.08 mL   13   PTEE STOPPER   2   134,478.00*   2ml   +/- 0.08 mL   13   PTEE STOPPER   2   134,478.00*   2ml   +/- 0.08 mL   13   PTEE STOPPER   2   134,478.00*   2ml   +/- 0.08 mL   13   PTEE STOPPER   2   134,478.00*   2ml   +/- 0.08 mL   13   PTEE STOPPER   2   134,478.00*   2ml   +/- 0.08 mL   13   PTEE STOPPER   2   134,478.00*   2ml						
131,232.01   Sml				-		
131.232.01   Sml				-		
134,232.02   10ml   +/- 0.02 mL   9   POLYTHELENE STOPPER   2   131,232.03   20ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.03   20ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131,232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131,232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134,232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131,232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131,232.06   100ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   131,232.07   200ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   131,232.07   200ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131,232.08   250ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131,232.08   250ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131,232.09   500ml   +/- 0.00 mL   19   POLYTHELENE STOPPER   2   131,232.10   1000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131,232.11   2000ml   +/- 0.30 mL   27   POLYTHELENE STOPPER   2   131,232.13   4000ml   +/- 0.50 mL   27   POLYTHELENE STOPPER   2   131,232.15   6000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   1   134,478.00   1ml   +/- 0.01 mL   8   PTEE STOPPER   2   134,478.00   1ml   +/- 0.01 mL   8   PTEE STOPPER   2   134,478.00   5ml   +/- 0.00 mL   13   PTEE STOPPER   2   134,478.00   5ml   +/- 0.00 mL   13   PTEE STOPPER   2   134,478.00   10ml   +/- 0.00 mL   13   PTEE STOPPER   2   134,478.00   5ml   +/- 0.00 mL   13   PTEE STOPPER   2   134,478.00   5ml   +/- 0.00 mL   13   PTEE STOPPER   2   134,478.00   5ml   +/- 0.00 mL   13   PTEE STOPPER   2   134,478.00   5ml   +/- 0.00 mL   13   PTEE STOPPER   2   134,478.00   5ml   +/- 0.00 mL   13   PTEE STOPPER   2   134,478.00   5ml   +/- 0.00 mL   13   PTEE STOPPER   2   134,478.00   50ml   +/- 0.00 mL   13   PTEE STOPPER   2   134,478.00   50ml   +/- 0.00 mL   14   PTEE S				_		
131.232.02   10ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.03*   20ml   +/- 0.03 mL   9   POLYTHELENE STOPPER   2   131.232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   131.232.07   200ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   131.232.07   200ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.09   250ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.09   500ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.09   500ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.10   1000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.11   2000ml   +/- 0.50 mL   27   POLYTHELENE STOPPER   2   131.232.13*   4000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   1   131.232.15*   6000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   1   131.232.15*   6000ml   +/- 1.50 mL   8   PTEE STOPPER   2   131.478.00*   1ml   +/- 0.01 mL   8   PTEE STOPPER   2   131.478.00*   1ml   +/- 0.08 mL   13   PTEE STOPPER   2   131.478.00*   1ml   +/- 0.08 mL   13   PTEE STOPPER   2   131.478.00*   10ml   +/- 0.08 mL   13   PTEE STOPPER   2   131.478.00*   10ml   +/- 0.08 mL   13   PTEE STOPPER   2   131.478.00*   10ml   +/- 0.08 mL   13   PTEE STOPPER   2   131.478.00*   25ml   +/- 0.08 mL   13   PTEE STOPPER   2   131.478.00*   25ml   +/- 0.08 mL   13   PTEE STOPPER   2   131.478.00*   25ml   +/- 0.08 mL   13   PTEE STOPPER   2   131.478.00*   25ml   +/- 0.08 mL   13   PTEE STOPPER   2   131.478.00*   25ml   +/- 0.08 mL   13   PTEE STOPPER   2   131.478.00*   25ml   +/- 0.08 mL   13   PTEE STOPPER   2   131.478.00*   25ml   +/- 0.08 mL   13   PTEE STOPPER   2   131.478.00*   25ml   +/- 0.08 mL				-		
134.232.03*   20ml   +/- 0.03 mL   9   POLYTHELENE STOPPER   2   131.232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   50ml   +/- 0.05 mL   9   POLYTHELENE STOPPER   2   134.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   131.232.07   200ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   131.232.07   200ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   131.232.08   250ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.08   250ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.09   500ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.11   2000ml   +/- 0.50 mL   27   POLYTHELENE STOPPER   2   131.232.13*   4000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   1   134.478.00*   1ml   +/- 0.01 mL   8   PTFE STOPPER   2   134.478.00*   2ml   +/- 0.02 mL   9   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.02 mL   9   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.02 mL   9   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.02 mL   9   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.03 mL   13   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.03 mL   13   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.03 mL   13   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.03 mL   13   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.00*   5ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.00*   5ml				_		
131.232.03*   20ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.04   25ml   +/- 0.03 mL   9   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   131.232.07   200ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   131.232.07   200ml   +/- 0.12 mL   16   POLYTHELENE STOPPER   2   131.232.08   250ml   +/- 0.12 mL   16   POLYTHELENE STOPPER   2   131.232.09   500ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.09   500ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.10   1000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.11   2000ml   +/- 0.30 mL   27   POLYTHELENE STOPPER   2   131.232.13*   4000ml   +/- 1.20 mL   38   POLYTHELENE STOPPER   1   131.232.15*   6000ml   +/- 1.20 mL   38   POLYTHELENE STOPPER   1   134.478.00*   1ml   +/- 0.01 mL   8   PTEE STOPPER   2   134.478.00*   1ml   +/- 0.02 mL   9   PTEE STOPPER   2   134.478.00*   1ml   +/- 0.02 mL   9   PTEE STOPPER   2   134.478.00   5ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.00   5ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.00   5ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.00   5ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.00   5ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.00   5ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.00   5ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.00   5ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.00   5ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.00   5ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.00   5ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.00   5ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.00   5ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.00   5ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.00   5ml				-		
134.232.04   25ml   +/- 0.03 mL   9   POLYTHELENE STOPPER   2   131.232.04   25ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.05   50ml   +/- 0.05 mL   9   POLYTHELENE STOPPER   2   134.232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.06   100ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   134.232.07   200ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   134.232.07   200ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   134.232.07   200ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   134.232.08   250ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.08   250ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.09   500ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.10   1000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.11   2000ml   +/- 0.50 mL   27   POLYTHELENE STOPPER   2   131.232.13   4000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   1   131.232.13*   4000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   1   134.478.00*   1ml   +/- 0.01 mL   8   PTFE STOPPER   2   134.478.00*   1ml   +/- 0.01 mL   8   PTFE STOPPER   2   134.478.00   5ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.01   5ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.02   10ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.02   10ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.03   20ml   +/- 0.08 mL   13   PTFE STOPPER   1   134.478.04   25ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.04   25ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.05   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.47				-		
131.232.04   25ml				_		
131.232.05   50ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   134.232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   131.232.07   200ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   131.232.07   200ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.08   250ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.08   250ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.09   500ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.10   1000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.11   2000ml   +/- 0.50 mL   27   POLYTHELENE STOPPER   2   131.232.13*   4000ml   +/- 1.20 mL   38   POLYTHELENE STOPPER   1   131.232.13*   6000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   1   134.478.00*   1ml   +/- 0.01 mL   8   PTFE STOPPER   2   134.478.00*   2ml   +/- 0.015 mL   8   PTFE STOPPER   2   134.478.01   5ml   +/- 0.02 mL   9   PTFE STOPPER   2   131.478.01   5ml   +/- 0.08 mL   13   PTFE STOPPER   2   131.478.02   10ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.03*   20ml   +/- 0.03 mL   9   PTFE STOPPER   1   134.478.03*   20ml   +/- 0.03 mL   9   PTFE STOPPER   2   134.478.03*   20ml   +/- 0.03 mL   9   PTFE STOPPER   2   134.478.04   25ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.04   25ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.05   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.07   200ml   +/- 0.00 mL   16   PTFE STOPPER   2   134.478.06   100ml   +/- 0.00 mL   16   PTFE STOPPER   2   134.478.09   500ml   +/- 0.20 mL   19   PTFE STOPPER   2   134.478.09   500ml   +/- 0.20 mL   19   PTFE STOPPER   2   134.478.09   500ml   +/	131.232.04	25ml	+/- 0.08 mL	-		2
134.232.06   100ml   +/- 0.08 mL   13   POLYTHELENE STOPPER   2   131.232.06   100ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   134.232.07   200ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.08   250ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   134.232.08   250ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.09   500ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.10   1000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.11   2000ml   +/- 0.50 mL   27   POLYTHELENE STOPPER   2   131.232.15   6000ml   +/- 1.20 mL   38   POLYTHELENE STOPPER   1   131.232.15   6000ml   +/- 1.00 mL   38   POLYTHELENE STOPPER   1   134.478.00*   1ml   +/- 0.01 mL   8   PTFE STOPPER   2   134.478.00*   2ml   +/- 0.02 mL   9   PTFE STOPPER   2   134.478.001   5ml   +/- 0.02 mL   9   PTFE STOPPER   2   134.478.001   5ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.002   10ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.002   10ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.03   20ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.04   25ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.04   25ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.05   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.00 mL   19   PTFE STOPPER   2   134.478.07   200ml   +/- 0.00 mL   19   PTFE STOPPER   2   134.478.08   250ml   +/- 0.00 mL   19   PTFE STOPPER   2   134.478.09   500ml   +/- 0.00 mL   19	134.232.05	50ml	+/- 0.05 mL	9	POLYTHELENE STOPPER	2
131.232.06	131.232.05	50ml	+/- 0.08 mL	13	POLYTHELENE STOPPER	2
134.232.07   200ml   +/- 0.10 mL   16   POLYTHELENE STOPPER   2   131.232.07   200ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   134.232.08   250ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.09   500ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.00   500ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.10   1000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.11   2000ml   +/- 0.50 mL   27   POLYTHELENE STOPPER   1   131.232.13*   4000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   1   131.232.15*   6000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   1   134.478.00*   1ml   +/- 0.01 mL   8   PTEE STOPPER   2   134.478.00*   2ml   +/- 0.01 mL   8   PTEE STOPPER   2   134.478.01   5ml   +/- 0.02 mL   9   PTEE STOPPER   2   134.478.01   5ml   +/- 0.08 mL   13   PTEE STOPPER   2   131.478.02   10ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.02   10ml   +/- 0.03 mL   9   PTEE STOPPER   2   134.478.03*   20ml   +/- 0.03 mL   9   PTEE STOPPER   1   134.478.03*   20ml   +/- 0.03 mL   9   PTEE STOPPER   1   134.478.03*   20ml   +/- 0.03 mL   9   PTEE STOPPER   1   134.478.04   25ml   +/- 0.03 mL   9   PTEE STOPPER   2   134.478.04   25ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.05   50ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.05   50ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTEE STOPPER   2   134.478.06   100ml   +/- 0.00 mL   16   PTEE STOPPER   2   134.478.07   200ml   +/- 0.00 mL   16   PTEE STOPPER   2   134.478.08   250ml   +/- 0.00 mL   19   PTEE STOPPER   2   134.478.08   250ml   +/- 0.00 mL   19   PTEE STOPPER   2   134.478.09   500ml   +/- 0.00 mL   19   PTEE STOPPER   2   134.478.09   500ml   +/- 0.20 mL   19   PTEE STOPPER   2   134.478.09   500ml   +/- 0.20 mL   19   PTEE STOPPER   2   134.478.09   500ml   +/- 0.20 mL   19   PTEE STOPPER   2   134.478.01   1000ml   +/- 0.30 mL   22   PTEE ST	134.232.06	100ml	+/- 0.08 mL	13	POLYTHELENE STOPPER	2
131.232.07   200ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   134.232.08   250ml   +/- 0.12 mL   16   POLYTHELENE STOPPER   2   131.232.09   500ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.10   1000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.11   2000ml   +/- 0.50 mL   27   POLYTHELENE STOPPER   2   131.232.13   4000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   1   131.232.15   6000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   1   134.478.00	131.232.06	100ml	+/- 0.10 mL	16	POLYTHELENE STOPPER	2
134.232.08   250ml   +/- 0.12 mL   16   POLYTHELENE STOPPER   2   131.232.08   250ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.09   500ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.10   1000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.11   2000ml   +/- 0.50 mL   27   POLYTHELENE STOPPER   1   131.232.13*   4000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   1   131.232.15*   6000ml   +/- 1.50 mL   8   POLYTHELENE STOPPER   1   134.478.00*   1ml   +/- 0.01 mL   8   PTFE STOPPER   2   134.478.00b*   2ml   +/- 0.015 mL   8   PTFE STOPPER   2   134.478.01   5ml   +/- 0.02 mL   9   PTFE STOPPER   2   131.478.01   5ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.02   10ml   +/- 0.02 mL   9   PTFE STOPPER   2   134.478.03*   20ml   +/- 0.03 mL   9   PTFE STOPPER   2   134.478.04   25ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.04   25ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.05   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.05   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.05   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.07   200ml   +/- 0.09 mL   19   PTFE STOPPER   2   134.478.08   250ml   +/- 0.00 mL   19   PTFE STOPPER   2   134.478.08   250ml   +/- 0.00 mL   19   PTFE STOPPER   2   134.478.09   500ml   +/- 0.00 mL   19   PTFE STOPPER   2   134.478.09   500ml   +/- 0.00 mL   19   PTFE STOPPER   2   134.478.09   500ml   +/- 0.00 mL   19   PTFE STOPPER   2   134.478.11   2000ml   +/- 0.50 mL   27   PTFE STOPPER   1   134.478.13*   4000ml   +/- 1.50 mL   38   PTFE STOPPER	134.232.07	200ml	+/- 0.10 mL	16	POLYTHELENE STOPPER	2
131.232.08   250ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.09   500ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.10   1000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.11   2000ml   +/- 0.50 mL   27   POLYTHELENE STOPPER   1   131.232.13*   4000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   1   131.232.15*   6000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   1   134.478.00*   1ml   +/- 0.01 mL   8   PTFE STOPPER   2   134.478.00B*   2ml   +/- 0.015 mL   8   PTFE STOPPER   2   134.478.01   5ml   +/- 0.02 mL   9   PTFE STOPPER   2   131.478.02   10ml   +/- 0.08 mL   13   PTFE STOPPER   2   131.478.02   10ml   +/- 0.02 mL   9   PTFE STOPPER   2   134.478.03*   20ml   +/- 0.03 mL   9   PTFE STOPPER   2   134.478.04   25ml   +/- 0.03 mL   9   PTFE STOPPER   2   134.478.04   25ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.05   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.05   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.05   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.07   200ml   +/- 0.00 mL   16   PTFE STOPPER   2   134.478.08   250ml   +/- 0.00 mL   19   PTFE STOPPER   2   134.478.08   250ml   +/- 0.00 mL   19   PTFE STOPPER   2   134.478.08   250ml   +/- 0.00 mL   19   PTFE STOPPER   2   134.478.09   500ml   +/- 0.00 mL   19   PTFE STOPPER   2   134.478.09   500ml   +/- 0.00 mL   19   PTFE STOPPER   2   134.478.09   500ml   +/- 0.00 mL   19   PTFE STOPPER   2   134.478.09   500ml   +/- 0.00 mL   22   PTFE STOPPER   2   134.478.11   2000ml   +/- 0.50 mL   27   PTFE STOPPER   1   134.478.13*   4000ml   +/- 1.50 mL   38   PTFE STOPPER   1   13				-		
131.232.09   500ml   +/- 0.20 mL   19   POLYTHELENE STOPPER   2   131.232.10   1000ml   +/- 0.30 mL   22   POLYTHELENE STOPPER   2   131.232.11   2000ml   +/- 0.50 mL   27   POLYTHELENE STOPPER   1   131.232.13*   4000ml   +/- 1.20 mL   38   POLYTHELENE STOPPER   1   131.232.15*   6000ml   +/- 1.50 mL   38   POLYTHELENE STOPPER   1   134.478.00*   1ml   +/- 0.01 mL   8   PTFE STOPPER   2   134.478.008*   2ml   +/- 0.015 mL   8   PTFE STOPPER   2   134.478.01   5ml   +/- 0.02 mL   9   PTFE STOPPER   2   131.478.02   10ml   +/- 0.08 mL   13   PTFE STOPPER   2   131.478.02   10ml   +/- 0.08 mL   13   PTFE STOPPER   2   134.478.03*   20ml   +/- 0.03 mL   9   PTFE STOPPER   1   134.478.04   25ml   +/- 0.08 mL   13   PTFE STOPPER   1   134.478.04   25ml   +/- 0.08 mL   13   PTFE STOPPER   2   131.478.04   25ml   +/- 0.08 mL   13   PTFE STOPPER   2   131.478.05   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   131.478.05   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   131.478.05   50ml   +/- 0.08 mL   13   PTFE STOPPER   2   131.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   131.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   131.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   131.478.06   100ml   +/- 0.08 mL   13   PTFE STOPPER   2   131.478.06   100ml   +/- 0.09 mL   13   PTFE STOPPER   2   131.478.06   100ml   +/- 0.00 mL   16   PTFE STOPPER   2   131.478.07   200ml   +/- 0.00 mL   16   PTFE STOPPER   2   131.478.08   250ml   +/- 0.20 mL   19   PTFE STOPPER   2   131.478.09   500ml   +/- 0.20 mL   19   PTFE STOPPER   2   131.478.09   500ml   +/- 0.20 mL   19   PTFE STOPPER   2   131.478.09   500ml   +/- 0.20 mL   19   PTFE STOPPER   2   131.478.01   1000ml   +/- 0.30 mL   22   PTFE STOPPER   2   131.478.11   2000ml   +/- 0.50 mL   27   PTFE STOPPER   1   131.478.13*   4000ml   +/- 1.50 mL   38   PTFE STOPPER   1   131.478.15*   6000ml   +/- 1.50 mL   38   PTFE STOPPER   1   131.478.15*   1000ml   +/- 1.50 mL   38   PTFE STOPPER   1   131.478.15*   1000ml   +/- 1.50 mL   38   PTFE STOPPER   1   1				-		
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134.478.00*         1ml         +/- 0.01 mL         8         PTFE STOPPER         2           134.478.008*         2ml         +/- 0.015 mL         8         PTFE STOPPER         2           134.478.01         5ml         +/- 0.02 mL         9         PTFE STOPPER         2           131.478.01         5ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.02         10ml         +/- 0.08 mL         13         PTFE STOPPER         1           134.478.02         10ml         +/- 0.02 mL         9         PTFE STOPPER         2           134.478.03*         20ml         +/- 0.03 mL         9         PTFE STOPPER         1           131.478.04         25ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.04         25ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.05         50ml         +/- 0.05 mL         9         PTFE STOPPER         2           131.478.06         100ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.07         200ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.08						
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131.478.01         5ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.02         10ml         +/- 0.08 mL         13         PTFE STOPPER         1           134.478.02         10ml         +/- 0.02 mL         9         PTFE STOPPER         2           134.478.03*         20ml         +/- 0.03 mL         9         PTFE STOPPER         1           131.478.04         25ml         +/- 0.03 mL         9         PTFE STOPPER         2           131.478.04         25ml         +/- 0.08 mL         13         PTFE STOPPER         2           134.478.05         50ml         +/- 0.05 mL         9         PTFE STOPPER         2           131.478.05         50ml         +/- 0.08 mL         13         PTFE STOPPER         2           134.478.06         100ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.06         100ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.07         200ml         +/- 0.10 mL         16         PTFE STOPPER         2           131.478.08         250ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.09						
134.478.02         10ml         +/- 0.02 mL         9         PTFE STOPPER         2           134.478.03*         20ml         +/- 0.03 mL         9         PTFE STOPPER         1           131.478.03*         20ml         +/- 0.08 mL         13         PTFE STOPPER         1           134.478.04         25ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.04         25ml         +/- 0.08 mL         13         PTFE STOPPER         2           134.478.05         50ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.05         50ml         +/- 0.08 mL         13         PTFE STOPPER         2           134.478.06         100ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.06         100ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.07         200ml         +/- 0.10 mL         16         PTFE STOPPER         2           131.478.08         250ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.09         500ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.10 <td>131.478.01</td> <td></td> <td></td> <td>13</td> <td></td> <td>2</td>	131.478.01			13		2
134.478.03*         20ml         +/- 0.03 mL         9         PTFE STOPPER         1           131.478.03*         20ml         +/- 0.08 mL         13         PTFE STOPPER         1           134.478.04         25ml         +/- 0.03 mL         9         PTFE STOPPER         2           131.478.04         25ml         +/- 0.08 mL         13         PTFE STOPPER         2           134.478.05         50ml         +/- 0.08 mL         9         PTFE STOPPER         2           131.478.05         50ml         +/- 0.08 mL         13         PTFE STOPPER         2           134.478.06         100ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.06         100ml         +/- 0.10 mL         16         PTFE STOPPER         2           134.478.07         200ml         +/- 0.10 mL         16         PTFE STOPPER         2           134.478.08         250ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.08         250ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.10         1000ml         +/- 0.30 mL         22         PTFE STOPPER         2           131.478.13* </td <td>131.478.02</td> <td>10ml</td> <td>+/- 0.08 mL</td> <td>13</td> <td>PTFE STOPPER</td> <td>1</td>	131.478.02	10ml	+/- 0.08 mL	13	PTFE STOPPER	1
131.478.03*         20ml         +/- 0.08 mL         13         PTFE STOPPER         1           134.478.04         25ml         +/- 0.03 mL         9         PTFE STOPPER         2           131.478.04         25ml         +/- 0.08 mL         13         PTFE STOPPER         2           134.478.05         50ml         +/- 0.08 mL         9         PTFE STOPPER         2           131.478.06         100ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.06         100ml         +/- 0.10 mL         16         PTFE STOPPER         2           134.478.07         200ml         +/- 0.10 mL         16         PTFE STOPPER         2           134.478.07         200ml         +/- 0.20 mL         19         PTFE STOPPER         2           134.478.08         250ml         +/- 0.12 mL         16         PTFE STOPPER         2           131.478.08         250ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.10         1000ml         +/- 0.30 mL         22         PTFE STOPPER         2           131.478.11         2000ml         +/- 0.50 mL         27         PTFE STOPPER         1           131.478.13		10ml	+/- 0.02 mL	9	PTFE STOPPER	2
134.478.04         25ml         +/- 0.03 mL         9         PTFE STOPPER         2           131.478.04         25ml         +/- 0.08 mL         13         PTFE STOPPER         2           134.478.05         50ml         +/- 0.05 mL         9         PTFE STOPPER         2           131.478.05         50ml         +/- 0.08 mL         13         PTFE STOPPER         2           134.478.06         100ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.06         100ml         +/- 0.10 mL         16         PTFE STOPPER         2           134.478.07         200ml         +/- 0.10 mL         16         PTFE STOPPER         2           134.478.07         200ml         +/- 0.20 mL         19         PTFE STOPPER         2           134.478.08         250ml         +/- 0.12 mL         16         PTFE STOPPER         2           131.478.09         500ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.10         1000ml         +/- 0.30 mL         22         PTFE STOPPER         2           131.478.13*         4000ml         +/- 0.50 mL         27         PTFE STOPPER         1           131.478.15						
131.478.04         25ml         +/- 0.08 mL         13         PTFE STOPPER         2           134.478.05         50ml         +/- 0.05 mL         9         PTFE STOPPER         2           131.478.05         50ml         +/- 0.08 mL         13         PTFE STOPPER         2           134.478.06         100ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.06         100ml         +/- 0.10 mL         16         PTFE STOPPER         2           134.478.07         200ml         +/- 0.10 mL         16         PTFE STOPPER         2           131.478.08         250ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.08         250ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.09         500ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.10         1000ml         +/- 0.30 mL         22         PTFE STOPPER         2           131.478.13*         4000ml         +/- 1.20 mL         38         PTFE STOPPER         1           131.478.15*         6000ml         +/- 1.50 mL         38         PTFE STOPPER         1						
134.478.05         50ml         +/- 0.05 mL         9         PTFE STOPPER         2           131.478.05         50ml         +/- 0.08 mL         13         PTFE STOPPER         2           134.478.06         100ml         +/- 0.08 mL         13         PTFE STOPPER         2           131.478.06         100ml         +/- 0.10 mL         16         PTFE STOPPER         2           134.478.07         200ml         +/- 0.10 mL         16         PTFE STOPPER         2           131.478.07         200ml         +/- 0.20 mL         19         PTFE STOPPER         2           134.478.08         250ml         +/- 0.12 mL         16         PTFE STOPPER         2           131.478.08         250ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.10         1000ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.11         2000ml         +/- 0.50 mL         27         PTFE STOPPER         1           131.478.13*         4000ml         +/- 1.20 mL         38         PTFE STOPPER         1           131.478.15*         6000ml         +/- 1.50 mL         38         PTFE STOPPER         1						
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131.478.06       100ml       +/- 0.10 mL       16       PTFE STOPPER       2         134.478.07       200ml       +/- 0.10 mL       16       PTFE STOPPER       2         131.478.07       200ml       +/- 0.20 mL       19       PTFE STOPPER       2         134.478.08       250ml       +/- 0.12 mL       16       PTFE STOPPER       2         131.478.08       250ml       +/- 0.20 mL       19       PTFE STOPPER       2         131.478.09       500ml       +/- 0.20 mL       19       PTFE STOPPER       2         131.478.10       1000ml       +/- 0.30 mL       22       PTFE STOPPER       2         131.478.11       2000ml       +/- 0.50 mL       27       PTFE STOPPER       1         131.478.13*       4000ml       +/- 1.20 mL       38       PTFE STOPPER       1         131.478.15*       6000ml       +/- 1.50 mL       38       PTFE STOPPER       1						
134.478.07         200ml         +/- 0.10 mL         16         PTFE STOPPER         2           131.478.07         200ml         +/- 0.20 mL         19         PTFE STOPPER         2           134.478.08         250ml         +/- 0.12 mL         16         PTFE STOPPER         2           131.478.08         250ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.09         500ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.10         1000ml         +/- 0.30 mL         22         PTFE STOPPER         2           131.478.11         2000ml         +/- 0.50 mL         27         PTFE STOPPER         1           131.478.13*         4000ml         +/- 1.20 mL         38         PTFE STOPPER         1           131.478.15*         6000ml         +/- 1.50 mL         38         PTFE STOPPER         1						
131.478.07         200ml         +/- 0.20 mL         19         PTFE STOPPER         2           134.478.08         250ml         +/- 0.12 mL         16         PTFE STOPPER         2           131.478.08         250ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.09         500ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.10         1000ml         +/- 0.30 mL         22         PTFE STOPPER         2           131.478.11         2000ml         +/- 0.50 mL         27         PTFE STOPPER         1           131.478.13*         4000ml         +/- 1.20 mL         38         PTFE STOPPER         1           131.478.15*         6000ml         +/- 1.50 mL         38         PTFE STOPPER         1						
134.478.08         250ml         +/- 0.12 mL         16         PTFE STOPPER         2           131.478.08         250ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.09         500ml         +/- 0.20 mL         19         PTFE STOPPER         2           131.478.10         1000ml         +/- 0.30 mL         22         PTFE STOPPER         2           131.478.11         2000ml         +/- 0.50 mL         27         PTFE STOPPER         1           131.478.13*         4000ml         +/- 1.20 mL         38         PTFE STOPPER         1           131.478.15*         6000ml         +/- 1.50 mL         38         PTFE STOPPER         1						
131.478.08     250ml     +/- 0.20 mL     19     PTFE STOPPER     2       131.478.09     500ml     +/- 0.20 mL     19     PTFE STOPPER     2       131.478.10     1000ml     +/- 0.30 mL     22     PTFE STOPPER     2       131.478.11     2000ml     +/- 0.50 mL     27     PTFE STOPPER     1       131.478.13*     4000ml     +/- 1.20 mL     38     PTFE STOPPER     1       131.478.15*     6000ml     +/- 1.50 mL     38     PTFE STOPPER     1						
131.478.09     500ml     +/- 0.20 mL     19     PTFE STOPPER     2       131.478.10     1000ml     +/- 0.30 mL     22     PTFE STOPPER     2       131.478.11     2000ml     +/- 0.50 mL     27     PTFE STOPPER     1       131.478.13*     4000ml     +/- 1.20 mL     38     PTFE STOPPER     1       131.478.15*     6000ml     +/- 1.50 mL     38     PTFE STOPPER     1						
131.478.11     2000ml     +/- 0.50 mL     27     PTFE STOPPER     1       131.478.13*     4000ml     +/- 1.20 mL     38     PTFE STOPPER     1       131.478.15*     6000ml     +/- 1.50 mL     38     PTFE STOPPER     1				19		2
131.478.13*     4000ml     +/- 1.20 mL     38     PTFE STOPPER     1       131.478.15*     6000ml     +/- 1.50 mL     38     PTFE STOPPER     1	131.478.10	1000ml	+/- 0.30 mL	22	PTFE STOPPER	2
131.478.15* 6000ml +/- 1.50 mL 38 PTFE STOPPER 1	131.478.11	2000ml	+/- 0.50 mL	27	PTFE STOPPER	1
	131.478.13*	4000ml	+/- 1.20 mL	38	PTFE STOPPER	1
		6000ml	+/- 1.50 mL	38	PTFE STOPPER	1





















#### Catalogue Tolerance Stopper Qty Capacity Per Pack (± ml) Type 134.236.00A\* +/- 0.01 mL PENNY HEAD GLASS 1ml 134.236.00BA 2ml +/- 0.015 mL 8 PENNY HEAD GLASS 134.236.01A +/- 0.02 mL PENNY HEAD GLASS 5ml 9 131.236.01A 5ml +/- 0.08 mL 13 PENNY HEAD GLASS 134.236.02A 10ml +/- 0.02 mL 9 PENNY HEAD GLASS 131.236.02A 10ml +/- 0.08 mL 13 PENNY HEAD GLASS +/- 0.03 mL 134.236.03A\* 20ml 9 PENNY HEAD GLASS 131.236.03A\* 20ml +/- 0.08 mL 13 PENNY HEAD GLASS 134.236.04A 25ml +/- 0.03 mL 9 PENNY HEAD GLASS 131.236.04A 25ml +/- 0.08 mL PENNY HEAD GLASS 13 1 134.236.05A 50ml +/- 0.05 mL PENNY HEAD GLASS 9 131.236.05A 50ml +/- 0.08 mL PENNY HEAD GLASS 13 134.236.06A 100ml +/- 0.08 mL 13 PENNY HEAD GLASS 131.236.06A 100ml +/- 0.10 mL PENNY HEAD GLASS 16 134.236.07A 200ml +/- 0.10 mL 16 PENNY HEAD GLASS 131.236.07A 200ml +/- 0.20 mL 19 PENNY HEAD GLASS PENNY HEAD GLASS +/- 0.12 mL 134.236.08A 250ml 16 +/- 0.20 mL PENNY HEAD GLASS 131.236.08A 250ml 19 131.236.09A 500ml +/- 0.20 mL 19 PENNY HEAD GLASS 1 131.236.10A 1000ml +/- 0.30 mL PENNY HEAD GLASS 22 2000ml +/- 0.50 mL PENNY HEAD GLASS 131.236.11A 27 134.276.00A\* 1ml +/- 0.01 mL 8 POLYTHELENE STOPPER 134.276.00BA<sup>3</sup> +/- 0.015 mL 8 POLYTHELENE STOPPER 2ml 134.276.01A 5ml +/- 0.02 mL 9 POLYTHELENE STOPPER 1 131.276.01A 5ml +/- 0.08 mL 13 POLYTHELENE STOPPER POLYTHELENE STOPPER 134.276.02A 10ml +/- 0.02 mL 9 +/- 0.08 mL POLYTHELENE STOPPER 131.276.02A 10ml 13 POLYTHELENE STOPPER 134.276.03A\* 20ml +/- 0.03 mL 9 1 131.276.03A\* 20ml +/- 0.08 mL POLYTHELENE STOPPER 13 134.276.04A 25ml +/- 0.03 mL 9 POLYTHELENE STOPPER 131.276.04A 25ml +/- 0.08 mL 13 POLYTHELENE STOPPER 134.276.05A 50ml +/- 0.05 mL 9 POLYTHELENE STOPPER 131.276.05A 50<sub>ml</sub> +/- 0.08 mL 13 POLYTHELENE STOPPER 134.276.06A 100ml +/- 0.08 mL 13 POLYTHELENE STOPPER POLYTHELENE STOPPER 131.276.06A 100ml +/- 0.10 mL 16 134.276.07A 200ml +/- 0.10 mL 16 POLYTHELENE STOPPER 131.276.07A 200ml +/- 0.20 mL POLYTHELENE STOPPER 19 +/- 0.12 mL 134.276.08A 250ml 16 POLYTHELENE STOPPER 131.276.08A +/- 0.20 mL POLYTHELENE STOPPER 250ml 19 131.276.09A 500ml +/- 0.20 mL 19 POLYTHELENE STOPPER 131.276.10A 1000ml +/- 0.30 mL 22 POLYTHELENE STOPPER POLYTHELENE STOPPER 131.276.11A 2000ml +/- 0.50 ml 27 1 134.479.00A<sup>3</sup> 1ml +/- 0.01 mL 8 PTFE STOPPER 134.479.00BA<sup>3</sup> +/- 0.015 mL PTFE STOPPER 2<sub>m</sub>l 8 1 134.479.01A 5ml +/- 0.02 mL 9 PTFE STOPPER 131.479.01A +/- 0.08 mL PTFE STOPPER 5ml 13 1 131.479.02A 10<sub>m</sub>l +/- 0.08 mL 13 PTFE STOPPER 134.479.02A +/- 0.02 mL 9 PTFE STOPPER 10ml 1 131.479.03A\* 20ml +/- 0.08 mL 13 PTFE STOPPER 1 134.479.03A\* 20ml +/- 0.03 mL 9 PTFE STOPPER 134.479.04A 25ml +/- 0.03 mL 9 PTFF STOPPFR 1 131.479.04A 25ml PTFE STOPPER +/- 0.08 mL 13 134.479.05A PTFE STOPPER 50ml +/- 0.05 mL 9 131.479.05A 50ml +/- 0.08 mL PTFE STOPPER 13 134.479.06A 100ml +/- 0.08 mL PTFE STOPPER 13 1 131.479.06A 100ml +/- 0.10 mL 16 PTFE STOPPER 1 134.479.07A 200ml +/- 0.10 mL PTFE STOPPER 16 131.479.07A 200ml +/- 0.20 mL 19 PTFE STOPPER 1 134.479.08A 250ml +/- 0.12 mL 16 PTFE STOPPER 131.479.08A 250ml +/- 0.20 ml 19 PTFF STOPPFR 1 131.479.09A 500ml +/- 0.20 mL 19 PTFE STOPPER 131.479.10A 1000ml +/- 0.30 mL PTFE STOPPER 22 1 131.479.11A 2000ml PTFE STOPPER +/- 0.50 mL 27

#### Amber Volumetric Flask, CLASS A. SERIALIZED

These flasks are made as per **ASTM E 288 Class A** Serialized specification. The flasks have diamond graduated line and are calibrated TC (To Contain). These comes in white colour enamel printing.





































These flasks are made as per ASTM E 288 Class A Serialized specification. The flasks have diamond graduated line and are calibrated TC (To Contain). These comes in white colour enamel printing.









**ASTM** 









Catalogue	Capacity	Tolerance	Stopper	Stopper	Qty
No.	capacity	(± ml)	Size	Туре	Per Pack
134.234.00A*	1ml	+/- 0.01 mL	8	PENNY HEAD GLASS	2
134.234.00BA*	2ml	+/- 0.015 mL	8	PENNY HEAD GLASS	2
134.234.01A	5ml	+/- 0.02 mL	9	PENNY HEAD GLASS	2
131.234.01A	5ml	+/- 0.08 mL	13	PENNY HEAD GLASS	2
134.234.02A	10ml	+/- 0.02 mL	9	PENNY HEAD GLASS	2
131.234.02A	10ml	+/- 0.08 mL	13	PENNY HEAD GLASS	2
134.234.03A* 131.234.03A*	20ml 20ml	+/- 0.03 mL +/- 0.08 mL	9 13	PENNY HEAD GLASS PENNY HEAD GLASS	2
134.234.03A	25ml	+/- 0.03 mL	9	PENNY HEAD GLASS	2
131.234.04A	25ml	+/- 0.03 mL	13	PENNY HEAD GLASS	2
134.234.05A	50ml	+/- 0.05 mL	9	PENNY HEAD GLASS	2
131.234.05A	50ml	+/- 0.08 mL	13	PENNY HEAD GLASS	2
134.234.06A	100ml	+/- 0.08 mL	13	PENNY HEAD GLASS	2
131.234.06A	100ml	+/- 0.10 mL	16	PENNY HEAD GLASS	2
134.234.07A	200ml	+/- 0.10 mL	16	PENNY HEAD GLASS	2
131.234.07A	200ml	+/- 0.20 mL	19	PENNY HEAD GLASS	2
134.234.08A	250ml	+/- 0.12 mL	16	PENNY HEAD GLASS	2
131.234.08A	250ml	+/- 0.20 mL	19	PENNY HEAD GLASS	2
131.234.09A	500ml	+/- 0.20 mL	19	PENNY HEAD GLASS	2
131.234.10A	1000ml	+/- 0.30 mL	22	PENNY HEAD GLASS	2
131.234.11A	2000ml	+/- 0.50 mL	27	PENNY HEAD GLASS	1
134.232.00A*	1ml	+/- 0.01 mL	8	POLYTHELENE STOPPER	2
134.232.00BA*	2ml	+/- 0.015 mL	8	POLYTHELENE STOPPER	2
134.232.01A	5ml	+/- 0.02 mL	9	POLYTHELENE STOPPER	2
131.232.01A	5ml	+/- 0.08 mL	13	POLYTHELENE STOPPER	2
134.232.02A	10ml	+/- 0.02 mL	9	POLYTHELENE STOPPER	2
131.232.02A	10ml	+/- 0.08 mL	13	POLYTHELENE STOPPER	2
134.232.03A*	20ml	+/- 0.03 mL	9	POLYTHELENE STOPPER	2
131.232.03A*	20ml	+/- 0.08 mL	13	POLYTHELENE STOPPER	2
134.232.04A	25ml	+/- 0.03 mL	9	POLYTHELENE STOPPER	2
131.232.04A	25ml	+/- 0.08 mL	13	POLYTHELENE STOPPER	2
134.232.05A	50ml	+/- 0.05 mL	9	POLYTHELENE STOPPER	2
131.232.05A 134.232.06A	50ml 100ml	+/- 0.08 mL +/- 0.08 mL	13 13	POLYTHELENE STOPPER	2
134.232.06A 131.232.06A	100ml	+/- 0.08 IIIL +/- 0.10 mL	16	POLYTHELENE STOPPER POLYTHELENE STOPPER	2
134.232.00A	200ml	+/- 0.10 mL	16	POLYTHELENE STOPPER	2
131.232.07A	200ml	+/- 0.20 mL	19	POLYTHELENE STOPPER	2
134.232.08A	250ml	+/- 0.12 mL	16	POLYTHELENE STOPPER	2
131.232.08A	250ml	+/- 0.20 mL	19	POLYTHELENE STOPPER	2
131.232.09A	500ml	+/- 0.20 mL	19	POLYTHELENE STOPPER	2
131.232.10A	1000ml	+/- 0.30 mL	22	POLYTHELENE STOPPER	2
131.232.11A	2000ml	+/- 0.50 mL	27	POLYTHELENE STOPPER	1
134.478.00A*	1ml	+/- 0.01 mL	8	PTFE STOPPER	2
134.478.00BA*	2ml	+/- 0.015 mL	8	PTFE STOPPER	2
134.478.01A	5ml	+/- 0.02 mL	9	PTFE STOPPER	2
131.478.01A	5ml	+/- 0.08 mL	13	PTFE STOPPER	2
131.478.02A	10ml	+/- 0.08 mL	13	PTFE STOPPER	1
134.478.02A	10ml	+/- 0.02 mL	9	PTFE STOPPER	2
134.478.03A*	20ml	+/- 0.05 mL	9	PTFE STOPPER	1
131.478.03A*	20ml	+/- 0.08 mL	13	PTFE STOPPER	1
134.478.04A	25ml	+/- 0.03 mL	9	PTFE STOPPER	2
131.478.04A	25ml	+/- 0.08 mL	13	PTFE STOPPER	2
134.478.05A	50ml	+/- 0.05 mL	9	PTFE STOPPER	2
131.478.05A	50ml	+/- 0.08 mL	13	PTFE STOPPER	2
134.478.06A	100ml	+/- 0.08 mL	13	PTFE STOPPER	2
131.478.06A 134.478.07A	100ml	+/- 0.10 mL +/- 0.10 mL	16 16	PTFE STOPPER PTFE STOPPER	2
134.478.07A 131.478.07A	200ml 200ml	+/- 0.10 IIIL +/- 0.20 mL	16 19	PTFE STOPPER PTFE STOPPER	2
131.478.07A 134.478.08A	250ml	+/- 0.20 IIIL +/- 0.12 mL	16	PTFE STOPPER PTFE STOPPER	2
131.478.08A	250ml	+/- 0.20 mL	19	PTFE STOPPER	2
131.478.09A	500ml	+/- 0.20 mL	19	PTFE STOPPER	2
131.478.10A	1000ml	+/- 0.30 mL	22	PTFE STOPPER	2
131.478.11A	2000ml	+/- 0.50 mL	27	PTFE STOPPER	1
* Non ASTM					























#### Volumetric Flask (Snap Cap), CLASS A UNSERIALIZED

These flasks are made as per **ASTM E 288 Class A Unserialized** Specification. The flasks have diamond graduated line and are calibrated TC (to contain). It comes in white colour enamel printing .

Catalogue No.	Capacity	Tolerance (± ml)	Stopper Type	Qty Per Pack
132.402.05W	50ml	+/- 0.05 mL	SNAP CAP	2
132.402.06W	100ml	+/- 0.08 mL	SNAP CAP	2
132.402.07W	200ml	+/- 0.10 mL	SNAP CAP	2
132.402.08W	250ml	+/- 0.12 mL	SNAP CAP	2
132.402.09W	500ml	+/- 0.20 mL	SNAP CAP	2
132.402.10W	1000ml	+/- 0.30 mL	SNAP CAP	2
132.402.11W	2000ml	+/- 0.50 mL	SNAP CAP	1









### Volumetric Flask (Snap Cap), CLASS B

Designed as per ASTM E 288 Class B.

Catalogue No.	Capacity	Tolerance (± ml)	Stopper Type	Qty Per Pack
132.422.05	50ml	+/- 0.10 mL	SNAP CAP	2
132.422.06	100ml	+/- 0.16 mL	SNAP CAP	2
132.422.07	200ml	+/- 0.20 mL	SNAP CAP	2
132.422.08	250ml	+/- 0.24 mL	SNAP CAP	2
132.422.09	500ml	+/- 0.40 mL	SNAP CAP	2
132.422.10	1000ml	+/- 0.60 mL	SNAP CAP	2
132.422.11	2000ml	+/- 1.00 mL	SNAP CAP	1



#### **Volumetric Flask**

blown in Polypropylene, are strong, unbreakable and have good contact clarity. These autoclavable flasks are provided with screw caps to prevent leakage.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
		F C3/F dCK
158.303.01	25 ml	6
158.303.02	50 ml	6
158.303.03	100 ml	6
158.303.04	250 ml	2
158.303.05	500 ml	2
158.303.06	1000 ml	2



















### **Measuring Cylinders**

GLASSCO measuring cylinders are made from ASTM E - 438 TYPE 1 CLASS A BORO 3.3 glass that meet ISO 4788 standard. The calibration is done on automatic computer controlled machine and are calibrated to contain (TC, In) according to the ISO tolerance standards. All these cylinders of CLASS A are printed in blue colour and class B in white colour. All Cylinders come with H Mark printed on it.





Measuring Cylinder with Round Base Class A with conformity batch certificate or individual work certificate (Economy Model)

Cat No. with conformity	Cat no. With individual			Econo	my	
batch certificate	work certificate	Cap. ml.	SUB DIVISION	Tolerance ( <u>+</u> ml)	Lot PCS/ PACK	Individual PCS/ PACK
139.202.01	139.223.01	5ML	0.1	0.05	2	1
139.202.02	139.223.02	10ML	0.2	0.10	2	1
139.202.03	139.223.03	25ML	0.5	0.25	2	1
139.202.04	139.223.04	50ML	1.0	0.50	2	1
139.202.05	139.223.05	100ML	1.0	0.50	2	1
139.202.06	139.223.06	250ML	2.0	1.00	2	1
139.202.07	139.223.07	500ML	5.0	2.50	2	1
139.202.08	139.223.08	1000Ml	10.0	5.00	1	1
139.202.09	139.223.09	2000Ml	20.0	10.00	1	1

#### **Measuring Cylinders**

moulded in Polypropylene. These autoclavable cylinders have raised prominent graduations for easy reading and have excellent contact clarity. The broad base provides good stability.

Material: Polypropylene

Cat. No.	Capacity	Least Count	Pcs/Pack
175.303.01	10 ml	0.2 ml	24
175.303.02	25 ml	0.5 ml	12
175.303.03	50 ml	1 ml	12
175.303.04	100 ml	1 ml	12
175.303.05	250 ml	2 ml	6
175.303.06	500 ml	5 ml	4
175.303.07	1000 ml	10 ml	2
175.303.08	2000 ml	20 ml	2
175.303.08	2000 mi	20 MI	









Measuring Cylinder with hexagonal base class A with conformity batch certificate or individual work certificate as per DIN EN ISO 4788 & USP Standards

Cat No. with conformity	Cat no. With individual					
batch certificate	work certificate	Cap. ml.	SUB DIVISION	Tolerance ( <u>+</u> ml)	Lot PCS/ PACK	Individual PCS/ PACK
139.202.01A	139.223.01A	10ML	0.2	0.10	2	1
139.202.02A	139.223.02A	25ML	0.5	0.25	2	1
139.202.03A	139.223.03A	50ML	1.0	0.50	2	1
139.202.04A	139.223.04A	100ML	1.0	0.50	2	1
139.202.05A	139.223.05A	250ML	2.0	1.00	2	1
139.202.06A	139.223.06A	500ML	5.0	2.50	2	1
139.202.07A	139.223.07A	1000ML	10.0	5.00	1	1
139.202.08A	139.223.08A	2000Ml	20.0	10.00	1	1
	139.223.08A	2000Ml	20.0		1	

	II.	iicasuiiiiy G	yılılucis	USF	uraut		
Cat No. Cat no. With conformity individual		New USP Cylinders					
	batch certificate	work certificate	Cap. ml.	SUB DIVISION	Tolerance ( <u>+</u> ml)	Lot PCS/ PACK	Individual PCS/ PACK
	139.292.01A	139.221.01A	10ML	0.2	0.10	2	1
	139.292.02A	139.221.02A	25ML	0.5	0.15	2	1
	139.292.03A	139.221.03A	50ML	1.0	0.25	2	1
	139.292.04A	139.221.04A	100ML	1.0	0.50	2	1
	139.292.05A	139.221.05A	250ML	2.0	1.00	2	1
	139.292.06A	139.221.06A	500ML	5.0	1.50	2	1
	139.292.07A	139.221.07A	1000ML	10.0	3.00	1	1
	139.292.08A	139.221.08A	2000Ml	20.0	6.00	1	1























Measuring Cylinders



Cat No.	Cap. ml.	SUB DIVISION	Tolerance ( <u>+</u> ml)	PCS/ PACK
137.202.02	10ML	0.2	0.200	10
137.202.03	25ML	0.5	0.500	10
137.202.04	50ML	1.0	1.000	10
137.202.05	100ML	1.0	1.000	10
137.202.06	250ML	2.0	2.000	10











Measuring Cylinder, Low Form, as per DIN EN ISO 4788, Hex Base, Class B, To Contain (TC), Single Metric, These are printed in amber colour.

-				
Cat No.	Cap. ml.	Sub Division	Tolerance ( <u>+</u> ml)	PCS/ PACK
138.429.01A	10ML	1.0	0.200	10
138.429.02A	25ML	1.0	0.500	10
138.429.03A	50ML	2.0	1.000	10
138.429.04A	100ML	2.0	1.000	10
138.429.05A	250ML	5.0	2.000	10
138.429.06A	500 ML	10.0	5.000	10
138.429.07A	1000ML	20.0	10.000	10
138.429.08A	2000 ML	50.0	20.000	10





















comes with the bumper guard.

Capacity

10ml

25ml

50ml

100ml

250ml

500ml

1000ml

2000ml

Catalogue

No.

139.464.01A

139.464.02A

139.464.03A

139.464.04A

139.464.05A

139.464.06A

139.464.07A

139.464.08A







#### Measuring Cylinder Graduated, Hex Base, Class A, Unserialized, with Double Metric Scale, TC (To Contain)

Cylinders are made to meet ASTM E 1272 norms and are printed in double scale with white enamel. All the cylinders from 10ml to 2000ml comes with the bumper guard.

Catalogue No.	Capacity	Grad Interval (ml)	Tolerance (± ml)	Qty Per Pack
139.453.01A	10ml	0.2 mL	0.1	2
139.453.02A	25ml	0.5 mL	0.17	2
139.453.03A	50ml	1 mL	0.25	2
139.453.04A	100ml	1 mL	0.5	2
139.453.05A	250ml	2 mL	1	2
139.453.06A	500ml	5 mL	2	2
139.453.07A	1000ml	10 mL	3	1
139.453.08A	2000ml	20 mL	6	1













Measuring Cylinder Graduated, Hex Base, Class A, Unserialized, with Double Metric Scale, TD (To Deliver) Cylinders are made to meet ASTM E 1272 norms and are printed in double scale with white enamel. All the cylinders from 10ml to 2000ml

Grad Interval

(ml)

0.2 mL

0.5 mL

1 mL

1 mL

2 mL

5 mL

10 mL

20 mL

Tolerance

(± ml)

0.1

0.17

0.25

0.5

2

3

Qty

Per Pack

2

2

2

2

#### **Measuring Cylinder Hexagonal**

are now available with hexagonal base also. The hexagonal base provides excellent stability to the cylinder where as the tapered spout works really while pouring any reagent.

Material: Polypropylene

Cat. No.	Capacity	Least Count	Pcs/Pack
177.303.01	10 ml	0.2 ml	24
177.303.02	25 ml	0.5 ml	12
177.303.03	50 ml	1 ml	12
177.303.04	100 ml	1 ml	12
177.303.05	250 ml	2 ml	6
177.303.06	500 ml	5 ml	4
177.303.07	1000 ml	10 ml	2









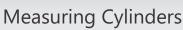












### Measuring Cylinder Graduated Class B, Hex Base, with Double Metric Scale, TC (To Contain),

Cylinders are made to meet ASTM E 1272 norms and are printed in double scale with white enamel. All the cylinders from 10ml to 2000ml comes with the bumper guard.

Catalogue No.	Capacity	Grad Interval ( ml)	Tolerance (± ml)	Qty Per Pack
138.289.01A	10ml	0.2 mL	0.20	2
138.289.02A	25ml	0.5 mL	0.34	2
138.289.03A	50ml	1 mL	0.50	2
138.289.04A	100ml	1 mL	1.00	2
138.289.05A	250ml	2 mL	2.00	2
138.289.06A	500ml	5 mL	4.00	2
138.289.07A	1000ml	10 mL	6.00	1
138.289.08A	2000ml	20 mL	12.00	1

















#### Measuring Cylinder Graduated Class B, Hex Base, with Double Metric Scale, TD (To Deliver),

Cylinders are made to meet **ASTM E 1272** norms and are printed in double scale with white enamel. All the cylinders from 10ml to 2000ml comes with the bumper guard.

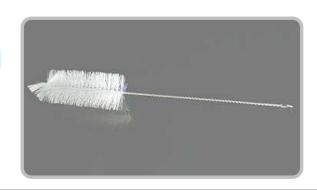
Catalogue No.	Capacity	Grad Interval ( ml)	Tolerance (± ml)	Qty Per Pack
138.288.01A	10ml	0.2 mL	0.20	2
138.288.02A	25ml	0.5 mL	0.34	2
138.288.03A	50ml	1 mL	0.50	2
138.288.04A	100ml	1 mL	1.00	2
138.288.05A	250ml	2 mL	2.00	2
138.288.06A	500ml	5 mL	4.00	2
138.288.07A	1000ml	10 mL	6.00	1
138.288.08A	2000ml	20 mL	12.00	1





Cat. No.	Туре	Material	Pcs/Pack
593.303.05	Cylinder Brush	Nylon	50











### Measuring Cylinders

















**Mixing Cylinder Class A** with PP stopper as per **DIN EN ISO 4788** standards in round base and hexagonal base with batch conformity certificate.

Cat No.	Cat no. with				
with Round Base	Hexagonal Base	Cap. ml.	SUB DIVISION	Tolerance ( <u>+</u> ml)	PCS/ PACK
141.202.02	142.202.01A	10ML	0.2	0.10	2
141.202.03	142.202.02A	25ML	0.5	0.25	2
141.202.04	142.202.03A	50ML	1.0	0.50	2
141.202.05	142.202.04A	100ML	1.0	0.50	2
141.202.06	142.202.05A	250ML	2.0	1.00	2
141.202.07	142.202.06A	500ML	5.0	2.50	2
141.202.08	142.202.07A	1000ML	10.0	5.00	1
141.202.09	142.202.08A	2000ML	20.0	10.00	1









Cat No.	Cap. ml.	Sub Divi ml.	Tolerance ( <u>+</u> ml)	PCS/ PACK
143.202.01	50ML	25 & 50	0.4	10
143.202.02	100ML	50 & 100	0.8	10











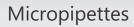












#### **High Performance Micro Volume Pipette**

- Fully autoclavable.
- UV resistance.
- "CE"mark awarded.
- Click-stop system for digital volume setting.
- Ergonomic Design ensuring light weight & soft plunger movement.
- Two step plunger operation allows "reverse pipetting technique".
- Calibration as per DIN 12650 & EN-ISO 8655 standards.
- High accuracy and precision guaranteed.
- Individual serial No. permanently marked on each pipette.
- Calibration report enclosed with every pipette.
- · Color coded for easy identification

#### Variable Micropipette

Item Code	Volume Range	Increment	Pcs/Pack	Colour
500.303.01	0.1 - 2.5 µl	0.01 µl	1	
500.303.02	0.5 - 10 µl	0.1 μΙ	1	
500.303.03	2 - 20 µl	0.1 µl	1	
500.303.04	5 - 50 µl	0.5 µl	1	
500.303.05	10 - 100 µl	0.5 µl	1	
500.303.06	50 - 200 µl	1.0 µl	1	
500.303.07	20 - 200 µl	1.0 µl	1	
500.303.08	100 - 1000 µl	5.0 µl	1	
500.303.09	200 - 1000 µl	5.0 µl	1	
500.303.10	500 - 5000 µl	50.0 µl	1	
500.303.11	1000 - 5000 µl	50.0 µl	1	
500.303.12	500 - 10000 µl	100.0 µl	1	
500.303.13	1000 - 10000 µl	100.0 µl	1	



Item Code	Volume Range	Pcs/Pack	Colour
501.303.01	2.5 µl	1	
501.303.02	5 µl	1	
501.303.03	10 µl	1	
501.303.04	20 µl	1	
501.303.05	25 µl	1	
501.303.06	50 µl	1	
501.303.07	100 µl	1	
501.303.08	200 µl	1	
501.303.09	250 µl	1	
501.303.10	500 µl	1	
501.303.11	1000 μΙ	1	
501.303.12	2000 μΙ	1	
501.303.13	5000 µl	1	
501.303.14	10000 µl	1	









#### **Tips for Micropipette**

(To be used with Glassco Micropipette)

Item Code	Capacity	Pcs/Pack
502.303.01	10 µl	1000
502.303.03	200 µl	1000
502.303.04	1000 µl	1000
502.303.05	5000 µl	100
502.303.06	10000 µl	100





















#### **High Performance Micro Volume Pipette**

- Fully autoclavable.
- UV resistance.
- "CE"mark awarded.
- Click-stop system for digital volume setting.
- Ergonomic Design ensuring light weight & soft plunger movement.
- Two step plunger operation allows "reverse pipet ting technique".
- Calibration as per DIN 12650 & EN-ISO 8655 standards.
- High accuracy and precision guaranteed.
- Individual serial No. permanently marked on each pipette.
- Calibration report enclosed with every pipette.
- Color coded for easy identification.
- Manifold can rotate 360° to allow convenient pipetting angle.
- One hand tip ejection.

#### **Eight Channel Micropipette**

Item Code	Volume Range	Increment	Pcs/Pack	Colour
500.303.14	0.5 - 10 µL	0.1µl	1	
500.303.15	5 - 50 µL	0.5µl	1	
500.303.16	10 - 100 μL	0.5µl	1	
500.303.17	20 - 200 µL	0.5ul	1	
500.303.18	30 - 300 µL	1.0µl	1	

#### Twelve Channel Micropipette

Item Code	Volume Range	Increment	Pcs/Pack	Colour
500.303.19	0.5 - 10 μL	0.1 µL	1	
500.303.20	5 - 50 µL	0.5 µL	1	
500.303.21	10 - 100 μL	0.5 µL	1	
500.303.22	20 - 200 µL	0.5 µL	1	
500.303.23	30 - 300 µL	1.0 µL	1	



#### Micro Tip Box

moulded in Polypropylene and are therefore autoclavable. The Box itself is clear providing an excellent view of the tips inside while a table like structure is provided inside to hold the tips. The tip holding spaces are uniformly placed to facilitate the use of multi channel pipettes. The cover is joined to the base through ball catcher hinges and provides excellent protection to the tips.

**Material**: Polypropylene with improved robust hunge design which prevents the top from being easilt disengaged from the bottom of box.

Cat. No.	Capacity	Pcs/Pack
157.303.03	For 96 Micro Tips of 2-10µl	6
157.303.04	For 96 Micro Tips of 2-200µl	6
157.303.05	For 100 Micro Tips of 200-1000µl	6





























### SPECIALLY DESIGNED VOLUME ADJUSTMENT KNOB

Convenient and easy volume setting with minimal force ensuring no fatigue or strain. A 270 degree turn in the clockwise and anticlockwise direction ensures

locking and unlocking respectively.













60ml















60ml





### **Bottle Top Dispenser-Research Fully Autoclavable**

Glassco Bottle top dispenser is another genius of its strong R & D base. Responding to the needs of the present generation, Glassco is proud to offer its NEW BOTTLE TOP DISPENSER which is an unique combination of competitive pricing and high performance.

All wetted parts are PTFE, FEP and Borosilicate Glass only which allows the instrument to be used with wide variety of laboratory chemicals.

High precision and accuracy is ensured through careful selection of raw material and several stages of strict quality checks during manufacturing process.

Each instrument is individually calibrated in ISO 17025 accredited laboratory in accordance with ISO 8655 standards and comes with Individual Calibration certificate.

#### Features:

- Available in seven volume ranges:
  - a. 0.25-2.5 ml
  - b. 0.5-5 ml
  - c. 1-10 ml
  - d. 2.5-30 ml
  - e. 5-60 ml
  - f. 10-100 ml
  - g. 50-400 ml
- Smooth, effortless plunger movement and bubble free dispensing.
- Easy to dis-assemble for cleaning and servicing.
- Instrument is fully autoclavable at 121°C, 15psi. for 10 15 mins.



#### PTFE PISTON:

Specially designed PTFE Piston ensures wiper-like smooth, effortless movement and high accuracy.



#### **GLASS BARREL PROTECTION:**

Glass Barrel is protected by a polypropylene sleeve. It also ensures no glass splitting in case of any accidental breakage.



#### **ADAPTORS:**

Adaptors to fit most of the laboratory reagent bottles are provided in the following sizes: 28, 30, 32, 36, 40 & 45mm.













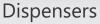












Simple, user friendly instrument suitable for all laboratory applications except HF.

Strict quality control at all steps of manufacturing ensures high reliability, accuracy and precision.



#### SPECIALLY DESIGNED VOLUME **ADJUSTMENT KNOB**

Convenient and easy volume setting with minimal force ensuring no fatigue or strain. A 270 degree turn in the clockwise and anticlockwise direction ensures locking and unlocking respectively.





#### **ADJUSTABLE DELIVERY NOZZLE:**

Adjustable delivery nozzle to facilitate dispensing ease in all demanding laboratory conditions.



#### **NOZZLE CAP:**

Nozzle cap prevents any unwanted drop on the work space and avoids contact with hazardous chemicals.



#### **VALVE MANIFOLD FOR LEAK PROOFING:**

Specially designed, springless, PTFE valve manifold ensures excellent chemical compatibility and leak proof valve functioning.





















#### **CALIBRATION:**

Specially designed calibration tool is provided for convenient and quick In-lab user re-calibration. This is in compliance with GLO/ISO Norms.

Removable Cap for Calibration



**Calibration Tool** 



### **Component Description**

Component	Description
Piston	PTFE
Cylinder	Glass
Volume Adjustment Knob	Screw Type
Valve Housing	PTFE
Valve Assembly	Glass Ball & Seat
Discharge Assembly	PTFE
Delivery Tube	FEP
Inlet Tube	FEP
Calibration	Individually calibrated and certified. In-lab easy Calibration by the user is also possible.
Accuracy & Reproducibility	In accordance with ISO 8655 standards.
Compatibility	Excellent compatibility with all reagents except HF

### **Specifications & Ordering Information**

			ISO 8655 Specifications				Glassco Specifications			
Model No.	Vol. Range	Increment	Accu ±%	ıracy ± ml	±%	t ml	Accu ±%	ıracy ± ml	±%	V ± ml
500.404.01	0.25-2.5 ml	0.05 ml	0.6	0.015	0.2	0.005	0.6	0.015	0.2	0.005
500.404.02	0.5-5 ml	0.1 ml	0.6	0.030	0.2	0.010	0.5	0.025	0.1	0.005
500.404.03	1-10 ml	0.2 ml	0.6	0.060	0.2	0.020	0.5	0.050	0.1	0.010
500.404.04	2.5-30 ml	0.5 ml	0.6	0.180	0.2	0.060	0.5	0.150	0.1	0.030
500.404.05	5-60 ml	1.0 ml	0.6	0.360	0.2	0.120	0.5	0.300	0.1	0.060
500.404.06	10-100 ml	2.0 ml	0.6	0.600	0.2	0.200	0.5	0.500	0.1	0.100
500.404.07	50-400 ml	5.0 ml	0.6	2.400	0.2	0.800	0.5	2.000	0.1	0.400





























Separating and Dropping Funnels are produced from ASTM E-438 TYPE-1 CLASS A BORO 3.3 heat resistant glass. All these flasks are manufactures as per **DIN ISO 4800** standard. The printing is done in white colour.



**Separating Funnel Squibb Shape**, with PP Stopper as per ISO 4800 Standards.







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CAT.	CAT NO.WITH	CAPACITY				
NO.PLAIN	GRADUATION	CAI ACT I	N/S	BORE	STOP COCK TYPE	PCS/ PACK
147.202.02	147.209.02	50ML	19/26	2.5	SOLID GLASS	1
147.202.03	147.209.03	100ML	19/26	2.5	SOLID GLASS	1
147.202.04	147.209.04	250ML	29/32	4	SOLID GLASS	1
147.202.05	147.209.05	500ML	29/32	4	SOLID GLASS	1
147.202.06	147.209.06	1000ML	29/32	6	SOLID GLASS	1
147.202.07	147.209.07	2000ML	29/32	6	SOLID GLASS	1
148.202.02	148.209.02	50ML	19/26	2.5	NEEDLE VALVE	1
148.202.03	148.209.03	100ML	19/26	2.5	NEEDLE VALVE	1
148.202.04	148.209.04	250ML	29/32	4	NEEDLE VALVE	1
148.202.05	148.209.05	500ML	29/32	4	NEEDLE VALVE	1
148.202.06	148.209.06	1000ML	29/32	6	NEEDLE VALVE	1
148.202.07	148.209.07	2000ML	29/32	6	NEEDLE VALVE	1
149.202.02	149.209.02	50ML	19/26	2.5	PTFE	1
149.202.03	149.209.03	100ML	19/26	2.5	PTFE	1
149.202.04	149.209.04	250ML	29/32	4	PTFE	1
149.202.05	149.209.05	500ML	29/32	4	PTFE	1
149.202.06	149.209.06	1000ML	29/32	6	PTFE	1
149.202.07	149.209.07	2000ML	29/32	6	PTFE	1

#### **Separating Funnel, with PTFE Key Stopcock**

These funnels are manufactured from ASTM E 438 TYPE 1 CLASS A BORO 3.3 glass which meet **ASTM E 1096** specification. The flasks come with PTFE KEY STOPCOCK and PP stopper. The flasks are printed in white colour enamel.

Catalogue No.	Capacity	Stop Cock Size	Stopper No.	Qty Per Pack
149.402.03	125ml	2	22	1
149.402.04	250ml	4	22	1
149.402.05	500ml	4	27	1
149.402.06	1000ml	4	27	1
149.402.07	2000ml	6	38	1



















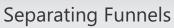












# **Pear Separating Funnels**

Separating Funnel Pear (ISO Shape), with PP Stopper as per ISO 4800 Standards.

CAT. NO.	CAPACITY				
PLAIN		N/S	BORE	STOP COCK TYPE	PCS/ PACK
150.202.02	50ML	19/26	2.5	SOLID GLASS	1
150.202.03	100ML	19/26	2.5	SOLID GLASS	1
150.202.04	250ML	29/32	4	SOLID GLASS	1
150.202.05	500ML	29/32	4	SOLID GLASS	1
150.202.06	1000ML	29/32	6	SOLID GLASS	1
150.202.07	2000ML	29/32	6	SOLID GLASS	1
151.202.02	50ML	19/26	2.5	NEEDLE VALVE	1
151.202.03	100ML	19/26	2.5	NEEDLE VALVE	1
151.202.04	250ML	29/32	4	NEEDLE VALVE	1
151.202.05	500ML	29/32	4	NEEDLE VALVE	1
151.202.06	1000ML	29/32	6	NEEDLE VALVE	1
151.202.07	2000ML	29/32	6	NEEDLE VALVE	1
152.202.02	50ML	19/26	2.5	PTFE	1
152.202.03	100ML	19/26	2.5	PTFE	1
152.202.04	250ML	29/32	4	PTFE	1
152.202.05	500ML	29/32	4	PTFE	1
152.202.06	1000ML	29/32	6	PTFE	1
152.202.07	2000ML	29/32	6	PTFE	1





























# **Graduated Dropping Funnels**

Dropping Funnel Cylindrical, with PP Stopper as per ISO 4800 Standards  $\,$ 

CAT. NO.	CAPACITY				
		N/S	BORE	STOP COCK TYPE	PCS/ PACK
154.203.02	50ML	14/23	2.5	SOLID GLASS	1
154.204.02	50ML	29 /32	2.5	SOLID GLASS	1
154.203.03	100ML	14/23	2.5	SOLID GLASS	1
154.204.03	100ML	29/32	2.5	SOLID GLASS	1
154.202.04	250ML	29/32	4	SOLID GLASS	1
154.202.05	500ML	29/32	4	SOLID GLASS	1
154.202.06	1000ML	29/32	6	SOLID GLASS	1
156.203.02	50ML	14/23	2.5	NEEDLE VALVE	1
156.204.02	50ML	29 /32	2.5	NEEDLE VALVE	1
156.203.03	100ML	14/23	2.5	NEEDLE VALVE	1
156.204.03	100ML	29/32	2.5	NEEDLE VALVE	1
156.202.04	250ML	29/32	4	NEEDLE VALVE	1
156.202.05	500ML	29/32	4	NEEDLE VALVE	1
156.202.06	1000ML	29/32	6	NEEDLE VALVE	1
158.203.02	50ML	14/23	2.5	PTFE	1
158.204.02	50ML	29 /32	2.5	PTFE	1
158.203.03	100ML	14/23	2.5	PTFE	1
158.204.03	100ML	29/32	2.5	PTFE	1
158.202.04	250ML	29/32	4	PTFE	1
158.202.05	500ML	29/32	4	PTFE	1
158.202.06	1000ML	29/32	6	PTFE	1



















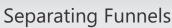












### **Gilson Funnels**



### Separating Funnel Gilson, with PP Stopper

CAT NO.	CAPACITY				
		N/S	BORE SIZE	STOP COCK TYPE	PCS/ PACK
159.202.01	50ML	19/26	2.5	SOLID GLASS	1
159.202.02	100ML	19/26	2.5	SOLID GLASS	1
159.202.03	250ML	29/32	4	SOLID GLASS	1
159.202.04	500ML	29/32	4	SOLID GLASS	1
159.202.05	1000ML	29/32	6	SOLID GLASS	1
159.202.06	2000ML	29/32	6	SOLID GLASS	1
160.202.01	50ML	19/26	2.5	PTFE	1
160.202.02	100ML	19/26	2.5	PTFE	1
160.202.03	250ML	29/32	4	PTFE	1
160.202.04	500ML	29/32	4	PTFE	1
160.202.05	1000ML	29/32	6	PTFE	1
160.202.06	2000ML	29/32	6	PTFE	1









#### **Separatory Funnel Holder**

non-corrosive Separatory Funnel Holder, moulded in Polypropylene, has a front opening which provides clear view of the solution and allows unobstructed placement of separating funnels. Two tapped wedges are provided to ensure firm grip on rods having dia 1/2" or 3/5".

Material: Polypropylene

Cat No.	Capacity	Pcs/Pack
114.303.01	Separator Funnel Holder	12

#### **Seperatory Funnel**

is made of Polypropylene, giving it excellent contact clarity and strength. This pear shaped, autoclavable seperating funnel has a leakproof threaded screw cap. The Polypropylene stopcock, fitted with a self lubricating PTFE plug, is push fitted to the stem of the seperatory funnel.

Material: Polypropylene

Cat No.	Capacity	Pcs/Pack
181.303.01	100 ml	2
181.303.02	250 ml	2
181.303.03	500 ml	2























CAT NO.	CAPACITY				
CAT NO.	CALACITI	Socket & Cone N/S	BORE SIZE	STOP COCK TYPE	PCS/ PACK
162.202.03	50ML	19/26	2.5	SOLID GLASS	1
162.202.05	100ML	19/26	2.5	SOLID GLASS	1
162.204.06	250ML	29/32	4	SOLID GLASS	1
162.204.08	500ML	29/32	4	SOLID GLASS	1
162.204.11	1000ML	29/32	6	SOLID GLASS	1
163.202.03	50ML	19/26	2.5	NEEDLE VALVE	1
163.202.05	100ML	19/26	2.5	NEEDLE VALVE	1
163.204.06	250ML	29/32	4	NEEDLE VALVE	1
163.204.08	500ML	29/32	4	NEEDLE VALVE	1
163.204.11	1000ML	29/32	6	NEEDLE VALVE	1
164.202.03	50ML	19/26	2.5	PTFE	1
164.202.05	100ML	19/26	2.5	PTFE	1
164.204.06	250ML	29/32	4	PTFE	1
164.204.08	500ML	29/32	4	PTFE	1
164.204.11	1000ML	29/32	6	PTFE	1

























# **Pear Separating Funnels**

Separating Funnel Pear Shape with stem inside cone

CAT NO.	CAPACITY				
		Socket & Cone N/S	BORE SIZE	STOP COCK TYPE	PCS/ PACK
162.210.03	50ML	19/26	2.5	SOLID GLASS	1
162.210.05	100ML	19/26	2.5	SOLID GLASS	1
162.210.06	250ML	29/32	4	SOLID GLASS	1
162.210.08	500ML	29/32	4	SOLID GLASS	1
162.210.10	1000ML	29/32	6	SOLID GLASS	1
164.210.03	50ML	19/26	2.5	PTFE	1
164.210.05	100ML	19/26	2.5	PTFE	1
164.210.06	250ML	29/32	4	PTFE	1
164.210.08	500ML	29/32	4	PTFE	1
164.210.10	1000ML	29/32	6	PTFE	1

























# **Dropping Funnels**

 $\label{eq:continuous} \textbf{Separating Funnel, Cylindrical, with PP Stopper,}$ with Socket and Cone. DIN 4800

CAT NO.	CAPACITY				
		Socket & Cone N/S	BORE SIZE	STOP COCK TYPE	PCS/ PACK
165.202.02	50ML	14/23	2.5	SOLID GLASS	1
165.202.02A	50ML	29/32	2.5	SOLID GLASS	1
165.202.03	100ML	14/23	2.5	SOLID GLASS	1
165.202.03A	100ML	29/32	2.5	SOLID GLASS	1
165.202.05A	250ML	29/32	4	SOLID GLASS	1
165.202.06A	500ML	29/32	4	SOLID GLASS	1
165.202.07A	1000ML	29/32	6	SOLID GLASS	1
166.202.02	50ML	14/23	2.5	NEEDLE VALVE	1
166.202.02A	50ML	29/32	2.5	NEEDLE VALVE	1
166.202.03	100ML	14/23	2.5	NEEDLE VALVE	1
166.202.03A	100ML	29/32	2.5	NEEDLE VALVE	1
166.202.05A	250ML	29/32	4	NEEDLE VALVE	1
166.202.06A	500ML	29/32	4	NEEDLE VALVE	1
166.202.07A	1000ML	29/32	6	NEEDLE VALVE	1
167.202.02	50ML	14/23	2.5	PTFE	1
167.202.02A	50ML	29/32	2.5	PTFE	1
167.202.03	100ML	14/23	2.5	PTFE	1
167.202.03A	100ML	29/32	2.5	PTFE	1
167.202.05A	250ML	29/32	4	PTFE	1
167.202.06A	500ML	29/32	4	PTFE	1
167.202.07A	1000ML	29/32	6	PTFE	1



















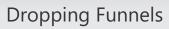














### Dropping Funnel, Cylindrical with stem inside cone. DIN 4800

CAT NO.	CAPACITY				
		Socket & Cone N/S	BORE SIZE	STOP COCK TYPE	PCS/ PACK
165.210.02	50ML	14/23	2.5	SOLID GLASS	1
165.210.02A	50ML	29/32	2.5	SOLID GLASS	1
165.210.03	100ML	14/23	2.5	SOLID GLASS	1
165.210.03A	100ML	29/32	2.5	SOLID GLASS	1
165.210.05	250ML	29/32	4	SOLID GLASS	1
165.210.06	500ML	29/32	4	SOLID GLASS	1
165.210.07	1000ML	29/32	6	SOLID GLASS	1
167.210.02	50ML	14/23	2.5	PTFE	1
167.210.02A	50ML	29/32	2.5	PTFE	1
167.210.03	100ML	14/23	2.5	PTFE	1
167.210.03A	100ML	29/32	2.5	PTFE	1
167.210.05	250ML	29/32	4	PTFE	1
167.210.06	500ML	29/32	4	PTFE	1
167.210.07	1000ML	29/32	6	PTFE	1











### **Pressure Equalizing Funnels**

CAT NO.	CAPACITY				
		SOCKET AND CONE N/S	BORE SIZE	STOP COCK TYPE	PCS/ PACK
168.202.01	50ML	14/23	2.5	SOLID GLASS	1
168.202.01A	50ML	29/32	2.5	SOLID GLASS	1
168.202.02A	100ML	14/23	2.5	SOLID GLASS	1
168.202.03A	100ML	29/32	2.5	SOLID GLASS	1
168.202.04A	250ML	29/32	4	SOLID GLASS	1
168.202.05A	500ML	29/32	4	SOLID GLASS	1
169.202.01	50ML	14/23	2.5	PTEF	1
169.202.01A	50ML	29/32	2.5	PTEF	1
169.202.02A	100ML	14/23	2.5	PTEF	1
169.202.03A	100ML	29/32	2.5	PTEF	1
169.202.04A	250ML	29/32	4	PTEF	1
169.202.05A	500ML	29/32	4	PTEF	1



















# **Pressure Equalizing Funnels**

### **Pressure Equalizing Funnels, Pear Shape**

CAT NO.	CAPACITY				
		SOCKET AND CONE N/S	BORE SIZE	STOP COCK TYPE	PCS/ PACK
170.202.01	50ML	14/23	2.5	SOLID GLASS	1
170.202.02A	100ML	14/23	2.5	SOLID GLASS	1
170.202.04A	250ML	29/32	4	SOLID GLASS	1
170.202.05A	500ML	29/32	4	SOLID GLASS	1
171.202.01	50ML	14/23	2.5	PTFE	1
171.202.02A	100ML	14/23	2.5	PTFE	1
171.202.04A	250ML	29/32	4	PTFE	1
171.202.05A	500ML	29/32	4	PTFE	1



























## Air Condensers





CAT NO.	Socket		Citi alia	
		Cone	Effective Length (mm.)	Pcs/ Pack
181.202.01	14/23	14/23	200	1
181.202.02	19/26	19/26	200	1
181.202.03	24/29	24/29	250	1
181.202.04	19/26	19/26	400	1
181.202.05	24/29	24/29	500	1
181.202.06	34/35	34/35	500	1
181.202.07	19/26	19/26	600	1
181.202.08	24/29	24/29	750	1
181.202.09	-	19/26	750	1
181.202.10	-	24/29	750	1
181.202.11	-	19/26	1000	1
181.202.12	-	24/29	1000	1





PS: All Condensers can be ordered with ASTM Joint Sizes on request.

















## **Liebig Condenser**

**Manufactured from ASTM E428** type **1 Class A Boro 3.3 Glass**. These condenser comes with Glass & Plastic screw thread connector & is highly efficient with large cooling surface, **DIN 12576**. This Condenser is suitable for Distillation & Reflux applications.

CAT NO .	SOCKET	EFFECTIVE LENGTH			
		(mm)	CONE	CONNECTOR	Pcs/ Pack
182.181.01	14/23	160	14/23	SCREW THREAD	1
182.181.01A	19/26	160	19/26	SCREW THREAD	1
182.181.02	19/26	250	19/26	SCREW THREAD	1
182.181.03	24/29	250	24/29	SCREW THREAD	1
182.181.3A	29/32	250	29/32	SCREW THREAD	1
182.181.04*	19/26	300	19/26	SCREW THREAD	1
182.181.05 *	24/29	300	24/29	SCREW THREAD	1
182.181.06*	29/32	300	29/32	SCREW THREAD	1
182.181.10	24/29	400	24/29	SCREW THREAD	1
182.181.11	29/32	400	29/32	SCREW THREAD	1
182.202.01	14/23	160	14/23	GLASS	1
182.202.01A	19/26	160	19/26	GLASS	1
182.202.02	19/26	250	19/26	GLASS	1
182.202.03	24/29	250	24/29	GLASS	1
182.202.03A	29/32	250	29/32	GLASS	1
182.202.04*	19/26	300	19/26	GLASS	1
182.202.05 *	24/29	300	24/29	GLASS	1
182.202.06*	29/32	300	29/32	GLASS	1
182.202.10	24/29	400	24/29	GLASS	1
182.202.11	29/32	400	29/32	GLASS	1









PS: For All types of Condensers Clamps look at page 115















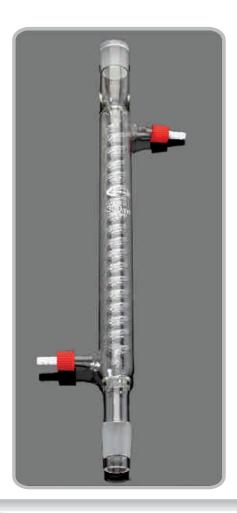




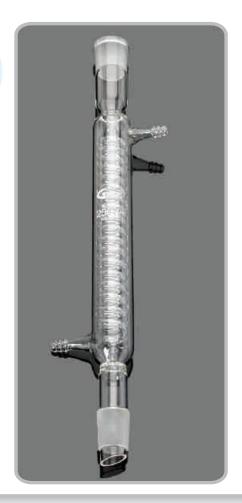
### Coil Condenser

Manufactured from ASTM E 438 type 1 Class A boro 3.3 Glass. These condenser comes with glass connectors and with plastic screw thread connector and is highly efficient with a large cooling surface. This Condenser is suitable for Distillation & Reflux applications.

CAT NO .	SOCKET	EFFECTIVE LENGTH				
		(mm)	CONE	CONNECTOR	Pcs/ Pack	
183.181.01	14/23	160	14/23	SCREW THREAD	1	
183.181.01A	19/26	160	19/26	SCREW THREAD	1	
183.181.02A	14/23	250	14/23	SCREW THREAD	1	
183.181.03	19/26	250	19/26	SCREW THREAD	1	
183.181.04	24/29	250	24/29	SCREW THREAD	1	
183.181.04A	29/32	250	29/32	SCREW THREAD	1	
183.181.05	24/29	300	24/29	SCREW THREAD	1	
183.181.06	29/32	300	29/32	SCREW THREAD	1	
183.181.07	29/32	400	29/32	SCREW THREAD	1	
183.202.01	14/23	160	14/23	GLASS	1	
183.202.01A	19/26	160	19/26	GLASS	1	
183.202.02A	14/23	250	14/23	GLASS	1	
183.202.03	19/26	250	19/26	GLASS	1	
183.202.04	24/29	250	24/29	GLASS	1	
183.202.04A	29/32	250	29/32	GLASS	1	
183.202.05	24/29	300	24/29	GLASS	1	
183.202.06	29/32	300	29/32	GLASS	1	
183.202.07	29/32	400	29/32	GLASS	1	























### **Allihin Condenser**

Manufactured from ASTM E 438 type 1 Class A boro 3.3 Glass in compliance with DIN 12581. These condensers are ideal for reflux and comes with glass and plastic screw thread connector.

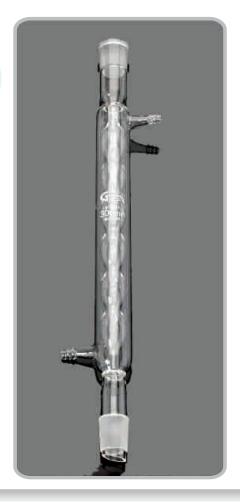
This Condenser having inner bulb section provides increased cooling surface and is ideal for Reflux Applications.

CAT NO .	SOCKET	EFFECTIVE LENGTH (mm)			
		(111111)	CONE	CONNECTOR	Pcs/ Pack
190.181.05	14/23	160	14/23	SCREW THREAD	1
190.181.06	19/26	160	19/26	SCREW THREAD	1
190.181.07	14/23	250	14/23	SCREW THREAD	1
190.181.08	19/26	250	19/26	SCREW THREAD	1
190.181.09	24/29	250	24/29	SCREW THREAD	1
190.181.09A	29/32	250	29/32	SCREW THREAD	1
190.181.10*	24/29	300	24/29	SCREW THREAD	1
190.181.11*	29/32	300	29/32	SCREW THREAD	1
190.181.12*	24/29	400	24/29	SCREW THREAD	1
190.181.13*	29/32	400	29/32	SCREW THREAD	1
190.202.05	14/23	160	14/23	GLASS	1
190.202.06	19/26	160	19/26	GLASS	1
190.202.07	14/23	250	14/23	GLASS	1
190.202.08	19/26	250	19/26	GLASS	1
190.202.09	24/29	250	24/29	GLASS	1
190.202.09A	29/32	250	29/32	GLASS	1
190.202.10*	24/29	300	24/29	GLASS	1
190.202.11*	29/32	300	29/32	GLASS	1
190.202.12*	24/29	400	24/29	GLASS	1
190.202.13*	29/32	400	29/32	GLASS	1

<sup>\*</sup> Non DIN



























## **Dimroth Condenser**

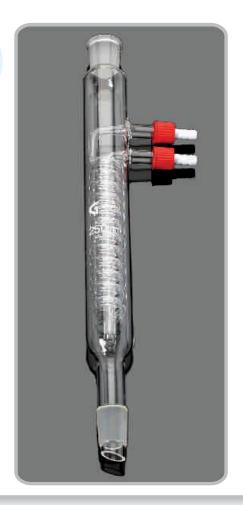
Manufactured from ASTM E 438 type 1 Class A boro 3.3 Glass in compliance with DIN 12591. The condenser comes with glass and plastic screw thread connector

CAT NO .	SOCKET	APPROX EFFECTIVE LENGTH			
		(mm)	CONE	CONNECTOR	Pcs/ Pack
190.181.01A	14/23	160	14/23	SCREW THREAD	1
190.181.02A	19/26	160	19/26	SCREW THREAD	1
190.181.03A	19/26	250	19/26	SCREW THREAD	1
190.181.04A	24/29	250	24/29	SCREW THREAD	1
190.181.05A	29/32	250	29/32	SCREW THREAD	1
190.181.06A*	24/29	300	24/29	SCREW THREAD	1
190.181.07A*	29/32	300	29/32	SCREW THREAD	1
190.181.08A	29/32	400	29/32	SCREW THREAD	1
190.204.01	14/23	160	14/23	GLASS	1
190.204.02	19/26	160	19/26	GLASS	1
190.204.03	19/26	250	19/26	GLASS	1
190.204.04	24/29	250	24/29	GLASS	1
190.204.05	29/32	250	29/32	GLASS	1
190.204.06*	24/29	300	24/29	GLASS	1
190.204.07*	29/32	300	29/32	GLASS	1
190.204.08	29/32	400	29/32	GLASS	1

<sup>\*</sup> Non DIN























# **Condensers for Soxhlet Apparatus**

#### Manufactured from ASTM E 438 type 1 Class a boro 3.3 Glass.

This condenser come with glass and plastic screw thread connector.

CAT NO .	CONE	EFFECTIVE LENGTH			
		(mm)	EXTRACTOR ML	CONNECTOR	Pac Pac
191.181.01	45/40	300	100	SCREW THREAD	1
191.181.01A	45/40	400	250	SCREW THREAD	1
191.181.02	60/46	400	500	SCREW THREAD	1
191.181.03	71/55	400	1000	SCREW THREAD	1
191.202.01	45/40	300	100	Glass	1
191.202.01A	45/40	400	250	Glass	1
191.202.02	60/46	400	500	Glass	1
191.202.03	71/55	400	1000	Glass	1













Manufactured from ASTM E 438 type 1 Class a boro 3.3 Glass. This condenser come with glass and plastic screw thread connector.

CAT NO .	CONE	EFFECTIVE LENGTH (mm)			
		(111111)	EXTRACTOR ML	CONNECTOR	Pcs/ Pack
192.181.01	45/40	300	100	SCREW THREAD	1
192.181.01A	45/40	400	250	SCREW THREAD	1
192.181.02	60/46	400	500	SCREW THREAD	1
192.181.03	71/55	400	1000	SCREW THREAD	1
192.202.01	45/40	300	100	Glass	1
192.202.01A	45/40	400	250	Glass	1
192.202.02	60/46	400	500	Glass	1
192.202.03	71/55	400	1000	Glass	1



















# **Extraction Apparatus**





Consists of Flask, Extractor and condenser,

donaia di Fiask, Extractor and condenaci.							
Cat No .	Extractor cap.(ml)	Extractor Scoket	Extractor Cone	Flask Cap	condenser Type	Connector	Pcs/ Pack
210.202.04	100	45/40	29/32	250	ALLIHIN	SCREW THREAD	1
210.202.06	250	45/40	29/32	500	ALLIHIN	SCREW THREAD	1
210.202.08	500	60/46	29/32	1000	ALLIHIN	SCREW THREAD	1
210.202.09	1000	71/55	29/32	2000	ALLIHIN	SCREW THREAD	1
210.202.12	100	45/40	29/32	250	DIMROTH	SCREW THREAD	1
210.202.13	150	45/40	29/32	250	DIMROTH	SCREW THREAD	1
210.202.14	250	45/40	29/32	500	DIMROTH	SCREW THREAD	1
210.202.15	500	60/46	29/32	1000	DIMROTH	SCREW THREAD	1
210.202.16	1000	71/55	29/32	2000	DIMROTH	SCREW THREAD	1



**DIN 12602** 



Cat. No.	Capacity (ml)	Socket	Cone	Pcs/ Pack
211.202.04	100	45/40	29/32	1
211.202.06	250	45/40	29/32	1
211.202.08	500	60/46	29/32	1
211.202.09	1000	71/55	29/32	1

PS: Soxhlet Extraction Apparatus can also be offered with ASTM Joint sizes on request.

























# **Utility Sets**

This set is ideal for introducing student to the principal techniques of perparative organic chemistry. Although

the set is very simple a surprising number of preparations on the 30 g scale can be carried out.

Cat. No.	Description
202.202.01	Complete set comprising
	5 items of Glassware

Item No.	Componets	29 BU/M
1	Pear shaped flask 50ml	1
2	Still head	1
3	Liebig condenser	1
4	Screw cap adapter	1
5	Receiver adapter	1





A highly popular set in schools, collages and universities. It has been purposely designed to cover the essential requirements for the teaching of organic chemistry and is suitable for preparations up to 30g. This is a set which is difficult to beat for versatility.

Cat. No.	Description
203.202.01	Complete set comprising
	9 items of Glassware.

Item No.	Componets	27 BU/M
1	Pear shaped flask 50ml	1
2	Still head	1
3	Liebig condenser	1
4	Screw cap adapter	1
5	Receiver adapter	1
6	Air leak/steam inlet tube	1
7	Dropping funnel, 50 ml	1
	with GP Rotaflo tap	
8	Stopper	1
9	Thermometer	1























# **Utility Sets**

For student use in preparation organic chemistry up to the 1501 g scale, this includes all the necessary equipment to allow a wide range of preparation to be carried out. IT is also invaluable for industrial laboratories where the among of preparative work is not great and may occur at infrequent intervals. for such applications, this set has the advantage of covering an extensive field of work and occupying little space when not in use.

Cat. No.	Description
207.202.01	Complete set comprising
	16 items of Glassware.

Item No.	Componets	Socket size	Cone size
1	Still head	14/23	19/26
2	Receiver	19/26	24/29
3	Air leak/steam inlet tube	-	19/26
4	Liebig condenser	19/26	19/26
5	Dropping funnel, 100 ml	19/26	19/26
6	Reducing adapter	19/26	24/29
7	Multiple adapter	19/26	24/29
8	Flask, R.B., 50 ml	24/29	-
9	Flask, Erlenmeyer, 250 ml	24/29	-
10	Flask, R.B., 250 ml	24/29	-
11	Stopper	-	19/26
12	Stopper	-	19/26
13	Thermometer Pocket	-	14/23
14	Receiver adapter	19/26	-
15	Flask, R.B., 100mk	24/29	-
16	Stopper	-	24/29

























## **Beakers**

Manufactured from ASTME 438 TYPE 1 GLASS A BORO 3.3 GLASS. These beakers comply to ISO 3819, DIN 12331 ASTM E - 960 and USP standards. These beakers come with white graduation and marking area for use with an ordinary pencil. The beakers has a uniform wall thickness which make it ideal for heating application. These Beakers have excellent thermal performance and are highly resistant to chemical attack.

These beakers can be provided in White & Blue color printing. For ordering just use the same catalogue number and just mention the colour you need.





Beaker, Low form with graduation and spout DIN 12331, ISO 3819

Cat No.	Capacity ml	D. (mm)	H. (mm)	Pcs/ Pack
229.202.02	10	26	35	10
229.202.03	25	34	50	10
229.202.04	50	42	60	10
229.202.05	100	50	70	10
229.202.06	150	60	80	10
229.202.07	250	70	95	10
229.202.08	400	80	110	10
229.202.09	600	90	125	8
229.202.10	1000	105	145	6
229.202.11	2000	132	185	4
229.202.13	3000	152	210	1







Cat No.	Capacity ml	D. (mm)	H. (mm)	Pcs/ Pack
230.202.02	50	38	70	10
230.202.03	100	48	80	10
230.202.04	150	54	95	10
230.202.05	250	60	120	10
230.202.06	400	70	130	10
230.202.07	600	80	150	8





#### Beaker Tong, SS

- Made of stainless steel
- · Available in silicon sleeve or in fibre glass yarn to resist direct flame
- Tp hold beakers upto 2 Litres (155mm OD)

Cat No.	Туре	Length	Material	Max Temp	Pcs/Pack
396.303.01	Beaker	250 mm	Glass Fibre	500°C	4
396.303.02	Beaker	300 mm	Glass Fibre	500°C	4
396.303.03	Beaker	250 mm	Silicon	280°C	4
396.303.04	Beaker	300 mm	Silicon	280°C	4























### **Beakers**

#### Beaker, Low Form, with Double Capacity Scale

Beakers are manufactured from ASTM E 438 TYPE 1 CLASS A BORO 3.3 GLASS, these beakers are made as per ASTM E 960, TYPE 1 all beakers starting from 20ml have graduation and are printed in white colour enamel. All beakers have sightly flared beaded top for easy pouring

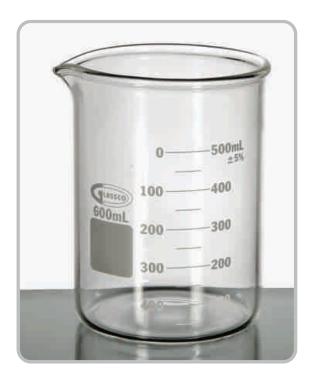
Catalogue No.	Capacity	Graduation Interval	Graduation Range	Qty Per Pack
229.402.02	10			1
229.402.03	20	10 mL	5-15 mL	1
229.402.03A	30	10 mL	5-25 mL	1
229.402.04	50	10 mL	10-40 mL	1
229.402.05	100	10 mL	20-80 mL	1
229.402.06	150	20 mL	20-140 mL	1
229.402.07	250	25 mL	25-200 mL	1
229.402.08	400	25 mL	25-325 mL	1
229.402.09	600	50 mL	100-500 mL	1
229.402.10	1000	50 mL	100-900 mL	1
229.402.11	2000	200 mL	200-1800 mL	1
229.402.14	4000	500 mL	500-3500 mL	1



Beaker **Low Form** 









### Beaker, Low Form, Heavy Wall, with Double Capacity Scale

Beakers are manufactured from ASTM E 438 TYPE 1 CLASS A BORO 3.3 GLASS, as per ASTM E 960, TYPE 2 all beakers are printed in white colour enamel. These beakers are stronger than standard beakers and are made from thick wall tube and comes with re-inforced Rim & Spout, which is less prone to breakage during washing, have longer life and increased user safety. This glassware is not recommended for use on hot plates.



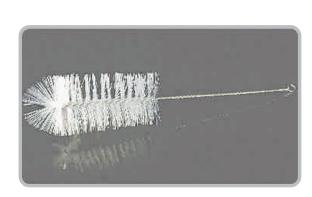


Catalogue No.	Capacity	Graduation Interval	Graduation Range	Qty Per Pack
229.235.07	250	25 mL	25-200 mL	12
229.235.08	400	25 mL	25-325 mL	12
229.235.09	600	50 mL	100-500 mL	6
229.235.10	1000	50 mL	100-900 mL	6
229.235.11	2000	200 mL	200-1800 mL	4
229.235.14	4000	500 mL	500-3500 mL	1

#### Brush, Beaker

Cat. No.	Туре	Material	Pcs/Pack
593.303.06	Beaker Brush	Nylon	50





























### Beakers (Euro Design)

Material : Polypropylene

Cat. No.	Capacity	Pcs/Pack
101.303.01	25 ml	12
101.303.02	50 ml	12
101.303.03	100 ml	12
101.303.04	250 ml	12
101.303.05	500 ml	12
101.303.06	1000 ml	6
101.303.07	2000 ml	6
101.303.08	5000 ml	2

#### Measuring Jugs, Euro Design

these handy Jugs, moulded in Polypropylene, are clear, autoclavable and have good chemical resistance. These jugs are provided with a handle for  $\,$ easy & convenient lifting and have raised graduations for easy reading.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
179.303.01	250ml	12
179.303.05	500ml	12
179.303.06	1000ml	6
179.303.07	2000ml	6
179.303.08	3000ml	6
179.303.09	5000ml	4









#### **Conical Flask**

made of Polypropylene, these cone shaped flasks are rigid, translucent & autoclavable. The screw cap keeps the contents of the flask contamination free and makes the flask leakproof. Threads should be disengaged before autoclaving.

Material: Polypropylene

Item Code	Capacity ml	Pcs/Pack
111.303.01	100 ml	12
111.303.02	250 ml	12
111.303.03	500 ml	12

























# Erlenmaryer Flasks

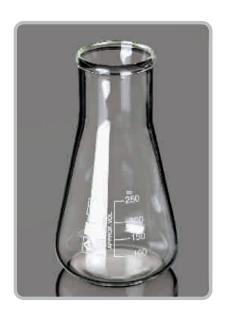
Manufactured from ASTM E 438 TYPE A BORO 3.3 GLASS. These flasks comply to DIN ISO 1773 and USP standards. All these flasks come with thick reinforced rim and are manufactured form thick glass. These flasks come with white graduation and marking area for use with ordinary pencil. These flasks can be provided in White & Blue color printing. For ordering just the same catalogue number and just mention the colour you need.

Erlenmeyer Flasks, Narrow Neck with graduation DIN ISO 1773 with Reinforced thick Rim to reduce chipping & breakage.

Cat No.	Capacity ml	D. (mm)	D1. (mm)	H. (mm)	Pcs/ Pack
231.202.01	25	42	22	75	10
231.202.02	50	51	22	90	10
231.202.03	100	64	22	105	10
231.202.04	250	85	34	145	10
231.202.05	500	105	34	180	10
231.202.06	1000	131	34	220	10
231.202.07	2000	166	50	280	6
231.202.08	3000	187	52	310	1
231.202.09	5000	220	52	365	1









Erlenmeyer Flasks, Wide Neck with graduation DIN 12385, EN ISO 24450 with Reinforced thick Rim to reduce chipping & breakage.

11 0 0						
Cat No.	Capacity ml	D. (mm)	D1. (mm)	H. (mm)	Pcs/ Pack	
232.202.01*	25	42	31	70	10	
232.202.02	50	51	34	85	10	
232.202.03	100	64	34	105	10	
232.202.05	250	85	50	140	10	
232.202.07	500	105	50	175	10	
232.202.08	1000	131	50	220	10	
232.202.09	2000	153	72	276	6	

<sup>\*</sup> Non DIN



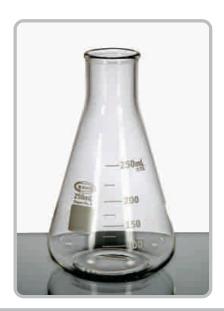
These flasks are made from thick wall and have reinforced thick beaded rim. The flasks are produced to meet ASTM E 1404 TYPE 1 specifications. All the flasks are printed in white enamel.

Catalogue No.	Capacity	Sub Division (ml)	Graduation Range	Rubber Stopper Size	Qty Per Pack
231.402.01	25 mL	5 mL	10-25 mL	0	12
231.402.02	50 mL	10 mL	20-50 mL	1	12
231.402.03A	125 mL	25 mL	50-125 mL	5	12
231.402.04	250 mL	25 mL	50-200 mL	6	12
231.402.04A	300 mL	25 mL	100-300 mL	6	12
231.402.05	500 mL	50 mL	100-500 mL	7	6
231.402.06	1000 mL	50 mL	250-1000 mL	9	6
231.402.07	2000 mL	100 mL	600-2000 mL	10	4
231.402.08A	4000 mL	500 mL	1000-4000 mL	10	1
231.402.09	6000 mL	500 mL	1500-6000 mL	10	1



















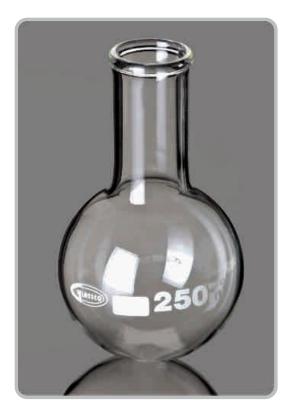








# **Round Bottom Flasks**



#### **Round Bottom and Flat Bottom Flasks**

Manufactured from ASTM E 438 TYPE 1 CLASS A BORD 3.3 These flasks comply to **DIN ISO 1773 and USP standards.** All these flasks come with thick reinforced rim and are manufactured from thick glass. These flasks come with white printing and marking area for use with ordinary pencil.

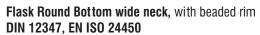


Flask Round Bottom narrow neck, with beaded rim DIN 12347, DIN ISO 1773

Cat No.	Capacity ml	D. (mm)	D1. (mm)	H. (mm)	Pcs/ Pack
233.202.01	50	51	26	95	10
233.202.02	100	64	26	110	10
233.202.03	250	85	34	144	10
233.202.04	500	105	34	168	10
233.202.05	1000	131	42	200	10
233.202.06	2000	166	42	240	6
233.202.07 *	3000	195	50	305	1
233.202.08*	5000	233	55	345	1
233.202.09	10000	279	65	380	1

<sup>\*</sup> Non DIN





Cat No.	Capacity ml	D. (mm)	D1. (mm)	H. (mm)	Pcs/ Pack
234.202.01	50	51	34	95	10
234.202.02	100	64	35	110	10
234.202.03	250	85	51	145	10
234.202.04	500	105	50	168	10
234.202.05	1000	131	50	200	10
234.202.07	2000	166	76	240	6

























### Flasks

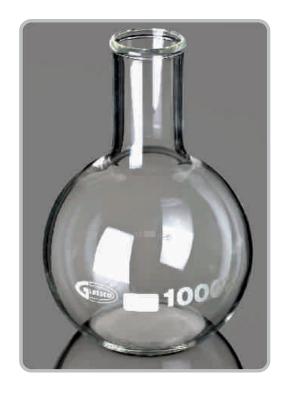
## Flat Bottom Flasks

#### Flask Flat Bottom, narrow neck, with beaded rim **DIN ISO 1773**

Cat No.	Capacity ml	D. (mm)	D1. (mm)	H. (mm)	Pcs/ Pack
235.202.01	50	51	22	90	10
235.202.02	100	64	22	105	10
235.202.03	250	85	35	140	10
235.202.04	500	105	34	163	10
235.202.05	1000	131	42	190	10
235.202.06	2000	166	50	230	6
235.202.07*	3000	195	50	300	1
235.202.08	5000	233	50	320	1
235.202.09	10000	280	65	360	1

<sup>\*</sup> Non DIN









#### Flask Flat Bottom, wide neck, with beaded rim **EN ISO 24450**

Cat No.	Capacity ml	D. (mm)	D1. (mm)	H. (mm)	Pcs/ Pack
236.202.01	50	51	35	90	10
236.202.02	100	64	34	105	10
236.202.03	250	85	50	140	10
236.202.04	500	103	50	163	10
236.202.05	1000	131	50	190	10
236.202.06	2000	166	70	230	6

**Flask Tong, EURO DESIGN**Available in Silicon Sleeve in fibre Glass yarn to resist direct flame. To hold Flask upto 2 Liters (60 mm OD). Made of Stainless Steel

Cat No.	Length	Length	Max Temp	Pcs/Pack
396.303.05	250 mm	Glass Fibre	500℃	4
396.303.06	300 mm	Glass Fibre	500℃	4
396.303.07	250 mm	Silicon	280℃	4
396.303.08	300 mm	Silicon	280°C	4











### Flasks Accessories









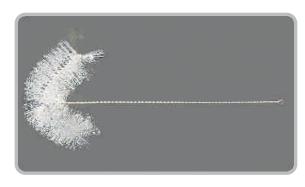




#### Brush, Flask

Cat. No.	Туре	Material	Pcs/Pack
593.303.04	Flask Brush	Nylon	50









#### Flask Stand

moulded in Polypropylene, this Flask Stand gives a stair like top view. Every step provides excellent support to the round bottom flask at every point of Contact. This Flask Stand can hold round bottom Flasks up to 10 Ltr. capacity. This Stackable Flask Stand can also be steam autoclaved.

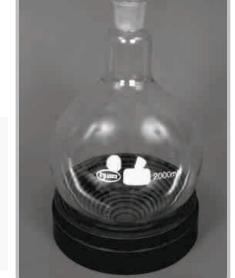
Material: polypropylene

Cat. No.	Capacity	Pcs/Pack
115.303.01	Flask Stand	6











made of silicon to hold flasks from 10ml to 10000 ml, can withstand temp. up to 280°C.

Cat No.	Pcs/Pack
417 303 01	2





#### **Hand Grip**

made of silicon with slip free mechanism, easy use, can with stand temp. up to 280°C.

Cat No.	Pcs/Pack
418.303.01	4























Scoop & Dishes

## **General Labware**



Weighing Scoops, with open tubular arm, suitable for use when small quantity of dyes or powders are to be weighed

Cat No.	Capacity	Pack Size
245.202.01	3ml	10
245.202.02	6ml	10
245.202.03	10ml	10



#### **Dishes**

Manufactured from ASTM E 438 TYPE 1 CIASS A BORO 3.3 GLASS. These dishes to DIN and USP standards. The dishes are printed in white colour and have marking area to use with ordinary pencil.

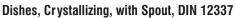




Dishes, Crystallizing, without Spout

Cat No.	Diameter x Height (mm)	Pack Size
246.202.01	40 x 25	10
246.202.02	50 x 30	10
246.202.03	60 x 35	10
246.202.04	70 x 40	10
246.202.05	80 x 45	10
246.202.06	95 x 55	10





, ,	٠.	*
Cat No.	0.D. x Height (mm)	Pack Size
246.202.015	40 x 25	10
246.202.02S	50 x 30	10
246.202.03S	60 x 35	10
246.202.045	70 x 40	10
246.202.05S	80 x 45	10
246.202.06S	95 x 55	10

























## **Petri Dish**, manufactured from **BORO 3.3 Glass** which can withstand repeated Autoclaving.

Cat No.	0.D. x Height (mm)	Pack Size
248.202.01	50 x 17	10
248.202.02	80 x 17	10
248.202.03	100 x 17	10
248.202.04	150 x 20	10
248.202.05	200 x 20	10

#### Petri Dish

these Petri Dishes are clear, unbreakable & autoclavable. Material : Polypropylene

	,, ,,	
Cat. No.	Size	Pcs/Pack
124.303.01	50 mm	36
124.303.02	75 mm	36
124.303.03	100 mm	36
124.303.04	125 mm	12
124.303.05	150 mm	12









#### Petri Dish (Disposable)

these transparent, ready to use, disposable Petri Dishes are made of optically clear, non-toxic, Polystyrene, These Petri Dishes packed individually in polyethylene bags are sterilized by radiation. Material: Polystyrene

Cat. No.	Size	Pcs/Pack
159.303.01	90 mm	36

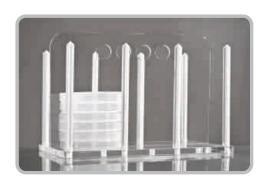
#### **Rack For Petri Dishes**

is a clear acrylic construction with white Polycarbonate Posts. It has a capacity to hold 60 petri dishes of 90 mm size. This rack is very useful during inoculation, incubation & Storage. Visibility from all sides enables the culture to be seen & checked during incubation.

Material: Polymethyl Methacrylate/Polycarbonate

Cat. No.	Size	Pcs/Pack
160.303.01	90 mm	2
160.303.02	60mm	2



























Crucibles

#### Silica Crucible, with Lid Upto 1000°C

Cat. No.	Capacity	Dia (mm)	Height (mm)	Pcs/Pack
518.303.01	15	41	25	6
518.303.02	25	47	28	6
518.303.03	50	57	37	6
518.303.04	80	67	45	4
518.303.05	100	71	50	4
518.303.06	150	82	51	4









#### Silica Crucible, without Lid Upto 1000°C

Cat. No.	Capacity	Dia (mm)	Height (mm)	Pcs/Pack
519.303.01	15	41	25	6
519.303.02	25	47	28	6
519.303.03	50	57	37	6
519.303.04	80	67	45	4
519.303.05	100	71	50	4
519.303.06	150	82	51	4

#### Quartz Crucible,

Made of Quartz Gel & Powder, Tolerance upto 2000°C

Item Code	Size	Туре	Pcs/Pack
521.303.01	15 ML	Without Lid	4
521.303.02	25 ML	Without Lid	4
521.303.03	50 ML	Without Lid	2
521.303.04	100 ML	Without Lid	2
521.303.05	15 ML	With Lid	4
521.303.06	25 ML	With Lid	4
521.303.07	50 ML	With Lid	2
521.303.08	100 ML	With Lid	2









- Made of Ceramic With Lid
- Maximum temperature upto 1150°c

Item Code	Capacity	Dia	Height	Pcs/Pack
522.303.13	2 ml	18 mm	12 mm	6
522.303.14	8 ml	32 mm	20 mm	6
522.303.15	17 ml	41 mm	26 mm	4
522.303.16	30 ml	50 mm	31 mm	4
522.303.17	50 ml	61 mm	37 mm	4
522.303.18	100 ml	76 mm	46 mm	2
522.303.19	150 ml	84 mm	52 mm	2
522.303.20	250 ml	102 mm	60 mm	2



#### Crucible Porcelain, Tall form (Euro Design)

- Made of Ceramic With Lid, tall form
- Maximum temperature upto 1150°c

Item Code	Capacity	Dia	Height	Pcs/Pack
523.303.11	1.5 ml	15 mm	15 mm	6
523.303.12	6 ml	24 mm	20 mm	6
523.303.13	10 ml	31 mm	26 mm	4
523.303.14	15 ml	35 mm	29 mm	4
523.303.15	30 ml	43 mm	37 mm	4
523.303.16	40 ml	50 mm	40 mm	2
523.303.17	50 ml	53 mm	43 mm	2
523.303.18	100 ml	65 mm	54 mm	2
523.303.19	250 ml	88 mm	72 mm	2



























**Crucible Tong, SS**Stainless Steel. Grade 304.

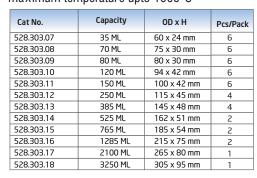
Cat. No.	Size (mm)	Pcs/Pack
355.303.01	150	4
355.303.02	200	4
355.303.03	250	4
355.303.04	300	4
355.303.05	375	4
355.303.06	450	4
355.303.07	600	4



Diack paint/cintine plateu.				
Cat. No.	Size (mm)	Туре	Pcs/Pack	
367.303.01	150	black painted	4	
367.303.02	200	black painted	4	
367.303.03	300	black painted	4	
367.303.04	150	chrome plated	4	
367.303.05	200	chrome plated	4	
367.303.06	300	chrome plated	4	



**Evaporating Dish,** EURO DESIGN made of Porcelain, maximum temperature upto 1000°C







Pestie & Mortar EURO DESIGN, made of Porcelain, maximum temperature upto 1000°C

Item Code	Size (ID x H)	Pcs/Pack
529.303.08	60 x 44 mm	6
529.303.09	75 x 48 mm	4
529.303.10	85 x 55 mm	4
529.303.11	100 x 70 mm	4
529.303.12	117 x 75 mm	4
529.303.13	125 x 88 mm	2
529.303.15	150 x 100 mm	1
529.303.16	175 x 115 mm	1
529.303.17	200 x 140 mm	1
529.303.18	250 x 175 mm	1
529.303.19	300 x 205 mm	1
529.303.20	350 mm ID	1
529.303.21	400 mm ID	1

























#### **Dessicator with Lid, Plain**, Die pressed, Neutral Glass with Porcelain perforated plate.

Cat No.	I.D.(mm)	Pcs/Pack
249.202.01	150	1
249.202.02	210	1
249.202.03	250	1
249.202.04	300	1









#### **Dessicator With Lid,**

Vacuum, Die Pressed, Neutral Glass with Porcelain Perforated Plate and Glass Sleeve

Cat No.	I.D.(mm)	Pack Size
250.202.01	150	1
250.202.02	210	1
250.202.03	250	1
250.202.04	300	1





#### **Desiccator (Vacuum)**

are made of Polypropylene and Polycarbonate. These autoclavable vacuum desiccators can hold vacuum up to 740 mm of Hg for 24 hrs. with out any greasing. The top dome, moulded in rigid and transparent Polycarbonate, gives a crystal clear view of the desiccant placed inside. The Knurled knob on the top provides easy handling of the dome. The lower part is made of Polypropylene. An internal groove is provided on the flange to hold a silicon rubber O-ring. The Polypropylene stopcock is fitted with a self lubricating PTEF plug. This plug works three way i.e. vacuum creation, shut ting off & vacuum releasing.

Material: Polypropylene/Polycarbonate

	Cat. No.	Size	Flange	I.D.	Pcs/Pack
	118.303.01	150 mm	171 mm	150 mm	1
	118.303.02	200 mm	232 mm	199 mm	1
	118.303.03	250 mm	276 mm	240 mm	1
ı	118.303.04	300 mm	340 mm	300 mm	1





#### **Desiccator (Plain)**

are physically the same as Vacuum Desiccator. Only difference is the absence of stop cock. Grease should be applied on the flanges to make it air tight. Both Vacuum & Plain Desiccators are provided with a thick perforated Polypropylene disc with a big hole in the center for easy lifting. The tiny holes in the disc provide air trough & support to the dishes. However porcelain discs are advisable in case of incandescent crucibles.

Material: Polypropylene/Polycarbonate

Cat. No.	Туре	Size	Flange	I.D.	Pcs/Pack
119.303.01	Plain	150 mm	171 mm	150 mm	1
119.303.02	Plain	200 mm	232 mm	199 mm	1
119.303.03	Plain	250 mm	276 mm	240 mm	1
119.303.04	Plain	300 mm	340 mm	300 mm	1
119.303.05	(Vaccum - All Clear)	150mm	171mm	150 mm	1
119.303.06	(Vaccum - All Clear)	200mm	232 mm	199 mm	1
119.303.07	(Vaccum - All Clear)	250mm	276 mm	250 mm	1
119.303.08	(Vaccum - All Clear)	300mm	340 mm	300 mm	1























#### **Laboratory Tray**

needless to say, Glassco Laboratory Tray moulded in polypropylene is a multipurpose tray that can be used for sterilizing, drying glassware, porcelain ware & other laboratory instruments. These steam autoclavable trays have tapered walls which prove good for nesting.

Material: Polypropylene

Cat. No.	Size	Pcs/Pack
185.303.01	450 x 350 x 75 mm	10
185.303.02	375 x 300 x 75 mm	10

#### **Utility Tray**

adding to the already existing range of autoclavable laboratories trays, is the Utility Tray and as the name suggests this Polypropylene Tray can be utilized for purposes ranging from drying glassware to sterilizing and to store any laboratory apparatus.

Material: Polypropylene

Cat. No.	Size	Pcs/Pack
186.303.01	375 x 350 x 130 mm	6







#### **Carrier Tray**

This autoclavable Polypropylene Tray has a unique feature i.e. its handle which proves really helpful in carrying reagents or laboratory apparatus from one place to another, single handedly.

Material: Polypropylene

Cat. No.	Size	Pcs/Pack
187.303.01	380 x 240 x 115 mm	6





#### **Draining Rack**

Material: Acrylopitrile Butadiene Styrene/polycarbonate

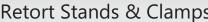
Cat. No.	Pcs/Pack
205.303.01	1

















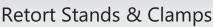












#### **Retort Stand**

non-corrosive, moulded Retort Stands provide excellent replacement for the metal ones. Even the metallic rod has a polypropylene covering making it non- corrosive. The rod measuring 12.5 mm x 750 mm can be screwed into the heavy base giving way to a perfectly stable Retort Stand.

Material: Polystyrene/Polypropylene

Item Code	Size	Pcs/Pack
117.303.01	225 x 150 mm- Side Hold	1
117.303.02	300 x 200 mm-Center Hold	1
117.303.03	300 x 200 mm- Side Hold	1







#### **Retort Stand**

Material: M.S & Blue Powder Coated Rod with L- Key AS PER DIN 12892

Item Code	Size	Size (Length x dia)	Pcs/Pack
309.303.01	150 x 100mm	500mm x 12mm	2
309.303.02	200 x 125mm	600mm x 12mm	2
309.303.03	250 x 150mm	750mm x 12mm	2

#### **Retort Stand**

Material: Cast Iron & Hammer tone rod with L- Key AS PER DIN 12892

Item Code	Size	Size (Length x dia)	Pcs/Pack
310.303.01	150 x 100 mm	950 x 10 mm	2
310.303.02	175 x 125 mm	600 x 12.5 mm	2
310.303.03	200 x 125mm	600 x 12.5 mm	2
310.303.04	200 x 125mm	600 x 12 mm	2
310.303.05	225 x 150mm	750 x 12 mm	2
310.303.06	250 x 150mm	600 x 12 mm	2
310.303.07	250 x 200mm	750 x 12 mm	2
310.303.08	300 x 175mm	900 x 12 mm	2
310.303.09	250 x 150mm	750 x 12 mm	2









#### **Retort Rings**

Material: Mild Steel, Hammer Tone Painted, with Boss Head

Item Code	Size	Pcs/Pack
313.303.01	50 mm	4
313.303.02	62.5mm	4
313.303.03	75mm	4
313.303.04	100mm	4
313.303.05	125mm	2
313.303.06	150mm	2
313.303.07	200mm	2







### Clamps





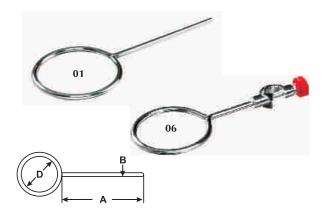












#### **Retort Ring**

Made of steel, chrome plated. With rod from 70 mm to 220 mm length or With bosshead to suit rod dia of 14 mm

Item Code	Α	В	D	Туре	Pcs/Pack
393.303.01	160 mm	7	50mm	Rod	4
393.303.02	200 mm	7	70mm	Rod	4
393.303.03	220 mm	8	100mm	Rod	4
393.303.04	220 mm	8	120mm	Rod	2
393.303.05	220 mm	8	140mm	Rod	2
393.303.06	70 mm	7	50mm	Bosshead	4
393.303.07	70 mm	7	70mm	Bosshead	4
393.303.08	70 mm	8	100mm	Bosshead	4
393.303.09	70 mm	8	120mm	Bosshead	2
393.303.10	70 mm	8	140mm	Bosshead	2

### **Retort Clamp**

Cross pattern, die-casted, to hold upto 65 mm AS PER DIN 12894

Item Code	Туре	Pcs/Pack
324.303.01	Aluminium, Cork Lined - Cross Pattern,	2
	to hold upto 50 - 65 mm circles	
324.303.04	Zinc, Cork Lined - Cross Pattern,	2
	to hold upto 50 - 65 mm circles	









#### **Retort Clamp**

3 Prong, Aluminium, Silicone Sleeved, AS PER DIN 12894 Material: Aluminium diecasted & white Powder Coated

Item Code	Туре	Pcs/Pack
326.303.02	Three Prongs, to hold upto 50 - 65 mm circles	2

Universal Clamp Aluminium, Cork Lined, AS PER DIN 12894 Material : Aluminium diecasted, powder coated, chrome plated with MS Steel Rod

Item Code	Туре	Pcs/Pack
328.303.01	to hold upto 50 - 65 mm circles	2

























Clamps

#### Condenser Clamp - Four Prong

Silicone Sleeved,

Material: Aluminium, powder coated with steel rod

Item Code	Туре	Pcs/Pack
334.303.02	to hold upto 125 mm circles	2









#### Condenser Clamp - Three Prong

Silicone Sleeved,

Material: Aluminium, powder coated with steel rod

Item Code	Туре	Pcs/Pack
335.303.02	to hold upto 125 mm circles	2

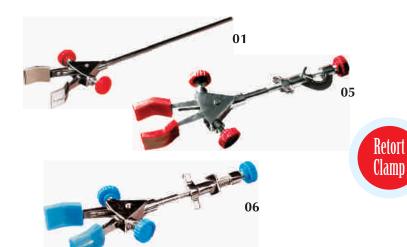
#### **Retort Clamp**

3 Prong, EURO DESIGN

Item Code	Туре	Туре
390.303.01	PVC sleeve with rod	2
390.303.02	Silicone sleeve with rod	2
390.303.03	PVC sleeve with boss Head	2
390.303.04	SILICONE sleeve with boss Head	2







#### **Retort Clamp**

2 Prong Standard, EURO DESIGN, Zinc alloy, Chrome plated to hold upto 80 mm

Item Code	Туре	Pcs/Pack
391.303.01	CORK lined with rod	2
391.303.02	PVC sleeve with rod	2
391.303.03	SILICONE sleeve with rod	2
391.303.04	CORK lined with boss head	2
391.303.05	PVC sleeve with boss head	2
391.303.06	SILICONE sleeve with boss head	2

























#### **BOSS HEAD**

 $\label{eq:material} \textbf{Material: Cast Iron, painted, for use retort Stand and Condenser Clamp AS PER DIN 12895}$ 

Item Code	Size (Dia x Length)	Pcs/Pack
337.303.01	hold upto 25mm heavy, with round screw	4
337.303.02	hold upto 25mm heavy, with thumb screw	4
337.303.03	hold upto 25mm heavy, with rod screw	4



Material : Cast Iron, painted,for use with retort Stand and condenser clamp AS PER DIN 12895

Item Code	Size (Dia x Length)	Pcs/Pack
338.303.01	hold upto 20mm heavy with round screw	4
338.303.03	hold upto 20mm heavy with rod screw	4













#### **BOSS HEAD**

Material : Powder coated, AS PER DIN 12895

Item Code	Description	Pcs/Pack
341.303.01	Aluminium, Round Screw, hold upto 16 mm AS PER DIN 12895	4
341.303.02	Aluminium, Thumb Screw, hold upto 16 mm AS PER DIN 12895	4
341.303.03	Aluminium, Rod Screw, hold upto 16 mm AS PER DIN 12895	4
341.303.04	Zinc, Round Screw, hold upto 16 mm AS PER DIN 12895	4
341.303.05	Zinc, Thumb Screw, hold upto 16 mm AS PER DIN 12895	4
341.303.06	Zinc, Rod Screw, hold upto 16 mm AS PER DIN 12895	4

#### **Tripod Stand**

Material: Cast iron base, Hammer Tone,

Finished Round

Item Code	Size	Тор	Pcs/Pack
344.303.01	100 x 150 mm	with round top	1
344.303.02	100 x 175 mm	with round top	1
344.303.03	100 x 200 mm	with round top	1
344.303.04	125 x 150 mm	with round top	1
344.303.05	125 x 175 mm	with round top	1
344.303.06	125 x 200 mm	with round top	1
344.303.07	100 x 150 mm	with triangle top	1
344.303.08	100 x 175 mm	with triangle top	1
344.303.09	100 x 200 mm	with triangle top	1
344.303.10	125 x 150 mm	with triangle top	1
344.303.11	125 x 175 mm	with triangle top	1
344.303.12	125 x 200 mm	with triangle top	1



























#### Wire Gauge

Ceramic Center, Maximum Temperature Upto 800°C

Item Code	Туре	Pcs/Pack
524.303.01	100 x 100 mm	10
524.303.02	125 x 125 mm	10
524.303.03	150 x 150 mm	10
524.303.04	200 x 200 mm	10









#### **Bunsen Burner**

with Stop Cock L.P.G.

Item Code	Description	Pcs/Pack
347.303.01	Casted Iron black painted AS PER DIN 30665	1
347.303.02	Casted Iron Black painted, easy flame regulator double walled	1
	Brass pipe to give a concentrated higher flame, Eco-Friendly	
	AS PER DIN 30665	





#### **Meaker Burner**

Material: Casted Iron red painted AS PER DIN 30665

Item Code	Description	Pcs/Pack
348.303.01	Without Stop Cock	1







#### **Meaker Burner**

Material: Casted Iron red painted AS PER DIN 30665

ı	Item Code	Description	Pcs/Pack
	349.303.01	With Stop Cock L.P.G	1
	349.303.02	ECONOMIC With Stop Cock L.P.G, Bunsen	1
	Burner type with cap, for school purpose		

#### **Laboratory Jack**

all sizes are in millimeters.

Cat No.	Туре	Size (mm)	Pcs/Pack
370.303.09	Stainless Steel	120 x 140	1
370.303.10	Stainless Steel	200 x 200	1
370.303.11	Stainless Steel	250 x 250	1



























#### Silicon Cork

Autoclavable with temperature range -50 to 250  $^{\rm o}$  C, Shore Hardness 45-50

		61-	
		Size (Bottom Dia x	
M C	Туре	Top Dia x Height)	Des (Des)
Item Code	Туре	Top Dia x Height)	Pcs/Pack
405.303.01	(TRANSLUCENT	9 x 11.5 x 20	10
405.303.02	(TRANSLUCENT)	11 x 14 x 24	10
405.303.03	(TRANSLUCENT)	13 x 16 x 24	10
405.303.04	(TRANSLUCENT)	15 x 18 x 24	10
405.303.05	(TRANSLUCENT)	17 x 20 x 26	10
405.303.06	(TRANSLUCENT)	18 x 21 x 26	10
405.303.07	(TRANSLUCENT)	19 x 22.5 x 28	10
405.303.08	(TRANSLUCENT)	23 x 25.5 x 28	10
405.303.09	(TRANSLUCENT)	25 x 28.5 x28	10
405.303.10	(TRANSLUCENT)	27 x 31 x 32	10
405.303.11	(TRANSLUCENT)	29 x 33 x 32	10
405.303.12	(TRANSLUCENT)	31 x 36 x 35	10
405.303.13	(TRANSLUCENT)	33 x 38.5 x 38.5	10
405.303.14	EURO DESIGN (TRANSLUCENT)	3.5 x 6.5 x 15	10
405.303.15	EURO DESIGN (TRANSLUCENT)	5 x 9 x 20	10
405.303.16	EURO DESIGN (TRANSLUCENT)	8 x 12 x 20	10
405.303.17	EURO DESIGN (TRANSLUCENT)	10.5 x 14.5 x 20	10
405.303.18	EURO DESIGN (TRANSLUCENT)	12.5 x 16.5 x 20	10
405.303.19	EURO DESIGN (TRANSLUCENT)	14 x 18 x 20	10
405.303.20	EURO DESIGN (TRANSLUCENT)	17 x 22 x 25	10
405.303.21	EURO DESIGN (TRANSLUCENT)	18 x 24 x 30	10
405.303.22	EURO DESIGN (TRANSLUCENT)	21 x 27 x 30	10
405.303.23	EURO DESIGN (TRANSLUCENT)	23 x 29 x 30	10
405.303.24	EURO DESIGN (TRANSLUCENT)	26 x 32 x 30	10
405.303.25	EURO DESIGN (TRANSLUCENT)	29 x 35 x 30	10
405.303.26	EURO DESIGN (TRANSLUCENT)	31 x 38 x 35	10
405.303.27	EURO DESIGN (TRANSLUCENT)	36 x 44 x 40	10
405.303.28	EURO DESIGN (TRANSLUCENT)	41 x 49 x 40	10
405.303.29	EURO DESIGN (TRANSLUCENT)	47 x 55 x 40	10
405.303.30	EURO DESIGN (TRANSLUCENT)	50.5 x 59.5 x 45	10
405.303.31	EURO DESIGN (TRANSLUCENT)	56 x 65 x 45	10
405.303.32	EURO DESIGN (TRANSLUCENT)	60 x 70 x 50	10
405.303.33	EURO DESIGN (TRANSLUCENT)	64.5 x 75.5 x 55	10
405.303.34	EURO DESIGN (TRANSLUCENT)	71 x 83 x 60	10
405.303.35	EURO DESIGN (TRANSLUCENT)	79 x 92 x 65	10
405.303.36	EURO DESIGN (TRANSLUCENT)	87 x 100 x 65	10
405.303.37	EURO DESIGN (TRANSLUCENT)	94 x 107 x 65	10

**Rubber Tubing** Material : Natural Rubber, Temperature range -30 to 70°C Red Superior 10 Meter Coil

Item Code	Bore	Wall Thickness	Pcs/Pack
406.303.01	4.0 mm	1.0 mm	10 Mtr
406.303.02	5.0 mm	1.5 mm	10 Mtr
406.303.03	6.0 mm	1.5 mm	10 Mtr
406.303.04	7.0 mm	1.5 mm	10 Mtr
406.303.05	8.0 mm	1.5 mm	10 Mtr
406.303.06	9.0 mm	2.0 mm	10 Mtr
406.303.07	10.0 mm	2.0 mm	10 Mtr
406.303.08	12.0 mm	2.5 mm	10 Mtr



#### **Rubber Corks**

Autoclavable with temperature range -30 to 70°C, Shore Hardness 45

		Size	
	<b>-</b>	(Bottom Dia x	
Item Code	Туре	Top Dia x Height)	Pcs/Pack
410.303.01		9 x 6 x 16 mm	10
410.303.02		13 x 9 x 15.5 mm	10
410.303.03		14 x 11 x 18.5 mm	10
410.303.04		16.5 x 13 x 20 mm	10
410.303.05		19 x 14 x 21 mm	10
410.303.06		21 x 15 x 22 mm	10
410.303.07		22.5 x 17.5 x 23 mm	10
410.303.08		24.5 x 20 x 24 mm	10
410.303.09		26 x 20 x 27.5 mm	10
410.303.10		26.5 x 21 x 27.5 mm	10
410.303.11		28 x 21.5 x 31 mm	10
410.303.12		30 x 26 x 33 mm	10
410.303.13		33 x 29 x 32 mm	10
410.303.14		34.5 x 30 x 34.5 mm	10
410.303.15		38.5 x 31 x 37 mm	10
410.303.16		41.5 x 32 x 42.5 mm	10
410.303.17		42 x 38 x 40.5 mm	10
410.303.18		45 x 35 x 36.5 mm	10
410.303.19		49.5 x 40 x 40.5 mm	10
410.303.20		53.5 x 48 x 33.5 mm	10
410.303.21		58 x 44 x 45 mm	10
410.303.22		60 x 51 x 56.5 mm	10
410.303.23	EURO DESIGN (TRANSLUCENT)	3.5 x 6.5 x 15 mm	10
410.303.24	EURO DESIGN (TRANSLUCENT)	5 x 9 x 20 mm	10
410.303.25	EURO DESIGN (TRANSLUCENT)	8 x 12 x 20 mm	10
410.303.26	EURO DESIGN (TRANSLUCENT)	10.5 x 14.5 x 20 mm	10
410.303.27	EURO DESIGN (TRANSLUCENT)	12.5 x 16.5 x 20 mm	10
410.303.28	EURO DESIGN (TRANSLUCENT)	14 x 18 x 20 mm	10
410.303.29	EURO DESIGN (TRANSLUCENT)	17 x 22 x 25 mm	10
410.303.30	EURO DESIGN (TRANSLUCENT)	18 x 24 x 30 mm	10
410.303.31	EURO DESIGN (TRANSLUCENT)	21 x 27 x 30 mm	10
410.303.32	EURO DESIGN (TRANSLUCENT)	23 x 29 x 30 mm	10
410.303.33	EURO DESIGN (TRANSLUCENT)	26 x 32 x 30 mm	10
410.303.34	EURO DESIGN (TRANSLUCENT)	29 x 35 x 30 mm	10
410.303.35	EURO DESIGN (TRANSLUCENT)	31 x 38 x 35 mm	10
410.303.36	EURO DESIGN (TRANSLUCENT)	36 x 44 x 40 mm	10
410.303.37	EURO DESIGN (TRANSLUCENT)	41 x 49 x 40 mm	10
410.303.38	EURO DESIGN (TRANSLUCENT)	47 x 55 x 40 mm	10
410.303.39	EURO DESIGN (TRANSLUCENT)	50.5 x 59.5 x 45 mm	10
410.303.40	EURO DESIGN (TRANSLUCENT)	56 x 65 x 45 mm	10
410.303.41	EURO DESIGN (TRANSLUCENT)	60 x 70 x 50 mm	10
410.303.42	EURO DESIGN (TRANSLUCENT)	64.5 x 75.5 x 55 mm	10
410.303.43	EURO DESIGN (TRANSLUCENT)	71 x 83 x 60 mm	10
410.303.44	EURO DESIGN (TRANSLUCENT)	79 x 92 x 65 mm	10
410.303.45	EURO DESIGN (TRANSLUCENT)	87 x 100 x 65 mm	10
410.303.46	EURO DESIGN (TRANSLUCENT)	94 x 107 x 65 mm	10



























Forceps

#### **Forceps**

Stainless Steel straight fine points, 410 SS Grade

Item Code	Size	Pcs/Pack
531.303.01	100 mm	10
531.303.02	125 mm	10
531.303.03	150 mm	10
531.303.04	200 mm	10
531.303.05	250 mm	10
531.303.06	300 mm	10





#### Forceps

Curved Fine Points, 410 SS Grade

110 00 01000		
Item Code	Size	Pcs/Pack
532.303.01	100 mm	10
532.303.02	125mm	10
532.303.03	150 mm	10
532.303.04	200 mm	10
532.303.05	250 mm	10
532 303 06	300 mm	10



#### **Forceps**

Stainless Steel, Straight Blunt Points, 410 SS Grade

Item Code	Size	Pcs/Pack
533.303.01	100 mm	10
533.303.02	125mm	10
533.303.03	150 mm	10
533.303.04	200 mm	10
533.303.05	250 mm	10
533.303.06	300 mm	10



Forceps

Stainless Steel, Straight Blunt Points, 410 SS Grade

Item Code	Size	Pcs/Pack
534.303.01	100 mm	10
534.303.02	125mm	10
534.303.03	150 mm	10
534.303.04	200 mm	10
534.303.05	250 mm	10
534.303.06	300 mm	10



PS: All kind of Forceps can also be supplied in 304 Grade Stainless Steel on special request.

#### **Dissecting Set**

of 14 Instruments (Zip Type)

Item Code	Description	Туре
536.303.01	made of Stainless Steel, Instruments are Dressing Scissor, Cuticle Scissor, Dressing Forceps, Dissecting Forceps, Flapper, Seeker, Arrow Needle, Needle, Blow Pipe, B.P. Handle with Scalpel Blade, Dropper, Chain Hook, Scalpels, Magnifier Lense.	Zip
536.303.01	made of Stainless Steel, Instruments are Dressing Scissor, Cuticle Scissor, Dressing Forceps, Dissecting Forceps, Flapper, Seeker, Arrow Needle, Needle, Blow Pipe, B.P. Handle with Scalpel Blade, Dropper, Chain Hook, Scalpels, Magnifier Lense.	Velcro









### Spatulas

















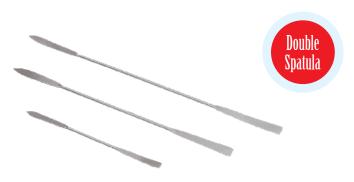


#### **Double Spatula**

Material: Stainless steel, Grade 202, one end Chattaway, one end flat

01

Item Code	Size	Pcs/Pack
375.303.01	155 mm	10
375.303.02	210 mm	10
375.303.03	250 mm	10



#### Micro Spatula

Material : Stainless steel, one end spoon and one side spatula, Grade 202

Item Code	Size	Pcs/Pack
377.303.01	155 mm	10



#### Spatula

Material : Stainless Steel, Grade 202

Item Code	Size	Туре	Pcs/Pack
374.303.01	125 mm	one end spoon and one end flat	10
374.303.02	150 mm	one end spoon and one end flat	10
374.303.03	200 mm	one end spoon and one end flat	10
374.303.04	250 mm	one end spoon and one end flat	10
374.303.05	300 mm	one end spoon and one end flat	10
374.303.06	125 mm	both end flat	10
374.303.07	150 mm	both end flat	10
374.303.08	200 mm	both end flat	10
374.303.09	250 mm	both end flat	10



**Double Spatula**Material : Stainless steel, one end tapered, one end flat, flexible type, Grade 202

Item Code		Size	Pcs/Pack
	376.303.01	155 mm	10
	376.303.02	260 mm	10
	376.303.03	305 mm	10



#### Spatula Knife

Wooden Handle

Item Code	Size	Pcs/Pack
541.303.01	100 mm	6
541.303.03	150 mm	6
541.303.04	200 mm	6
541.303.05	250 mm	6
541.303.06	300 mm	6































#### Laboratory Gloves,

Item Code	Size	Pcs/Pack
505.303.07	Small, per 100	6
505.303.08	Medium, per 100	6
505.303.09	Large, per 100	6

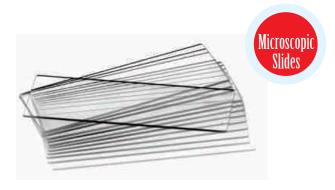


Neutral Glass

Item Code	Туре	Pcs/Pack
564.303.07	50 mm	10
564.303.08	65 mm	10
564.303.09	75 mm	10
564.303.10	100 mm	10
564.303.11	125 mm	10
564.303.12	150 mm	10







#### **Microscopic Slides**

Pack of 50

Item Code	Туре	Pcs/Pack
565.303.01	76/26 Plain	10

#### Slide Box/Rack

are durable, compact & provide utmost protection to 1"x3' slides. Heavy walls will not wrap, splinter or crack. Boxes are unaffected by humidity and are thoroughly insect proof.

Material: Polystyrene

Cat. No.	Quantity	Pcs/Pack
129.303.01	25 Slides	12
129.303.02	50 Slides	12
129.303.03	100 Slides	6









#### **Cover Glass**

0.13 - 0.17 mm Thickness, Pack of 50

	,	
Item Code	Туре	Pcs/Pack
566.303.01	18 x 18 mm	10
566.303.02	20 x 20 mm	10
566.303.03	22 x 22 mm	10
566.303.04	24 x 24 mm	10
566.303.05	22 x 32 mm	10
566.303.06	24 x 50 mm	10







### General Labware













#### Coplin Jar

made of Polypropylene can hold 10 sides of the size 1"  $\times$  3" back to back. The interior of the Coplin Jar is grooved in a way to hold slides in erect position. Domed & shallow thread screw cap provides protection to the slides.

Material: Polypropylene

Cat. No.	Туре	Pcs/Pack
127.303.01	Coplin Jar	12







#### **Storage Boxes**

made of polypropylene, prove to be an excellent option for storage of different powdered reagents & other material in the laboratory. Square shape of these boxes help in saving shelf space. Available in three different sizes, these boxes have polypropylene caps, are autoclavable, provide good chemical resistance & heavy duty service.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
189.303.01	250 ml	12
189.303.02	500 ml	12
189.303.03	1000 ml	12

#### Stirrer

made of polypropylene, these Stirrers are very useful for stirring different solutions in the laboratory. These Stirrers prove to be tough and long lasting.

Material: Polypropylene

Cat. No.	Dia	Length	Pcs/Pack
193.303.01	6 mm	150 mm	12
193.303.02	7 mm	200 mm	12
193.303.03	7 mm	250 mm	12
193.303.04	7 mm	300 mm	12
193.303.05	10 mm	250 mm	12





#### **Soft Loop Sterile**

Material: Polystyrene

Cat. No.	Capacity	Pcs/Pack
202.303.01	1ul (Soft Loopes)	100
202.303.02	10ul (Soft Loopes)	100
202.303.03	Inoculation Needle	100

















Glassco Brand sintered glassware is need for the filtration of liquids and gases in the laboratory it incorporates a porous glass disc as a filter media, which is non corrosive and reusable. It is also used for gas washing dispersion and adsorption.

Sintered disc is manufactured by crushing Glassco Brand glass, powdering, cleaning, separating into various mesh size and then fusing together in the form of a disc. The sintered disc is graded into 5 grades-G1, G2, G3, G4, and G5. The grades are classified by maximum pore size, which is obtained by measuring pressure at which the first air bubble breaks away from filter under certain conditions. The pressure differential is then used to calculate the equivalent capillary diameters in microns. The desired pore size is obtained by suitable controlling the grain size, firing time, temperature and the thickness of the. Each disc is tested and graded individually.

The pore diameters are reasonably uniform, which ensures required flow rate through the filter.

the flow rate further depends on pressure differential between the two sides of the disc, free area of the discs, viscosity of the fluid being filtered etc. between different discs of same size and grade, there is a fair amount of uniformity in pore size and hence the results from two or more discs of the same size and grade will be uniform. This ensures reproducible analytical results.

The discs have maximum surface hardness and hence glass powder does not get scraped off during cleaning or with chemicals. Filters do not shed particles during usage.

The discs are sealed to tubing without blocking the pores. The they are 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/percipitates, ges Dispersion, ges 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 mercy valves.
5.	1-2	Bacteriological filtration.

#### Chemical Durability

Glassco Sintered ware is produced from the same high quality material from which all Glassco Brand borosilicate laboratory glassco are manufactured and thus, have excellent resistance to chemical attack.

#### **Operating Pressure**

The sintered discs and the glassco are incorporation them are mainly designed for the application of vacuum of for passage of gases at a relatively low pressure. In all cases the differential pressure must not exceed 100 KM/m²(15psi).

#### Thermal Limitations

The resistance to thermal shock of sintered ware is comparatively less than of standard Glassco glassware. Therefore, articles of sintered ware should not be subjected to excessive temperature charges nor to direct flames.

Glassco Sintered crucibles are particularly suited for drying to constant weight. Dry sintered crucibles at room temperature can be placed directly into a drying oven at 150°C, although customary practice is to dry at 110°C. Sintered ware may safely be heated in furnace to 500°C without ill effect, provided that the cycle of heating and cooling is gradual strains caused by excessive temperature of apparatus.

Sintered ware of porosity grades 4 and 5 when cold and damp should never be subjected to a sudden temperature change since the evolution to steam my set up sufficient pressure within th filter, to crack it.

Filtration apparatus should be kept on its rim (stem upwards) in oven or sterilizer, A perforated support base is advantageous for air convection in case pipeline filters. Care should be taken by use of heat insulating material such as asbestos to avoid premature near filter seal. Apparatus should remain in the oven of sterilizer during cooling to avoid too fast cooling rate.

#### Cleaning of Sintered Ware

New sintered filters should be washed carefully with hot hydrochloric acid and then rinsed with distilled water before they are used. This treatment will ensure that all loose particles are removed from the filter.

It is recommended that all sintered filters are thoroughly cleaned "immediately" after use. This is the most favorable time for ease of cleaning and will ensure less risk of contamination in subsequent use

Many precipitates can be removed from the filter by backflishing with water. However, great care must be taken with large diameters and fine filter, 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 will a vacuum pump is also effective.

Filters clogged by dust and dirt dust and gas filtration can be restored by treatment with a warm detergent solution followed by blowing clean air 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 may cloq filter which may be removed by chemical cleaning as given below.





















# Filtration Glassware





Manufactured from **ASTM E 438 TYPE 1 CLASS A BORO 3.3 GLASS.** These funnels comply to ISO, DIN AND USP standards.

Item Code	Diameter (mm)	Pcs/ Pack
238.202.01 *	25	10
238.202.02	35	10
238.202.03 *	38	10
238.202.04 *	40	10
238.202.05 *	50	10
238.202.06	55	10
238.202.07 *	65	10
238.202.08 *	70	10
238.202.09	75	10
238.202.10 *	80	10
238.202.11	100	10
238.202.12	125	10
238.202.13	150	10

<sup>\*</sup> Non DIN







Item Code	N/S Size	Approx Funnel Diameter	Pack Size
238.202.01P	14/23	45 mm	10
238.202.02P	14/23	70 mm	10
238.202.03P	29/32	70 mm	10
238.202.04P	29/32	80 mm	10
238.202.05P	14/23	100 mm	10
238.202.06P	29/32	100 mm	10









#### **Powder Funnel**

These funnels are made from ASTM E 438 TYPE CLASS A BORO 3.3 GLASS and are made as per **ASTM E 1095** specifications. The funnels come with fire polished rim and stem

Catalogue No.	Top Diameter	Stem O.D.	Qty Per Pack
238.404.06P	60 mm	13 mm	6
238.404.08P	80 mm	15 mm	6
238.404.10P	100 mm	18 mm	6
238.404.12P	125 mm	19 mm	2
238.404.15P	150 mm	19 mm	2























#### **Funnel Holder**

made of Polypropylene, these corrosion free Funnel Holders can hold funnels with dia 3" to 6". The extra plate provided can be placed to hold funnels bearing dia 1" to 3". Two tapered wedges are provided to ensure firm grip on Rods having dia 1/2" or 3/8". Material: Polypropylene

Cat. No.	Туре	Pcs/Pack
113.303.01	Funnel Holder	12



**Funnel** 



#### **Funnels - Long Stem**

these long stem funnels have smooth walls,  $60^{\circ}$  cone angle and external ribs to prevent air lock. Moulded in Polypropylene, these clear funnels can also be steam autoclaved.

Material: Polypropylene

Cat. No.	Size	Inside ø	Stem Length	Pcs/Pack
122.303.04	100 mm	93 mm	84 mm	36
122.303.05	150 mm	148 mm	55 mm	12

#### **Analytical Funnel**

Material : Polypropylene

Cat. No.	Size (mm)	Pcs/Pack
207.303.01	50mm, Inside 50, Stem Length 50, PP	72
207.303.02	62mm, Inside 62, Stem Length 67, PP	36
207.303.03	75mm, Inside 75, Stem Length 77, PP	36
207.303.04	100mm, Inside 100, Stem Length 95, PP	36
207.303.05	35mm, Inside 35, Stem Length 37, PP	80









#### **Powder Funnel**

For transferring powdered reagents. Is unique because of its parallel stem which minimizes bridging of powder. Autoclavable at  $120^{\circ}\text{C}$ .

Material: Polypropylene

Cat.No.	0.D. (mm)	I.D. (mm)	Stem Length	Pcs/Pack
210.303.01	65	65	22	36
210.303.02	80	78	30	36
210.303.03	100	100	33	36
210.303.04	150	145	30	12

#### **Industrial Funnel**

For filling carboy's, drums and barrels very conveniently with handle.

Material: Polypropylene

Cat.No.	Dia (mm)	Pcs/Pack
211.303.01	200	12
211.303.02	250	6



























## **Buchner funnels** with sintered disc manufacturer from **ASTM 438 TYPE 1 CLASS A BORO 3.3 GLASS**

	Cat No.	Capacity (ML)	Disc Dia (MM)	Porosity	Pcs/ Pack
	256.G00.01	35	30	0	2
	256.G01.01	35	30	1	2
	256.G02.01	35	30	2	2
	256.G03.01	35	30	3	2
	256.G04.01	35	30	4	2
	256.G00.02	80	40	0	2
	256.G01.02	80	40	1	2
	256.G02.02	80	40	2	2
	256.G03.02	80	40	3	2
	256.G04.02	80	40	4	2
	256.G00.03	200	65	0	2
	256.G01.03	200	65	1	2
	256.G02.03	200	65	2	2
	256.G03.03	200	65	3	2
	256.G04.03	200	65	4	2
L	256.G00.04	500	90	0	2
	256.G01.04	500	90	1	2
	256.G02.04	500	90	2	2
	256.G03.04	500	90	3	2
	256.G04.04	500	90	4	2
	256.G00.05	1000	120	0	2
	256.G01.05	1000	120	1	2
	256.G02.05	1000	120	2	2
	256.G03.05	1000	120	3	2
	256.G04.05	1000	120	4	2

#### **Buchner Funnel, with Fritted Disc**

Funnels are made from thick wall and comes with bidded rim printed in white colour enamel. Funnels is made to meet **Federal specifications DD-F-776.** 



Catalogue No.	Capacity	Disc Diameter	Ht. above Dist	Stem Length	Stem O.D.	Porosity	Qty Per Pack
256.C00.00A	21					C	2
	2 mL	10 mm	30 mm	30 mm	7 mm	Coarse	
256.M00.00A	2 mL	10 mm	30 mm	30 mm	7 mm	Medium	2
256.F00.00A	2 mL	10 mm	30 mm	30 mm	7 mm	Fine	2
256.C00.00	15 mL	20 mm	45 mm	75 mm	8 mm	Coarse	2
256.M00.00	15 mL	20 mm	45 mm	75 mm	8 mm	Medium	2
256.F00.00	15 mL	20 mm	45 mm	75 mm	8 mm	Fine	2
256.C00.01	30 mL	30 mm	45 mm	75 mm	8 mm	Coarse	2
256.M00.01	30 mL	30 mm	45 mm	75 mm	8 mm	Medium	2
256.F00.01	30 mL	30 mm	45 mm	75 mm	8 mm	Fine	2
256.C00.02A	60 mL	40 mm	50 mm	75 mm	10 mm	Coarse	2
256.M00.02A	60 mL	40 mm	50 mm	75 mm	10 mm	Medium	2
256.F00.02A	60 mL	40 mm	50 mm	75 mm	10 mm	Fine	2
256.C00.03B	150 mL	60 mm	50 mm	75 mm	15 mm	Coarse	1
256.M00.03B	150 mL	60 mm	50 mm	75 mm	15 mm	Medium	1
256.F00.03B	150 mL	60 mm	50 mm	75 mm	15 mm	Fine	1
256.C00.03A	350 mL	80 mm	75 mm	75 mm	20 mm	Coarse	1
256.M00.03A	350 mL	80 mm	75 mm	75 mm	20 mm	Medium	1
256.F00.03A	350 mL	80 mm	75 mm	75 mm	20 mm	Fine	1
256.C00.05	600 mL	90 mm	90 mm	100 mm	20 mm	Coarse	1
256.M00.05	600 mL	90 mm	90 mm	100 mm	20 mm	Medium	1
256.F00.05	600 mL	90 mm	90 mm	100 mm	20 mm	Fine	1
256.C00.06	2000 mL	125 mm	160 mm	110 mm	26 mm	Coarse	1
256.M00.06	2000 mL	125 mm	160 mm	110 mm	26 mm	Medium	1
256.C00.07	3000 mL	150 mm	170 mm	110 mm	26 mm	Coarse	1
256.M00.07	3000 mL	150 mm	170 mm	110 mm	26 mm	Medium	1

















Buchner







#### **Buchner Funnel**

moulded in Polypropylene, these two piece funnels are light weight, easy to clean & autoclavable. The top portion can be snap fitted with the lower one forming a vaccum seal which does not require greasing. The base of the top portion has a perforated filter plate.

Material: Polypropylene

Cat No.	Size	Pcs/Pack
123.303.01	70 mm	12
123.303.02	110 mm	6
123.303.03	90 mm	6



#### **Buchner Funnel, Porcelain**

EURO DESIGN made of porcelain, maximum temperature upto 1000°C

Cat. No.	Dia (mm (OD x H)	Pcs/Pack
527.303.10	20 mm x 64 mm	10
527.303.11	51 mm x 89 mm	10
527.303.12	.303.12 67 mm x 110 mm	
527.303.13	84 mm x 143 mm	4
527.303.14	105 mm x 160 mm	2
527.303.15	125 mm x 195 mm	2
527.303.16	142 mm x 202 mm	1
527.303.17	170 mm x 221 mm	1
527.303.18	210 mm x 270 mm	1
527.303.19	270 mm x 350 mm	1





#### Filter Crucible with sintered disc manufacturer from ASTM E 438 TYPE 1 CLASS A BORO 3.3 GLASS.

Cat No.	Porosity	Capacity (ML)	Pcs/ Pack
255.G00.01	0	15	10
255.G01.01	1	15	10
255.G02.01	2	15	10
255.G03.01	3	15	10
255.G04.01	4	15	10
255.G00.02	0	30	10
255.G01.02	1	30	10
255.G02.02	2	30	10
255.G03.02	3	30	10
255.G04.02	4	30	10
255.G00.03	0	50	10
255.G01.03	1	50	10
255.G02.03	2	50	10
255.G03.03	3	50	10
255.G04.03	4	50	10

#### **Crucible Holders**

Cat. No.	Туре	Pcs/Pack
416.303.01	Set of 7, made of Natural Rubber	1
416.303.02	Set of 7, made of Silicon	1





PS: For Silica, Quartz & Porcelain Crucible Refer to page 109























### **All-Glass Filter Holder**

For 47 mm Disc Filters

#### **Applications:**

This is used in vacuum filter aqueous, organic or corrosive liquids for particulate contamination analysis. Also recommended for HPLC solvent filtration.

#### **Specifications:**

Materials

258.202.01 Borosilicate glass funnel, base and tubulated cap;

anodized aluminum spring clamp; fritted glass

filter support

Filter Diameter, mm 47 Filtration Area, cm<sup>2</sup> 9.6

Funnel Capacity, ml Funnel: 300 ml; flask: 1 l

**Outlet Fitting** 6 mm (1/4 in.) O.D. tubulated cap sidearm to

#### **Ordering Information:**

Catalogue No. Description

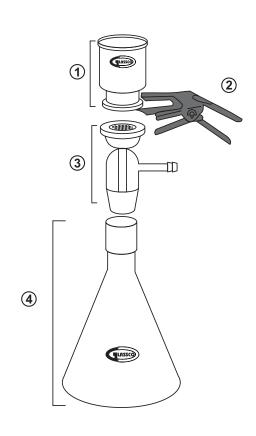
258.202.01 All-Glass Filter Holder Assembly with funnel, fritted

base & cap, clamp 47 mm, ground joint flask 1 Ltr.

Replacement Parts

Catalogue No. Description

258.245.01 Glass funnel, 300 ml, borosilcate 258.245.02 Spring clamp, 47 mm, aluminum 258.245.03 Glass Base & Cap, 47 mm 258.245.04 Ground Joint Flask, 1000ml



#### Replacement Parts:

- Funnel 300 ml 1
- 2 Clamp 47 mm
- 3 Vacuum Base 47 mm with Sintered Disc
- Ground Joint Flask 1000 ml

























## Filtration Glassware

## **Glass Microanalysis** Filter Holders

For 25 mm Disc Filters

#### **Applications:**

This is used to filter under vacuum/small volumes for particulate or biological contamination analysis. Filter is available in fritted glass or stainless steel. Thick prefilters or laminated filters will not seal in this holder. You may use Durapore (PVDF) membrane or unlaminated PTFE for solvent applications with this apparatus.

#### **Specifications:**

Materials

259.202.01 Borosilicate glass funnel and base; fritted glass

filter support; anodized aluminum spring clamp;

silicone stopper

259.202.03 Borosilicate glass funnel and base; removable

stainless steel screen filter support; anodized

aluminum spring clamp; silicone stopper

Filter Diameter, mm 25 Filtration Area, cm<sup>2</sup> 2.5 Funnel Capacity, ml

No. 5 perforated silicone stopper mounts in **Outlet Fitting** 

standard 125 ml filtering flask

Dimensions

Height, cm 15.2 25 Diameter, cm

#### Ordering Information:

Catalogue No. Description

259.202.01 Microanalysis Filter Holder, 25 mm,

fritted glass support

**Replacement Parts** 259.245.01 Funnel, 15 ml, borosilicate glass 259.245.02 Fritted Glass Base with stopper, 25 mm 259.245.03 Spring Clamp, 25 mm, aluminum 259.245.06 No. 5 perforated stopper, silicone

Catalogue No. Description

259.202.03 Microanalysis Filter Holder, 25 mm,

stainless steel support

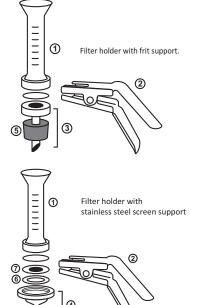
Replacement Parts

Funnel, 15 ml, borosilicate glass 259.245.01 259,245,03 Spring Clamp, 25 mm, aluminum 259.245.05 Base stopper & stainless steel screen 259.245.06 No. 5 perforated stopper, silicone 259.245.07 Gaskets, Teflon Support Screen, 25 mm, stainless steel 259.245.08

**Optional Accessories** 

259.245.04 Vacuum filtering flask, 125 ml





### Replacement Parts:

- Glass Funnel 15 ml
- Clamp 25 mm
- Fritted Glass Base 25 mm
- Base 25 mm
- Stopper No. 5
- Teflon Gasket
- Screen 25 mm



Accessories

Filter Flask 125 ml



















## Filtration Glassware





## Replacement Parts:

- 1. Funnel 300 ml
- 2. Base 47 mm Frit
- Clamp 47 mm
- Stopper 8 No.

Filter holder with glass filter support, 260.202.01



## Replacement Parts:

- 1. Funnel 300 ml Teflon Coated
- 2. Clamp 47 mm
- Base 47 mm Frit Teflon
- Coated
- 4. Stopper 8 No.

Filter holder with PTFE-faced filter



## Replacement Parts:

- 1. Funnel 300 ml
- 2. Clamp 47 mm
- 3. Base 47 mm 4. Screen 47 mm
- 5. PTFE Gasket
- 6. Stopper No. 8
- Filter holder with stainless steel screen filter support, 262.202.01

## Glass Filter Holder

For 47 mm Disc Filters

## **Applications:**

#### Use 260.202.01 for

Bacteriological analysis of water (using 47 mm sterile membrane filters) Analysis of suspended solids in water (using 47 mm depth filters)

### Use 261.202.01 for

Bacteriological analysis applications where autoclaving filter holder with membrane in place needed

#### Use 262.202.01 for

- Particulate contamination analysis of oils and hydraulic fluids by gravimetric or particulate counting methods
- Exfoliative cytology applications

#### Specifications:

Materials of Construction Borosilicate glass funnel and base; anodized aluminum spring clamp; silicone

stopper

260.202.01 Coarse-frit glass filter support 261.202.01 PTFE-faced funnel and base 262,202,01 Stainless steel screen filter support

Filter Diameter, mm Filtration Area, cm<sup>2</sup> 9.6

Funnel Capacity, mL 300; accessory 1 L is available

35 (thick depth prefilter) or 47 Prefilter Diameter, mm

(membrane prefilter)

**Outlet Fitting** No. 8 perforated silicone stopper mounts in standard 1 L and 4 L filtering flasks

**Dimensions** 

Height, cm 22.9 Diameter, cm 7.6

Sterilization Method 260.202.01 and 261.202.01

30 UV sterilize or autoclave without filter

262.202.01 Autoclave with filter in-place

























## Filtration Glassware

## **Glass Filter Holders**

For 47 mm Disc Filters



Catalogue No.

Description

260.202.01

Glass filter holder assembly with funnel, fritted base, stopper,

clamp, 47 mm

Replacement Parts:

260.245.01 Glass funnel, 300 ml, borosilcate 260.245.02 Base for 47 mm glass/filter holder 260.245.03 Spring clamp, 47 mm, aluminum 260.245.05 No. 8 perforated stopper, silicone

Catalogue No.

Description

261.202.01 Glass filter holder assembly, PTFE-coated, with PTFE coated

funnel and PTFE coated base, stopper clamp no. 8, 47 mm, Frit

Replacement Parts:

PTFE-faced Glass Filter Holder 261.245.01 Funnel, PTFE-faced, 300 ml 261.245.02 Spring clamp, 47 mm, aluminum 261.245.03 Glass base, PTFE-faced, 47 mm 261.245.04 No. 8 perforated stopper, silicone

Catalogue No.

Description

262.202.01 Glass filter holder with stainless steel screen, 47 mm

Replacement Parts: Stainless Screen Glass Filter Holder 262.245.01 Glass funnel, 300 ml, borosilicate

262.245.02 Spring clamp, 47 mm, aluminum

262.245.03 Glass base, 47 mm

262.245.04 Support screen, 47 mm, stainless steel

262.245.05 Gasket, PTFE

262.245.06 No. 8 perforated stopper, silicone

**Optional Accessories** 

260.245.04 Vacuum filtering flask, 1 Ltr 260.245.08 Vacuum filtering flask, 4 Ltr





260.245.08























## **All-Glass Filter Holder**

For 90 mm Disc Filters

### **Applications:**

This is used in vacuum filter aqueous, organic or corrosive liquids for particulate contamination analysis. Also recommended for HPLC solvent filtration.

Materials Borosilicate glass funnel, base and tubulated cap;

PTFE-coated stainless steel screen; anodized

aluminum spring clamp

Filter Diameter, mm 9 Funnel Capacity, L 1

Outlet Fitting 6 mm (1/4 in.) O.D. tubulated cap sidearm to vacuum



258.245.04

### Ordering Information:

Cat. No. Description

263.202.01 Glass Filter Holder with stainless steel screen, 90 mm

Spring Clamp, 90 mm anodized aluminum

## Replacement Parts

Cat. No.	Description
263.245.01	Funnel, 1L, 90 mm, ground glass seal
263.245.02	Vacuum Base and Cap, 90 mm
263.245.03	Stainless Steel Screen, PTFE coated, 90 mm
263.245.04	Gasket, PTFE 90 mm

### **Optional Accessories**

263.245.05

Cat. No.	Description
258.245.04	Ground Joint Flask, 1 L
263.245.06	Bottle 2 L
263.245.07	Bottle 5 L



263.245.07

























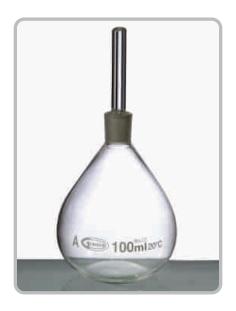
# **Bottles**

## **Weighing Bottles,** Ground In Stopper Manufactured from ASTM 438 TYPE 1 BORO 3.3 GLASS

Cat No.	O.D. x Ht. (ml)	Form	Capacity (ml)	Pcs/ Pack
264.202.01	40 x 30	Squat Form	20	10
264.202.02	50 x 25	и	20	10
264.202.03	50 x35	ш	35	10
264.202.04	50 x 50	"	50	10
264.202.05	60 x 30	и	40	10
264.202.06	20 x 40	Tall Form	5	10
264.202.07	25 x 50	"	15	10
264.202.08	30 x 60	"	25	10
264.202.09	40 x80	и	60	10









**Pycnometers to Gay** - Lussac, Calibrated Manufactured from ASTM 438 TYPE 1 BORO 3.3 GLASS, **DIN ISO 3507** 

Cat No.	Capacity (ml)	Tolerance ( <u>+</u> ml)	Pcs/ Pack
268.202.01	10	1.0	2
268.202.02	25	2.0	2
268202.03	50	3.0	2
268.202.04	100	3.0	2



Cat No.	Capacity (ml)	Pcs/ Pack
269.202.01	10	2
269.202.02	25	2
269.202.03	50	2
269.202.04	100	2































Reagent Bottles

Bottles Reagent narrow mouth, manufactured from ASTM E 438 TYPE 1 BORO 3.3 GLASS in compliance to DIN ISO 4796 - 2 standards with standard ground joint & PP stopper, EN ISO 4796

Clear Glass Cat No.	Amber Glass Cat No.	Capacity (ml)	N/S	Pcs/ Pack
272.232.02 A	273.232.02 A	50	14/23	10
272.232.03	273.232.03	100	14/23	10
272.232.04	273.232.04	250	19/26	10
272.232.05	273.232.05	500	24/29	10
272.232.06	273.232.06	1000	29/32	10
272.232.07	273.232.07	2000	29/32	10

<sup>\*</sup> These Bottles can also be supplied with Glass Stoppers.

## **Reagent Bottle**

Narrow mouth in conformity with ASTM E 438, TYPE 1 CLASS A BORO 3.3 GLASS, these bottles come with pressed flat stopper

,,					
Catalogue Capacity		Stopper No.	Qty Per Pack		
272.207.03A	125ml	19	1		
272.207.04	250ml	19	1		
272.207.05	500ml	24	1		
272.207.06	1000ml	29	1		
272.207.07	2000ml	29	1		







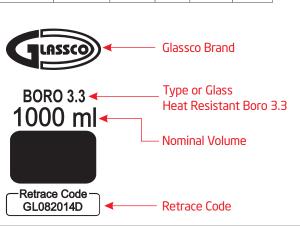


Bottles Reagent narrow mouth, manufactured from ASTM E 438 TYPE 1 BORO 3.3 GLASS in compliance to DIN ISO 4796 - 1 standards AUTOCLAVABLE SCREW CAP AND

POURING RING, EN ISO 4796

(	Clear Glass Cat No.	Amber Glass Cat No.	Capacity (ml)	D	н	Pcs/ Pack
2	74.202.01	275.202.01	100	56	100	10
2	74.202.02	275.202.02	250	70	138	10
2	74.202.03	275.202.03	500	86	176	10
2	74.202.04	275.202.04	1000	101	225	10
2	74.202.05	275.202.05	2000	136	260	10









275.205.02 Blue colour pouring ring





275.205.01 Blue colour screw cap GL 45





















Cat No.	Capacity (ml)	Pcs/ Pack
279.202.01	30	10
279.202.02	60	10
279.202.03	120	10
279.202.04	250	10









**Amber Dropping Bottles**, Manufactured from ASTM E 438 TYPE 1 BORO 3.3 GLASS fitted with ground in interchangeable stopper and rubber teat.

Cat No.	Capacity (ml)	Pcs/ Pack
279.229.01	30	10
279.229.02	60	10
279.229.03	120	10
279.229.04	250	10



Cat No.	Capacity (ml)	Pcs/ Pack
283.202.01	15	100
283.202.02	30	100
283.202.03	60	100















BOD Bot tles for incubating diluted samples of clean water, waster water, effluent water and polluted water during the 5 day biochemical oxygen demand (BOD) test. These BOD bot tles feature a flared mouth to form a water seal to prevent the ingress of air during incubation. The interchangeable stoppers have a tapered bot tom that also prevents air entrapment.

The stopper joint on BOD bottles is compatible with the probes of leading BOD and DO meters. Bottles have large, permanent marking squares.

Featuring the best quality of glass on the market, BOD bottles are manufactured from high-quality Borosilicate tubing; this type of glass makes them much less susceptible to etching when compared to traditional BOD bottles.

Bottles meet **ASTM E-438 Type 1**, **Class A** Borosilicate Glass specifications. These bottles come in numbered and un numbered version and also in penny head or robotic stopper.















Catalogue No.	Capacity	Number Sequence	Stopper Type	Qty Per Pack
284.456.01	60 mL	Unnumbered	Glass Pennyhead	1
284.451.01A	60 mL	1-36	Glass Pennyhead	1
284.451.01B	60 mL	37-72	Glass Pennyhead	1
284.451.01C	60 mL	73-108	Glass Pennyhead	1
284.453.01	60 mL	Unnumbered	Glass Robotic	1
284.453.01A	60 mL	1-36	Glass Robotic	1
284.453.01B	60 mL	37-72	Glass Robotic	1
284.453.01C	60 mL	73-108	Glass Robotic	1
284.456.02	300 mL	Unnumbered	Glass Pennyhead	1
284.456.02R	Bar-Coded, 300 mL	1-24	Glass Pennyhead	1
284.456.02A	Bar-Coded, 300 mL	25-48	Glass Pennyhead	1
284.456.02B	Bar-Coded, 300 mL	49-72	Glass Pennyhead	1
284.456.02C	Bar-Coded, 300 mL	73-96	Glass Pennyhead	1
284.456.02D	Bar-Coded, 300 mL	97-120	Glass Pennyhead	1
284.456.02E	Bar-Coded, 300 mL	121-144	Glass Pennyhead	1
284.456.02F	Bar-Coded, 300 mL	145-168	Glass Pennyhead	1
284.456.02G	Bar-Coded, 300 mL	169-192	Glass Pennyhead	1
284.456.02H	Bar-Coded, 300 mL	193-216	Glass Pennyhead	1
284.456.021	Bar-Coded, 300 mL	217-240	Glass Pennyhead	1
284.456.02J	Bar-Coded, 300 mL	241-264	Glass Pennyhead	1
284.456.02K	Bar-Coded, 300 mL	265-288	Glass Pennyhead	1
284.456.02L	Bar-Coded, 300 mL	289-312	Glass Pennyhead	1
284.456.02M	Bar-Coded, 300 mL	313-336	Glass Pennyhead	1
284.456.02N	Bar-Coded, 300 mL	337-360	Glass Pennyhead	1
284.456.020	Bar-Coded, 300 mL	361-384	Glass Pennyhead	1
284.456.02P	Bar-Coded, 300 mL	385-408	Glass Pennyhead	1
284.456.02Q	Bar-Coded, 300 mL	409-432	Glass Pennyhead	1
284.455.02	300 mL	Unnumbered	Glass Robotic	1
284.455.02A	Bar-Coded, 300 mL	1-24	Glass Robotic	1
284.455.02B	Bar-Coded, 300 mL	25-48	Glass Robotic	1
284.455.02C	Bar-Coded, 300 mL	49-72	Glass Robotic	1
284.455.02D	Bar-Coded, 300 mL	73-96	Glass Robotic	1
284.455.02E	Bar-Coded, 300 mL	97-120	Glass Robotic	1
284.455.02F	Bar-Coded, 300 mL	121-144	Glass Robotic	1
284.455.02G	Bar-Coded, 300 mL	145-168	Glass Robotic	1
284.455.02H	Bar-Coded, 300 mL	169-192	Glass Robotic	1
284.455.021	Bar-Coded, 300 mL	193-216	Glass Robotic	1
284.455.02J	Bar-Coded, 300 mL	217-240	Glass Robotic	1
284.455.02K	Bar-Coded, 300 mL	241-264	Glass Robotic	1
284.455.02L	Bar-Coded, 300 mL	265-288	Glass Robotic	1
284.455.02M	Bar-Coded, 300 mL	289-312	Glass Robotic	1
284.455.02N	Bar-Coded, 300 mL	313-336	Glass Robotic	1
284.455.020	Bar-Coded, 300 mL	337-360	Glass Robotic	1
284.455.02P	Bar-Coded, 300 mL	361-384	Glass Robotic	1
284.455.02Q	Bar-Coded, 300 mL	385-408	Glass Robotic	1
284.455.02R	Bar-Coded, 300 mL	409-432	Glass Robotic	1



















## Head for Gas Bottles, DIN 12596

Cat No.	Capacity	Pcs/ Pack
285.202.01	125ml	1
285.202.02	250ml	1
285.202.03	500ml	1









## Gas Washing Bottle, Interchangeable joints, DIN 12596, 12463

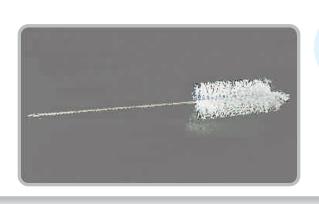
Cat No.	Capacity (ml)	Pcs/ Pack
286.202.01	125ml	1
286.202.02	250ml	1
286.202.03	500ml	1





## Sintered Wash Bottles Head, DIN 12596

Cat No.	Capacity	Pcs/ Pack
287.202.01	125ml	1
287.202.02	250ml	1
287.202.03	500ml	1





## Brush, Bottle

Cat. No.	Туре	Material	Pcs/Pack
593.303.01	Bottle Brush	Nylon	50























### **Dropping Bottles**

blown in Low Density Polyethylene, Glassco Dropping Bottles dispense small uniform drops of liquids when pressed lightly. Material: Low Density Polylethylene

Cat. No.	Capacity	Pcs/Pack
105.303.01	60 ml	12
105.303.02	125 ml	12









### Reagent Bottles (Narrow Mouth)

these Narrow Mouth Reagent Bottles are available in Polypropylene as well as Polyethylene. The PP bottles are rigid, translucent and have excellent contact clarity. These bottles can be autoclaved filled as well as empty. On the other hand, the Polyethylene bottle too have excellent strength and are unbreakable. The Polypropylene Cap has a built in seal ring to make these bottles leakproof.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
106.303.01	60 ml	12
106.303.02	125 ml	12
106.303.03	250 ml	12
106.303.04	500 ml	12
106.303.05	1000 ml	6
106.303.06	4 ml	12
106.303.07	8 ml	12
106.303.08	15 ml	12
106.303.09	30 ml	12

## Reagent Bottles (Wide Mouth)

are available in Polypropylene as well as Polyethylene. The PP bottles are rigid, translucent and have excellent contact clarity. These bottles can be autoclaved filled as well as empty. On the other hand, the Polyethylene bottles too have excellent strength and are unbreakable. The Polypropylene Cap has a built in seal ring to make these bottles leakproof.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
107.303.01	60 ml	12
107.303.02	125 ml	12
107.303.03	250 ml	12
107.303.04	500 ml	12
107.303.05	1000 ml	6
107.303.06	30 ml	12

























are made of Polypropylene and are therefore much lighter than glass. These are autoclavable, durable & dependable. The leakproof spigot screwed to the bottle body requires only a half turn to open or close. These bottles are used for storing or dispensing distilled water & other laboratory solutions. Threads should be totally disengage before autoclaving.

Material: Polypropylene

Cat. No.	Capacity	Pcs/Pack
108.303.04	2 Ltr.	1
108.303.01	6 Ltr.	1
108.303.02	10 Ltr.	1
108.303.03	20 Ltr.	1







<u>Aspirator</u>

Bottles



### **Wash Bottles**

are made of Low Density Polyethylene which gives these bottles a translucent & unbreakable character. Solutions can be poured easily by squeezing the bottle lightly. The cap is fitted with a flexible polyethylene delivery tube which can be aimed wherever required.

Material: Polyethylene

Cat. No.	Capacity	Pcs/Pack
109.303.01	125 ml	12
109.303.02	250 ml	12
109.303.03	500 ml	6
109.303.04	1000 ml	6

## Wash Bottles (New Type)

are also made of Low Density Polyethylene and are therefore translucent & unbreakable. The distinguishing feature that these bottles contain is the built in delivery tube making it a one piece Wash Bottle. These Bottles are graduated on the outer surface to give an approximate idea about the volume of solution filled or dispensed.

Material: Low Density Polyethylene

Cat. No.	Capacity	Pcs/Pack
110.303.01	250 ml	12
110.303.02	500 ml	12
110.303.03	125 ml	12









### Carboy

Material: Polypropylene, Autoclavable

Cat. No.	Capacity	Pcs/Pack
195.303.01	10ltr	1
195.303.02	20 Ltr	1























**Bottles** 

## Carboy With Stop Cock

Material: Polypropylene, Autoclavable

Cat. No.	Capacity	Pcs/Pack
196.303.01	10 Ltr	1
196.303.02	20 Ltr	1









## **Narrow Mouth Bottle**

Material: Polypropylene, Autoclavable

Cat. No.	Capacity	Pcs/Pack





## **Wide Mouth Square Bottle**

Material: Polypropylene, Autoclavable

Cat. No.	Capacity	Pcs/Pack
100 202 01	4000 ml	1





## **Heavy Duty Vacuum Bottle**

Material : Polypropylene, Autoclavable

Cat. No.	Capacity	Pcs/Pack
199.303.01	2000 ml	1





















## "SAFE - HANDLE"



Glass bottles are clean, dependable containers for liquid but they can present a serious safety hazard when broken. By containing liquid spills and broken glass, the "Safe-Handle" protects people and property from glass shards and exposure to flammable or hazardous liquid.

## **Designed For Safety:**

- · Minimizes spills and prevents breakage
- Meets secondary containment requirement
- Easy mechanism
- · Environmentally friendly
- No effect on product quality
- Suitable for 2.5 ltr. glass bot tle
- Prevent breakage and minimizes spills
- Meets secondary containment requirements
- Easy-to-use mechanism
- Is Environmentally responsible
- Does not contaminate liquids



## 6 Easy steps to greater lab safety.



Step 1. Disengage Bottom & top of Safe-Handle.



Step 4. When the bottle is empty, place the Safe-Handle While holding the bottom handle with one hand, turn the top handle with the other hand in a clockwise direction until the lugs click into place.



Step 2. Carefully place the bottle in the bottom portion of the Safe-Handle.



Step 5. Lock the top of the container to the bottom by pressing the handle lock mechanism until it snaps together. Ensure that the locking me chanism is engaged bef ore carrying or dispensing liquid.



Lower the Safe-Handle top over the neck of the bottle. Line up the indicator arrows to ensure assembly.



Step 6.

When the bottle is empty, place the Safe-Handle on a flat surface to disengage. Hold the bottom handle with one hand. Using the other hand, rotate the top in acounter-clockwise direction until the lugs are disegaged Remove the top from the bottom.

































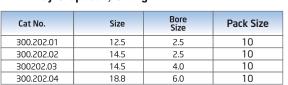




## **Rotaflow Stopcock, Straight**

	Cat No.	Bore Size	Pack Size
	299.202.01	0-3	10
- 1	200 202 02	0.6	10



























## **Rotaflow stopcock for Burette**

Cat No.	Bore Size	Pack Size
302.202.01	0-3	10









Glass Stopcock, Straight

Cat No.	Size	Bore Size	Pack Size
301.202.01	12.5	2.5	10
301.202.02	14.5	2.5	10
301.202.03	14.5	4.0	10
301.202.04	18.8	6.0	10



Cat No.	Size	Bore Size	Pack Size
303.202.01	12.5	2.5	10









## Glass key stopcock for Burrete

Cat No.	Size	Bore Size	Pack Size
304.202.01	12.5	2.5	10





















Stopcocks





## Rotaflow Stopcock for Automatic Burette

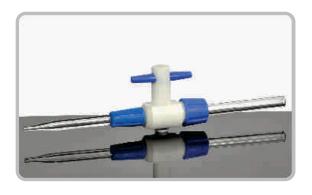
Cat No.	Bore Size	Pack Size
306.202.01	0-3	10

## Rotaflow Stopcock 90°

Cat No.	Bore Size	Pack Size
305.202.01	0-3	10
305.202.02	0-6	10









Detachable PTFE Key Stopcock for Burette

101 Bullotto			
Cat No.	Pack Size		
206 202 010	10		

















## List of Accreditation Bodies Worldwide

No.	Accreditation Body	Country
1	Organismo Argentina de Accreditation (OAA)	Argentina
2	National Association of Testing Authorities, Australia (NATA)	Australia
3	Bundersministerium fur Wirtchaft, Familie und Jugend (BMWA)	Austria
4	Belgian Accreditation Structure (BELAC)	Belgium
5	Coordenacao Geral de Acreditacao General Coordination for Accreditation (CGCRE/INMETRO)	Brazil
6	Standards Council of Canada (SCC)	Canada
7	Canadian Association for Laboratory Accreditation Inc. (CALA)	Canada
8	China National Accreditation Service for Conformity Assessment (CNAS)	People's Republic of China
9	Ente Costarricense de Accreditation (ECA)	Costa Richa
10	National Accreditation Body of Republica de Cuba (ONARc)	Cuba
11	Czech Accreditation Institute (CAI)	Czech Republic
12	Danish Accreditation (DANAK)	Denmark
13	Egyptian Accreditation Council (EGAC)	Egypt
14	Finnish Accreditation Service (FINAS)	Finland
15	Comite Francais d'Accreditation (COFRAC)	France
16	Deutsche Akkreditierungsstelle GmbH (DAKKS)	Germany
17	Hellenic Accreditation System S.A. (ESYD)	Greece
18	Oficina Guatemalteca de Accreditacion (OGA)	Guatemala
19	Hong Kong Accreditation Services (HKAS)	Hong Kong China











## List of Accrediation Bodies Worldwide

No.	Accreditation Body	Country
20	National Accreditation Board for Testing and calibration Laboratories (NABAL)	India
21	National Accreditation Body of Indonesia (KAN)	Indonesia
22	Irish National Accreditation Board (INAB)	Ireland
23	Israel Laboratory Accreditation Authority (ISRAC)	Israel
24	Silstema Italiano di Accreditamento (ACCREDIA)	Italy
25	Consorzio Pubblico per l' Accreditation (COPA)	Italy
26	Japan Accreditation Board for Conformity Assessment (JAB)	Japan
27	International Accreditation Japan (IAJapan)	Japan
28	Voluntary EMC Laboratory Accreditation Center INC (VLAC)	Japan
29	Korea Laboratory Accreditation Scheme (KOLAS)	Republic of Korea
30	Department of standards Malaysia (Standards Malaysia)	Malaysia
31	entidad mexicana de acreditacion a.c. (ema)	Mexico
32	Dutch New Zealand Council (RvA)	The Netherlands
33	International Accreditation New Zealand (IANZ)	New Zealand
34	Norsk Akkreditering (NA)	Norway
35	Pakistan National Accreditation Council (PNAC)	Pakistan
36	Philippine Accreditation Office (PAO)	Philippines
37	Polish Center for Accreditation (PCA)	Poland
38	Instituto Portugues de Acreditacao (IPAC)	Portugal
39	Romanian Accreditation Association (RENAR)	Romania
40	Association of Analytical centers "Analitica" (AAC "Analitica")	Russian Federation







## List of Accrediation Bodies Worldwide

No.	Accreditation Body	Country
41	Singapore Accreditation Council (SAC)	Singapore
42	Slovak National Accreditation Service (SNAS)	Slovakia
43	Slovenian Accreditation (SA)	Slovenia
44	South African National Accreditation System (SANAS)	South Africa
45	Entidad Nacional de Acrditacion (ENAC)	Spain
46	Sri Lanka Accreditation Board for Conformity Assessment (SLAB)	Sri Lanka
47	Swedish Board for Accreditation and Conformity Assessment (SWEDAC)	Swedan
48	Swiss Accreditation Services (SAS)	Switzerland
49	Taiwan Accreditation Foundation (TAF)	Chinese taipei
50	The Bureau of Laboratory Quality Standards, Department of Medical Science, Ministry of Public Health, Thailand (BLQSDMSc)	Thailand
51	National Standardization council of Thailand - Office of the National Accreditation Council (NSC - ONAC)	Thailand
52	Bureau of Laboratory Accreditation, Department of Science Services, Ministry of Science and Technology (BLA - DSS)	Thailand
53	Tunisian Thailand Council (TUNAC)	Tunisia
54	Turkish Accreditation Agency (TURKAK)	Turkey
55	Dubai Municipality - Accreditation Department (DAC)	United Arab Emirates
56	United Kingdom Accreditation Service (UKAS)	United Kingdom











## List of Accrediation Bodies Worldwide

No.	Accreditation Body	Country
57	American Association for Laboratory Accreditation (A2LA)	USA
58	National Voluntary Laboratory Accreditation Program (NVLAP)	USA
59	International Accreditation Service, Inc (IAS)	USA
60	ANSI-ASQ National Accreditation Board doing Business as ACLASS	USA
61	Laboratory Accreditation Bureau (L-A-B)	USA
62	Perry Johnson Laboratory Accreditation, Inc. (PJLA)	USA
63	American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB)	USA
64	Bureau of Accreditation (BoA)	Vietnam

















## **Technical Data: PLASTICWARE**

## **PHYSICAL PROPERTIES**

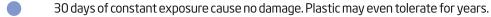
$\bigcap$	Max use	Bittleness				5	Sterilizatio	n			Water
Resin	Temp °C	Temp °C	Transparency	Auto- claving	Gas	Dry Heat	Radi- ation	Disin- fection	Specific Gravity	Flexi- bility	Absor ption %
HDPE	120	-100	Translucent	No	Yes	No	Yes	Yes	0.95	Rigid	20.01
LDPE	80	-100	Translucent	No	Yes	No	Yes	Yes	0.92	Excel	<0.01
PC	135	-135	Clear	Yes+	Yes	No	No	Yes	1.20	Rigid	0.35
PP	135	0	Translucent	Yes	Yes	No	No	Yes	0.90	Rigid	<0.02
PS	90	20	Clear	No	Yes	No	Yes	Some	1.05	Rigid	0.05

### **Sterilization**

- Autoclaving (121°C, 15 psig for 20 minutes) Clean and rinse item with distilled water before autoclaving. Certain chemicals which have no
  appreciable effect on resins at room temperature may cause deterioration at autoclaving temperatures.
- ALWAYS COMPLETELY DISENGAGE THREADS BEFORE AUTOCLAVING.
- Gas Ethylene oxide formaldehyde.
- Dry heat 160°C for 120 minutes.
- Disinfectant Benzalkonium chloride, formalin, ethanol etc.
- Radiation gamma irradiated at 2.5 Mard with unstablized plastic. Sterilizing reduces mechanical strength. Do not use PC vessels for vaccum application if they have been Autoclaved.

## **CHEMICAL RESISTANCE**

CLASSES OF SUBSTANCES AT ROOM TEMPERATURE	HDPE	LDPE	PC	PP	PS
ACIDS, DILUTE OR WEAK					
ACIDS, STRONG AND CONCENTRATED					
ALCOHOLS, ALIPHATIC					
ALDEHYDES					
BASES					
ESTERS					
HYDROCARBONS, ALIPHATIC					
HYDROCARBONS, AROMATIC					
HYDROCARBONS, HALOGENATED					
KETONES					
OXIDIZING AGENTS, STRONG					



Little or no damage after 30 days of constant exposure to the reagents.

Some effect after 7 days of constant exposure to the reagent like crazing, cracking, loses of strength or discolouration.

PS

Polystyrene

Not recommended for continuous use. Immediate damage may occur.

## **ABBREVIATIONS**

Acrylo Nitrile Butadiene Styrene ABS PP Polypropylene Poly Tetra Flouro Ethylene PTFE PC Polycarbonate Poly Methyl Methacrylate **PMMA HDPE** High Density Polyethylene Poly Methyl Pentene TPX **LDPE** Low Density Polyethylene











## **Technical Data: METALWARE**

## MILD STEEL

Each of these standard samples has been analyzed by Chemists in United Kingdom and other countries representing the following interests associated with the Iron and Steel Industries.

The standards have been prepared under rigorous laboratory conditions, and are issued by the organizers under the auspices of the above body of co-workers

						Α	NALYS	SIS				
Description	Special Features	Combined C	Silicon	Sulphur	Phosphorus	Manganese	Arsenic	Nickle	Chromium	Соррег	Oxygen	Iron
Ordinary		%	%	%	%	%	%	%	%	%	%	%
Carbon Steels*	Complete Analysis and pure iron std.											
"A <sup>2</sup> "	for K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> v.s	0.037	0.034	0.020	0.008	0.043	0.031	0.059	0.013	0.067	0.04	99.64
"C"	C Standard only	0.091		0.02a	0.02a	0.50a						
"F"	C and Mn Standard	0.114		0.02a	0.02a	0.492						
"N <sup>1</sup> "	Complete Analysis	0.153	0.176	0.050	0.036	0.527	0.03	0.26		0.04		
"P"	High S and P Standard	0.205	0.06a	0.073	0.105	0.706	0.03a					
"M"	C and Si standard	0.228	0.057	0.05a	0.03a	0.6a	0.03a					
"O¹"	Complete Analysis	0.333	0.162	0.032	0.031	0.617	0.024	0.162	0.017a	0.037a		
"H"	C, S and P Standard	0.428	0.15a	0.047	0.035	0.76a						
"j"	C and Mn Standard	0.521	0.15a	0.04a	0.033 0.02a	0.726						
"R"	C, S and Mn Standard	0.786	0.22a	0.053	0.06a	0.914	0.03a			0.02a		
"S1"	C and P Standard	0.921	0.22a 0.07a	0.033 0.04a	0.051	0.514 0.6a						
"U"	C, Mn and Ni Standard	1.203	0.17a	0.04a	0.051 0.05a	0.472		0.608	trace	0.05a		
Nickel Steels	c, i iii dha i vi Standara	1.203	0.174	0.0 10	0.034	0.17		0.000	trace	0.034		
"T"	Ni Standard only	0.3a						3.367				
"O"	Ni, C and Mn Standard	0.325				0.590		3.985				
Alloy Steels	W, Cana i in Standard	0.525				0.550		3.303		V.	Co.	W.
"V"	Cr-V Steel, Complete Analysis	0.548	0.161	0.063	0.024	0.542	0.016a		0.861	0.273		
"W"	Cr-V-W-Co Steel, Complete Analysis	0.695	0.187	0.075	0.028	0.101		0.44	3.01	0.791	4.67	16.21
Cast Iron	er v vv eo steer, complete / marysis	(DIFF)	0.107	0.075	0.020	0.101		0.11	Ti.	Tot'IC	Grap	hite
Hematite "A"	Complete Analysis	0.734	1.989	0.047	0.049	0.688	0.042		0.052	3.121	2.387	
Hematite "B"	Low Phosphorus - Titaniferous	b.039	2.2a	0.031	0.026	0.6a	0.031		0.108	3.06b	2.67b	
Basic "D"	P Standard only	3.0a			1.19	0.8a				3.0a		
Slag	r standard strily iii	3.00			P <sub>2</sub> O <sub>5</sub>	SiO <sub>2</sub>	CaO	MqO	Fe	Mn	Al <sub>2</sub> O <sub>3</sub>	V
Basic Slag "A"à	P₃ O₅ and part Complete Analysis				12.92	16.15	44.73	6.85	8.93	2.53	3.91a	0.45a
Ore	. 2 05 and part complete randysis	Fe	P.	CaO.	MgO.	Alk's	Al <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	SiO <sub>2</sub>	S.	CdH <sub>2</sub> O	CO <sub>2</sub>
Iron Ore "A" à	Complete Analysis	58.20	0.056	2.05	1.22	0.33	1.83	0.116	8.13	0.063	1.56	1.41
5.1 010 71 0	complete / marysis iii	30.20	3.030	Mn	0	5.55	1.05	5.115	5.15	3.003	1.50	
Mang. Ore "A"	Mn, O, SiO <sub>2</sub> , P, Fe	1.3	0.222	51.3	14.3				6.49			
Non-Ferrus	1 111, 0, 5102, 1, 1 C	Pb.	Sb.	Sn.	Cu.	Fe.	Bi.	As.	Zn.			
White Met. "A"	Complete Analysis	82.6	12.04	4.64	0.33	0.06	0.03	0.06	0.08			
WINTELIET V	Complete Analysis	02.0	12.04	7.07	0.55	0.00	0.05	0.00	0.00			

 $<sup>\</sup>hbox{(a) Approx}\,-\,\hbox{not a standardized figure, (b) Standardized at Organizing Headquarters only}.$ 

## STAINLESS STEEL

Grade 316 is the standard molybdenum-bearing grade, second in importance to 304 amongst the austenitic stainless steels. The molybdenum gives 316 better overall corrosion resistant properties than Grade 304, particularly higher resistance to pitting and crevice corrosion in chloride environments. It has excellent forming and welding characteristics. It is readily brake or roll formed into a variety of parts for applications in the industrial, architectural, and transportation fields. Grade 316 also has outstanding welding characteristics. Post-weld annealing is not required when welding thin sections.

Grade 316L, the low carbon version of 316 and is immune from sensitisation (grain boundary carbide precipitation). Thus it is extensively used in heavy gauge welded components (over about 6mm). Grade 316H, with its higher carbon content has application at elevated temperatures, as does stabilised grade 316Ti.

The austenitic structure also gives these grades excellent toughness, even down to cryogenic temperatures.

Key Properties

These properties are specified for flat rolled product (plate, sheet and coil) in ASTM A240/A240M. Similar but not necessarily identical properties are specified for other products such as pipe and bar in their respective specifications.

Table 1. Composition ranges for 316 grade of stainless steels.

Grade		С	Mn	Si	Р	S	Cr	Mo	Ni	N
316	Min	-	-	-	0	-	16.0	2.00	10.0	-
310	Max	80.0	2.0	0.75	0.045	0.03	18.0	3.00	14.0	0.10
316L	Min	-	-	-	-	-	16.0	2.00	10.0	-
310L	Max	0.03	2.0	0.75	0.045	0.03	18.0	3.00	14.0	0.10
21611	Min	0.04	0.04	0	-	-	16.0	2.00	10.0	-
316H	Max	0.10	0.10	0.75	0.045	0.03	18.0	3.00	14.0	-

TYPICAL CHEMICAL PROPERTIES OF STAINLESS STEEL										
Chemical Composition (Max. unless otherwise noted)										
	Carbon Manganese Phosphorus Sulfur Silicon Chromium Nickel									
304 (Austenitic)	0.08	2.00	0.045	0.03	1.00	18.00 -20.00	8.00 -10.50			







<sup>\*</sup> In the preparation of the ordinary carbon steels special attention has been given to making them suitable as standard for the determination of carbon by colour.

## **Technical Data**













## **ALUMINIUM**

Weight: With a density of 2.7 g/cm3, Aluminium is approximately is one third as dense as steel.

Strength: Aluminium alloys commonly have tensile strengths of between 70 and 700 Mpa. The range for alloys used in extrusion is 150-300 Mpa.

Unlike most steel grades, aluminium does not become brittle at low temperatures. Instead, it's strength increases. At high temperatures, aluminium's strength decreases. At temperatures continuously above 100°C, strength is affected to the extent that the weakening must be taken into account.

## **CAST IRON**

Cast iron is made by remelting pig iron, often along with substantial quantities of scrap iron and scrap steel, and taking various steps to remove undesirable contaminants such as phosphorus and sulfur. Depending on the application, carbon and silicon content are reduced to the desired levels, which may be anywhere from 2% to 3.5% and 1% to 3% respectively. Other elements are then added to the melt before the final form is produced by casting.

## Comparative qualities of cast irons

Name	Nominal composition [% by weight]	Form and condition	Yield strength [ksi (0.2% offset)]	Tensile strength [ksi]	Elongation [%(in 2 inches)]	Hardness [Brinell scale]
Cast grey iron (ASTM A48)	C 3.4, Si 1.8, Mn 0.5	Cast		25	0.5	180
White	C 3.4, Si 0.7, Mn 0.6	Cast (as cast)		25	0	450
Mallcable iron (ASTM A47)	C 2.5, Si 1.0, Mn 0.55	Cast (annealed)	33	52	12	130
Ductile or modular iron	C 3.4, P 0.1, Mn 0.4, Ni 1.0, Mg 0.06	Cast	53	70	18	170
Ductile or modular iron (ASTM A339)		Cast (quench tempered)	108	135	5	310
Ni-hard type 2	C 2.7, Si 0.6, Mn 0.5, Ni 4.5, Cr 2.0	Sand-cast		55		550
Ni-resist type 2	C 3.0, Si 2.0, Mn 1.0, Ni 20.0, Cr 2.5	Cast		27	2	140

## **BRASS**

Brass is any alloy of copper and zinc; the proportions of zinc and copper can be varied to create a range of brasses, each of which has unique properties. In comparison bronze is principally and alloy of copper and tin. Despite this distinction, some type of brasses are called bronzes. Brass is a substitutional alloy. It is mainly used for making laboratory metalware like retort stands, retort clamps etc

Properties: Brass has higher malleability than copper or zinc. The relatively low melting point (900-940°C depending on composition) of brass and its flow characteristics make it a relatively easy material to cast. By varying the proportions of copper and zinc, the properties of the brass can be changed, allowing hard and soft brasses.

Today almost 90% of all brass alloys are recycled, Brass scrap is collected and transported to the foundry where it is melted and recast into billets. Billets are later heated up and extruded into the right form and size.

 $Brass\ Types: Common\ brass, or\ rivet\ brass, is\ 37\%\ zinc\ brass, cheap\ and\ standard\ for\ cold\ working.$ 











## Technical Data: RUBBER

## **SILICON RUBBER TUBING**

Suitable for Laboratory, Pharmaceutical and Industrial use. It has specific advantages over other types such as latex, usual synthetic rubber and plastic tubing.

- 1. Silicon Rubber Tubing is suitable for use over a temperature range of -50°C to 250°C hence useful for transfer of hot liquids.
- 2. It can be sterilized by steam (autoclave) or by hot air. This finds applications for use under aseptic conditions.
- 3. The tubing is odourless. It does not impart any smell or taste to liquid passing through it. It is suitable for transfer of pharmaceutical liquids, beverages and other food preparations.
- 4. The Silicon Rubber used for making tubing is of superior grade. Tubing is not irritant to skin.
- 5. The tubing is highly elastic and hence suitable for use with peristaltic pump.
- 6. Silicon Rubber is attacked by strong acids, strong alkalies, oils, bromine, carbon tetrachloride and toluene. The tubing is not recommended for use with these materials.
  - Silicon Rubber tubing is Transparent to Translucent.

## **NATURAL RUBBER TUBING**

made from Rubber Trees

Shore hardness : 45 Density : 1.13

Temperature range : -30°Cto 110°C light

It is resistant to dilute acid, alkalies, ammonia etc. Rubber Tubing light, flexible. For transferring gasses.





















## LOW EXPANSION BOROSILICATE GLASS

Form the 16th Century to, today, chemical research teams have used glass containers for a very basic reason the glass containers is transparent, almost invisible. And so the contents and the reaction are clearly visible, But because chemists must heat, cool and mix chemical substances, ordinary glass is not always adequate for laboratory works.

Laboratory works requires apparatus made in a glass - which can readily be moulded into any desired shape or from, which offers maximum inertness when in contact with the widest range of chemical substances, which can withstand thermal shock with fracture and high temperature work without deforming, and which will be resillient enough to survive the everyday knocks to which it will be subjected in normal laboratory handling, washing and sterilizing processes.

#### **Chemical Composition**

Glassco Glassware is a low alkali borosilicate composition. Its typical chemical composition is given under. It is virtually free of magnesia-lime-Zinc group and contains only traces of heavy metals.

PERCENTAG	E BY WEIGHT
SiO2	81%
B203	13%
Na20	4%

### **Thermal Properties**

As the Coefficient of thermal expansion of Borosilicate glass is low, the thermal stresses under a given

temperature gradient are consequently low and the glass can withstand higher temperature gradients and also sudden temperature changes/thermal shocks. Minute scratching of glass surface can however reduce its thermal resistance.

In general the 'Strain Point' should be regarded as the maximum safe operating temperature of Glassco glassware. When heated above 500°C the glass may acquire permanent stresses on cooling. All Glassco labware is annealed in modern ovens under strictly controlled conditions to ensure minimal residual stress in the products.

Cofficient of Linear Expansion	32.5x10-7℃
Strains Point	515℃
Annealing Point	565°C
Softening Point	820°C
Specific Heat	0.2
Thermal Conductivity (Cal/cm³/°C/Sec)	0.0027

#### **Chemical Durability**

Glassco Glassware in highly resistance to water, neutral and acid solutions, concentrated acids and their mixtures as well as to chloride, bromine, iodine, and organic matters. Even during 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. Resistance to attack of various chemicals is shown under. Only hydroflioric acid, very hot phosphoric acid and alkaline solutions increasingly attack the glass surface with rising concentration and temperature.

### Fabrication with Borosilicate Glass

Due to low expansion of glass and easy workability, this glass can be shaped, formed, joined into complicated apparatus. It can be done even by an analyst in his own laboratory. He can keep on changing till he gets what he needs. In case where annealing in a controlled oven is difficult he can do so by flame annealing which is also great advantage.

Optical	Рго	perti	es
---------	-----	-------	----

Laboratory glassware made from Borosilicate Glass shows no noticeable absorption in the visible region of the spectrum. It appear consquently clear and colourless.

CONTACT CHEMICAL	DURATION IN HOUR	LOSS IN WT. MG/M²
Water distilled at 100°C	6	10
Water Vapour Steam at 121°C	1	75
Acid HCI	6	100
80% H2So4at 130°C	12	140
Alkali- 1N soln. of NA2Co3 boiling	6	4000
Infusion Fluids Isotonic		
Nacl (0.85%) 121°C	2.5	70
Glucose (5%) 121°C	2.5	50

When treated with proper care Glassco laboratory apparatus will givea

long and satisfactory service. The following prepared notes are to assist users in obtaining the maximum life and performance from their apparatus. Our sales department will be happy to advise 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 there is established constant thermal gradient through the glass.
- It may break under the transient stress of a 'thermal shock', that is sudden heating or cooling.
- It may, if heated beyond certain temperature, acquire a permanent stress on cooling which could cause subsequent failure.

### The following precautionary measures will assist in avoiding failures during heating and cooling procedures.

- 01. Never leave vessel unattended when evaporation work is being carried out. The vessel may crack or explode as dryness condition is approached if the heat source is not adjusted correctly. Lower the temperature gradually as the liquid level drops.
- 02. Always use caution when removing glassware from a heat source and avoid placing on a cold or damp surface. Although the ware can withstand extreme temperatures, sudden temperature changes may cause the vessel to break.
- 03. Always cool vessels slowly to prevent thermal breakage.
- 04. Never apply heat to badly scratched or etched vessel as the thermal strength will have been greatly reduced.
- 05. Never apply point source heating to a vessel as this will greatly increase the chance of breakage.
- 06. Always diffuse the heat source by using a metal gauze or air/water bath. Alternatively ensure even heating of the vessel byslow movement of the vessel in relation to the heat source.
- 07. Adjust Bunsen burner to get a large soft flame. It will heat slowly but also more uniformly. Uniform heat is critical factor for some chemical reactions.
- 08. Ensure that the flame contacts the vessel below the liquid level. Heating above that level will invite breakage of the vessels.
- 09. Always use anti-bumping devices in the vessel, such as powered pumice or glass wool rapid heating of the vessel and contents is required.
- 10. Never use 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.
- 11. Thick walled glassware should not be subjected to direct flame or other localised heat source. Vessels of this type are best heated with the use of an electric immersion heater.
- 12. Avoid heating glassware over electric heaters with open elements. Uneven heat of this type can include localised stress and increase the chance of breakage.
- 13. Remember that the hot plate will retain heat long after the appliance has been switched off.
- 14. Always ensure that the surface of the hot plate is larger in area than the base of the vessel being heated. An under-sized plate of the job in hand will invite uneven heating and promote breakage of glassware.
- 15. Always ensure that manufacturer's instructions are Bollowed when electrical heat sources.

#### Mixing and Stirring

- 01. Always use a policemen's or similar device on stirring rods to prevent scratching the inside of a vessel.
- 02. When using a glass vessel with a magnetic stirrer always use a covered follower to prevent abrading the inside of the vessel.
- 03. When using glass or metal mechanical stirrer in a glass vessel always predetermine the height of the stirrer before use to ensure there is no contact between the stirrer blade and the bottom or sides of the vessel.
- 04. Never mix sulphuric acid and water inside a glass measuring cylinder. The heat of reaction can break the base of the cylinder.

#### Vacuum and Pressure

- 01 Never use a glassware beyond the recommended safe limit.
- O2 Always use a safety screen when working with glassware subjected to pressure of vacuum.
- 03 Never subject glassware to sudden pressure changes. Always apply and release positive and negative pressures gradually.





















## Joining and Separating glass apparatus

- 01. When storing glass stopcocks and joints, insert a thin strip of paper between joint surfaces to prevent sticking.
- 02. Never store stopcocks for long periods with lubricant still on the ground surfaces.
- 03. Glass stopcocks on Burettes and Separation Funnels should be lubricated frequently to prevent sticking.
- 04. If a ground joint sticks, separation can generally be achieved by carefully recking the cone in the socket, or gently tapping of the socket flange on a wooden surface, or by heating the socket and not the cone in a localised flame. The use of penetrating oil will often prove useful in aiding separation.
- 05. In using lubricants it is advisable to apply light coat of grease completely around the upper part of the joint. Use only a small amount and avoid greasing that part of the joint which contacts the inner part of apparatus.
- 06. Three type of lubricants are commonly use on standard taper joints
  - (A) Hydrocarbon grease is the most widely used. It can be easily remove by most laboratory solvents, including acetone.
  - **(B)** Because hydrocarbon grease is so easily removable, silicon grease is often preferred for higher temperature or high vacuum applications. It can be removed readily with chloroform.
  - **(C)** For long term reflux or extraction reactions, a water soluble, organic and insoluble grease, such as glycerin, is suitable. Water will clean glycerin. There are other type of greases which can be used specifically when certain reagents are used in the Burettes or Separating Funnels.
- 07. The use of water, oil or glycerol is recommended on both tubing and rubber bung when inserting glass tubing into a bung. Always wear heavy protective gloves or similar protection when carrying out this operation.
- 08. Always fire polish rough ends of glass tubing before attempting to insert into flexible tubing. The lubricants recommended above may also prove useful.
- 09. Never attempt to pull a thermometer out of a rubber bung. Always cut the bung away.

### **PERSONAL SAFETY**

- 01. Use tongs to asbestos gloves to remove all glassware from heat. Hot glass can cause severs burns.
- 02. Protective gloves, safety shoes, aprons, and goggles should be worn as safety chemical accidents, spilling or splattering.
- 03. Always flush the outside of acid bottle with water before opening. Do not put the stopper on the counter top where someone else may come in contact with acid residue.
- 04. Special care is needed when dealing with mercury. Even a small amount of mercury in the bottom of a drawer can poison the room atmosphere. Mercury toxicity is cumulative and the element's ability to amalgamate with a number of metals is well known. After an accident involving mercury, the area should be cleaned carefully until there are no globules remaining. All mercury containers should be kept well-stoppered.
- 05. Never drink from a beaker. A beaker left specifically for drinking is a menace to the laboratory. Do not taste chemicals for identification. Smell chemicals only when necessary and by waiting a small amount of vapour towards the nose.
- 06. Avoid pipeting by mouth, particularly when using concentrated acids, alkalis or potentially biohazardous materials. Use mechanical means such as a rubber bulb or an automatic dispenser.
- 07. Never fill receptacle with material other than that called for by the label. Label all containers before filling. Throw away contents of unlabelled containers.
- 08. To avoid breakage when clamping glassware, do not permit glass-to-metal contact and do not use excessive force to tighten the clamps.
- 09. 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 might cause the contents to be ejected, resulting in injury.
- 10. Spattering from acids, caustic materials and strong oxidizing solutions on the skin or clothing should be washed off immediately with large quantities of water.



















- 11. When working with chlorine, hydrogen sulphide, carbon monoxide, hydrogen cyanide and other very toxic substances, always use a protective mask or perform these experiments under a fume hood on a well ventilated area.
- 12. In working with volatile materials, remember that heat causes expansion and confinement of expansion results in explosion. Remember also that danger exists even though external heat is not applied.
- 13. Perchloric acid is especially dangerous because it explodes on contact with organic materials. Do not use perchloric acid around wooden benches or tables. Keep perchloric acid, wear protective clothing.
- 14. When using hot plates and other electrical equipments, ensure the wire and plugs are in good condition. Never handle electrical connection with damp hand

#### **CLEANING**

Successful experimental results can only be achieved by using a clean apparatus. In all instances laboratory glassware must be physically clean, in nearly all cases it must be chemically clean and in specific cases it must be bacteriologically clean or sterile. There must be no trace of grease and the safest criteria of cleanliness is the uniform wetting of the glass surface by distilled water-this being of the utmost importance for glassware used for volumetric methods. Any prevention of uniform wetting of the surface will introduce errors such as distortion of the meniscus and accuracy of volume.



## **GENERAL CLEANING**

- 01. Cleaning of glassware which has contained hazardous materials must be solely undertaken by experienced personal.
- 02. Most new glassware is slightly alkaline in reaction. For precision chemical tests, new glassware should be soaked several hours in acid water (1% solution hydrochloric acid or nitric acid) before washing.
- 03. Glassware which is contaminated with blood clots, culture media, etc. must be sterilized before cleaning.
- 04. If glassware become induly clouded or dirty or contains coagulated organic matter, it must be cleaned with chromic acid cleaning solution. The dichromates should be handle with extreme care because it is a powerful corrosive
- 05. Wash glassware as quickly as possible after use but if delays are unavoidable, the articles should be allowed to soak in water.
- 06. Grease is removed by weak sodium carbonate solution or acetone or fat solvents. Never use strong alkalis.
- 07. Hot water with recommended detergents should be used and if glass is exceptionally dirty a cleaning power with a mild abrasive action can be applied, provided the surface is not scratched.
- 08. During washing all parts of the article should be throughly 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 glassware.
- 09. 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 should depend on amount of contamination on the glassware.
- 10. Special type of precipitate material may required removal with nitric acid, aqua regia or fuming sulphuric acid. These are very corrosive substances and should be used only when required.





















- 11. 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.
- 12. Drying can be undertaken either in baskets or on pages in air or at a temperature not exceeding 120°C.
- 13. Always protect clean glassware from dust by use of temporary closures or by placing in a dust free cabinet. For cleaning specific type of glassware, please refer the following pages.

## Cleaning Specific Types of Glassware Pipettes

Place pipettes tips down, in a cylinder or tall jar of water immediately after use. Do not drop them into the jar, since this may break or chip the tips and render the pipettes useless for accurate measurements. A pad of cotton or glass wool at the bottom of the jar will help to prevent breaking of the tips. Be certain that the water level is high enough to immerse the greater portion or all or each pipette. At a convenient time, the pipettes may then be drained and placed and in a cylinder or jar of dissolved detergent or, if exceptionally dirty, in a jar of chromic acid cleaning solution. After soaking for several hours, or overnight, drain the pipettes and run tap water over and through then until all traces of dirt are removed. Soak the pipettes in distilled water for at least one hour. Remove from the distilled water, dry the outside with a cloth, shake out the water and dry.

### Burettes (with glass stopcock)

- 01. Remove the stopcock key and wash the burette with detergent and water.
- 02. Rinse with tap water until all the dirt is removed. Then rinse with distilled water and dry.
- $03. \ \ Wash the stopcock key separately. Before the stopcock key is replaced in the buretts stopcock key are not interchangeable$
- 04. Always cover burettes when not in use.

### **Culture Tubes**

- 01. 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 (15ib. pressure). Media which solidify on cooling should be poured out while the tubes are emptied, brush with detergent and water, rinse throughly with tap water, rinse with distilled water, place in a basket and drv.
- 02. If tubes are to be filled with a medium which is sterilized by autoclaving, do not plug until the medium is added .Both medium & tubes are thus sterilized with one autoclave.
- 03. If the tubes are to be filled with a sterile medium or if they are to be sterilized by the fractional method then sterilize the tubes in the autoclave or dry air sterilizer before adding the medium.

### Serological Tube

- 01. 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 expendient to sterilize all tubes as routine.
- 02. 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 soap or detergent and boil for 30 minutes. Rinse the tubes and clean with brush, rinse and dry with the usual precautions.
- 03. 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 large amounts produce hemolysis. Detergents interfere with serologic reactions.
- 04. Serological tubes and glassware should be kept separate from all other glassware and used for nothing except serologic procedures.



















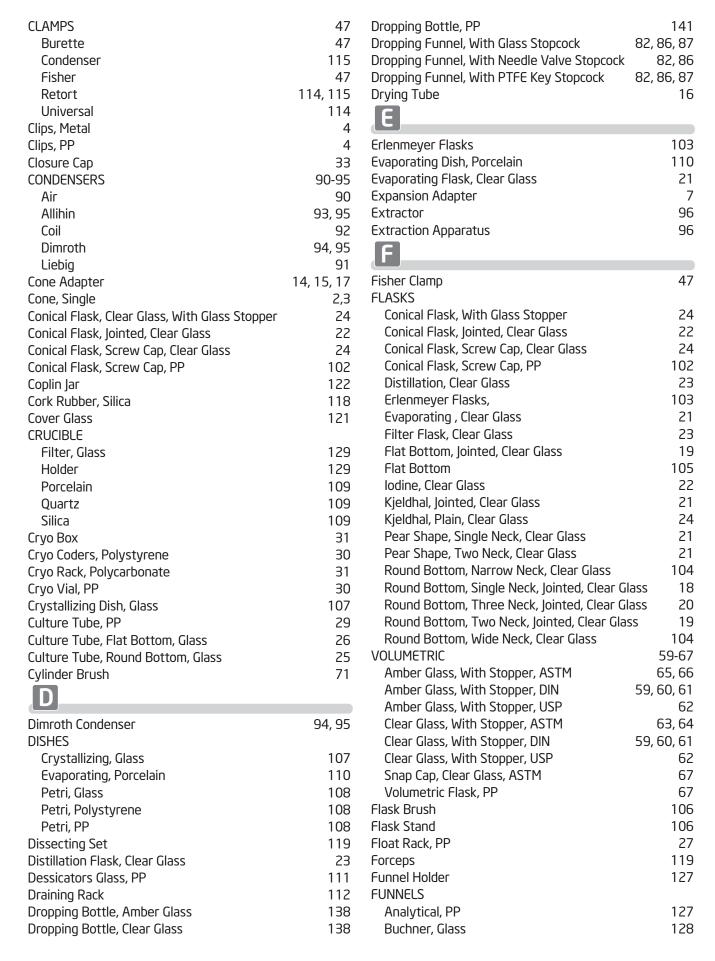
A		Mac-cartney, Glass Narrow Mouth, PP	138 143
ADAPTERS	6-17	Pycnometers, Glass	136
Air Leak Tube	17	Reagent, With Screw Cap, Glass	137
Bushing	6	Reagent, With Screw Cap, PP	141
Claisen Head	13	Reagent, With Stopper, Glass	137
Cone Adapter	14, 15, 17	Square Bottle, PP	143
Drying Tube	16	Vacuum, PP	143
Expansion	7	Weighing, Glass	136
Multiple	8	Bottle Top Dispenser	75-78
Receiver	9, 10, 11	Box, Micro Tip	74
Recovery Bend	12	Brush, Beaker	101
Reduction	7	Brush, Bottle	140
Screw Thread	17	Brush, Burette	46
Socket Adapter	15, 16	Brush, Cylinder	71
Splash Head	13, 14	Brush, Flask	106
Steam Distillation	14	Brush, Test Tube, Nylon	33
Still Head	12	Buchner Funnel	128-129
Swan Neck	9	Burette Clamp	47
Thermometer Pocket	17	Bushing Adapter	6
All Glass Filter Holder 47mm	130, 132, 133	BURETTES	42-46, 48, 49
All Glass Filter Holder 90mm	134	Automatic, Clear Glass, ASTM	49
Air Condenser	90	Automatic, Clear Glass, DIN	48, 49
Allihin Condenser	93, 95	Burette, Clear Glass, Economy Model, DIN	
Analytical Funnel, PP	127	Burette, Clear Glass,	. 13
Aspirator Bottle, PP	142	with Glass Stopcock, DIN	42, 43, 45
Automatic Burette, Clear Glass	48, 49	Burette, Clear Glass,	12, 13, 13
	.5, .5	with Needle Valve Stopcock, DIN	43, 45
B		Burette, Clear Glass,	13, 13
Basket, Test Tube	35	with PTFE Detachable Stopcock, DIN	44, 45
BEAKERS	100-102	Burette, Clear Glass,	11, 13
Low Form, Clear Glass, ASTM	101	with PTFE Key Stopcock, ASTM	46
Low Form, Clear Glass, DIN	100	Burette, Clear Glass,	10
Low Form, Heavy, Clear Glass, ASTM	101	with PTFE Key Stopcock, DIN	44, 45
PP, Euro Design	102	Burette, TPX	45
Tall Form, Clear Glass, DIN	100	Burner Bunsen	117
Beaker Tong, SS	100	Burner Meaker	117
Boss Head	116	Scirici Flediker	,
BOTTLES		L	
Aspirator, PP	142	Carboy Bottle, PP	142, 143
Bod, Glass	139	Carrier Tray	112
Carboy, PP	142, 143	Centrifuge Tube, Conical, Glass	26
Dropping, Amber Glass	138	Centrifuge Tube, Conical, PP	28
Dropping, Clear Glass	138	Centrifuge Tube, Round, Glass	32
Dropping, PP	141	Centrifuge Tube, Round, PP	28
Gas Wash, Glass	140	Claisen Head Adapter	13
Gas Wash, PE	142		, 5



















Buchner, Porcelain Buchner, PP

Filter, Glass

Industrial, PP

Long Stem, PP

Powder, Glass

Gas Wash Bottle, Glass

**GRADUATED PIPETTES** 

Hollow Glass Stopper

Iodine Flask, Clear Glass

Industrial Funnel, PP

Clips, Metal

Cone, Single

Socket, Double Socket, Single

Spherical Ball

Spherical Cup

Laboratory Gloves

Mac-cartney Bottle, Glass MCT Box, Polycabonate

Micro Centrifuge Tube Rack

Microanalysis Filter Holders 25mm

Micro Centrifuge Tube, PP

MCT Twin Rack, PP

Measuring Cylinders

Meaker Burner

Measuring Jugs

Micro Pipette

Micro Tip Box

Laboratory Jack Liebig Condenser

Kjeldhal Flasks Jointed, Clear Glass

Kjeldhal Flasks Plain, Clear Glass

Clips, PP

Head For Gas Wash Bottle, Glass

Gas Wash Bottle, PE

Powder, PP

G

Mohr

Hand Grip

**JOINTS** 

Serological





129

129

126

127

127

126

127

140

142

54-56

53-56

106

140 5

22

12

2-4

4

4

2,3 3

2,3

4

4

21

24

121 117

91

138

28

27

117

102

35

27 74

131

68-72

73-74



Multiple Adapter	8
Narrow Mouth Bottle, PP Nessler Cylinder	143 72
Oak Ridge Centrifuge Tube, PP	28
PCR Tube Rack Pear Shape Flask Single Neck, Clear Glass Pear Shape Flask Two Neck, Clear Glass Penny Head, Glass Stopper Pestle & Mortar Petri Dish PIPETTES Graduated Pipettes, Micro Pipette, Fixed, Variable Multichannel Volumetric Pipettes Pipette Box Pipette Controller Pipette Filler Pipette Pumps Pipette Stands Plastic Stopper Powder Funnel, Glass Powder Funnel, PP Pressure Equalizing Funnels Pycnometers, Glass	27 21 21 6 110 108 50-56 53-56 73 74 51-53 57 57 57 57 57 58 5 126 127 87-88 136
Quartz Crucible	109
R	
Cryo Box Cryo, Polycarbonate Draining Float, PP MCT Box, Polycarbonate MCT Twin, PP Micro Centrifuge Tube PCR Tube Petri Dish Scintillation Vial, PP Slide Reagent Bottle, With Screw Cap, Glass Reagent Bottle, With Stopper, Glass	31 31 112 27 28 27 35 27 108 30 121 137 141
Retort Rings Receiver Adapter Recovery Bend Adapter	113, 114 9, 10, 11 12





7



Recovery Bend Adapter

Reduction Adapter













Retort Clamp	114, 115		
Retort Stand	113		25
Round Bottom Flask, Narrow Neck, Clear Glass	104		35 33
Round Bottom Flask, Single Neck, Jointed, Clear			
Round Bottom Flask, Three Neck, Jointed, Clear (			34
Round Bottom Flask, Two Neck, Jointed, Clear Gl			34
Round Bottom Flask, Wide Neck, Clear Glass	104		35
Rubber Cork	118		17
Rubber Tubing	118		73
S		Tong Crucible	110
		Tong, Flask	105
Safety Jar	144		112
Scintillation Vial Rack, PP	30		116
Scintillation, PP	30		2.0
Screw Thread	17	5	26
SEPARATING FUNNELS	80-88		28
Cylindrical, With Glass Stopcock	82, 86, 87	_	32
Cylindrical, With Needle Valve Stopcock	82, 86	<u> </u>	28
Cylindrical, With PTFE Key Stopcock	82, 86, 87		29
Gilson Funnel, With Glass Stopcock	83		26
Gilson Funnel, With PTFE Key Stopcock	83		25
Iso Shape, With Glass Stopcock, DIN	81, 84, 85		27
Iso Shape, With Needle Valve Stopcock, DIN	81, 84		28
Iso Shape, With PTFE Key Stopcock, DIN	81, 84, 85		118
Pear Shape, PP, With PTFE Plug	83		32
Squibb	80		33
Separating Funnel, Holder, PP	83		
Silica Cork	118		
Silica Crucible	109		114
Slide Rack	121	Utility Sets (Organic Chemistry Set)	97-98
Slides Microscopic	121	Utility Tray	112
Socket Adapter	15, 16		
Socket, Double	3		
Socket, Single	2,3		134
Soft Loop Sterile	122		143
Spatula	120		29-30
Spherical Ball	4	VOLUMETRIC FLASKS	59-67
Spherical Cup	4		65, 66
Splash Adapter	13, 14		59, 60, 61
Square Bottle, PP	143		62
STANDS		Clear Glass, With Stopper, ASTM	63, 64
Flask	106		59, 60, 61
Pipette	58		62
Retort	113		67
Test Tube Stand	34		67
Test Tube, Stand, Wire Pattern	35	Volumetric Pipettes, One Mark, Clear Glass,	51-53
Tripod	116	W	
Steam Distillation	14		
Stirrer	122	Watch Glass	121
Still Head Adapter	12		136
Stopcocks	145-147	Weighing Scoops	107
Stoppers	5-6	Wire Mesh	117
Storage Box	122		
Storage Vial, PP	29		
Swan Neck Adapter	9		











Notes	
	•••••
	•••••
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Fax: 0091-171-2891632 Email: info@glasscolabs.com Website: www.glasscolabs.com

## **Branch Office**

Glassco Laboratory Instruments Ltd. ABACUS House, 367, Bland Ford Road, Beckenham Br3 4NW, United Kingdom