



## Welcome to the new edition of the **ABDOS LIFE SCIENCES CATALOG**

The year 2017 was a historic year in the journey and history of Abdos. In July 2017 Abdos group completed 50 years with the promise to be innovative, aggressive, meaningful and desirable for our stakeholders. Abdos group is into diversified business of packaging, FMCG, distribution, contract manufacturing and life sciences. Please connect with us through our websites and various social media platforms to know more about us.

Life Sciences vertical of Abdos began in the year 2010 with state of art manufacturing and distribution centre in Roorkee, Uttarakhand about 4 hours from New Delhi. Our products are applied in various applications from research to drug discovery or from quality control to diagnostics. Our products add value and improve the lives of people around us.

This year Abdos set up its first logistics subsidiary in Europe which has brought us closer to our customers in 32 European countries. We stock over 800 products at our hub in Netherlands keeping in mind the buying trend of our customers. In times to come there are more subsidiaries planned in other parts of the world. Currently Abdos products are available through our distributors in India and 48 countries worldwide.

We have introduced 2 new product line and added 55 new products in this edition of our catalog. We are adding the range of Treated Cell Culture products, enhancing range of volumetric products and benchtop equipments. As always we are constantly evaluating new products keeping in mind new areas of growth and research in the field of life sciences.

Abdos continues to invest in products, infrastructure, customer services and after sales but the future is 'digital' and at Abdos we look at embracing future. Come August 2018 you can find us in your pockets and hands through "Abdos Mobile App". This App will serve as a knowledge base on products, services, latest events, technical support and certifications together with providing some unique scientific utility tools that can be of help to researchers and technicians. We look forward to connect with you on our digital platform.

We thank all our stakeholders for their continuous support towards the growth of Abdos.

Team Abdos





## ASSURED QUALITY

“ Abdos is investing into the future with cutting-edge robotics and automation platforms to provide consistent and high-performance products. We have initiated “manufacturing happiness” at all our production location and automation continues to be an integral strategy to achieve it. ”



# QUALITY OBJECTIVE

We are committed to provide the best quality products to our consumers at best possible prices.

We will strive to innovate and respond creatively and competitively to changes in external environment and technological advancement.

We believe our strength lies in our employees and we are ever so willing to give them training, equipment and tools to empower them to be confident of quality.

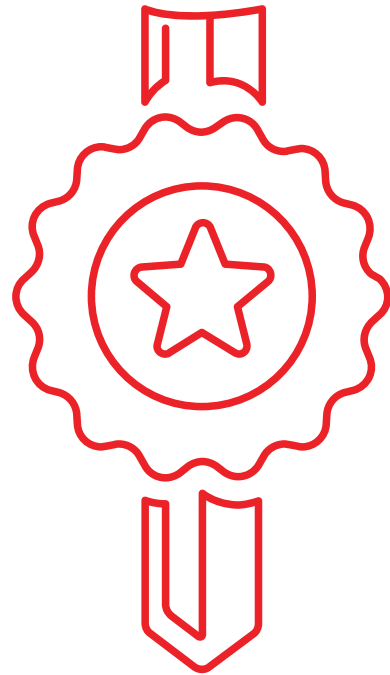
We conduct periodic reviews to ensure our plant and maintenance systems run effectively and efficiently so that there is no compromise on quality.

## QUALITY POLICY

“We at Abdos, promise to provide complete consumer satisfaction by emphasizing strongly on continual improvement through lean business processes with engagement of employees at all levels.”

## QUALITY MANAGEMENT

Abdos quality standards are certified accordingly to ISO 9001:2008 through its state of art production process, quality inspections, process parameters, SOP and automation. Since 2015 Abdos has received NS-EN ISO 13485:2012 to establish ourselves as a high quality manufacturer of medical devices. Abdos believes in using the latest technologies with stringent quality control measures and periodic reviews to ensure our plants and warehouses run efficiently and effectively. We believe in the qualification and development of people in our organization and provide them training, equipment and resources to empower them to be confident of quality.



## CE MARKING

Products that fall under the scope of European Directive 98/79/EC on In Vitro Diagnostic Device have been specified as CE IVD in the catalogue. This helps us to comply with general requirements and safety regulations of CE. Find CE IVD logo on the inside pages as shown here.



## QUALITY CONTROL PROCESS

1

### Check In-Coming Products

Incoming products like raw material, packaging material and consumables are checked for contaminations, strength and aesthetics according with the agreed specifications with the supplier

2

### On-line Quality Inspection

During the manufacturing process the product quality is checked in every shift based on Standard Testing Protocols. If any deviations arises the required improvements are done during manufacturing.

3

### Application Tests in Laboratory

Each product is checked for physical, chemical and biological functions. Our in-house labs perform the necessary applications test as an end user to certify the products are fit to be dispatched to customers.

4

### Final Pre-Dispatch Audit

Products are finally tested for proper verifications of labels, packaging and documents. Traceability of products are verified at this stage for lot no. , expiry, manufacturing date etc.

## QUALITY CERTIFICATION

Products from Abdos Life Sciences provide the following certifications and application dependant features



**E.A.R - CERTIFICATE**  
**GPSD 2001/95/EC &**  
**IVD 98/79/EC**



**QUALITY**  
**MANAGEMENT SYSTEM**  
**ISO 9001**



**MEDICAL DEVICES**  
**(Quality Management System)**  
**EN ISO 13485**

## ABDOS KNOWLEDGE CENTER

Abdos is more than just products. Our endeavour has always been to provide information on our products and services to optimize the daily work flow. Visit our knowledge center below.



Order now at  
[www.abdoslifesciences.com/order-catalog](http://www.abdoslifesciences.com/order-catalog)

**CATALOG**

**PRODUCT BROCHURES**

## MOBILE APP

Featuring Data Comparisons, FAQs & More  
Download Now From



## WEBSITE

Everything you need to know about Abdos Life Sciences, right from product catalog with ordering facility to technical information, data comparisons & more



# COMMITTED TO THE EARTH!

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**Pursuing “Green” has become a quest for ABDOS towards the Go Green Earth with competitiveness and global excellence.**

“ We believe in working on long-term strategies to reduce the company’s impact on the environment. ”

As a young, innovative company ABDOS is setting the environment standard for others to follow.

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## STEPS TAKEN FOR BEING GREEN ORGANIZATION

Green Logistics; Goods are transported by rail or sea whenever possible.

Hot runner moulds to save on plastic usage.

Closed water cycle cooling process save energy.

The use of modern, electronic moulding machines consume much less energy than the older, hydraulic machines.

The use of robotic and automation reduce human interference thereby reducing carbon footprints.




















As a manufacturer, ABDOS has control over design and manufacturing of its products by reducing waste and weight of the plastic, paper, bags, foils generated at ours and our supplier’s plant.

ABDOS drives Digitally, Eliminate Waste in Printing.

Large expanse of greenery and plants at all locations of ABDOS reduce ozone levels helping to remove carbon dioxide and other greenhouse gases from the air, which cools the earth.



# NOMENCLATURE

Autoclave / Non Autoclave	 
DNase RNase and Pyrogen free	
IVD Certified IVD 98/79/EC	
Sterile (Gamma Irridiation / Ethylene oxide/ E Beam)	  
Leak-proof Tested 635 mm/Hg	
Accuracy Standards	  
Petri Dish Standards	
CE Certified	
New Product	
Alphanumeric Identification	
Product Suitable for food use	
Product Suitable for Real-time PCR	
Do not expose to flame	
Recyclable	

The technical data(dimensions, capacities and resistances) specified in this catalogue are approximated.  
 The resistances(to chemical products, temperature, centrifugation..) may suffer variations depending on external conditions.  
 We recommend to test the product under the forecasted conditions of use. Please do not hesitate to ask for samples if necessary.

# C O N T E N T S

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## CENTRIFUGE TECHNIQUES



Micro Centrifuge  
Racks  
Self Standing  
Conical Bottom  
& More

## Micro Centrifuge Tubes, PP

01

### Micro Centrifuge Tubes, Natural

Code	Capacity (ml)	Outer Diameter (mm)	Height (mm)	No. Per Case	Price / Case (₹)	Price / 144 Case (₹)
P10201	0.5	10	31.5	1000	586	79321
P10202	1.5	13	41	500	418	56581
P10203	2.0	13	41	500	461	62401

### Micro Centrifuge Tubes, Coloured & Amber

Code	Capacity (ml)	Outer Diameter (mm)	Height (mm)	No. Per Case	Price / Case (₹)
P10207	0.5 Coloured	10	31.5	1000	712
P10201A	0.5 Amber	10	31.5	1000	720
P10204	1.5 Coloured	13	41	500	461
P10204A	1.5 Amber	13	41	500	523
P10205	2.0 Coloured	13	41	500	523
P10203A	2.0 Amber	13	41	500	571

\*P10207, P10204 & P10205 are available in Red, Blue, Yellow and Green

Abdos Micro Centrifuge tubes are manufactured using high purity virgin polypropylene (PP) confirming to US FDA 21 CFR free from natural rubber, heavy metal.

These tubes can be used at -80°C and with various organic solvents and are also boil proof.

These tubes are with the integral snap cap.

Can withstand up to 20000 RCF\*.

Frosting on the surface of the tubes makes writing easier.

Amber colour micro centrifuge tubes suitable for light-sensitive samples do not allow any light to pass through the tubes.

Large moulded in graduations make identification easy.



## LAST DROP, Low Retention Micro Centrifuge Tubes, PP

02

Code	Capacity(ml)	Outer Diameter (mm)	Height (mm)	No. per case	Price/case (₹)
P10208	0.5	10	31.5	1000	1149
P10209	1.5	13	41	500	827
P10210	2	13	41	500	912

Abdos LAST DROP™ Micro Centrifuge tubes are manufactured using high purity virgin polypropylene (PP) confirming to US FDA 21 CFR free from natural rubber, heavy metal.

Advanced superhydrophobic material confirming retention level 10 time lesser and reduces protein and nucleic acid binding, resulting in a better sample recovery.

Can withstand up to 20000 RCF\*.

These tubes can be used at -80°C and with various organic solvents and are also boil proof.

These tubes are with the integral snap cap.

Frosting on the surface of the tubes makes writing easier.

Large moulded in graduations make identification easy.



\*Depending on the quality of Centrifuge and compatibility of Rotor.

### Rack for Micro Centrifuge Tube, RPP

03

Code	Tube Capacity (ml)	Places	Colour	L x W x H (mm)	No. per Case	Price / Case (₹)
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P20205	1.5 & 2	20 Places (10 x 2 Array)	White	215 x 70 x 40	8	1198
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Sturdy rack with rubbered support at the bottom for stability.

Racks lock together on each side to allow the user to attach several racks for larger experiments.

Easy removal and insertion of tubes.

Compatible with both 1.5 ml and 2.0 ml Micro Centrifuge Tube.

Each hole has moulded-in-numbers for easy sample identification.



### Rack for Micro Centrifuge Tube, PC

04

Code	Tube Capacity (ml)	Places	Colour	L x W x H (mm)	No. per Case	Price/ Case (₹)
------	--------------------	--------	--------	----------------	--------------	-----------------

P20201	1.5 & 2	24 (6 x 4 Array)	White	164 x 100 x 59	8	1997
P20202	1.5 & 2	24 (6 x 4 Array)	Yellow	164 x 100 x 59	8	1997
P20203	1.5 & 2	48 (12 x 4 Array)	White	293 x 100 x 59	8	3656
P20204	1.5 & 2	48 (12 x 4 Array)	Yellow	293 x 100 x 59	8	3656

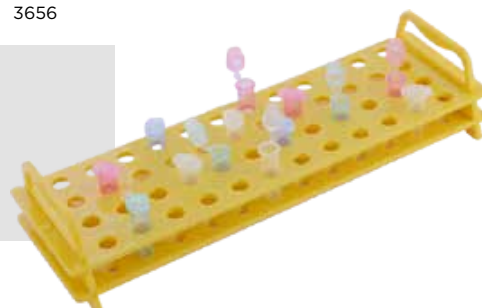
Easy to hold ergonomic design.

Each hole has moulded-in numbers and letters for easy sample identification.

Racks are stackable when empty or full.

Easy removal and insertion of tubes.

Compatible with both 1.5ml and 2.0 ml Micro Centrifuge Tube



### Poly Wire Micro Tube Rack, Nylon

05

Code	Tube Capacity (ml)	Places	Colour	L x W x H (mm)	No. per Case	Price/ Case (₹)
------	--------------------	--------	--------	----------------	--------------	-----------------

P20227	1.5 & 2	24	Blue	143 x 90 x 52	8	5200
P20228	1.5 & 2	96	Blue	210 x 131 x 54	4	5000

Abdos Poly Wire Tube Racks are manufactured using reinforced nylon tube racks offering superior chemical and heat resistance over most other plastic-based racks.

Handles provide easy and safe transportation and allow racks to be stacked.

Temperature range -40°C to +140°C.





## CENTRIFUGE TUBES FEATURES

Unique printing technology makes the surface chemical resistant & scratch proof.

Perfect grip on screw cap provides secure control on the cap in wet conditions.

Even wall thickness to withstand maximum G-force, 15000 RCF.

Suitable for temperatures of  $-80^{\circ}$  to  $+121^{\circ}$  C.

Sterile tubes have been validated according to ENISO 11137-2; SAL 10-6

The larger white frosted portion for easy writing.

Highly transparent, 5% less haze percentage than a competitor.

Hydrodynamic conical bottom for perfect pelleting of sediments.

### THE CAP

- Specially design flat thread confirm perfect vacuum tight closure make leak proof & prevent from override of cap.
- Unique plug seal ensure perfect sealing & make it leak proof.

**Abdos centrifuge tubes are manufactured from ultra-pure USP class VI certified virgin polypropylene to ensure the highest quality & confirming to US FDA 21 CFR.**

**Free from heavy metals, natural rubber & inhibitory plasticizers**



## Centrifuge Tubes Conical Bottom, PP/HDPE

### Centrifuge Tube Conical Bottom, PP Natural

Code	Capacity (ml)	Colour of Cap	Outer Diameter (mm)	Height (mm)	No. Per Case	Price / Case (₹)	Price / 20 Case (₹)
P10430	15 (Bulk)	Blue	16.5	121	500	3195	60066
P10401	15	Blue	16.5	121	500	3360	63168
P10441	15	Red	16.5	121	500	3360	63168
P10402	15 (sterile)	Blue	16.5	121	500	3840	72192
P10442	15 (sterile)	Red	16.5	121	500	3840	72192
P10431	50 (Bulk)	Blue	29.2	116	500	4610	86668
P10403	50	Blue	29.2	116	500	4850	91180
P10443	50	Red	29.2	116	500	4850	91180
P10404	50 (sterile)	Blue	29.2	116	500	5820	109416
P10444	50 (sterile)	Red	29.2	116	500	5820	109416



### Centrifuge Tube Conical Bottom, PP Amber

Code	Capacity (ml)	Colour of Cap	Outer Diameter (mm)	Height (mm)	No. Per Case	Price / Case (₹)
P10405	15 (Amber)	Blue	16.5	121	500	4392
P10406	15 (Sterile Amber)	Blue	16.5	121	500	4766
P10407	50 (Amber)	Blue	29.2	116	500	5875
P10408	50 (Sterile Amber)	Blue	29.2	116	500	7261



Abdos Centrifuge tubes are manufactured using high purity virgin polypropylene (PP) conforming to US FDA 21 CFR free from natural rubber, heavy metal.

Sterile Tubes has been validated according to EN ISO 11137-2; 2012 for SAL 10<sup>-6</sup>

Can withstand up to 15000 RCF\*.

The large white frosted portion for easy writing.

The option of Amber colour for the light-sensitive sample.

Build in plug in the cap makes it leak proof.



## Self Standing Centrifuge Tubes, PP/HDPE

Code	Capacity (ml)	Colour of Cap	Outer Diameter (mm)	Height (mm)	No. Per Case	Price / Case (₹)
P10432	50 (Bulk)	Blue	29.2	117.3	500	5200
P10423	50	Blue	29.2	117.3	500	5335
P10449	50	Red	29.2	117.3	500	5335
P10424	50 (Sterile)	Blue	29.2	117.3	500	6790
P10450	50 (Sterile)	Red	29.2	117.3	500	6790



Abdos Centrifuge tubes are manufactured using high purity virgin polypropylene (PP) conforming to US FDA 21 CFR free from natural rubber, heavy metal.

Skirted bottom makes it easier to use without any rack.

The large white frosted portion for easy writing.

Build in plug in the cap makes it leak proof.

Sterile Tubes has been validated according to EN ISO 11137-2; 2012 for SAL 10<sup>-6</sup>

Can withstand up to 3500 RCF\*





## Individually Wrap Centrifuge Tubes, PP/HDPE

08

Code	Capacity (ml)	Colour of Cap	Outer Diameter (mm)	Height (mm)	No. Per Case	Price / Case (₹)
P10425	15 (Sterile)	Blue	16.5 mm	121	500	4320
P10451	15 (Sterile)	Red	16.5 mm	121	500	4320
P10426	50 (Sterile)	Blue	16.5 mm	121	500	8730
P10452	50 (Sterile)	Red	16.5 mm	121	500	8730
P10427	50 (Self Standing, Sterile)	Blue	29.2 mm	116	450	8650
P10453	50 (Self Standing, Sterile)	Red	29.2 mm	116	450	8650

Abdos Centrifuge tubes are manufactured using high purity virgin polypropylene (PP) conforming to US FDA 21 CFR free from natural rubber, heavy metal.

The large white frosted portion for easy writing.

Silk-Screen graduation makes identification easy.

Best suited for less number of samples.

The option of Amber colour for the light-sensitive sample.

Build in plug in the cap makes it leak proof.

Sterile Tubes has been validated according to EN ISO 11137-2; 2012 for SAL 10<sup>-6</sup>



STERILE R

## Racked Centrifuge Tube Conical Bottom, Paper

09

Code	Capacity (ml)	Height (mm)	No. Per Case	Price / Case (₹)
P10409	15 (Rack Only)	47	10	735
P10410	50 (Rack Only)	48	10	735
P10411	15 (Racked)	125	750 (25 pcs x 30 racks)	7114
P10412	15 (Racked, Sterile)	125	750 (25 pcs x 30 racks)	7963
P10413	15 (Amber, Racked)	125	750 (25 pcs x 30 racks)	8366
P10414	15 (Sterile Amber, Racked)	125	750 (25 pcs x 30 racks)	9180
P10415	50 (Racked)	123	400 (25 pcs x 16 Racks)	5676
P10416	50 (Racked, Sterile)	123	400 (25 pcs x 16 Racks)	6569
P10417	50 (Amber, Racked)	123	400 (25 pcs x 16 Racks)	6511
P10418	50 (Sterile Amber, Racked)	123	400 (25 pcs x 16 Racks)	7550

These Racks are designed to hold Centrifuge Conical Bottom.

These racks designate a convenient solution for storing Abdos Centrifuge Tube.

These racks are made out of paper to hold 25 Abdos 15 ml & 50 ml Conical Bottom Centrifuge Tube.



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### Centrifuge Tubes Conical Bottom, PS/HDPE

Code	Capacity (ml)	Colour of Cap	Outer Diameter (mm)	Height (mm)	No. Per Case	Price / Case (₹)
P10419	15 (Sterile)	Blue	16.5	117.8	500	4900
P10421	15 (Racked Sterile)	Blue	16.5	125	750 (25 pcs x 30 racks)	8900

Abdos Centrifuge tubes are manufactured using high purity virgin Polystyrene (PS), free from natural rubber, heavy metal.

Polystyrene centrifuge tube are hydrophobic & its biologically inert surface is good for cell and protein recovery

Perform well with animal cell culture handling.

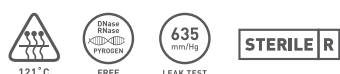
The large white frosted portion for easy writing.

Silk-Screen graduation makes identification easy.

Build in plug in the cap makes it leak proof.

Sterile Tubes has been validated according to EN ISO 11137-2; 2012 for SAL 10<sup>-6</sup>

Can withstand up to 2500 RCF\*.



11

### Centrifuge Tube Box, PP

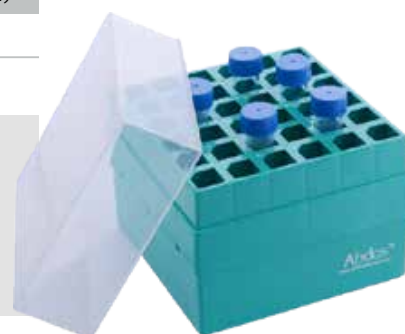
Code	Tube Capacity (ml)	Places	L x W x H (mm)	No. per Case	Price / Case (₹)
P20604	15	36 (6 x 6 Array)	147 x 147 x 126	4	1560
P20605	50	16 (4 x 4 Array)	147 x 147 x 126	4	1560

Abdos Centrifuge tube box provides a more durable and rugged alternative to cardboard or foam racks.

The distinctive green colour on the 15 ml and blue colour on the 50 ml makes these racks easy to distinguish.

These racks can withstand a temperature of -80°C to 121°C.

All grids are properly indexed with a clear lid that provides easy tube identification.



12

### Click Together Conical Tube Racks, ABS

Code	Tube Capacity (ml)	Places	L x W x H (mm)	No. per Case	Price/ Case (₹)
P20218	15 & 50	15 ml Tube - 30 (6 x 5 Array) 50 ml Tube - 20 (5 x 4 Array)	209 X 171 X 63	4	2300
P20219	15 & 50	15 ml Tube - 18 (6 x 3 Array) 50 ml Tube - 10 (5 x 2 Array)	209 X 198 X 63	4	2300

Shipped flat they are easy to assemble and snap together securely.

Alphanumeric index aids for tube identification.

Designed for stable use in a water bath.



\*Depending on the quality of Centrifuge and compatibility of Rotor.

## Universal Centrifuge Tube Rack, PP

13

Code	Tube Capacity (ml)	Places	Colour	L x W x H (mm)	No. per Case	Price/Case (₹)
P20212	15 & 50	12 (4 x 3 Array)	Blue	194 x 140 x 51	1	4500

Ideal for firmly holding a wide range of tubes and vessels.

Accepts tubes and vessels from 16-30 mm.

Moulded indexing for easy identification of tubes and vials.

Quickly change the tube with this adaptable polypropylene rack. Open the well with a turn of the knob or directly inserts a tube into the opening.

Generous handles for easy transport



## Foldable Space Savings Rack, PP

14

Code	Tube Capacity (ml)	Places	Colour	L x W x H (mm)	No. per case	Price/Case (₹)
P20213	15	45 (9 x 5 Array)	Purple	255 x 137 x 72	2	2850
P20214	50	18 (6 x 3 Array)	Green	255 x 137 x 72	2	2850
P20215	15 & 50	15 ml Tube - 21 (7 x 3 Array) & 50 ml Tube - 12 (6 x 2 Array)	Blue	255 x 137 x 72	2	2850
P20216	15 & 50	15 ml Tube - 21 (7 x 3 Array) & 50 ml Tube - 12 (6 x 2 Array)	Pink	255 x 137 x 72	2	2850

Simple easy action to open and close, expand and collapse when racks are needed.

Moulded indexing for easy identification of tubes and vials.

Save space when racks are not in use. Racks can be stacked in open or closed position.

Designed to help recognize 15 and 50 ml tubes.



## Floating Rack For Micro Centrifuge Tube, PP

15

Code	Tube Capacity (ml)	Places	Colour	L x W x H (mm)	No. per Case	Price/Case (₹)
P20225	1.5 & 2	16	White	102 x 102 x 60	4	1250
P20226	1.5 & 2	20	White	98 x 60 (Ø x h)	4	1250

Use on the bench, with water baths or ice containers.

Polypropylene racks keep micro tubes afloat in a water bath or can be pushed into a crushed ice -perfect for controlling sample temperature.

Not recommended for autoclaving.

Detachable legs provide two options:

- Attach legs so rack stands upright on bench top.
- Detach legs so samples can be quickly popped out by pushing down onto any surface.



## Swirl Mini Micro Centrifuge

Code	Product	No. per Case	Price / Case (₹)
E11501	Swirl Mini Micro Centrifuge Including 8 Place Rotor for 1.5 & 2.0 ml Tube & 2 Place Rotor for 8 x 0.2 ml Tube Strip	1	13095

### Spare Accessories:

Code	Product	No. per Case	Price /Case (₹)
E11502	8 Place Rotor for 1.5 & 2.0 ml	1	3395
E11503	16 (8 x 2) Strips Place Rotor for 0.2 ml PCR Tubes & 16 Place Rotor for 0.2 ml PCR tube	1	2522

Swirl is a small, compact and reliable centrifuge for spin-down and microfiltration procedures.

Swirl is supplied with 8 places angular rotor of 1.5 ml and a PCR rotor that admit two stripes of 0.2 ml PCR strip.

Swirl has a maximum speed of 7000 rpm / 2680 RCF.

Swirl uses minimal bench-top space.

The rotor can be change without tools and machine accelerates and breaks in seconds.

Swirl adapts a Brushless DC Motor.

CE explosion proof safe test IEC/EN61010-2-20.

### Specifications

Voltage	220 – 240 V
Frequency	50-60 Hz
Max Speed	7000 rpm
Max. RCF	2680xg
Run Time	Continuous operation
Rotor Capacity	(i) 0.2ml x 16 PCR Tubes (ii) 0.2 ml x 2 PCR strips (8 Tubes each) (iii) 1.5 / 2 ml x 8 Tubes
Noise level	≤ 45 dB
Dimensions	150 x 150 x 117 mm
Weight	0.5 kg
Permissible ambient temperature	4 to 40° C
Permissible relative humidity	80%



## Swirl Maxi Micro Centrifuge

Code	Product	No. per Case	Price /Case (₹)
E11510	Swirl Maxi Micro Centrifuge	1	71000

### Spare Accessories:

Code	Product	No. per Case	Price /Case (₹)
E11511	12 Place Rotor for 0.2, 0.5, 1.5 & 2.0 ml	1	23500
E11512	Rotor Adapter for 2.0 ml - 0.2 ml used with E11511	24	5300
E11513	Rotor Adapter for 2.0 ml - 0.5 ml used with E11511	24	5300

Swirl Maxi is a compact micro centrifuge used for sedimentation of cells and virus, separation of sub-cellular organelles and isolation of macromolecules such as DNA, RNA, proteins or lipids.

It is used in the physical and chemical analysis, biochemistry, cellular biology, clinical labs, blood donation centre and high-end research.

It has a large ergonomic design with easy to read display and sound.

Both RPM and G-force can be displayed.

It is stable and silent during operation. It also delivers fast acceleration and deceleration.

Swirl Maxi conforms to international safety standards and regulations. It has also passed the explosion-proof test and CE, TUV and FCC marked.

Swirl Maxi adapts a Brushless DC Motor. Automatic lid-lock release prevents

sample warming and allows easy access to samples.

The short spin function is used for quick spins by pressing and holding PULSE key. The centrifuge speed can be accelerated and held at the target speed.

High strength aluminium alloy rotors are fully autoclavable, withstanding steam sterilizing at 121°C for 20 minutes.

### Specifications

Voltage	220 – 240 V
Frequency	50 - 60 Hz
Current	3A
Max Speed	15000 rpm (500-15000 rpm) with increment of 100 rpm
Max. RCF	15100xg with increment of 100xg
Speed Accuracy	± 20 rpm
Rotor Capacity	0.2ml, 0.5ml, 1.5 ml & 2ml x 12 places.
Run Time	30sec-99min-HOLD (Continuous operation)
Driving Motor	Brushless DC motor
Safety Devices	Dual door interlock Over-speed detection Over temperature detection Automatic internal diagnosis
Noise level	≤ 54 dB
Additional Features	Speed/RCF switch Short-time run function Sound-alert function
Acceleration / Breaking time	11 sec for Acceleration & 9 sec for Breaking
Dimensions	255 x 245 x 140 mm
Weight	6 kg
Permissible ambient temperature	4 to 40°C
Permissible relative humidity	80%



## Swirl Clinical Centrifuge

Code	Product	No. per Case	Price /Case (₹)
E11540	Swirl Clinical Centrifuge	1	60000

### Spare Accessories:

Code	Product	No. per Case	Price /Case (₹)
E11541	8 Place Rotor for 15 ml & 12 Place Rotor for 5, 7 & 10 ml	1	14000
E11542	Rotor Adapter for 10 ml used with E11541	12	2500

Swirl Clinical Centrifuge is used for separation of serum, plasma, urea, urine, blood samples and other routine application in hospital, research. They are also used in environmental analyses for clarification of water and soil sample and in schools as a teaching aid.

Swirl Clinical Centrifuge has a large ergonomic design with easy to read display and sound alert.

Automatic lid opening when the run is complete prevents sample warming and allow easy access to samples.

Both RPM and G-force can be displayed.

Digital LCD display can show real-time parameters and have a symbol showing the experimental process.

Swirl Clinical is used for quick spins by pressing and holding the pulse key.

Swirl Clinical has precise control, high accuracy of speed and has gentle breaking at low speeds with efficient separation.

Swirl Clinical conforms to international safety standards and regulations. It has also passed the explosion-proof test and CE, TUV and FCC marked.

Bio-safe rotor and anti-sample overflow prevent sample do not leak in the centrifugal process causing microbial contamination.

Swirl Clinical adapts a Brushless DC Motor.

Passed EN61010-2-101:2002 particular requirements for invitro diagnostic (IVD) medical equipment.

Go into a self-diagnostic check when switching on and then display accumulative time & last running parameter.

### Specifications

Voltage	220 – 240 V
Frequency	50 -60 Hz
Current	3A
Max Speed	300-4500 rpm with increment of 100 rpm
Max. RCF	2490xg with Increment of 100xg
Speed Accuracy	± 20 rpm
Rotor Capacity	5 ml/7 ml/ 10ml x 12 places 15ml x 8 places
Run Time	30sec-99min-HOLD (Continuous operation)
Driving Motor	Brushless DC motor
Safety Devices	Door interlock Over-speed detection Automatic internal diagnosis
Noise level	≤ 56 dB
Additional Features	Speed /RCF switch Short-time run function Sound-alert function
Acceleration / Breaking time	20 sec for both Acceleration and Breaking
Dimensions	301 x 354 x 217 mm
Weight	6 kg
Permissible ambient temperature	4 to 40° C
Permissible relative humidity	80%



## Swirl Pro High Speed Micro Centrifuge

19

Code	Product	No. per Case	Price /Case (₹)
E11520	Swirl Pro High Speed Micro Centrifuge including 24 Place Rotor for 0.2, 0.5, 1.5 & 2.0 ml	1	145500

E11530	Swirl Refrigerated Pro High Speed Micro Centrifuge including 24 Place Rotor for 0.2, 0.5, 1.5 & 2.0 ml	1	P.O.R.
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Code	Product	No. per Case	Price /Case (₹)
E11521	24 Place Rotor for 0.2, 0.5, 1.5 & 2.0 ml	1	21500
E11522	18 Place Rotor for 5.0 ml (Round bottom)	1	21500
E11528	12 Place Rotor for 5.0 ml (Conical bottom)	1	21500
E11523	36 Place Rotor for 0.2 & 0.5 ml	1	21500
E11524	32 (8 x 4) Place Rotor for 0.2 ml PCR	1	54000
E11525	Rotor Adapter for 2.0 ml to 0.2 ml used with E11521	24	5500
E11526	Rotor Adapter for 2.0 ml to 0.5 ml used with E11521	24	5500
E11527	Rotor Adapter for 0.5 ml to 0.2 ml used with E11523	36	7500

Swirl Pro is a micro centrifuge used for sedimentation of cells and virus, separation of sub-cellular organelles and isolation of macromolecules such as DNA, RNA, proteins or lipids.

Swirl Pro is used in the physical and chemical analysis, biochemistry, cellular biology, clinical labs, blood donation centre and high-end research.

Swirl Pro has a large ergonomic design with easy to read display and sound alert.

Automatic lid opening when the run is complete prevents sample warming and allow easy access to samples.

Swirl Pro is stable and silent during operation. It also delivers fast acceleration and deceleration. Both RPM and G-force can be displayed.

Swirl Pro conforms to international safety standards and regulations. It has also passed the explosion-proof test and CE, TUV and FCC marked.

Special multi-flow air-cooling design helps to keep lower rotor temperature.

Unique cooling system design minimizes rotor heating to less than 10°C after running for 1 hour.

Bio-safe rotor and anti-sample overflow prevent sample do not leak in the centrifugal process causing microbial contamination.

Robust aluminium alloy rotor can be fully autoclaved.



Specifications		
<b>Code</b>	<b>E11520</b>	E11530
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Current	3 A	3 A
Max Speed	15000 rpm (200-15000 rpm) with increment of 10 rpm	15000 rpm (200-15000 rpm) with increment of 10 rpm
Max. RCF	21380 xg with increment of 10 xg	2380 xg with increment of 10 xg
Temperature Range	-	-20°C to 40°C
Speed Accuracy	±20 rpm	±20 rpm
Rotor Capacity	5 mL x 18 places. 0.2 mL/0.5 mL/ 1.5 mL/2 mL x 24 places. 0.5 mL x 36 places PCR 8 x 4 place	5 mL x 18 places. 0.2 mL/0.5 mL/ 1.5 mL/2 mL x 24 places. 0.5 mL x 36 places PCR 8 x 4 places
Run Time	30 sec-99 min-HOLD (Continuous operation)	30 sec-99 min-HOLD (Continuous operation)
Driving Motor	Brushless DC motor	Brushless DC motor
Safety Devices	Dual door interlock Over-speed detection Over temperature detection Automatic internal diagnosis	Dual door interlock Over-speed detection Over temperature detection Automatic internal diagnosis
Noise Level	≤54 Db	≤54 Db
Additional Features	Speed/RCF switch Short-time run function Sound-alert function	Speed/RCF switch Short-time run function Sound-alert function
Acceleration /Braking time	25 sec for both Acceleration and Braking	25 sec for both Acceleration and Braking
Dimensions	280 x 364 x 266 mm	388 x 580 x 324 mm
Weight	12 kg	30 kg
Permissible Ambient Temperature	4 to 40° C	4 to 40° C
Permissible Relative Humidity	80%	80%



E11521



E11522



E11523



E11524



E11525, 26, 27  
Rotor Adapters



## Swirl Micro Plate Centrifuge

20

Code	Product	No. per Case	Price /Case (₹)
E11550	Swirl Micro Plate Centrifuge	1	99999

### Spare Accessories:

Code	Product	No. per Case	Price /Case (₹)
E11551	Adapter, 96 x 0.2ml or 12 x PCR strips,	2	8000
E11552	Rotor with carrier for Deepwell plates upto 35mm tall (Max speed 1500 rpm)	1	26000

Astonishingly small footprint (9x10 in) half the size of the conventional centrifuge.

Upon closing the lid of the centrifuge, the rotor accelerates and the centrifugal force swings the plates into a horizontal position. Any droplets on the walls of the plate quickly concentrate into the well bottoms.

With a g-force of 600xg, most samples can be spun.

Just open the lid and automatic electric break brings the rotor to a quick & smooth stop in just 4.0 seconds.

The easily reachable rotor chamber includes two plate carriers that rest at a 75° angle thus allows plates to be inserted confidently without a seal in tapes or caps

### Specifications

Voltage	220- 230 V
Frequency	50 - 60 Hz
Max Speed	2250 rpm / 600 x g
Rotor Capacity	2 x 2 PCR Plates 2 x Microtiter plates 24 x 0.2 ml PCR Strips
Deceleration	4 Seconds
Dimension	230 x 260 x 197 mm
Weight	4.1 kg
Permissible Ambient Temperature	4 - 40° C
Permissible Relative Humidity	80%



\*When stacking skirted PCR plates, max. capacity is 4 plates.



Before & after centrifugation (angled position)



During centrifugation (Horizontal position)



## CRYO TECHNIQUES

Cryo Vial  
Freezing Tubes  
Storage Vial  
Cryo Box  
& More



21

### Freezing Tubes Sterile, PP ( - 80° C)

Code	Capacity (ml)	Outer Diameter (mm)	Height (mm)	No. per Case	Price / Case (₹)	Price /20 Case (₹)
P60102	1.8 Sterile Skirted Foot	11.36	45.7	1000	5200	97760
P60103	4.5 Sterile Skirted Foot	11.36	86.5	500	4200	78960



P60102

P60103

Abdos Freezing tubes are manufactured using high purity virgin polypropylene (PP) conforming to US FDA 21 CFR free from natural rubber, heavy metal.

Manufactured to be used at a temperature between -80° C to 121° C.

Large white frosted portion easy writing.

Silk-Screen graduation makes identification easy.

Build in plug in the cap makes it leak proof.

Sterile Tubes has been validated according to EN ISO 11137-2; 2012 for SAL 10<sup>-6</sup>



22

### Freezing Tube Coders, HDPE

Code	Colour of Cap	No. per Case	Price/Piece	Price/case (₹)
P60104 W	White	100	1.5	150
P60104 B	Blue	100	1.5	150
P60104 R	Red	100	1.5	150
P60104 Y	Yellow	100	1.5	150
P60104 G	Green	100	1.5	150

These coders fit onto the top of 'Abdos' Freezing Tube closures.

Suitable for P60102, P60103 and P60118.

These provide quick visual identification of specific vials to simplify inventory maintenance.

Available in wide range of colours.



## Cryo Vial External Threaded Sterile, PP ( - 196° C)

Code	Capacity (ml)	Outer Diameter (mm)	Height (mm)	No. per Case	Price / Case (₹)	Price / 20 Case (₹)
P60115	1.0 Sterile Star Foot	12.00	41.00	1000	5796	108965
P60116	1.8 Sterile Star Foot	12.00	48.5	1000	6417	120640
P60117	1.8 Sterile Round Bottom	12.00	47.5	1000	6417	120640
P60118	4.5 Sterile Skirted Foot	11.36	86.5	500	4554	85615



P60115

P60116

Abdos Cryo Vial external thread are manufactured using high purity virgin polypropylene (PP) conforming to US FDA 21 CFR free from natural rubber, heavy metal.

Abdos Cryo Vial is designed for long-term cryogenic storage of biological sample, all type of cells and any enzymes or reagents.

Its leak-proof cap design and strong wall thickness make it an ideal product for transporting samples and specimens.

These cryo vials are designed for mechanical freezing and its screw cap reduces the risk of contamination due to handling.

Manufactured to be used at a temperature between -196° C to 121° C.

The large white frosted portion for easy writing.

Graduation in silk-screen printing makes identification easy.

Unique Star Foot design allows for single hand operation and grooves into Abdos P20616 single hand cryo holder rack.

Available in self-standing reclosable zipper bags.

Abdos cryo vials are certified IVD product Recital 29 of the directive 98 / 79 / EC on in Vitro Diagnostic Medical Devices.

Sterile Tubes has been validated according to EN ISO 11137-2; 2012 for SAL 10<sup>-6</sup>



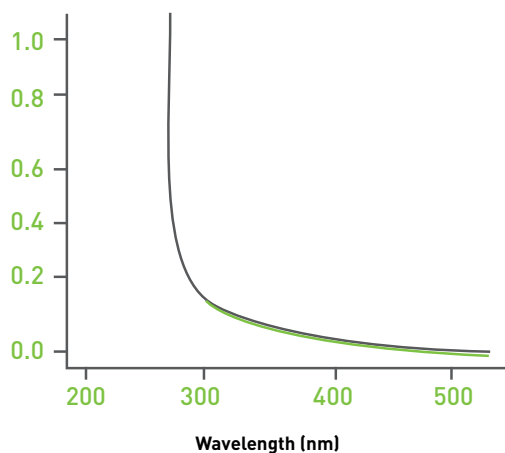
P60117

P60118



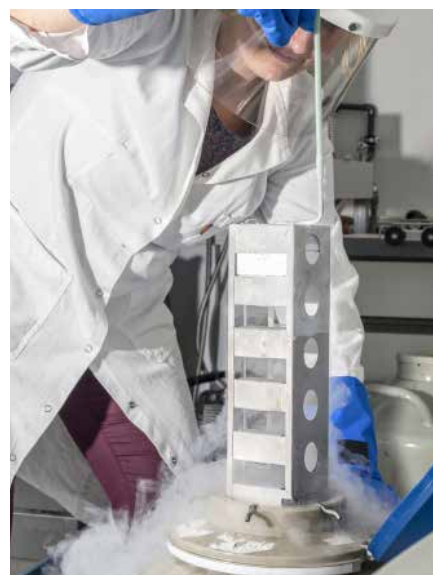
\* Pls note compatible coders for P60118 Cryo Vial 4.5 ml Skirted Foot is P60104.

## Leeching Performance Report with DMSO



The graph demonstrates no absorbants found to the threshold limits confirming no traceable leeching observed with DMSO.

\* Caution: Do not use Abdos Cryogenic vial in the liquid phase of liquid nitrogen. Improper use may cause liquefied nitrogen to be trapped inside the vial and lead to pressure built up resulting in possible explosion or biohazard release. Can be used in vapour phase of liquid nitrogen.



Abdos Cryo Vial being taken out from a liquid Nitrogen canister

## Cryo Vial Internal Threaded Sterile with Silicone Seal, PP (-196° C)

Code	Capacity (ml)	Outer Diameter (mm)	Height (mm)	No. Per Case	Price/Case (₹)	Price /20 Case (₹)
P60108	1.0 Sterile Star Foot	12.3	41.2	1000	8750	164500
P60109	1.8 Sterile Star Foot	12.3	47.5	1000	8800	165440
P60110	1.8 Sterile Round	12.3	46.2	1000	8800	165440
P60112	4.5 Sterile Star Foot	12.3	90.3	500	6350	119380
P60113	4.5 Sterile Round Bottom	12.3	89	500	6350	119380

Abdos Cryo Vial Internal thread are manufactured using high purity virgin polypropylene (PP) conforming to US FDA 21 CFR free from natural rubber, heavy metal.

Abdos Cryo Vial is designed for long-term cryogenic storage of biological sample, all type of cells and any enzymes or reagents.

Its leak-proof cap design with Silicon Seal and strong wall thickness make it an ideal product for transporting samples and specimens.

These cryo vials are designed for vapour phase liquid nitrogen freezing and also incorporate a silicone seal to enhance cap sealing.

Manufactured to be used at a temperature between -196° C to 121° C.

The large white frosted portion for easy writing.

Graduation in silk-screen printing makes identification easy.

Unique Star Foot design allows for single hand operation and grooves into Abdos P20616 single hand cryo holder rack.

Available in self-standing reclosable zipper bags.

The silicon ring used in Abdos Cryo Vial for Sealing effects is made up of the material & ingredient under the code of federal regulation 21, as per 21 CFR 177.2600 (G) & meets USP – Class VI Regularities under plastic vial & Cap.

Abdos cryo vials are certified IVD product Recital 29 of the directive 98 / 79 / EC on in Vitro Diagnostic Medical Devices.

Sterile Tubes has been validated according to EN ISO 11137-2; 2012 for SAL 10-6



P60113



P60112



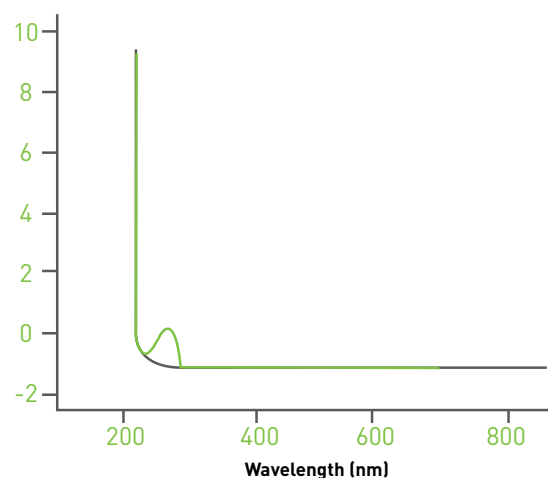
P60110



P60109



## Leaching Performance Report with DMSO



The graph demonstrates no absorbants found to the threshold limits confirming no traceable leaching observed with DMSO.

\*Caution: Do not use Abdos Cryogenic vial in the liquid phase of liquid nitrogen. Improper use may cause liquefied nitrogen to be trapped inside the vial and lead to pressure built up resulting in possible explosion or biohazard release. Can be used in the vapour phase of liquid nitrogen.



P60108

## Cryo Coders for External & Internal Threaded Vials, HDPE

Code	Colour	No. Per Case	Price /Piece	Price / Case (₹)
P60114 W	White	100	1.5	150
P60114 B	Blue	100	1.5	150
P60114 R	Red	100	1.5	150
P60114 Y	Yellow	100	1.5	150
P60114 G	Green	100	1.5	150

These coders fit onto the top of 'Abdos' skirted foot externally threaded cryogenic vial closures.

These provide quick visual identification of specific vials to simplify inventory maintenance.

Available in wide range of colours.



## Storage Vial, PP

### Storage Vial, Natural

Code	Capacity (ml)	Outer Diameter (mm)	Height (mm)	No. Per Case	Price / Case (₹)	Price / 20 Case (₹)
P60119	1.0	12	41	1000	2880	54144
P60106	2.0	11.8	47.2	1000	2880	54144
P60107	5.0	11.8	88	1000	3500	65800

### Storage Vial, Amber

Code	Capacity (ml)	Outer Diameter (mm)	Height (mm)	No. Per Case	Price/ Case (₹)
P60119A	1.0 Amber	12	41	1000	3750
P60119A1	1.0 Transparent Amber	12	41	1000	3750
P60106A	2.0 Amber	11.36	47.2	1000	3800
P60106A1	2.0 Transparent Amber	11.36	47.2	1000	3800
P60107A	5.0 Amber	11.36	88	1000	4800
P60107A1	5.0 Transparent Amber	11.36	88	1000	4800



Abdos Storage vial is manufactured using high purity virgin polypropylene (PP) conforming to US FDA 21 CFR free from natural rubber, heavy metal.

Used for storage of PCR reagents, enzymes and other diagnostics and biochemical reagents or sample.

HDPE screw closure is leak proof.

Can be used at low temperature.

Amber Storage Vial can be used for light-sensitive samples.



## Single Hand Cryo Holder Rack, PC

27

Code	Tube Capacity (ml)	Places	L x W x H (mm)	No. per Case	Price / Case (₹)
P20616	1 - 2	40 (10 x 4 Array)	201 x 105 x 22	4	1505

Designed for use with Cryogenic Vial, Freezer Tubes, Storage Vial and Micro Tubes.

Inbuilt numbered and letters grid for sample identification.

The rack has a secure locking system in each well that will not allow the Cryo Vial

to turn on either side.

It has unique innovative locking system allowing the user to unlock star foot Cryo Vial with one hand.

Anti-skid rubber feet support the rack.



Add Colour Code of your choice:  
WHITE (W), YELLOW (Y), BLUE (B)

## Cryo Box, PC

28

Code	Tube Capacity(ml)	Places	L xW x H (mm)	No. per Case	Price / Case (₹)
P20601	1 - 2	25 (5 x 5 Array)	75 x 75 x 54	8	1200
P20601 Assorted	1 - 2	25 (5 x 5 Array)	75 x 75 x 54	8	1200
P20602	1 - 2	81 (9 x 9 Array)	133 x 132 x 54	4	1500
P20602 Assorted	1 - 2	81 (9 x 9 Array)	133 x 132 x 54	4	1500
P20603	5	81 (9 x 9 Array)	133 x 132 x 97	4	2125
P20603 Assorted	5	81 (9 x 9 Array)	133 x 132 x 97	4	2125

Manufactured of strong polycarbonate and designed to be used at a temperature between -196° C to 121° C.

Can be used in the gas phase of liquid nitrogen with appropriate safety procedure in place.

Transparent lids permit viewing of contents.

Lids have numbered grid for sample identification. The surface of the lid has a frosted area suitable for writing with

markers, facilitating inventory control. These boxes create small, space-efficient storage system within a large mechanical freezer.

The dimensions of the cryo box are compatible with vertical, horizontal and drawer style freezer racks.

Specially Designed venting in base & lid ensures a smooth flow for vapours for consistency in cooling.



Add Colour Code of your choice:  
WHITE (W), YELLOW (Y), BLUE (B)

## Cryo Box, System 100 Place, PC

Code	Tube Capacity (ml)	Places	L x W x H (mm)	No. per Case	Price / Case (₹)
P20615	1-2 (Freezer Compatible)	100 (10x10 Array)	133 x 133 x 54	4	1750
P20611	1 - 2	100 (10x10 Array)	140 x 140 x 54	4	1750

Manufactured of strong polycarbonate and designed to be used at a temperature between -196° C to 121° C.

Can be used in the gas phase of liquid nitrogen with appropriate safety procedure in place.

These boxes have 10x10 array (100 places) that can optimize the storage volume of the end user.

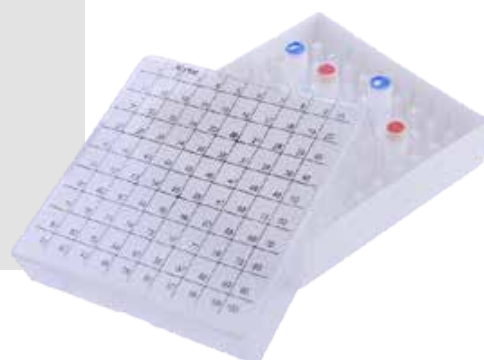
These boxes create small, space-efficient storage system within a large mechanical freezer.

Transparent lids permit viewing of contents.

Lids have numbered grid for sample identification.

The surface of the lid has a frosted area suitable for writing with markers, facilitating inventory control.

The dimensions of the P20615 Cryo Box are compatible with vertical, horizontal and drawer style freezer racks.



Add Colour Code of your choice:  
WHITE (W), YELLOW (Y), BLUE (B)

## Cryo Cube Box / Storage Cube Box, PP

Code	Tube Capacity (ml)	Places	Colour	L x W x H (mm)	No. per Case	Price/ Case (₹)
P20612	1.5 - 2 Micro Tube & 1 - 2 Cryo Tubes	50 (10 x 5 Array)	White, Yellow, Blue	142 x 85 x 59	8	1240
P20614	1.5 - 2 Micro Tube & 1 - 2 Cryo Tubes	81 (9 x 9 Array)	White, Yellow, Blue	130 x 130 x 55	4	1090
P20607	1.5 - 2 Micro Tube & 1 - 2 Cryo Tubes	100 (10 x 10 Array)	White, Yellow, Blue	140 x 140 x 55	4	1185

Manufactured in state of the art moulding facility using high purity polypropylene.

These boxes are stackable, versatile and designed for sample storage up to -80° C.

These boxes help you to meet storage requirements of 1.5 - 2.0 ml microtubes and 1.0 to 2.0 ml cryogenic vials.

The dimension of P20614 Cryo Cube Box is compatible with vertical, horizontal and drawer style freezer racks.

These boxes have hinged lid connected to the base and ultra smooth locking system ensures secure closure preventing accidental opening of these boxes in deep freezers.

Inbuilt numbers and letters grid for sample identification.



Add Colour Code of your choice:  
WHITE (W), YELLOW (Y), BLUE (B)



## Freezing Cardboard Cryo Boxes, Cardboard

31

Code	Tube Capacity (ml)	Places	L x W x H (mm)	No. per Case	Price/ Case (₹)
P20606	1.5 - 2 Micro Tube & 1 - 2 Cryo Tubes	81 (9 x 9 Array)	132 x 132 x 50	8	1350
P20613	1.5 - 2 Micro Tube & 1 - 2 Cryo Tubes	100 (10 x 10 Array)	132 x 132 x 50	8	1350

Designed for storage and preservation of frozen samples.

Can withstand ultra-low temperature in deep freezers.

The removable top lid makes it easy to open and close.

These boxes can be used for upright freezers, drawers & chest freezers with dividers.

Lamination on these boxes does not allow moisture to soak or liquid to stick on these boxes.



## Cryo Gloves

32

Code	Size	No. per case	Price /Case (₹)
U20307	Wrist S	1 Pair	11130
U20308	Wrist M	1 Pair	11130
U20309	Wrist L	1 Pair	11130
U20310	Wrist XL	1 Pair	11130
U20311	Mid Arm S	1 Pair	11618
U20312	Mid Arm M	1 Pair	11618
U20313	Mid Arm L	1 Pair	11618
U20314	Mid Arm XL	1 Pair	11618
U20315	Elbow S	1 Pair	14710
U20316	Elbow M	1 Pair	14710
U20317	Elbow L	1 Pair	14710
U20318	Elbow XL	1 Pair	14710



These cryogenic gloves protect your hands and arms when working in hazardous, ultra-cold environments.

These cryo gloves are made from state-of-the-art fabrics and use a flexible, multi-layered insulated construction that provides maximum thermal protection to perform tasks effectively and safely.

These gloves have an innovative design that offers superior thermal protection allowing for a maximum level of flexibility and dexterity.

High performance, thermal inner lining wicks moisture away from hands, maintaining comfort over extended periods.

### Application Environment

Ultra low blast freezers	Clinical laboratory
Cold rooms	Bio medical
Dry ice handling	Blood banks Pharmaceutical Frozen food processing

## Cryo Apron

33

Code	Size (inch)	No. per Case	Price /Case (₹)
U20331	36	1	14500
U20332	42	1	15790
U20333	48	1	17400
U20334	54	1	18685



These Cryo aprons provide a high level of thermal protection to the torso and upper legs in harsh cryogenic atmospheres.

These Cryogenic aprons have quick-release buckles at the neck and waist for added safety and function.

Multi-layered construction allows for the maximum level of thermal protection and waterproof nylon outer shell protects you from cryogenic splashes and keeps you safe and comfortable.

Application	Environment
Cold room / walking freezer	Cryo preservation facilities
Blast freezers	Cryogenic liquid producers
Delivery and filling of cryogenic liquid	Clinical lab Bio medical Blood banks Frozen food processing

## Water Proof Cryo Gloves

34

Code	Size	No. per Case	Price /Case (₹)
U20319	Wrist S	1 Pair	14500
U20320	Wrist M	1 Pair	14500
U20321	Wrist L	1 Pair	14500
U20322	Wrist XL	1 Pair	14500
U20323	Mid Arm S	1 Pair	14625
U20324	Mid Arm M	1 Pair	14625
U20325	Mid Arm L	1 Pair	14625
U20326	Mid Arm XL	1 Pair	14625
U20327	Elbow S	1 Pair	19330
U20328	Elbow M	1 Pair	19330
U20329	Elbow L	1 Pair	19330
U20330	Elbow XL	1 Pair	19330



These cryogenic gloves protect your hands and arms when working in hazardous, ultra-cold environments.

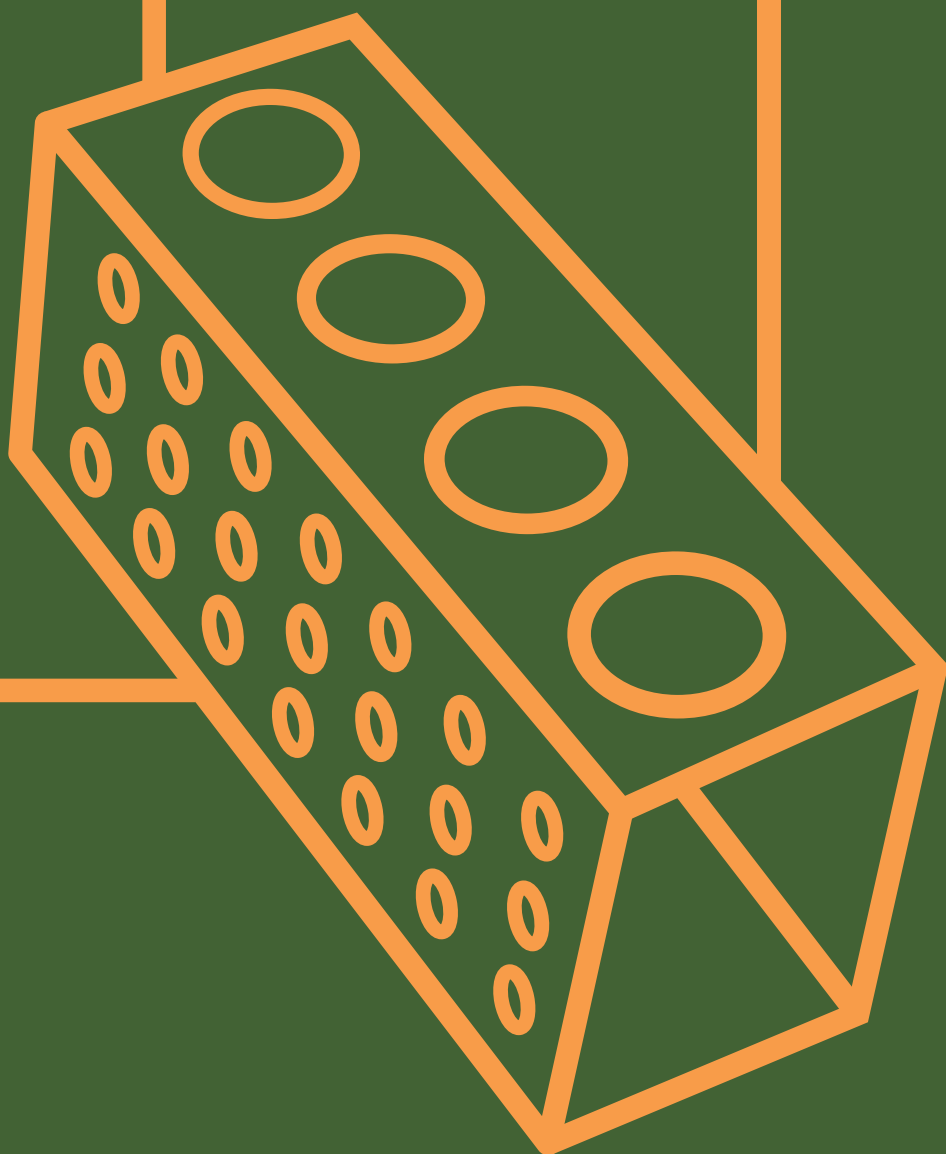
These cryo gloves are made from state-of-the-art fabrics and use a flexible, multi-layered insulated construction that provides maximum thermal protection to perform tasks effectively and safely.

These gloves are designed to provide a high level of thermal protection where the exposure to cryogenic fluids might exist.

These gloves are multi-layered and allow for a maximum level of thermal protection, flexibility and dexterity essential feature when the function is important and safety is critical.

Application	Environment
LN2 atmosphere and environment	Fertility clinic
Refrigerated liquid baths	Bio medical
Cryo freezers	Genetic and bio technology
Cryogenic grinding	Pharmaceutical

**MULTI PURPOSE  
RACKS & BOXES**



Rotator Workshop  
Multi Combination Racks  
Reversible Rack  
Polygrid Test Tube Rack  
& More

## Rotator Workstation, PP

Code	Tube Capacity (ml)	L x W x H (mm)	No. per Case	Price /Case (₹)
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P20208	PCR Tubes & Plates, 0.5 & 1.5 & 2.0, 15 & 50	108 x 68 x 108	4 (assorted colours)	1920
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Assorted colours consists of Blue, Green, Yellow & Red.

Abdos rotator workstation is a unique ultimate workstation helping you organize your laboratory work.

These racks can withstand temperature of -80 °C to 121°C.

Cube Type Multi-Hole for keeping Different Product as Per own requirement and has unique rotate and lock design that helps add or subtract racks according to end user's needs.



### Product compatibility chart for Rotator Workstation:

Product	No. per unit
50 ml Centrifuge Tubes	2 per unit
15 ml Centrifuge Tubes	8 per unit
1.5 ml or 2.0 ml Micro Centrifuge Tubes	9 per unit
0.5 ml Micro Centrifuge Tubes	6 per unit
PCR plates (unskirted or semi skirted 96 well)	1 per 2 units locked together
PCR 8-tube strips	6 per unit
PCR 12-tube strips	8 per 2 unit
PCR 0.2 ml tubes	48 per unit



### Multi Combination Racks, PP

Code	Tube Capacity (ml)	L x W x H (mm)	No. per Case	Price /Case (₹)
------	--------------------	----------------	--------------	-----------------

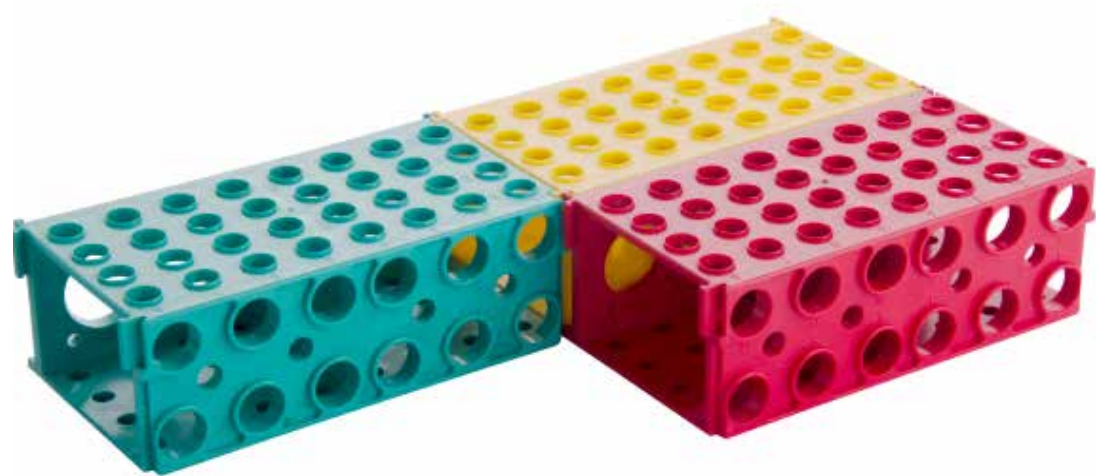
P20209	0.5 & 1.5 & 2.0, 12 x 75 mm Tube, 15 & 50	175 x 90 x 65	4 (assorted colours)	950
--------	---	---------------	----------------------	-----

Assorted colours consists of Blue, Green, Yellow & Red.

Abdos multi combination racks is a unique combination of the rack for various tubes and vials. Multi-Hole for keeping Different Product as per own requirement and has unique rotate and lock design that helps add or subtract racks according to end user's needs. These racks can withstand temperature of -80 °C to 121°C.



Product compatibility chart for Multi Combination Racks:	
Product	No. per unit
50 ml Centrifuge Tubes	4 per unit
15 ml Centrifuge Tubes	12 per unit
1.5 ml or 2.0 ml Micro Centrifuge Tubes	32 per unit
0.5 ml Micro Centrifuge Tubes	32 per unit
Ria Vial 12 x 75 mm	32 per unit



## Expanding Tube Rack, PP

37

Code	Tube (ml)	Capacity	Places	L x W x H (mm)	No. per case	Price / Case (₹)
P20230	12	1.5/2.0 ml	64	310 x 128 x 335	1	2050
P20231	7.8 and 5.1	.5 mL and .2 ml	64 - 0.5 ml and 96 - 0.2 ml	310 x 128 x 310	1	2050

Abdos Expanding tubes are designed to reduce sample handling time and the need for several racks when working with samples for cold temperature storage.

The opening and closing mechanism allow the rack to expand, creating needed room for sample manipulation, When done, simply collapse the rack back to its compact form and it's ready for the freezer.

Stackable, with alphanumeric well identifications

Temperature range -80 to 121°C



## 3 Way Rack, PP

38

Code	Capacity (mll)	L x W x H (mm)	No. per case	Price / Case (₹)
P20234	0.5 & 1.5 & 2.0, 12 x 75 Tube, 15 & 50	164 x 123 x 62	6 (assorted colours)	4000

Interlock multiple racks to increase tube storage.

The tiered rack makes sample transfer and loading an easier process.

Polypropylene racks connect to one another on either end.

Finger slots are moulded into the rack making them easy to pick up and move

Lowest level holds individual 0.2 mL tubes or strips of 8 or 12 tubes with 24 wells and well dia 6.3 mm.

Middle tier holds 0.5 mL tubes with 14 wells and well dia. 7.8 mm.

Top tier holds 1.5 mL tubes with 12 wells and well dia. 11 mm.



## Reversible Rack with Cover, PP

39

Code	Tube Capacity (ml)	Places	L x W x H (mm)	No. per case	Price / Case (₹)
P20206	1.5, 2.0 & 0.5	96 place (12 x 8 Array)	220 x 150 x 50	6	1700
P20206 Assorted	1.5, 2.0 & 0.5	96 place (12 x 8 Array)	220 x 150 x 50	6 (2 pcs of each colour)	1700
P20207	1.5, 2.0 & 0.5	80 (16 x 5 Array)	240 x 85 x 50	6	1250
P20207 Assorted	1.5, 2.0 & 0.5	80 (16 x 5 Array)	240 x 85 x 50	6 (2 pcs of each colour)	1250

Manufactured in the state of the moulding facility using high purity virgin polypropylene.

Holds 1.5/2.0 ml micro centrifuge tubes on one side with smaller positions for the 0.5 ml tubes on another side.

Moulding Indexing for easy reference of tubes and vials.

[16 x 5] Array on the 80 Place rack for 0.5, 1.5 & 2.0 ml micro centrifuge tubes and [12 x 8] array On the 96 place rack for 0.5, 1.5 ml & 2.0 ml micro centrifuge tubes.

Available in bright and attractive colour.



Add Colour Code of your choice: GREEN (G), YELLOW (Y), BLUE (B)

## Twisty Tube Rack, PP

40

Code	Tube Capacity (ml) - Places	L xW x H (mm)	No. per Case	Price / Case (₹)
P20210	0.2 ml - 96, 0.5 ml - 48 1.5/2.0 ml - 48	296 x 118 x 34	1kit (Blue + Purple)	3050

These racks make dilution and concentration study easier as it can transfer samples between 0.2ml PCR tubes to 0.5, 1.5 and 2.0 ml tubes.

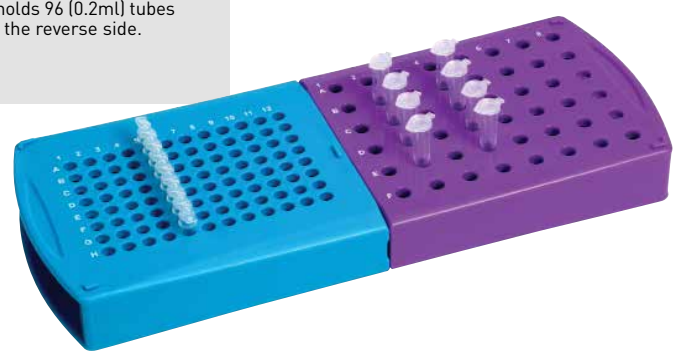
Can be rotated and customize according to end-user application.

These racks have tapered wells that securely suspend tubes and makes removal easy.

Moulded in indexing for easy retrieval of tubes.

These Racks can withstand a temperature of - 80°C to 121°C.

Blue section holds 48 (0.5 ml) tubes and reverses side holds 48 (1.5 ml) tubes and whereas purple section holds 96 (0.2ml) tubes and 48 (1.5 ml) tubes on the reverse side.



## Frosty Mate™ Storage Racks, PC

### -20 °C Freezer Storage Racks

Code	Capacity (ml)	Places	L x W x H (mm)	No. per case	Price/Case (₹)
P11104	1.5 - 2 ml Micro Tube, 1- 2 ml Cryo Tube and 0.5 ml Micro Tube with external attachment	32 (8x4 Array)	240 x 120 x 120	1	4800

### 0°C Freezer Storage Racks

Code	Capacity (ml)	Places	L x W x H (mm)	No. per case	Price/Case (₹)
P11105	1.5 - 2 ml Micro Tube, 1- 2 ml Cryo Tube and 0.5 ml Micro Tube with external attachment	32 (8 x 4 Array)	240 x 120 x 120	1	4800

These racks have consistent thermal protection to maintain the temperature at low temperature.

These racks are suitable for storage for PCR reagents, cells, enzymes or other temperature sensitive reagents and protecting the critical sample from temperature fluctuations.

Moulded indexing makes identification faster and easier.

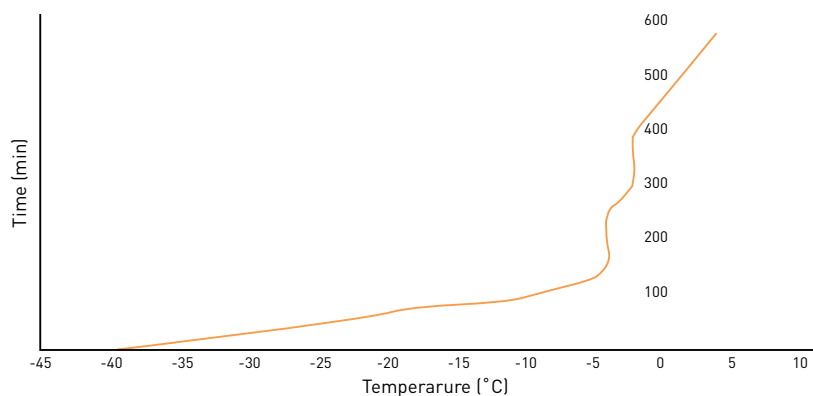
These racks are available in Two temperature range:

- (a) -20° C unit will maintain a temperature between -10° C and -20° C for up to three hours.
- (b) 0° C unit will maintain a temperature of 0° C for 5 hours.

These racks are filled with an inert, non-toxic gel.



Graph representing temperature stability VS Time



Note - Storage rack should be kept 24 hours in the deep freeze before the use to get improved results



## Frosty Mate™ Colour Change Racks, PP

### MCT Freezer Change Racks

Code	Colour at Cold Temperature	Colour at Warm Temperature	Capacity (ml)	Places	L x W x H (mm)	No. per Case	Price / Case (₹)
P11106	Green	Yellow	1.5 - 2 ml Micro Tube	24 (6 x 4 Array)	150 x 100 x 75	1	4100

### PCR Freezer Change Racks

Code	Colour at Cold Temperature	Colour at Warm Temperature	Capacity	Places	L x W x H (mm)	No. per Case	Price / Case (₹)
P11107	Green	Yellow	PCR tubes, 96 well plates & strip tubes	96 (12 x 8 Array)	150 x 100 x 75	1	4200

These racks maintain the temperature of less than 4°C for almost 3.5 hours (with the lid on the rack) at room temperature.

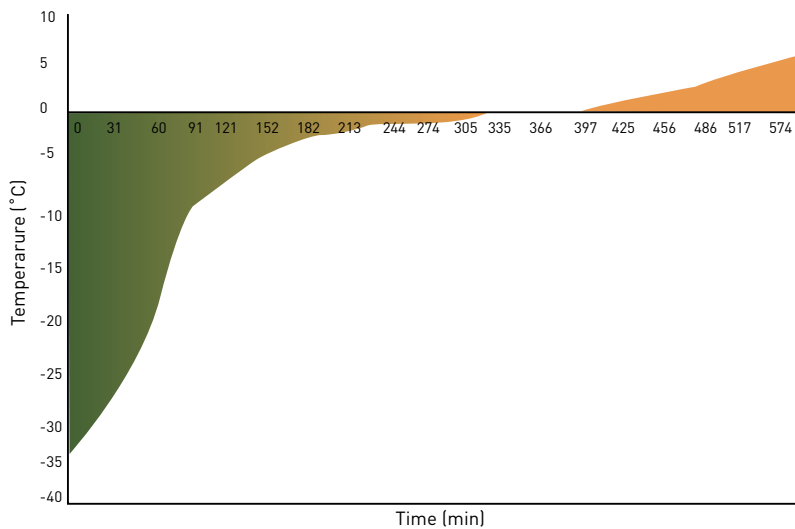
Can be used for transportation of biological samples, chemicals etc.. at a stable temperature for a long time with FROSTY MATE

Consistently cooled samples – FROSTY MATE colour changes dramatically when the temperature of a rack containing samples reaches below 4° C.

A clear visible colour change From Yellow to Green



Graph representing temperature stability (Indicating colour) VS Time



Note - Freeze colour change rack should be kept 24 hours in the deep freeze before the use to get improved results

## Test Tube Rack, RPP & PC

### Test Tube Rack, RPP

Code	Tubes (mm)	Places	L x W x H (mm)	No. per Case	Price / Case (₹)
P20701	13	31	275 x 65 x 110	4	803
P20702	16	31	275 x 65 x 110	4	803
P20703	20	20	324 x 73 x 127	4	922
P20704	25	18	324 x 73 x 127	4	922
P20705	32	12	280 x 84 x 127	4	1068

### Test Tube Rack, PC

Code	Tubes (mm)	Places	L x W x H (mm)	No. per Case	Price / Case (₹)
P20706	13	31	275 x 65 x 110	4	1590
P20707	13	62	275 x 133 x 112	2	1586
P20708	16	31	275 x 65 x 110	4	1590
P20709	16	62	275 x 133 x 112	2	1586
P20710	20	20	324 x 73 x 127	4	1770
P20711	20	40	324 x 143 x 127	2	1770
P20712	25	18	324 x 73 x 127	4	1770
P20713	25	36	324 x 143 x 127	2	1770
P20714	32	12	280 x 84 x 127	4	2012
P20715	32	24	280 x 170 x 128	2	2012

Holes are keyed with moulded-in numbers and letters for easy identification.

Ergonomics design facilities for easy handling.

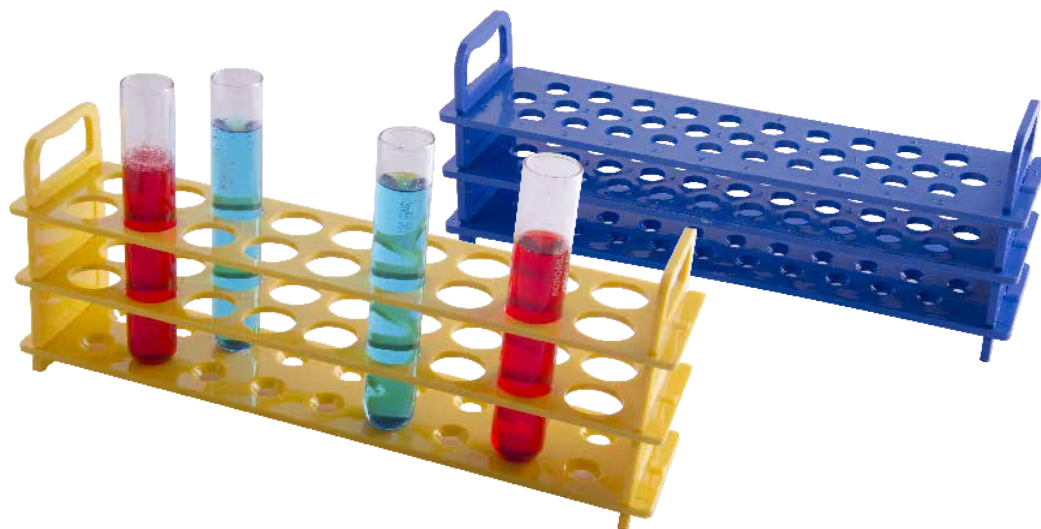
Can be used in the wide temperature range.

Superior chemicals resistance.

Wide range available in different colours



Add Colour Code of your choice:  
WHITE (W), BLUE (B), YELLOW (Y)



## Double / Jumbo Test Tube Rack, RPP

44

### Double Jumbo Test Tube Rack

Code	Tubes (mm)	Places	L x W x H (mm)	No. per Case	Price / Case (₹)
P20441	10-13	432	673 x 230 x 80	1	7000
P20442	13-16	240	521 x 260 x 89	1	7000

### Jumbo Test Tube Rack

Code	Tubes (mm)	Places	L x W x H (mm)	No. per Case	Price / Case (₹)
P20443	10-13	216	337 x 267 x 91	1	3700
P20444	13-16	120	337 x 267 x 91	1	3700

These innovative double jumbo test tube racks are used for high capacity storage for tubes, vials and vessels.

Extremely suitable for high throughput labs requiring large sample storage.

Manufactured from robust, sturdy and lightweight material suitable for easy movement and transport.

Holes are keyed with moulded-in numbers and letters for easy identification.

Due to sheer its size, the rack eliminates the risk of using multiple racks. Use these racks for storing various grouping samples.

These Racks are available in white, and blue.



Add Colour Code of your choice:  
WHITE (W), BLUE (B)



## Polygrid Test Tube Racks, PP

45

Code	Tube Diameter (mm)	Places	L x W x H (mm)	No. per Case	Price/Case (₹)
P20716	13	90	248 x 116 x 64	4	996
P20717	17	60	245 x 118 x 70	4	996
P20718	21	40	248 x 116 x 70	4	996

Manufacture in the stock of the art moulding facility using high purity virgin polypropylene (PP).

Can be used in the wide temperature range.

Racks have Precise grid and vials

Superior chemical resistance.



Add Colour Code of your choice:  
WHITE (W), BLUE (B)



## Polywire Racks, Delrin

### Polywire Rack Full, Delrin

Code	Tubes (mm)	Places	L x W x H (mm)	No. per Case	Price / Case (₹)
P20725	13	72	104 x 202 x 59	4	4000
P20726	16	60	127 x 250 x 70	4	5400
P20727	20 (15ml Tube)	40	100 x 252 x 83	4	5500
P20728	25	40	120 x 300 x 92	4	7000
P20729	30 (50ml Tube)	24	110 x 282 x 85	4	7000

### Polywire Rack Half, Delrin

Code	Tubes (mm)	Places	L x W x H (mm)	No. per Case	Price / Case (₹)
P20720	13	36	104 x 104 x 59	4	3000
P20721	16	36	127 x 127 x 70	4	4200
P20722	20 (15ml Tube)	20	100 x 127 x 83	4	4300
P20723	25	16	120 x 122 x 92	4	4300
P20724	30 (50ml Tube)	9	110 x 110 x 85	4	4300

Polywire racks are durably moulded in a single continuous piece so no assembly required and there are no detachable pieces.

Manufacture from delrin® which is very tough, highly resistant to acids, bases solvents and heat.

Superior to manufacturing from Reinforced Nylon.

Moulded in indexing for easy identification.

These racks have flat labelling area for easier identification.

Stable in a water bath.

Can be used in the wide temperature range from - 40° C to 140° C.



Add Colour Code of your choice:  
WHITE (W), BLUE (B), RED (R)



## Weighing Boats, PS

47

### Weighing Boats Standard, PS

Code	Size	Colour	L xW x H (mm)	No. per Case	Price /Case (₹)
P70501	Small	Blue	46 x 46 x 8	250	1298
P70502	Medium	Blue	85 x 85 x 24	250	2149
P70505	Large	Blue	140 x 140 x 22	250	3850

### Weighing Boat with Pour Spout, PS

Code	Size	Colour	L xW x H (mm)	No. per Case	Price /Case (₹)
P70503	Small	White	43 x 58 x 13	250	2136
P70504	Medium	White	83 x 132 x 26	250	3863
P70506	Large	White	108 x 183 x 26	250	7000



Abdos weighing boats are flexible with smooth surfaces to provide accurate pour-outs with minimal sample loss.

Biologically inert and resistant to dilute and weak acids, aqueous solutions, alcohols, and bases.

All Abdos weighing boats are anti-static and facilitate the weighing of the static-affected sample.

Can be used with microwave moisture analyzers.

These boats can withstand temperature between 10°C to 70°C.

Standard Weighing Boats are shallow with a wide, flat bottom to resist tipping.

They have rounded corners to simplify transfer.

Pour spout weighing boat have an innovative unique design for easy dispense of the sample without flexing the dish. 12-mil thickness provides good strength, stability and handling.



## Spatula, PP

48

Code	Length (mm)	No. per case	Price/Case
P70707	150	12	165
P70708	200	12	210

Abdos Spatula is moulded in Polypropylene.

Spatula consists of a spoon on one side while the other end is a flat construction with a knife edge.

This edge is helpful in breaking up crystals of different salts while the spoon is used to draw salts from the containers.

Suitable for use with food.





**LIQUID HANDLING**

Micro Pipettes  
Tips  
Filter Tips  
Sample Containers  
Ria Vial  
& more

## ABDOS PIPETTES

ABDOS Pipette meets the highest needs in precision and accuracy – combined with ultimate ergonomics and increased flexibility with sophisticated blend of feature and functionality. It is easy to calibrate and maintain with tools supplied. The operator manual included in the pack provides complete information on recalibration and maintenance of the pipette.

### 1 Comfortable Finger Support:

helps in prolonged pipetting operation with less fatigue.

### 2 Easy Calibration:

Calibrated accordance with ISO8655. Each pipette is supplied with individual control certificate.

### 3 Ejector:

Very low operating force and position in such a way that thumb strain is reduced when moving to eject tips.

### 4 Display:

Clear and easy read display with large numbers and precise increment.

### 5 Slim Pipette Shaft:

Allows Pipetting into narrow vessels.

### 6 Tip Cone:

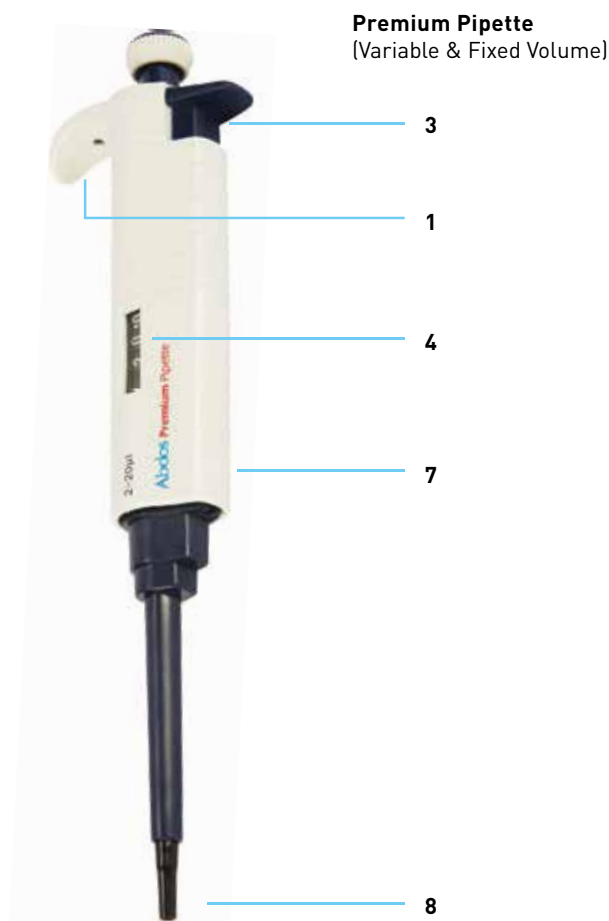
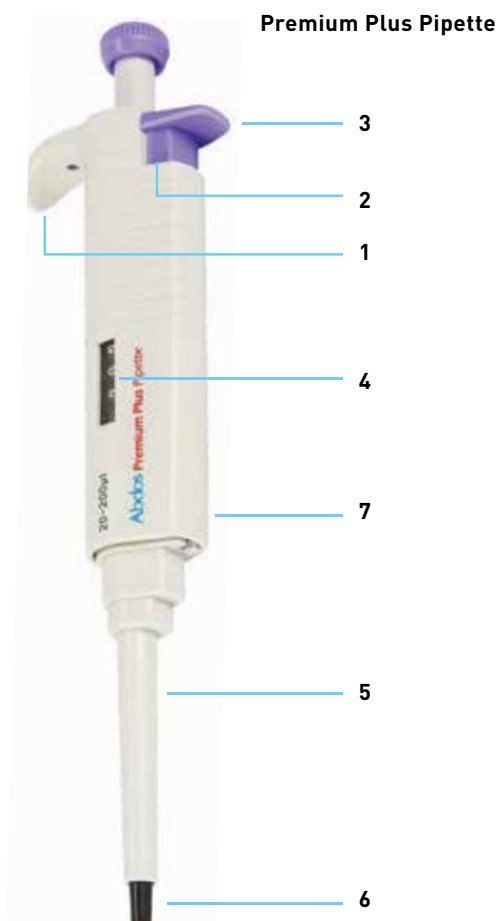
Optimized Standard Design. Pipette tips from ABDOS and other manufacturer's tips can be used.

### 7 Fully Autoclavable

without disassembly with steam Sterilization at 121°C, 1atm for 20 minutes. Does not require any special preparations.

### 8 Premium Pipette

with lower part autoclavable to ensure contamination free operations.



## Premium Plus Pipettes, PP

Fully Autoclavable Single Channel Adjustable Premium Plus Pipettes

Specifications									
Code	Capacity (µl)	Increment (µl)	Test Volume (µl)	Maximum permissible systematic error (Inaccuracy)		Maximum permissible random error (Imprecision)		No. per Case	Price / Case (₹)
				(± %)	(± µl)	(± %)	(± µl)		
E11145	0.1 - 2.5	0.05	2.5	2.50	0.062	2.00	0.05	1	5600
			1.25	3.00	0.037	3.00	0.0375		
			0.25	12.00	0.03	6.00	0.015		
E11107	0.5 - 10	0.1	10	1.00	0.1	0.80	0.08	1	5600
			5	1.50	0.175	1.50	0.075		
			1	2.50	0.025	1.50	0.015		
E11108	2-20	0.5	20	0.90	0.18	0.40	0.08	1	5600
			10	1.20	0.12	1.00	0.10		
			2	3.00	0.06	2.00	0.04		
E11146	5 - 50	0.5	50	0.60	0.3	0.30	0.15	1	5600
			25	0.90	0.225	0.60	0.15		
			5	2.00	0.1	2.00	0.1		
E11109	10-100	1	100	0.80	0.80	0.15	0.15	1	5600
			50	1.00	0.50	0.40	0.20		
			10	3.00	0.30	1.50	0.15		
E11110	20-200	1	200	0.60	1.20	0.15	0.15	1	5600
			100	0.80	0.80	0.30	0.30		
			20	3.00	0.60	1.00	1.00		
E11147	50 - 200	1	200	0.60	1.20	0.15	0.15	1	5600
			100	0.80	0.80	0.30	0.30		
			50	1.00	0.50	0.40	0.2		
E11111	100-1000	5	1000	0.60	6	0.20	2	1	5600
			500	0.70	3.50	0.25	1.25		
			100	2.00	2	0.70	0.70		
E11134	1000-5000	50	5000	0.50	25	0.15	7.5	1	5600
			2500	0.60	15	0.30	7.5		
			1000	0.70	7	0.30	3		

Abdos Premium Plus Pipettes are Fully Autoclavable.

Abdos Premium Plus Pipettes are lightweight, ergonomic with low force design.

Volume settings can be clearly read through digital display.

Abdos Premium Plus Pipettes are easy to calibrate and maintain with the tool supplied.

Abdos Premium Plus Pipettes are designed to avoid repetitive strain injuries.

Abdos Premium Plus Pipettes are supplied with operator manual that provides complete information on recalibration and maintenance of the pipettes.





# Premium Pipettes, PP

Semi Autoclavable Single Channel Adjustable Premium Pipettes

Specifications									
Code	Capacity (µl)	Increment (µl)	Test Volume (µl)	Maximum permissible systematic error (Inaccuracy)		Maximum permissible random error (Imprecision)		No. per Case	Price / Case (₹)
				(± %)	(± µl)	(± %)	(± µl)		
E11100	0.1 - 2.5	0.05	2.5	2.50	0.062	2.00	0.05	1	5000
			1.25	3.00	0.037	3.00	0.0375		
			0.25	12.00	0.03	6.00	0.015		
E11101	0.5 - 10	0.1	10	1.00	0.1	0.80	0.08	1	5000
			5	1.50	0.175	1.50	0.075		
			1	2.50	0.025	1.50	0.015		
E11102	2-20	0.5	20	0.90	0.18	0.40	0.08	1	5000
			10	1.20	0.12	1.00	0.10		
			2	3.00	0.06	2.00	0.04		
E11106	5 - 50	0.5	50	0.60	0.3	0.30	0.15	1	5000
			25	0.90	0.225	0.60	0.15		
			5	2.00	0.1	2.00	0.1		
E11103	10-100	1	100	0.80	0.80	0.15	0.15	1	5000
			50	1.00	0.50	0.40	0.20		
			10	3.00	0.30	1.50	0.15		
E11104	20-200	1	200	0.60	1.20	0.15	0.15	1	5000
			100	0.80	0.80	0.30	0.30		
			20	3.00	0.60	1.00	1.00		
E11112	50 - 200	1.1	200	0.60	1.20	0.15	0.15	1	5000
			100	0.80	0.80	0.30	0.30		
			50	1.00	0.50	0.40	0.2		
E11105	100-1000	5	1000	0.60	6	0.20	2	1	5000
			500	0.70	3.50	0.25	1.25		
			100	2.00	2	0.70	0.70		
E11131	1000-5000	50	5000	0.50	25	0.15	7.5	1	5000
			2500	0.60	15	0.30	7.5		
			1000	0.70	7	0.30	3		
E11132	2000-10000	100	10000	0.60	60	0.20	20	1	5000
			5000	1.20	60	0.30	15		
			2000	3.00	60	0.60	12		

Abdos Premium Pipettes are lightweight, ergonomic with low force design.

Volume settings can be clearly read through digital display.

Abdos Premium Pipettes are easy to calibrate and maintain with the tools supplied.

Abdos Premium Pipettes are Semi-Autoclavable.

Abdos Premium Pipettes are designed to avoid repetitive strain injuries.

Abdos Premium Pipettes are supplied with operator manual that provides complete information on recalibration and maintenance of the pipettes.



## Fixed Premium Pipette, PP

### Fixed Volume Pipette

Specifications								
Code	Capacity (µl)	Test Volume (µl)	Maximum permissible systematic error (Inaccuracy)		Maximum permissible random error (Imprecision)		No. per Case	Price / Case (₹)
			(± %)	(± µl)	(± %)	(± µl)		
E10001	5	5	1.3	0.065	1.2	0.06	1	2850
E10002	10	10	0.8	0.08	0.8	0.08	1	2850
E10003	20	20	0.6	0.12	0.5	0.1	1	2850
E10004	25	25	0.5	0.125	0.3	0.075	1	2850
E10005	50	50	0.5	0.25	0.3	0.15	1	2850
E10006	100	100	0.5	0.50	0.3	0.30	1	2850
E10007	200	200	0.4	0.80	0.2	0.40	1	2850
E10008	250	250	0.4	1	0.2	0.50	1	2850
E10009	500	500	0.3	1.5	0.2	1.0	1	2850
E10010	1000	1000	0.3	3	0.2	2.0	1	2850

Abdos Premium Pipettes are lightweight, ergonomic with low force design.

Volume settings can be clearly read through digital display.

Abdos Premium Pipettes are easy to calibrate and maintain with the tools supplied.

Abdos Premium Pipettes are Semi-Autoclavable.

Abdos Premium Pipettes are designed to avoid repetitive strain injuries.

Abdos Premium Pipettes are supplied with operator manual that provides complete information on recalibration and maintenance of the pipettes.



## Premium Plus Multi-Channel Pipette

ABDOS Premium Plus Multi-Channel Pipette meets the highest needs in precision and accuracy – combined with ultimate ergonomics and increased flexibility with sophisticated blend of feature and functionality. These fully autoclavable 8-channel and 12- multichannel pipette is available for Standard 96-well plates. Individual piston and Tip cone assemblies allows easy repair and maintenance. It is easy to calibrate and maintain with tools supplied. Calibrated in accordance with ISO8655. The quality control includes the gravimetric testing with distilled water at 22°C. It is supplied with operator manual that provides complete information on recalibration and maintenance of the pipette.

### 1 Volume Adjustment:

Simply turn the plunger button for volume selection.

### 2 Comfortable Finger Support:

Helps in prolonged pipetting operation with less fatigue.

### 3 Tip Ejector:

Allows convenient one handed operation. Very low operating force

### 4 Display:

Clear and easy read display with large numbers and precise increment.

### 5 Ejector Coller And Tip Cone

can be removed.

### 6 Rotating Dispensing Heads

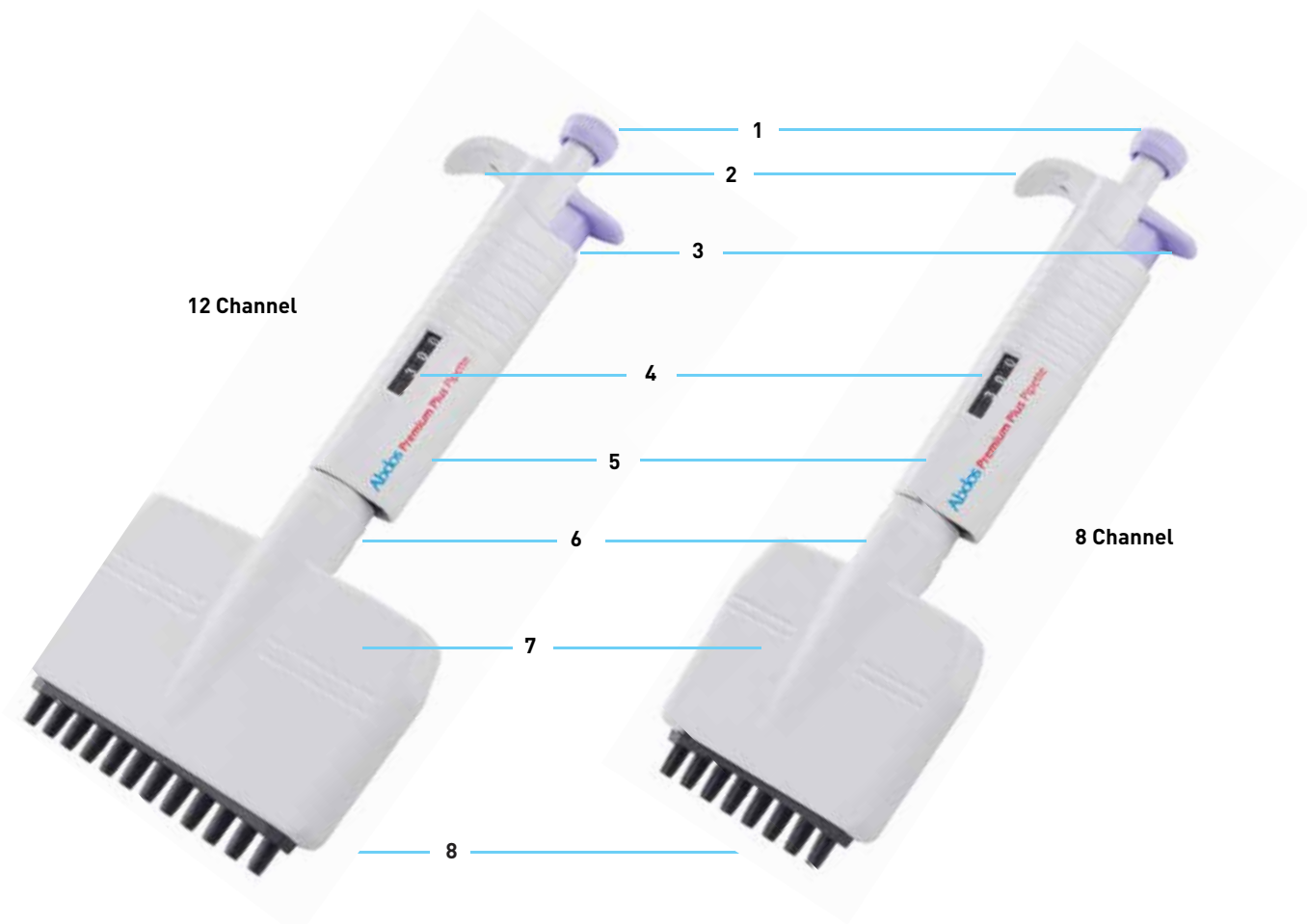
provide effortless pipetting convenience.

### 7 Fully Autoclavable

without disassembly with steam Sterilization at 121°C, 1atm for 20 minutes. Does not require any special preparations.

### 8 Chemical Resistance Tip Cone:

Optimized Standard Design. Pipette tips from ABDOS and other manufacturer's tips can be used.



## Premium Plus Multi-Channel Pipette, PP

### 8 - Channel Adjustable Premium Plus Pipettes

#### Specifications

Code	Capacity (µl)	Increment (µl)	Test Volume (µl)	Maximum permissible systematic error (Inaccuracy)		Maximum permissible random error (Imprecision)		No. per Case	Price / Case (₹)
				(± %)	(± µl)	(± %)	(± µl)		
E11136	0.5 - 10	0.1	0.5	1.50	0.15	1.50	0.15	1	21000
			5	2.50	0.125	2.50	0.125		
			1	4.00	0.04	4.00	0.04		
E11137	5 - 50	0.5	50	1.00	0.50	0.50	0.25	1	21000
			25	1.50	0.375	1.00	0.25		
			5	3.00	0.15	2.00	0.10		
E11138	50-300	5	300	0.70	2.10	0.25	0.75	1	21000
			150	1.00	1.50	0.50	0.75		
			50	1.50	0.75	0.80	0.40		

Abdos Premium Plus Multi-channel Pipette have a unique ergonomic design for comfortable finger support and convenient tip ejector design allows one-handed operation.

The dispensing head of these pipettes rotate for optimum pipetting convenience.

The special compound material tip cone design allows visual seal verification and have excellent chemical resistance.

Individual piston and tip cone assemblies allow easy repair and maintenance.

Volume settings can be clearly read through digital display.

Abdos Premium Plus Multi-channel Pipette are easy to calibrate and maintain with the tools supplied.

These pipettes are designed to avoid repetitive strain injuries.

All Abdos pipette are supplied with operator manual that provides complete information on recalibration and maintenance of the pipettes.

## Premium Plus Multi-Channel Pipette, PP

### 12 - Channel Adjustable Premium Plus Pipettes

#### Specifications

Code	Capacity (µl)	Increment (µl)	Test Volume (µl)	Maximum permissible systematic error (Inaccuracy)		Maximum permissible random error (Imprecision)		No. per Case	Price / Case (₹)
				(± %)	(± µl)	(± %)	(± µl)		
E11139	0.5 - 10	0.1	0.5	1.50	0.15	1.50	0.15	1	22500
			5	2.50	0.125	2.50	0.125		
			1	4.00	0.04	4.00	0.04		
E11140	5 - 50	0.5	50	1.00	0.50	0.50	0.25	1	22500
			25	1.50	0.375	1.00	0.25		
			5	3.00	0.15	2.00	0.10		
E11141	50-300	5	300	0.70	2.10	0.25	0.75	1	22500
			150	1.00	1.50	0.50	0.75		
			50	1.50	0.75	0.80	0.40		

Abdos Premium Plus Multi-channel Pipette have a unique ergonomic design for comfortable finger support and convenient tip ejector design allows one-handed operation.

Abdos Premium Plus Multi-channel Pipette are available for standard 96-well plate.

Volume settings can be clearly read through digital display. The special compound material tip cone design allows visual seal verification and have excellent chemical resistance.

Individual piston and tip cone assemblies allow easy repair and maintenance.

These pipettes are designed to avoid repetitive strain injuries.

All Abdos pipette are supplied with operator manual that provides complete information on recalibration and maintenance of the pipettes.

The dispensing head of these pipettes rotate for optimum pipetting convenience.

## Premium Electronic Pipette



Specifications									
Code	Capacity (µl)	Increment (µl)	Test Volume (µl)	Maximum permissible systematic error (Inaccuracy)		Maximum permissible random error (Imprecision)		No. per Case	Price / Case (₹)
				(± %)	(± µl)	(± %)	(± µl)		
E11161	0.5 - 10	0.01	10 1	0.10 0.03	1.0 3.0	0.05 0.03	0.50 2.00	1	36000
E11162	5 - 50	0.1	50 5	0.40 0.14	0.80 2.75	0.15 0.08	0.30 1.50	1	36000
E11163	50 - 300	1	300 30	1.80 0.75	0.60 2.50	0.60 0.23	0.20 0.75	1	36000
E11164	10 - 100	5	1000 100	5.00 2.25	0.50 2.25	1.50 0.50	0.15 0.50	1	36000

Abdos Premium Plus electronic pipette is fast, precise with an ergonomic design that is easy to use in laboratories.

Highly efficient lithium-ion battery offering long running time with each charge.

Comprehensive range with easy programming.

Lower part is autoclavable.

Motor driven with build-in-error control improving pipetting precision and providing more reliable results.

Reduces workload and improves the accuracy and precision.

Easy display and clear number.

Self calibration - by link it to PC & a balance with USB connector, user can calibrate Premium Electronic Pipette



## Pipet Rack Stand, Acrylic

Code	Places	L x W x H (mm)	No. per Case	Price /Case (₹)
P70201	5	190 x 135 x 265	1	2630

Keep your pipettors within easy inside this convenient rack.

Holds five standard size pipettors.

Racks are mounted on their own stand.

Keeps working area or desk free from clutter.

## Pipette Rack Stand (Carosol Type), PP

Code	Places	No. per Case	Price /Case (₹)
P70203	6	1	6300

Keep your pipettors within easy reach inside the round carosol stand.

Holds six standard size pipettors.

The carousol stand rotates smoothly and comfortable.

Keeps working area or desk free from clutter.





# PIPETTE TIPS

PP

## WAFER VALUE ADDITIONS

Each wafer of the rack is printed with effective Volume Range and Lot Number with Product Code making it easy to keep your work organized and ensure supplies are traceable



Max Vol.

Product Code

Description

Lot No.

## PIPETTE TIPS FEATURES



All Tips are manufactured from ultra pure USP Class VI certified virgin polypropylene to ensure the highest quality & conforming to US FDA 21 CFR. Free from heavy metals, natural rubber & inhibitory plasticizers

Free from Bacteriostatic & Fungistatic property

Superior leeching performance in its class assures contamination free results.

DNase, RNase & Pyrogen free.

Precise Graduation mark for error free pipetting

Tips with High clarity for better visibility of samples.

Diamond polished moulds for an extremely hydrophobic & smooth surface to ensure lowest retention in its class.

### ABDOS BEVELLED TIPS



Precise diamond polished with special treatment on bevelled orifice prevents smooth working & sample hold-up

Bevelled orifice prevents sample hang up and makes it easier to pipette-off the last drop of sample

Perfect airlock grip on pipette by inner radial rings for accurate pipetting

Bevelled tip prevent accidental damage of gel rupture during loading

### THE ABDOS EDGE



The Universal Tip collar fits all popular pipettes.

The use of multiple cavity tools guarantees high conformity within one batch. The automated moulding and assembling procedures carried out under validated clean-room conditons to eliminate contamination.

Thin-wall technology ensures perfect seal while reducing the loading and ejection forces.

### ABDOS ULTRA-POINT TIPS



Ultra point orifice for precise work like gel loading & careful pipetting between space as small as 1 mm as in PAGE, electrophoresis & IEF



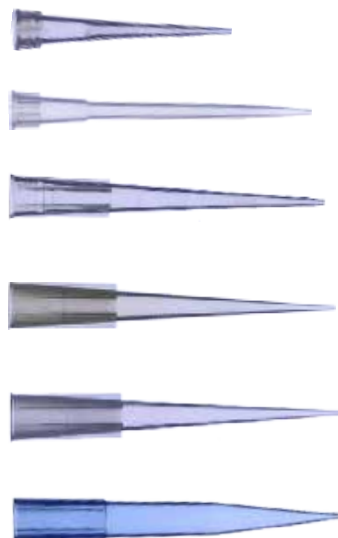
Ultra clear transparency for two phase pipetting



## Pipette Tips, Bulk in Resealable Bags, PP

57

Code	Capacity (µl)	Colour	No. per Case	Price / Case (₹)	Price / 192 Case (₹)
P10115	0.2 - 10 (Graduated)	Natural	1000	480	86630
P10137	0.2 - 10 Extended (Graduated)	Natural	1000	480	86630
P10129	2 - 200 (Bevelled Graduated)	Yellow	1000	356	64251
P10130	2 - 200 (Bevelled Graduated)	Natural	1000	356	64251
P10101	2 - 200 (Ultra Point Tip Orifice)	Yellow	1000	375	67680
P10105	2 - 200 (Ultra Point Tip Orifice)	Natural	1000	375	67680
P10138	2 - 300 (Graduated)	Natural	1000	461	83165
P10102	100 - 1000	Blue	500	269	48513
P10106	100 - 1000	Natural	500	269	48513



Bulk Micro Tips are offered in resealable zip lock bag keeping

the product free of contamination and dust.

Micro Tips can be manually accumulated in empty boxes.

Abdos polyethylene bags are recyclable.



STERILE R

## Large Volume Pipette Tips, Bulk PP

58

Code	Capacity (ml)	Colour	No. per Case	Price /Case (₹)
P10144	1 - 5 (Graduated)	Natural	100	384
P10145	1 - 10 (Graduated)	Natural	100	768

The ergonomically optimized cone geometry provides the optimal pipette fit on the models from other manufacturers.

Fine graduations make visual checks of the pipetting volume even easier.



## Micro Tips, Individually Wrapped, Sterile

Code	Capacity (µl)	Colour	No. per Case	Price /Case (₹)
PI0164	0.2 - 10 µl (Graduated)	Natural	400	1010
PI0161	2 - 200 µl (Bevelled Graduated)	Natural	400	1152
PI0163	100 - 1000 µl	Natural	400	1091

Individually wrapped pipette tips in sterile purity level.

Sterile individually wrapped tips have been validated according to ENISO 11137-2; SAL 10<sup>-6</sup>



**STERILE R**

## Pipette Tips, Racked PP

Code	Capacity (µl)	Colour	No. Per Case	Price /Case (₹)
PI0116	0.2 - 10 (Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	1624
PI0139	0.2 - 10 Extended (Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	1630
PI0140	2-200 (Bevelled Graduated)	Yellow	10 Racks x 96 pcs (960 pcs)	1654
PI0141	2-200 (Bevelled Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	1654
PI0107	2-200 (Ultra Point Tip Orifice)	Yellow	10 Racks x 96 pcs (960 pcs)	1737
PI0108	2-200 (Ultra Point Tip Orifice)	Natural	10 Racks x 96 pcs (960 pcs)	1737
PI0142	2-300 (Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	1654
PI0109	100 - 1000	Blue	10 Racks x 96 pcs (960 pcs)	1800
PI0110	100-1000	Natural	10 Racks x 96 pcs (960 pcs)	1800

Racked Micro Tips are offered in prefilled racks that do not require any manual accumulation in empty boxes.

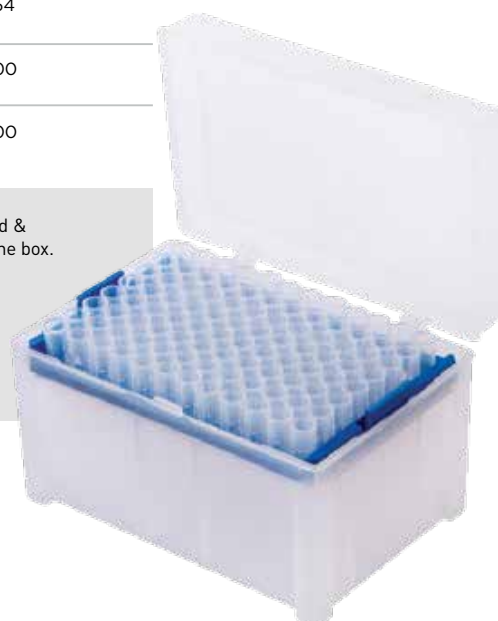
Polypropylene racks are very robust, sturdy with consistent and thick wall thickness.

Can be used for repeat autoclaving.

Racks are hinged with transparent lid & base providing excellent view inside the box.

Racks are stackable.

Reusable once empty.



## Pipette Tips, Sterile Racked, PP

Sterile by Gama Radiation.

Code	Capacity (µl)	Colour	No. Per Case	Price /Case (₹)
P10117	0.2 - 10 (Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	1960
P10147	0.2 - 10 Extended (Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	1965
P10149	2-200 (Bevelled Graduated)	Yellow	10 Racks x 96 pcs (960 pcs)	1997
P10148	2-200 (Bevelled Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	1997
P10111	2-200 (Ultra Point Tip Orifice)	Yellow	10 Racks x 96 pcs (960 pcs)	2097
P10112	2-200 (Ultra Point Tip Orifice)	Natural	10 Racks x 96 pcs (960 pcs)	2097
P10150	2-300 (Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	1997
P10113	100-1000	Blue	10 Racks x 96 pcs (960 pcs)	2220
P10114	100 - 1000	Natural	10 Racks x 96 pcs (960 pcs)	2220

Racked Micro Tips are offered in prefilled racks that do not require any manual accumulation in empty boxes.

Can be used for repeat autoclaving. Racks are hinged with transparent lid & base providing excellent view inside the box.

Polypropylene racks are very robust, sturdy with consistent and thick wall thickness.

Racks are stackable and reusable once empty.



\* Sterile Tips has been validated according to ENISO 11137-2; 2012 for SAL 10<sup>-6</sup>



STERILE R

## Pipette Tips, Refill Pack, PP

Code	Capacity (µl)	Colour	No. Per Case	Price /Case (₹)
P10118	0.2 - 10 (Graduated)	Natural	12 Refill Racks x 96 pcs (1152 pcs)	1331
P10153	2-200 (Bevelled Graduated)	Yellow	10 Refill Racks x 96 pcs (960 pcs)	1109
P10152	2-200 (Bevelled Graduated)	Natural	10 Refill Racks x 96 pcs (960 pcs)	1109
P10119	2-200 (Ultra Point Tip Orifice)	Yellow	10 Refill Racks x 96 pcs (960 pcs)	1164
P10120	2-200 (Ultra Point Tip Orifice)	Natural	10 Refill Racks x 96 pcs (960 pcs)	1164
P10154	2-300 (Graduated)	Natural	10 Refill Racks x 96 pcs (960 pcs)	1109

Racked Micro Tips are offered in prefilled trays that can be directly loaded in the box.

More cost effective and economical than racked micro tips.

Easy to load and remove into boxes.

Fits perfectly onto Abdos Micro Tip Box.

Saves time and costs of manual accumulating in empty boxes.

12 x 8 Array to align the contents in the box. Can be autoclaved when racked.



# LAST DROP™

## LOW RETENTION PIPETTE TIP

### FEATURES



The Retention level is 10 times lesser with viscous samples than standard pipette tips.

Highly homogenous surface free of defects sites, preventing non-specific binding.

DNase, RNase and Pyrogen free.

Tips are also free from Bacteriostatic & Fungistatic property that gives tips a unique feature to work in microbiological lab.

Optimal surface for enhanced dispensing behaviour & minimal sample loss of highly viscous liquids or samples containing detergents.

The use of the latest injection moulding process produce high precision, thin walled tips with high clarity for better visibility of sample.

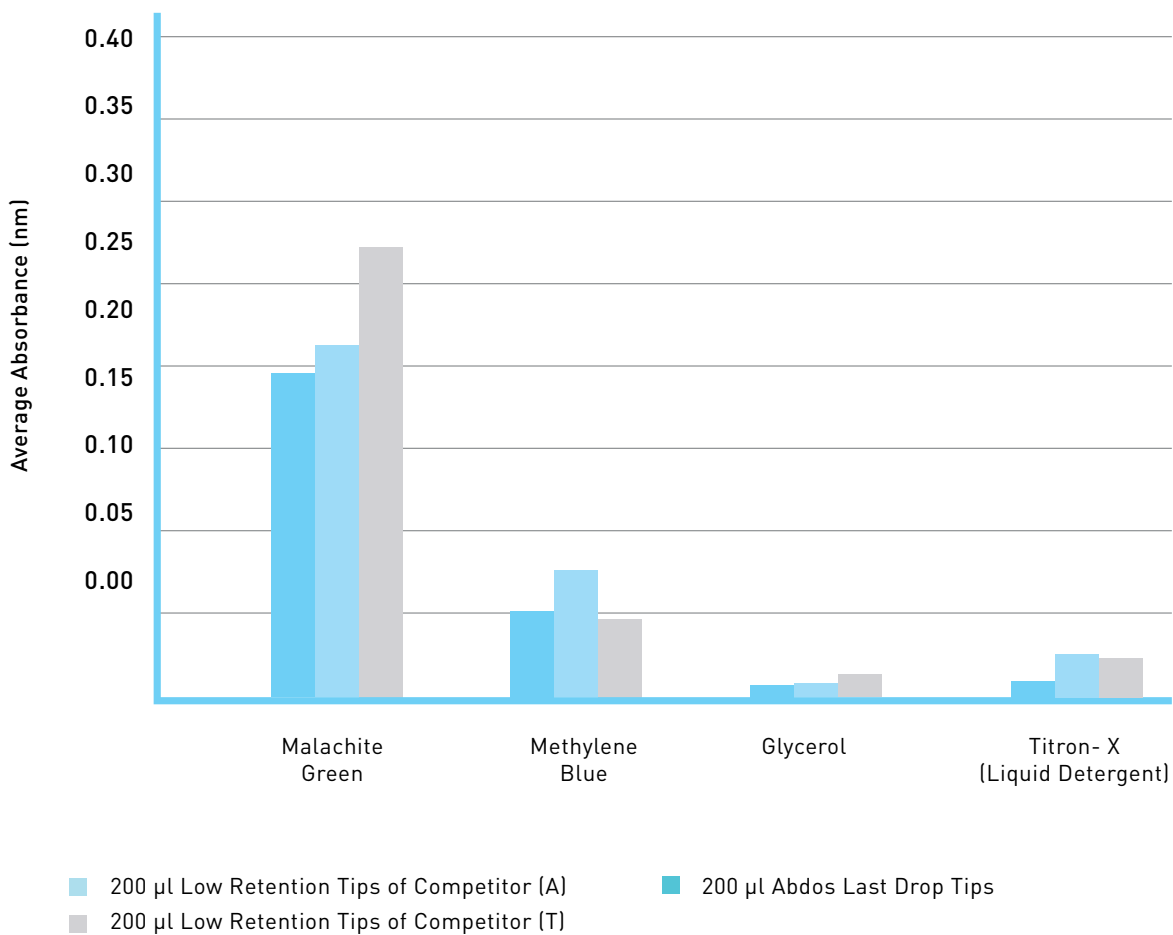
Reduce Sample retention for precision & to save on costly reagents.

All tips are manufactured from ultrapure USP Class VI certified, Virgin PP (Polypropylene to ensure the highest quality free from heavy metals, natural rubber and inhibitory plasticizers)

## MATERIAL & METHOD

200µl Last Drop pipette tip were compared with other low retention tip in combination with an electronic pipette were use to aspirate & dispense 100µl of Malachite Green, Methylene Blue, Glycerol & Titron-X (liquid detergent) at a constant pipetting speed, Residual in the pipette were washed out by repeated rinsing with 200µl water into cuvette and compared photometrically. The test was repeated 10 times for each tip. The average value's established are shown in the table.

## COMPARISON CHART



**Result:** Abdos Last Drop Pipette Tips clearly reduce sample loss. As seen above in the graph, it clearly indicates that Abdos Tips retained least amount of residue and saves on costly reagents.

### Last Drop™ Pipette Tips in Resealable Bulk, PP

Code	Capacity (µl)	Colour	No. per Case	Price / Case (₹)
P10001	0.2 - 10 (Graduated)	Natural	1000	768
P10002	0.2 - 10 Extended (Graduated)	Natural	1000	773
P10003	2 - 200 (Bevelled Graduated)	Natural	1000	950
P10004	2 - 200 (Ultra Point Tip Orifice)	Natural	1000	998
P10005	2 - 300 (Graduated)	Natural	1000	950
P10006	100 - 1000	Natural	500	596



Bulk Last Drop™ Micro Tips are offered in resealable zip lock bag keeping the product free of contamination and dust.

Last Drop™ Micro Tips can be manually accumulated in empty boxes.

Abdos polyethylene bags are recyclable.



### Last Drop™ Pipette Tips, Racked PP

Code	Capacity (µl)	Colour	No. Per Case	Price / Case (₹)
P10020	0.2 - 10 (Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	2208
P10021	0.2 - 10 Extended (Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	2213
P10022	2-200 (Bevelled Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	2252
P10023	2-200 (Ultra Point Tip Orifice)	Natural	10 Racks x 96 pcs (960 pcs)	2365
P10024	2-300 (Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	2253
P10025	100-1000	Natural	10 Racks x 96 pcs (960 pcs)	2538

Racked Last Drop™ Micro Tips are offered in prefilled racks that do not require any manual accumulation in empty boxes.

Racks are hinged with transparent lid & base providing excellent view inside the box.

Polypropylene racks are very robust, sturdy with consistent and thick wall thickness.

Reusable once empty.

Can be used for repeat autoclaving.



## Last Drop™ Pipette Tips, Sterile Racked, PP

65

Sterile by Gama Radiation.

Code	Capacity (µl)	Colour	No. Per Case	Price /Case (₹)
P10040	0.2 - 10 (Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	2561
P10041	0.2 - 10 Extended (Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	2566
P10042	2-200 (Bevelled Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	2608
P10043	2-200 (Ultra Point Tip Orifice)	Natural	10 Racks x 96 pcs (960 pcs)	2738
P10044	2-300 (Graduated)	Natural	10 Racks x 96 pcs (960 pcs)	2608
P10045	100 - 1000	Natural	10 Racks x 96 pcs (960 pcs)	2997

Racked Last Drop™ Micro Tips are offered in pre-filled racks that do not require any manual accumulation in empty boxes.

Racks are hinged with transparent lid & base providing excellent view inside the box.

Polypropylene racks are very robust, sturdy with consistent and thick wall thickness.

Reusable once empty.

Can be used for repeat autoclaving.



\* Sterile Tips has been validated according to ENISO 11137-2; 2012 for SAL 10<sup>-6</sup>



STERILE R

## Last Drop™ Pipette Tips, Refill Pack, PP

66

Code	Capacity (µl)	Colour	No. Per Case	Price /Case (₹)
P10060	0.2 - 10 (Graduated)	Natural	12 Refill Racks x 96 pcs (1152 pcs)	1811
P10061	2-200 (Bevelled Graduated)	Natural	10 Refill Racks x 96 pcs (960 pcs)	1509
P10062	2-200 (Ultra Point Tip Orifice)	Natural	10 Refill Racks x 96 pcs (960 pcs)	1585
P10063	2-300 (Graduated)	Natural	10 Refill Racks x 96 pcs (960 pcs)	1509

Racked Last Drop™ Micro Tips are offered in pre-filled trays that can be directly loaded in the box.

More cost effective and economical than racked micro tips.

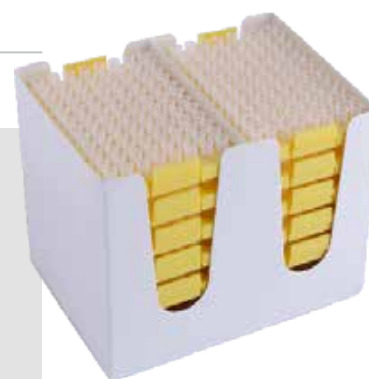
Easy to load and remove into boxes.

Fits perfectly onto Abdos Micro Tip Box.

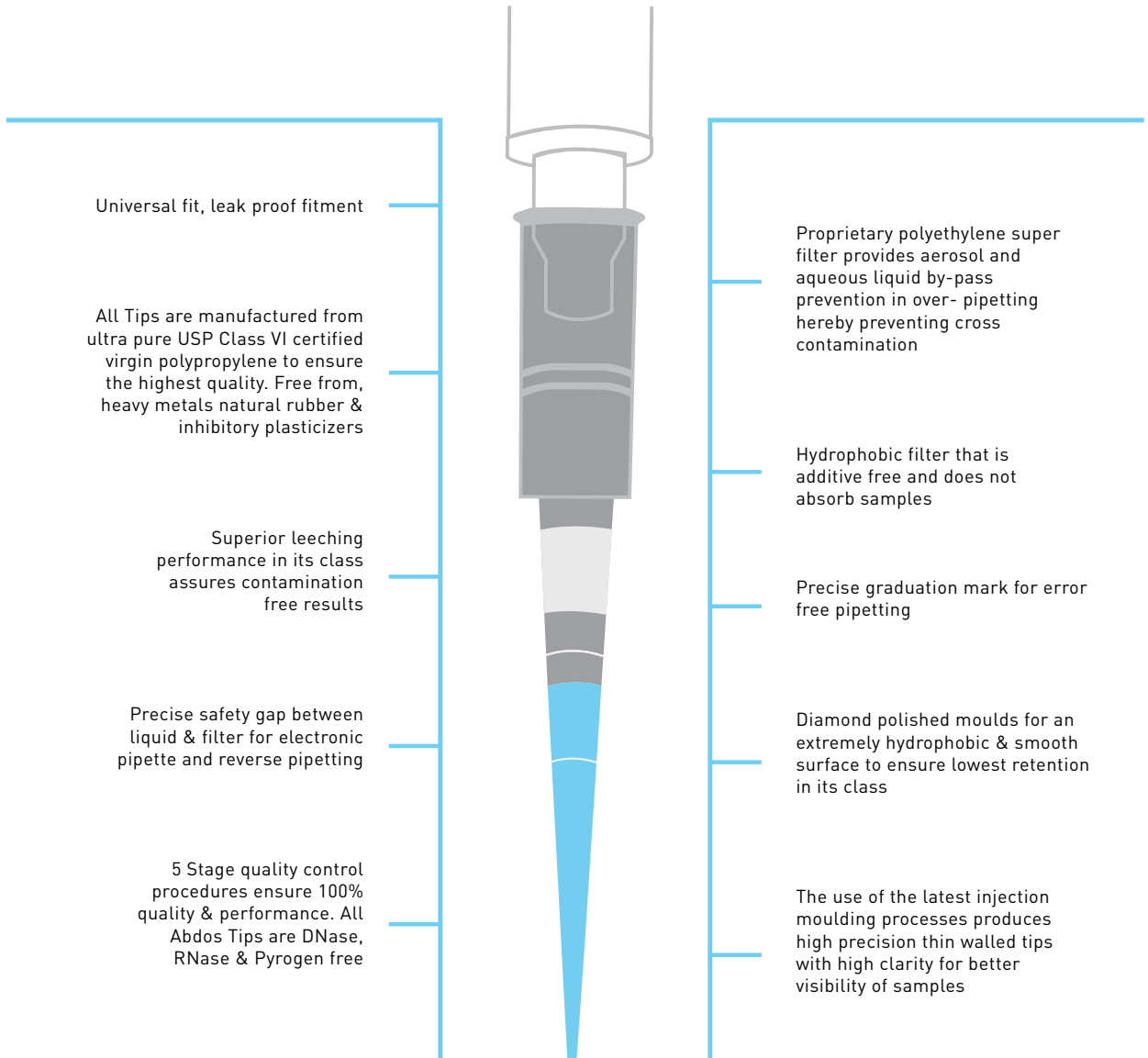
Saves time and costs of manual accumulating in empty boxes.

12 x 8 Array to align the contents in the box.

Can be autoclaved when racked.



# FILTER PIPETTE TIPS FEATURES



- Best Suited for Biological application
- Abdos Filter are 100% pure porous PE makes Recovery of Samples from Wetted, Filtered without Contamination
- Non Cytotoxic (ISO 10993-5 MRM, Minimal Essential Media Elution, GLP Compliant)
- 99.9% Bacterial Aerosol Filtration Efficiency (BFE), (ASTM F21012)

- Non Hemolytic (Modified ASTM F 756-08 Hemolysis Direct Contact GLP with Human Blood)
- Inert, Hydrophobic Filter does not trap or block the liquid

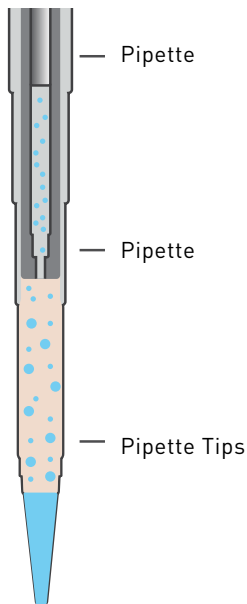


## ABDOS SUPER FILTER PREVENTS BOTH LIQUID & AEROSOL PASSING THROUGH THE FILTER.

### Case Study:

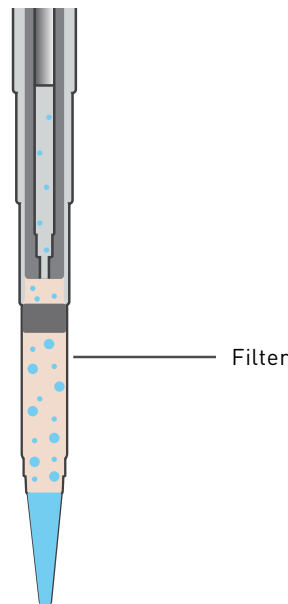
Contamination is one of the major issue we faced while working in our labs, majorly contamination is been carried out while pipetting the samples from one source to other therefore Abdos offers Super filter that prevents both Liquid & Aerosol passing through the filter thus make pipette shaft contamination free.

Non filter  
Pipette Tips



May lead to contaminate the pipette as there is no barrier for Liquid or Aerosol to prevent entering into the shaft. Thus can affect your experiment & you may loose your precious samples.

Selective Barrier  
Pipette Tips



Most filter pipette tip does not act as a barrier to both liquid and Aerosol. The Pores of the filter act as a selective barrier herby contaminating the pipette. While in other filter pipette tips the liquid touches the filter the filter becomes wet and locks by that possibility of sample recovery is not possible.

Abdos Super  
Filter Tip



Abdos Super filter prevents Aerosol passing through & aqueous liquid by-pass prevention in over- pipetting. Thus makes it unique in preventing the contamination.

Proprietary Pure Porous Hydrophobic PE filter help us to recover contamination free samples from wetted filter and does not trap or block the liquid into the filter.

## Filter Tips, Bulk in resealable Bags

Code	Capacity (µl)	Colour	No. Per Case	Price /Case (₹)
P11001	0.2 - 10 (Graduated)	Natural	1000	1920
P11002	0.2 - 10 (Extended Graduated)	Natural	1000	1925
P11003	2-20 (Graduated)	Natural	1000	2075
P11004	2-100 (Graduated)	Natural	1000	2075
P11005	2-200 (Graduated)	Natural	1000	2075
P11006	2-300 (Graduated)	Natural	1000	2075
P11007	100-1000 (Natural)	Natural	500	1325



Bulk Filter Micro Tips are offered in resealable zip lock bag keeping the product free of contamination and dust.

Filter Tips can be manually accumulated in empty boxes.

Abdos polyethylene bags are recyclable.



## Filter Tips - Racked, PP

Code	Capacity (µl)	Colour	No. Per Case	Price /Case (₹)
P11020	0.2-10 (Graduated)	Natural	10 Racks x 96 Pcs	3086
P11022	0.2-10 Extended (Graduated)	Natural	10 Racks x 96 Pcs	3086
P11024	2-20 (Graduated)	Natural	10 Racks x 96 Pcs	3086
P11026	2-50 (Graduated)	Natural	10 Racks x 96 Pcs	3086
P11028	2-100 (Graduated)	Natural	10 Racks x 96 Pcs	3086
P11032	2-200 (Graduated)	Natural	10 Racks x 96 Pcs	3086
P11034	2-300 (Graduated)	Natural	10 Racks x 96 Pcs	3086
P11036	100-1000	Natural	10 Racks x 96 Pcs	3596

Racked Filter Micro Tips are offered in prefilled racks that do not require any manual accumulation in empty boxes.

Racks are hinged with transparent lid & base providing excellent view inside the box.

Polypropylene racks are very robust, sturdy with consistent and thick wall thickness.

Reusable once empty.



### Filter Tips - Sterile Racked, PP

Code	Capacity (µl)	Colour	No. Per Case	Price / Case (₹)	No. / Bulk Case	Price/ Bulk Case (₹)
P11021	0.2-10 (Graduated)	Natural	10 Racks x 96 Pcs	3250	10	30550
P11023	0.2-10 Extended (Graduated)	Natural	10 Racks x 96 Pcs	3350	10	31490
P11025	2-20 (Graduated)	Natural	10 Racks x 96 Pcs	3250	10	30550
P11027	2-50 (Graduated)	Natural	10 Racks x 96 Pcs	3250	10	30550
P11029	2-100 (Graduated)	Natural	10 Racks x 96 Pcs	3250	10	30550
P11033	2-200 (Graduated)	Natural	10 Racks x 96 Pcs	3250	10	30550
P11035	2-300 (Graduated)	Natural	10 Racks x 96 Pcs	3250	8	24440
P11037	100 -1000	Natural	10 Racks x 96 Pcs	3740	8	28125

Racked Filter Micro Tips are offered in prefilled racks that do not require any manual accumulation in empty boxes.

Polypropylene racks are very robust, sturdy with consistent and thick wall thickness.

Racks are hinged with transparent lid & base providing excellent view inside the box.

Reusable once empty.

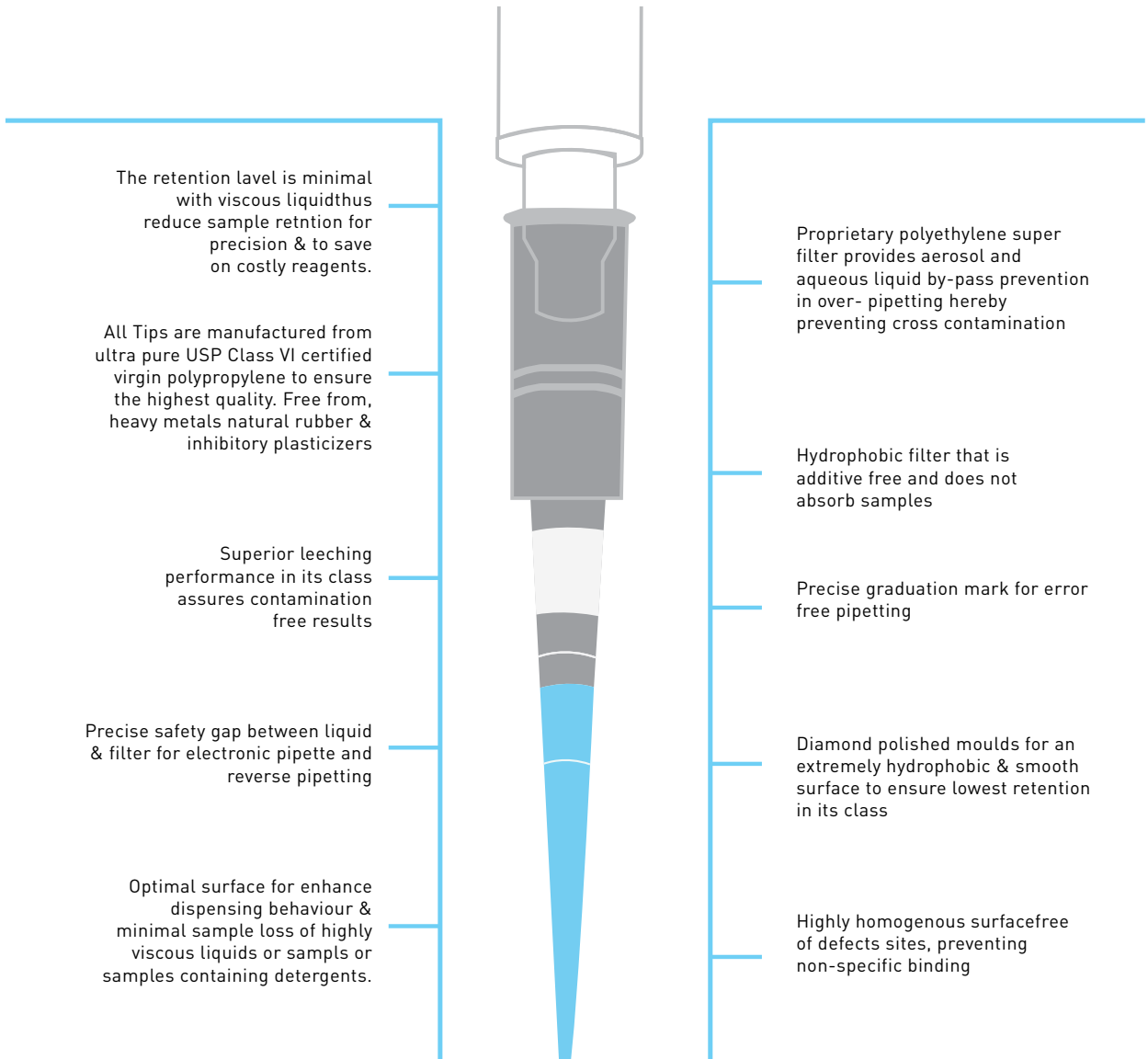
\* Sterile Tips has been validated according to ENISO 11137-2; 2012 for SAL 10<sup>-6</sup>



# LAST DROP™ FILTER PIPETTE TIPS

## LOW RETENTION PIPETTE TIP

### FEATURES



- Best Suited for Biological application
- Abdos Filter are 100% pure porous PE makes Recovery of Samples from Wetted, Filtered without Contamination
- Non Cytotoxic (ISO 10993-5 MRM, Minimal Essential Media Elution, GLP Compliant)
- 99.9% Bacterial Aerosol Filtration Efficiency (BFE), (ASTM F21012)

- Non Hemolytic (Modified ASTM F 756-08 Hemolysis Direct Contact GLP with Human Blood)
- Inert, Hydrophobic Filter does not trap or block the liquid

## Last Drop™, Low Retention Filter Tips, Bulk in resealable Bags

70

Code	Capacity (µl)	Colour	No. Per Case	Price /Case (₹)
P11050	0.2 - 10 (Graduated)	Natural	1000	2491
P11051	0.2 - 10 (Extended Graduated)	Natural	1000	2580
P11052	2-20 (Bevelled Graduated)	Natural	1000	2665
P11053	2-100 (Bevelled Graduated)	Natural	1000	2665
P11054	2-200 (Bevelled Graduated)	Natural	1000	2665
P11055	2-300 (Graduated)	Natural	1000	2665
P11056	100-1000 (Natural), Bulk	Natural	500	1621



Last Drop Filter Tips are offered in resealable zip lock bag keeping the product free of contamination and dust.

Filter Tips can be manually accumulated in empty boxes.

Abdos polyethylene bags are recyclable.



## Last Drop™, Low Retention Filter Tips - Racked, PP

71

Code	Capacity (µl)	Colour	No. Per Case	Price /Case (₹)
P11060	0.2-10 (Graduated)	Natural	10 Racks x 96 Pcs	4067
P11062	0.2-10 Extended (Graduated)	Natural	10 Racks x 96 Pcs	4151
P11064	2-20 (Graduated)	Natural	10 Racks x 96 Pcs	4067
P11066	2-50 (Graduated)	Natural	10 Racks x 96 Pcs	4067
P11068	2-100 (Graduated)	Natural	10 Racks x 96 Pcs	4067
P11072	2-200 (Graduated)	Natural	10 Racks x 96 Pcs	4067
P11074	2-300 (Graduated)	Natural	10 Racks x 96 Pcs	4067
P11076	100-1000	Natural	10 Racks x 96 Pcs	4518

Racked Last Drop Filter Tips are offered in prefilled racks that do not require any manual accumulation in empty boxes.

Racks are hinged with transparent lid & base providing excellent view inside the box.

Polypropylene racks are very robust, sturdy with consistent and thick wall thickness.

Reusable once empty.



## Last Drop™, Low Retention Filter Tips - Sterile Racked, PP

Code	Capacity (µl)	Colour	No. Per Case	Price / Case (₹)	No. /Bulk Case	Price/ Bulk Case (₹)
P11061	0.2-10 (Graduated)	Natural	10 Racks x 96 Pcs	4275	10	40185
P11063	0.2-10 Extended (Graduated)	Natural	10 Racks x 96 Pcs	4370	10	41078
P11065	2-20 (Graduated)	Natural	10 Racks x 96 Pcs	4275	10	40185
P11067	2-50 (Graduated)	Natural	10 Racks x 96 Pcs	4275	10	40185
P11069	2-100 (Graduated)	Natural	10 Racks x 96 Pcs	4275	10	40185
P11073	2-200 (Graduated)	Natural	10 Racks x 96 Pcs	4275	10	40185
P11075	2-300 (Graduated)	Natural	10 Racks x 96 Pcs	4275	8	32148
P11077	100 -1000	Natural	10 Racks x 96 Pcs	4740	8	35645

Last Drop Filter Tips are offered in prefilled racks that do not require any manual accumulation in empty boxes.

Polypropylene racks are very robust, sturdy with consistent and thick wall thickness.

Racks are hinged with transparent lid & base providing excellent view inside the box.

Reusable once empty.

\* Sterile Tips has been validated according to ENISO 11137-2; 2012 for SAL 10<sup>-6</sup>



# ABDOS TIPS & LAST DROP PIPETTE TIPS COMPATIBILITY CHART

Pipettor Brand / Make			Abdos Premium (Single Channel)				Abdos Premium Plus (Single Channel)				Abdos Fixed (Single Channel)							Abdos Premium (Multi Channel)			Abdos Premium Plus (Multi Channel)							
Abdos Code for Pipette Tips	Abdos Code for Last Drop Pipette Tips	Volume	0.5 - 10 µl	2-20 µl	10-100 µl	20-200µl	100-1000 µl	0.5 - 10 µl	2-20 µl	10-100 µl	20-200 µl	100-1000 µl	5 µl	10 µl	20 µl	25 µl	50 µl	100 µl	200 µl	250 µl	500 µl	1000 µl	0.5 - 10 µl	5 - 50 µl	50-300 µl	0.5 - 10 µl	5 - 50 µl	50-300 µl
P10115	P10001	0.2 - 10 µl	√					√					√	√									√			√		
P10137	P10002	0.2 - 10 µl	√					√					√	√									√			√		
P10129	-	2 - 200 µl		√	√	√			√	√	√				√	√	√	√	√	√	√			√	√		√	√
P10130	P10003	2 - 200 µl		√	√	√			√	√	√				√	√	√	√	√	√	√			√	√		√	√
P10101	-	2 - 200 µl		√	√	√			√	√	√				√	√	√	√	√	√	√			√	√		√	√
P10105	P10004	2 - 200 µl		√	√	√			√	√	√				√	√	√	√	√	√	√			√	√		√	√
P10138	P10005	2 - 300 µl		√	√	√			√	√	√				√	√	√	√	√	√	√			√	√		√	√
P10102	-	100 - 1000 µl					√					√										√	√					
P10106	P10006	100 - 1000 µl					√					√										√	√					

Pipettor Brand/ Make			Biohit eLine (Single channel)				Biohit eLine (multi channel)				Biohit m- Line® (Single channel)				Biohit m-Line® (multi channel)			Biohit Proline (Single channel)				Biohit Proline (Multi channel)			Biohit ePet (Single channel)			
Abdos Code for Pipette Tips	Abdos Code for Last Drop Pipette Tips	Volume	0.2-10µl	5-120µl	10-300µl	50-1000µl	0.2-10µl	5-120µl	10-300µl	0.5-10µl	2-20µl	10-100µl	20-200µl	100-1000µl	0.5-10µl	5-100µl	30-300µl	0.2-10µl	5-100µl	10-250µl	10-500µl	50-1000µl	0.2-10µl	5-100µl	25-250µl	0.2-10µl	5-100µl	50-1200µl
P10115	P10001	0.2 - 10 µl	√				√								√			√					√			√		
P10137	P10002	0.2 - 10 µl	√				√								√			√					√			√		
P10129	-	2 - 200 µl		√							√	√				√			√					√			√	
P10130	P10003	2 - 200 µl		√							√	√				√			√					√			√	
P10101	-	2 - 200 µl		√							√	√				√			√					√			√	
P10105	P10004	2 - 200 µl		√							√	√				√			√					√			√	
P10138	P10005	2 - 300 µl		√	√			√			√	√				√	√		√	√				√	√		√	
P10102	-	100 - 1000 µl				√							√									√						
P10106	P10006	100 - 1000 µl				√							√									√						

Pipettor Brand/ Make			Biohit ePet (multi channel)				Biohit Proline electronics (Single channel)				Biohit Proline electronics (Multi channel)				Biohit Proline (Single channel)				Biohit Proline (Multi channel)				Biohit Proline Plus (Single channel)					
Abdos Code for Pipette Tips	Abdos Code for Last Drop Pipette Tips	Volume	0.2-10µl	5-100µl	50-1200µl	25-250 µl	0.2-10µl	5-100µl	10-250µl	50-1000µl	50-1200µl	0.2-10µl	5-100µl	10-250µl	50-1200µl	0.2-10µl	5-50µl	10-100µl	50-200µl	10-250µl	200-1000µl	0.5-10µl	5-50µl	50-250µl	50-300µl	0.5-10µl	20-200µl	100-1000 µl
P10115	P10001	0.2 - 10 µl	√				√					√				√						√				√		
P10137	P10002	0.2 - 10 µl	√				√					√				√						√				√		
P10129	-	2 - 200 µl		√				√				√					√	√	√				√				√	
P10130	P10003	2 - 200 µl		√				√				√					√	√	√				√				√	
P10101	-	2 - 200 µl		√				√				√					√	√	√				√				√	
P10105	P10004	2 - 200 µl		√				√				√					√	√	√				√				√	
P10138	P10005	2 - 300 µl		√		√		√	√			√	√				√	√	√	√			√	√	√		√	
P10102	-	100 - 1000 µl							√												√							√
P10106	P10006	100 - 1000 µl							√												√							√

Pipettor Brand/ Make			Brand Transferpette												Brand Electronics												
			Single Channel						Multi Channel						Single Channel			Multi Channel									
Abdos Code for Pipette Tips	Abdos Code for Last Drop Pipette Tips	Volume	0.1-1µl	0.5-10µl	2-20µl 'ULTRA MICRO'	2-20µl	5-50µl	10-100µl	20-200µl	25-250µl	100-1000µl	0.5-10µl	2-20µl	2.5-25µl	5-50µl	10-100µl	20-200µl	0.5-10µl	10-100µl	20-200µl	30-300µl	100-1000µl	0.5-10µl	5-100µl	10-200µl	15-300µl	
P10115	P10001	0.2 - 10 µl		√								√						√					√				
P10137	P10002	0.2 - 10 µl		√								√						√					√				
P10129	-	2 - 200 µl					√	√	√						√	√	√		√	√					√	√	
P10130	P10003	2 - 200 µl					√	√	√						√	√	√		√	√					√	√	
P10101	-	2 - 200 µl					√	√	√						√	√	√		√	√					√	√	
P10105	P10004	2 - 200 µl					√	√	√						√	√	√		√	√					√	√	
P10138	P10005	2 - 300 µl					√	√	√	√					√	√	√	√	√	√	√				√	√	√
P10102	-	100 - 1000 µl									√												√				
P10106	P10006	100 - 1000 µl									√												√				

Pipettor Brand/ Make			Brand Transferpette S						Capp Aero						Gilson Pipetman				Gilson Pipetman Ultra									
			Single Channel			Multi Channel			Single Channel /Multi Channel						Single Channel				Multi Channel									
Abdos Code for Pipette Tips	Abdos Code for Last Drop Pipette Tips	Volume	0.1-1µl	0.5-10µl	2-20µl 'ULTRA MICRO'	10-100µl	20-200µl	100-1000µl	0.5-10µl	10-100µl	20-200µl	30-300µl	0.2-2µl	0.5-10µl	5-50µl	10-100µl	25-200µl	50-300µl	100-1000µl	0.2-2µl	1-10µl	2-20µl	20-100µl	50-200µl	200-1000µl	1-20µl	20-300µl	
P10115	P10001	0.2 - 10 µl		√					√				√	√						√	√							
P10137	P10002	0.2 - 10 µl		√					√				√	√						√	√							
P10129	-	2 - 200 µl					√	√		√	√				√	√							√	√				
P10130	P10003	2 - 200 µl					√	√		√	√				√	√							√	√				
P10101	-	2 - 200 µl					√	√		√	√				√	√							√	√				
P10105	P10004	2 - 200 µl					√	√		√	√				√	√							√	√				
P10138	P10005	2 - 300 µl					√	√		√	√	√			√	√	√						√	√			√	
P10102	-	100 - 1000 µl						√											√						√			
P10106	P10006	100 - 1000 µl						√										√						√				

Pipettor Brand / Make			Gilson Pipetman Ultra					Gilson Concept			Gilson Concept			Gilson Neo				
			Single Channel					Single Channel			Multi Channel			Single Channel				
Abdos Code for Pipette Tips	Abdos Code for Last Drop Pipette Tips	Volume	0.2-2µl	1-10µl	2-20µl	20-100µl	20-200µl	200-1000µl	0.5-10µl	5-100µl	20-300µl	1-10µl	10-100µl	30-300µl	0.2-2µl	1-10µl	20-100µl	100-1000µl
P10115	P10001	0.2 - 10 µl		√					√			√						
P10137	P10002	0.2 - 10 µl		√					√			√						
P10129	-	2 - 200 µl					√	√				√						√
P10130	P10003	2 - 200 µl					√	√				√						√
P10101	-	2 - 200 µl					√	√				√						√
P10105	P10004	2 - 200 µl					√	√				√						√
P10138	P10005	2 - 300 µl					√	√				√	√					√
P10102	-	100 - 1000 µl						√										√
P10106	P10006	100 - 1000 µl						√										√



Pipettor Brand/ Make			Vistalab Ovation QS					Vistalab Ovation M					Vistalab Ovation E				Eppendorf Reference				"Eppendorf Electronic"								
			Single Channel					Single Channel					Multi Channel				Single Channel												
Abdos Code for Pipette Tips	Abdos Code for Last Drop Pipette Tips	Volume	0.2-2µL	1-10µL	2-20µL	10-100µL	20-200µL	100-1000µL	0.2-2µL	1-10µL	2-20µL	10-100µL	20-200µL	100-1000µL	0.5-20µL	5-250µL	2-125µL	25-1250µL	0.1-10µL	"0.1-10µL 'ULTRA MICRO'"	2-20µL	10-100µL	20-200µL	100-1000µL	0.5-10µL	5-100µL	2-200µL	50-1000µL	
P10115	P10001	0.2 - 10 µl	√	√	√				√	√	√				√				√		√								
P10137	P10002	0.2 - 10 µl	√	√	√				√	√	√				√				√		√								
P10129	-	2 - 200 µl				√	√				√	√			√	√						√	√			√	√		
P10101	-	2 - 200 µl				√	√				√	√			√	√						√	√			√	√		
P10105	P10004	2 - 200 µl				√	√				√	√			√	√						√	√			√	√		
P10138	P10005	2 - 300 µl				√	√				√	√			√	√						√	√			√	√		
P10102	-	100 - 1000 µl						√					√				√							√				√	
P10106	P10006	100 - 1000 µl						√					√				√							√				√	

Pipettor Brand/ Make			Eppendorf Research					"Eppendorf "					"Thermo Finnpipette "				"Thermo Finnpipette"			"Matrix Impact /Impact2"								
			Single Channel					Multi Channel					Single Channel				Multi Channel			s /mc								
Abdos Code for Pipette Tips	Abdos Code for Last Drop Pipette Tips	Volume	0.1-2.5µl	0.5-10µl	2-20µl	10-100µl	20-200µl	100-1000µl	0.5-10µl	5-100µl	50-100µl	0-300µl	30-300µl	50-1200µl	0.2-10µl	0.5-10µl	5-40µl	40-200µl	100-1000µl	200-1000µl	0.1-10µl	10-100µl	30-300µl	2-125µl	2-20µl	15-1250µl		
P10115	P10001	0.2 - 10 µl		√	√				√						√	√					√							
P10137	P10002	0.2 - 10 µl		√	√				√						√	√					√							
P10129	-	2 - 200 µl				√	√			√	√						√					√		√				
P10101	-	2 - 200 µl				√	√			√	√						√					√		√				
P10105	P10004	2 - 200 µl				√	√			√	√						√					√		√				
P10138	P10005	2 - 300 µl				√	√			√	√	√	√				√					√	√	√				
P10102	-	100 - 1000 µl						√					√*						√	√								
P10106	P10006	100 - 1000 µl						√					√*						√	√								

Pipettor Brand/ Make			Labnet Labpette					Labnet Labpette				Labnet BioPette E				"Nichiryo / Oxford Benchmate"											
			Single Channel					Multi Channel				Single Channel		Multi Channel		Single Channel & Multi Channel											
Abdos Code for Pipette Tips	Abdos Code for Last Drop Pipette Tips	Volume	0.1-2µl	0.5-10µl	2-20µl	10-100µl	20-200µl	100-1000µl	1-10µl	5-50µl	20-200µl	50-300µl	0.5-10µl	2-20µl	10-200µl	100-1000µl	0.5-10µl	2-20µl	10-200µl	100-1000µl	0.5-10µl	2-20µl	10-50µl	10-100µl	20-200µl	100-1000µl	
P10115	P10001	0.2 - 10 µl	√	√					√				√			√					√						
P10137	P10002	0.2 - 10 µl	√	√					√				√			√					√						
P10129	-	2 - 200 µl				√	√				√			√										√	√		
P10101	-	2 - 200 µl				√	√				√			√										√	√		
P10105	P10004	2 - 200 µl				√	√				√	√		√										√	√		
P10138	P10005	2 - 300 µl				√	√				√	√		√										√	√		
P10102	-	100 - 1000 µl						√						√					√								√
P10106	P10006	100 - 1000 µl						√						√					√								√

Pipettor Brand/ Make			Socorex Calibra /Accura										Axygen Axyjet														
			Single Channel							Multi Channel			Single Channel						Multi Channel								
Abdos Code for Pipette Tips	Abdos Code for Last Drop Pipette Tips	Volume	0.1-20µl	0.2-20µl	0.5-10µl	1-10µl	2-20µl	10-100µl	20-200µl	100-1000µl	1-10µl	5-50µl	10-100µl	20-200µl	50-200µl	0.1-2µl	0.5-10µl	2-20µl	5-50µl	10-100µl	20-200µl	50-250µl	100-1000µl	1-10µl	5-50µl	20-200µl	50-300µl
P10115	P10001	0.2 - 10 µl			√	√				√						√								√			
P10137	P10002	0.2 - 10 µl		√	√					√						√								√			
P10129	-	2 - 200 µl						√	√		√	√	√	√					√	√	√				√	√	√
P10130	P10003	2 - 200 µl						√	√		√	√	√	√					√	√	√				√	√	√
P10101	-	2 - 200 µl						√	√		√	√	√	√					√	√	√				√	√	√
P10105	P10004	2 - 200 µl						√	√		√	√	√	√					√	√	√				√	√	√
P10138	P10005	2 - 300 µl						√	√		√	√	√	√					√	√	√	√			√	√	√
P10102	-	100 - 1000 µl								√														√			
P10106	P10006	100 - 1000 µl								√														√			

Pipettor Brand/ Make		BRAND		Eppendorf		Biohit Proline plus		Gilson		Thermo		Abdos	
Abdos Code for Pipette Tips	Volume	1-5 ml	1-10 ml	1-5 ml	1-10 ml	1-5 ml	1-10 ml	1-5 ml	1-10 ml	1-5 ml	1-10 ml	1-5 ml	1-10 ml
P10144	1 - 5 ml			√		√		√				√	
P10145	1 - 10 ml		√		√		√		√				√

# ABDOS FILTER TIPS & LAST DROP FILTER PIPETTE TIPS COMPATIBILITY CHART

Pipettor Brand/ Make			Abdos Premium (Single Channel)					Abdos Premium Plus (Single Channel)					Abdos Fixed (Single Channel)					Abdos Premium (Multi Channel)			Abdos Premium Plus (Multi Channel)							
Abdos Code for Filter Pipette Tips	Abdos Code for Last Drop Filter Pipette Tips	Volume	0.5 - 10 µl	2-20 µl	10-100 µl	20-200µl	100-1000 µl	0.5 - 10 µl	2-20 µl	10-100 µl	20-200 µl	100-1000 µl	5 µl	10 µl	20 µl	25 µl	50 µl	100 µl	200 µl	250 µl	500 µl	1000 µl	0.5 - 10 µl	5 - 50 µl	50-300 µl	0.5 - 10 µl	5 - 50 µl	50-300 µl
P11001	P11050	0.2 - 10 µl	√					√					√	√									√			√		
P11002	P11051	0.2 - 10 µl	√					√					√	√									√			√		
P11003	P11052	2 - 20 µl		√	√	√			√	√	√				√	√	√	√	√	√				√	√		√	√
P11026	P11066	2 - 50 µl		√	√	√			√	√	√				√	√	√	√	√	√				√	√		√	√
P11004	P11053	2 - 100 µl		√	√	√			√	√	√				√	√	√	√	√	√				√	√		√	√
P11005	P11054	2 - 200 µl		√	√	√			√	√	√				√	√	√	√	√	√				√	√		√	√
P11006	P11055	2 - 300 µl		√	√	√			√	√	√				√	√	√	√	√	√				√	√		√	√
P11007	P11056	100 - 1000 µl					√					√									√	√						

Pipettor Brand / Make			Biohit eLine (Single Channel)				Biohit eLine (Multi Channel)			Biohit m- Line® (Single channel)				Biohit m-Line® (Multi Channel)			Biohit Proline (Single Channel)				Biohit Proline (Multi Channel)			Biohit ePet (Single Channel)				
Abdos Code for Filter Pipette Tips	Abdos Code for Last Drop Filter Pipette Tips	Volume	0.2-10µl	5-120µl	10-300µl	50-1000µl	0.2-10µl	5-120µl	10-300µl	0.5-10µl	2-20µl	10-100µl	20-200µl	100-1000µl	0.5-10µl	5-100µl	30-300µl	0.2-10µl	5-100µl	10-250µl	10-500µl	50-1000µl	0.2-10µl	5-100µl	25-250µl	0.2-10µl	5-100µl	50-1200µl
P11001	P11050	0.2 - 10 µl	√				√			√				√			√						√			√		
P11002	P11051	0.2 - 10 µl	√				√			√				√			√						√			√		
P11003	P11052	2 - 20 µl		√							√	√					√			√				√			√	
P11026	P11066	2 - 50 µl		√							√	√					√			√				√			√	
P11004	P11053	2 - 100 µl		√							√	√					√			√				√			√	
P11005	P11054	2 - 200 µl		√							√	√					√			√				√			√	
P11006	P11055	2 - 300 µl		√	√			√			√	√				√	√			√	√			√	√		√	√
P11007	P11056	100 - 1000 µl				√							√									√						

Pipettor Brand/ Make			Biohit ePet Multi Channel)				Biohit Proline electronics (Single Channel)					Biohit Proline Electronics (Multi Channel)				Biohit Proline (Single Channel)				Biohit Proline (Multi Channel)			Biohit Proline Plus (Single Channel)					
Abdos Code for Filter Pipette Tips	Abdos Code for Last Drop Filter Pipette Tips	Volume	0.2-10µl	5-100µl	50-1200µl	25-250 µl	0.2-10µl	5-100µl	10-250µl	50-1000µl	50-1200µl	0.2-10µl	5-100µl	10-250µl	50-1200µl	0.2-10µl	5-50µl	10-100µl	50-200µl	10-250µl	200-1000µl	0.5-10µl	5-50µl	50-250µl	50-300µl	0.5-10µl	20-200µl	100-1000 µl
P11001	P11050	0.2 - 10 µl	√				√				√				√							√				√		
P11002	P11051	0.2 - 10 µl	√				√				√				√							√				√		
P11003	P11052	2 - 20 µl		√				√				√				√	√	√	√				√			√		
P11026	P11066	2 - 50 µl		√				√				√				√	√	√	√				√			√		
P11004	P11053	2 - 100 µl		√				√				√				√	√	√	√				√			√		
P11005	P11054	2 - 200 µl		√				√				√				√	√	√	√				√			√		
P11006	P11055	2 - 300 µl		√		√	√	√				√	√			√	√	√	√	√			√	√	√	√	√	
P11007	P11056	100 - 1000 µl							√												√							√

Pipettor Brand/ Make			Brand Transferpette											Brand Electronics														
			Single Channel							Multi Channel				Single Channel			Multi Channel											
Abdos Code for Filter Pipette Tips	Abdos Code for Last Drop Filter Pipette Tips	Volume	0.1-1µl	0.5-10µl	2-20µl 'ULTRA MICRO'	2-20µl	5-50µl	10-100µl	20-200µl	25-250µl	100-1000µl	0.5-10µl	2-20µl	2.5-25µl	5-50µl	10-100µl	20-200µl	30-300µl	0.5-10µl	10-100µl	20-200µl	30-300µl	100-1000µl	0.5-10µl	5-100µl	10-200µl	15-300µl	
P11001	P11050	0.2 - 10 µl		√								√							√						√			
P11002	P11051	0.2 - 10 µl		√								√							√						√			
P11003	P11052	2 - 20 µl					√	√	√						√	√	√			√	√					√	√	
P11026	P11066	2 - 50 µl					√	√	√						√	√	√			√	√					√	√	
P11004	P11053	2 - 100 µl					√	√	√						√	√	√			√	√					√	√	
P11005	P11054	2 - 200 µl					√	√	√						√	√	√			√	√					√	√	
P11006	P11055	2 - 300 µl					√	√	√	√					√	√	√	√		√	√	√				√	√	√
P11007	P11056	100 - 1000 µl									√													√				

Pipettor Brand/ Make			Brand Transferpette S							Capp Aero						Gilson Pipetman					Gilson Pipetman Ultra								
			Single Channel				Multi Channel			Single Channel /Multi Channel						Single Channel					Multi Channel								
Abdos Code for Filter Pipette Tips	Abdos Code for Last Drop Filter Pipette Tips	Volume	0.1-1µl	0.5-10µl	2-20µl 'ULTRA MICRO'	10-100µl	20-200µl	100-1000µl	0.5-10µl	10-100µl	20-200µl	30-300µl	0.2-2µl	0.5-10µl	5-50µl	10-100µl	25-200µl	50-300µl	100-1000µl	0.2-2µl	1-10µl	2-20µl	20-100µl	50-200µl	200-1000µl	1-20µl	20-300µl		
P11001	P11050	0.2 - 10 µl		√					√				√	√						√	√								
P11002	P11051	0.2 - 10 µl		√					√				√	√						√	√								
P11003	P11052	2 - 20 µl				√	√		√	√					√	√							√	√					
P11026	P11066	2 - 50 µl				√	√		√	√					√	√							√	√					
P11004	P11053	2 - 100 µl				√	√		√	√					√	√							√	√					
P11005	P11054	2 - 200 µl				√	√		√	√					√	√							√	√					
P11006	P11055	2 - 300 µl				√	√		√	√	√				√	√	√						√	√				√	
P11007	P11056	100 - 1000 µl						√											√						√				

Pipettor Brand/ Make			Gilson Pipetman Ultra					Gilson Concept			Gilson Concept			Gilson Neo				
			Single Channel					Single Channel			Multi Channel			Single Channel				
Abdos Code for Filter Pipette Tips	Abdos Code for Last Drop Filter Pipette Tips	Volume	0.2-2µl	1-10µl	2-20µl	20-100µl	20-200µl	200-1000µl	0.5-10µl	5-100µl	20-300µl	1-10µl	10-100µl	30-300µl	0.2-2µl	1-10µl	20-100µl	100-1000µl
P11001	P11050	0.2 - 10 µl		√					√			√				√		
P11002	P11051	0.2 - 10 µl		√					√			√				√		
P11003	P11052	2 - 20 µl				√	√					√					√	
P11026	P11066	2 - 50 µl				√	√					√					√	
P11004	P11053	2 - 100 µl				√	√					√					√	
P11005	P11054	2 - 200 µl				√	√					√					√	
P11006	P11055	2 - 300 µl				√	√			√	√		√	√			√	
P11007	P11056	100 - 1000 µl						√										√

Pipettor Brand/ Make			Vistalab Ovation QS					Vistalab Ovation M					Vistalab Ovation E				Eppendorf Reference				Eppendorf Electronic								
			Single Channel					Single Channel					Multi Channel				Single Channel												
Abdos Code for Filter Pipette Tips	Abdos Code for Last Drop Filter Pipette Tips	Volume	0.2-2µL	1-10µL	2-20µL	10-100µL	20-200µL	100-1000µL	0.2-2µL	1-10µL	2-20µL	10-100µL	20-200µL	100-1000µL	0.5-20µL	5-250µL	2-125µL	25-1250µL	0.1-10µl	"0.1-10µl ULTRA MICRO"	2-20µl	10-100µl	20-200µl	100-1000µl	0.5-10µl	5-100µl	2-200µl	50-1000µl	
P11001	P11050	0.2 - 10 µl	✓	✓	✓				✓	✓	✓			✓					✓		✓								
P11002	P11051	0.2 - 10 µl	✓	✓	✓				✓	✓	✓			✓					✓		✓								
P11003	P11052	2 - 20 µl				✓	✓					✓	✓			✓	✓					✓	✓			✓	✓		
P11026	P11066	2 - 50 µl				✓	✓					✓	✓			✓	✓					✓	✓			✓	✓		
P11004	P11053	2 - 100 µl				✓	✓					✓	✓			✓	✓					✓	✓			✓	✓		
P11005	P11054	2 - 200 µl				✓	✓					✓	✓			✓	✓					✓	✓			✓	✓		
P11006	P11055	2 - 300 µl				✓	✓					✓	✓			✓	✓					✓	✓			✓	✓		
P11007	P11056	100 - 1000 µl						✓					✓				✓						✓					✓	

Pipettor Brand/ Make			Eppendorf Research					Eppendorf					Thermo Finnpipette				Thermo Finnpipette		Matrix Impact/Impact2										
			Single Channel					Multi Channel					Single Channel				Multi Channel		s/mc										
Abdos Code for Filter Pipette Tips	Abdos Code for Last Drop Filter Pipette Tips	Volume	0.1-2.5µl	0.5-10µl	2-20µl	10-100µl	20-200µl	100-1000µl	0.5-10µl	5-100µl	50-100µl	0-300µl	30-300µl	50-1200µl	0.2-10µl	0.5-10µl	5-40µl	40-200µl	100-1000µl	200-1000µl	0.1-10µl	10-100µl	30-300µl	2-125µl	2-20µl	15-1250µl			
P11001	P11050	0.2 - 10 µl		✓	✓				✓					✓	✓						✓								
P11002	P11051	0.2 - 10 µl		✓	✓				✓					✓	✓						✓								
P11003	P11052	2 - 20 µl				✓	✓			✓	✓						✓					✓			✓				
P11026	P11066	2 - 50 µl				✓	✓			✓	✓						✓					✓	✓		✓				
P11004	P11053	2 - 100 µl				✓	✓			✓	✓						✓					✓	✓		✓				
P11005	P11054	2 - 200 µl				✓	✓			✓	✓						✓					✓	✓		✓				
P11006	P11055	2 - 300 µl				✓	✓			✓	✓	✓	✓				✓					✓	✓		✓				
P11007	P11056	100 - 1000 µl						✓					✓*						✓	✓									

Pipettor Brand/ Make			Labnet Labpette					Labnet Labpette				Labnet BioPette E					Nichiryo /Oxford Benchmate												
			Single Channel					Multi Channel				Single Channel			Multi Channel		Single Channel & Multi Channel												
Abdos Code for Filter Pipette Tips	Abdos Code for Last Drop Filter Pipette Tips	Volume	0.1-2µl	0.5-10µl	2-20µl	10-100µl	20-200µl	100-1000µl	1-10µl	5-50µl	20-200µl	50-300µl	0.5-10µl	2-20µl	10-200µl	100-1000µl	0.5-10µl	2-20µl	10-200µl	100-1000µl	0.5-10µl	2-20µl	10-50µl	10-100µl	20-200µl	100-1000µl			
P11001	P11050	0.2 - 10 µl	✓	✓					✓				✓				✓				✓								
P11002	P11051	0.2 - 10 µl	✓	✓					✓				✓				✓				✓								
P11003	P11052	2 - 20 µl				✓	✓				✓			✓					✓					✓	✓				
P11026	P11066	2 - 50 µl				✓	✓				✓			✓					✓					✓	✓				
P11004	P11053	2 - 100 µl				✓	✓				✓			✓					✓					✓	✓				
P11005	P11054	2 - 200 µl				✓	✓				✓			✓					✓					✓	✓				
P11006	P11055	2 - 300 µl				✓	✓				✓	✓		✓					✓					✓	✓				
P11007	P11056	100 - 1000 µl						✓							✓				✓								✓		

Pipettor Brand/ Make			Socorex Calibra/Accura												Axygen Axypet													
			Single Channel						Multi Channel						Single Channel						Multi Channel							
Abdos Code for Filter Pipette Tips	Abdos Code for Last Drop Filter Pipette Tips	Volume	0.1-20µl	0.2-20µl	0.5-10µl	1-10µl	2-20µl	10-100µl	20-200µl	100-1000µl	1-10µl	5-50µl	10-100µl	20-200µl	50-200µl	0.1-2µl	0.5-10µl	2-20µl	5-50µl	10-100µl	20-200µl	50-250µl	100-1000µl	1-10µl	5-50µl	20-200µl	50-300µl	
P11001	P11050	0.2 - 10 µl			√	√					√						√								√			
P11002	P11051	0.2 - 10 µl			√	√					√						√								√			
P11003	P11052	2 - 20 µl						√	√		√	√	√	√					√	√	√					√	√	√
P11026	P11066	2 - 50 µl						√	√		√	√	√	√					√	√	√					√	√	√
P11004	P11053	2 - 100 µl						√	√		√	√	√	√					√	√	√					√	√	√
P11005	P11054	2 - 200 µl						√	√		√	√	√	√					√	√	√					√	√	√
P11006	P11055	2 - 300 µl						√	√		√	√	√	√					√	√	√	√				√	√	√
P11007	P11056	100 - 1000 µl								√													√					

## Empty Micro Tip Box, PP

73

Code	Tip Capacity (µl)	Places	L x W x H (mm)	No. per Case	Price / Case (₹)
P20101	0.2 - 10	96	126 x 93 x 70	6	780
P20102	2-200	96	126 x 93 x 70	6	780
P20104	2-300	96	126 x 93 x 77	6	810
P20103	100-1000	96	143 x 100 x 88	6	1010

Abdos Micro Tip Box are robust with consistent wall thickness for repetitive use in single and multi channel pipette.

Abdos Micro Tip Box can accommodate

Abdos Micro Tips and the tip holding space is uniformly placed to facilitate easy use in multi channel pipette.

Manufactured in high quality polypropylene.

Transparent top cover provides excellent view of the Micro Tips inside the box.

These boxes are stackable.

All Tip Boxes contain 96 Tip holes.

Can be autoclaved.



## Reagent Reservoir, HIPS

74

Code	Capacity (ml)	No. per Case	Price /Case (₹)
P10501	25	10	1125
P10503	100	10	1325

Unique "trough within a trough" maximizes reagent recovery.

100ml reagent reservoir has capacity for extended multi-channel pipetting into microtiterplates. This design allows ample clearance for all types of pipettors.

A wide base provides stability and avoids spills.

Graduated marks on inside wall.

Convenient pour-off spouts on all four corners.

Superior design provides stronger sidewalls.



## Stepmate Stepper

Code	Capacity (ml)	No. per Case	Price /Case (₹)
E11171	0.5 - 50	1	19885

### Suitable Tips & Adapter for Stepmate Stepper

Code	Capacity (ml)	Colour	No. per case	Price /Case (₹)
P11089	0.05	Natural	100	24000
P11090	0.5	Natural	100	12000
P11091	1.25	Natural	100	12000
P11092	2.5	Natural	100	12000
P11093	5	Natural	100	12000
P11094	12.5	Natural	100	12000
P11095	25	Natural	25	4200
P11096	50	Natural	25	4200
P11080	0.5 (Sterile)	Natural	100	17500
P11081	1.25 (Sterile)	Natural	100	17500
P11082	2.5 (Sterile)	Natural	100	17500
P11083	5 (Sterile)	Natural	100	17500
P11084	12.5 (Sterile)	Natural	100	17500
P11085	25 (Sterile)	Natural	25	6800
P11086	50 (Sterile)	Natural	25	6800
P11908	Adapters for 50 ml	Natural	1	900
P11909	Adapters for 25 ml	Natural	1	900

\* The first and last dispensing liquid should be discarded for precision.

Dial Setting	1	2	3	4	5
Number of steps	48	23	15	11	8

### Specifications

Syringe Volume (ml)	Test Volume (µl)					A%	P%
0.50	10	20	30	40	50	0.8	0.7
1.25	25	50	75	100	125	0.8	0.5
2.50	50	100	150	200	250	0.8	0.4
5.00	100	200	300	400	500	0.4	0.3
12.50	250	500	750	1000	1250	0.3	0.3
25.00	500	1000	1500	2000	2500	0.2	0.3
50.0	1000	2000	3000	4000	5000	0.2	0.2

Stepmate Stepper is ideal for routine or research applications in diagnostics, molecular biology, environmental analysis and more.

Stepmate stepper works on positive displacement pressure and offers highest precision dispensing of liquid media with high viscosity, high density and high vapor pressure.

It provides upto 48 dispensing steps and improves work efficiently.

It is lightweight and ergonomic.

It can be used with one hand and is maintenance free.

Factory fitted calibration.





## Supreme Bottle Top Dispenser

76

Code	Capacity (ml)	No. Per Case	Price / Case (₹)
E11701	0.25 - 2.5	1	10685
E11702	0.50 - 5	1	10685
E11703	1.0 - 10	1	10685
E11704	2.5 - 30	1	15750
E11705	5.0 - 60	1	15750
E11706	10 - 100	1	19000

### Material Specifications

Piston	PTFE & ETP
Cylinder	Borosilicate Glass
Volume Adjustment Knob	PP, 180° Rotation
Value Housing	PFA
Value Assembly	Borosilicate Glass Ball & Seat
Discharge Assembly	PTFE
Delivery Tube	FEP
Inlet Tube	FEP
Calibration	Individually Calibrated and Certified
Accuracy & Reproducibility	According to ISO 8655 Standards
Compatibility	Excellent with all reagents except HF

### Specifications

Code	Capacity (ml)	Increment (ml)	Accuracy		CV	
			± %	± ml	± %	± ml
E11701	0.25 - 2.5	0.05	0.6	0.015	0.2	0.005
E11702	0.50 - 5	0.1	0.6	0.030	0.2	0.010
E11703	1 - 10	0.2	0.6	0.060	0.2	0.020
E11704	2.5 - 30	0.5	0.6	0.180	0.2	0.060
E11705	5 - 60	1	0.6	0.360	0.2	0.120
E11706	10 - 100	2	0.6	0.600	0.2	0.200

Supreme is robust and reliable basic bottle top dispenser designed through years of research.

Supreme has a smooth and soft plunger for easy working in difficult laboratory conditions.



## Supreme Plus Bottle Top Dispenser

Code	Capacity (ml)	No. per Case	Price /Case (₹)
E11711	0.25 - 2.5	1	14366
E11712	0.50 - 5	1	14366
E11713	1.0 - 10	1	14366
E11714	2.5 - 30	1	20150
E11715	5.0 - 60	1	20150
E11716	10 - 100	1	24000

### Material Specifications

Piston	PTFE & ETP
Cylinder	Borosilicate Glass
Volume Adjustment Knob	PP, 180° Rotation
Value Housing	PFA
Re-Circulation Value Housing	PFA
Value Assembly	Borosilicate Glass Ball & Seat
Discharge Assembly	PTFE
Delivery Tube	FEP
Inlet Tube	FEP
Calibration	Individually Calibrated and Certified
Accuracy & Reproducibility	According to ISO 8655 Standards
Compatibility	Excellent with all reagents except HF

### Specifications

Code	Capacity (ml)	Increment (ml)	Accuracy		CV	
			± %	± ml	± %	± ml
E11711	0.25 - 2.5	0.05	0.6	0.015	0.2	0.005
E11712	0.50 - 5	0.1	0.6	0.030	0.2	0.010
E11713	1 - 10	0.2	0.6	0.060	0.2	0.020
E11714	2.5 - 30	0.5	0.6	0.180	0.2	0.060
E11715	5 - 60	1	0.6	0.360	0.2	0.120
E11716	10 - 100	2	0.6	0.600	0.2	0.200

Supreme Plus is the most advanced next generation highly robust and reliable bottle top dispenser designed through years of research.

Supreme Plus has a recirculation value for redirecting the liquid into the bottle for bubble free dispensing without any loss of reagent.

Supreme Plus has a smooth and soft plunger for easy working in difficult laboratory conditions.



## Supreme Duet Bottle Top Dispenser

Code	Capacity (ml)	No. per Case	Price /Case (₹)
E11731	0.25 - 2.5	1	26400
E11732	0.50 - 5	1	26400
E11733	1.0 - 10	1	26400
E11734	2.5 - 30	1	35750
E11735	5.0 - 60	1	37400
E11736	10 - 100	1	51150

### Material Specifications

Piston	PTFE & ETP
Cylinder	Borosilicate Glass
Volume Adjustment Knob	PP, 180° Rotation
Value Housing	PFA
Re-Circulation Value Housing	PFA
Value Assembly	Borosilicate Glass Ball & Seat
Discharge Assembly	PTFE
Delivery Tube	FEP
Inlet Tube	FEP
Calibration	Individually Calibrated and Certified
Accuracy & Reproducibility	According to ISO 8655 Standards
Compatibility	Excellent with all reagents except HF

### Specifications

Code	Capacity (ml)	Increment (ml)	Accuracy		CV	
			± %	± ml	± %	± ml
E11731	0.25 - 2.5	0.05	0.6	0.015	0.2	0.005
E11732	0.50 - 5	0.1	0.6	0.030	0.2	0.010
E11733	1 - 10	0.2	0.6	0.060	0.2	0.020
E11734	2.5 - 30	0.5	0.6	0.180	0.2	0.060
E11735	5 - 60	1	0.6	0.360	0.2	0.120
E11736	10 - 100	2	0.6	0.600	0.2	0.200

Supreme duet is the most advanced next generation highly robust and reliable bottle top dispenser designed through years of research.

Supreme duet has a recirculation value for redirecting the liquid into the bottle and rinsing the instrument without dismounting from the bottle.

Supreme duet with a worldwide patent can be used in 4 modes dilution, rinsing, dual liquid handling and re-circulation all in a single unit.

Supreme duet has a smooth and soft plunger for easy working in difficult laboratory conditions.



## Rave Plus Pipette Filler

Code	Product	No. per Case	Price /Case (₹)
E1114	Rave Plus Pipette Filler	1	16200
E1120	Rave Eco Pipette Filler	1	12500

### Spare Filters

Code	Product	No. per Case	Price /Case (₹)
E1116	Spare 0.45 µm Filter	1	695
E1117	Spare Lithium-ion	1	6100
E1118	Spare Adapter	1	5349

### Specifications

Battery	Lithium-Ion
Battery Service Life	More than 8 hours of Intermittence use.
Charging Time	Approx. 2 Hours.
Pipette Types	Glass or Plastic Pipettes (0.1-100ml)
Aspirate Speeds	8
Dispense Speeds	8 Gravity Dispense
Filter	0.45 µm Hydrophobic

Abdos Rave Plus Pipette Filler is robust, light-weight and is ergonomically designed to allow longer, fatigue- free pipetting.

Abdos Rave Plus Pipette Filler is powerful and can fill a 50 ml Pipette in less than 10 seconds. Motor and pump operate quietly with very low vibration.

Users can use Volumetric and Serological Pipettes ranging from 1 ml to 100 ml.

Abdos Rave Plus Pipette Filler is supplied with Lithium-ion battery that provides enough battery power to finish the users series.

Abdos Rave Pipette Controller is supplied with integral and replaceable 0.45 µm filter.



## Rave Pipette Controller

80

Code	Product	No. per Case	Price/ Case (₹)
E11113	Rave Pipette Controller	1	2925

Spare Filters

Code	Product	No. per Case	Price/ Case (₹)
E11119	Spare 3.00 µm Filter	1	266

Abdos Rave Pipette Controller is robust, light weight and its simple to use operations makes it ideal for repetitive pipetting.

Users can use Volumetric and Serological Pipettes ranging from 1 ml to 100 ml.

Abdos Rave Pipette Controller is supplied with integral and replaceable 0.3 µm filter.

The in-line filter prevents contamination. Precise Pipetting control is possible in Abdos Rave Pipette Controller.

Abdos Rave Pipette Controller have autoclavable silicone pipette holder.



## Fast Release Pipette Pump

81

Code	Capacity (ml)	No. per Case	Price /Case (₹)
E11219	2	4	3500
E11220	10	4	3500
E11221	25	4	4000

Abdos fast release pipette pump ensures quick and accurate operation.

These lightweight pipette pump has a fast release trigger that dispenses the entire pipette contents.

The thumb wheel easily rotates for precision aspirating or dispensing, down to a volume of one drop at a time.

The thumb wheel can be used to blow out the contents of the pipette.

Resistant to acids, alkalis.

Easily disassembly for cleaning.



## Handypette Pipette Aid.

82

Code	Capacity (ml)	No. per Case	Price / Case (₹)
E11222	2	4	2375
E11218	10	4	2375
E11216	25	4	2610

Colour coded by volume with green for 10 ml and red for 25 ml.

Users can easily insert glass and plastic pipettes into the collar with stabilizing fingers for secure hold.

Resistant to acids, alkalis.

Easily disassembly for cleaning.

Rotating the knurled thumbwheel draws liquid to desired volumes. To release liquid apply light pressure to the fast release lever. For gradual dispensing rotate the thumb wheel.



## Rubber Pipette Pump

83

Code	Capacity	No. per Case	Price/ Case (₹)
E11217	Up to 100 ml	4	2100

Pump opening is standard to fit almost all glass and plastic pipette.

One size can be used for liquid upto 100 ml.

The pump has a heavy wall and easy to grip body.



## Pipette Stand Horizontal, PP

84

Code	Places	No. per Case	Price /Case (₹)
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P70204	12	6	995
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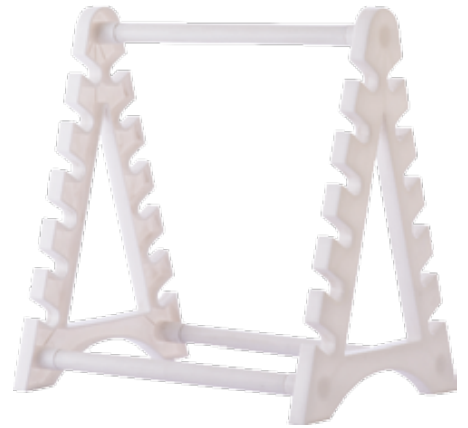
These polypropylene racks can hold upto 12 glass or plastic pipette in horizontal position.

The rack consists of three polypropylene coated metal rods to provide stability and strength to the rack.

Can be autoclaved.

These racks are available in white colour.

These racks can be easily assembled or disassembled to save space.



## Pipette Stand Vertical, PP

85

Code	Places	D x H, (mm)	No. per Case	Price /Case (₹)
------	--------	-------------	--------------	-----------------

P70205	28	232 x 381	1	551
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These polypropylene racks can hold upto 28 glass or plastic pipette in vertical position.

The heavy base has a diameter of 9 inch and polypropylene coated square rod having a length of 15 inches is screwed into the base.

These racks are available in white colour.

There are two disc to hold the pipette and give it stability. Both discs can be moved in upward and downward direction to accommodate various length of pipette.

Can be autoclaved.



## Pipette Storage Rack with Magnet, ABS

86

Code	Description	L x W x H (mm)	No. per Case	Price /Case (₹)
------	-------------	----------------	--------------	-----------------

P70202	Store 1 - 50 ml pipette or cans	291 x 88 x 401	1	3800
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These Rack cut-out viewing window and come with two removable attachments that hold pipette bulbs, fillers, and pumps.

Angled four shelved compartments keep 0.1 to 50 mL pipettes or cans within easy reach while preventing damage and clutter.

These racks help to protect and organize glass and plastic pipettes.

These unique innovative magnetized racks have strong magnets on both sides and mounts securely to most metal surfaces.



## Serological Pipettes Sterile, PS

87

Code	Length (mm)	Capacity (ml)	No. per Case	Price /Case (₹)
P10601	270	1	500	5500
P10602	270	2	400	4800
P10603	295	5	200	3000
P10604	295	10	200	3200
P10605	298	25	200	6200
P10606	300	50	100	6000

Individually wrapped graduated pipettes with paper/plastic peel-pack.

Lot numbers printed on each pipette wrapper.

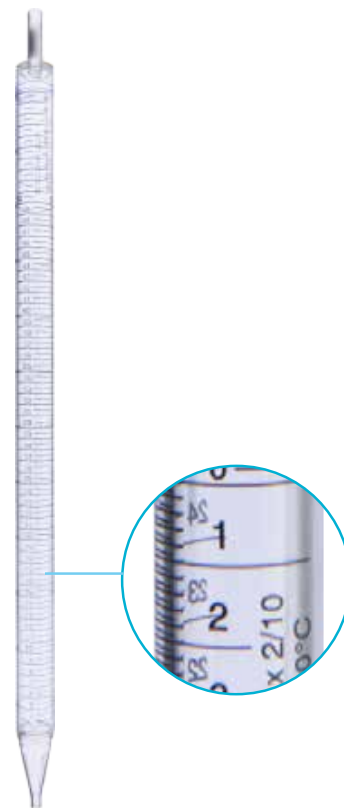
Unique color-coded plug allows easy size identification.

Accuracy within  $\pm 2\%$  at full volume

Sterile, individually wrapped and certified nonpyrogenic and DNase, RNase-free.



**STERILE E**



## Pasteur Pipettes, LDPE

88

Code	Capacity (ml)	Length (mm)	No. per Case	Price / Case (₹)	Price /48 Case (₹)
*P31207	0.5	130	500	750	33840
*P31208	0.5 Sterile	130	500	2700	121824
P31201	1.0	154	500	679	30636
P31202	1.0 Sterile	154	500	2425	109416
*P31209	2.0	156	500	690	31133
*P31210	2.0 Sterile	156	500	2425	109416
P31205	3.0	154	500	703	31731
P31206	3.0 Sterile	154	500	2425	109416

These unbreakable, non-toxic all-in one pipettes eliminate the hazard of broken glass and exposure to infectious materials.

The low-affinity surface reduces the loss of cells and valuable proteins due to binding.

Molded from translucent low-density polyethylene they are inert to biological fluids and most acids.

Sterile and non-sterile options available.

Can be sealed and refrigerated.

**STERILE E0**



\* P31207, P31208, P31209 & P31210 will be available January 2019 onwards.



## Radioimmunoassay (RIA) Vial & Cap (Plastic Test Tube)

### Radioimmunoassay (RIA) Vial

Code	Ø x h (mm)	Material	Capacity (ml)	No. per Case	Price /Case	Price /260 Case (₹)
P10301	12 x 75	PP	5	500	439	107231
P10303	12 x 75	PS	5	500	449	109613
P10305	12 x 40	PP	2.5	500	332	81019
P10306	12 x 40	PS	2.5	500	337	82363

### Radioimmunoassay (RIA) Vial Cap

Code	Ø (mm)	Material	No. per Case	Price /Case	Price/192 Case (₹)
P10304	12	HDPE	500	230	41510
P10307	12	PP	500	272	49091
P10302	12	LDPE	500	272	49091

\* Ria Vial Cap can be available in various colours upon request.

### Amber Radioimmunoassay (RIA) Vial

Code	Ø x h (mm)	Material	Capacity (ml)	No. per Case	Price /Case (₹)
P10301A	12 x 75	PP Amber	5	500	536
P10301A1	12 x 75	PP Transparent Amber	5	500	536
P10305A	12 x 40	PP Amber	2.5	500	410
P10305A1	12 x 40	PP Transparent Amber	2.5	500	410

### Amber Radioimmunoassay (RIA) Vial Cap

Code	Ø (mm)	Material	No. per Case	Price /Case (₹)
P10304A	12	HDPE Amber	500	283
P10304A1	12	HDPE Transparent Amber	500	283

Abdos Ria Vials are polypropylene/polystyrene tubes generally used in Radioimmuno Assay –a scientific method used to test antigens (for sample, hormone levels in the blood) without the need to use a bioassay.

Abdos Ria Vial PP are clear and can with stand 3000 RCF during centrifugation while the transparent polystyrene tubes can withstand 1400 RCF.

The PP tubes can accept common acids, alkalies & solvents at room temperature while the PS tubes can accept mild bases, weak acids but not organic solvents.

Amber Ria Vials are used for light sensitive samples.

Abdos Ria Vials PP are autoclavable while PS tubes are non-autoclavable.



## Plastic Test Tube & Cap

### Plastic Test Tube

Code	Ø x h (mm)	Material	Capacity (ml)	No. per Case	Price / Case (₹)
P10308	13 x 100	PP	8	500	1035
P10309	13 x 100	PS	8	500	1075
P10310	16 x 100	PP	10	500	1290
P10311	16 x 100	PS	10	500	1325

### Plastic Test Tube Cap

Code	Ø (mm)	Material	No. per Case	Price /Case (₹)
P10312	13	HDPE	1000	1005
P10313	16	HDPE	1000	1280

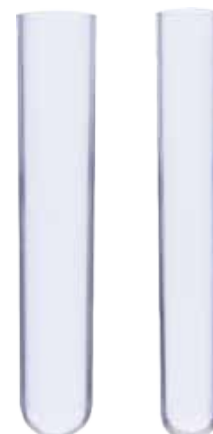
Abdos plastic test tube is polypropylene/ polystyrene tubes are used for routine sample handling, storage and transportation.

These tubes have high impact strength and stable for use in acids, alkalies and solvents.

Polypropylene tubes are clear and can withstand 3000 RCF during centrifugation while the transparent polystyrene tubes can withstand 1400 RCF.

The PP tubes can accept common acids, alkalies & solvents at room temperature while the PS tubes can accept mild bases, weak acids but not organic solvents.

PP are autoclavable while PS tubes are non-autoclavable.



## Wire Sample Container Rack, Epoxy Coated Steel

Code	Tube Diameter (mm)	Places	L xW x H (mm)	No. per Case	Price / Case (₹)
P40111	58	24 (6 x 4 Array)	393 x 262 x 50	1	3359

Durable racks for transport or sample handling.

Suitable for various round, conical, flat bottom in glass, plastic tubes and bottles.

Superior chemical resistance.

Holds bottles and vessels up to 58 mm in diameter.

Bottom has mesh that gives support.

Slotted bottom.

Can be autoclaved



## Sample Container, PP/HDPE

Code	Capacity (ml)	Sub Division (ml)	Height (ml)	No. Per Case	Price/ Each (₹)	Price/ Case (₹)
P40101	60	10	58	400	5.88	2352
P40102	60 (Sterile)	10	58	350	7.84	2744
P40105	60 (with Spoon)	10	58	400	7.25	2900
P40106	60 (Sterile with Spoon)	10	58	350	9.2	3220
P40103	120	20	80	200	7.92	1584
P40104	120 (Sterile)	20	80	200	9.36	1872
*P40112	200	20	120	100	12	1200
*P40113	200 (Sterile)	20	120	100	19	1900



Ultra clear polypropylene container with polyethylene leak proof screw cap.

Frosted portion for easy writing.

Clear and easy to read graduations.

Non-Sterile container has tear off cap sleeve for highest level of hygiene.

Sterile container is individually packed in polyethylene pouch.

\* P40112 & P40113 will be available January 2019 onwards.



Add Colour Code of your choice: WHITE (W), RED (R), BLUE (B)

### VALUE ADDITIONS

60 ml Sample Container can with stand upto 95 kpa of pressure best suitable for vacuum transportation lift for sample at Hospitals



The Unique Grip screw cap provides a secure grip in wet conditions

Moulded ring provides stability and confirms complete closer of the cap while ensuring 100% leak proof.

Sterile contains are individually wrapped and has been validated according to ENISO 11137-2; 2012 for SAL 10<sup>-6</sup>

Engraved graduation marks and frosted surface for Name, No. and date provides better visibility on volume and traceability of the samples.

Highly Transparent for easy visualization of samples.

An IVD CERTIFIED PRODUCTS best recommended for diagnostics as a leakproof screw cap, principally important when transporting hazardous material. Ideal for transport and storage of urine, sputum and most liquids or particulate samples.

Samples containers shatter resistant Manufactured from ultra-pure USP-VI Virgin Polypropylene (PP) and Comply with the requirement of 21 CFR 177.1520.

Containers are Manufactured inside the controlled, validated Clean Room ISO Class 7 by high-end Injection Moulding using high precision moulds which ensure smooth and symmetrical End product.



**CELL CULTURE  
TECHNIQUES**

Tissue Culture Flask  
Cell Culture Dishes  
Cell Culture Plates  
Cell Culture Stirrer  
& More

## Cell Culture Flasks, PS

Code	Cell Growth Area , (cm <sup>2</sup> )	Cap Style	Volume (ml)	Rcommended Medium Volume (ml)	No per Pack	No. Per Case	Price / Case (₹)
P21010	25	Sealed Cap	50	5 - 7.5	10	200	8600
P21011	25	Vent Cap	50	5 - 7.5	10	200	9800
P21012	75	Sealed Cap	250	15 - 22.5	5	100	8400
P21013	75	Vent Cap	250	15 - 22.5	5	100	9800
P21014	175	Sealed Cap	750	35 - 52.5	5	40	6160
P21015	175	Vent Cap	750	35 - 52.5	5	40	7200
P21016	225	Sealed Cap	950	45 - 67.5	5	25	7750
P21017	225	Vent Cap	950	45 - 67.5	5	25	9625

Abdos Tissue culture treated plates are made from the highest quality of virgin polystyrene.

Culture Flask is been treated with vacuum plasma to assures uniform growth.

Flat high clarity polystyrene surface for distortion-free observation.

Angled neck for easy access till corner of the flask.

Frosted writing area with clear moulded graduation marking.

Designed with precision for stackable stability.

Culture flask with breathable vented cap membrane 0.22 um, hydrophobic filter ensures gas exchange without contamination.

Sterilized by E-beam, Sterile culture flask has been validated according to EN ISO 11137-2; 2012 for SAL 10<sup>-6</sup>



Both vent caps and plug seal caps are available



### Tissue Culture Treated Plates, PS

Code	No. of well	Cell Growth Area , (cm <sup>2</sup> )	Bottom shape	Rcommended Medium Volume (ml)	No. Per Case	Price / Case (₹)
P21020	6	9.5	flat	1.9 - 2.9	50	5000
P21021	12	3.6	flat	0.76 - 1.14	50	5250
P21022	24	1.9	flat	0.38 - 0.57	50	5250
P21023	48	0.88	flat	0.19 - 0.28	50	5650
P21024	96	0.32	flat	0.1 - 0.2	100	9500
P21025	96	0.32	U	0.1 - 0.2	100	12000
P21026	96	0.32	V	0.1 - 0.2	100	12000

Abdos Tissue culture treated plates are made from the highest quality of virgin polystyrene.

Plates are designed with low profile & low-evaporation rate ensuring no loss of samples.

Small feet on the bottom corners of each plate eliminates scraping of the microscopic lens.

Plates are been treated with vacuum plasma to assures uniform growth.

Easy to peel-open and individually wrapped blister pack with lot no for traceability.

Sterilized by E-beam, Sterile plates has been validated according to EN ISO 11137-2; 2012 for SAL 10<sup>-6</sup>



### Cell Culture Dish, PS

Code	Diameter (mm)	height (mm)	Cell Growth Area (cm <sup>2</sup> )	Rcommended Medium Volume (ml)	No per Pack	No. Per Case	Price / Case (₹)
P21030	35	9	9	1.8 - 2.7	20	500	6500
P21031	60	12	21	4.2 - 6.3	20	500	8000
P21032	100	17.7	55	11 - 16.5	20	300	7200
P21033	150	23.1	152	30.4 - 45.6	5	100	9500

Abdos Tissue culture treated plates are made from the highest quality of virgin polystyrene.

Culture dished are ideal for all types of culturing where microscopic observation is required.

Dishes are been treated with vacuum plasma to assures uniform growth.

Flat high clarity polystyrene surface for distortion-free observation.

Sterilized by E-beam, Sterile culture dish has been validated according to EN ISO 11137-2; 2012 for SAL 10<sup>-6</sup>



## Cell Scrapers, PP/HIPS

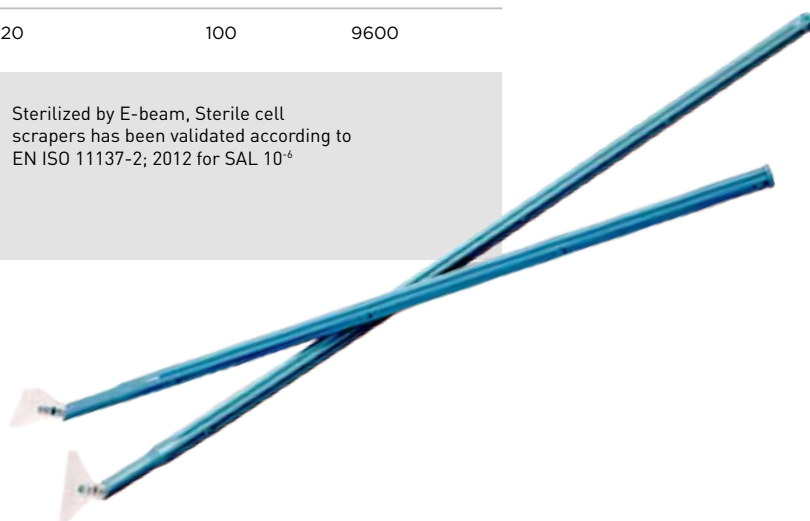
96

Code	length (mm)	Blade Width (mm)	Blade Length (mm)	No. Per Case	Price /Case (₹)
P21040	220	13	13	100	7700
P21041	280	20	20	100	9600

Abdos Cell Scrapers blades are made for HIPS and handle is made of PP.

Specially designed with a free rotating blade to turn as per required direction.

Sterilized by E-beam, Sterile cell scrapers has been validated according to EN ISO 11137-2; 2012 for SAL 10<sup>-6</sup>



### Application

T-25/ T-75 Cell Culture flasks,  
60 mm cell culture dish

T-75/ T-175/ T-225 Cell Culture flasks,  
100 & 150 mm cell culture dish



## Double Sidearm SPINNER FLASK

97

Code	Product	No. Per Case	Price /Case (₹)
P11662	Spinner Flask, 500ml, Standard, Flat Bottom,	1	40000
P11663	Spinner Flask, 3000ml, Standard, Flat Bottom	1	74000

Double Sidearm Spinner Flask for cell culture stirrer comes ready-to-use with paddle and integrated magnet, eliminating the need for time-consuming assembly or cleaning and reassembly.

The vessel is comparable to conventional glass spinner flasks for growth of suspension celllines and any attachment-dependent cultures using micro carrier beads.

The paddle size and height is optimized for each vessel size. A unique integrated magnet provides a smooth, even rotation at required speeds on any laboratory slow speed stirrer. Heat build-up in the vessel is reduced by means of a specially designed flange that raises the vessel of the stir-plate surface.

### Specifications

Sidearm cap diameter	54 mm (Approx.)
Sidearm openings	2
Sidearm Style	45°
Cap Style	Screw cap
Cap Material	Polypropylene
Diameter	87.3 mm (Approx.)
Sidearm I.D.	38.1 mm (Approx.)

NEW



## SWIRLTOP –LED-Single/Four Position Cell Culture Magnetic Stirrer

Code	Product	Work plate Size (cm)	No. Per Case	Price /Case (₹)
E11660	Cell Culture Stirrer-One (1) Position	10.5 x 10.5	1	58000
E11661	Cell Culture Stirrer-Four (4) Position	10.5 x 10.5	1	88000

ABDOS Cell Culture Magnetic Stirrers are designed for optimal suspension cell culture and the use of micro carriers. There are various program modes for optimal cell culturing preventing excessive turbulence.

Swirltop Cell Culture Magnetic Stirrers have various modes for optimal cell culturing like cycle on/min, cycle off/min, cycle run/rpm, cycle count.

Swirltop Cell Culture Magnetic Stirrers are easy to read LED display which is compatible with an incubator and cold room

### Specifications

Voltage	220-240 V
Frequency	50-60 Hz
Speed Display	LED
Speed Range	5 – 200 rpm (Resolution $\pm 1$ rpm)
Motor Type	Stepper Motor
Motor Output Power	4W
Timer Range	0 to 49min 59Sec
Max. Stirring Quantity	3 L
Max Magnetic Bar(Length)	80 mm
Dimensions of work plate	105 x 105 mm
Dimensions	205 x 250 x 90 mm
Work Plate Material	Cast Aluminium
Protection Class	IP21
Permissible ambient temperature	5-40° C
Permissible relative Humidity	80%







**PCR  
TECHNIQUES**

PCR Tubes  
Strip Tubes  
PCR Plates Family  
Deep Well Plates  
& More

## PCR Tubes, PP

99

Code	Capacity (ml)	Type	Height (mm)	No. Per Case	Price /Case (₹)
P10701	0.2	Clear Flat Cap	21.5	1000	2750
P10702	0.2	Domed Cap	23.16	1000	2750

Abdos PCR tubes are manufactured in state of the art precision moulded facility using high purity virgin polypropylene.

Abdos PCR tubes have a longer length and even cap insertion that ensures tight fit eliminating the risk of sample evaporation.

Abdos PCR tubes have thin and consistent wall thickness to reduce the insulating effect on the tube.

The caps are optically clear for real time qPCR.



## Strip Tubes without Cap -8 strips & 12 strips, PP

100

Code	Capacity (ml)	Type	Height (mm)	No. Per Case	Price /Case (₹)
P10706	0.2	8 Strip Standard Tubes	20.70	125 strips	5950
P10708	0.1	8 Strip Low Profile Tubes	16.10	125 strips	4177
P10707	0.2	12 Strip Standard Tubes	20.70	80 strips	5600

Abdos Strips PCR Tubes are manufactured in state of the art precision moulded facility using high purity virgin polypropylene.

Tubes have uniform ultra thin walls to reduce the insulating effect on the strips.

Optically clear for real time qPCR.

Strip tubes are available in both Standard and Low Profile Wells.



## Strip Caps, PP

101

Code	Type	No. Per Case	Price /Case (₹)
P10709	8 Strip Cap Flat Optically Clear	125 strips	1545
P10710	12 Strip Cap Flat Optically Clear	80 strips	964
P10711	8 Strip Cap Domed	125 strips	1280
P10712	12 Strip Cap Domed	80 strips	996

Abdos Strips PCR Caps are manufactured in state of the art precision moulded facility using high purity virgin polypropylene.

Caps feature ultra-clear surface ideal for florescent, luminescent and real time PCR applications.

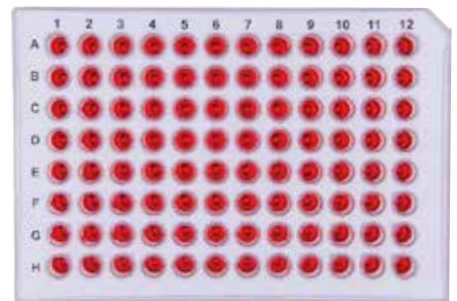
Optically clear for real time qPCR.



## PCR Plates Family, PP

102

Code	Capacity	Type	No. Per Case	Price /Case (₹)
P10713	96 Well	Unskirted Standard Well	25 Plates	4375
P10714	96 Well	Unskirted Low Profile well	25 Plates	5125
P10715	96 Well	Unskirted Elevated Top Standard Well	10 Plates	2249
P10722	96 Well	Semi-Skirted low profile	25 Plates	6375
P10716	96 Well	Semi - Skirted Standard Well	10 Plates	2550
P10723	96 Well	Fully-Skirted Low Profile Well	10 Plates	2750
P10717	384 Well	Fully - Skirted Well	10 Plates	3534



Abdos PCR plates are manufactured in state of the art precision moulded facility using high purity virgin polypropylene.

Abdos PCR plate are qPCR compatible.

Ultra thin and consistent wall thickness allows precise thermal transfer.

DNase, RNase, DNA, Pyrogen free and PCR inhibitor free.

Maximum G-Force 4000 RCF.

Kindly see Thermal Cycler Compatibility Chart on Page No. 102 & 103



P10713



P10714



P10715



P10716



P10717



P10722



P10723

### Sealing Mats, Silicone Rubber

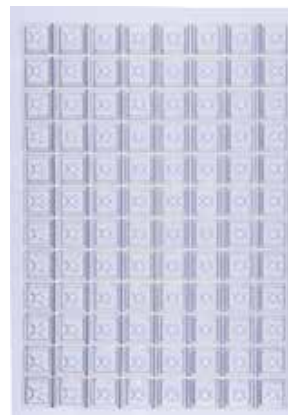
103

Code	Type	No. Per Case	Price /Case (₹)
P10721	Silicone Sealing Mats	50 mats	15000

These mats are made of silicon rubber and designed to seal all PCR plates except P10717.

The mat is made up of 96 (12 x 8 array) plugs.

The mat has to be compressed. A plug that caps the individual well seals each well on the PCR plate



### Sealing Films, Polyester

104

Code	Type	No. Per Case	Price /Case (₹)
P10718	Clear Seal Film	100 sheets	14000

Abdos sealing films are optically clear and are suitable for use in real-time PCR applications.

The film is adhesive coated and sticks to the plate.

It can be used for PCR plates.

Abdos sealing films are disposable and for single use only



### Sealing Films, Aluminium

105

Code	Type	No. Per Case	Price /Case (₹)
P10719	Silver Seal	100 sheets	7600

These sealing films are aluminium hence completely opaque and the end user cannot see the contents in the well. The film is adhesive coated and sticks to the plate.

These films are readily pierceable either by manual pipette or by liquid handling robot. Once the hole is pierced the film is no longer self sealing.



## Deep Well Plates Family, PP

106

Code	Capacity (ml)	Type	No. Per Case	Price /Case (₹)
P10802	2.2	Deep Well Plates	25 Plates	8750
P10803	1.2	Deep Well Plates	50 Plates	13000

Abdos Deep Well Plates are manufactured in state of the art precision moulded facility using high purity virgin polypropylene.

Deep Well Plates are used for sample collection, in-vitro growth chambers and long-term storage.

Can be used at temperature down to -80° C.

Abdos Deep Well Plates are square with conical base.

Conical Base helps to minimize dead volumes.

These plates come with clear alphanumeric indexing.

Excellent chemical resistance.



P10802



P10803

## Reagent Reservoir, PP

107

Code	Capacity (ml)	Type	No. Per Case	Price /Case (₹)
P10801	22	Reagent Reservoir	25 Reservoir	19500

Abdos Reagent Reservoir are manufactured in state of the art precision moulded facility using high purity virgin polypropylene.

Standard SBS footprints designed to be robot compatible.

Base of the reservoir minimizes dead volume.

Most durable for multi-used and cost effective for single use.

Can be used at temperature down to -80° C.

Excellent chemical resistance.



## Square Sealing Mats for Deep Well Plates Family, Silicone Rubber

108

Code	Type	No. Per Case	Price /Case (₹)
P10804	Square Well Sealing Mats	50 mats	14438

\* These mats are used for sealing P10802 & P10803 (Deep well Plates)

Abdos Reagent Reservoir are manufactured in state of the art precision moulded facility using high purity virgin polypropylene.

Standard SBS footprints designed to be robot compatible.

Base of the reservoir minimizes dead volume.

Most durable for multi-used and cost effective for single use.

Can be used at temperature down to -80° C.

Excellent chemical resistance.



### PCR Workup Rack, PP

109

Code	Capacity	Places	L x W x H (mm)	No. per Case	Price / Case (₹)
P11101	1 x 96 well PCR plates, 96 place x individual PCR tubes & 12 x 8-well strips	96	138 x 98 x 39	5	2025

Manufactured in state of the art moulding facility using high purity polypropylene.

These workup rack can be easily stackable.

These racks can accommodate unskirted, semi-skirted and skirted 96 well PCR plates. It can also accommodate strip PCR tubes.

Legs at all four corners make it robust and stable for good grip on the surface.

These racks have moulded alphanumeric indexing for fast and accurate identification.

Operating temperature is -80° C to 121° C.



### PCR Workstation Rack With Lid, PP

110

Code	Capacity	L x W x H (mm)	No. per Case	Price / Case (₹)
P11103	24 x individual 0.2 ml PCR tubes, 16 x 0.5, 1.5 / 2.0 ml tubes & 96 well rack for PCR plates	215 x 120 x 50	5	3855

Manufactured in state of the art moulding facility using high purity polypropylene.

These workstation are easily stackable.

These racks can accommodate unskirted, semi-skirted and skirted 96 well PCR plates, individual PCR tubes and 0.5, 1.5 and 2.0 ml micro centrifuge tube.

These workstations are ideal platform to satisfy all pre or post PCR sampling applications.

These workstations have moulded alphanumeric indexing for fast and accurate identification.

Operating temperature is -80° C to 121° C.



## Touch Cyclor 9639 Thermal Cyclor

Code	Capacity	No. per Case	Price / Case (₹)
E11351	Touch Cyclor 9639 Thermal Cyclor, multiformat Block (Accepts 1 PCR Plates, 96x0.2ml tubes or 39x0.5ml tubes)	1	P.O.R.
E11352	Touchcyclor 32 Mini Thermal Cyclor, Multiformat Block (Accept 32x0.2ml or 4 PCR Strips)	1	P.O.R.
E11353	Touch Cyclor 9639 Thermal Cyclor with 1X384 well block	1	P.O.R.

### Spare Accessories

Code	Capacity	No. per Case	Price /Case (₹)
E11354	In-situ Adapter for 4 slides( For E11351)	1	P.O.R.

Abdos Touch Cyclor 9639 Thermal Cyclor is the perfect for all-purpose PCR machine with a Large, colour touchscreen which can be used while wearing gloves.

This is easy to use, with intuitive programming and a library of preinstalled programs. Program Wizard helps users to set up a protocol on a single screen. Programs are shown graphically and are easily edited which can be stored in public folders, in private (password-protected) folders.

Touch Cyclor 9639 is equipped with Aluminium block with Peltier heating/cooling element. Its multi-format sample block is suitable for use with 96 x 0.2 ml tubes, 39 x 0.5 ml tubes, and 96-well plates: no interchangeable parts required!

For even more flexibility, the unit may be purchased with an optional 384-well block or an adapter that holds up to four slides for in situ PCR or hybridization of pathology samples.

Sample integrity is maintained with the fully adjustable heated lid that prevents evaporation and condensation. Lid temperature can be programmed and will turn off automatically when block temperature falls below 35 °C.

### Specifications

Touch Cyclor 9639 Multiformat Block	96 x 0.2 ml tubes, 39 x 0.5 ml tubes or 1 nonskirted 96 well plate
Touch Cyclor-32 Mini	32 x 0.2 ml tubes or 4 PCR Strips
384 well block	1x384 well plate
In-Situ Adapter	4xslides(Fits in Multiformat Block)
Temperature control range	0°-100°C
Temperature Control Modes	Block control or simulated sample control
Heating cooling method	Peltier
Programmable lid temperature	30°-112°C, User Adjustable
Maximum ramp rate: Heating Rate	5°C per sec
Cooling Rate	4°C per sec
Time increments/decrements	Yes, Time & Temperature
Temp accuracy/uniformity	±0.2°C/ ±0.2°C
Gradient range/differential	30°C to 105°C /1-30°C
Restart after power failure	Yes
Certifications	ISO9001:2000
Program memory	Up to 100 programs. Unlimited storage with a USB flash drive
Communication	LAN and RS232
Multuser login with password protection	Yes



# THERMAL CYCLER COMPATIBILITY GUIDE

## for ABDOS 96 & 384 Wellplates

		P10713 96 Well, Unskirted Standard Well	P10714 96 Well, Unskirted Low Profile Well	P10715 96 Well, Unskirted, Elevated Top, Standard Well	P10722 96 Well, Semi Skirted, Low Profile Well	P10716 96 Well, Semi Skirted, Standard Well	P10723 96 Well, Fully Skirted, Low Profile Well	P10717 384 Well, Full Skirted, Low Profile Well
Standard well (Overall well height approx 21 mm, Max. capacity > 350L)		•		•		•		
Low Profile well (Overall well height approx 16 mm, Max capacity approx. 200L)			•		•		•	50 µl
Manufacturer	Thermal Cycler Model							
<b>APPLIED BIOSYSTEMS</b>								
Thermal Cyclers	2700	•		•		•		•
	9600	•		•		•		
	9700	•		•		•		•
	9800 "Fast"							
"Real Time" Thermal Cyclers	5700	•				•		
	PRISM 7000	•				•		
	7300	•			•			
	7500	•			•			
	7500 "Fast"							
	7700	•				•		
	7900HT	•			•			
Sequencers	PRISM 310	•		•		•		
	PRISM 3100	•		•		•		
	3130 (XL)	•		•		•		
	3700	•		•		•		•
	PRISM 3730 (XL)	•		•		•		
<b>AMERSHAM</b>								
Sequencers	Mega BACE 500						•	
	Mega MACE 1000						•	
	Mega BACE 4000							•
<b>BECKMAN</b>								
Sequencers	CEQ	•						
<b>BIOMETRA</b>								
Thermal Cyclers	Uno	•	•	•		•	•	
	Uno II	•	•	•		•	•	•
	T1 Thermal Cycler	•	•	•		•	•	•
	Tgradient	•	•	•		•	•	
	Trobot	•	•	•		•	•	•
<b>BIO-RAD / MJ RESEARCH</b>								
Thermal Cyclers	Gene Cycler	•		•				
	PTC -100	•	•	•		•	•	•
	PTC -200	•	•	•		•	•	•
	PTC-225 TETERAD	•	•	•		•	•	•
	DYAD-DYAD Disciple	•	•	•		•	•	•
	iCYCLER	•		•		•	•	
	MyCycler	•		•		•		
"Real Time" Thermal Cyclers	OPTICON / OPTICON2	•	•				•	
	Chrome 4		•				•	
	ICYCLER	•		•		•	•	•
	Myiq	•		•		•	•	
	IQ5	•		•		•	•	
Sequencers	BaseStation						•	
<b>CORBETT RESEARCH</b>								
Thermal Cyclers	PamCycler 96	•				•		
	PamCycler 384						•	•

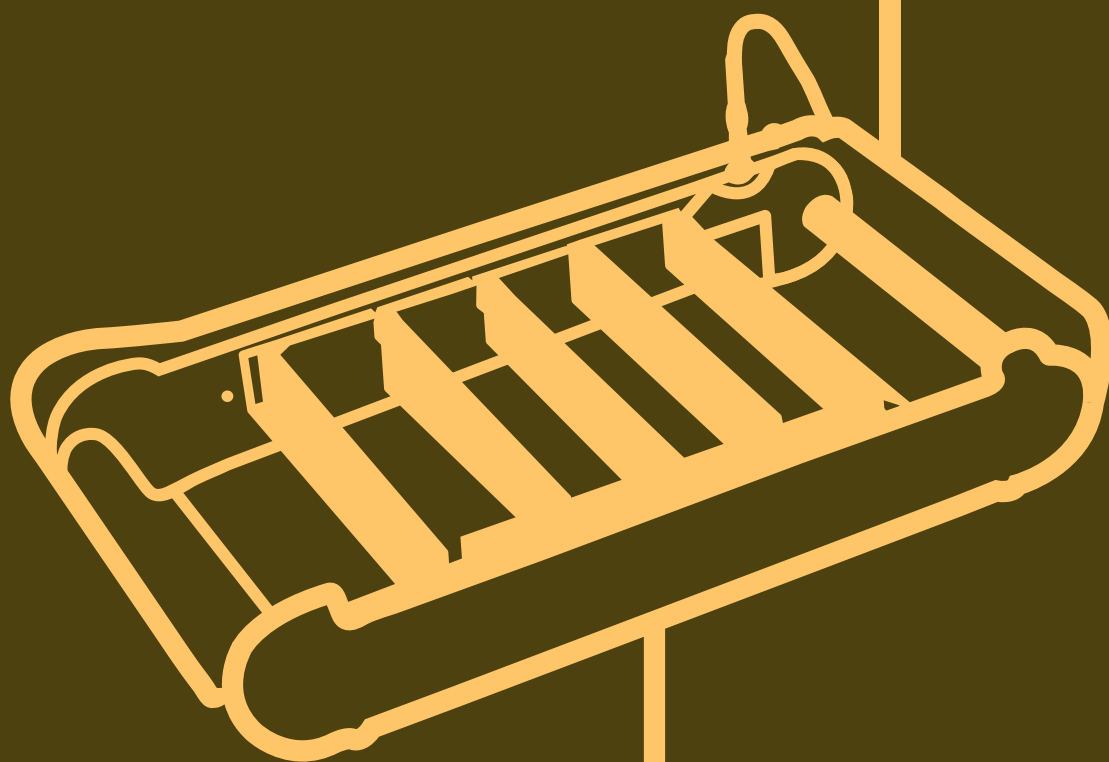
Plates to SBS Specifications foot print. Certified Free From DNase, RNase and Detectable DNA.  
 This chart is intended as a guide only. Abdos cannot accept any liability or responsibility for information given.  
 PCR is a patented process of Roche Holdings.



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Well Shape								
Standard well (Overall well height approx 21 mm Max. capacity > 350)		•		•		•		
Low Profile well (Overall well height approx 16 mm; Max capacity approx. 200)			•		•		•	50 µl
Manufacturer	Thermal Cycler Model							
EPPENDORF								
Thermal Cyclers	Mastercycler	•	•	•		•	•	
	Mastercycler Gradient	•		•				
	Mastercycler ep	•	•	•		•	•	
	Mastercycler M384							•
"Real Time" Thermal Cyclers	Mastercycler ep Realplex		•				•	
ERICOM								
Thermal Cyclers	Power Block L	•	•	•	•			
	Deltacycler L	•	•	•		•		
	Deltacycler LL	•	•		•			
	Single Block	•	•	•		•		
	Twin Block	•	•	•		•		
ESCO								
	Swift	•		•		•		•
FLEXI								
Thermal Cyclers	Gene	•		•		•	•	•
	Genius	•		•		•	•	
G-STORM								
Thermal Cyclers	GS1	•	•	•	•	•		
	GS4	•	•	•	•	•		
	GSX	•	•	•	•	•		
	GSXs	•	•	•	•	•		
MWG								
Thermal Cyclers	Primus 96	•	•	•	•	•	•	
	Primus 384							•
ROCHE								
	Lightcycler 480							•
STRATAGENE								
Thermal Cyclers	Robocycler 96	•				•		
	Robocycler Gradient	•	•	•	•	•	•	
	Mx4000 and Mx 3000	•	•	•	•	•	•	
"Real Time" Thermal Cyclers		•	•	•	•			
TAKARA								
Thermal Cyclers	TP 240							
	TP3000						•	
		•	•	•	•	•	•	
TECHNE								
Thermal Cyclers	Touchgene							
	Cyclogene	•	•	•	•	•		
	Genius	•	•	•	•	•		
	Genius Quad	•	•	•	•	•		
	Genius (TC412)	•	•	•	•	•		
	Flexigene	•	•	•	•	•	•	
	Touchgene X	•	•	•	•	•	•	•
	Touchgene Gradient (TC512)	•	•	•	•	•	•	•
	Quantica	•	•	•	•	•	•	•
"Real Time" Thermal Cyclers			•				•	
THERMO HYBAID								
Thermal Cyclers	PCR Sprit							
	MBS Satalite (Multiblock)	•	•	•	•	•	•	
	System	•	•	•	•	•	•	•
	Px2 and PxE	•	•	•	•	•	•	•
	PCR Express and Omni-E	•	•	•	•	•	•	•
	Touchdown	•	•	•	•	•	•	•
	OmniGene	•	•	•	•	•	•	•
		•	•	•	•	•	•	•
TRANSGENOMIC								
Sequencers	WAVE System						•	

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## ELECTROPHORESIS



Standard Horizontal Submarine  
Single Plate Mini  
Cooled Twin Plate Maxi  
Power Supplies  
& More

## HU6 Mini Horizontal Submarine Gel Electrophoresis System

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Code	Product	No. per Case	Price (₹)
HU6	Mini horizontal gel unit with removable casting tray and 2x1mm thick, 8-sample combs and coloured loading strips	1	58000

### Accessories for HU6 Mini Horizontal Submarine Gel Electrophoresis System

Code	Product	No. per Case	Price (₹)
HU6-UT	Gel casting tray 6 x 7.5 cm	1	11000
HU6-SCG	Silicon casting gates	2	7400
HU6-CS	Coloured loading strips	1	4000
HU6-CU	External casting unit for 3 gel casting trays	2	9500
HU6-GS	Gel scoop 6 x 8.5 cm	6	8000
PT-0.2	0.2 mm thick, platinum electrode wire	1	14400
CABLE-4	1 metre power leads with shrouded 4mm power output connectors	1	9200
HU6-C1-8	HU6 Comb, Thickness 1 mm, 8-wells, well volume: 20 $\mu$ l	2	5500
HU6-C1-12MC	HU6 Comb, Thickness 1 mm, 12-wells, well volume: 11 $\mu$ l (Multichannel Pipette Compatible)	2	5500
HU6-C1-16	HU6 Comb, Thickness 1 mm, 16-wells, well volume: 10 $\mu$ l	1	5500
HU6-C1.5-8	HU6 Comb, Thickness 1.5 mm, 8-wells, well volume: 30 $\mu$ l	1	5500
HU6-C1.5-12MC	HU6 Comb, Thickness 1.5 mm, 12-wells, well volume: 17 $\mu$ l (Multichannel Pipette Compatible)	1	5500
HU6-C1.5-16	HU6 Comb, Thickness 1.5 mm, 16-wells, well volume: 15 $\mu$ l	1	5500
HU6-C2-8	HU6 Comb, Thickness 2 mm, 8-wells, well volume: 40 $\mu$ l	1	5500
HU6-C2-12MC	HU6 Comb, Thickness 2 mm, 12-wells, well volume: 22 $\mu$ l (Multichannel Pipette Compatible)	1	5500
HU6-C2-16	HU6 Comb, Thickness 2 mm, 16-wells, well volume: 20 $\mu$ l	1	5500

The system has four casting options to provide total flexibility in gel casting either directly within the tank or externally when tank is in use.

The combs are colour Coded and height adjustable to offer complete control over loading volume and well depth to a maximum 32-sample throughput.

Coloured loading strips are available for easy well detection when loading.

Gel length is a short 6 cm ideal for rapid separations.

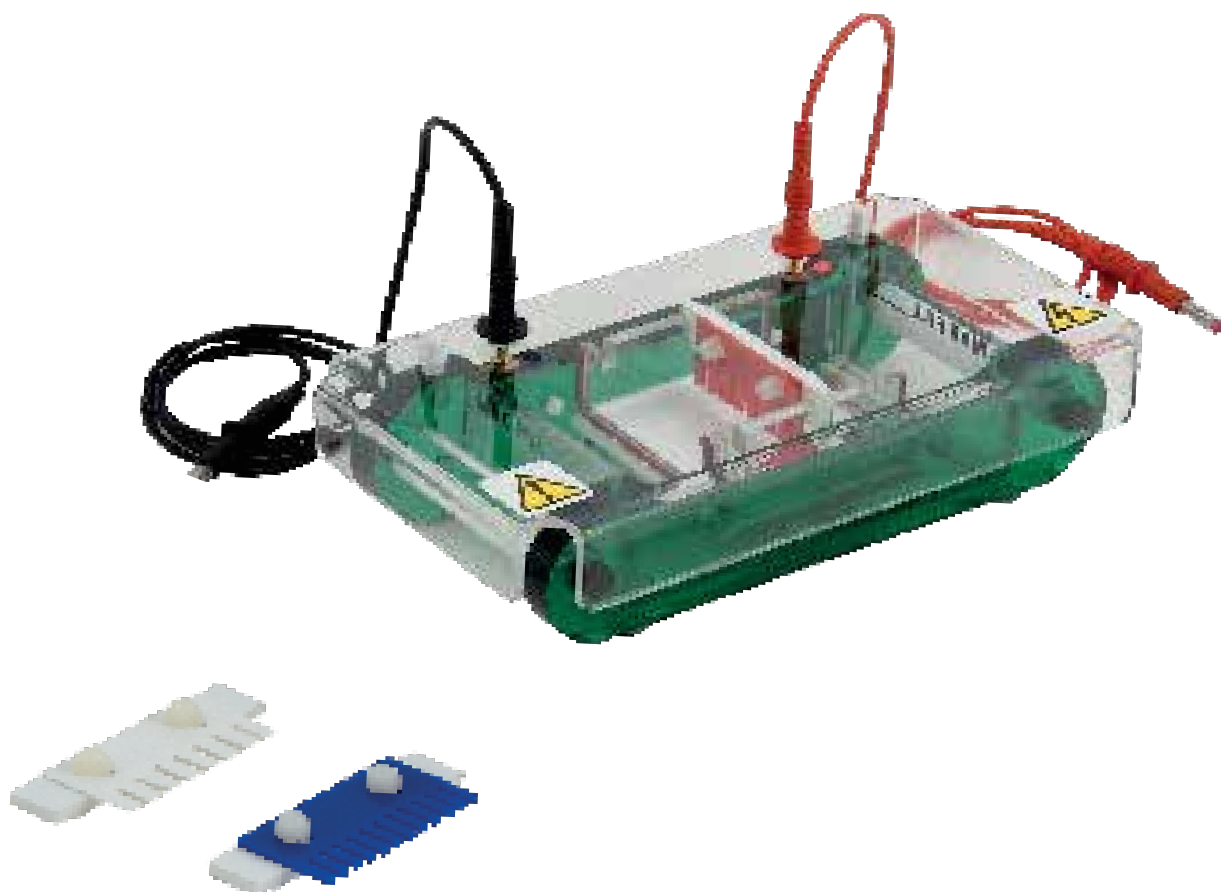
The tank is very compact reducing the buffer volume required to cover the gel, providing greater control over the voltage gradient and run-time.

UV-transparent acrylic casting tray allows user to image the gel without risk of damage due to handling.

The system has handles on the side for safe and easy transportation around the laboratory.



Specifications	
Unit Dimensions (W x L x H)	13 x 24 x 6.5 cm
Gel Dimensions (W x L)	6 x 7.5 cm
Buffer Volume	325 ml
Maximum Sample Capacity	32
Combs	2
Comb Thickness	1, 1.5 or 2 mm
Comb Throughput	8 to 16 samples
Comb Slots	2
Migration Distance Between Combs	3.5 cm
Recommended Running Voltage	70 to 90 V
Power Output Connectors (diameter)	Shrouded, 4 mm
Recommended Power Supply	Consort EV245



## HU13 Midi Horizontal Submarine Gel Electrophoresis System

Code	Product	No. Per Case	Price (₹)
HU13	Midi horizontal gel unit with removable casting tray and 2x1mm thick, 16-sample combs, coloured loading strips and buffer recirculation ports.	1	65900

### Accessories for HU13 Midi Horizontal Submarine Gel Electrophoresis System

Code	Product	No. Per Case	Price (₹)
HU13-UT	Gel casting tray 12.8 x 15 cm	1	11000
HU-BRP	Buffer Recirculation ports	2	5000
HU13-SCG	Silicon casting gates	2	6500
HU13-CU	External casting unit for 3 gel casting trays	1	14400
PT-0.2	0.2 mm thick, platinum electrode wire	2	14400
CABLE-4	1 metre power leads with shrouded 4mm power output connectors	2	9200
HU13-C1-10	HU13 Comb, Thickness 1 mm, 10-wells, well volume: 40 µl	1	6500
HU-SG	1 x Silicone Gasket for the HU	1	3000
HU13-SS	Scie-Plas Super seals	2	5500
HU13-CS	Coloured loading strips	12	4000
HU13-GS	Gel scoop 13 x 15 cm	1	9000
HU13-C1-12MC	HU13 Comb, Thickness 1 mm, 12-wells, well volume: 35 µl (Multichannel Pipette Compatible)	1	8000
HU13-C1-16	HU13 Comb, Thickness 1 mm, 16-wells, well volume: 25 µl	1	8000
HU13-C1-20	HU13 Comb, Thickness 1 mm, 20-wells, well volume: 17 µl	1	8000
HU13-C1-24	HU13 Comb, Thickness 1 mm, 24-wells, well volume: 13 µl	1	8000
HU13-C1-28MC	HU13 Comb, Thickness 1 mm, 28-wells, well volume: 13 µl (Multichannel Pipette Compatible)	1	8000
HU13-C1.5-10	HU13 Comb, Thickness 1.5 mm, 10-wells, well volume: 60 µl	1	8000
HU13-C1.5-12MC	HU13 Comb, Thickness 1.5 mm, 12-wells, well volume: 50 µl (Multichannel Pipette Compatible)	1	8000
HU13-C1.5-16	HU13 Comb, Thickness 1.5 mm, 16-wells, well volume: 35 µl	1	8000
HU13-C1.5-24	HU13 Comb, Thickness 1.5 mm, 24-wells, well volume: 20 µl	1	8000
HU13-C1.5-28MC	HU13 Comb, Thickness 1.5 mm, 28-wells, well volume: 20 µl (Multichannel Pipette Compatible)	1	8000
HU13-C2-10	HU13 Comb, Thickness 2 mm, 10-wells, well volume: 85 µl	1	8000
HU13-C2-12MC	HU13 Comb, Thickness 2 mm, 12-wells, well volume: 70 µl (Multichannel Pipette Compatible)	1	8000
HU13-C2-16	HU13 Comb, Thickness 2 mm, 16-wells, well volume: 50 µl	1	8000
HU13-C2-20	HU13 Comb, Thickness 2 mm, 20-wells, well volume: 35 µl	1	8000
HU13-C2-24	HU13 Comb, Thickness 2 mm, 24-wells, well volume: 25 µl	1	8000
HU13-C2-28MC	HU13 Comb, Thickness 2 mm, 28-wells, well volume: 25 µl (Multichannel Pipette Compatible)	1	8000

MC Indicates Multi-Channel pipette compatible

The system has four casting options to provide total flexibility in gel casting either directly within the tank or externally when tank is in use.

The combs are colour Coded and height adjustable to offer complete control over loading volume and well depth to a maximum 112 - sample throughput.

Coloured loading strips are available for easy well detection when loading.

The system has four comb positions at 3.5cm intervals along the tray for fast separation of multiple samples.

UV-transparent acrylic casting tray allows user to image the gel without risk of damage due to handling.

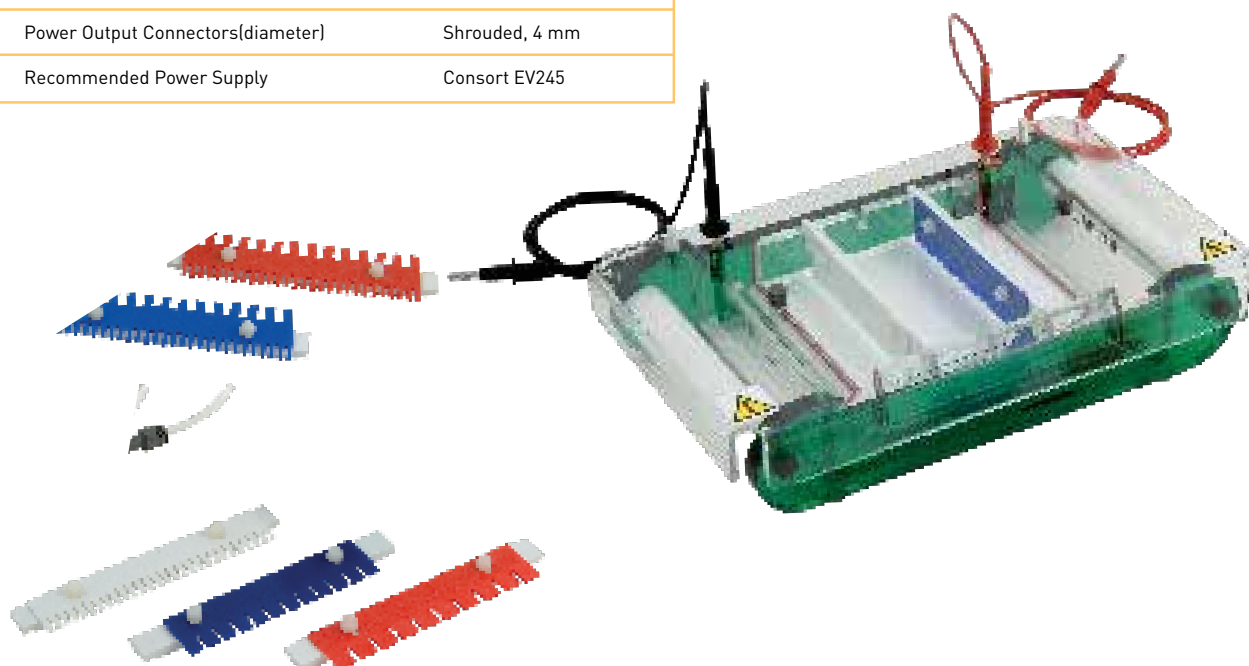
The system comes with buffer circulation ports that may be connected to a peristaltic pump for buffer circulation during electrophoresis to maintain buffer pH and prevent ionic gradient formation.

The tank is very compact reducing the buffer volume required to cover the gel, providing greater control over the voltage gradient and run-time.

The system has handles on the side for safe and easy transportation around the laboratory.

### Specifications

Unit Dimensions (W x L x H)	20 x 32 x 7 cm
Gel Dimensions (W x L)	12.8 x 15 cm
Buffer Volume	900 ml
Buffer Recirculation Ports	2
Maximum Sample Capacity	112
Combs	2
Comb Thickness	1, 1.5 or 2 mm
Comb Throughput	10 to 28 samples
Comb Slots	4
Migration Distance Between Combs	3.5 cm
Recommended Running Voltage	100 to 125V
Power Output Connectors(diameter)	Shrouded, 4 mm
Recommended Power Supply	Consort EV245



## TV50 Single Plate Mini - Gel Electrophoresis System

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Code	Vertical Mini Single Plate Mini Gel Electrophoresis unit	No. Per Case	Price (₹)
TV50	Single-plate mini-gel unit with GRM and integral lower buffer chamber, lid, 2x(10x10cm; W x H) plain glass plates, 2x1mm spacers, 2 x spacer aligners, 2 x(10x10cm) notched glass plates and 1 x 1mm thick 12-sample comb	1	70000

The system is a single plate 10 x 10 cm mini-gel unit a simple, non-cooled cost-effective solution for low throughput PAGE.

The system contains 2 and 10 gel multicasters.

The system is compatible with standard, 10 x 10cm (W x H) commercially available precast gels.

Two (2) mm thick float glass plates guarantee uniform gel thickness and even sample migration with ground edges to inhibit sample leakage during casting.

Optional TV 100 silicone gasket allows the GRM to be adapted for the 'non-eared' or short glass plates of major alternative brands.

Single screw for fast electrophoresis set-up.

Low buffer volume within the inner chamber of the GRM and bottom reservoir economises buffer consumption.

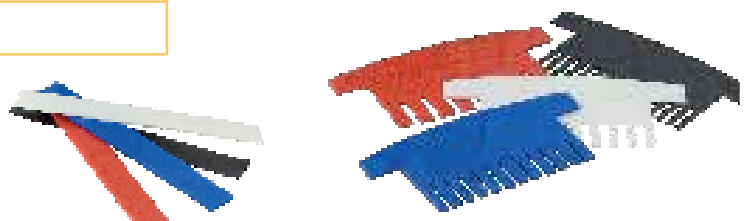
Ventilation holes in the system prevent the build-up of condensation during electrophoresis.

Colour Coded combs and spacers available in 0.75, 1, 1.5 and 2 mm thickness.

The system has a small footprint area and occupies minimal bench space.

### Specifications

Unit Dimensions (W x D x H)	21.5 x 12.5 x 13.5 cm
Bottom Reservoir Dimensions (W x D x H)	16.5 x 6 x 3.5 cm
Plate Dimensions (W x H x T)	10 x 10 x 0.2 cm
Standard Spacer Dimensions (W x H x T)	1 x 10 x 0.1 cm
Active Gel Dimensions (W x H)	8 x 8.5 cm
Maximum Sample Capacity	1 x 20
Recommended Buffer Volume	
Inner Buffer Chamber	50 ml
Lower Buffer Chamber	250 ml
Recommended Running Conditions for Denaturing/ Native PAGE Gel	Voltage 50 – 100 V(5 -10V/cm) Current 5-10mA Time 1.5 – 2.5h
Power Output Connectors (diameter)	Shrouded, 4 mm
Recommended Power Supply	Consort EV245



## TV100Y Standard & TV100YK Twin Plate Mini Gel Electrophoresis Unit with Casting

Code	TV100Y Standard & TV100YK Twin Plate Mini Gel Electrophoresis Unit	No.Per Case	Price (₹)
TV100Y	Twin-plate mini-gel unit with GRM and gel tank, lid, 2x(10x10cm;w x h) plain glass plates, 4x1 mm spacers, 2x spacer aligners, 2x(10x10cm) notched glass plates, 1x dummy plate and 2x 1mm thick 12-sample combs plus casting base and 2 x silicone seals	1	110000
TV100YK	Twin-plate mini-gel unit with GRM and cooled gel tank, with built-in cooling coil and quick-fit tubing, plus lid, 2x(10x10cm;w x h) plain glass plates, 4x1 mm spacers, 2x spacer aligners, 2x(10x10cm) notched glass plates, 1x dummy plate, 2x 1mm thick 12-sample combs, casting base and 2 x silicone seals	1	133000

The system is a twin plate 10 x 10 cm mini-gel unit designed specifically for PAGE techniques requiring self-cast gels, although precast gels may also be used.

The system contains standard casting units.

The system is compatible with standard, 10 x 10cm (W x H) commercially available precast gels.

Two (2) mm thick float glass plates guarantee uniform gel thickness and even sample migration with ground edges to inhibit sample leakage during casting.

Standard TV100Y-non-cooled + casting and Cooled TV100YK – cooled + casting versions available.

Enhanced cooling in TV100YK –snap-lock connectors allow the cooling coil to be connected to an external chiller unit for faster, higher voltage separations.

Glass plate stops within the newly modified GRM –lock the glass plates firmly into position onto soft silicone gaskets in casting base to ensure leak-free gel casting.

Single screws at either side of each gel clamping plate – act in conjunction with a counterbalanced, dovetailed silicone gasket to disperse pressure evenly along the height and breadth of the gel as the screws are tightened.

Low buffer volume within the inner chamber of the GRM and bottom reservoir economises buffer consumption.

Colour Coded combs and spacers available in 0.75, 1, 1.5 and 2 mm thickness.

The system has a small footprint area and occupies minimal bench space.

### Specifications

Code	TV100Y	TV100YK
Unit Dimensions (W x D x H)	20 x 15 x 14 cm	28 x 15 x 18 cm
Inner Tank Dimensions (W x D x H)	16.5 x 11 x 11.5 cm	16.5 x 11 x 15 cm
Plate Dimensions (W x H x T)	10 x 10 x 0.2 cm	10 x 10 x 0.2 cm
Standard Spacer Dimensions (W x H x T)	1 x 10 x 0.1 cm	1 x 10 x 0.1 cm
Active Gel Dimensions (W x H)	8 x 8.5 cm	8 x 8.5 cm
Maximum Sample Capacity	2 x 16	2 x 16
Recommended Buffer Volume	Inner Buffer Chamber 90 ml Gel Tank 1200 ml	Inner Buffer Chamber 90 ml Gel Tank 1600 ml
Recommended Running Conditions for Denaturing/ Native PAGE Gel	Voltage 50–100 V (5 -10V/cm) Current 5-10 mA Time 1.5 – 2.5 h	Voltage 100 – 150 V (10 -15 V/ cm) Current 10-15 mA Time 1 – 1.75 h
Snap Lock Connectors for Cooling Coil	Inner Diameter n/a Outer Diameter n/a	Inner Diameter 10 mm Outer Diameter 12 mm
Quick-fit Tubing	Inner Diameter n/a Outer Diameter n/a	Inner Diameter 10 mm Outer Diameter 12 mm
Casting Base Silicone Seal Dimensions (W x L x H)	1.5 x 11 x 0.8 cm	1.5 x 11 x 0.8 cm
Power Output Connectors (diameter)	Shrouded, 4 mm	Shrouded, 4 mm
Recommended Power Supply	Consort EV245	Consort EV245



TV100Y-  
non-cooled + casting



TV100YK-  
cooled + casting



Code	Accessories for TV100Y & TV100YK Standard Twin Plate Mini Gel Electrophoresis Unit	No. Per Case	Price (₹)
TCS-CC	Quick Fit Tubes for cooling coil	2	10900
TV100-PGS0.75	(10x10cm) plain glass plates with 0.75mm bonded spacers for TV100	2	9500
TV100-PGS1	(10x10cm) plain glass plates with 1 mm bonded spacers for TV100	2	9500
TV100-PG	(10x10cm) plain glass plates for TV100	2	3800
TV100-NG	(10x10cm) notched glass plates for TV100	2	8500
TV100-S0.75	0.75mm thick spacers for TV100	2	3500
TV100-S1	1 mm thick spacers for TV100	2	3500
TV100-CB	Cam Pin casting base with 2 silicone seals	1	35000
TV100-MC2	caster system for 2x(10 x10cm) gradient mini-gels	1	65500
TV100-MC10	caster system for 10x(10 x10cm) gradient mini-gels	1	83000
PT-0.2	0.2mm thick, platinum electrode wire	2	14400
CABLE-4	1 metre power leads with shrouded 4 mm power connectors	2	9200
TV100-C0.75-8MC	TV100 Combs Thickness 0.75 mm, 8-wells, well volume: 67 $\mu$ l (Multi Channel Pipette Compatible)	1	5500
TV100-PGS1.5	(10x10cm) plain glass plates with 1.5 mm bonded spacers for TV100	2	9500
TV100-PGS2	(10x10cm) plain glass plates with 2 mm bonded spacers for TV100	2	9500
TV100-DP	(10 x 10cm) dummy plate	1	2800
TV100-S0.75	0.75mm thick spacers for TV100	2	3500
TV100-S1	1 mm thick spacers for TV100	2	3500
TV100-S1.5	1.5 mm thick spacers for TV100	2	3500
TV100-S2	2 mm thick spacers for TV100	2	3500
TV100-SA	spacer aligners for TV100	2	3500
TV100-CB-Seals	Silicon Seals for cam-pin casting base	2	3200
TV100-C0.75-10	TV100 Combs Thickness 0.75 mm, 10-wells, well volume: 45 $\mu$ l	1	5000
TV100-C0.75-12	TV100 Combs Thickness 0.75 mm, 12-wells, well volume: 42 $\mu$ l	1	5000
TV100-C0.75-16MC	TV100 Combs Thickness 0.75 mm, 16-wells, well volume: 28 $\mu$ l (Multi Channel Pipette Compatible)	1	5000
TV100-C1-8MC	TV100 Combs Thickness 1 mm, 8-wells, well volume: 90 $\mu$ l (Multi Channel Pipette Compatible)	1	5000
TV100-C1-10	TV100 Combs Thickness 1 mm, 10-wells, well volume: 60 $\mu$ l	1	5000
TV100-C1-12	TV100 Combs Thickness 1 mm, 12-wells, well volume: 56 $\mu$ l	1	5000
TV100-C1-16MC	TV100 Combs Thickness 1 mm, 16-wells, well volume: 37 $\mu$ l (Multi Channel Pipette Compatible)	1	5000
TV100-C1-20	TV100 Combs Thickness 1 mm, 20-wells, well volume: 30 $\mu$ l	1	5000
TV100-C1.5-8MC	TV100 Combs Thickness 1.5 mm, 8-wells, well volume: 120 $\mu$ l (Multi Channel Pipette Compatible)	1	5000
TV100-C1.5-10	TV100 Combs Thickness 1.5 mm, 10-wells, well volume: 90 $\mu$ l	1	5000
TV100-C1.5-12	TV100 Combs Thickness 1.5 mm, 12-wells, well volume: 84 $\mu$ l	1	5000
TV100-C1.5-16MC	TV100 Combs Thickness 1.5 mm, 16-wells, well volume: 55 $\mu$ l (Multi Channel Pipette Compatible)	1	5000
TV100-C2-8MC	TV100 Combs Thickness 2 mm, 8-wells, well volume: 180 $\mu$ l (Multi Channel Pipette Compatible)	1	5000
TV100-C2-10	TV100 Combs Thickness 2 mm, 10-wells, well volume: 120 $\mu$ l	1	5000
TV100-C2-12	TV100 Combs Thickness 2 mm, 12-wells, well volume: 112 $\mu$ l	1	5000

MC Indicates Multi-Channel pipette compatible

## Power Supplies

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Code	Product	No. per case	Price (₹)
EV245	Power Supply	1	104000
4/4 MMA	4mm -to- 4mm adapter for power supplies with 4mm output terminals	2	4000
4/2 MMA	4mm -to- 2mm adapter for power supplies with 2mm output terminals	2	4000
2/4 MMA	2mm -to- 4mm adapter for power supplies with 4mm output terminals	2	4000

### Specifications



Code	Consort EV245
Voltage	0...400V
Current	0...500mA
Power	0...50W
Parameter Range	1...100% of full scale
Timer	0...99:59h
Volt- Hours	0...99.99kVh
Display	LCD, 2 x 16 characters
Resolution	1V, 1mA, 1W
Programs	9 x 9 set of parameters
Outputs	3 in parallel, 4mm sockets
Minimum Load Resistance	30Ω
Buffer Depletion Detection	On/off, programmable
No Load Detection	On/off, programmable
Ground Leakage Detection	✓
Overload Detection	✓
Computer Control	✓
Data/ Logging	3600 values
Rs232	9600b/s
Ambient Temperature	0...40°C
Relative Humidity	0...95% non condensing
Power Requirements	210...250VAC, 50/60Hz, 75W
Dimensions (W*D*H)	24x20x13 cm
Weight	3 Kg

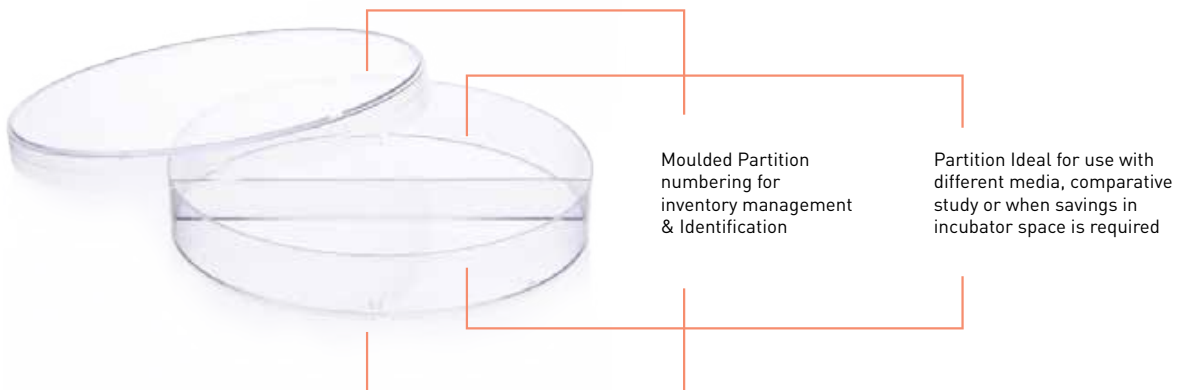
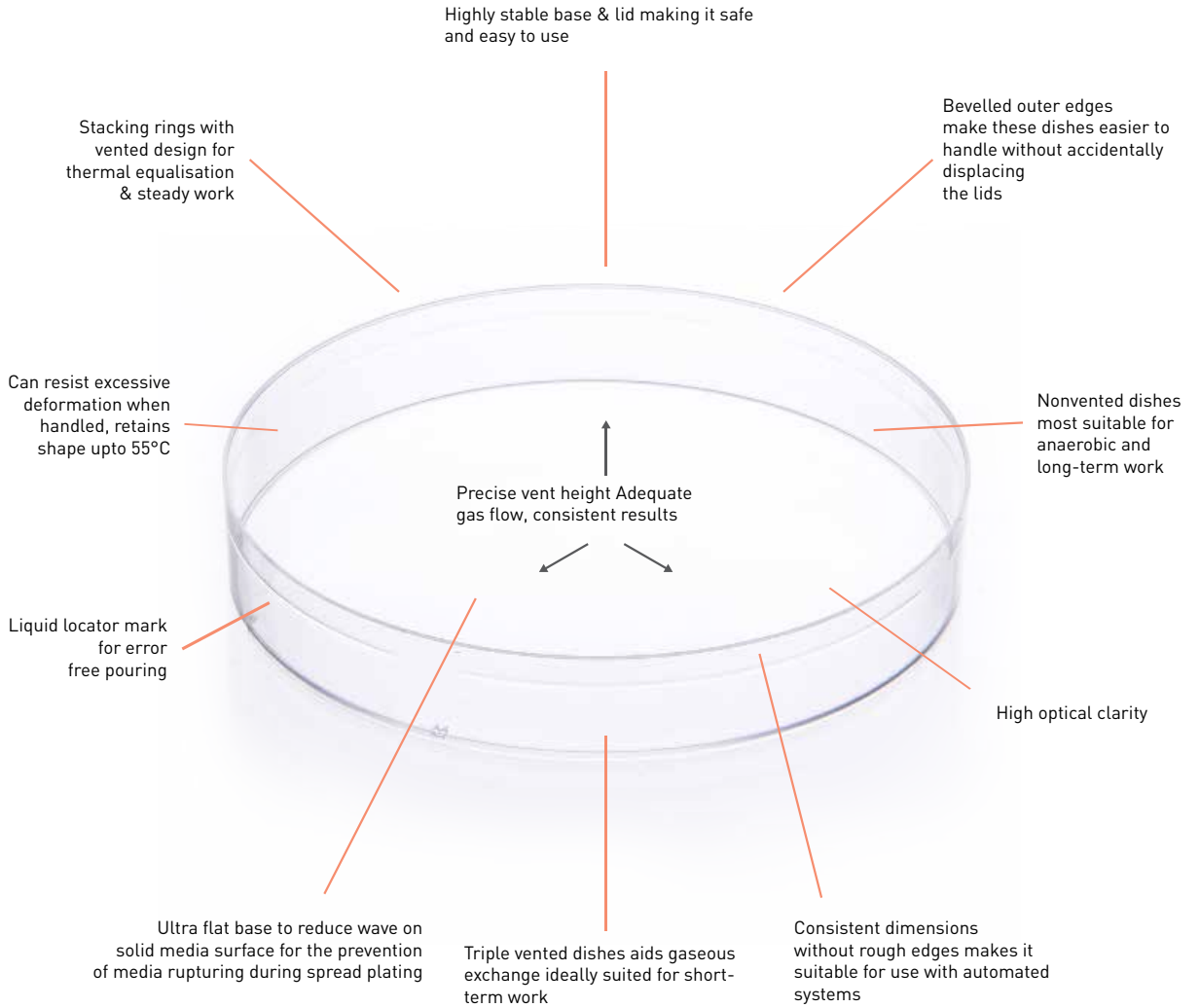




**MICRO BIOLOGY**

2 Compartment  
3 Compartment  
Soft Inoculation Loop  
Cell Spreaders

## PETRI DISH FEATURES



## Petri Dish, PS

### Petri Dish - Aseptic

Code	Diameter (mm)	Height (mm)	Compartment	Vented	Packing	No. per Case	Price / Case (₹)	Price /20 Case (₹)
P10901	90	15.8	No	3 Vent	Sleeve of 20	480	2991	56231
P10902	90	15.8	No	3 Vent	Individual Wrapped	380	2677	50325
P10903	90	15.8	No	0 Vent	Sleeve of 20	480	2991	56231
P10904	90	15.8	No	0 Vent	Individual Wrapped	380	2677	50328

### Petri Dish - Gama Radiated Sterile

Code	Diameter (mm)	Height (mm)	Compartment	Vented	Packing	No. per Case	Price / Case (₹)	Price /20 Case (₹)
P10905	90	15.8	No	3 Vent	Sleeve of 20	480	3312	62258
P10906	90	15.8	No	3 Vent	Sleeve of 10	480	3396	63844
P10907	90	15.8	No	3 Vent	Individual Wrapped	380	3011	56608
P10908	90	15.8	No	0 Vent	Sleeve of 20	480	3312	62258
P10909	90	15.8	No	0 Vent	Sleeve of 10	480	3396	63844
P10910	90	15.8	No	0 Vent	Individual Wrapped	380	3011	56608

### Petri Dish - Gama Radiated Sterile, Double Wrapped

Code	Diameter (mm)	Height (mm)	Compartment	Vented	Packing	No. per Case	Price / Case (₹)
P10928	90	15.8	No	0 Vent	Sleeve of 18	432	3477
P10927	90	15.8	No	0 Vent	Sleeve of 8	384	3262

Abdos high quality disposable Petri Dishes are suitable for all microbiological applications manufactured as per ISO 24998 : 2008 'Plastics laboratory ware — Single-use

Robust dimensional accuracy of 90 mm ensures compatibility with most automated systems.

Extremely high optical clarity for easy view on microscope.

Abdos Petri Dishes retain their shape upto 55° C.

Vented Dishes have elevated lid that allows for superior gas exchange and evaporation.

Non-Vented Dishes have flat lid that prevents evaporation encouraging long incubation period and anaerobic application.

Aseptic Dishes are manufactured in clean room under controlled low bio-burden conditions for best performance in all applications.

Easy to stack.

Shallow dish design allow for maximum use of incubator space.

Abdos Petri Dishes are also available in two & three compartment that enable parallel testing of single sample using different agar, solvents and reagents.

Sterile Plates has been validated according to EN ISO 11137-2; 2012 for SAL 10<sup>-6</sup>



**2 Compartment Petri Dish - Aseptic**

Code	Diameter (mm)	Height (mm)	Compartment	Vented	Packing	No. per Case	Price /Case (₹)
P10911	90	15.80	2	3 Vent	Sleeve of 20	480	3881
P10912	90	15.80	2	3 Vent	Individual Wrapped	380	3465
P10913	90	15.80	2	0 Vent	Sleeve of 20	480	3881
P10914	90	15.80	2	0 Vent	Individual Wrapped	380	3465

**2 Compartment Petri Dish - Gama Radiated Sterile**

Code	Diameter (ml)	Height (mm)	Compartment	Vented	Packing	No. per Case	Price /Case (₹)
P10915	90	15.80	2	3 Vent	Sleeve of 20	480	4302
P10916	90	15.80	2	3 Vent	Individual Wrapped	380	3891
P10917	90	15.80	2	0 Vent	Sleeve of 20	480	4302
P10918	90	15.80	2	0 Vent	Individual Wrapped	380	3891

**3 Compartment Petri Dish - Aseptic**

Code	Diameter(mm)	Height (mm)	Compartment	Vented	Packing	No. per Case	Price /Case (₹)
P10919	90	15.80	3	3 Vent	Sleeve of 20	480	4929
P10920	90	15.80	3	3 Vent	Individual Wrapped	380	4234
P10921	90	15.80	3	0 Vent	Sleeve of 20	480	4929
P10922	90	15.80	3	0 Vent	Individual Wrapped	380	4234

**3 Compartment Petri Dish - Gama Radiated Sterile, PS**

Code	Diameter (mm)	Height (mm)	Compartment	Vented	Packing	No. per Case	Price /Case (₹)
P10923	90	15.80	3	3 Vent	Sleeve of 20	480	5459
P10924	90	15.80	3	3 Vent	Individual Wrapped	380	4919
P10925	90	15.80	3	0 Vent	Sleeve of 20	480	5459
P10926	90	15.80	3	0 Vent	Individual Wrapped	380	4919



## Soft Inoculation Loop Gama Radiated Sterile, ABS

118

Code	Capacity (µl)	Colour	Length (mm)	Packing	No. Per Case	Price / Case (₹)
P10985	1 µl loop + Incorporated Needle	White	200	Sleeve of 20	2000	8500
P10986	1 µl loop + Incorporated Needle	White	200	Individually Wrapped	500	3055
P10987	10 µl loop + Incorporated Needle	Blue	200	Sleeve of 20	2000	8500
P10988	10 µl loop + Incorporated Needle	Blue	200	Individually Wrapped	500	3055

Smooth surface, provide uniform and gentle streaking without damaging the gel surface.

Available in individual wrapped pack and zip lock sleeve that eliminates risk of contamination.

Polygonal shaft improves grip, assists orientation and makes operation easy.

Sterile loops has been validated according to EN ISO 11137-2; 2012 for SAL 10<sup>-6</sup>



STERILE R



## Cell Spreaders Gama Radiated Sterile, PP

119

Code	Shape	Length (mm)	Blade Width (mm)	Colour	Packing	No. Per Case	Price / Case (₹)
P10989	Triangle Shaped	215	30	Blue	Individually Wrapped	100	1742
P10990	Triangle Shaped	240	60	Yellow	Individually Wrapped	100	2596
P10991	T - Shaped	140	35	Blue	Individually Wrapped	400	5824

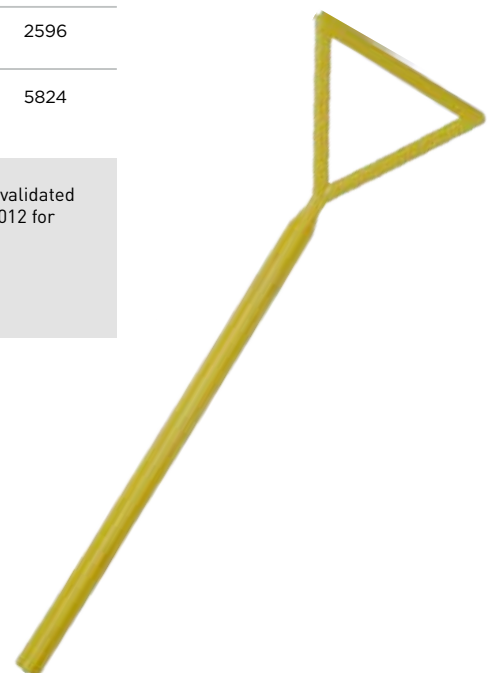
Cell spreaders are designed to spread and disperse liquid onto the surface of an agar plate without gouging or cutting the medium.

Sterile Cell Sperader has been validated according to EN ISO 11137-2; 2012 for SAL 10<sup>-6</sup>

Available in Triangular and T-shaped.



STERILE R



**BOTTLES &  
CARBOYS**



Narrow Mouth

Wide Mouth

Jerrican

Aspirator

& More



## Narrow Mouth Bottle, PP

120

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price / Case (₹)
P11135	4	12.2	39	100	760
P11136	8	17.5	42.3	100	950
P11137	15	17.5	56.1	100	1140
P11138	30	17.5	60	12	194
P11131	60	17.5	82.4	12	251
P11132	125	21	97.6	12	331
P11133	250	21	130.7	12	547
P11134	500	24.6	165.5	12	730

These bottles come with inner thread for superior sealing and better security.

These bottles are used for packing, shipping and storage purpose.

Superior chemical resistance.

Complete emptying is guaranteed through inclination of shoulders.



## Narrow Mouth Bottle, LDPE

121

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price/ Case (₹)
P11145	4	12.2	39	100	810
P11146	8	17.5	42.3	100	855
P11147	15	17.5	56.1	100	950
P11148	30	17.5	60	12	160
P11141	60	17.5	82.4	12	205
P11142	125	21	97.6	12	285
P11143	250	21	130.7	12	445
P11144	500	24.6	165.5	12	547

These bottles come with inner thread for superior sealing and better security.

These bottles are used for packing, shipping and storage purpose.

Superior chemical resistance.

Complete emptying is guaranteed through inclination of shoulders.

Suitable for storage of low densed liquids.



122

## Narrow Mouth Bottle, HDPE

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price / Case (₹)
P11155	4	12.2	39	100	760
P11156	8	17.5	42.3	100	855
P11157	15	17.5	56.1	100	1045
P11158	30	17.5	60	12	171
P11151	60	17.5	82.4	12	228
P11152	125	21	97.6	12	308
P11153	250	21	130.7	12	490
P11154	500	24.6	165.5	12	604

These bottles come with inner thread for superior sealing and better security.

These bottles are used for packing, shipping and storage purpose.

Superior chemical resistance.

Complete emptying is guaranteed through inclination of shoulders.

Suitable for storage of low densed liquids.



123

## Amber Narrow Mouth Bottle, HDPE

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price / Case (₹)
P11155A	4	12.2	39	100	855
P11156A	8	17.5	42.3	100	1045
P11157A	15	17.5	56.1	100	1330
P11158A	30	17.5	60	12	217
P11151A	60	17.5	82.4	12	285
P11152A	125	21	97.6	12	388
P11153A	250	21	130.7	12	604
P11154A	500	24.6	165.5	12	809

These bottles come with inner thread for superior sealing and better security.

Opaque amber colour reduces UV light transmissions to protect light sensitive samples.

These bottles are used for packing, shipping and storage purpose.

Superior chemical resistance.

Complete emptying is guaranteed through inclination of shoulders.

Suitable for storage of low densed liquids.



## Narrow Mouth Bottle with Sealing Cap, HDPE

124

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price / Case (₹)
P11111	50	17.5	84	12	530
P11112	100	17.5	103	12	530
P11113	250	22	136	12	800
P11114	500	22	170	6	495
P11115	1000	22	222	6	680

These bottles come with secure sealing cap for better security and long-term storage.

Screw cap with opening-off seal, its use is recommended when you need to preserve the content after the filling.

These bottles are used for packing, shipping and storage purpose.

Complete emptying is by through the inclination of shoulders.

Suitable for storage of low densed liquids.

Superior chemical resistance.



## Narrow Mouth Bottle, LDPE

125

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price/ Case (₹)
P11121	50	18.5	76	12	620
P11122	100	18.5	115	12	723
P11123	250	23	138	12	915
P11124	500	23	165	6	560
P11125	1000	34.5	213	6	905
P11126	2000	34.5	273	3	860

These bottles come with inner cap for superior sealing and better security.

Precise graduation allows good view of the product and filling the bottle without the use through volumetric products (like Beakers or Cylinders).

These bottles are used for packing, shipping and storage purpose.

Complete emptying is by through the inclination of shoulders.

On the shoulder of the bottle and cap there are holes that allow use of slips or seals extremely useful during transportation.

Superior chemical resistance.

Suitable for storage of low densed liquids.



## Wide Mouth Bottle, PP

126

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price / Case (₹)
P11161	60	24.8	81	12	296
P11162	125	32	94.5	12	410
P11163	250	32.2	126.7	12	627
P11164	500	47.5	163.2	12	844

These bottles come with inner thread for superior sealing and better security.

Wide mouth allows for easy filling and emptying of the bottle.

Superior chemical resistance.

These bottles are used for packing, shipping and storage purpose.

Complete emptying is guaranteed through inclination of shoulders.



## Wide Mouth Bottle, LDPE

127

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price/ Case (₹)
P11171	60	24.8	81	12	239
P11172	125	32	94.5	12	331
P11173	250	32.2	126.7	12	513
P11174	500	47.5	163.2	12	695

These bottles come with inner thread for superior sealing and better security.

Wide mouth allows for easy filling and emptying of the bottle.

Superior chemical resistance.

These bottles are used for packing, shipping and storage purpose.

Complete emptying is guaranteed through inclination of shoulders.



## Wide Mouth Bottle, HDPE

128

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price / Case (₹)
P11181	60	24.8	81	12	262
P11182	125	32	94.5	12	365
P11183	250	32.2	126.7	12	570
P11184	500	47.5	163.2	12	775

These bottles come with inner thread for superior sealing and better security.

Wide mouth allows for easy filling and emptying of the bottle.

Superior chemical resistance.

These bottles are used for packing, shipping and storage purpose.

Complete emptying is guaranteed through inclination of shoulders.



## Amber Wide Mouth Bottle, HDPE

129

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price/ Case (₹)
P11181A	60	24.8	81	12	319
P11182A	125	32	94.5	12	445
P11183A	250	32.2	126.7	12	695
P11184A	500	47.5	163.2	12	935

These bottles come with inner thread for superior sealing and better security.

Opaque amber colour reduces UV light transmissions to protect light sensitive samples.

Wide mouth allows for easy filling and emptying of the bottle.

These bottles are used for packing, shipping and storage purpose.

Superior chemical resistance.

Complete emptying is guaranteed through inclination of shoulders.



## Wide Mouth Bottle with Sealing Cap, HDPE

130

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price/ Case (₹)
P11201	250	30	140	12	1090
P11202	500	30	179	6	700
P11203	750	30	214	6	830
P11204	1000	30	218	6	920

These bottles come with secure sealing cap for better security and long-term storage.

Screw cap with opening-off seal, Its use is recommended when you need to preserve the contents after filling.

These bottles are used for packing, shipping and storage purpose.

Complete emptying is by through the inclination of shoulders.

Superior chemical resistance.

Suitable for the storage of dense fluids, granulates and powders.



## Wide Mouth Bottle Graduated, LDPE

131

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price/ Case (₹)
P11211	50	24	77	12	620
P11212	100	24	89	12	665
P11213	250	34.5	126	12	955
P11214	500	34.5	161	6	510
P11215	1000	45	201	6	900
P11216	2000	45	250	6	1700

These bottles come with inner cap for superior sealing and better security.

They are equipped with inner-cap for a better seal and with holes on the shoulder and on the cap to enable the use of security seals.

Precise graduation allows good view of the product and filling the bottle without the use through volumetric products (like Beakers or Cylinders).

These bottles are used for packing, shipping and storage purpose.

Complete emptying is through the inclination of shoulders.

Superior chemical resistance..

Suitable for storage of low densed liquids.



## Wide Mouth Bottle with Handle, HDPE

132

Code	Capacity (Its)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price / Case (₹)
P11261	5	88	280	6	3600
P11262	10	88	350	6	4300

These bottles come with inner cap for superior sealing and better security.

These bottles come with stable carrying handle for easy movement.

Suitable for storage of low densed liquids, chemicals, standards, granulates and powders of liquids, granulates and powders.

Superior chemical resistance.



121°C



## Wide Mouth Bottle with Handle, HDPE

133

Code	Capacity (Its)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price/ Case (₹)
P11263	5	85	350	6	5200
P11264	10	100	420	6	6900
P11265	15	115	460	3	5800
P11266	20	130	500	3	6700
P11267	25	130	570	3	8000

These bottles come with inner cap for superior sealing and better security.

These are very strong and durable for extended use over time.

These bottles come with stable carrying handle for easy movement.

Superior chemical resistance.

Suitable for storage of low densed liquids, chemicals, standards, granulates and powders of liquids, granulates and powders.



121°C



## Jerrican, HDPE

134

Code	Capacity (lts)	Dimensions (mm)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price / Case (₹)
P11401	1	69 x 118	21	183	3	800
P11402	2	79 x 143	21	235	3	1000
P11403	5	120 x 225	44	280	1	600
P11404	10	145 x 275	44	340	1	820
P11405	15	160 x 315	44	390	1	1090
P11406	20	170 x 340	44	425	1	1190
P11407	25	195 x 355	44	500	1	1550
P11408	30	195 x 355	44	550	1	1750

These jerrican come with secure sealing cap for better security and long-term storage.

These jerrican are used for storing and shipping reagents, chemicals, culture media, and standards.

These jerrican come with space saving design and durable molded-in design for better control during pouring.

Superior chemical resistance.



121°C



## Jerrican with Stopcock, HDPE

135

Code	Capacity (lts)	Dimensions (mm)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price/ Case (₹)
P11411	10	150 x 250	44	360	1	1505
P11412	20	180 x 320	46	450	1	2900

These jerrican come with secure sealing cap for better security and long-term storage.

These jerrican are used for storing and shipping reagents, chemicals, culture media, and standards.

Superior chemical resistance.

Comes with high quality and durable stopcock or tap for easy withdrawal of liquids, chemicals, reagents, culture media and standards.

These jerrican come with space saving design and durable molded-in design for better control during pouring.



121°C





## Aspirator Bottle with Stopcock, HDPE

136

Code	Capacity (lts)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price / Case (₹)
P11501	5	51	355	1	1165
P11502	10	51	430	1	1900
P11504	20	51	510	1	2740
P11510	Spare Stopcock	9	NA	1	650

These bottles come with secure sealing cap for better security and long-term storage.

These bottles are used to storing and shipping reagents, chemicals, culture media, and standards.

These are very strong and durable for extended use over time with a strong carrying handle.

Comes with high quality and durable stopcock or tap for easy withdrawal of liquids, chemicals, reagents, culture media and standards.

Can be used at temperature below 0° C.

Superior chemical resistance.



121° C



## Carboy with Stopcock, HDPE

137

Code	Capacity (lts)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price/ Case (₹)
P11507	10	51	430	1	2044
P11503	15	51	465	1	2500
P11508	20	51	510	1	2900
P11505	25	80	580	1	3900
P11506	50	80	715	1	5300
P11510	Spare Stopcock	9	NA	1	650

These carboys come with secure sealing cap for better security and long-term storage.

These carboys are used for storing and shipping reagents, chemicals, culture media, and standards.

These are very strong and durable for extended use over time with a strong carrying handle on both sides of the carboy.

Comes with high quality and durable stopcock or tap for easy withdrawal of liquids, chemicals, reagents, culture media and standards.

Can be used at temperature below 0° C.

Superior chemical resistance.



121° C



## Aspirator Bottle with Stopcock, HDPE

138

Code	Capacity (lts)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price / Case (₹)
P11511	30	250	440	1	5300
P11512	50	250	650	1	7900
P11513	100	250	800	1	11900
P11510	Spare Stopcock	9	NA	1	650

These carboys come with secure sealing cap for better security and long-term storage.

These carboys are used for storing and shipping reagents, chemicals, culture media, and standards.

These heavy-duty carboys are large with wide mouth capable of handling large volume.

Can be used at temperature below 0° C.

These are very strong and durable for extended use over time with a strong carrying handle on both sides of the carboy.

Comes with high quality and durable stopcock or tap for easy withdrawal of liquids, chemicals, reagents, culture media and standards.

Superior chemical resistance



## Spray Bottle, LDPE

139

Code	Capacity (ml)	No. per Case	Price/ Case (₹)
P11191	500	6	3300
P11192	1000	6	3600
P11200	Spare Pump	1	380

These bottles are used to spray, clean and disinfect bench top space, laminar flow, incubators, bench top instruments and production floor.

Can also be used for spraying into areas difficult to access as well as applications in thin layer chromatography.

Spray bottles have stable smooth operated pump trigger and adjustable spray nozzle that can be regulated from finest mist to precise liquid jet.

Superior chemical resistance.



## Dropping Bottle, LDPE

140

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price / Case (₹)
P11301	60	23.6	2	12	296
P11302	125	22.8	8	12	433

These dropping bottles are used for routine storage and pouring applications in laboratory.

these bottles can be squeezed to ensure precise and steady dropping of liquid from the bottle.

moulded from high quality virgin low-density polyethylene to ensure excellent results.

superiour chemical resistance.



## Dropping Bottle Euro Type, LDPE

141

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price / Case (₹)
P11305	30	17.5	60	12	479
P11306	60	17.5	82.4	12	832
P11307	125	23.6	94.2	12	912
P11308	250	22.8	101.8	12	1322

These dropping bottles are used for routine storage and pouring applications in laboratory.

these bottles can be squeezed to ensure precise and steady dropping of liquid from the bottle.

moulded from high quality virgin low-density polyethylene to ensure excellent results.

superiour chemical resistance.



## Wash Bottle, LDPE

142

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price/ Case (₹)
P11311	250	24	148	12	604
P11312	500	23.8	173	6	433

These wash bottles are used for routine storage and pouring applications in the laboratory.

These bottles have an internal spray to ensure precise dropping of liquid from the bottle.

Molded from high quality virgin low-density polyethylene to ensure excellent result.

Superior chemical resistance.



## Jars with Screw Cap, HDPE

143

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price / Case (₹)
P11601	50	36	60	12	898
P11602	100	36	70	12	932
P11603	250	50	90	12	1010
P11604	500	70	103	6	730
P11605	750	70	120	6	841
P11606	1000	86	127	6	1040
P11607	2000	86	185	3	701

These jars come with superior sealing for better security.

Wide mouth allows for easy filling and emptying of the bottle.

Superior chemical resistance.

Suitable for storage of low densed liquids, chemicals, standards, granulates and powders of liquids, granulates and powders.



## Wide Mouth Jars with Pressure Seal Cap, HDPE

144

Code	Capacity (ml)	Mouth Diameter (mm)	Height (mm)	No. per Case	Price/ Case (₹)
P11611	500	86	74	12	1795
P11612	1000	86	130	12	2190
P11613	1500	86	180	12	2580
P11614	2000	86	185	6	1461

These jars come with superior sealing for better security.

The self-sealing pressure cap is tamper proof.

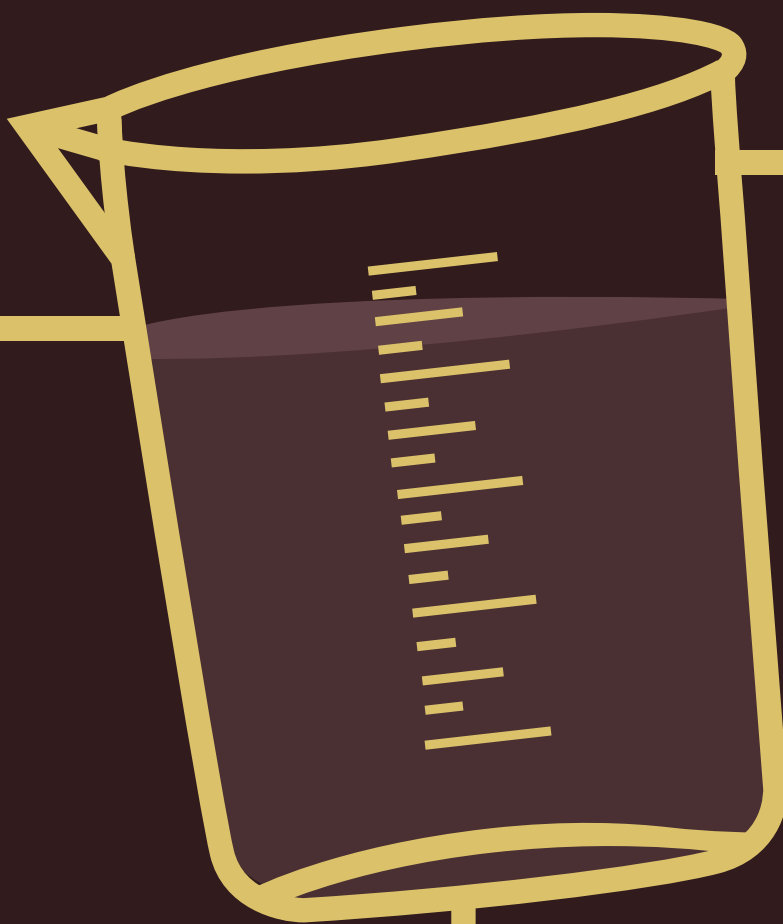
Wide mouth allows for easy filling and emptying of the bottle.

Superior chemical resistance.

Suitable for storage of low densed liquids, chemicals, standards, granulates and powders of liquids, granulates and powders.



GENERAL LABORATORY  
PRODUCTS



Beakers  
Measuring Cylinder  
Workstation Storage  
Magnetic Stirrer Bar  
& More

## Beakers without Handle, PP & TPX

### Beakers without Handle, PP

Code	Capacity (ml)	Height (mm)	No. per Case	Price /Case (₹)
P50601	50	59	12	239
P50602	100	73	12	262
P50603	250	94	12	467
P50604	500	128	6	365
P50605	1000	150	4	498
P50606	2000	192	4	874
P50607	5000	263	2	1070
P50608	10000	328	1	939



### Beakers without Handle, TPX

Code	Capacity (ml)	Height (mm)	No. per Case	Price /Case (₹)
P50701	50	59	12	487
P50702	100	73	12	677
P50703	250	94	12	1402
P50704	500	128	6	1277
P50705	1000	150	4	1315
P50706	2000	192	4	2115
P50707	5000	263	2	2093
P50708	10000	328	1	2092



Manufactured in states of the art moulding facility using high purity virgin polypropylene (PP) and polymethylpentene (TPX).

PP Material conforming to US FDA 21 CFR.

TPX Material have distinct advantage of highly transparent & chemical resistivity, also have higher thermal withstand capacity over PP beakers.

Tapered stacking style saves space and makes it easy to handle.

All sizes have easy to read silk-screened graduations.

Precise pouring spouts.



## Beakers with Handle, PP & TPX

### Beakers with Handle, PP

Code	Capacity (ml)	Height (mm)	No. per Case	Price /Case (₹)
P50802	100	73	6	205
P50803	250	94	6	353
P50804	500	128	6	627
P50805	1000	150	4	821
P50806	2000	192	4	1231
P50807	5000	263	2	1355
P50808	10000	330	1	1400



### Beakers with Handle, TPX

Code	Capacity (ml)	Height (mm)	No. per Case	Price /Case (₹)
P50902	100	73	6	451
P50903	250	94	6	814
P50904	500	128	6	1467
P50905	1000	150	4	1719
P50906	2000	192	4	2538
P50907	5000	263	2	2222
P50908	10000	330	1	2212

Manufactured in states of the art moulding facility using high purity virgin polypropylene (PP) and polymethylpentene (TPX).

PP Material conforming to US FDA 21 CFR.

TPX Material have distinct advantage of highly transparent & chemical resistivity, also have higher thermal withstand capacity over PP beakers.

Tapered stacking style saves space and makes it easy to handle.

All sizes have easy to read silk-screened graduations.

Precise pouring spouts.



147

## Measuring Cylinder, PP Class "B"

Code	Capacity (ml)	Sub division (ml)	Error limit (ml)	Height (mm)	No. per Case	Price/Case (₹)
P50301	10	0.2	±0.2	138	12	1368
P50302	25	0.5	±0.5	170	12	1630
P50303	50	1	±1	198	12	1847
P50304	100	1	±1	257	6	1180
P50305	250	2	±2	314	6	1898
P50306	500	5	±5	344	3	1228
P50307	1000	10	±10	412	3	1593
P50308	2000	20	±20	482	3	3813

Molded in large, easy to read graduations.

Molded in highest quality translucent virgin polypropylene.

Cylinders have generous pour spout for smooth flow of liquid during pouring.

Hexagonal shape gives stability to the base.



148

## Measuring Cylinder, TPX Class "B"

Code	Capacity (ml)	Sub division (ml)	Error limit (ml)	Height (mm)	No. per Case	Price/Case (₹)
P50401	10	0.2	±0.2	138	12	2166
P50402	25	0.5	±0.5	170	12	2880
P50403	50	1	±1	198	12	3306
P50404	100	1	±1	257	6	2033
P50405	250	2	±2	314	6	3249
P50406	500	5	±5	344	3	2411
P50407	1000	10	±10	412	3	3663
P50408	2000	20	±20	482	3	6477

These transparent graduated cylinders have excellent value.

Molded in large neat and easy to read graduations.

Hexagonal shape gives stability to the base.

Cylinders have generous pour spout for smooth flow of liquid during pouring.





## Measuring Cylinder, TPX Class "A"

149

Code	Capacity (ml)	Sub division (ml)	Error limit (ml)	Height (mm)	No. per Case	Price/Case (₹)
P50501	10	0.2	±0.1	138	1	670
P50502	25	0.5	±0.25	170	1	770
P50503	50	1	±0.5	198	1	880
P50504	100	1	±0.5	257	1	1100
P50505	250	2	±1	314	1	1700
P50506	500	5	±2.5	343	1	2520
P50507	1000	10	±5	412	1	3700
P50508	2000	20	±10	482	1	6100

These transparent graduated cylinders have excellent value.

Molded in large neat and easy to read graduations.

Hexagonal shape gives stability to the base.

Cylinders have generous pour spout for smooth flow of liquid during pouring.

Meet accuracy requirements of class A under "DIN 12681/ISO 6706".

Supplied with conformity test certificate that indicates batch number and year of production that is also marked on the cylinder.



121°C



## Scoop, HDPE

150

Code	Capacity (ml)	Total Length (mm)	No. per Case	Price /Case (₹)
P11901	100	180	12	2245
P11902	250	240	12	2920
P11903	500	300	6	2094
P11904	1000	360	6	2470
P11905	2500	400	3	2021

These scoops used for withdrawal and movement of solid, granulates, gels and other samples.

With precise formed filling edge and comfortable, stable and robust handle.

Natural in colour.

Round bottom for better use.

Superior chemical resistance.



## Plain and Vacuum Desiccator

Code	Product	Material	Plate Diameter (mm)	Inside Diameter (mm)	Flange Outer Diameter (mm)	Overall Height (mm)	No. per case	Price/ Case (₹)
E11601	Plain Desiccator	PP / PP	150	145	170	210	1	982
E11602	Plain Desiccator	PP / PP	200	195	230	270	1	1839
E11603	Plain Desiccator	PP / PP	250	240	275	330	1	2550
E11604	Plain Desiccator	PP / PP	300	297	338	410	1	3886
E11605	Vacuum Desiccator	PP / PC	150	145	170	210	1	1668
E11606	Vacuum Desiccator	PP / PC	200	195	230	270	1	2555
E11607	Vacuum Desiccator	PP / PC	250	240	275	330	1	3208
E11608	Vacuum Desiccator	PP / PC	300	297	338	410	1	4602
E11609	All Clear Vacuum Desiccator	PC / PC	150	145	170	210	1	2045
E11610	All Clear Vacuum Desiccator	PC / PC	200	195	230	270	1	3137
E11611	All Clear Vacuum Desiccator	PC / PC	250	240	275	330	1	4024
E11612	All Clear Vacuum Desiccator	PC / PC	300	297	338	410	1	5831

### SPARE ACCESSORIES

CODE	Product	No. per case	Price/ Case(₹)
E11620	Stop Cock for Vacuum Desiccator	1	714
E11621	Silicone Ring for 150 mm Desiccator	1	130
E11622	Silicone Ring for 200 mm Desiccator	1	191
E11623	Silicone Ring for 250 mm Desiccator	1	240
E11624	Silicone Ring for 300 mm Desiccator	1	306



Plain Desiccator

### Plain Desiccator

Desiccators are enclosures containing desiccants for preserving moisture sensitive products.

These desiccator are moulded in high quality plastics which is light and easy to handle.

Silicone O-ring assures tight seal down to 0°C without using grease.

Bottom part of the desiccators comes with thick perforated polypropylene disc with big holes in the middle for easy lifting.

Use with disposable or reusable desiccant.

Bottom part of the desiccators is white in colour.



Vacuum Desiccator

### Vacuum Desiccator

Vacuum desiccator are molded in high quality plastics which is light and easy to handle.

Bottom part of the desiccators comes with thick perforated polypropylene disc with big holes in the middle for easy lifting.

Polypropylene stopcock with PTFE.

Silicone O-ring assures tight seal down to 0°C without using grease.

Bottom part of the desiccators is white in colour / transparent in all clear vacuum desiccator.



All Clear Vacuum Desiccator

## Vacuum Gauge Round Desiccator

CODE	Product	Capacity (Lts)	D x H (mm)	Colour	No. per case	Price /Case (₹)
E11617	Vacuum Gauge Round Desiccator	6	242 x 354	Natural	1	25000
E11617 A	Vacuum Gauge Round Desiccator	6	243 x 354	Amber	1	33000
E11618	Vacuum Gauge Round Desiccator	10	308 x 400	Natural	1	31000
E11618 A	Vacuum Gauge Round Desiccator	10	308 x 400	Amber	1	38000
E11619	Vacuum Gauge Round Desiccator	20	385 x 475	Natural	1	38000
E11619 A	Vacuum Gauge Round Desiccator	20	385 x 475	Amber	1	45000

These vacuum desiccator feature a round design with light weight yet high tensile strength.

Maximum vacuum of 1 Torr (1.33 x 10<sup>-4</sup> Mpa) for 72 hours.

High quality silicone gasket ensures greaseless airtight seal for cost effective and clean test environment.

Flange lock holds the top and the bottom together during non- vacuum conditions.

UV-blocking models minimizes damages and discolouration of light-sensitive samples.

Vacuum gauge is attached at the centre of the lid for easy vacuum level checking.

Highly transparent, shatterproof, non- corrosive, and easy to clean polycarbonate construction.

Three-way stopcock ensures consistent and uniform vacuum draw, vacuum release, or gas exchange. The barbed fitting on each side secures attachment of tubing.

### Specifications

Code	E11617 & E11617 A	E11618 & E11618 A	E11619 & E11619 A
Internal Volume	6 L / 0.2 cu ft	10 L / 0.4 cu ft	20 L / 0.7 cu ft
Gauge Range	0 to -0.1 Mpa	0 to -0.1 Mpa	0 to -0.1 Mpa
Nozzle	9.5 mm / 0.37 inch (Diameter)	9.5 mm / 0.37 inch (Diameter)	9.5 mm / 0.37 inch (Diameter)
Max. Permissible Vacuum	1.33 x 10 <sup>-4</sup> Mpa	1.33 x 10 <sup>-4</sup> Mpa	1.33 x 10 <sup>-4</sup> Mpa
Material - Body	Polycarbonate	Polycarbonate	Polycarbonate
Material - Perforated Sample Tray	Polypropylene	Polypropylene	Polypropylene
Material - Drying Agent Tray	Polypropylene	Polypropylene	Polypropylene
Material - Locker	Polypropylene	Polypropylene	Polypropylene
Material - Vacuum Seal	Silicone Rubber	Silicone Rubber	Silicone Rubber
Dimension - Exterior (Dia X H)	242 x 354 mm	308 x 400 mm (Diameter)	385 x 475 mm (Diameter)
Net Weight	1.5 Kg	2.5 Kg	4.2 Kg

E11617 A, E11618 A, E11619 A Codes are translucent (amber colour) vacuum desiccators with ultraviolet block effect. All models comes with vacuum gauge.



## Vacuum Guage Cubic Desiccator

CODE	Product	Capacity (Lts)	W x D x H (mm)	Colour	No. per case	Price /Case (₹)
E11613	Vacuum Guage Cubic Desiccator	11	322 x 285 x 271	Natural	1	100000
E11613 A	Vacuum Guage Cubic Desiccator	11	323 x 285 x 271	Amber	1	105000
E11614	Vacuum Guage Cubic Desiccator	23	420 x 397 x 281	Natural	1	125000
E11614 A	Vacuum Guage Cubic Desiccator	23	421 x 397 x 281	Amber	1	130000
E11615	Vacuum Guage Cubic Desiccator	35	420 x 397 x 381	Natural	1	157500
E11615 A	Vacuum Guage Cubic Desiccator	35	421 x 397 x 381	Amber	1	164000
E11616	Vacuum Guage Cubic Desiccator	45	420 x 397 x 491	Natural	1	200000
E11616 A	Vacuum Guage Cubic Desiccator	45	421 x 397 x 491	Amber	1	210000

These cubical vacuum desiccator are integrally molded ensuring superb vacuum capability with almost no leakage and excellent durability.

Maximum vacuum of 1 Torr (1.33 x 10<sup>-4</sup> Mpa) for 72 hours.

Three-way stopcock ensures consistent and uniform vacuum raw, vacuum release, or gas exchange. The barbed fitting on each side secures attachment of tubing.

High quality silicone gasket ensures greaseless airtight seal for cost effective and clean test environment.

Highly transparent, shatterproof, non-corrosive, and easy to clean polycarbonate construction.

Maximum utilization of internal space using four to six shelves depending on product sizes.

Stackable space saving design allows efficient use of cramped lab space.

Four in built ports allowing easy attachment of tubing.

UV-blocking models minimizes damages and discolouration of light-sensitive samples.

Vacuum gauge is attached at the front door for easy vacuum level checking.

### Specifications

Code	E11613 & E11613 A	E11614 & E11614 A	E11615 & E11615 A	E11616 & E11616 A
Internal Volume	11 L / 0.4 cu ft	23 L / 0.8 cu ft	35 L / 1.2 cu ft	45 L / 1.6 cu ft
Guage Range	0 to -0.1 Mpa	0 to -0.1 Mpa	0 to -0.1 Mpa	0 to -0.1 Mpa
Nozzle	9.5 mm / 0.37 inch (Diameter)	9.5 mm / 0.37 inch (Diameter)	9.5 mm / 0.37 inch (Diameter)	9.5 mm / 0.37 inch (Diameter)
Max. Permissible Vacuum	1.33 x 10 <sup>-4</sup> Mpa	1.33 x 10 <sup>-4</sup> Mpa	1.33 x 10 <sup>-4</sup> Mpa	1.33 x 10 <sup>-4</sup> Mpa
Max Load per shelf	3 Kg	5 Kg	5 kg	5 kg
Number of Shelves	2 standard / 4 maximum	2 standard / 4 maximum	3 standard / 5 maximum	3 standard / 6 maximum
Material - Body	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Material - Perforated Sample Tray	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Material - Drying Agent Tray / Locker	Polypropylene	Polypropylene	Polypropylene	Polypropylene
Material - Vacuum Seal	Silicone Rubber	Silicone Rubber	Silicone Rubber	Silicone Rubber
Dimension - Interior (W x D x H)	248 x 254 x 238 mm	346 x 365 x 246 mm	355 x 375 x 345 mm	355 x 374 x 445 mm
Dimension - Exterior (W x D x H)	322 x 285 x 271 mm	420 x 397 x 281 mm	420 x 397 x 381 mm	420 x 397 x 491 mm
Net Weight	4.2 Kg	8.2 Kg	10.8 Kg	12.2 Kg



\* E11613 A, E11614 A, E11615 A, E11616 A Codes are translucent (amber colour) vacuum desiccators with ultraviolet block effect. All models comes with vacuum guage.

### Coplin Jar, PP

154

Code	Places	Height (mm)	No. per Case	Price /Case (₹)
P90101	10	114	12	600

These Coplin Jars are polypropylene staining jar that holds either 5 single or 10 back-to-back standard 75 x 25 mm slides.

Flat cap, features large milled edge for easy hand grip and has a built-in plug seal.

Interior of the Coplin Jar is grooved to hold the slides in an upright position.

Can be autoclaved.



### Slide Box, ABS

155

Code	Places	L x W x H (mm)	No. per Case	Price /Case (₹)
P90103	25	95 x 82 x 32	12	1015
P90104	50	199 x 82 x 32	6	846
P90105	100	192 x162 x 32	6	1651

These slide tray are suitable for holding standard 25 x 75 mm microscope slides.

Uniform grooved slide slots separates slides and prevents it to come in contact with each other.

Slide tray are mounted with cock sheet on the bottom and index list inside the lid for microscope slide identification.

Hinged lid gives secure closure to the box.



### Slide Tray, PS

156

Code	Places	L x W x H (mm)	No. per Case	Price /Case (₹)
P90102	20	300 x 194 x12	6	2448

These slide tray are manufactured in state of art molding facility using virgin polystyrene.

Thumb cut area provides space for easy slide handling.

These slide tray are suitable for holding standard 25 x 75 mm microscope slides.



### Slide Dispenser, ABS

157

Code	Places	L x W x H (mm)	No. per Case	Price /Case (₹)
P90106	72	120 x120 x163	1	814

These slide dispensers are suitable for standard 25 x 75 mm slides.

The overall design of the dispensers makes it easy to load and dispense slides.

Users can effortlessly turn either side of the wheel to dispense slides one at a time.

Holds upto 72 pcs of microscope slides



### Slide Mailer, PP

158

Code	Places	L x W x H (mm)	No. per Case	Price /Case (₹)
P90107	1	85 x 42 x 5	25	209
P90108	2	82 x 70 x 5	25	337
P90109	3	100 x 84 x 5	25	347
P90110	5	82 x 30 x17	25	372

These slide mailers are suitable for holding standard 25 x 75 mm slides.

They are ideal for secure shipping and storing of slides.

Easy to close secure snaps for storage of valuable slides.



### Microscope Slide File, HIPS

159

Code	Places	L x W x H (mm)	No. per Case	Price /Case (₹)
P90113	20	192 x 295 x11	10	6528

These slide file will hold upto 20 standard microscope slides 75 mm x 25 mm.

These slide file is made of two parts the base holding the slides horizontally in pre-numbered spaces for easy identification and the transparent door which can either cover the slides and allow easy reading of ID labels with or without optical bar code reader.

Will resist temperature between -80 °C to +80 °C.

Removal of the slides is made easy by pressing on one end that will automatically lift the other end.



## Slide Storage System, HIPS

160

Code	Places	L x W x H (mm)	No. per Case	Price /Case (₹)
P90111	100	82 x 245 x 86	10	8160

The most convenient, organized and versatile way of storing 75 x 25 mm microscope slides.

Slide storage system includes a slide box and a removable tray. Transparent hinged cover makes the contents of the box easy to see at a glance.

Can withstand temperature between - 80 °C to + 80 °C.

All slides are stored upright for easier insertion and removal. To easily pick up the slide simply tilt the slides forward and backward with one finger.



## Slide Drain Rack, HIPS

161

Code	Places	L x W x H (mm)	No. per Case	Price /Case (₹)
P90112	100/ 200	75 x 231 x 25	10	2326

This tray used as drain rack can hold upto 200 microscope slides in 100 individual numbered slots.

All slides are stored upright for easier insertion and removal.

To easily pick up the slide simply tilt the slides forward and backward with one finger.



## Slide Staining System, Acetal

162

Code	Places	L x W x H (mm)	No. per Case	Price /Case (₹)
P90114	12	64 x 76 x 92	1 Kit (Staining Jar + Slide Rack)	2372

This system has two components a square staining jar and a 12-position vertical slide rack.

This system is made of acetal plastic and will not break like glass jars.

Resist temperature between -150 °C to 121 °C

Superior chemical resistance.

The base is wide and offers greater stability while the inside is recessed allowing for a smaller reagent volume of only 80 ml.

Can be autoclaved.



## Funnel, PP

163

Code	Size Dia, (mm)	Internal Dia (mm)	Stem Length (mm)	No. per Case	Price / Case (₹)
P70314	50	50	50	72	648
P70315	62	62	67	36	396
P70316	75	75	77	36	504
P70317	100	100	95	36	1332

Designed specifically for analytical chemistry.

The body of the funnel is 60° angle.

Each size takes a standard size filter paper.

Provided with external and internal ribs.



## Funnel Holder, PP

164

Code	Places	No. per Case	Price /Case (₹)
P70311	Single	12	1652
P70312	Double	6	1142

These are corrosion free and can hold funnels with diameter 3 inch to 6 inches.

Two tapered wedges are provided to have firm grip on rods.

Extra plate provided can be placed to hold funnels with diameter 1 inch to 3 inch.



## Seperatory Funnel Holder, PP

165

Code	Places	No. per Case	Price /Case (₹)
P70313	Single	12	1275

These are corrosion free with a front opening that allows clear view of the solution and allows unobstructed placement of separating funnels.

Two tapered wedges are provided to have firm grip on rods.





## Retort Stand, PP/PE Coated Rod

166

Code	L x B (mm)	Height of Rod	No. per Case	Price /Case (₹)
P70211	225 x 150 side hole	750	1	826
P70212	300 x 200 centre hole	750	1	1040
P70213	301 x 200 side hole	750	1	1040

Retort stand is used to attach clamp that holds test tubes and other equipment like burettes.

It is available in both central and side holes.

It is used for titration, distillation and filtering of samples.

Base of the stand is PP and the rod is coated in PE



## Burette Clamp, PP

167

Code	Places	No. per Case	Price /Case (₹)
P70601	Single	12	1652
P70602	Double	6	1142

Burette clamps are used to hold burette, test tubes etc.

Two tapered wedges are provided to ensure firm on the rods.

Completely corrosion proof as it is molded in polypropylene.

Available in both single and double clamp.

Spring-loaded jack in the middle provides grip to the burette and prevents it from slipping.



## Assorted workstation Storage Bin, Acrylic

168

Code	No. of Compartment	L x W x H (mm)	No. per Case	Price /Case (₹)
P70104	5	255 x 135 x 368	1	6100

Users can organize most of their commonly used laboratory disposables in one location.

Second section of the bin are used to store and dispense tissue paper, kimwipes and Parafilm M (supplied with super-sharp serrated blade).

First section of the bins can be used to store tubes, vials, pipette tips, hair cap or masks.

Third section of the bins is used to store and dispense gloves.



## Workstation Storage / Dispenser Bin, Acrylic

169

Code	Size	L xW x H (mm)	No. per Case	Price /Case (₹)
P70101	Small	200 x 140 x 190	1	2980
P70102	Large	200 x 140 x 275	1	4500

Users can organize most of their commonly used laboratory disposables in one location.

First section of the bins can be used to store tubes, vials, pipette tips, hair cap or masks.

Third section of the bins is used to store and dispense gloves.

Second section of the bins are used to store and dispense tissue paper, kimwipes and Parafilm M (supplied with super-sharp serrated blade).



## Workstation Storage 3 Compartment, Acrylic

170

Code	No. of Compartment	L x W x H (mm)	No. per Case	Price /Case (₹)
P70103	3	410 x 200 x 190	1	7500

Ideal for storing and dispensing small laboratory product such as Pipette tips, Pasture Pipette, Micro Centrifuge Tubes.

Removable to cover allow easy filling into 3 separate compartments.

Hinged opening at the front to take out items from the bin.

Holes at the back of each compartment help it to be placed or struck on to the wall.

Fills, protect and dispenses three supplies.

Easy to move, easy to load, easy to use.



## Bench Top Beta Shield, Acrylic

171

Code	L xW x H (cm)	No. per case	Price/Case (₹)
P70105	45 x 30 x 30	1	6500

Abdos Beta shield are designed to be used in the laboratory during procedure that handle  $\beta$ -emitting isotopes.

These Beta shield protect the lab work and its angled top allow contents of the tube located behind the shield to be viewed from the top.

Thickness 11 mm.

The Base of the Beta Shield provides a large flat work surface and minimizes the risk of "hot spots" on the lab bench.



## Drying Rack

172

Code	Places	L x W x H (mm)	No. per Case	Price /Case (₹)
P20302	55 places	360 x 160 x 680	1	3199

These Drying are used for draining and drying test tubes, beakers, flasks and other labware.

The rack can be placed on the rack, on the table or near a sink.

There are 55 pages in the rack 50 smaller pegs for products with small diameter and 5 large bracket designed to hold Erlenmeyer flasks, beakers etc

The racks comes with a tray at the bottom in order to avoid drops on the surface or table.

These pages are plastics coated for better protection.



## Animal Cage, PP/ Stainless Steel

173

Code	Places	L x W x H (mm)	No. per Case	Price /Case (₹)
P20501	Single Grill	290 x 220 x 140	1	1020
P20502	Single Grill	430 x 270 x 150	1	1530
P20503	Twin Grill	290 x 220 x 140	1	1734
P20504	Twin Grill	430 x 270 x 150	1	2244

These provide excellent shelter for animal species in the laboratory.

Metallic top provides good ventilation and provides for feeding the animal species.

Excellent chemical resistance.



## Water Bottle for Animal Species, PP/SS

174

Code	Capacity (ml)	Mouth Diamter (mm)	Height (mm)	No. per Case	Price / Case (₹)
P20511	125	290 x 220 x 140	97.6	12	1237
P20512	250	430 x 270 x 150	130.7	12	1849

These narrow mouth bottles come with attached stainless steel pipe for release of liquid.

Easy to fill, empty and wash.

Leak proof.



## Micro Magnetic Stirrer Bar, PTFE/Alnico v Magnet

175

Code	OD (Ø) x L (mm)	No. per Case	Price /Case (₹)
P80136	2 x 2	5	826
P80137	2 x 5	5	826
P80101	2 x 7	5	826
P80102	3 x 10	5	826



For the stirring of liquids on magnetic stirrer and hot plates stirrers.

Resistant to virtually all chemical attack and temperatures up to 260°C.

Strong alloy magnets sheathed in pure white inert PTFE.

For use in small vessels, e.g. test tubes, vials etc.

## Magnetic Stirrer Bar With Pivot Ring, PTFE/Alnico v Magnet

176

Code	OD (Ø) x L (mm)	No. per Case	Price /Case (₹)
P80138	4.5 x 12	10	1087
P80103	4.5 x 15	10	1087
P80124	6 x 12	10	1214
P80104	6 x 20	10	1336
P80123	6 x 25	10	1470
P80105	6 x 30	10	1603
P80139	6 x 35	10	1710
P80125	8 x 13	10	1546
P80106	8 x 40	10	1931
P80107	8 x 50	10	2185
P80126	10 x 25	10	1882
P80108	10 x 60	5	1792
P80109	10 x 70	5	1850
P80127	13 x 75	2	1547
P80140	24 x 57	2	3045
P80141	24 x 108	2	6300
P80142	24 x 159	2	7875



Central pivot ring ensures efficient spinning even on curved or uneven bases.

Strong alloy magnets sheathed in pure white inert PTFE.

For the stirring of liquids on magnetic stirrers and hot plates stirrers.

Resistant to virtually all chemical attack and temperatures up to 260°C.

177

## Cylindrical Magnetic Stirrer Bar, PTFE/Alnico v Magnet

Code	OD (Ø) x L (mm)	No. per Case	Price /Case (₹)
P80143	6 x 10	10	1185
P80144	6 x 15	10	1125
P80110	6 x 20	10	1125
P80154	6 x 25	10	1206
P80111	6 x 30	10	1272
P80145	8 x 13	10	1469
P80146	8 x 20	10	1469
P80147	8 x 25	10	1773
P80148	8 x 30	10	1773
P80112	8 x 40	10	1616
P80113	8 x 50	10	2510
P80149	10 x 60	10	3359
P80114	10 x 70	10	4200
P80150	10 x 80	10	4935

Plain design with rounded ends, suitable for a wide range of flat bottomed containers.

For the stirring of liquids on magnetic stirrers and hot plates stirrers.

Strong alloy magnets sheathed in pure white inert PTFE.

Resistant to virtually all chemical attack and temperatures up to 260°C



121°C



178

## Octagonal Magnetic Stirrer Bar, PTFE/Alnico v Magnet

Code	OD (Ø) x L (mm)	No. per Case	Price /Case (₹)
P80115	8 x 13	10	1335
P80116	8 x 25	10	1414
P80117	8 x 38	10	1762
P80128	8 x 51	10	1940
P80129	8 x 64	10	2744
P80151	10 x 13	10	1785
P80152	10 x 25	10	1785
P80153	10 x 38	10	1995
P80118	10 x 51	10	2670
P80119	13 x 75	10	5250

Shape gives increased turbulence at low speeds.

Bars with central pivot ring.

For the stirring of liquids on magnetic stirrers and hot plates stirrers.

Strong alloy magnets sheathed in pure white inert PTFE.

Resistant to virtually all chemical attack and temperatures up to 260°C.



## Plain Magentic Stirrer Bar, PTFE/Alnico v Magnet

179

Code	OD (Ø) x L (mm)	No. per Case	Price /Case (₹)
P80155	6 x 10	10	1050
P80156	6 x 15	10	1155
P80157	6 x 20	10	1365
P80158	6 x 25	10	1523
P80159	6 x 30	10	1784
P80160	8 x 13	10	1628
P80161	8 x 25	10	2204
P80162	8 x 40	10	1647
P80163	8 x 50	10	2625
P80164	8 x 60	10	3045
P80165	10 x 25	10	2625
P80166	10 x 35	10	2625
P80167	10 x 50	10	3149
P80168	10 x 60	10	3465
P80169	10 x 70	10	3885
P80170	10 x 80	10	4199

Plain design for more turbulence at low speed.

For the stirring of liquids on magnetic stirrers and hot plates stirrers.

Strong alloy magnets sheathed in pure white inert PTFE.

Resistant to virtually all chemical attack and temperatures up to 260°C.



## Oval Magentic Stirrer Bar, PTFE/Alnico v Magnet

180

Code	OD (Ø) x L (mm)	No. per Case	Price /Case (₹)
P80171	5 x 10	10	1575
P80172	6 x 15	10	1575
P80173	10 x 20	10	2205
P80174	10 x 25	10	2625
P80175	10 x 30	10	3360
P80176	16 x 30	10	4095
P80177	16 x 35	10	4725
P80178	20 x 40	10	6195
P80179	20 x 50	10	8190
P80180	20 x 64	10	9345
P80181	20 x 70	10	10500

Best suited for round bottom flask.

For the stirring of liquids on magnetic stirrers and hot plates stirrers.

Strong alloy magnets sheathed in pure white inert PTFE.

Resistant to virtually all chemical attack and temperatures up to 260°C.



## Triangular Magnetic Stirrer Bar, PTFE/Alnico v Magnet

181

Code	H (Ø) x L (mm)	No. per Case	Price /Case (₹)
P80130	14 x 25	2	1113
P80131	14 x 40	2	1324
P80132	14 x 55	2	1492
P80182	14 X 80	2	1941

Ideal for mixing difficult solutions e.g. dissolving solvents or mixing sediments.

Spins well giving the best possible mixing action.

For the stirring of liquids on magnetic stirrers and hot plates stirrers.

Strong alloy magnets sheathed in pure white inert PTFE.

Resistant to virtually all chemical attack and temperatures up to 260°C.



## Wings Magnetic Stirrer Bar, PTFE/Alnico v Magnet

182

Code	H (Ø) x L (mm)	No. per Case	Price /Case (₹)
P80183	8 x 11	2	1680
P80184	10 x 16	2	2100
P80185	13 x 10	2	1680
P80186	13 x 20	2	2100

For the stirring of liquids on magnetic stirrers and hot plates stirrers.

Strong alloy magnets sheathed in pure white inert PTFE.

Best suited for test tubes.

Resistant to virtually all chemical attack and temperatures upto 260°C.



## Double-Ended Magnetic Stirrer Bars, PTFE/Alnico v Magnet

183

Code	H (Ø) x L (mm)	No. per Case	Price /Case (₹)
P80133	8 x 35	5	2783
P80134	8 x 55	5	3360

Double ended stirrer bars have double paddle action for efficient stirring plus high stability.

Strong alloy magnets sheathed in pure white inert PTFE.

Resistant to virtually all chemical attack and temperatures up to 260°C.



## Cross-Spin Magnetic Stirrer Bars, PTFE/Alnico V Magnet

184

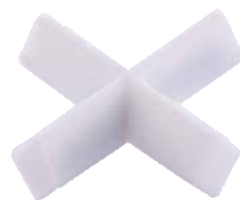
Code	H (Ø) x L (mm)	No. per Case	Price /Case (₹)
P80135	8 x 20, 9 x 25, 10 x 30, 11 x 38, 15 x 50, 20 x 60	1 set consisting of 1 pcs each.	3398

Cross spin stirrer bars add speed and efficiency to your mixing requirements.

The cross shape creates a deep vortex and provides stable and quiet operation.

Strong alloy magnets sheathed in pure white inert PTFE.

Resistant to virtually all chemical attack and temperatures up to 260°C.



## Magnetic Retrievers, PTFE/ Alnico V Magnet

185

Code	H (Ø) x L (mm)	No. per Case	Price /Case (₹)
P80187	10 x 150	2	1995
P80188	10 x 250	2	2520
P80189	10 x 350	2	2835

Used to retrieve stirrer bar.

Innert & leak Free.

Moulded in from FDA approved PTFE and ALICO V MAGNET.

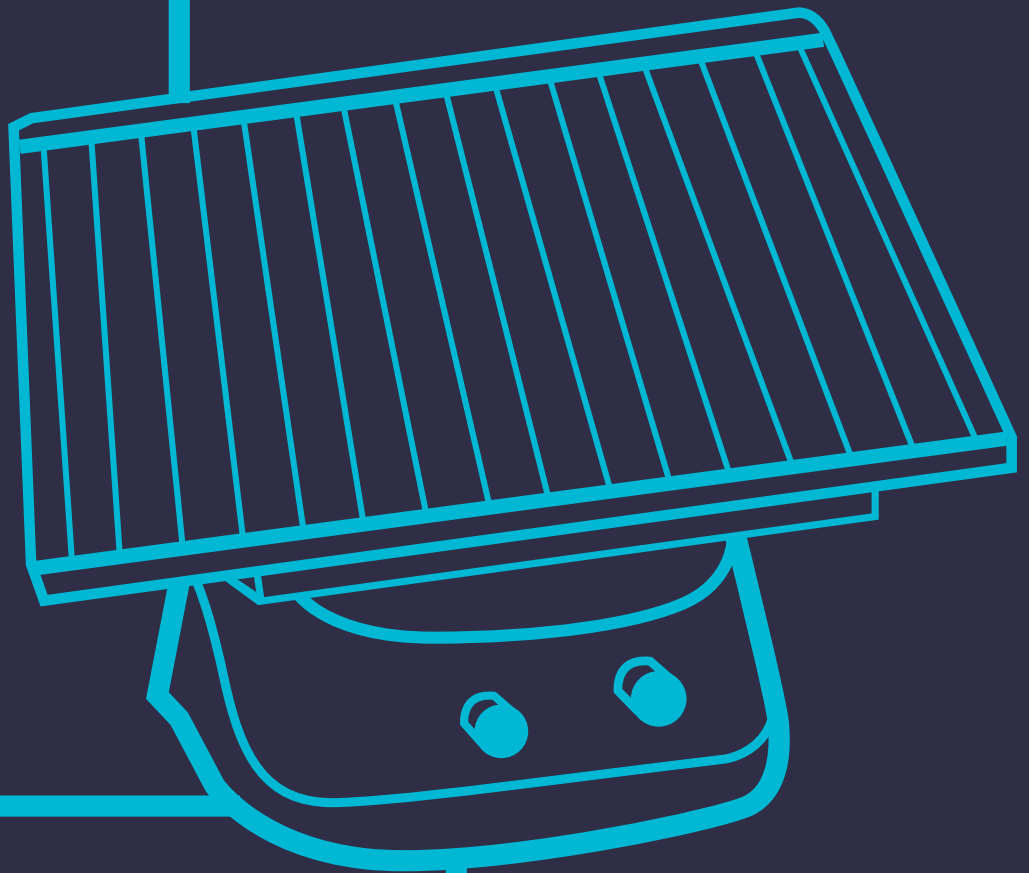
Strong alloy magnets sheathed in pure white inert PTFE.

Resistant to virtually all chemical attack and temperatures up to 260°C.





## EQUIPMENTS



Magnetic Stirrer &  
Hot Plates  
Digital Dry Bath  
Microplate Mixer  
Orbital Shaker  
Digital Incubator &  
More

## SWIRLTOP – Ultra Flat & Eco Magnetic Stirrer

Code	Product	Workplate Size (cm)	No. per Case	Price /Case (₹)
E11307	Ultra Flat Magnetic Stirrer	9 x 9	1	11500
E11308	Eco Magnetic Stirrer	12x12	1	9000

SWIRLTOP magnetic stirrers are used in biotech labs, provides better mixing and is ideal for application of physical and chemical analysis.

It comes with automatic reverse rotation for better mixing result.

Its body is made of ABS material.

Top plate is made from chemically resistant materials (PET).

Slip proof and stable.

### Specifications



Code	E11307	E11308
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Stirring position	1	1
Speed range	15-1500 rpm	300-2000 rpm
Max. stirring quantity(H <sub>2</sub> O)	0.8 L	1.5 L
Maximum magnetic bar(length)	40mm	40mm
Dimensions of work plate	90x90 mm	120x120 mm
Dimensions	175x120x15 mm	150x145x50 mm
Weight	0.3 kg	0.3 kg
Speed setting	Button	Scale
Permissible ambient Temperature & Humidity	5-40° C	5-40° C
Permissible relative humidity	80%	80%
Protection Class	IP65	IP21



E11307



E11308

## SWIRLTOP – Digital (LED) Magnetic Stirrer & Hot Plate

187

Code	Product	Workplate Size (Ø cm)	No. per Case	Price / Case (₹)
E11231	LED Digital Magnetic Stirrer & Hot Plate with Support Rod & External Temperature Probe	13.5	1	23000

E11234	LED Digital Magnetic Stirrer & Hot Plate	13.5	1	20500
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### Spare Accessories

Code	Product	No. per Case	Price / Case (₹)
E11232	SS / Support Rod	1	3600
E11233	ETP / External Temperature Probe	1	7500

Swirl Top unit feature an extremely durable, chemical resistant white stainless steel ceramic coated surface that allows immediate heat transfer.

External Temperature sensor accessory is available with accuracy of  $\pm 0.5^{\circ}\text{C}$ .

Extremely accurate digital control system is ideal for applications of analytical and biological laboratory.

Swirl Top has advanced microprocessor control with convenient turn knobs that allow quick, precise adjustment and

maintains accurate temperature and speed.

Large, backlit LED display provide constant visualization of speed and temperature while safety LED indicates when the top plate is above  $50^{\circ}\text{C}$ .

LED Display shows temperature and speed.

This digital system is compatible with a wide variety of popular glass beakers, flasks, bottles and vessels.

Heat resistant ABS casing.

### Specifications

Voltage	220-240V
Frequency	50-60 Hz
Motor type	Brushless DC Motor
Maximum stirring capacity	3 L
Work plate dimensions diameter	Diameter 5 Inch
Work plate material	SS Cover Ceramic
Shaking movement	Orbital
Temperature range	Room Temperature - $280^{\circ}\text{C}$
Speed range	200 - 1500 rpm
Dimension	150 x 260 x 80 mm
Weight	1.8 kg
Permissible ambient temperature	5 - $40^{\circ}\text{C}$
Permissible relative humidity	80%
Protection Class	IP21



## SWIRLTOP - Analog Magnetic Stirrer & Hot Plate

Code	Product	Workplate Size (cm)	No. per Case	Price /Case (₹)
E11656	Analog Magnetic Stirrer	13.5 x 13.5	1	28000
E11655	Analog Magnetic Stirrer & Hot Plate	13.5 x 13.5	1	40000

Swirl Top unit feature an extremely durable, chemical resistant white ceramic work surface.

Swirl Top has advanced microprocessor control with convenient turn knobs that allow quick, precise adjustment and maintains accurate temperature and speed.

Max heating plate temperature 340°C Maximum Speed at 1500rpm.

Outstanding brushless DC motor performance enables more stirring power.

### Specifications

Code	E11656	E11655
Voltage	220-240V	220-240V
Frequency	50-60 Hz	50-60 Hz
Motor Type	Brushless DC Motor	Brushless DC Motor
Maximum stirring capacity	10 L	20L
Work plate material	Glass with Ceramic	Stainless steel with ceramic
Temperature range	----	Room Temperature - 340°C, Increment 1° C
Speed display	Analog	Analog
Temperature display	----	Analog
Speed range	0 - 1500 rpm, resolution 3 1 rpm	0 - 1500 rpm, resolution 3 1rpm
Maximum magnetic bar (length)	80 mm	80mm
Dimension	215 x 360 x 112 mm	160x280x85 mm
Weight	3.8 kg	2.8 kg
Permissible ambient temperature and Humidity	5 - 40°C	5 - 40°C
Permissible relative humidity	80%	80%
Protection class	IP21	IP42



## SWIRLTOP - Analog Magnetic Stirrer & Hot Plate

189

Code	Product	Top Plate Size (cm)	No. per Case	Price /Case (₹)
E11211	Magnetic Stirrer	19 x 19	1	19900
E11213	Hot Plate	19 x 19	1	19900
E11215	Magnetic Stirrer & Hot Plate with Support Rods	19 x 19	1	28500

Swirl Top unit feature an extremely durable, chemical resistant white ceramic work surface.

Swirl Top has advanced microprocessor control with convenient turn knobs that allow quick, precise adjustment and maintains accurate temperature and speed.

Swirl Top is compatible with a wide variety of popular glass beakers, flasks, bottles and vessels.

E11215 comes complete with support rod for mounting thermometers and temperature probes.

### Specifications

Voltage	220-240 V
Frequency	50 Hz
Shaking movement	Orbital
Maximum stirring capacity	5 L
Temperature range	5-380° C
Speed range	60-1500 rpm
Dimension	200x230x115 mm
Weight	4 kg
Permissible ambient temperature	5-40° C
Permissible ambient humidity	80%



## SWIRLTOP - Digital (LCD) Magnetic Stirrer & Hot Plate

Code	Product	Workplate Size (cm)	No. per Case	Price /Case (₹)
E11225	Digital Magnetic Stirrer	16.5 x 16.5	1	28000
E11226	Digital Hot Plate	16.5 x 16.5	1	28000
E11227	Digital Magnetic Stirrer & Hot Plate	16.5 x 16.5	1	32000

### Spare Accessories

Code	Product	No. per Case	Price /Case (₹)
E11228	Support Rod	1	5299
E11229	External Temperature Probe	1	11000

Swirl Top unit feature an extremely durable, chemical resistant white ceramic work surface.

It has advanced microprocessor control with convenient turn knobs that allow quick, precise adjustment and maintains accurate temperature and speed.

Large, backlit LCD display provide constant visualization of speed and temperature while safety LCD indicates when the top plate is above 50° C

This digital system is compatible with a wide variety of popular glass beakers, flasks, bottles and vessels.

Optional probe is available to derive precise temperature control. When connected the probe provides direct feedback to the microprocessor that continuously adjusts and maintains the selected temperature in the sample within accuracy of  $\pm 0.5^{\circ}\text{C}$

### Specifications

Voltage	220 - 240 V
Frequency	50 Hz
Shaking Movement	Orbital
Maximum stirring capacity	5 L
Temperature Range	5 - 380° C
Speed Range	200 - 1500 rpm
Dimension	177 x 267 x 102 mm
Weight	2.2 kg
Permissible ambient temperature	5 - 40° C
Permissible relative humidity	80%



## SWIRLTOP – 7Inch Digital Magnetic Stirrer & Hot Plate

191

Code	Product	Workplate Size (cm)	No. per Case	Price / Case (₹)
E11650	Magnetic Stirrer & Hotplate with support Rod & External Temperature Probe	18.4 x 18.4	1	55000
E11652	Magnetic Stirrer & Hotplate	18.4 x 18.4	1	52000
E11651	Hotplate with support Rod & External Temperature Probe	18.4 x 18.4	1	40000
E11653	Hotplate	18.4 x 18.4	1	36500

### Spare Accessories

Code	Product	No. per Case	Price / Case (₹)
E11232	SP - Support Rod	1	3600
E11233	ETP - External Temperature Probe	1	7500

Built in PID Controller ensures the safe heating of the medium with overheating and protection.

Max heating plate temperature 550°C

Glass ceramic work place provides excellent chemical resistant performance and most efficient heat transfer.

External temperature control is possible by connecting the temperature sensor (PT 1000) with an accuracy at  $\pm 0.2^{\circ}\text{C}$ .

Digital speed controlling.

Maximum Speed at 1500rpm.

Outstanding brushless DC motor performance enables more stirring power.

Two rotating knobs enable the easy and direct change of speed and temperature

HOT WARNING will flash when the work plate temperature is above 50°C or even the hot plate is turned off.

Remote Function provides PC Control and data transmission.

### Specifications

Code	E111650	E111651
Voltage	220-240V	220-240V
Frequency	50-60 Hz	50-60 Hz
Motor Type	Brushless DC Motor	Brushless DC Motor
Maximum stirring capacity	20 L	NA
Work plate dimensions diameter	184x184mm( 7Inch)	184x184mm ( 7Inch)
Work plate material	Glass Ceramic	Glass Ceramic
Temperature range	Room Temperature - 550° C, Increment 1° C	Room Temperature - 550°C, Increment 1° C
Overheating protection	580° C	580° C
Temperature control accuracy	$\pm 0.1^{\circ}\text{c}$	$\pm 0.1^{\circ}\text{c}$
Speed display	LCD	NA
Temperature display	LCD	LED
Speed range	100 - 1500 rpm, resolution $\pm 1$ rpm	100 - 1500 rpm, resolution $\pm 1$ rpm
Maximum magnetic bar (length)	80mm	NA
Dimension	215x360x112mm	215x360x112mm
Protection class	IP21	IP21



## SWIRLTOP –Multi Channel Magnetic Stirrer & Hot Plate

Code	Product	Workplate Size (cm)	No. per Case	Price /Case (₹)
E11235	10 Channel Magnetic Stirrer	18 x 45	1	90000
E11236	10 Channel Magnetic Stirrer & Hot Plate	18 x 45	1	130000
E11237	16 Channel Magnetic Stirrer	36.5 x 34.5	100000	

SWIRLTOP Unit feature an extremely durable stainless steel plate with anti-slip and anti-corrosion silicon surface.

Swirl Top advanced Microprocessor based electronic speed control motor provides constant speed.

High performance multi-position magnetic stirrer with uniform temperature distribution.

Micro-processor based stirring controls to provide consistency with various samples.

Brushless DC Motor for maintenance free & quite operations.

### Specifications

Product	16 Channel	10 Channel
Voltage	220-240V	220-240V
Frequency	50-60Hz	50-60Hz
Dimension of work plate	365 x 345 mm	180 x 450 mm
Speed Display	Scale	Scale
Shaking movement	Orbital	Orbital
Temperature range	NA	Room Temperature-120°C
Motor type	DC Motor	DC Motor
Stirring speed	0-1100 rpm	0-1100 rpm
Stirring position	16	10
Max. Stirring capacity	0.4L(each stirring position)	0.4L(each stirring position)
Max. magnetic bar	40mm	40mm
Plate material	Stainless Steel with Silicone Film	Stainless Steel with Silicone Film
Dimensions (WxDXH)	500 x 380 x 65 mm	182 x 622 x 65 mm
Protection class	IP21	IP21



E11237



E11235



## SWIRLMAX- Tube Roller

193

Code	Product	No. per Case	Price /Case (₹)
E11230	Tube Roller	1	21499

Swirlmax is a classic tube roller that can be used for rocking and rolling for complete mixing.

It has a wide speed range of 0-70rpm.

It has a total of six roller with small footprints and it is very easy to clean.

Swirlmax has a quite DC brushless motor which is reliable, sound free and maintenance free.

Swirlmax can be used in cold rooms or in incubators.



### Specifications

Voltage	220-240 V
Frequency	50 Hz
Power	25 W
Motor Type	DC Motor
Rocking Motion	Rocking and Rolling
Amplitude	24 mm
Max. load capacity	4 kg
Number of Rollers	6
Roller Size	280 mm
Speed Range	0-70 rpm
Speed Display	Scale
Operation Type	Continuous operation
Dimensions	450 x 260 x 120 mm
Weight	4.5 kg
Permissible ambient Temperature	5 - 40° C
Permissible ambient Humidity	80%
Protection Class	IP 21

## HOTBLOCK - LED Digital Dry Bath

Code	Product	Block Size (cm)	No. per Case	Price / Case (₹)
E11330	LED Digital Dry Bath with heating block for 1.5 / 2.0 ml	15 x 9.5	1	38000

### Spare Accessories

Code	Product	Places	No. per Case	Price / Case (₹)
E11331	Heating Block for 0.2 ml	54	1	12300
E11332	Heating Block for 0.5 ml	40	1	12300
E11333	Heating Block for 1.5/2.0 ml	40	1	12300
E11334	Heating Block for 5/15 ml	28	1	12300
E11335	Heating Block for 50 ml	8	1	12300
E11336	Heating Block for 0.2, 0.5, 1.5/2.0 ml	18	1	12300
E11337	Heating Block, used for 96/384 micro plate	-	1	12300

ABDOS LED Digital Dry Bath is ideal for molecular biology, histology, clinical, environmental and industrial laboratories including melting and boiling point determination, enzyme reactions, incubation and activation of cultures, immunoassays, DNA denaturation, culture and media tests, coagulation, tests, blood urea nitrogen determinations and in-situ hybridizations.

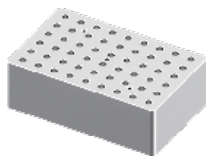
In-Built over temperature protection.

Various optional blocks are available for best performance

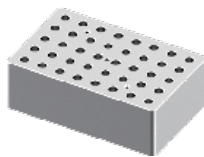
Protection class according to DIN EN 60529



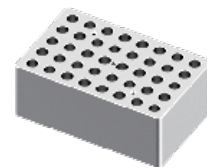
Specifications	
Voltage	220-240 V
Frequency	50-60 HZ
Adaptor block material	Aluminium
Maximum heating rate	5.5°C/min
Power	160 W
Heating temperature Range	Room Temperature-120°C
Control accuracy	±0.5°C
Safety temperature	140°C
Timer	Yes
Time setting range	0 min-99h 59 min
Operation type	Continuous/timed operation
Dimensions	175 X 290 X 85 mm
Weight	1.6 kg (Without heating Block)
Permissible ambient temperature	5-40° C
Permissible ambient Humidity	80%
Protection Class	IP21



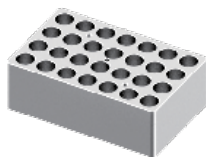
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E11332



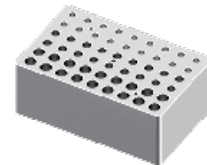
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E11334



E11335



E11336

## THERMO MIX - LCD Digital

195

Code	Product	No. per case	Price / Case (₹)
E11340	LCD Digital Thermo Mix with Heating, Cooling and Mixing with 1.5 ml Heating Block	1	POR
E11341	LCD Digital Thermo Mix with Heating and Cooling with 1.5 ml Heating Block	1	POR
E11342	LCD Digital Thermo Mix with Heating and Mixing with 1.5 ml Heating Block	1	POR

### Spare Accessories

Code	Product	Places	No. per case	Price/ Case (₹)
E11343	Heating Block, used for 0.2 ml / 96 well PCR plate	96	1	POR
E11344	Heating Block, used for 96 /384 well micro plate	96/384	1	POR
E11345	Heating Block, used for 0.5 ml	24	1	POR
E11346	Heating Block, used for 1.5 ml	24	1	POR
E11347	Heating Block, used for 2.0 ml	24	1	POR
E11348	Heating Block, used for 5 ml	8	1	POR
E11349	Heating Block, used for 15 ml	8	1	POR
E11350	Heating Block, used for 50 ml	4	1	POR

ABDOS Thermo Mix Series allow for precise and efficient shaking and mixing as well as excellent temperature accuracy. Uniform mixing offers a wide range of applications, such as Gene Synthesis, Gene Purification, Gene Denaturation, Protein Denaturation, Enzymatic reaction Bacterial growth and many more.



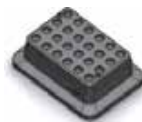
Specifications			
Code	E11340	E11341	E11342
Voltage	220 - 240 V	220 - 240 V	220 - 240 V
Frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Functions	Heating, cooling & Mixing	Heating & Cooling	Heating & Mixing
Adaptor Block Material	Aluminium	Aluminium	Aluminium
Temperature Range	Heating :25°C-100°C Cooling :25°C - below15°C	Heating :25°C-110°C Cooling : 25°C - below25°C	Heating :25°C-100°C
Temperature Uniformity	Max ±0.5°C	Max ±0.5°C	Max 30.5°C
Temperature Accuracy	±0.5°C	±0.5°C	±0.5°C
Maximum Heating Rate	5.5°C/min	5.5°C/min	5.5°C/min
Maximum Cooling Rate	5.5°C/min(100°C-25°C) 0.5°C/min(below 25°C)	2.5°C/Min(100°C-25°C) 0.5°C/Min(below 25°C)	
Mixing Frequency	200-1500 rpm	NA	200-1500 rpm
Mixing Orbit	3 mm	NA	3 mm
Program	6	9	6
Overheating Protection	150°C	150°C	150°C
Dimension(WXDXH)	200x235x120mm	200x235x120mm	200x235x120mm
Weight	7.3 kg	7.3 kg	7.3 kg



E11345



E11346



E11347



E11348



E11349



E11350



E11344



E11343

## SWIRLEX – LCD Digital Overhead Stirrer

196

Code	Product	Maximum Stirring Quantity (Lts)	No. per Case	Price / Case (₹)
E11310	Digital Overhead Stirrer with Universal Plate Stand including support holder and fixing device & (E11313) Stainless Steel Crossed Stirrer	20	1	69300
E11311	Digital Overhead Stirrer with Universal Plate Stand including support holder and fixing device & (E11313) Stainless Steel Crossed Stirrer	40	1	82500

### Spare Accessories

Code	Product	Dimensions (cm)	No. per Case	Price /Case (₹)
E11312	Universal Plate Stand including support holder and fixing device	20 x 31 (L x W)	1	10000
E11313	Stainless Steel Crossed Stirrer	40 x 5 (L x Ø)	1	1199
E11314	Stainless Steel Straight Stirrer	40 x 6 (L x Ø)	1	2999
E11315	Stainless Steel Blade Stirrer	40 x 6.8 (L x Ø)	1	2999
E11316	Stainless Steel Centrifugal Stirrer	40 x 9 (L x Ø)	1	2999
E11317	PTFE Crossed Stirrer	35 x 6.5 (L x Ø)	1	4599
E11318	PTFE Straight Stirrer	35 x 7 (L x Ø)	1	4599
E11319	PTFE Blade Stirrer	35 x 6.8 (L x Ø)	1	4599
E11320	PTFE Centrifugal Stirrer	35 x 8.5 (L x Ø)	1	4599

Swirlex overhead stirrer is widely used in chemical synthesis, pharmaceutical synthesis, physical and chemical analysis, petrochemical industry and more.

Reliability, long continuous service and outstanding performance are its hallmark.

Digital LCD display for precise monitoring of set and actual speed.

LCD Torque displays real time information on viscosity changes.

Protection and safety circuits ensures automatic cut-off in an anti-stall or overload conditions.

Provides a constant speed even with changes in viscosities of sample.

RS232 interface PC can control and document all operation values via RS232 interface.



Specifications		
Voltage	E11310	E11311
Frequency	220-240V	220-240V
Power	50-60 HZ	50-60 HZ
Speed Range	70 W	130 W
Speed Display	50 – 2200 rpm	50 – 2200 rpm
Accuracy	33 rpm	33 rpm
Max. Stirring Quantity	20 L	40 L
Max Torque	40 Ncm	60 Ncm
Max Viscosity	10000 mPas	50000 mPas
Chuck range diameter	0.5 – 10 mm	0.5 – 10 mm
Overload Protection Display	LED Lights, Motor Automatically Stops	LED Lights, Motor Automatically Stops
Motor Protection Display	LED Lights, Motor Automatically Stops	LED Lights, Motor Automatically Stops
Dimensions	83 x 220 x 186 mm	83 x 220 x 186 mm
Weight	2.6 kg	2.8 kg
Permissible ambient Temperature	5-40° C	5-40° C
Permissible ambient Humidity	80%	80%
Protection class according To DIN/EN 60529	IP 21	IP 21



E11312



E11313



E11314



E11315



E11316



E11317



E11318



E11318



E11319

## SWIRLEX - Vortex Shaker

197

Code	Product	Work Plate Size	No. per case	Price /Case (₹)
E11190	Swirlex - Adjuststable Vortex Shaker	4mm	1	10500

### Spare Accessories

Code	Product	No. per case	Price /Case (₹)
E11191	Tube holding rod	1	3555
E11192	Universal 100 mm top plate with 4 vacuum suction feet	1	1184
E11198	Platform pad for tubes and vessels Ø 99 mm	1	1339
E11197	Tube adaptear for 48 holes test tubes Ø 6 mm	1	1339
E11193	Tube adaptear for 18 holes test tubes Ø 10 mm	1	1339
E11194	Tube adaptear for 12 holes test tubes Ø 12 mm	1	1339
E11195	Tube adaptear for 8 holes test tubes Ø 16 mm	1	1339
E11196	Tube adaptear for 8 holes test tubes Ø 20 mm	1	1339

\*E11192 is required to run Abdos E11198, E11197, E11193, E11194, E11195 & E11196 adapters.

Swirlex-Vortex is suitable for touch or continuous or fixed operation.

Used for gentle mixing to vigorous re-suspension of cells biological and canonical liquid components in tubes using eccentric mechanism.

A wide range of accessories is also available.

Swirlex vortex Shaker is eccentric with oil less ball bearing.

These vortex shakers contain specially designed silicone feet and steel base excellent for damping vibration.

### Specifications

Code	E11190
Voltage	220-240V
Frequency	50-60Hz
Speed Range	0 - 2500 rpm
Shaking Movement	Orbital
Outer Diameter	4mm
Speed Display	Analog Type
Run Type	Continuous/Touch operation
Dimensions	127x130x160 mm
Weight	3.5 kg
Power	60W
Permissible ambient Temperature	5-40° C
Permissible relative humidity	80%
Protection Class	IP21





## SWIRLEX- MICROPLATE MIXER

198

Code	Product	No. per Case	Price / Case (₹)
E11200	Swirlex Microplate Mixer Including Microplate Clamp(E11201) as standard	1	30000

### Spare Accessories

Code	Product	No. per Case	Price / Case (₹)
E11201	Microplate clamp	1	700
E11202	Double microplate clamps	1	800

SWIRLEX-Microplate Mixer is used for holding single or double micro plates with an SBS footprint.

This is widely used in life sciences including microbiology, cell and molecular biology,

immunology and biotechnology for various mixing applications with optional adapters. The high speed and small diameter combine to offer a true vortexing action in each well of the micro plate. This action ensures both complete and uniform mixing.

### Specifications

Speed Range:	Single Microplate :0-1500 rpm Double Microplate :0-1000 rpm
Voltage	220-240V
Frequency	50-60Hz
Shaking Movement:	Orbital
Orbit Diameter:	4.5 mm
Maximum Shaking Weight (With accessory)	0.5 Kg
Motor Type :	Brushless DC Motor
Dimensions:	260x150x80mm
Permissible ambient temperature	5-40° C
Permissible relative humidity	80%
Protection Class	IP21



E11202



## WAVEX- CLASSIC TUBE ROTATOR

Code	Product	No. per Case	Price / Case (₹)
E11300	Wavex- Classic Tube Rotator	1	36200

### Spare Accessories

Code	Product	No. per Case	Price / Case (₹)
E11301	Plastic Clips for 1.5 ml x 12 micro centrifuge tubes, Disk accessory	1	499
E11302	Plastic Clips for 15 ml x 12 micro centrifuge tubes, Disk accessory	1	649
E11303	Plastic Clips for 50 ml x 12 micro centrifuge tubes, Disk accessory	1	849

Wavex rotating mixer give gentle but effective mixing of biological samples to be held in 1.5ml to 50 ml tubes used in a variety of applications including immune precipitations, prevention of blood coagulation and latex diagnostics.

Wavex rotating mixer has a Disk type design.

Wavex rotating mixer give gentle but effective mixing of biological samples to be held in 1.5ml to 50 ml tubes used in a variety of applications including immune precipitations, prevention of blood coagulation and latex diagnostics.

### Specifications

Voltage	220-240 V
Frequency	50 Hz
Power	20 W
Motor Type	DC Motor
Speed Range	0 - 80 rpm
Operation Type	Continuous
Dimensions	300 X 220 X 310 mm
Permissible ambient Temperature	5-40° C
Permissible ambient Humidity	80%
Protection Class	IP 21



## WAVEX – LCD TUBE ROTATOR

200

Code	Product	No. per Case	Price / Case (₹)
E11270	Wavex- LCD Tube Rotator with Disk accessory for 50 ml x 8 centrifuge tubes	1	70000

### Spare Accessories

Code	Product	No. per Case	Price / Case (₹)
E11271	Disk accessory for 1.5 ml x 60 micro centrifuge tubes	1	10000
E11272	Disk accessory for 50 ml x 8 centrifuge tubes	1	5000
E11273	Disk accessory for 15 ml x 16 tubes	1	5500
E11274	Disk support rods used with disk accessories	4	2500

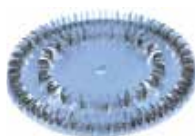
Wavex rotating mixer give gentle but effective mixing of biological samples to be held in 1.5ml to 50 ml tubes used in a variety of applications including immune precipitations, prevention of blood coagulation and latex diagnostics.

Wavex rotating mixer has a Disk type design.

Wavex rotating mixer give gentle but effective mixing of biological samples to be held in 1.5ml to 50 ml tubes used in a variety of applications including immune precipitations, prevention of blood coagulation and latex diagnostics.

### Specifications

Voltage	220-240 V
Frequency	50 Hz
Power	40 W
Motor Type	DC Motor
Tilt Angle	0 - 90°
Speed Range	10 - 70 rpm
Speed & Timer Display	LCD
Time Setting Range	1 - 1199 min
Operation Type	Continuous / timed operation
Dimensions	280 x 210 x 300 mm
Weight	8 kg
Permissible ambient Temperature	5-40° C
Permissible ambient Humidity	80%
Protection Class	IP 21



E11271



E11272



E11273



E11274

## WAVEX – Classic Rotating Mixer

201

Code	Product	No. per Case	Price / Case (₹)
E11305	WAVEX- Classic Rotating Mixer	1	34500

### Spare Accessories

Code	Product	No. per Case	Price / Case (₹)
E11301	Plastic Clips for 1.5 ml x 12 micro centrifuge tubes.	1	499
E11302	Plastic Clips for 15 ml x 12 micro centrifuge tubes.	1	649
E11303	Plastic Clips for 50 ml x 12 micro centrifuge tubes .	1	849

Wavex tube rotators give gentle but effective mixing of biological samples to be held in 1.5 ml to 50 ml tubes used in a variety of applications including immune precipitations, prevention of blood coagulation and latex diagnostics.

### Specifications

Voltage	220-240 V
Frequency	50-60 Hz
Power	20 W
Motor Type	DC Motor
Tilt Angle	0 - 90°
Speed Range	0-80 rpm
Speed & Timer Display	Scale
Time Setting Range	1 - 1199
Operation Type	Continuous
Dimensions	150 x 530 x 190 mm
Weight	8 kg
Permissible ambient Temperature	5-40° C
Permissible ambient Humidity	80%
Protection Class	IP21



## WAVEX – LCD ROTATING MIXER

202

Code	Product	No. per Case	Price /Case (₹)
E11280	Wavex- LCD Rotating Mixer with Rotisserie accessory for 50 ml x 24 centrifuge tubes horizontally	1	60000

### Spare Accessories

Code	Product	No. per Case	Price /Case (₹)
E11281	Rotisserie accessory for 1.5 ml x 48 micro centrifuge tubes horizontally	1	10000
E11282	Rotisserie accessory for 50 ml x 24 centrifuge tubes horizontally	1	9000
E11283	Rotisserie accessory for 15 ml x 24 centrifuge tubes horizontally	1	9000
E11284	Rotisserie accessory for 1.5 ml x 32 micro centrifuge tubes vertically	1	9000
E11285	Rotisserie accessory for 50 ml x 16 centrifuge tubes vertically	1	9000
E11286	Rotisserie accessory for 15 ml x 16 centrifuge tubes vertically	1	9000
E11274	Disk support rods used with disk accessories	4	2500

Wavex rotating mixer give gentle but effective mixing of biological samples to be held in 1.5 ml to 50 ml tubes used in a variety of applications including immune precipitations, prevention of blood coagulation and latex diagnostics.

Wavex rotating mixer has a rotisserie type design.

LCD displays and digital speed control allows procedures to be accurate.

### Specifications

Voltage	220-240 V
Frequency	50-60 Hz
Power	40 W
Motor Type	DC Motor
Tilt Angle	0 - 90°
Speed Range	0-70 rpm
Speed & Timer Display	LCD
Time Setting Range	1 - 1199 min
Operation Type	Continuous / timed operation
Dimensions	220 x 510 x 260 mm
Weight	8 kg
Permissible ambient Temperature	5-40° C
Permissible ambient Humidity	80%
Protection Class	IP21



E11284



E11285



E11286



E11281



E11282



E11283

## Wavemax - Classic Rocking Shaker & LCD Digital Rocking Shaker

### Classic Rocking Shaker

Code	Product	No. per Case	Price /Case (₹)
E11401	Wavemax - Classic Rocking Shaker with flat mat	1	30700

### LCD Digital Rocking Shaker

Code	Product	No. per Case	Price /Case (₹)
E11410	Wavemax - Digital Rocking Shaker with flat mat	1	89000

### Spare Accessories for Rocking Shaker

Code	Product	No. per Case	Price /Case (₹)
E11411	Universal attachment with 4 Bars	1	10500
E11413	Dish attachment with non-slip mat & fixed string	1	9500
E11414	Fixing clip attachment	1	7000
E11415	Fixing clip for for 25 ml flask	1	900
E11416	Fixing clip for for 50 ml flask	1	900
E11417	Fixing clip for for 100 ml flask	1	900
E11418	Fixing clip for for 200/250 ml flask	1	1700
E11419	Fixing clip for for 500 ml flask	1	1700

\* Pls note E11414 is required to run E11415, E11416, E11417, E11418 & E11419.

Abdos classic rocking shakers are used for staining and destaining gel, hybridization procedure, haematology and blotting techniques. Designed to provide precise speed and tilt angles required for broad range of molecular and biological mixing applications

It boasts of digital speed control and large LCD display, speed and timer can be viewed simultaneously.

Aluminium-alloyed platform provides strong bearing capability, with non-slip mat that holds vessels and prevents it from slipping.

Special designed and developed compact space-saving design fits easily in the incubator.

Space Accessories have wide range of platforms for use with variety of vessels.



Specifications		
Code	E11401	E11410
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Power	20 W	50W
Motor type	DC Motor	DC Motor
Rocking motion	See-saw rocking	See-saw rocking
Maximum load capacity (With Platform)	3.0kg	5.0kg
Tilt angle	7°	9°
Speed range	0-80 rpm	10-70 rpm
Speed & timer display	Analog	LCD
Time range	NA	1 min - 19h59min
Operation Type	Continuous operation	Continuous /timed operation
Dimensions	270 x 330 x 130 mm	360 x 430 x 106 mm
Weight	2.7 Kg	9.0 Kg
Permissible ambient temperature	5-40° C	5-40° C
Permissible ambient Humidity	80%	80%
Protection class	IP21	IP21



Universal attachment with bars

Dish attachment with non-slip mat

## Wavemax – Classic Dancing (3D) Shaker & LCD Digital (3D) Dancing Shaker

### Classic Dancing (3D) Shaker

Code	Product	No. per Case	Price /Case (₹)
E11420	Wavemax – Classic Dancing Shaker with flat mat	1	30700

### LCD Digital Dancing (3D) Shaker

Code	Product	No. per Case	Price /Case (₹)
E11430	Wavemax – Digital Dancing Shaker with flat mat	1	89000

### Spare Accessories for Rocking Shaker

Code	Product	No. per Case	Price /Case (₹)
E11411	Universal attachment with 4 Bars	1	10500
E11413	Dish attachment with non-slip mat & fixed string	1	9500
E11414	Fixing clip attachment	1	7000
E11415	Fixing clip for for 25 ml flask	1	900
E11416	Fixing clip for for 50 ml flask	1	900
E11417	Fixing clip for for 100 ml flask	1	900
E11418	Fixing clip for for 200/250 ml flask	1	1700
E11419	Fixing clip for for 500 ml flask	1	1700

\* Pls note E11414 is required to run E11415, E11416, E11417, E11418 & E11419.

Wavemax classic dancing shakers are used for staining and destaining gel, hybridization procedure, haematology and blotting techniques.

This 3 dimensional shaker is designed to provide precise speed and tilt angles required for broad range of molecular and biological mixing applications.

Abdos LCD dancing shaker boasts of digital speed control and large LCD display, speed and timer can be viewed simultaneously.

Aluminium-alloyed platform provides strong bearing capability, with non-slip mat that holds vessels and prevents it from slipping.

Special designed and developed compact space-saving design fits easily in the incubator.

Space accessories have wide range of platforms for use with variety of vessels.





Specifications		
Code	E11420	E11430
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Power	20 W	40 W
Motor Type	DC Motor	DC Motor
Rocking Motion	3 Dimensional orbital	3 Dimensional Orbital
Maximum load capacity (With Platform)	3.0kg	10 kg
Tilt Angle	7°	9°
Speed Range	0-80 rpm	10-70 rpm
Speed & Timer Display	Analog	LCD
Time Range	NA	1 min - 19h59 min
Operation Type	Continuous operation	Continuous /timed operation
Dimensions	270 x 330 x 130 mm	360 x 410 x 200 mm
Weight	3.2 Kg	9.0 Kg
Permissible ambient Temperature	5-40° C	5-40° C
Permissible ambient Humidity	80%	80%
Protection Class	IP21	IP21



Universal attachment with bars

Dish attachment with non-slip mat

## WAVEMAX – ORBITAL SHAKER JUNIOR

CODE	Product	No. per case	Price/ Case (₹)
E11260	Wavemax- Orbital Shaker Junior with flat mat	1	55000

### Spare Accessories

CODE	Product	No. per case	Price/ Case (₹)
E11261	Universal Magnetic platform for flasks and tube racks	1	13000
E11262	Adjustable spring platform for unique vessel types	1	18000

Abdos powerful orbital shaker is capable of mixing liquids upto a load capacity of 6 kg in bottles, flasks, test tubes and dishes.

Abdos orbital shaker Junior has digital speed control of upto 300 rpm.

Universal magnetic clamp can be instantly exchanged.

These shakers have high capacity of upto 2 4 x 125 ml, 14 x 250 ml, 9 x 500 ml, 5 x 1l and 2 x 2l flasks and bottles

These shakers have horizontal circular 19 mm orbit for aeration and mixing.

### Specifications

Voltage	220-240 V
Frequency	50 Hz
Shaking Movement	Orbital
Speed Range	50 - 300 rpm, Variable
Speed Increment	10 rpm
Orbit	19 mm
Load Capacity	Maximum 4 kg ; 4 X 1 L
Dimension	330 x 300 x 120 mm
Weight	5.5 kg
Permissible ambient temperature	+4 to +65° C
Permissible relative humidity	80%



## WAVEMAX – ORBITAL SHAKER

206

CODE	Product	No. per case	Price/ Case (₹)
E11290	Wavemax – Orbital Shaker with flat mat	1	175000

### Spare Accessories

CODE	Product	No. per case	Price/ Case (₹)
E11291	Universal Magnetic platform for flasks and tube racks	1	28000

Kindly note: Flask Clamps and fixed platforms are sold separately. See Page No.188 for complete listing.

Abdos powerful orbital shaker is capable of mixing liquids upto a load capacity of 6 kg in bottles, flasks, test tubes and dishes.

These shakers have high capacity of upto 24 x 125 ml, 14 x 250 ml, 9 x 500 ml, 5 x 1l and 2 x 2l flasks and bottles

Abdos orbital shaker has digital speed control of upto 300 rpm.

These shakers have horizontal circular 19 mm orbit for aeration and mixing.

Universal magnetic clamp can be instantly exchanged.

### Specifications

Voltage	220-240V
Frequency	50 Hz
Shaking Movement	Orbital
Speed Range	30 - 300 rpm, Variable
Speed Increment	1 rpm
Orbit	19 mm
Load Capacity	Maximum 6 kg ; 2X2 L
Dimension	280 x 330 x 75 mm
Weight	11.25 kg
Permissible ambient temperature	+4 to +65° C
Permissible relative humidity	80%



## WAVEMAX - Classic Orbital & Linear Shaker

### Classic Orbital Shaker

Code	Product	No. per Case	Price /Case (₹)
E11440	Wavemax - Classic Orbital	1	33500

### Classic Linear Shaker

Code	Product	No. per Case	Price /Case (₹)
E11450	Wavemax - Classic Linear Shaker	1	33500

Abdos orbital and linear shakers are capable of mixing and shaking liquids in bottles, flasks, vessels, test tubes and dishes.

Space Accessories have wide range of platforms for use with variety of vessels.

Special designed and developed compact space-saving design fits easily in the incubator and refrigerator.

### Specifications



Code	E11440	E11450
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Power	30 W	30 W
Motor Type	DC Motor	DC Motor
Shaking Motion	Orbital	Linear
Orbital Diameter	20mm	20mm
Maximum load capacity (With Platform)	3 kg	3 kg
Speed Range	0-200 rpm	0-200 rpm
Operation Type	Continuous operation	Continuous /timed operation
Dimensions	270 x 330 x 110 mm	270 x 330 x 110 mm
Weight	3 Kg	3 Kg
Permissible ambient Temperature	5-40° C	5-40° C
Permissible ambient Humidity	80%	80%
Protection Class	IP21	IP21



## WAVEMAX - LCD Digital Orbital & Linear Shaker

208

### LCD Digital Orbital Shaker

Code	Product	No. per Case	Price /Case (₹)
E11460	Wavemax – Orbital Shaker with Universal attachment with 3 Bars	1	72000

### LCD Digital Linear Shaker

Code	Product	No. per Case	Price /Case (₹)
E11470	Wavemax – Linear Shaker with Universal attachment with 3 Bars	1	72000

### Spare Accessories for E11440, E11450, E11460 & E11470

Code	Product	No. per Case	Price /Case (₹)
E11451	Universal attachment with 3 Bars	1	9500
E11452	Dish attachment with non-slip mat	1	9000
E11453	Fixing clip attachment	1	5000
E11415	Fixing clip for for 25 ml flask	1	900
E11416	Fixing clip for for 50 ml flask	1	900
E11417	Fixing clip for for 100 ml flask	1	900
E11418	Fixing clip for for 200/250 ml flask	1	1700
E11419	Fixing clip for for 500 ml flask	1	1700

\* Pls note E11453 is required to run E11415, E11416, E11417, E11418 & E11419.

Abdos orbital and linear shakers are capable of mixing and shaking liquids in bottles, flasks, vessels, test tubes and dishes.

Independent LCD display for adjusting speed and time. Speed and timer can be viewed simultaneously.

Maximum load capacity of 2.5 kg with platform.

Special designed and developed compact space-saving design fits easily in the incubator and refrigerator.

Electronic time switching clock controls time or continuous operation mode.

Space Accessories have wide range of platforms for use with variety of vessels.

Over speed detection and protection.





Specifications		
Code	E11460	E11470
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Power	30 W	30 W
Motor Type	Brushless DC Motor	Brushless DC Motor
Shaking Motion	Obital	Linear
Orbital Diameter	4 mm	4 mm
Maximum load capacity (With Platform)	2.5 kg	2.5 kg
Speed Range	100-800 rpm	100-350 rpm
Speed & Timer Display	LCD	LCD
Time Range	1 min - 19h59 min	1 min - 19h59 min
Operation Type	Continuous /timed operation	Continuous /timed operation
Dimensions	300 x 340 x 100 mm	300 x 340 x 100 mm
Weight	8.1 Kg	8.1 Kg
Permissible ambient Temperature	5-40° C	5-40° C
Permissible ambient Humidity	80%	80%
Protection Class	IP21	IP21



Universal attachment with bars



Dish attachment with non-slip mat



Fixing clamp attachment

## Wavemax - Heavy Duty Lcd Digital Orbital & Linear Shaker

### LCD Digital Orbital Shaker

Code	Product	No. per Case	Price /Case (₹)
E11480	Wavemax - Heavy Duty Orbital Shaker with Universal attachment with 4 Bars	1	76999

### LCD Digital Linear Shaker

Code	Product	No. per Case	Price /Case (₹)
E11490	Wavemax - Heavy Duty Linear Shaker with Universal attachment with 4 Bars	1	76999

### Spare Accessories for E11480, E11490

Code	Product	No. per Case	Price /Case (₹)
E11411	Universal attachment with 4 Bars	1	10500
E11413	Dish attachment with non-slip mat & fixed string	1	9500
E11414	Fixing clip attachment	1	7000
E11415	Fixing clip for for 25 ml flask	1	900
E11416	Fixing clip for for 50 ml flask	1	900
E11417	Fixing clip for for 100 ml flask	1	900
E11418	Fixing clip for for 200/250 ml flask	1	1700
E11419	Fixing clip for for 500 ml flask	1	1700

Abdos orbital and linear shakers are capable of mixing and shaking liquids in bottles, flasks, vessels, test tubes and dishes.

Independent LCD display for adjusting speed and time, speed and timer can be viewed simultaneously.

Special designed and developed compact space-saving design fits easily in the incubator and refrigerator.

Maximum load capacity of 7.5 kg with platform.

Electronic time switching clock controls time or continuous operation mode.

Space Accessories have wide range of platforms for use with variety of vessels.

Over speed detection and protection.





Specifications		
Code	E11480	E11490
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Power	30 W	30 W
Motor Type	Brushless DC Motor	Brushless DC Motor
Shaking Motion	Orbital	Linear
Orbital Diameter	10 mm	10 mm
Maximum load capacity (With Platform)	7.5 kg	7.5 kg
Speed Range	100-500 rpm	100-350 rpm
Speed & Timer Display	LCD	LCD
Time Range	1 min - 19h59 min	1 min - 19h59min
Operation Type	Continuous /timed operation	Continuous /timed operation
Dimensions	370 x 420 x 100 mm	370 x 420 x 100 mm
Weight	13.5 Kg	13.5 Kg
Permissible ambient Temperature	5-40° C	5-40° C
Permissible ambient Humidity	80%	80%
Protection Class	IP21	IP21



Fixing Clamps



Universal attachment with bars



Dish attachment with non-slip mat



## WAVEMAX- Digital Incubator

210

CODE	Product	No. per case	Price/ Case (₹)
E11355	Heating Digital Incubator	1	55000
E11356	Heating & Cooling Digital Incubator	1	83000

### Spare Accessories

CODE	Product	Platform Dimension	No. per case	Price/ Case (₹)
E11357	Extra Shelf ,10.5x8 inch, Plastic(not autoclavable)	10.5"x18"	1	5000

Wavemax-Digital Incubators provide the facility to monitor the chamber temperatures in real time.

Having large internal chambers with two adjustable shelves for increased space. Internal Power Outlet for Installation of other

Equipment for sample agitation within the Digital Incubators.

Wavemax-Digital Incubator is available in a heating unit or heating and cooling for lower temperature applications.

### Specifications

Code	E11355	E11356
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Temp. Range	Ambient +5°C to 60°C	Ambient -15°C to 60°C
Temp. Operation	Only Heating	Heating & Cooling
Temp. Accuracy	0.5°C (at 37°C)	0.5°C (at 37°C)
Temp. Uniformity	31.5°C (at 37°C)	31.5°C (at 37°C)
Temp. Increment	1°C	1°C
Platform Dimensions	235 x 290 mm	235 x 290 mm
Operating Temp. Range	+4 to +65°C	+4 to +65°C
Exterior	335 x 370 x 475 mm	335 x 370 x 475 mm
Interior	26 x 23.5 x 32.5 cm	26 x 23.5 x 32.5 cm
Capacity	20L	20L
Weight	6.5 kg	6.5 kg

NEW



## WAVEMAX - Incu-Shaker Mini

CODE	Product	Platform Dimension	No. per case	Price/ Case (₹)
E11920	Incu-Shaker Mini with Non-Slip Rubber Mat	9.5 x 11.5 in	1	P.O.R.

### Spare Accessories

CODE	Product	Platform Dimension	No. per case	Price/ Case (₹)
E11925	Universal Magnetic Platform for Flasks and Tube racks (For E11920)	9.5 x 11.5 in	1	P.O.R.

Kindly note: Flask Clamps and fixed platforms are sold separately. See Page No. 188 for complete listing.

Wavemax- Incu-Shaker Mini is a compact shaking incubator that can accept a variety of flasks, tubes, trays, etc.

The standard platform features a non-slip surface ideal for staining trays, tissue culture flasks, and Petri dishes.

Abdos Incu-Shaker offer exceptional temperature uniformity and accuracy due to a proprietary heat distribution technology that ensures temperatures are precisely maintained throughout the chamber within 0.25%, even in the corners.

Over temperature and over speed controls ensure safety, long life, and sample integrity.

Featuring the MAGic Clamp platform, this shaker lets you customize the size and types of vessels being used by simply exchanging clamp sizes. Clamps utilize a powerful magnetic base to securely attach to the shaking platform without screws, bolts, or tools

Speed, temperature, and time are controlled with a push of a button and are displayed on the LED panel.

Advanced motor isolation system minimizes noise and vibration.

### Specifications

Code	E11920
Volt	220-240 V
Frequency	50-60 Hz
Speed	Variable, 30 to 300 rpm
Speed Adjustment	1 rpm
Shaking Orbit	19 mm
Temperature Range	Ambient +5°C to 70°C
Temperature Increment	0.1°C
Temperature Accuracy	±0.1°C
Temperature Uniformity	±0.25%
Timer	1 min to 48 hours or continuous
Platform Dimensions	23.5 x 29 cm
Overall Dimensions (W x D x H)	28 x 41 x 33 cm
Weight	11.5 Kg



## WAVEMAX - Incu-Shaker (Incubating / Refrigerating)

212

CODE	Product	Platform Dimension (in)	No. per case	Price/ Case (₹)
E11921	Incu-Shake-53	13.8 x 13.8	1	P.O.R.
E11922	Incu-Shake-53R	13.8 x 13.8	1	P.O.R.
E11923	Incu-Shake-83	17.7 x 17.7	1	P.O.R.
E11924	Incu-Shake-83R	17.7 x 17.7	1	P.O.R.

### Spare Accessories

CODE	Product	No. per case	Price/ Case (₹)
E11955	Sticky Plate for Incu-Shake 53 & Incu-Shake53R	1	P.O.R.
E11956	Sticky Plate for Incu-Shake 83 & Incu-Shake83R	1	P.O.R.
E11957	Clamp Platform for Incu-Shake 53 & Incu-Shake53R	1	P.O.R.
E11958	Clamp Platform for Incu-Shake 83 & Incu-Shake83R	1	P.O.R.
E11959	Clamp For 50 ml flask	1	P.O.R.
E11960	Clamp For 100 ml flask	1	P.O.R.
E11961	Clamp For 250 ml flask	1	P.O.R.
E11962	Clamp For 300 ml flask	1	P.O.R.
E11963	Clamp For 500 ml flask	1	P.O.R.
E11964	Clamp For 1 L flask	1	P.O.R.
E11965	Clamp For 2 L flask	1	P.O.R.
E11966	Clamp For 2.8 L flask	1	P.O.R.
E11967	Clamp For 4 L flask	1	P.O.R.
E11968	Clamp For 6 L flask	1	P.O.R.
E11969	Test Tube Holder for 16 mm diameter hole	1	P.O.R.
E11970	Test Tube Holder for 25 mm diameter hole	1	P.O.R.
E11971	Test Tube Holder for 35 mm diameter hole	1	P.O.R.
E11972	Multi-Purpose Tray for Incu-Shake 53 & Incu-Shake53R	1	P.O.R.
E11973	Multi-Purpose Tray for Incu-Shake 83 & Incu-Shake83R	1	P.O.R.
E11974	Adjustable Bar Tray for Incu-Shake 53 & Incu-Shake53R	1	P.O.R.
E11975	Adjustable Bar Tray for Incu-Shake 83 & Incu-Shake83R	1	P.O.R.
E11976	Rubber Surface Tray for Incu-Shake 53 & Incu-Shake53R	1	P.O.R.
E11977	Rubber Surface Tray for Incu-Shake 83 & Incu-Shake83R	1	P.O.R.

Wavemax-Incubating/Refrigerating Shakers offers a variety of biological and biotech applications. This is a dual-action (orbital and reciprocating) shaker which is equipped with

high velocity fan ensuring the uniform temperature distribution and rapid thermal distribution and rapid thermal recovery. Sample monitoring is easy with transparent acryl lid and fluorescent lamp.

### Operating Features

Temperature control:

- +5°C above ambient to 60°C. (for E11921 and E11923)
- +15°C to 60°C. (For E11922 and E11924)

Microprocessor PID control.

Simple calibration and auto-tuning functions.

Digital timer with Delayed ON/OFF function: 1 min to 99 hr 59 min.

High temperature limit setting and open door alarm.

Adjustable fan speed with defrosting time and period control.

Intuitive control panel with bright LED display (0.1°C resolution) and touch-sensitive keypad.

### Optional Accessories

Universal / Dedicated Platforms, Rubber Mats, Universal Attachments

Flask Clamps, Test Tube Racks, Spring Wire Racks, Microplate Holders

### Shaking Features:

Dual shaking modes: orbital or reciprocating action.

Speed range: 10 to 300 rpm.

Programmable shaking motion :

- Timer range: 10 sec to 999 hr 59 min 59 sec.
- Forward & Backward, Pause: 10 sec to 59 min 59 sec.

Selectable orbit diameter or stroke length: 20, 30, 40mm.



### Specifications

Model	E11921	E11922	E11923	E11924
Volume (L)	53	53	83	83
Temperature Range	Ambient +5 ~ 60°C	15 ~ 60°C	Ambient +5 ~ 60°C	15 ~ 60°C
Temperature Accuracy	±0.1 (38°C)	±0.1 (38°C)	±0.1 (38°C)	±0.1 (38°C)
Temperature Stability	±1.0 (38°C)	±1.0 (38°C)	±1.0 (38°C)	±1.0 (38°C)
Temperature Heater	Heating Plate, 600W	Heating Plate, 600W	Heating Plate, 600W	Heating Plate, 600W
Temperature Timer	Start / Stop / Duration setting; 10sec ~999hr 59min 59sec	Start / Stop / Duration setting; 10sec ~999hr 59min 59sec	Start / Stop / Duration setting; 10sec ~999hr 59min 59sec	Start / Stop / Duration setting; 10sec ~999hr 59min 59sec
Shaker Controller	PID automatic regulation	PID automatic regulation	PID automatic regulation	PID automatic regulation
Shaker Power Unit	Brushless motor	Brushless motor	Brushless motor	Brushless motor
Shaker Methods	Clockwise, Counter-clockwise, forth-back, interrupted,	Clockwise, Counter-clockwise, forth-back, interrupted,	Clockwise, Counter-clockwise, forth-back, interrupted,	Clockwise, Counter-clockwise, forth-back, interrupted,
Shaker Shaking Throw	20, 30 (standard ), 40 mm	20, 30 (standard ), 40 mm	20, 30 (standard ), 40 mm	20, 30 (standard ), 40 mm
Shaker Speed (rpm)	10 to 300	10 to 300	10 to 300	10 to 300
Shaker Stability (rpm)	±1 (at 150rpm)	±1 (at 150rpm)	±1 (at 150rpm)	±1 (at 150rpm)
Max. Load (kg)	10	10	15	15
Platform Dimensions	350 x 350 mm	350 x 350 mm	450 x 450 mm	450 x 450 mm
Inside Dimensions	410 x 410 x 320 mm	410 x 410 x 320 mm	510 x 510 x 320 mm	510 x 510 x 320 mm
Outside Dimensions	440 x 740 x 625 mm	440 x 740 x 625 mm	540 x 850 x 625 mm	540 x 850 x 625 mm
Net Weight (kg)	74	85	91	102



CODE	Product	Platform Dimension	No. per case	Price/ Case (₹)
E11910	ORBI-SHAKER CO <sub>2</sub> with flatmat Platform	13 x 12 in	1	P.O.R.
E11911	ORBI-SHAKER CO <sub>2</sub> XL with flatmat Platform	16 x16.5 in	1	P.O.R.

### Spare Accessories

CODE	Product	Platform Dimension	No. per case	Price/ Case (₹)
E11915	Universal Magnetic platform for flasks and tube racks(E11910)	14 x 12 in	1	P.O.R.
E11916	Universal Magnetic platform for flasks and tube racks(For E11911)	16 x 16.5 in	1	P.O.R.
E11917	Universal Magnetic platform for flasks and tube racks(For E11911)	18 x 18 in	1	P.O.R.
E11945	Magnetic Clamp for for 3000 ml flask(For E11911)	-	1	P.O.R.
E11946	Magnetic Clamp for for 2000 ml flask(For E11911)	-	1	P.O.R.
E11947	Shelf 14" x 5.5", for Petri dishes, plates, trays, etc.(For E11911)	-	1	P.O.R.

WAVEMAX- ORBI-SHAKER CO<sub>2</sub> is designed for aeration, mixing and shaking in extreme environments, including CO<sub>2</sub> incubators. It can withstand temperatures from 0° to 65°C and humidity levels up to 100%.

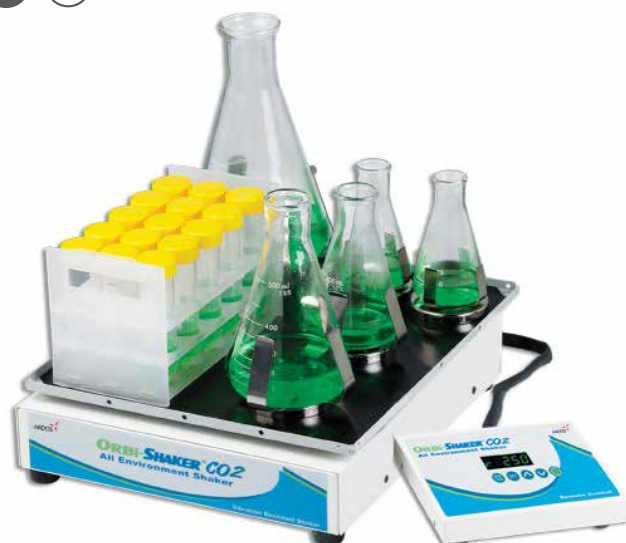
To avoid contamination, unintentional release of gas or deviations from protocol remote control module is provided. The remote controller allows the user to set and adjust the shaker settings without opening the chamber door(s).

These Shakers have a capacity of up to 24X 125 ml, 14X250 ml, 9X500 ml, 5X 1.0 L and 2 X 2.0 L flasks and bottles.

The instrument is supplied with a 13 x 12 in. non-slip platform. In addition, convenient MAGic Clamp™ platforms (of multiple sizes) are also available for use with Erlenmeyer flasks and test tube racks. The unique magnetic attachment method has been widely recognized as the easiest way to instantly change between flask clamps of different sizes.

### Specifications

Code	E11910	E11911
Speed Range	30 to 300 rpm, variable	30 to 300 rpm, variable
Speed Increment	1 rpm	1 rpm
Motion/Orbit	Circular /19 mm	Circular /19 mm
Timer	1 minute to 48 hours, continuous	1 minute to 48 hours, continuous
Maximum Capacity	1X2L or 5 X1L	5X2L or 9X1L
Maximum Load Capacity	6.0 kg	7.5 kg
Operating Temperature	0°C to +65°C	0°C to +65°C
Humidity	Up to 100%	Up to 100%
STD Platform Dimension	330 x 305 mm	400x 425 mm
Weight	11.5 Kg	23 Kg



**Spare Accessories for E11260,E11290,E11910,E11911,E11920**

CODE	Product	No. per case	Price/ Case (₹)
E11928	Universal Magnetic Clamp for 125ml, 250ml, 500ml flasks	1	5500
E11929	Magnetic Clamp for 1000 ml flask	1	7000
E11930	Magnetic Clamp for for 500 ml flask	1	4500
E11931	Magnetic Clamp for for 250 ml flask	1	4500
E11932	Magnetic Clamp for for 125 ml flask	1	4000
E11933	Magnetic Clamp for for 50 ml flask	1	3700
E11934	Magnetic Clamp for one Microplate	1	9500
E11935	Magnetic Clamp for Tube Rack 30x15ml & 20x50ml tubes	1	18000
E11936	Magnetic Clamp for Tube Rack 72x14mm culture tubes	1	18000
E11937	Magnetic Clamp for Tube Rack 32x15ml, tubes	1	18000
E11938	Magnetic Clamp for Tube Rack 15x50ml, tubes	1	18000

**Spare Accessories for E11290,E11920,E11910,E11911**

CODE	Product	No. per case	Price/ Case (₹)
E11939	Magnetic Clamp for Tube Rack 4x500ml or 600ml conical bottles	1	21000
E11940	Magnetic Clamp for Tube Rack 12x1.5/2.0 ml tubes horizontal	1	12500
E11941	Magnetic clamp for tube Rack 4x15ml tubes horizontal	1	12500
E11942	Magnetic Clamp for Tube Rack 2x50ml tubes horizontal	1	12500
E11943	Magnetic Clamp for tilted holder for 15ml and 50ml tube rack	1	14000
E11944	Universal spring Platform	1	P.O.R

**Spare Accessories for E11290, E11920 & E11911**

CODE	Product	No. per case	Price/ Case (₹)
E11948	Platform for 5 x 500 ml	1	P.O.R.
E11949	Platform for 8 x 250 ml	1	P.O.R.
E11950	Platform for 1 x 125 ml	1	P.O.R.
E11951	Platform for 4 microplates	1	P.O.R.

## WAVEMAX - Incucell-Co<sub>2</sub> Incubator

214

CODE	Product	Volume	No. per case	Price/ Case (₹)
E11980	INCUCCELL-40	40 L	1	P.O.R.
E11981	INCUCCELL-180	180 L	1	P.O.R.

### Spare Accessories

CODE	Product	No. per case	Price/ Case (₹)
E11985	GAS Regulator	1	P.O.R.
E11986	CO2 Analyzer	1	P.O.R.

WAVEMAX-INCUCCELL CO<sub>2</sub> Incubator is Ideal for the experiments of the cultivation of animal cells, sperm/ovum, and anaerobic cells, different types of microbial cells and special tissues. Exceptional temperature and CO<sub>2</sub> control create the perfect incubation conditions, while features such as the seamless chamber make them easy to clean and ensure a contamination-free environment

### Features:

6 Sides Direct Heating System.	No Condensation: Heating by front door heater & frame heater prevent condensation in chamber and on glass door.
Dry Wall and Air Jacket.	Natural Humidification using Water Tray.
DUAL BEAM IR CO <sub>2</sub> Sensor.	HEPA filtration of gas supply.
Microprocessor PID Control.	Availability of Various options like decontamination & Oxygen control.

### Specifications



Code	E11980	E11981
Chamber volume(L)	42	180
Temperature Range (°C)	Ambient+5-60	Ambient+5-60
Temperature Accuracy	±0.1°C (37°C)	±0.1°C - (37°C)
Temperature Resolution	0.1°C	0.1°C
Temperature Control	Digital PID	Digital PID
CO <sub>2</sub> Range	0% - 20%	0% - 20%
CO <sub>2</sub> Accuracy	±0.1% (5% 37°C)	±0.1% (5% 37°C)
CO <sub>2</sub> Resolution	0.1%	0.1%
CO <sub>2</sub> Sensor	IR CO <sub>2</sub> Sensor	IR CO <sub>2</sub> Sensor
CO <sub>2</sub> Control	Microprocessor	Microprocessor
CO <sub>2</sub> Inlet pressure range	0.5-0.6bar	0.6-0.7bar
Display	LED Display	LED Display
Jacket type	Dry Wall Type (6 sides heat)	Dry Wall Type (6 sides heat)
Chamber material	Stainless Steel (304)	Stainless Steel (304)
Number of shelves	Standard 2 (Max -4)	Standard 3( Max-8)
Chamber dimension	320 x 350 x 370 mm	473 x 528 x 710 mm
Overall dimension	408 x 482 x 550 mm	560 x 665 x 945 mm
Weight	35 kg	78 kg



## AEROVAC - Oil Free Vacuum Pump

CODE	Product	No. per case	Price/Case (₹)
E11800	Aerovac-300	1	21200
E11801	Aerovac-400	1	29340
E11802	Aerovac-600	1	41050
E11803	Aerovac-410	1	29340
E11804	Aerovac-610	1	41050
E11805	Aerovac-430	1	40890
E11806	Aerovac-800	1	72000
E11807	Aerovac-810	1	72000

### Spare Accessories

CODE	Product	Discription	No. per case	Price/Case (₹)
E11810	Connectors	--	1	6000
E11815	L-shape connector	--	1	10500
E11816	Quick connection outlet	--	1	7000
E11821	Silencer	Suitable for Aerovac300 / Aerovac400 / Aerovac410	1	6000
E11822	Silencer	Suitable for Aerovac600 / Aerovac610	1	6000
E11823	Vacuum regulator / filter	Incl. pressure gauge	1	23800
E11824	Vacuum regulator / filter	without pressure gauge	1	19500
E11825	Foot pedal	Suitable for Aerovac series vacuum pumps	1	13900
E11826	FEP tubing	--	1	3500
E11830	Silicon tubing	--	1	2500

ABDOS Aerovac - Oil Free Vacuum Pump is a compact, lightweight and mobile oil-free piston pump. It features manual pressure control and a gauge for pressure monitoring.

The unit is maintenance-free and its oil-free design reduces its environmental impact.

The pump can achieve flow rates of up to 52 L/min and an ultimate vacuum down to 13 mbar.

A wide range of optional accessories are available.

**Application Areas:**  
Aerovac Vacuum Pump is useful for biology laboratories, food industry, microbiological detection, vacuum extraction, liquid filtration, vacuum drying, suspended solids measurement.



### Specifications

Code	E11800	E11801	E11802	E11803	E11804	E11805	E11806	E11807
Volt(V)	220	220	220	220	220	220	220	220
Frequency(Hz)	50	50	50	50	50	50	50	50
Maximum Power(W)	60	80	80	125	190	210	220	220
Maximum Current (A)	0.3	0.4	0.4	0.6	1.0	1.0	1.0	1.0
Maximum Vacuum(mbar)	100	100	30	150/5.5bar	100	30	100	30
Maximum Flow Rate(L/min)	17	34	19	28	60	40	80	50
Motor Rotation(rpm)	1450	1450	1450	1450	1450	1450	1450	1450
Dimension WxDxH(mm)	272x142x165	310x152x165	310x152x165	247x235x200	340x155x195	340x155x195	340x185x195	340x185x195
Weight (kg)	4.4	5.4	5.4	5.5	8.6	8.6	8.6	8.6
Noise Level(dB)	50	60	50	50	52	52	52	52



## UTILITIES



Safety Goggles  
Resealable Bags  
Skincare Nitrile Gloves  
Hi/Lo Temperature Tape  
& More

## Laboratory Work Book

216

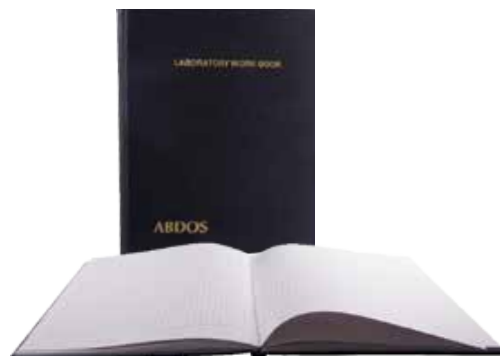
Code	No. of Pages	No. per Case	Price /Case (₹)
U50101	100	3	4050

Abdos Laboratory workbooks is used to keep important indispensable data such as lab work, details on experiment and design and development.

All pages are numbered with enough space for date, title, project number, book number and signature.

The cover of the book is water-proof and is chemical resistant.

These workbooks contain important information like periodic table and conversion table to help our end users.



## Biohazard Disposable Bags, PP

217

Code	Size (Inch)	No. per Case	Price /Case (₹)
U40105	12 x 18	200	1980
U40106	12 x 24	200	2310
U40103	18 x 22	200	2778
U40104	25 x 35	200	6050
U40120	42 x 42	100	7810

Bright red colour polypropylene bags are easy to open and is used to dispose used Micro Tips, Tubes and other plastic products.

These bags are printed with biohazard symbol, writing indicator white patch and pass ASTM 1922 tear resistance and ASTM 1709 dart impact tests.



Add Colour Code of your choice: RED (R), YELLOW (Y), NATURAL (N)

## Autoclavable Bags, PP

218

Code	L x W (inch)	No. per case	Price /Case (₹)
U40112	8 x 12	100	791
U40113	12 x 24	100	1320
U40108	16 x 18	100	1540
U40109	16 x 24	100	3025

These polypropylene autoclave bags made of 2 mil thickness are used for discarding used petri dishes, membrane filters, cell culture flasks, pipettes, culture plates and other plastic products.

These bags are transparent.



## Transport / Resealable Bags with Zip Lock, PE

219

Code	Size (Inch)	No. per Case	Price /Case (₹)
U40110	10.2 x 9.8	100	750
U40111	13.35 x 13	100	1154

These Bags can be used to store and ship samples, solids and food.

Though it can be used for all applications it has especially used in food, water, forensic science and quality control laboratory.

Suitable for use with food.

Using the rim and channel closure the bag can be closed by finger pressure and reopened repeatedly.

Content stored in the bag would be dust free and free of contaminants.



## Safety Goggles, PC

220

Code	No. per Case	Price /Case (₹)
U40101	2	509
U50103	2	992
U50104	2	1195

Polycarbonate lens with side shield.

Impact resistant and lightweight frames for comfortable eyewear.

99.9% UVA/UVB protection.

U50103 are best suitable for the complete protection of eye.

U50104 can be worn over spectacles for complete protection of eyes.



U40101



U540103



U50104

## Safety Goggles Box, Acrylic

221

Code	L x W x H (mm)	Size	No. per Case	Price /Case (₹)
P70106	23 x 16 x 18	Small	1	3200
P70107	23 x 16 x 25	Large	1	4000

This safety box can be set on the bench top or mounted on the wall for storage of goggles, glasses and other small lab products.

Safety Lid keeps the box free of dust and contamination.

Clear window helps to view the inventory from the outside.



## Safety Face Shield

222

Code	L x B x T (Inch)	No. per Case	Price /Case (₹)
U40102	15.5 x 8 x0.04	1	2620

Clear face shield of polycarbonate provides high impact and splash protection.

Ratched adjustment on the headgear provides comfortable fit.



## Respiratory Mask

223

Code	Description	Size	Colour	No. per Case	Price/Case (₹)
U20417	N 95 Particulate respirator	Regular	White	20	1460
U20418	P 95 Particulate respirator with exhalation	Regular	White	10	2800
U20419	N 95 Particulate respirator with exhalation	Regular	White	10	2310

These mask are disposable respirators that provide protection from particulates.

Large breathing chambers.

Option of exhalation valve, foam on the entire sealing surface and layer of carbon to provide odour relief from nuisance level of gases and vapour.

P95 and N95NIOSH approved.



## Sharp Containers, PP

224

Code	Capacity, (ml)	No. per case	Price/ Each (₹)	Price/Case (₹)
P50111	800	40	95	3800
P50112	1200	60	135	8100
P50113	3000	60	185	11100
P50114	5000	60	230	13800

A complete line of containers for needles, sharps and cutting waste, hospital waste.

Secure lock on lid makes it safe to discard with sharp waste.

Special design on lid makes it user-friendly to use with one hand while disposing of sharp needles.

Opening design inhibits hand entry to reduce the risk of needle sticks when disposing of sharps.

Clear tops and translucent containers allow you to monitor the fill level.

Puncture-resistant, durable polypropylene Can be autoclaved or incinerated.

Clearly marked with a biohazard label.



## Abdos Brand - Skincare Blue Nitrile Gloves - 9.5 inches length

225

Code	Size	No. per Case	Price /Case (₹)
U20447	X Small	100	575
U20341	Small	100	575
U20342	Medium	100	575
U20343	Large	100	575
U20448	X Large	100	575

These gloves are ideal product to protect you exposure to bacteria, viruses and chemicals. It also enhances your ability to offer maximum security against cross-contamination.

Its unique blue color provides quick, visual differentiation from natural rubber latex and other synthetic gloves.

Custom design enhance comfort and fit.

Ambidextrous, textured fingertips and beaded cuff enhance wet and dry grip.

These gloves are powder free, minimizing the potential for powder related complications.

Conforms to ASTM D6319 and EN 455 Standards.



## Abdos Brand - Skincare White Latex Gloves - 9.5 inches length

226

Code	Size	No. per Case	Price /Case (₹)
U20449	X Small	100	510
U20344	Small	100	510
U20345	Medium	100	510
U20346	Large	100	510
U20450	X Large	100	510

These gloves are ideal product to protect you exposure to bacteria, viruses and chemicals. It also enhances your ability to offer maximum security against cross-contamination.

Ambidextrous, textured fingertips and beaded cuff enhance wet and dry grip.

Softness provides superior comfort and natural fit.

These gloves are powder free, minimizing the potential for powder related complications, irritation and dermatitis.

Lower level of extractable proteins and chemical residue, hence lower incidences of allergic reactions.

Conforms to ASTM D6319 and EN 455 Standards.



## Safeskin Purple Nitrile Gloves

### Safe Skin Purple Nitrile Gloves - 9.5 inches length

Code	Size	No. per Case	Price /Case (₹)
U20301	Small	100	990
U20302	Medium	100	990
U20303	Large	100	990

### Safe Skin Purple Nitrile Gloves - 12.0 inches length

Code	Size	No. per Case	Price /Case (₹)
U20304	Small	50	940
U20305	Medium	50	940
U20306	Large	50	940

These gloves are ideal product to protect you exposure to bacteria, viruses and chemicals. It also enhances your ability to offer maximum security against cross-contamination.

Its unique purple color provides quick, visual differentiation from natural rubber latex and other synthetic gloves.

Its textured fingertips enhance wet and dry grip.

Custom design enhance comfort and fit.

These gloves are powder free, minimizing the potential for powder related complications.



## Glove Box Holder, Acrylic

Code	No. of Places	L x W x H (mm)	No. per Case	Price /Case (₹)
P70301	1	260 x 100 x 138	1	1700
P70302	2	260 x 100 x 270	1	2256
P70303	3	260 x 100 x 415	1	2987

They designate a place for gloves.

Clear and pristine holder to give clean appearance.

Easy to dispense the gloves through the holder.

Top loading of the glove box.

Each holder has holes that help it to be installed in a convenient location to the proximity of your work and tasks.



## Wypall X70 Wipers

229

Code	Size (cm)	Colour	No. per Case	Price /Case (₹)
U20407	24.7 x 20	White	1roll-100mtr	3243
U20413	24.7 x 20	Blue	1roll-100mtr	3243
U20414	26 x 26	White	50 sheets	612
U20415	25.4 x 38.1	Blue	50 sheets	781

An ideal product to replace cloth towels or rags.

They can exceptionally absorb oil, grease, solvents and water, reusable and durable.

They are designed to perform the wiping function that helps to improve productivity and performance.

They are bio-degradable hence reduce disposable cost and are environmental friendly.

They are made from advanced HYDROKNIT material that deliver products that are absorbent, higher in strength and have more bulk.

Available in 100 meters roll format in white and blue colour with perforation making it easy to use.



## Wypall L 30 Wipers

230

Code	Size (cm)	Colour	No. per Case	Price /Case(₹)
U20408	21.75 x 36.5	White	56 sheets	562
U20423	38 x 23.4	Blue	1roll-300mtr (approx)	4804

This product will consistently deliver the wiping performance that you need in convenient and cost effective manner.

Wiper is highly absorbent, thus controls usage and reduces wastage.

One time use and throw wipers,

eliminates cross-contamination. Wipers have low lint hence do not leave particles behind.

Versatile, highly absorbent wiper leaves surface clean and dry.

Available in both sheet and roll format that makes it easy to use.



## Kimtech Science Kimwipes Wipers

231

Code	Size (cm)	No. per Pack	No. per Case	Price /Case (₹)
U20409	11.17 x 21.3	280 sheets	60 packs	17200
U20410	37.33 x 42.16	140 sheets	15 packs	16290

These wipers is an ideal product for cleaning and wiping delicate surfaces such as beakers, lenses, slides, optical lenses, optical instruments, surface and glass layer.

Low in lint and low extractable wipers.

Non-abrasive wipers wont scratch on delicate surface when used wet.

Absorbent wipers hence easily wipe up liquid and sust.

LINTGURD anti-stat polyshield on each pop-up box helps to further reduce the lint and static buildup.

Multi-fold dispensing format enables one-at-a time dispensing which controls usage.

Handy, portable pop-up box makes the product convenient to use.



## Parafilm M

232

Code	Size (Inch x Feet)	No. per Case	Price /Case (₹)
U30101	2 x 250	1 Roll	2627
U30102	4 x 125	1 Roll	2369
U30103	20 x 50	1 Roll	5562

Parafilm M is a flexible, thermoplastic, waterproof self-sealing film that holds moisture loss to the minimum and offers secure sealing to the content of tubes, beakers, flasks, petri-dish and vials.

It has excellent resistance to air, other gases, alcohol, common acids and moderately concentrated alkalis.

At 21° C (70° F), it stretches 200% and returns partially to its original size at 82° C to 93° C (180° F to 200° F) and softens enough to make an adhesive bond between papers, cloths and leathers.



## Parafilm M Dispenser, Acrylic

233

Code	Capacity (Inch)	L x W x H, mm	No. per Case	Price /Case (₹)
P70401	2 & 4	180 x 120 x 160	1	3050

Ideal for storing, dispensing and cutting Parafilm ® M, tape and labels.

Openable top lid allows easy filling into the Dispenser.

These dispensers can hold both 2 inches and 4 inches Rolls.

Tapes and Labels can be easily cut through super-sharp serrated blade.





## Parafilm M Dispenser, ABS

234



Code	Capacity (inch.)	L x W x H, mm	No. per Case	Price /Case(₹)
P70402	2 & 4	156 x 120 x 156	1	3800

Ideal for storing, dispensing and cutting Parafilm® M, tape and labels.

Openable top lid allows easy filling into the Dispenser.

These dispensers are designed with safety razor that sides and cuts with no danger to fingers.

These dispensers can hold both 2 inches and 4 inches Rolls.

## Freezer Thermometer

235

Code	L x W x H (mm)	No. per Case	Price /Case (₹)
U20610	136 x 19 x 28	1	3600

These thermometer can be used as probe to investigate and protect frozen and chilled samples from potential spoilage.

Large digital display shows freezer/refrigerator temperature plus ambient temperature

Monitor temperatures inside your freezer or refrigerator with the added convenience of sound and flashing LED lights to alert out-of-range temperatures.

Set freezer range: (-9.5° to -23°C); set refrigerator range: (2° to 8°C)

Suction cup attaches the probe inside freezer/refrigerator while the thermometer secures to the outside with hook-and loop tape

Can be used as Fahrenheit °F or Celsius °C

Includes one AAA battery

Probe cable measures 0.9 m; probe measures 5 mm OD x 17 mm L



## Container Seal

236

Code	Size (Inch x Feet)	Colour	No. per Case	Price /Case (₹)
U20101 C	0.75 x 108	Clear	1 Roll	5950
U20101 W	0.75 x 108	White	1 Roll	5950
U20101 B	0.75 x 108	Blue	1 Roll	5950

Cryo-Babies are ideally used for 0.5ml and 2.0ml tubes and Cryo-Tags are used for general-purpose applications.

Made with a flexible, polyolefin label material and acrylic adhesive. This unique combination expands and contract together with temperature fluctuations resulting in strong adhesive bond.

Cryo-Babies and Cryo Tags can withstand freezer temperatures down to -196°C (liquid and vapor phase nitrogen), boiling water baths (100°C), autoclaving and moderate oven temperature (150°C). They will resist water soaking for at least 24 hours at room temperature and water vapor (100% relative humidity) at 35°C for at least 24 hours.

These labels can adhere to most plastics (100% virgin polypropylene tubes recommended), glass and metals without cracking, peeling or degrading.

These are chemically inert labels and resist most organic solvents and caustic agents.

These labels accept writing from most lab markers.



## Cryo-Babies and Cryo-Tags

237

### Cryo-Babies

Code	Size (Inch)	No. per Case	Price /Case (₹)
U10401	0.94 x 0.50	1000	3400
U10402	1.28 x 0.50	1000	3400

### Cryo-Tags

Code	Size (Inch)	No. per Case	Price /Case (₹)
U10501	1.50 x 0.75	1000	3400

Cryo-Babies are ideally used for 0.5ml and 2.0ml tubes and Cryo-Tags are used for general-purpose applications.

Cryo-Babies and Cryo Tags can withstand freezer temperatures down to -196°C (liquid and vapor phase nitrogen), boiling water baths (100°C), autoclaving and moderate oven temperature (150°C). They will resist water soaking for at least 24 hours at room temperature and water vapor (100% relative humidity) at 35°C for at least 24 hours.

These are chemically inert labels and resist most organic solvents and caustic agents.

Made with a flexible, polyolefin label material and acrylic adhesive. This unique combination expands and contract together with temperature fluctuations resulting in strong adhesive bond.

These labels can adhere to most plastics (100% virgin polypropylene tubes recommended), glass and metals without cracking, peeling or degrading.

These labels accept writing from most lab markers.



## Tough Spots

238

Code	Size (Inch)	No. per Case	Price /Case (₹)
U10301	1/2	1000	2825
U10302	3/8	1000	2825
U10303	1/2	5000	11300
U10304	3/8	5000	11300

Tough Spots are ideally used for labeling 0.5ml, 1.5ml and 2.0ml micro centrifuge tubes.

Tough Spots can withstand freezer temperatures down to -196°C (liquid and vapor phase nitrogen), boiling water bath (100°C), autoclaving and moderate oven temperature (150°C).

Tough Spots can endure sustained humidity and soaking, submersion in boiling water bath, autoclaving, organic solvents, caustic agents and other challenges without peeling, degrading or becoming brittle.

Made with a flexible, polyolefin label material and acrylic adhesive. This unique combination expands and contracts together with temperature fluctuation resulting in strong adhesive bond.

These labels can adhere to most plastics (100% virgin polypropylene tubes recommended), glass and metals without cracking, peeling or degrading.

These labels accept writing from most lab markers.



## Tough Tags

239

Code	Size (Inch)	No. per Case	Price /Case (₹)
U10201	1.28 x 0.50	1000	3750
U10202	0.94 x 0.50	1000	3050

Tough Tags are ideally used for labeling 0.5ml, 1.5ml and 2.0ml tubes. White Tough Tags can also be used for labeling general purpose label and microplates.

Tough Tags can withstand temperatures from -40°C to 121°C, boiling water bath, autoclaving and moderate freezer temperature.

Chemically inert, polyester sheets resist most organic solvents and caustic agents.

Tubes labeled with Tough-Tags easily slide in and out of centrifuge rotors without binding.

These labels can adhere to most plastics (100% virgin polypropylene tubes recommended), glass and metals without cracking, peeling or degrading.

Tough-Tags are pre-cut peel-off labels which accept any marking instrument. They are perfectly sized to fit microcentrifuge tubes and other container in the laboratory.

Dispensing box assists in labeling individual tubes used in small experiments.



## Tough Tag Station

240

Code	No. per Case	Price /Case (₹)
U10601	1	8600

Tough Tag Station can conveniently hold up to 6 roll of Tough-Tags, Tough-Spots or cryo-Tags.

Users can utilize the ledge to easily write on labels for sample identification.



## Petri-Seal

241

Code	Size (Inch x Feet)	Colour	No. per Case	Price /Case (₹)
U10901 C	0.5 x 108	Clear	1 Roll	4500
U10901 W	0.5 x 108	White	1 Roll	4500
U10901 B	0.5 x 108	Blue	1 Roll	4500
U10901 R	0.5 x 108	Red	1 Roll	4500
U10901 Y	0.5 x 108	Yellow	1 Roll	4500

Petri-Seal stretches and conforms to form a tight seal and is temperature resistant, waterproof and chemically resistant.

It resists abrasion and puncture and blocks vapor loss while reducing the rate of gas exchange.

Petri-Seal can be used with microtiter plates, petri dishes and culture plates to prevent entry of any contaminants.

Petri-Seal remains flexible down to -30°C and can withstand continuous exposure from -40°C (with intermittent exposure up to 100°C).

Tests have shown that PetriSeal leaves on adhesive residue even after two years.

Available in a wide variety of colours.



## Dura - Seal

242

Code	Size (Inch x Feet)	No. per Case	Price /Case (₹)
U10101	2 x 500	1 Roll	5000
U10102	4 x 250	1 Roll	5000

Dura-Seal the durable, heat and solvent-resistant stretch film, has substantial advantages over common laboratory stretch films.

Its superior heat-resistant allows for containers to be incubated in boiling water baths without suffering the characteristic melting of paraffin-based alternatives.

Dura Seal is polyethylene based and free of any adhesives, it can resist essentially all caustic agents and organic solvents.



### Method of Use:

Dura-Seal is easy to use. There is no interleaf paper to strip away, users have to just stretch the film symmetrically over a container opening and the 1.5mm thick film contracts inwardly around the opening or neck of the Container to provide a drum -tight, water-proof seal. The film can be Elongated 500-800% before breakage, minimizing the incidence of tearing During stretch sealing. The film clings to itself, especially after stretching so the free edges of the film may be stretched around the container to secure the edges.

### Permeability Information:

Oxygen	125cc/100in 2/24hrs at 23°C
Carbon Dioxide	1300cc/100in 2/24hrs at 23°C
Water vapor	1.0g/100in2/24hrs at 38° c and 90% R.H.

## Multipurpose Labeling Tape

243

Code	Size (Inch)	Colour	No. per Case	Price /Case (₹)
U10701 W	0.75 x 500	White	1 Roll	699
U10701 B	0.75 x 500	Blue	1 Roll	699
U10701 G	0.75 x 500	Green	1 Roll	699
U10701 O	0.75 x 500	Orange	1 Roll	699
U10701 Y	0.75 x 500	Yellow	1 Roll	699

These autoclavable tapes adhere to almost any dry surface-glass, plastic, metal, paper and rubber.

These tapes sticks throughout the most demanding procedures, is oil-proof, waterproof and acid resistant and can be steam autoclaved.

Holds in a wide range of temperatures and transfers and transfers cleanly from one surface to another, leaving no messy residue.

These labels accept handwritten notations inscribed with pen, pencil or marker.



## Multi-Tape Dispenser

244

Code	Size	No. per Case	Price /Case (₹)
U20501	For 500 inch Roll	1	9000

These dispensers facilitate easy dispensing from one convenient location.

Special design allows fast addition or replacement of label roll.



## Speciality Indicator Tape for Steam Autoclave

245

Code	Size (Inch)	No. per Case	Price /Case (₹)
U20802	1 x 500	1 Roll	1600

Versatile tape indicates completion of normal steam sterilization process.

All specialty steam indicator tape accepts handwritten notations, may be used to seal and identify almost all laboratory material before and after processing.

Change of colour of the written matter from white to dark after completion of autoclave cycle.



## High Temperature Indicator Tape

246

Code	Size (Inch)	No. per Case	Price /Case (₹)
U20702	0.75 x 250	1 Roll	5800

Hi-Temperature indicator tape shows the word "Sterilized" in bold letters after standard dry oven processing.

These are imprinted with heat-sensitive indicator ink.

These are cloth-textured tape that can stick to any surface or shape and can withstand acids, alkalis, oils and greases.

Indicates blue colour at dry heat 160° C.



## Hi/Lo Temperature Tape

247

Code	Size (Inch)	No. per Case	Price /Case (₹)
U20603	1	1 Roll	5600

These are cloth-textured tape that can stick to any container, withstands acid, alkalis, oil, greases, dry ice and liquid gases and wont crack or peel in dry oven or cryogenic temperatures.

Maximum operating temperature 260° C.



# GENERAL CONVERSION TABLE

## Instructions for using the Table

To Convert one unit of (A) into (B) multiply by (C)

To Convert one unit of (B) into (A) multiply by (D)

A	B	C (X 1 unit of A = B)	D (X 1 unit of B = A)
Inches	Centimetres	2.54	0.3937
Feet	Centimetres	30.48	0.0328
Yards	Metres	0.194	1.094
Miles	Metres	1,609.30	0.000621
Nautical miles	Metres	1,853.27	0.000539
Square inches	Sq. cms	6.45	0.155
Square feet	Sq. Metres	0.093	10.764
Square yards	Sq. Metres	0.836	1.196
Cubic inches	Cub. cms	16.39	0.061
Cubic feet	Litres	28.3	0.0353
Cubic feet	Gallons	6.24	0.1602
Cubic yards	Cub. metres	0.765	1.308
Pounds (Troy)	Kilograms	0.3732	2.68
Ounces (Troy)	Grammes	31.1	0.03216
Pounds (Avoir.)	Kilograms	0.4536	2.2046
Pounds (Avoir.)	Grains (Troy)	7,000	0.000143
Ounces (Avoir.)	Grammes	28.35	0.0353
Grains	Grammes	0.065	15.38
Cwt.	Kilograms	50.8	0.01968
Tons	Kilograms	1,016	0.000984
Gallons	Litres	4.546	0.22
Gallons of water	Pounds	10	0.1
Pounds of water	Litres	0.454	2.202
Lb per sq. in.	Gm. / sq. cm.	70.3	0.0142
Lb per sq. in.	H'd of water (ft.)	2.3	0.434
<b>To obtain</b>	<b>from</b>		<b>Multiply-by</b> <b>above</b>

A	B	C (X 1 unit of A = B)	D (X 1 unit of B = A)
Lb. per sq. in	H'd of water (M.)	0.7	1.4285
Lb. per sq. in	Atmospheres	0.068	14.7
Tons per sq. in	Kgm. / sq. mm.	1.575	0.635
Lb. per sq. ft	Kgm. / sq. metre	4.883	0.205
Lb. per cub. yd.	Kgm. / cub. metre	0.593	1.686
Lb. per cub. ft	Kgm. / cub. metre	16.02	0.0624
Lb. per gal lon	Kgm. / lit re	0.0998	10.02
Foot-lb	K'gram-met res	0.1833	7.23
Foot-tons	Tonne-met res	0.33	3
Hors-Power	Force de Cheval	1.014	0.9861
Hors-Power	Watts	746	0.00134
Hors-Power	Ft.-lb / min	33,000	0.00003
Hors-Power	Kg.-m. / sec.	73	0.01316
Watts	Ft.-lb. / min	44	0.0227
Watts	Kg.-m. / sec	0.1	10
Heat units	Calories	0.252	3.97
Atmospheres	Lb. / sq. inch	14.7	0.068
German candles	English candles	0.90	1.1111
Carrels	Candles.	9.55	0.1047
Joules	Ft. / lb	0.737	1.357
Miles / hour	Ft. / Min	88	0.01134
Metres / sec	Ft / Min.	197	0.00508
C.H. U	B. Th. U.	1.8	0.5555
Centipoise	Lb. force sec. / Sq. ft.	0.208	4.8
<b>To obtain</b>	<b>from</b>		<b>Multiply-by</b> <b>above</b>

# PERIODIC TABLE OF THE ELEMENTS

Non-Metals
Alkali Metals
Alkaline-Earthmetals
Transition Metals
Semi-Metallics

Other Metals
Halogens
Inert Gases
Lanthanides
Actinides

1. hydrogen 1 <b>H</b> 1.0079	2. beryllium 4 <b>Be</b> 9.0122	3. scandium 21 <b>Sc</b> 44.956	4. titanium 22 <b>Ti</b> 47.867	5. vanadium 23 <b>V</b> 50.942	6. chromium 24 <b>Cr</b> 51.996	7. manganese 25 <b>Mn</b> 54.938	8. iron 26 <b>Fe</b> 55.845	9. cobalt 27 <b>Co</b> 58.933	10. nickel 28 <b>Ni</b> 58.693	11. copper 29 <b>Cu</b> 63.546	12. zinc 30 <b>Zn</b> 65.38	13. boron 5 <b>B</b> 10.811	14. carbon 6 <b>C</b> 12.011	15. nitrogen 7 <b>N</b> 14.007	16. oxygen 8 <b>O</b> 15.999	17. fluorine 9 <b>F</b> 18.998	18. helium 2 <b>He</b> 4.0026																								
lithium 3 <b>Li</b> 6.941	beryllium 4 <b>Be</b> 9.0122	yttrium 39 <b>Y</b> 88.906	zirconium 40 <b>Zr</b> 91.224	niobium 41 <b>Nb</b> 92.906	molybdenum 42 <b>Mo</b> 95.96	technetium 43 <b>Tc</b> [98]	ruthenium 44 <b>Ru</b> 101.07	rhodium 45 <b>Rh</b> 102.91	palladium 46 <b>Pd</b> 106.42	silver 47 <b>Ag</b> 107.87	cadmium 48 <b>Cd</b> 112.41	aluminum 13 <b>Al</b> 26.982	silicon 14 <b>Si</b> 28.086	phosphorus 15 <b>P</b> 30.974	sulfur 16 <b>S</b> 32.065	chlorine 17 <b>Cl</b> 35.453	argon 18 <b>Ar</b> 39.948																								
sodium 11 <b>Na</b> 22.990	magnesium 12 <b>Mg</b> 24.305	strontium 37 <b>Sr</b> 87.62	hafnium 72 <b>Hf</b> 178.49	tantalum 73 <b>Ta</b> 180.95	tungsten 74 <b>W</b> 183.84	rhenium 75 <b>Re</b> 186.21	osmium 76 <b>Os</b> 190.23	iridium 77 <b>Ir</b> 192.22	platinum 78 <b>Pt</b> 195.08	gold 79 <b>Au</b> 196.97	mercury 80 <b>Hg</b> 200.59	aluminum 13 <b>Al</b> 26.982	germanium 32 <b>Ge</b> 72.64	arsenic 33 <b>As</b> 74.922	selenium 34 <b>Se</b> 78.96	bromine 35 <b>Br</b> 79.904	krypton 36 <b>Kr</b> 83.798																								
potassium 19 <b>K</b> 39.098	calcium 20 <b>Ca</b> 40.078	rubidium 37 <b>Rb</b> 85.468	rutherfordium 104 <b>Rf</b> [261]	dubnium 105 <b>Db</b> [262]	seaborgium 106 <b>Sg</b> [266]	bohrium 107 <b>Bh</b> [264]	hassium 108 <b>Hs</b> [271]	meitnerium 109 <b>Mt</b> [268]	darmstadtium 110 <b>Ds</b> [271]	roentgenium 111 <b>Rg</b> [272]	indium 49 <b>In</b> 114.82	tin 50 <b>Sn</b> 118.71	antimony 51 <b>Sb</b> 121.76	tellurium 52 <b>Te</b> 127.60	polonium 84 <b>Po</b> [209]	astatine 85 <b>At</b> [210]	xenon 54 <b>Xe</b> 131.29																								
caesium 55 <b>Cs</b> 132.91	barium 56 <b>Ba</b> 137.33	francium 87 <b>Fr</b> [223]	radium 88 <b>Ra</b> [226]	actinium 89 <b>Ac</b> [227]	thorium 90 <b>Th</b> 232.04	protactinium 91 <b>Pa</b> 231.04	uranium 92 <b>U</b> 238.03	neptunium 93 <b>Np</b> [237]	plutonium 94 <b>Pu</b> [244]	americium 95 <b>Am</b> [243]	curium 96 <b>Cm</b> [247]	berkelium 97 <b>Bk</b> [247]	californium 98 <b>Cf</b> [251]	einsteinium 99 <b>Es</b> [252]	fermium 100 <b>Fm</b> [257]	mendelevium 101 <b>Md</b> [258]	nobelium 102 <b>No</b> [259]	lawrencium 103 <b>Lr</b> [262]																							
radium 88 <b>Ra</b> [226]	actinium 89 <b>Ac</b> [227]	thorium 90 <b>Th</b> 232.04	protactinium 91 <b>Pa</b> 231.04	uranium 92 <b>U</b> 238.03	neptunium 93 <b>Np</b> [237]	plutonium 94 <b>Pu</b> [244]	americium 95 <b>Am</b> [243]	curium 96 <b>Cm</b> [247]	berkelium 97 <b>Bk</b> [247]	californium 98 <b>Cf</b> [251]	einsteinium 99 <b>Es</b> [252]	fermium 100 <b>Fm</b> [257]	mendelevium 101 <b>Md</b> [258]	nobelium 102 <b>No</b> [259]	lawrencium 103 <b>Lr</b> [262]	lutetium 71 <b>Lu</b> 174.97	ytterbium 70 <b>Yb</b> 173.05	thulium 69 <b>Tm</b> 168.93	erbium 68 <b>Er</b> 167.26	holmium 67 <b>Ho</b> 164.93	dysprosium 66 <b>Dy</b> 162.50	terbium 65 <b>Tb</b> 158.93	gadolinium 64 <b>Gd</b> 157.25	europlium 63 <b>Eu</b> 151.96	samarium 62 <b>Sm</b> 150.36	europium 61 <b>Pm</b> [145]	promethium 61 <b>Pm</b> [145]	cerium 58 <b>Ce</b> 140.12	praseodymium 59 <b>Pr</b> 140.91	neodymium 60 <b>Nd</b> 144.24	promethium 61 <b>Pm</b> [145]	samarium 62 <b>Sm</b> 150.36	europlium 63 <b>Eu</b> 151.96	gadolinium 64 <b>Gd</b> 157.25	terbium 65 <b>Tb</b> 158.93	dysprosium 66 <b>Dy</b> 162.50	holmium 67 <b>Ho</b> 164.93	erbium 68 <b>Er</b> 167.26	thulium 69 <b>Tm</b> 168.93	ytterbium 70 <b>Yb</b> 173.05	lutetium 71 <b>Lu</b> 174.97



# PHYSICAL PROPERTIES OF ABDOS LABWARE

Resin	Max Use Temp °C	Brittleness Temp °C	Transparency	Sterilization					Specific Gravity	Flexibility	Water Absorption %
				Autoclaving	Gas	Dry Heat	Radiation	Disinfectant			
HDPE	120	-100	Translucent	No	Yes	No	Yes	Yes	0.95	Rigid	< 0.01
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
PMMA	50	20	Clear	No	Yes	No	Yes	Some	1.20	Rigid	0.30
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
PSF	165	-10	Clear	Yes	Yes	Yes+	Yes	Yes	1.24	Rigid	0.30
PTFE	270	-200	Opaque	Yes	Yes	Yes	No	Yes	2.17	Excel	< 0.01
PVDF	110	-62	Translucent	Yes	Yes	No	No	Yes	1.75	Rigid	0.05
TPX*	175	20	Clear	Yes	Yes	Yes+	No	Yes	0.83	Rigid	< 0.01

## Sterilization

- Autoclaving (121°C, 15 psi 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 - 106°C for 120 minutes.

- Disinfection - Benzalkonium chloride, Formalin, Ethanol, etc.

- Radiation - gamma irradiated at 2.5 Mard with unstabilized plastic.

+ Sterilizing reduces mechanical strength. Do not use PC vessels for vacuum application if they have been autoclaved.

## Chemical Resistance for ABDOS Labware

Class of Substance at Room Temperature	HDPE	LDPE	PC	PMMA	PP	PS	PSF	PTFE	PVDF	TPX*	Resin Code
Acids, Dilute or Weak	E	E	E	G	E	E	E	E	E	E	HDPE High-density polyethylene
Acids, Strong and Concentrated	E	E	N	N	E	F	G	E	E	E	LDPE Low-density polyethylene
Alcohols, Aliphatic	E	E	G	N	E	E	G	E	E	E	PC Polycarbonate
Aldehydes	G	G	F	G	G	N	F	E	E	G	PMMA Polymethyl methacrylate
Bases	E	E	N	F	E	E	E	E	E	E	PP Polypropylene
Esters	G	G	N	N	G	N	N	E	G	G	PS Polystyrene
Hydrocarbons, Aliphatic	G	F	F	G	G	N	G	E	E	F	PSF Polysulfone
Hydrocarbons, Aromatic	G	F	N	N	F	N	N	E	E	F	PTFE Polytetrafluoroethylene
Hydrocarbons, Halogenated	F	N	N	N	F	N	N	E	N	N	PVDF Polyvinylidene fluoride
Ketones	G	G	N	N	G	N	N	E	N	F	TPX* Polymethylpentene
Oxidizing Agents, Strong	F	F	N	N	F	N	G	E	G	F	

### Chemical Resistance Classification

**E** = Excellent - 30 days of constant exposure cause no damage. Plastics may even tolerate for years.

**G** = Good - Little or no damage after 30 days of constant exposure to the reagent.

**F** = Fair - Some effect after 7 days of constant exposure to the reagent like crazing, cacking, loss of strength or discoloration.

**N** = Not Recommended - Not for continuous use. Immediate damage may occur.

\*TPX is the registered Trade Mark of Mitsui & Company Limited

# Thermoplastics Chemical and Properties

## CHEMICAL STABILITY OF PLASTICS

Medium	PTFE		PMP(TPX)		PP		HDPE		LDPE		PC		POM		PA		SAN		PMMA		PS		NR	
	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	
Acetaldehyde	E	E	G	F	E	F	E	G	E	F	G	F	E	E	G		F	F	F	F	F	F	F	F
Acetic acid (glacial acetic acid), 100%	E	E	E	G	E	G	E	E	E	G	F	F	F	F	F	F					F	F		G
Acetic acid 50%	E	E	E	E	E	E	E	E	E	E	E	G	G	F	F	F	E	G	F	F	G	G		F
Acetic anhydride	E	E	E	G	G	G	G	G	F	F	F	F	F	F	G	G					F	F		G
Acetone	E	E	E	E	E	E	E	E	E	G	F	F	E	E	E		F	F	F	F	F	F	F	G
Acetonitrile	E	E	G	F	E	G	E	G	E	G	F	F	E		E		F	F	F	F	F	F	F	F
Acetophenone	E	E	G	F	G	G	G	G	F	F	F	F	E		E		F	F	F	F	F	F	F	F
Acetyl chloride (acetic acid chloride)	E	E			E		E		E		F	F			F	F	F	F	F	F	F	F	F	F
Acetylacetone	E	E	E		E		E		E		F	F	E				F	F	F	F	F	F	F	F
Acrylic acid(2- propenic acid)	E	E	E		E		E		E		F	F	F	F			F	F	F	F	F	F	F	F
Acrylonitrile	E	E	F	F	G	F	E	E	E	E	F	F	F	F	E		F	F	F	F	F	F	F	F
Adipic acid	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	E	E	E	E	E	E	E
Allyl alcohol(2-propan-1-ol)	E	E	E	G	E	E	E	E	E	E	G	G	E	E	G		G	F	F	F	G	G		G
Aluminium chloride	E	E	E	E	E	E	E	E	E	E	F	F	E	G	G	F	E	E	E	E	E	E	E	G
Aluminium hydroxide	E	E	E	G	E	E	E	E	E	E	G	F	E	E	E	E	G	G	G	G	G	G	G	E
Amino acid	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Ammonium chloride	E	E	E	E	E	E	E	E	E	E	G	G	E	E	E		E	E	G	G	E	E	E	E
Ammonium fluoride	E	E	E	E	E	E	E	E	E	E	G	G	E	E	E		E	E	G	G	E	E	F	F
Ammonium hydroxide,30%(ammonia)	E	E	E	E	E	E	E	E	E	E	F	F	G	G	G		E	G	E	E	G	F	E	E
Ammonium sulphate	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	E	E	E	E	E	E	G
n-Amyl acetate (pentyl acetate)	E	E	E	G	G	F	E	G	G	F	F	F	E	E	G		F	F	E	E	F	F	G	G
Amyl alcohol (pentanol)	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	E			G	G		G
Amyl chloride (chloropentane)	E	E	F	F	F	F	F	F	F	F	F	F	E	E	E		F	F	F	F	F	F	F	F
Aniline	E	E	E	G	E	E	E	E	E	G	G	F	G	G	G	F	F	F	F	F	F	F	F	F
Aqua regia	E	E	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Barium chloride	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	E	E	E	E	E	E	E
Benzaldehyde	E	E	E	E	E	E	E	E	E	E	G	F	E	E	G		F	F	F	F	F	F	F	F
Benzene	E	E	G	G	E	G	E	E	G	F	F	F	E	G	E		F	F	F	F	F	F	F	F
Benzoyl chloride	E	E	G	G	E	G	E	E	G	F	F	F	E	G	F	F	F	F	F	F	F	F	F	F
Benzyl alcohol	E	E	G	F	G	F	G	F	G	F	G	G	E	E	F	F	F	F	F	F	F	F	F	F
Benzyl chloride	E	E											E		E						F	F		F
Benzylamine	E	E	G		G		G		G	F	F	F	E				F	F	F	F	F	F	F	F
Boric acid, 10%	E	E	E	E	E	E	E	E	E	F	E	E	E	E	E		E	E	E	E	E	E	E	E
Bromine	E	E	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Bromobenzene	E	E	F	F	F	F	F	F	F	F	F	F			E		F	F	F	F	F	F	F	F
Bromoform	E	E	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Bromonapthalene	E	E															F	F			F	F		
Butanediol	E	E	E	E	E	E	E	E	E	E			E	E	E		F	F			F	F		G
1-Butanol (butyl alcohol)	E	E	E	G	E	E	E	E	E	E	G	G	E	E	E	G	E	G	G	F	G	F		E
n-Butyl acetate (acetic acid n-butyl ester)	E	E	E	G	G	G	E	E	G	G	F	F	E	G	E		F	F	F	F	F	F	F	F
Butyl methyl ether	E	E	E	F	E	G	G	F	G	F	F	F	E	E			F	F	F	F	F	F	F	F
Butylamine	E	E											E	E			F	F			F	F		F
Butyric acid (butanoic acid)	E	E			F	F	G	F	F	F	G	F			G	G	F	F			F	F		F
Calcium carbonate	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Calcium Chloride	E	E	E	E	E	E	E	E	E	E	E	E	E	E	F	F	E	E	E	E	E	E	E	E
Calcium hydroxide	E	E	E	E	E	E	E	E	E	E	F	F	E	E	E		E	G	E	E	E	G		E
Calcium hypochlorite	E	E	E	G	E	E	E	E	E	E	G	F	E	E	E	F	E	E	G	G	E	E		F
Carbon disulphide	E	E	F	F	F	F	F	F	F	F	F	F	E	E	G		F	F	F	F	F	F	F	F
Carbon tetrachloride	E	E	F	F	F	F	G	F	G	F	F	F	G	G	F	F	F	F	G	F	F	F	F	F
Chloroacetaldehyde, 45%	E	E													F	F	F	F	F	F	F	F		
Chloroacetic acid (monochloroacetic acid)	E	E	E	G	E	G	E	E	E	E	G	F	F	F	F	F	F	F	G	F	G	F		F
Chloroacetone	E	E															F	F	F	F	F	F		G

Medium	PTFE		PMP(TPX)		PP		HDPE		LDPE		PC		POM		PA		SAN		PMMA		PS		NR	
	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	
Chlorobenzene	E	E	F	F	F	F	F	F	F	F	F	F	F			F	F	F	F	F	F	F	F	F
Chlorobutane	E	E	G	F	G	F	G	F	G	F			F	F			F	F	F	F	F	F	F	F
Chloroform	E	E	G	F	F	F	G	F	G	F	F	F	F	F	G	F	F	F	F	F	F	F	F	F
Chloronaphthalene	E	E											F	F										F
Chlorosulphonic acid	E	E											F	F	F	F								F
Cromic acid, 10%	E	E	E	E	E	E	E	E	E	E	E	G	G	G	F	F	F	F	G	F	F	F	F	F
Cromic acid , 50%	E	E	G	G	G	G	E	G	E	G	G	F	F	F	F	F	G	G	F	F	F	F	F	F
Cromic sulphuric acid	E	E	G	F	F	F	F	F	F	F	F	F	F	F	F	F	G	G	F	F	G	G	F	F
Copper sulphate	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	E	E	G
Cresol	E	E	F	F	G	G	G	F	F	F	F	F	F			F	F				F	F	F	F
Cumene(Isopropylbenzene)	E	E	F	F	G	F	E	G	G	F	F	F	E	F			F	F	F	F	F	F	F	F
Cyclohexane	E	E	F	F	G	F	G	F	G	F	F	F	E	E	E						F	F	F	F
Cyclohexenone	E	E	G	G	G	F	G	F	F	F	F	F			E						F	F	F	F
Cyclopentane	E	E	G	F	G	F	G	F	F	F	F	F									F	F	F	F
Decane	E	E	G		G		G	F			G		E											F
1-Decanol	E	E	E		E		E				G		E				G				G			G
Di-ethylene glycol	E	E	E	E	E	E	E	E	E	E	G	G	E	G	G		E	E	F	F	G	F	E	E
Dibenzyl ether	E	E	G		E		E						E				F	F	F	F	F	F	F	F
Dibromoethane	E	E																						
Dibutylphthalate	E	E	E	G	E	G	G	F	G	F	F	F	E	E			F	F	F	F	F	F	F	F
Di-chloroacetic acid	E	E	E	E	G	F	G	G	G	F	G	F			F	F					G	F	F	F
Dichlorobenzene	E	E	F	F	G	F	G	F	G	F	F	F	F	F	E		F	F	F	F	F	F	F	F
Dichloroethane	E	E	G	F	G	F	G	F	G	F			F	F	G									F
Dichloromethane (Methylene chloride)	E	E	G	F	G	F	G	F	G	F	F	F			G	F					F	F	F	F
Diesel oil	E	E	G	F	E	G	E	G	G	F	F	F	E	E	E	E	F	F	G	F	F	F	F	F
Diethanolamine	E	E			G		G				F	F					F	F	F	F	F	F	F	F
Diethyl ether	E	E	F	F	G	F	G	F	F	F	F	F	E	E	E	E	F	F	F	F	F	F	F	F
Di-ethylamine	E	E	G	G	G	F	G	F	F	F	F	F									G	G	G	G
1,2 Diethylbenzene	E	E	F	F	F	F	G	F	F	F	G	F									F	F	F	F
Dimethyl sulphoxide(DMSO)	E	E	E	E	E	E	E	E	E	E	F	F					F	F	F	F	F	F	F	F
Dimethylaniline	E	E									F	F					F	F	F	F	F	F	F	F
Dimethylformamide(DMF)	E	E	E	E	E	E	E	E	E	E	F	F	E	E	E		F	F	F	F	F	F	F	G
1,4-Dioxane	E	E	G	G	E	G	E	E	E	G	G	G	G	G	E		F	F	F	F	F	F	F	F
Diphenyl ether	E	E											G		G		F	F	F	F	F	F	F	F
1,2 Ethanediol (ethylene glycol, glycol)	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	G	E	E	E	E	E	E	E	F
Ethanol (ethyl alcohol)	E	E	E	G	E	E	E	E	E	E	E	G	E	E	E		G	F	F	F	G	F	G	G
Ethanolamine	E	E			E																			F
Ethyl acetate (acetic acid ethyl ester)	E	E	G	F	E	G	E	E	E	E	F	F			E						F	F	F	F
Ethyl methyl Ketone(MEK)	E	E	F	F	E	G	G	F	G	F	F	F	F	F	E		F	F			F	F	F	F
Ethylbenzene	E	E	F	F	F	F	F	F	F	F	F	F					F	F	F	F	F	F	F	F
Ethylene Oxide	E	E	G	F	G	F	G	G	G	G	G	F	E	E	G		F	F	F	F	F	F	F	F
Fluroacetic acid	E										F	F	F	F			F	F	F	F	F	F	F	F
Formaldehyde, 40%	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	G	E	E	F	F	F	F	G	G
Formamide	E	E	E	E	E	E	E	E	E	E			F	F	E									E
Formic acid, 98-100%	E	E	E	G	E	E	E	E	E	E	E	G	F	F	F	F	G	G	F	F	E	G	G	G
Gasoline	E	E	G	G	G	G	E	E	G	F	G	F	E	E	E		F	F	E		F	F	F	F
Glycerine	E	E	E	E	E	E	E	E	E	E	E	E	G	G	E	E	E	E	E	E	E	E	E	G
Glycolic acid, 70%	E	E	E	E	E	E	E	E	E	E						F	F							E
Heating oil (Diesel oil)	E	E	G	F	E	G	E	G	G	F	F	F	E	E	E		F	F	G	F	F	F	F	F
Heptane	E	E	G	G	G	G	G	G	G	F	E	G							G	F	F	F	F	F
Hexane	E	E	G	F	E	G	E	G	G	F	F	F	E	E	E		E	E	G	G	F	F	F	F
Hexonic acid	E	E																	E					
Hexanol	E	E	E	E	E	E	E	E	E	E									E					G
Hydrochloric acid,10%	E	E	E	E	E	E	E	E	E	E	F	F	F	F	F	F	G	F	G		E	E	G	G
Hydrochloric acid,20%	E	E	E	E	E	E	E	E	E	E	F	F	F	F	F	F	G	F	G	F	E	E	G	G
Hydrochloric acid, 37%	E	E	E	E	E	E	E	E	E	E	F	F	F	F	F	F	G	F	G	F	G	G	G	G

Medium	PTFE		PMP(TPX)		PP		HDPE		LDPE		PC		POM		PA		SAN		PMMA		PS		NR	
	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	
Hydrofluoric acid, 40%	E	E	E	E	E	E	E	E	E	E	F	F	F	F	F	F	E	G	F	F	E	E	F	
Hydrofluoric acid, 70%	E	G	E	G	E	G	E	G	E	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Hydrogen bromide	E	E	E	E	E	E	E	E	E	E	E	E	F	F	F	F					G	F	G	
Hydrogen peroxide, 35%	E	E	E	E	E	E	E	E	E	E	E	E	E	F	F	F	E	E	F	F	E	E	F	
Hydroiodic acid	E	E	E	E	E	E	E	E	E	E														
Isoamyl alcohol (3-methyl-1-butanol)	E	E	E	E	E	E	E	E	E	E			E	E									G	
Isobutanol (isobutyl alcohol)	E	E	E	E	E	E	E	E	E	E	E	E	E	E			G	F	G	F	G	G	E	
Isooctane	E	E									G				E		G	F			G	F	F	
Isopropanol (2-propanol)	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	F	G	F	G	G	E	
Isopropyl ether	E	E	F	F	F	F	F	F	F	F	F	F			F	F					F	F	F	
Lactic acid (2-hydroxypropionic acid)	E	E	E	E	E	E	E	E	E	E	E	E	E	F	G	F	E	E	G	F	E	E	G	
Lugol's solution (Iodine/potassium iodine solution)	E	E	E	G	E	E	F	F	F	F	G	F	G	G			G	F	F	F	G	F	E	
Mercury	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	E	E	E	E	E	E	
Mercury chloride	E	E	E	E	E	E	E	E	E	E	E	E	G	G	F	F	E	E	E	E	E	G	E	
Methanol	E	E	E	E	E	E	E	E	E	G	E	G	E	E	G		G	F	F	F	G	F	G	
Methoxybenzene	E	E									F	F	G				F	F	F	F	F	F	F	
Methyl butyl ether	E	E	E	G	E	E	G	F	F	F	F	F	G			F	F	F	F	F	F	F	F	
Methyl ethyl ketone(MEK)	E	E	F	F	E	G	G	F	G	F	F	F	F	F			F	F	F	F	F	F	F	
Methyl formate (formic acid methyl ester)	E	E									F	F	E				F	F	F	F	F	F	F	
Methyl propyl ketone	E	E	G	G	E	G	E	E	E	G	F	F	E	E			F	F	F	F	F	F	F	
Methylene chloride (dichloromethane)	E	E	F	F	G	F	G	F	G	F	F	F	F	F	G	F	F	F	F	F	F	F	F	
Mineral oil	E	E	E	E	E	E	E	E	E	G	F	F	E	E			E		E	E	E		F	
Monochloroacetic acid	E	E	E	G	E	G	E	E	E	E	G	F	F	F	F	F	F	F	G	F	G	F	F	
Nitric acid, 10%	E	E	E	E	E	E	E	E	E	E	E	G	F	F	F	F	E	G	E	G	F	F	F	
Nitric acid, 30%	E	E	G	F	G	F	G	F	G	G	E	G	F	F	F	F	G	F	G	G	F	F	F	
Nitric acid, 70%	E	E	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
Nitrobenzene	E	E	F	F	F	F	G	F	F	F	F	F	G	F	F	F	F	F	F	F	F	F	F	
Oleic acid	E	E														G		F	F	F	F	F	F	
Oxalic acid	E	E	E	E	E	E	E	E	E	E	E	E	E	E	F	F	E	E	E	E	E	E	G	
Ozone	E	E	E	E	G	F	G	F	G	F	F	F	F	F	F	F	G	G	E	G	G	G	F	
n-Pentane	E	E														G							F	
Peracetic acid	E	E									F	F	F	F										
Perchloric acid	E	E	G	F	E	F	E	F	E	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
Perchloroethylene	E	E	F	F	F	F	F	F	F	F	F	F	E	G	F	F	G	G	G	F	F	F	F	
Petroleum	E	E	G	G	G	F	G	F	G	F	G	G	E	E	E				E	F	F	F	F	
Petroleum ether	E	E							G				E	E	E				E	F	F	F	F	
Phenol	E	E	G	G	E	E	E	E	E	G	F	F	F	F	F	F	F	F	F	F	F	F	F	
Phenyl ethanol	E	E			G	G										G								
Phenyldiazine	E	E			G	G																	G	
Phosphoric acid, 85%	E	E	E	E	E	E	E	E	E	E	E	E	E	F	F	F	E	E	F	F	E	G	F	
Piperadine	E	E			E	E																	F	
Potassium chloride	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		G	G	E	E	G	G	E	
Potassium Dichromate	E	E														F	F						G	
Potassium hydroxide	E	E	E	E	E	E	E	E	E	E	F	F	E	E	E		G	G	E	E	G	G	G	
Potassium permanganate	E	E	E	E	E	E	E	E	E	E	E	E	G	G	F	F	E	G	E	E	E	E	F	
Propanol	E	E	E	E	E	E	E	E	E	E	G		E	E	E	E	E	E	G		G		E	
Propionic acid	E	E	E	G	E	G	E	G	G	F	F	F	F	F	G	G					G	F	F	
Propylene glycol (propanediol)	E	E	E	E	E	E	E	E	E	E	E	G	E	E	F	F	F	F	G	G	E	E	E	
Pyridine	E	E	E	G	G	G	E	G	E	G	F	F	E	G	E		F	F	F	F	F	F	F	
Salicylaldehyde	E	E	E	E	E	E	E	E	E	E	G	G					F	F			F	F		
Salicylic acid	E	E	E	E	E	E	E	E	E	E			F	F	E		E	E			E	E	E	
Silver acetate	E	E	E	E	E	E	E	E	E	E	E	E	G	G			G	G	G	G	G	G	E	
Silver nitrate	E	E	E	E	E	E	E	E	E	E	E	E	G	G	E		E	E	E	E	G	G	E	
Sodium acetate	E	E	E	E	E	E	E	E	E	E	E	E	E	G	E		E	E	F	F	E	E	E	

Medium	PTFE		PMP(TPX)		PP		HDPE		LDPE		PC		POM		PA		SAN		PMMA		PS		NR
	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C
Sodium Chloride	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	E	E	E	E	E	E
Sodium dichromate	E	E	E	E	E	E	E	E	E	E	E	F	E	E	E		E	G	E	G	E	G	E
Sodium fluoride	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	E	E	E	E	E	G
Sodium hydroxide	E	E	E	E	E	E	E	E	E	E	F	F	E	E	E	G	E	E			E	E	G
Sulphuric acid, 60%	E	E	E	E	E	E	E	E	E	E	G	G	F	F	F	F	E	G	F	F	F	F	F
Sulphuric acid, 98%	E	E	E	E	F	F	G	F	G	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Tartaric acid	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	G	E	E	G	G	E	E	E
Tetrachloroethylene	E	E													F	F							F
Tetrahydrofuran(THF)	E	E	G	F	F	F	G	F	G	F	F	F	G	G	E		F	F	F	F	F	F	F
Tetramethylammonium hydroxide	E	E									F	F	F	F									
Toluene	E	E	G	F	G	F	G	G	G	F	F	F	E	E	E		F	F	F	F	F	F	F
Tri-ethylene glycol	E	E	E	E	E	E	E	E	E	E	E	G	E	G			E	E	G	G	E	E	G
Tri-propylene glycol	E	E	E	E	E	E	E	E	E	E	E	G	E	G			E	E	G	G	E	E	E
Trichloroacetic acid	E	E	E	E	G	F	G	G	G	F	G	F			F	F					G	F	G
Trichlorobenzene	E	E	G	G	F	F	F	F	F	F	F	F									F	F	
Trichloroethane	E	E	F	F	F	F	G	F	F	F	F	F	G	F	G		F	F	F	F	F	F	F
Trichloroethylene	E	E	F	F	F	F	G	F	F	F	F	F	F	G			F	F	F	F	F	F	F
Trichlorotrifluoroethane	E	E													G		F	F			F	F	
Triethanolamine	E	E															F	F			F	F	G
Trifluoroacetic acid (TFA)	E	G										F	F				F	F			F	F	
Trifluoroethane	E	E															F	F			F	F	F
Turpentine	E	E	G	G	F	F	G	F	G	F	F	F	E	E	E		G	G	E	E	F	F	F
Urea	E	E	E	E	E	E	E	E	E	E	F	F	E	E	E		E	E	E	E	E	E	E
Xylene	E	E	G	F	F	F	G	F	G	F	F	F	E	E	E		F	F	F	F	F	F	F
Zinc Chloride, 10%	E	E	E	E	E	E	E	E	E	E	E	E	E	G	F	F	E	E	F	F	E	E	E
Zinc Sulphate, 10%	E	E	E	E	E	E	E	E	E	E	E	E	E	G	F	F	E	E	G	G	E	E	G

E = Continuous exposure to media and solvents causes no harm to the product.

G = Continuous exposure for 7 -30 days to media and solvents causes minor damage to the product. (e.g. swelling, softening, mechanical strength, discolouration).

F= Not Suitable for continuous exposure to media and solvents. May damage the product. (e.g. deformation, cracking, liquification)

The above Chemical resistance chart is meant to be used as a guide only. As temperature, exposure time and functional conditions affect resistance and can vary for each application, Abdos highly recommends users to evaluate products under their own conditions prior to use. Abdos does not warrant (neither expressed or implied) that the information in this chart is accurate or that any material is suitable for any purpose.

## WHAT IS GAMMA IRRADIATION ?

Gamma rays are a form of electromagnetic radiation-like x-rays, but with higher energy. The primary industrial sources of gamma rays are radionuclide elements such as Cobalt 60, which emit gamma rays during radioactive decay. Gamma rays pass readily through plastics and kill bacteria by breaking the covalent bonds of bacterial DNA. They are measured in units called kiloGrays (kGy).

Gamma irradiation provides a number of benefits in cost and sterility assurance. It can be applied under safe, well-defined, and controlled operating parameters, and is not a heat- or moisture-generating process. Consequently, there is no heat stress and condensate drainage or outgassing is not required. Most importantly, there is no residual radioactivity after irradiation.

### DOSE VALIDATION

Gamma Radiation dose is validated according to IS. EN. ISO 11137-2 Method 1 to confirm the SAL 10<sup>-6</sup>. For that routine testing of bioburden & Sterility test carried out at our manufacturing facility.

### VALIDITY OF STERILITY

We assure all sterile products have been sterile through Co-60 gamma radiation with valid certified dose and has been PASSED for all sterility tests. We confirm that the Sterile product would be Sterile until unless the packing pouch is not tampered/punctured/open or 5 yrs from date of Radiation.

## SUITABILITY OF ABDOS PLASTICS FOR FOODSTUFF

The phthalates for which opinions have been given by EFSA (European Food Safety Authority and TDI's (Tolerable Daily Intake) established for use in plastics for containers in food application, are not intentionally added in the manufacture of or the formulation of this product. The phthalates are di-isononly phthalate (DINP), DI-(2-ethylhexyl) phthalate (DEHP), di-n- butyl phthalate (DBP), di-iso-decyl phthalate (DIDP), butylbenzyl phthalate (BBP). In addition, di-iso-butyl phthalate (DIBP) has recently been classified by TC C&L of ECB (Commission Working Group on Classification & Labeling – European Chemicals Bureau) in accordance with the requirements of Directive 67/548/EC (Classification and labeling of dangerous substance), taking into account a NOAEL, the toxicity of DIBP is more than 100 times lower than DNBP's ( product assessed by EFSA for use in plastics in contact with food). Phthalates are not used in the manufacture of or the formulation of any Abdos manufactured products.

Abdos manufactured products have passed the USP tests for a Class VI, physio-chemical testing and meets USP limits.

Abdos manufactured products are made from the base resin which meets the FDA requirements contained in the Code of Federal Regulation in 21 CFR 177. 1520 (a)(3)(i) and (c)3. 1a. 3. 2a. All other ingredients meet the requirements of their respective FDA regulations and 21 CFR 177.1520(b). All Abdos manufactured products meet the FDA criteria in 21 CFR 177.1520 for food contact applications, including cooking.

## AUTOCLAVE GUIDE LINE

To ensure successful steam sterilization of your plastic labware please adhere to the following guideline: Autoclave all plastic consumables at 121°C for 20 minutes, 15psi/1 atm. Do not use a dry cycle as this may cause deformation or weakening of the plastic. Allow temperature within the autoclave to return to at least 80°C before removing product.

Autoclaving (steam sterilisation) is defined as the destruction or irreversible inactivation of all reproducible microorganisms under exposure to "saturated steam at a minimum of 120 °C." (DIN 58946-1, 1987). DIN EN 285 specifies a minimum exposure time (te) of 20 minutes (killing time and safety margin) at a sterilisation temperature of 121 °C. For the correct sterilisation procedure, including biological safety (DIN EN285), please contact your hygiene specialist.

Prior to autoclaving plastic labware, ensure that no soiling or residual contamination remains on the equipment. Otherwise, the residual contamination will bake on solidly during the autoclaving process. Even substances that have no effect on the plastic at room temperature can still lead to destruction of the plastic during the autoclaving process. Additionally, microorganisms might not be killed effectively if they are protected by the residual contamination.

### NOTES ON AUTOCLAVING

- Containers with screw tops or stoppers must be open during autoclaving to allow for pressure equalisation.
- Autoclaving of a closed container will lead to the deformation or destruction of the container.
- Plastic labware should be stood upright on a level surface during autoclaving to avoid shape deformation.
- Plastic labware should not be laid on its side during autoclaving.
- No mechanical stresses should be present during autoclaving.
- For example, do not stack items.
- Do not autoclave any container that contains residual contamination or even rinsing agent.
- Not all plastics are resistant to steam sterilisation! For example, polycarbonate loses its tensile strength.
- Mind the temperature limits for the plastics.
- Autoclavable products are identified with a "121 °C" symbol in this catalogue.

The surfaces of some plastics can be attacked by chemicals present during autoclaving, which can cause persistent clouding. Some transparent plastics can absorb minute quantities of steam, which can lead to reversible clouding. This clouding disappears upon drying, which can be accelerated through the use of a drying oven.

## RPM VS. RCF "WHAT'S THE DIFFERENCE?"

**RPM** – stands for "Revolutions Per Minute" and is the speed that your rotor spins in your centrifuge.

RPM is specific to individual centrifuge brands and rotor sizes.

**RCF** – stands for "Relative Centrifugal Force" and is better known as g-force. This indicates the actual force resulting from the spinning action in the centrifuge.

It is g-force that drives sample separation.

The following equation can be used to convert RPM to RCF for any model centrifuge.

$$RCF = 0.0001118 \times \text{radius of rotation (cm)} \times \text{RPM}^2$$

Note: radius of rotation is given by the distance of the furthest most point of the tube from the axis of rotation. Please refer to your centrifuge user guide for radius value.

## NON-PYROGENIC CERTIFICATE OF ANALYSIS

Every lot of Abdos Micro Tips, Micro Centrifuge Tubes, Centrifuge Tubes, Cryo Vials, Petri Dish, Radioimmunoassay (Ria) Vials, Pasteur Pipette & other products are tested for Pyrogenic.

This report certifies that samples of the above products obtained from finished products are Non-Pyrogenic. Endotoxin levels are < 0.06 EU/ml. Products were tested for Endotoxins by the Limulus Amebocyte Lysate (LAL) Gel Clot Assay.

### PROCEDURE:

Lot samples of the products were extracted according to current FDA guidelines in Pyrogen free water and the extract solution was then assayed along with the positive and negative controls. The sensitivity of the LAL Gel Clot Assay was 0.06 EU/ml.

(A) P10105 Lot No-1503001 , (B) P60102 Lot No-1503007, (C) P10202 Lot No-,1503036 (D) P10401 Lot No-1503009, (E) P10403 Lot No-1503010

### RESULTS:

Endotoxin levels <0.06 EU/ml.

### COMMENTS:

Current FDA/USP guidelines set endotoxin limits for medical devices at 0.5 EU/ml, and 0.06 EU/ml for devices that contact cerebral spinal fluid. We test products according to the guidelines for medical devices that contact cerebral spinal fluid.

## RNASE FREE CERTIFICATE OF ANALYSIS

Every lot of Abdos Micro Tips, Micro Centrifuge Tubes, Centrifuge Tubes, Cryo Vials, Petri Dish, Radioimmunoassay (Ria) Vials, Pasteur Pipette & other products are tested for RNase.

This report certifies that samples of the above products obtained from finished products are free of any detectable RNase contamination. Products were tested for RNase activity by the following protocol.

### PROCEDURE:

Products were extracted in RNase free water. The extract was then added to an RNA standard. The RNA standard was incubated at 37°C for 1 hour then heated to 65°C for 5 minutes. RNA samples were then run on an agarose gel, photographed, and evaluated for degradation.

Lane (A) P10105 Lot No-1503001.(B) P60102 Lot No-1503007.(C) RNA standard exposed to RNase as a positive control (D) unexposed RNA standard as a negative control

### CONCLUSIONS:

No visible degradation is present in the product samples confirming that the products can be considered RNase free.



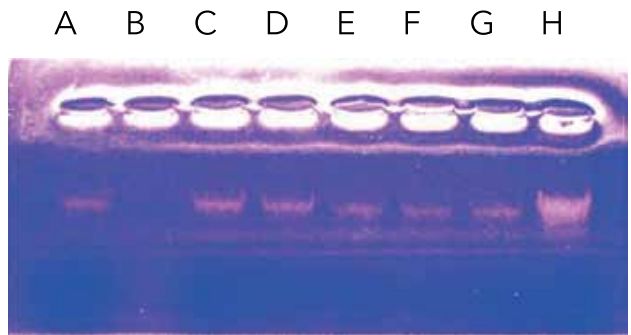
## DNASE FREE CERTIFICATE OF ANALYSIS

Every lot of Abdos Micro Tips, Micro Centrifuge Tubes, Centrifuge Tubes, Cryo Vials, Petri Dish, Radioimmunoassay (Ria) Vials, Pasteur Pipette & other products are tested for DNase.

This report certifies that samples of the above products obtained from the finished products are free of any detectable DNase contamination. Products were tested for DNase activity by the following protocol.

### PROCEDURE:

Products were extracted in DNase free water. The extract was then added to a DNA standard. The DNA standard was incubated at 37°C for 1 hour then heated to 65°C for 5 minutes. DNA samples were then run on an agarose gel, photographed, and evaluated for degradation.



Lane (A) unexposed DNA standard as a negative control , (B) DNA standard exposed to DNase as a positive control, (C) P10105 Lot No-1503001 , (D) P60102 Lot No-1503007, (E) P10202 Lot No-,1503036 (F) P10401 Lot No-1503009,(G) P10403 Lot No-1503010, (H) P60103 Lot No-1502010

### CONCLUSIONS:

No visible degradation is present in the product samples confirming the products can be considered DNase free.

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## TERMS & CONDITIONS OF SALE

The Price list includes 'Abdos' Brand products and Products from other manufacturers.

All prices are at-door delivery basis within India or our consignee.

GST will be charged extra as applicable.

The price for an item of the special requirement will be quoted on request.

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Our responsibility shall be within the competent courts in Kolkata.

Goods will be dispatched in standard packaging or multiple thereof.

Capacity measures are for laboratory use only and not for commercial use.

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The price is effective from 1st July 2018.

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