

#CommittedtotheEarth

ABDOS 



# CREATING FOR LIFE SCIENCE

EDITION VII | 2021-2022

[WWW.ABDOSLIFESCIENCES.COM](http://WWW.ABDOSLIFESCIENCES.COM)

## Welcome to the new edition of the **ABDOS LIFESCIENCES CATALOG**

Abdos now has a new and meaningful vision for its stakeholders; “To be the first choice of customers by building long-term relationships with them through our product range, service levels, innovations and sustainability endeavours.” In 2019-20 Abdos started its first overseas plant in Nigeria (Western Africa) in its packaging division. They set up a new greenfield state of the art manufacturing plant (in Kolkata, Eastern India) in its FMCG division. Abdos is into the 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.

The Life Sciences vertical of Abdos began in the year 2010 with a state of the art manufacturing and distribution centre in Roorkee (India) with offices in New Delhi (India), Kolkata (India), and it's logistics subsidiary in Venlo (Netherlands). Our products are used in various applications, from research to drug discovery & from quality control to diagnostics. Our products add value and improve the lives of people around us.

Last year Abdos Life sciences had undergone massive expansion in both manufacturing and logistics space. This new capability makes us one of the biggest clean room manufacturers in South East Asia. Two years back, Abdos set up its first logistics subsidiary in Europe, which has brought us closer to our customers in 32 European countries. 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 65 countries worldwide.

This is our 7th edition of the product catalog with 25 new products and three new product lines. We have added MAXIRCF™ Trace Metal Free Centrifuge Tubes, Biofill™ Vacuum Filtration system, and an entirely new range of Electrophoresis. As always, we are continually evaluating new products, keeping in mind new growth areas and research in the field of life sciences.

In 2020, the global COVID-19 pandemic has changed the landscape of the world and has affected our families, businesses, communities, and our way of life. Our heart goes out to anyone who is impacted by the virus, to whom we extend our heartfelt wishes for a speedy recovery. We're genuinely inspired by the selfless healthcare workers around the world who are on the front lines, working tirelessly to care for people in need. During this time, Abdos team, in all our business verticals, continued to work tirelessly and relentlessly, and we have emerged more reliable than ever before.

Abdos continues to invest in products, infrastructure, customer services, and after-sales. Still, the future is 'digital,' and at Abdos, we embrace the future, so we look forward to connecting with you on our digital platforms like LinkedIn, Facebook, our mobile app, and at our website: [www.abdoslifesciences.com](http://www.abdoslifesciences.com). These platforms serve as a knowledge base on products, services, latest events, technical support, and certifications. It also provides some unique scientific utility tools that can be of help to researchers and technicians.

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

Jai Hind



Team Abdos

**ABDOS manufacturing plant spread over  
40,000 square meters**



**Facility validated from ISO CLASS 8 & equipped with latest robotics & automation machines**

# 400+ Products & Delivering across 65+ Countries



Robust warehouse infrastructure helping customers across the globe



### **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 locations 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.

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

## **QUALITY MANAGEMENT**

Abdos quality standards are certified according to ISO 9001:2015 through its state of the art production processes, quality inspections, process parameters, SOP and automations. Since 2015 Abdos has received NS-EN ISO 13485:2016 to establish itself 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 with 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 the general requirements and safety regulations of CE. Find CE IVD logo on the inside pages as shown here:



# Quality Control Process

**01**

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## Check Incoming Products

Incoming products like raw materials, packaging materials and consumables are checked for contaminants, strength and aesthetics according to the agreed specifications with the supplier.

**02**

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## On-line Quality Inspection

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

**03**

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## Application Tests in Laboratory

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

**04**

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## Final Pre-Dispatch Audit

Products are finally tested for proper verification of labels, packaging and documents. Traceability of products is verified at this stage for lot number, expiry date, manufacturing date, etc.

## Quality Certifications

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



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



ENVIRONMENT  
MANAGEMENT SYSTEM  
ISO 14001



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.



## Mobile App

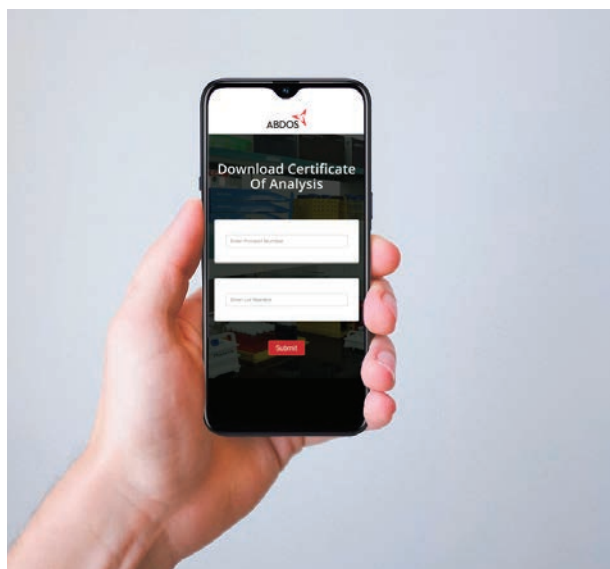
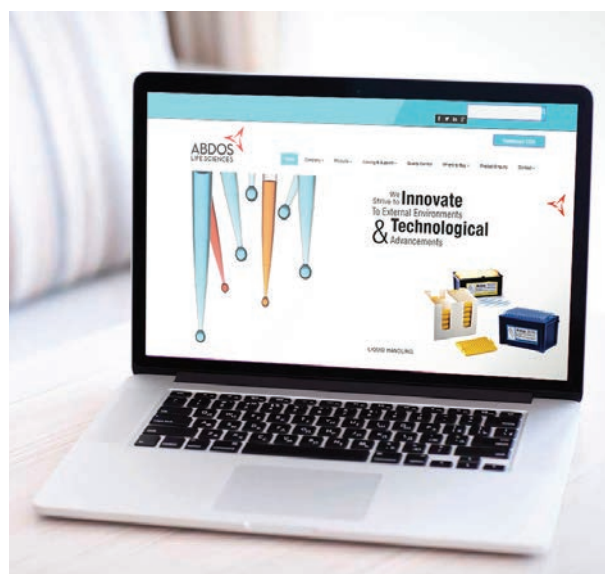
Featuring Data Comparisons, FAQs & More.

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.



## COA Online

Visit ABDOS website and access all the latest COA files online.





# COMMITTED TO THE EARTH

*Pursuing 'Green' has become a quest for ABDOS towards Go Green Earth, with competitiveness and global excellence.*

As a young and innovative company, ABDOS is setting the environmental standards for others to follow.

## **STEPS TAKEN FOR BEING A GREEN ORGANIZATION**

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

Hot runner moulds save on plastic usage.

Closed water cycle cooling process saves energy.

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

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

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

Abdos eliminates printing waste by e-marketing its products and services.

A 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.



## Royal Society of Chemistry

### Institutes

1. Bhabha Atomic Research Centre, Department of Atomic Energy, Hyderabad.
2. Nuclear Fuel Complex, Department of Atomic Energy, Hyderabad.
3. Analytical Chemistry Division, Bhabha Atomic Research Centre, Department of Atomic Energy, Mumbai.

### Topic

Development of a microwave-assisted digestion method for the rapid determination of chloride and fluoride in nuclear-grade boron carbide powders

### Product

ABDOS Centrifuge tubes of 15 mL and 50 mL capacity (Product code: P10402 & P10404)

### Link

<https://pubs.rsc.org/en/content/articlehtml/2014/ay/c3ay41313f>



## Springer

### Institutes

Nanoformulation Research Laboratory, Faculty of Pharmacy, Jamia Hamdard (Hamdard University), New Delhi,

### Topic

Transungual Delivery of Ketoconazole Nanoemulgel for the Effective Management of Onychomycosis

### Product

ABDOS vortex mixer (Product code : E11190)

### Link

<https://link.springer.com/article/10.1208/s12249-016-0488-0>



## Science Direct

### Institutes

Department of Food Engineering & Technology, Sant Longowal Institute of Engineering & Technology, Longowal, Punjab 148106, India.

### Topic

Structural modification of quinoa seed protein isolates (QPIs) by variable time sonification for improving its physicochemical and functional characteristics.

### Product

ABDOS Swirlax-Vortex Shaker (Product code : E11190)



## spiedigitallibrary.org

### Topic

Application of graphene paper laser ablation for separation of cancer cells.

### Product

ABDOS Centrifuge tube (15 ml graduated) (Product code: P10402)



## Springer

### Institutes

Guwahati Biotech Park, Technology Complex, IIT Guwahati and The Sophisticated Analytical Instrument Facility (SAIF), NEHU Shillong, and College of Veterinary Science, Guwahati.

*This work was financially supported by the Department of Biotechnology, Ministry of Science & Technology, Government of India under Grant No. BT/504/NE/TBP/2013.*

### Topic

Successful Delivery of Zidovudine-Loaded Docosanol Nanostructured Lipid Carriers (Docosanol NLCs) into Rat Brain

### Product

ABDOS-Swirlax-Vortex Shaker, (Product code : E11190)

ABDOS Centrifuge tubes of 15 mL and 50 mL capacity (Product code: P10430 & P10431)



## Bio protocol

### Institutes

Microbiology, School of Natural Sciences, National University of Ireland, Galway, Ireland.

### Topic

Determination of Survival of Wildtype and Mutant Escherichia coli in Soil.

### Product

1. ABDOS Sterile micropipette tips (100–1,000 µl) (Product code: P10102)
2. ABDOS Sterile micropipette tips (2–200 µl) (Product code: P10101)
3. ABDOS Microcentrifuge tube (1.5 ml) (Product code: P10202)
4. ABDOS Centrifuge tube (15 ml graduated) (Product code: P10402) 90 mm
5. ABDOS Petri dishes (Product code: P10901)

### Link

[https://archivsearch.library.nuigalway.ie/bitstream/handle/10379/6820/Somorin\\_%26\\_%20%27Byrne\\_2017.pdf?sequence=1&isAllowed=y](https://archivsearch.library.nuigalway.ie/bitstream/handle/10379/6820/Somorin_%26_%20%27Byrne_2017.pdf?sequence=1&isAllowed=y)



## Elsevier

### Institutes

Department of Food Engineering & Technology, Sant Longowal Institute of Engineering & Technology, Longowal, Punjab 148106, India.

### Topic

Structural modification in album (Chenopodium album) protein isolates due to controlled thermal modification and its relationship with protein digestibility.

### Product

ABDOS Swirlax-Vortex Shaker (Product code : E11190)

# NOMENCLATURE

CE certified



Quality management system



Quality management system - Medical Devices



Environment Management System



Petridish Standard



Gamma sterilization (Sterile R)



Forensic DNA Grade



Accuracy Standards



IVD CERTIFIED IVD 98/79/EC



DNase Rnase Free



Endotoxin Free



Human DNA free



ATP & Pyrogen free



Heavy Metal Free



Leak-proof Tested 635 mm/Hg



Sterile (Gamma Irridiation / Ethylene oxide/ E Beam)



GC/MS (Gas chromatography & Mass Spectrophotometry Test)



95 kPa pressure Test



Autoclave / Non Autoclave



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.

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# 01 CENTRIFUGE TECHNIQUES

MICRO CENTRIFUGE TUBES

CENTRIFUGE TUBES

RACKS FOR MICRO CENTRIFUGE TUBE

RACKS FOR CENTRIFUGE TUBE

EQUIPMENTS & MORE

## 01 | Micro Centrifuge Tubes, PP

- Abdos Micro Centrifuge tubes are manufactured using high purity virgin USP Class VI Medical grade polypropylene (PP) conforming to US FDA 21 CFR, free from natural rubber & heavy metal.
- These tubes can be used between -80°C to 121°C & with various organic solvents.
- These tubes are boil proof.
- These tubes come with integral snap cap.
- Frosting on the surface of the tubes makes writing easier.
- Large moulding in graduations make identification easy.
- Can withstand up to 20000 xg RCF\*.
- Amber colour micro centrifuge tubes suitable for light-sensitive samples do not allow any light to pass through the tubes.



### Micro Centrifuges Tube, PP

Code	Capacity	Outer Diameter	Height	No. / case
PI0201	0.5 ml	10 mm	31.5 mm	1000
PI0202	1.5 ml	13 mm	41 mm	500
PI0203	2.0 ml	13 mm	41 mm	500

### Micro Centrifuges Tubes, PP (Coloured & Amber)

Code	Capacity	Outer Diameter	Height	No. / case
PI0207	0.5 ml Coloured	10 mm	31.5 mm	1000
PI0201A	0.5 ml Amber	10 mm	31.5 mm	1000
PI0204	1.5 ml Coloured	13 mm	41 mm	500
PI0204A	1.5 ml Amber	13 mm	41 mm	500
PI0205	2.0 ml Coloured	13 mm	41 mm	500
PI0203A	2.0 ml Amber	13 mm	41 mm	500

PI0207, PI0204 & PI0205 are available in Red, Blue, Yellow and Green colour.



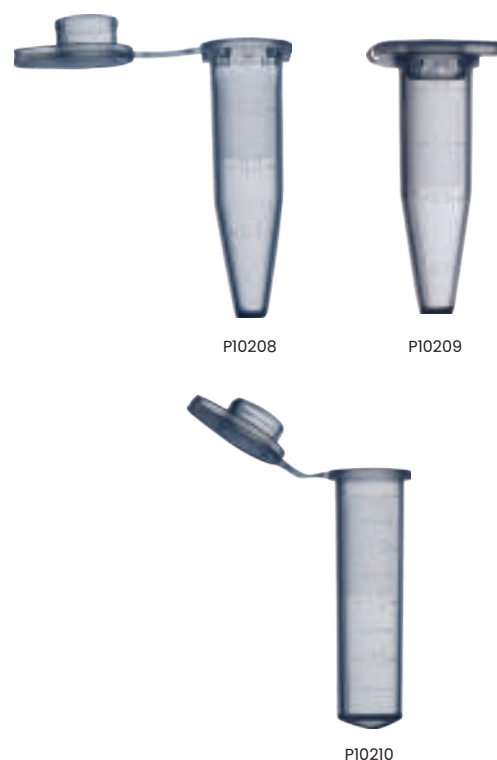
## 02 | LAST DROP™, Low Retention Micro Centrifuge Tubes, PP

- Abdos Micro Centrifuge tubes are manufactured using high purity virgin USP Class VI Medical grade polypropylene (PP) conforming to US FDA 21 CFR, free from natural rubber & heavy metal.
- Abdos low binding technology provides 10 times lesser retention level with highly viscous samples & saves costly reagents.
- These tubes are boil proof.
- These tubes can be used at -80°C and with various organic solvents and are also boil proof.
- These tubes come with integral snap cap.
- Frosting on the surface of the tubes makes writing easier.
- Large moulding in graduations make identification easy.
- Can withstand up to 20000 xg RCF\*



Code	Capacity	Outer Diameter	Height	No. / case
PI0208	0.5 ml	10 mm	31.5 mm	1000
PI0209	1.5 ml	13 mm	41 mm	500
PI0210	2.0 ml	13 mm	41 mm	500

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



# Centrifuge Tube Techniques

## 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, 18000\*g RCF.

Suitable for temperatures between -80°C and +121°C.

Sterile tubes have been validated according to ISO 11137 SAL 10<sup>-6</sup>

The large white frosted portion for easy writing.

Highly transparent, 5% less haze percentage than competitor.

Hydrodynamic conical bottom for perfect pelleting of sediments.

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

Free from heavy metals, natural rubber & inhibitory plasticizers.

Gas chromatography/ Mass spectrometry (GC/MS) tests ensure purity of the products.

## The Cap

Specially designed flat thread confirms perfect vacuum tight closure, makes it leak proof & prevents override of cap.

Unique plug seal ensures perfect sealing & makes it leak proof.



### 03 | Centrifuge Tubes Conical Bottom, PP/HDPE

- Abdos Centrifuge tubes are manufactured using high purity virgin USP Class VI Medical grade 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.
- Amber colour option for light-sensitive samples.
- Built-in plug in the cap makes it leak proof.
- Sterile Tubes have been validated according to ISO 11137 for SAL 10<sup>-6</sup>
- Can withstand up to 18000 xg RCF\*.



#### Centrifuge Tube Conical Bottom, PP/HDPE

Code	Capacity	Cap Colour	Outer Diameter	Height	No. / case
PI0430	15 ml (Bulk)	Blue	16.5 mm	121 mm	500
PI0401	15 ml	Blue	16.5 mm	121 mm	500
PI0441	15 ml	Red	16.5 mm	121 mm	500
PI0402	15 ml, Sterile	Blue	16.5 mm	121 mm	500
PI0442	15 ml, Sterile	Red	16.5 mm	121 mm	500
PI0431	50 ml (Bulk)	Blue	29.2 mm	116 mm	500
PI0403	50 ml	Blue	29.2 mm	116 mm	500
PI0443	50 ml	Red	29.2 mm	116 mm	500
PI0404	50 ml, Sterile	Blue	29.2 mm	116 mm	500
PI0444	50 ml, Sterile	Red	29.2 mm	116 mm	500

#### Centrifuge Tube Conical Bottom, PP AMBER

Code	Capacity	Cap Colour	Outer Diameter	Height	No. / case
PI0405	15 ml, Amber	Blue	16.5 mm	121 mm	500
PI0406	15 ml, Sterile Amber	Blue	16.5 mm	121 mm	500
PI0407	50 ml, Amber	Blue	29.2 mm	116 mm	500
PI0408	50 ml, Sterile Amber	Blue	29.2 mm	116 mm	500
PI0405T	15 ml, Transparent Amber	Blue	16.5 mm	121 mm	500
PI0406T	15 ml, Transparent Amber, Sterile	Blue	16.5 mm	121 mm	500
PI0407T	50 ml, Transparent Amber	Blue	29.2 mm	116 mm	500
PI0408T	50 ml, Transparent Amber, Sterile	Blue	29.2 mm	116 mm	500

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

\*Transparent Amber Centrifuge tubes can be supplied upon request.

### 04 | Centrifuge Tubes Conical Bottom, PS/HDPE

- Abdos Centrifuge tubes are manufactured using high purity virgin USP Class VI Polystyrene (PS) conforming to US FDA 21 CFR, free from natural rubber and 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.
- Amber colour option for light-sensitive samples.
- Built-in plug in the cap makes it leak proof.
- Sterile Tubes have been validated according to ISO 11137 for SAL 10<sup>-6</sup>
- Can withstand up to 2500 xg RCF\*.



Code	Capacity	Cap Colour	Outer Diameter	Height	No. / Case
PI0419	15 ml, Sterile	Blue	16.5 mm	121 mm	500
PI0421	15 ml, Racked Sterile	Blue	16.5 mm	121 mm	750 (25 pcs x 30 racks)

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



## 05 | Centrifuge Tubes Self Standing, PP/HDPE

- Abdos Centrifuge tubes are manufactured using high purity virgin USP Class VI Medical grade 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.
- Silk-Screen graduation makes identification easy.
- Amber colour option for light-sensitive samples.
- Built-in plug in the cap makes it leak proof.
- Sterile Tubes have been validated according to ISO 11137 for SAL 10<sup>-6</sup>
- Can withstand up to 7000 xg RCF\*.



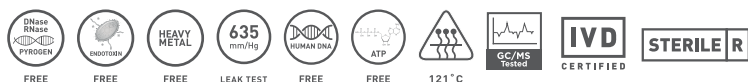
Code	Capacity	Cap Colour	Outer Diameter	Height	No. / Case
PI0432	50 ml (Bulk)	Blue	29.2 mm	117.3 mm	500
PI0423	50 ml	Blue	29.2 mm	117.3 mm	500
PI0449	50 ml	Red	29.2 mm	117.3 mm	500
PI0424	50 ml, Sterile	Blue	29.2 mm	117.3 mm	500
PI0450	50 ml, Sterile	Red	29.2 mm	117.3 mm	500

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



## 06 | PureRight™ Individually Wrapped Centrifuge Tube Conical Bottom, PP/HDPE

- Abdos Centrifuge tubes are manufactured using high purity virgin USP Class VI Medical grade polypropylene (PP) conforming to US FDA 21 CFR, free from natural rubber & heavy metal.
- Best suited for less number of samples.
- The large white frosted portion for easy writing.
- Silk-Screen graduation makes identification easy.
- Built-in plug in the cap makes it leak proof.
- Sterile Tubes have been validated according to ISO 11137 for SAL 10<sup>-6</sup>
- Can withstand upto 18,000 xg RCF\* & 7000 xg RCF\* for Conical & Self-standing centrifuge tubes respectively.



Code	Capacity	Cap Colour	Outer Diameter	Height	No. / Case
PI0425	15 ml, Sterile	Blue	16.5 mm	121 mm	500
PI0451	15 ml, Sterile	Red	16.5 mm	121 mm	500
PI0426	50 ml, Sterile	Blue	29.2 mm	121 mm	500
PI0452	50 ml, Sterile	Red	29.2 mm	121 mm	500
PI0427	50 ml Self Standing, Sterile	Blue	29.2 mm	116 mm	450
PI0453	50 ml Self Standing, Sterile	Red	29.2 mm	116 mm	450

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



## 07 | Racked Centrifuge Tubes Conical Bottom, Paper

- These Racks are designed to hold Centrifuge Conical Bottom.
- These racks designate a convenient solution for storing Abdos Centrifuge Tubes.
- These racks are made of eco-friendly paper to hold 25 Abdos 15 ml & 50 ml Conical Bottom Centrifuge Tubes.



Code	Capacity	Height	No. / Case
PI0409	15 ml, Rack Only	47 mm	10
PI0410	50 ml, Rack Only	48 mm	10
PI0411	15 ml, Racked	121 mm	750 (25 pcs x 30 racks)
PI0412	15 ml, Racked, Sterile	121 mm	750 (25 pcs x 30 racks)
PI0413	15 ml, Amber, Racked	121 mm	750 (25 pcs x 30 racks)
PI0414	15 ml, Amber, Racked, Sterile	121 mm	750 (25 pcs x 30 racks)
PI0415	50 ml, Racked	116 mm	400 (25 pcs x 16 Racks)
PI0416	50 ml, Racked, Sterile	116 mm	400 (25 pcs x 16 Racks)
PI0417	50 ml, Amber, Racked	116 mm	400 (25 pcs x 16 Racks)
PI0418	50 ml, Amber, Racked, Sterile	116 mm	400 (25 pcs x 16 Racks)



## 08 | MaxiRCF™ Trace Metal Free Centrifuge Tubes

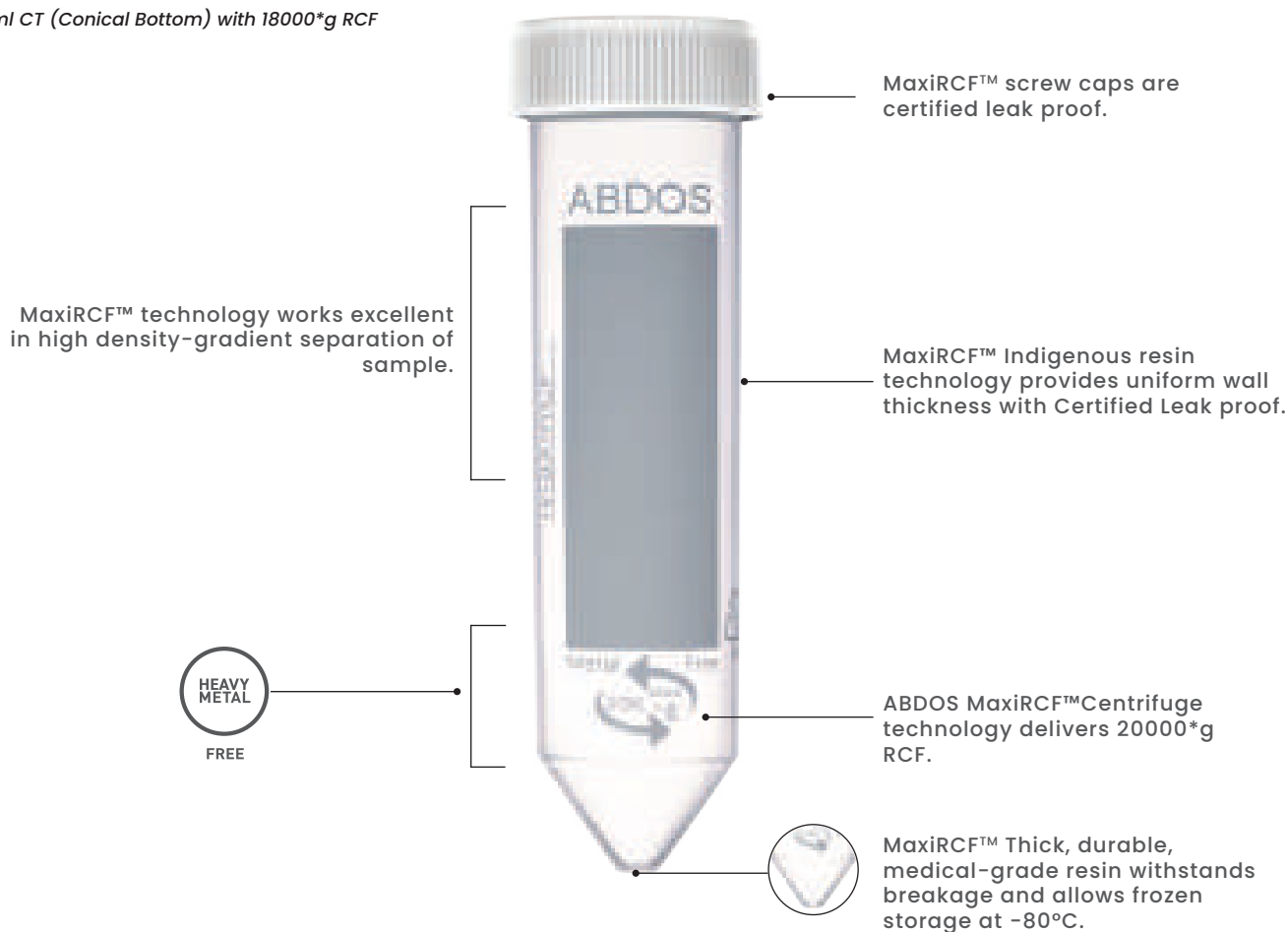
- Abdos MaxiRCF™ Trace Metal Free centrifuge tubes are manufactured using high purity virgin USP Class VI Medical grade polypropylene conforming to US FDA 21 CFR, free from natural rubber & heavy metal.
- Abdos MaxiRCF™ Trace Metal Free Centrifuge Tubes withstands 20,000xg RCF.
- Pure, Additive Free Natural Colour Cap for easy labelling and Trace Metal free.
- Abdos MaxiRCF™ Trace Metal Free Centrifuge Tubes works excellently in high density gradient separation of sample.
- Large white frosted area for easy writing.
- Sterile tubes are validated according to ISO 11137 for SAL 10<sup>-6</sup>

Abdos MaxiRCF™ Trace Metal Free centrifuge tubes are specifically manufactured to ensure that common trace metals and elements that can interfere with experiments are below an ICP-MS detection level of one part per billion (< 1ppb).

Metals included in testing are: Zinc, Iron, Copper, Manganese, Aluminum, Silicon, Nickel, Vanadium, Phosphorous, Cobalt, Chromium, Lithium, Selenium, Cadmium, Mercury, Arsenic and Lead.

\*Note: MaxiRCF™ Trace Metal Free centrifuge tubes:

- 50 ml CT (Conical Bottom) with 20000\*g RCF
- 50 ml CT (Self Standing) with 7000\*g RCF
- 15 ml CT (Conical Bottom) with 18000\*g RCF



Code	Capacity	Cap Colour	Outer Diameter	Height	No. / Case
P10480	15 ml (Bulk)	Natural	16.5 mm	121 mm	500
P10481	15 ml	Natural	16.5 mm	121 mm	500
P10482	15 ml, Sterile	Natural	16.5 mm	121 mm	500
P10483	50 ml (Bulk)	Natural	29.2 mm	116 mm	500
P10484	50 ml	Natural	29.2 mm	116 mm	500
P10485	50 ml, Sterile	Natural	29.2 mm	116 mm	500
P10486	50 ml, Self Standing (Bulk)	Natural	29.2 mm	117.3 mm	500
P10487	50 ml, Self Standing	Natural	29.2 mm	117.3 mm	500
P10488	50 ml, Self Standing (Sterile)	Natural	29.2 mm	117.3 mm	500

## 09 | Rack for Micro Centrifuge Tube, RPP

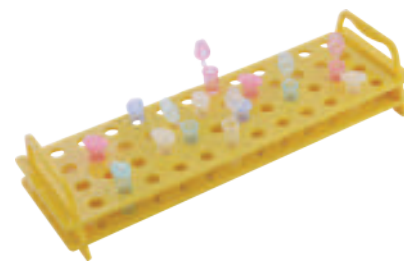
- Sturdy rack with rubber support at the bottom for stability.
- Racks lock together on each side to allow the user to attach several racks for larger experiments.
- Compatible with both 1.5 ml and 2.0 ml Micro Centrifuge Tube.
- Easy removal and insertion of tubes.
- Each hole has moulded-in numbers for easy sample identification.



Code	Capacity	Places	Colour	L x W x H	No. / Case
P20205	1.5 & 2.0 ml	20 Places (10x2 Array)	White	215 x 70 x 40 mm	8

## 10 | Rack For Micro Centrifuge Tube, PC

- 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 1.5 ml and 2.0 ml Micro Centrifuge Tubes.



Code	Capacity	Places	Colour	L x W x H	No. / Case
P20201	1.5 & 2.0 ml	24 Places (6x4 Array)	White	164 x 100 x 59 mm	8
P20202	1.5 & 2.0 ml	24 Places (6x4 Array)	Yellow	164 x 100 x 59 mm	8
P20203	1.5 & 2.0 ml	48 Places (12x4 Array)	White	293 x 100 x 59 mm	8
P20204	1.5 & 2.0 ml	48 Places (12x4 Array)	Yellow	293 x 100 x 59 mm	8

## 11 | Centrifuge Tube Box, PP

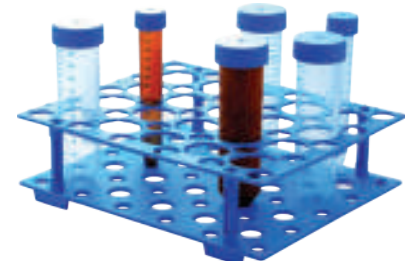
- Abdos Centrifuge tube box provides a more durable and rugged alternative to cardboard or foam racks.
- The distinctive green colour on the 15 ml and blue colour on the 50 ml makes these racks easy to distinguish.
- These racks can withstand a temperature of -80°C to 121°C.
- All grids are properly indexed with a clear lid that provides easy tube identification.



Code	Tube Capacity	Colour	Places	L x W x H	No. / Case
P20604	15 ml	Green	36 Places (6 x 6 Array)	147 x 147 x 126 mm	4
P20605	50 ml	Blue	16 Places (4 x 4 Array)	147 x 147 x 126 mm	4

## 12 | Click Together Conical Tube Racks, ABS

- Shipped flat, they are easy to assemble and snap together securely.
- Designed for stable use in a water bath.
- Alphanumeric index aids for tube identification.



Code	Tube Capacity	Colour	Places	L x W x H	No. / Case
P20218	15 ml & 50 ml	Blue	15 ml Tube - 30 (6 x 5 Array) 50 ml Tube - 20 (5 x 4 Array)	209 x 171 x 63 mm	4
P20219	15 ml & 50 ml	Blue	15 ml Tube - 18 (6 x 3 Array) 50 ml Tube - 10 (5 x 2 Array)	209 x 98 x 63 mm	4

## 13 | Universal Centrifuge Tube Rack, PP

- 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 insert a tube into the opening.
- Generous handles for easy transport.



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

## 14 | Foldable Space Saving Rack, PP

- Simple to open and close, expand and collapse when racks are needed.
- Designed to help recognize 15 and 50 ml tubes.
- Moulded indexing for easy identification of tubes and vials.
- Racks can be stacked in open or closed position.
- Save space when racks are not in use.
- Available in individual 17 mm hole diameter for 15 ml tubes & 30 mm hole diameter for 50 ml tubes or combination of both 17 mm & 30 mm hole diameter for 15 ml & 50 ml centrifuge tubes.



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

## 15 | Floating Rack for Micro Centrifuge Tube, PP

- Use on the bench, with water bath or ice containers.
- Polypropylene racks keep micro tubes afloat in water bath or can be pushed into crushed ice – perfect for controlling sample temperature.
- Not recommended for autoclaving.
- Detachable legs provide two options:
  - a. Attach legs so rack stands upright on bench top.
  - b. Detach legs so samples can be quickly popped out by pushing down onto any surface.



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



## 16 | Swirl Mini Micro Centrifuge

- Swirl is a small, compact and reliable centrifuge for spin-down and microfiltration procedures.
- Swirl is supplied with 8 place angular rotor of 1.5 ml and a PCR rotor that admit four strips of 0.2 mL PCR strip.
- It has a maximum speed of 7000 rpm/2680 xg RCF.
- It uses minimal bench-top space.
- Rotor can change without tools and the machine accelerates and brakes in seconds.
- Swirl adapts a Brushless DC Motor.
- CE explosion proof safe test IEC/EN61010-2-20.



Code	Product	No. / Case
E11501	Swirl Mini Micro Centrifuge Including 8 Place Rotor for 1.5 & 2.0 ml Tube & 4 Place Rotor for 8 x 0.2 ml Tube Strip	1

### Spare Accessories:

Code	Product	No. / Case
E11502	8 Place Rotor for 1.5 & 2.0 ml	1
E11503	32 (8 x 4) Strips Place Rotor for 0.2 ml PCR & 64 Place Rotor for 0.2 ml PCR tubes	1

### SPECIFICATIONS :

Voltage	220-240 V
Frequency	50-60 Hz
Max Speed	7000 rpm
Max RCF	2680 xg
Run Time	Continuous operation
Rotor Capacity	0.2/0.5/1.5/2.0 mL x 8 0.2 mL x 32 PCR Strips 2.0 mL x 4 PCR 8 Strips
Noise Level	≤45 dB
Dimensions	160 x 170 x 122 mm
Weight	0.5 kg
Permissible ambient temperature	4 to 45°C
Permissible relative humidity	80%



## 17 | Swirl Maxi Micro Centrifuge

- Swirl Maxi is a personal 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 Maxi is used in physical and chemical analysis, biochemistry, cellular biology, clinical labs, blood donation centre and high-end research.
- Swirl Maxi has a large ergonomic design with easy to read display and sound.
- Both RPM and G-force can be displayed.
- Swirl Maxi 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 from CE, TUV and FCC.
- 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, and can withstand stream sterilizing at 121°C for 20 minutes.



Code	Product	No. / Case
E11510	Swirl Maxi Micro Centrifuge with 12 Place Rotor for 0.2, 0.5, 1.5 & 2.0 ml	1

Spare Accessories:		
Code	Product	No. / Case
E11511	12 Place Rotor for 0.2, 0.5, 1.5 & 2.0 ml	1
E11512	Rotor Adapter for 0.2 ml - 2.0 ml used with E11511	24
E11513	Rotor Adapter for 0.5 ml - 2.0 ml used with E11511	24

### SPECIFICATIONS :

Voltage	220-240 V
Frequency	50-60 Hz
Current	3 A
Max Speed	15000 rpm (500-15000 rpm) with increment of 100 rpm
Max. RCF [xg]	15100 xg with increment of 100 xg
Speed Accuracy	±20 rpm
Rotor Capacity	0.2mL, 0.5mL, 1.5 mL & 2mL x 12 places.
Run Time	30 sec - 99 min - 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 /Braking time	11 sec for Acceleration & 9 sec for Braking
Dimensions	255 x 245 x 140 mm
Weight	6 kg
Permissible Ambient Temperature	4°C to 40°C
Permissible Relative Humidity	80%



## 18 | Swirl Clinical Centrifuge

- Swirl Clinical Centrifuge is used for separation of serum, plasma, urea, urine, blood samples and other routine applications in hospital and research. They are also used in environmental analyses for clarification of water and soil samples 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 run is complete prevents sample warming and allow easy access of samples.
- Both RPM and G-force can be displayed.
- Digital LCD display can show real time parameters and has symbol showing experimental process.
- Swirl Clinical is used for quick spins by pressing and holding the pulse key.
- It 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 from CE, TUV and FCC.
- Bio-safe rotor and anti-sample overflow prevents sample leakage in the centrifugal process causing microbial contamination.
- Swirl Clinical adapts a Brushless DC Motor.
- Passed EN61010-2-101:2002 for invitro diagnostic (IVD) medical equipment.
- Goes into a self-diagnostic check when switched on and then displays accumulative time & last running parameter.



Code	Product	No. / Case
E11540	Swirl Clinical Clinical Centrifuge with 8 Place Rotor for 15 ml & 12 Place Rotor for 5, 7 & 10 ml centrifuge tube & Rotor Adapter for 10 ml centrifuge tube	1

Spare Accessories:		
Code	Product	No. / Case
E11541	8 Place Rotor for 15 ml & 12 Place Rotor for 5, 7 & 10 ml	1
E11542	Rotor Adapter for 10 ml used with E11541	12

### SPECIFICATIONS :

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



## 19 | Swirl Micro Plate Centrifuge

- Less than half the size of conventional centrifuge (9 x 10 inches).
- The easily reachable rotor chamber includes two plate carriers that rest at a 75° angle, thus allowing plates to be inserted confidently without seal in tapes or caps.
- 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 600 xg, most samples can be spun.
- Just open the lid and the automatic electric brake brings the rotor to a quick & smooth stop in just 4.0 seconds.



Code	Product	No. / Case
E11550	Swirl Micro Plate Centrifuge	1

Spare Accessories:		
Code	Product	No. / Case
E11551	Adapter, 96 x 0.2 ml or 8 and 12 x PCR strips.	2
E11552	Rotor with carriers for deepwell plates upto 35mm tall (max speed 1500 rpm)	1

### SPECIFICATIONS :

Voltage	220-230 V
Frequency	50-60 Hz
Max Speed	2550 rpm/600 xg
Rotor Capacity	2 x 2 PCR Plates 2 x Microtiter plates 24 x 0.2 mL PCR Strips
Deceleration	4 seconds
Dimensions	230 x 260 x 197 mm
Weight	4.0 kg
Permissible Ambient Temperature	4 to +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)



**#CommittedtotheEarth**

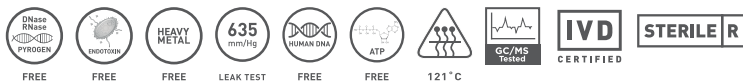


## 02 CRYO TECHNIQUES

CRYO VIALS  
STORAGE VIALS  
CRYO BOXES  
& MORE

## 20 | Cryo Vial External Thread, PP

- Abdos Cryo Vial external thread are manufactured using high purity virgin USP Class VI Medical grade 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 samples, all type of cells and any enzymes or reagents.
- It's leak-proof cap design and strong wall thickness makes it an ideal product for transporting samples and specimens.
- These cryo vials are designed for mechanical freezing and it's a 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.
- Best suited for IVD use (an IVD Certified product).
- Sterile Tubes have been validated according to ISO 11137 for SAL  $10^{-6}$

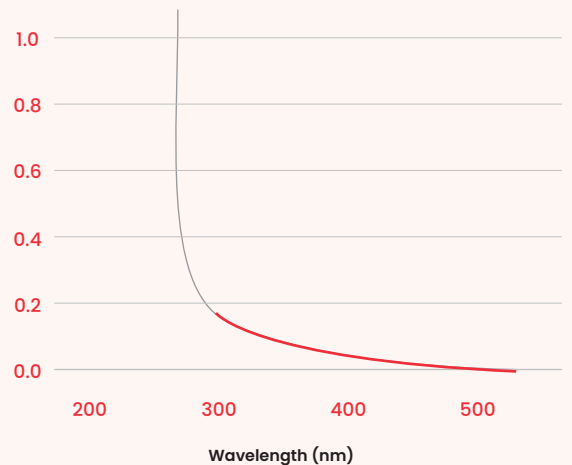


Code	Capacity	Outer Diameter	Height	No. / Case
P60115	1.0 ml Sterile Star Foot	12.00 mm	41.0 mm	1000
P60116	1.8 ml Sterile Star Foot	12.00 mm	48.5 mm	1000
P60117	1.8 ml Sterile Round Bottom	12.00 mm	47.5 mm	1000
P60118	4.5 ml Sterile Skirted Foot	11.80 mm	86.5 mm	500

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



### LEECHING PERFORMANCE REPORT WITH DMSO

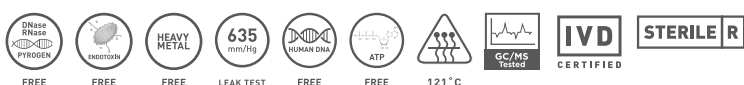


The graph demonstrates no absorbants & confirms no traceable leeching with DMSO (Dimethyl sulfoxide).

\* 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 & lead to pressure build up resulting in possible explosion or biohazard release. Can be used in vapour phase of liquid nitrogen.

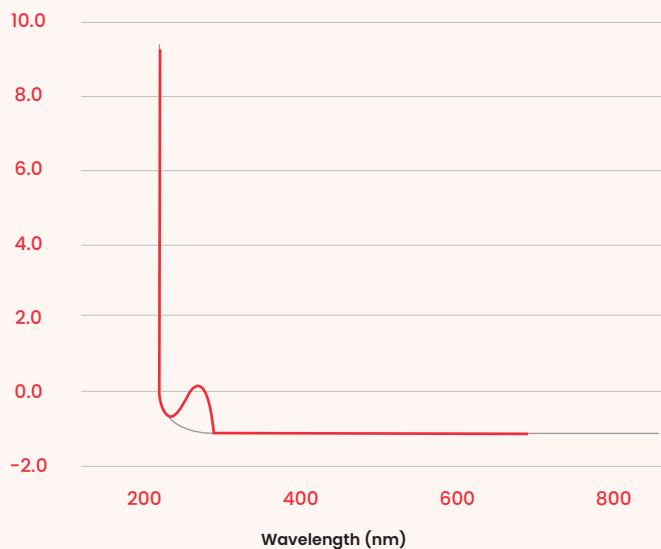
## 21 | Cryo Vial Internal Thread, PP

- Abdos Cryo Vial internal thread are manufactured using high purity virgin USP Class VI Medical grade 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 samples, all type of cells and any enzymes or reagents.
- It's leak-proof cap design with Silicon Seal and strong wall thickness makes it an ideal product for transporting samples and specimens.
- These cryo vials are designed for vapour phase LN<sub>2</sub> 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.
- 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.
- Best suited for IVD use (an IVD Certified product).
- Sterile Tubes have been validated according to ISO 11137 for SAL 10<sup>-6</sup>



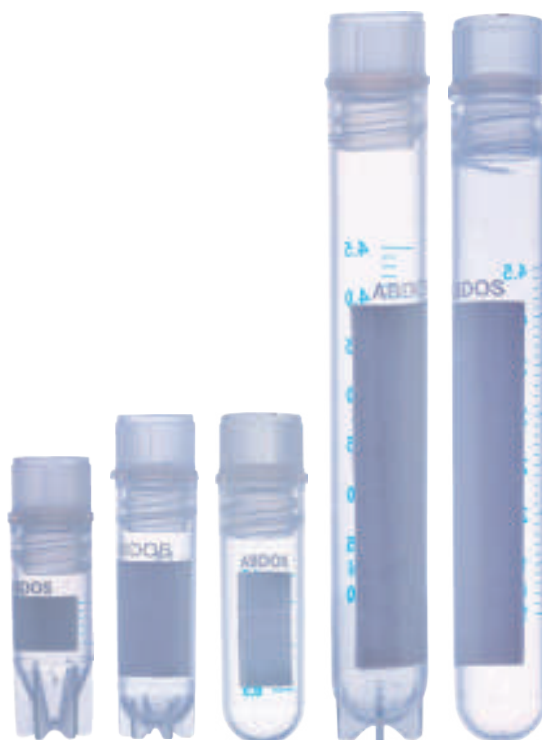
Code	Capacity	Outer Diameter	Height	No. / Case
P60108	1.0 ml Sterile Star Foot	12.3 mm	41.2 mm	1000
P60109	1.8 ml Sterile Star Foot	12.3 mm	47.5 mm	1000
P60110	1.8 ml Round Bottom	12.3 mm	46.2 mm	1000
P60112	4.5 ml Sterile Star Foot	12.3 mm	90.3 mm	500
P60113	4.5 ml Sterile Round Bottom	12.3 mm	89.0 mm	500

### LEECHING PERFORMANCE REPORT WITH DMSO



The graph demonstrates no absorbants & confirms no traceable leeching with DMSO (Dimethyl sulfoxide).

\* 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 build up resulting in possible explosion or biohazard release. Can be used in vapour phase of liquid nitrogen.



P60108 P60109 P60110 P60112 P60113

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

- 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 a wide range of colours.



Code	Colour Of Cap	No. / Case
P60114 W	White	100
P60114 B	Blue	100
P60114 R	Red	100
P60114 Y	Yellow	100
P60114 G	Green	100

## 23 | Storage Vial, PP

- Abdos Storage Vial are manufactured using high purity virgin USP Class VI Medical grade polypropylene (PP) conforming to US FDA 21 CFR, free from natural rubber & heavy metal.
- Used for storage of PCR reagents, enzymes and other diagnostics & biochemical reagents or samples.
- HDPE screw closure is leak proof.
- Can be used at low temperature.
- Amber Storage Vial can be used for light-sensitive samples.



### Storage Vial Natural, PP

Code	Capacity	Outer Diameter	Height	No. / Case
P60119	1.0 ml	12.0 mm	41 mm	1000
P60106	2.0 ml	11.8 mm	47.2 mm	1000
P60107	5.0 ml	11.8 mm	88.0 mm	1000

### Storage Vial Amber, PP

Code	Capacity	Outer Diameter	Height	No. / Case
P60119 A	1.0 ml Amber	12.0 mm	41 mm	1000
P60119 A1	1.0 ml Transparent Amber	12.0 mm	41 mm	1000
P60106 A	2.0 ml Amber	11.8 mm	47.2 mm	1000
P60106 A1	2.0 ml Transparent Amber	11.8 mm	47.2 mm	1000
P60107 A	5.0 ml Amber	11.8 mm	88 mm	1000
P60107 A1	5.0 ml Transparent Amber	11.8 mm	88 mm	1000



P60107 P60106

## 24 | Single Hand Cryo Holder Rack, PP

- Designed for use with Cryogenic Vial, Freezer Tubes, Storage Vial and Micro Tubes.
- It has unique innovative locking system allowing the user to unlock star foot Cryo Vial with one hand.
- The rack has a secure locking system in each well that will not allow the Cryo Vial to turn on either side.
- Inbuilt numbered and letters grid for sample identification.
- Anti-skid rubber feet support the rack.



Code	Tube Capacity	Places	Colors	L x W x H	No. / Case
P20616	1 - 2 ml	40 (10 x 4 Array)	White, Yellow, Blue	201 x 105 x 22 mm	4



## 25 | Cryo Box, PC

- Made of strong polycarbonate and designed to be used at a temperature between  $-196^{\circ}\text{C}$  to  $121^{\circ}\text{C}$ .
- Can be used in gas phase of liquid nitrogen with appropriate safety procedure in place.
- Transparent lids permit viewing of contents.
- These boxes create small, space-efficient storage system within a large mechanical freezer.
- 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 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.



Code	Tube Capacity	Places	Colour	L x W x H	No. / case
P20601	1 - 2 ml	25 (5 x 5 Array)	White, Yellow, Blue	75 x 75 x 54 mm	8
P20601 Assorted	1 - 2 ml	25 (5 x 5 Array)	White, Yellow, Blue	75 x 75 x 54 mm	8
P20602	1 - 2 ml	81 (9 x 9 Array)	White, Yellow, Blue	133 x 132 x 54 mm	4
P20602 Assorted	1 - 2 ml	81 (9 x 9 Array)	White, Yellow, Blue	133 x 132 x 54 mm	4
P20603	5 ml	81 (9 x 9 Array)	White, Yellow, Blue	133 x 132 x 97 mm	4
P20603 Assorted	5 ml	81 (9 x 9 Array)	White, Yellow, Blue	133 x 132 x 97 mm	4

\* Add colour code of your choice- White (W), Yellow (Y), Blue (B).



## 26 | Cryo Box, System 100 places, PC

- Made of strong polycarbonate and designed to be used at a temperature between  $-196^{\circ}\text{C}$  to  $121^{\circ}\text{C}$ .
- Can be used in 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.



Code	Tube Capacity	Places	Colour	L x W x H	No. / case
P20615	1 - 2 ml (Freezer Compatible)	100 (10 x 10 Array)	White, Yellow, Blue	133 x 133 x 54 mm	4
P20611	1 - 2 ml	100 (10 x 10 Array)	White, Yellow, Blue	140 x 140 x 54 mm	4

\* Add colour code of your choice- White (W), Yellow (Y), Blue (B).



## 27 | Cryo Cube Box / Storage Cube Box, PP

- Manufactured in state of the art moulding facility using high purity polypropylene.
- These boxes are stackable, versatile and designed for sample storage up to  $-80^{\circ}\text{C}$ .
- These boxes help you to meet storage requirements of 1.5 – 2.0 ml microtubes & 1.0-2.0 ml cryogenic vials.
- The dimension of P20614 Cryo Cube Box is compatible with vertical, horizontal & drawer style freezer racks.
- These boxes have hinged lid connected to the base and the ultra smooth locking system ensures secure closure preventing accidental opening of these boxes in deep freezers.
- Inbuilt numbered and letters grid for sample identification.



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



## 28 | Freezing Cardboard Cryo Boxes, CARDBOARD

- Designed for storage and preservation of frozen samples.
- Can withstand ultra-low temperature in deep freezer.
- 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.



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



## 29 | Cryo Apron

- These Cryo aprons provide a high level of thermal protection to the torso and upper legs in harsh cryogenic atmospheres.
- 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.
- These Cryogenic aprons have quick-release buckles at the neck & waist for added safety and function.
- Not for immersion in liquid nitrogen.



Code	Size	No. / Case	Application	Environment
U20331	36 inch or 91.4 cm	1	Cold room / walking freezer	Cryo preservation facilities
U20332	42 inch or 106.7 cm	1		
U20333	48 inch or 121.9 cm	1	Blast freezers	Cryogenic liquid producers
U20334	54 inch or 137.2 cm	1	Delivery and filling of cryogenic liquid	Clinical lab Bio medical Blood banks Frozen food processing

## 30 | Cryo Gloves

- These cryogenic gloves protect your hands and arms when working in hazardous, ultra-cold environments.
- These gloves have an innovative design that offers superior thermal protection allowing for a maximum level of flexibility and dexterity.
- 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.
- High performance, thermal inner lining wicks moisture away from hands, maintaining comfort over extended periods.
- Not for immersion in liquid nitrogen.

Code	Places	No. / Case	Application	Environment
U20307	Wrist S	1 Pair	Ultra low blast freezers	Clinical laboratory
U20308	Wrist M	1 Pair		
U20309	Wrist L	1 Pair	Cold rooms	Bio medical
U20310	Wrist XL	1 Pair	Dry ice handling	Blood banks Pharmaceutical Frozen food processing
U20311	Mid Arm S	1 Pair		
U20312	Mid Arm M	1 Pair		
U20313	Mid Arm L	1 Pair		
U20314	Mid Arm XL	1 Pair		
U20315	Elbow S	1 Pair		
U20316	Elbow M	1 Pair		
U20317	Elbow L	1 Pair		
U20318	Elbow XL	1 Pair		



## 31 | Water Proof Cryo Gloves

- These cryogenic gloves protect your hands and arms when working in hazardous, ultra-cold environments.
- 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.
- Not for immersion in liquid nitrogen.

Code	Size	No. / Case	Application	Environment
U20319	Wrist S	1 Pair	LN2 atmosphere and environment	Fertility clinic
U20320	Wrist M	1 Pair		
U20321	Wrist L	1 Pair	Refrigerated liquid baths	Bio medical
U20322	Wrist XL	1 Pair	Cryo freezers	Genetic and bio technology
U20323	Mid Arm S	1 Pair		
U20324	Mid Arm M	1 Pair	Cryogenic grinding	Pharmaceutical
U20325	Mid Arm L	1 Pair		
U20326	Mid Arm XL	1 Pair		
U20327	Elbow S	1 Pair		
U20328	Elbow M	1 Pair		
U20329	Elbow L	1 Pair		
U20330	Elbow XL	1 Pair		





# 03 LIQUID HANDLING

SINGLE & MULTICHANNEL PIPETTES

TIPS: MICRO & LARGE TIPS, FILTER TIPS, LOW RETENTION TIPS

SAMPLE CONTAINERS

PASTEUR & SEROLOGICAL PIPETTES

RIA VIALS & MORE



## Abdos Pipettes

ABDOS pipette meets the highest needs in precision and accuracy – combined with ultimate ergonomics and increased flexibility with sophisticated blend of features and functionality.

It is easy to calibrate and maintain with tools supplied.

It is supplied with operator manual that provides complete information on recalibration and maintenance of the pipette.



Comfortable Finger Support: helps in prolonged pipetting operation with less fatigue.

Easy Calibration: Calibrated accordance with ISO8655. Each pipette is supplied with Individual Calibration Certificate.

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

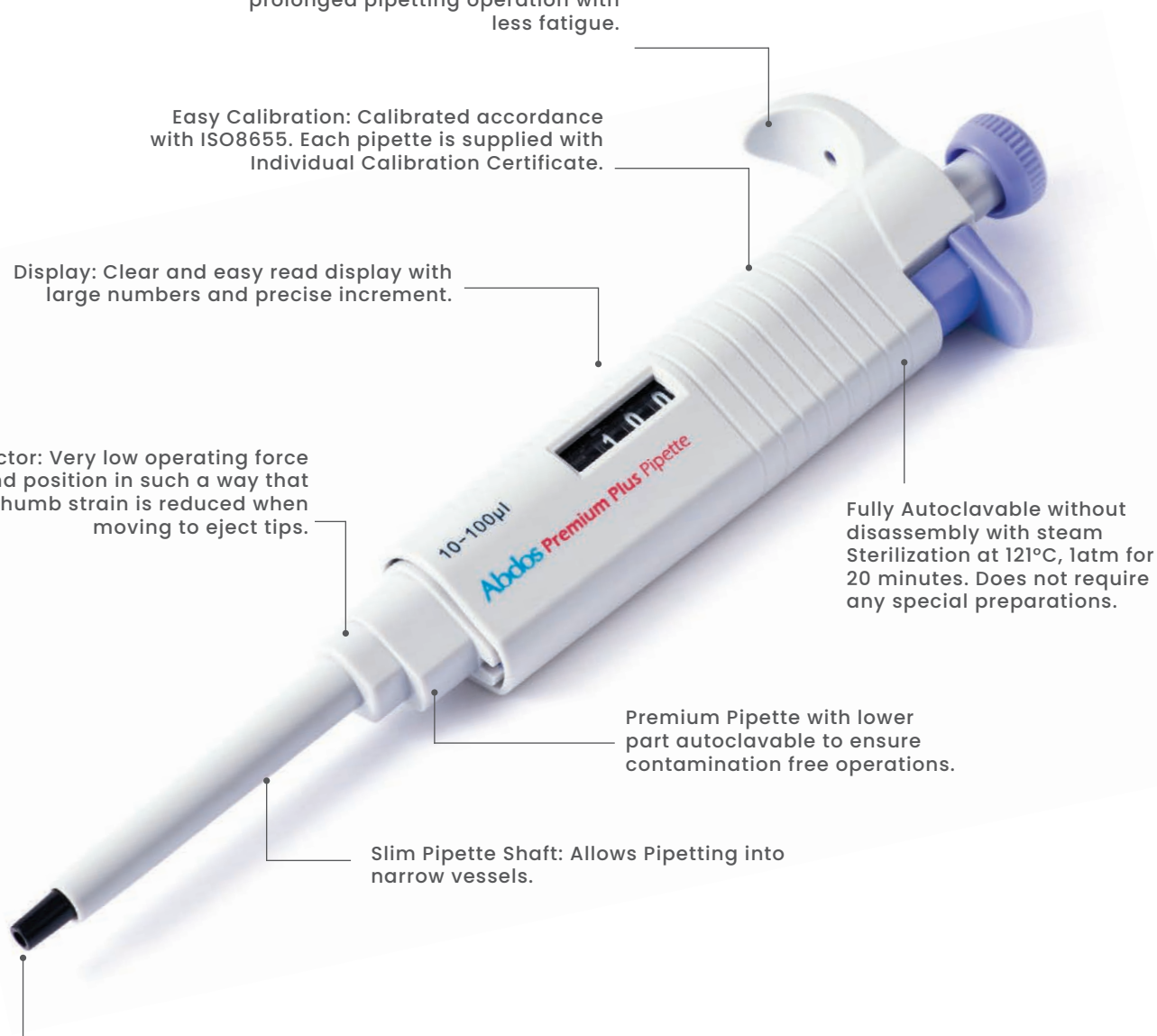
Ejector: Very low operating force and position in such a way that thumb strain is reduced when moving to eject tips.

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

Premium Pipette with lower part autoclavable to ensure contamination free operations.

Slim Pipette Shaft: Allows Pipetting into narrow vessels.

Tip Cone: Optimized Standard Design. Pipette tips from ABDOS and other manufacturers can be used.



## 32 | Fixed Premium Pipette, PP



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

## 33 | Premium Pipettes Semi-Autoclavable, PP



Code	Capacity	Increment	Test Volume	Maximum Permissible Systematic Error		Maximum Permissible Random Error		No. / Case
				Inaccuracy	Inaccuracy	Imprecision	Imprecision	
E11100	0.1 – 2.5 µl	0.05 µl	2.5 µl	± 2.50 %	± 0.062 µl	± 2.00 %	± 0.05 µl	1
			1.25 µl	± 3.00 %	± 0.037 µl	± 3.00 %	± 0.0375 µl	
			0.25 µl	± 12.00 %	± 0.03 µl	± 6.00 %	± 0.015 µl	
E11101	0.5 – 10 µl	0.1 µl	10 µl	± 1.00 %	± 0.1 µl	± 0.80 %	± 0.08 µl	1
			5 µl	± 1.50 %	± 0.175 µl	± 1.50 %	± 0.075 µl	
			1 µl	± 2.50 %	± 0.025 µl	± 1.50 %	± 0.015 µl	
E11102	2 – 20 µl	0.5 µl	20 µl	± 0.90 %	± 0.18 µl	± 0.40 %	± 0.08 µl	1
			10 µl	± 1.20 %	± 0.12 µl	± 1.00 %	± 0.10 µl	
			2 µl	± 3.00 %	± 0.06 µl	± 2.00 %	± 0.04 µl	
E11106	5 – 50 µl	0.5 µl	50 µl	± 0.60 %	± 0.3 µl	± 0.30 %	± 0.15 µl	1
			25 µl	± 0.90 %	± 0.225 µl	± 0.60 %	± 0.15 µl	
			5 µl	± 2.00 %	± 0.1 µl	± 2.00 %	± 0.1 µl	
E11103	10 – 100 µl	1.0 µl	100 µl	± 0.80 %	± 0.80 µl	± 0.15 %	± 0.15 µl	1
			50 µl	± 1.00 %	± 0.50 µl	± 0.40 %	± 0.20 µl	
			10 µl	± 3.00 %	± 0.30 µl	± 1.50 %	± 0.15 µl	
E11104	20 – 200 µl	1.0 µl	200 µl	± 0.60 %	± 1.20 µl	± 0.15 %	± 0.30 µl	1
			100 µl	± 0.80 %	± 0.80 µl	± 0.30 %	± 0.30 µl	
			20 µl	± 3.00 %	± 0.60 µl	± 1.00 %	± 0.20 µl	
E11112	50 – 200 µl	1.0 µl	200 µl	± 0.60 %	± 1.20 µl	± 0.15 %	± 0.30 µl	1
			100 µl	± 0.80 %	± 0.80 µl	± 0.30 %	± 0.30 µl	
			50 µl	± 1.00 %	± 0.50 µl	± 0.40 %	± 0.2 µl	
E11105	100 – 1000 µl	5 µl	1000 µl	± 0.60 %	± 6 µl	± 0.20 %	± 2 µl	1
			500 µl	± 0.70 %	± 3.50 µl	± 0.25 %	± 1.25 µl	
			100 µl	± 2.00 %	± 2 µl	± 0.70 %	± 0.70 µl	
E11131	1000 – 5000 µl	50 µl	5000 µl	± 0.50 %	± 25 µl	± 0.15 %	± 7.5 µl	1
			2500 µl	± 0.60 %	± 15 µl	± 0.30 %	± 7.5 µl	
			1000 µl	± 0.70 %	± 7 µl	± 0.30 %	± 3 µl	
E11132	2000 – 10000 µl	100 µl	10000 µl	± 0.60 %	± 60 µl	± 0.20 %	± 20 µl	1
			5000 µl	± 1.20 %	± 60 µl	± 0.30 %	± 15 µl	
			2000 µl	± 3.00 %	± 60 µl	± 0.60 %	± 12 µl	

## 34 | Premium Plus Pipettes Fully-Autoclavable, PP



Code	Capacity	Increment	Test Volume	Maximum Permissible Systematic Error		Maximum Permissible Random Error		No. / Case
				Inaccuracy	Inaccuracy	Imprecision	Imprecision	
E11145	0.1 – 2.5 µl	0.05 µl	2.5 µl	± 2.50 %	± 0.062 µl	± 2.00 %	± 0.05 µl	1
			1.25 µl	± 3.00 %	± 0.037 µl	± 3.00 %	± 0.0375 µl	
			0.25 µl	± 12.00 %	± 0.03 µl	± 6.00 %	± 0.015 µl	
E11107	0.5 – 10 µl	0.1 µl	10 µl	± 1.00 %	± 0.1 µl	± 0.80 %	± 0.08 µl	1
			5 µl	± 1.50 %	± 0.175 µl	± 1.50 %	± 0.075 µl	
			1 µl	± 2.50 %	± 0.025 µl	± 1.50 %	± 0.015 µl	
E11108	2 – 20 µl	0.5 µl	20 µl	± 0.90 %	± 0.18 µl	± 0.40 %	± 0.08 µl	1
			10 µl	± 1.20 %	± 0.12 µl	± 1.00 %	± 0.10 µl	
			2 µl	± 3.00 %	± 0.06 µl	± 2.00 %	± 0.04 µl	
E11146	5 – 50 µl	0.5 µl	50 µl	± 0.60 %	± 0.3 µl	± 0.30 %	± 0.15 µl	1
			25 µl	± 0.90 %	± 0.225 µl	± 0.60 %	± 0.15 µl	
			5 µl	± 2.00 %	± 0.1 µl	± 2.00 %	± 0.1 µl	
E11109	10 – 100 µl	1.0 µl	100 µl	± 0.80 %	± 0.80 µl	± 0.15 %	± 0.15 µl	1
			50 µl	± 1.00 %	± 0.50 µl	± 0.40 %	± 0.20 µl	
			10 µl	± 3.00 %	± 0.30 µl	± 1.50 %	± 0.15 µl	
E11110	20 – 200 µl	1.0 µl	200 µl	± 0.60 %	± 1.20 µl	± 0.15 %	± 0.30 µl	1
			100 µl	± 0.80 %	± 0.80 µl	± 0.30 %	± 0.30 µl	
			20 µl	± 3.00 %	± 0.60 µl	± 1.00 %	± 0.2 µl	
E11147	50 – 200 µl	1.0 µl	200 µl	± 0.60 %	± 1.20 µl	± 0.15 %	± 0.30 µl	1
			100 µl	± 0.80 %	± 0.80 µl	± 0.30 %	± 0.30 µl	
			50 µl	± 1.00 %	± 0.50 µl	± 0.40 %	± 0.2 µl	
E11111	100 – 1000 µl	5.0 µl	1000 µl	± 0.60 %	± 6 µl	± 0.20 %	± 2 µl	1
			500 µl	± 0.70 %	± 3.50 µl	± 0.25 %	± 1.25 µl	
			100 µl	± 2.00 %	± 2 µl	± 0.70 %	± 0.70 µl	
E11134	1000 – 5000 µl	50 µl	5000 µl	± 0.50 %	± 25 µl	± 0.15 %	± 7.5 µl	1
			2500 µl	± 0.60 %	± 15 µl	± 0.30 %	± 7.5 µl	
			1000 µl	± 0.70 %	± 7 µl	± 0.30 %	± 3 µl	



# Premium Plus Multi Channel Pipettes

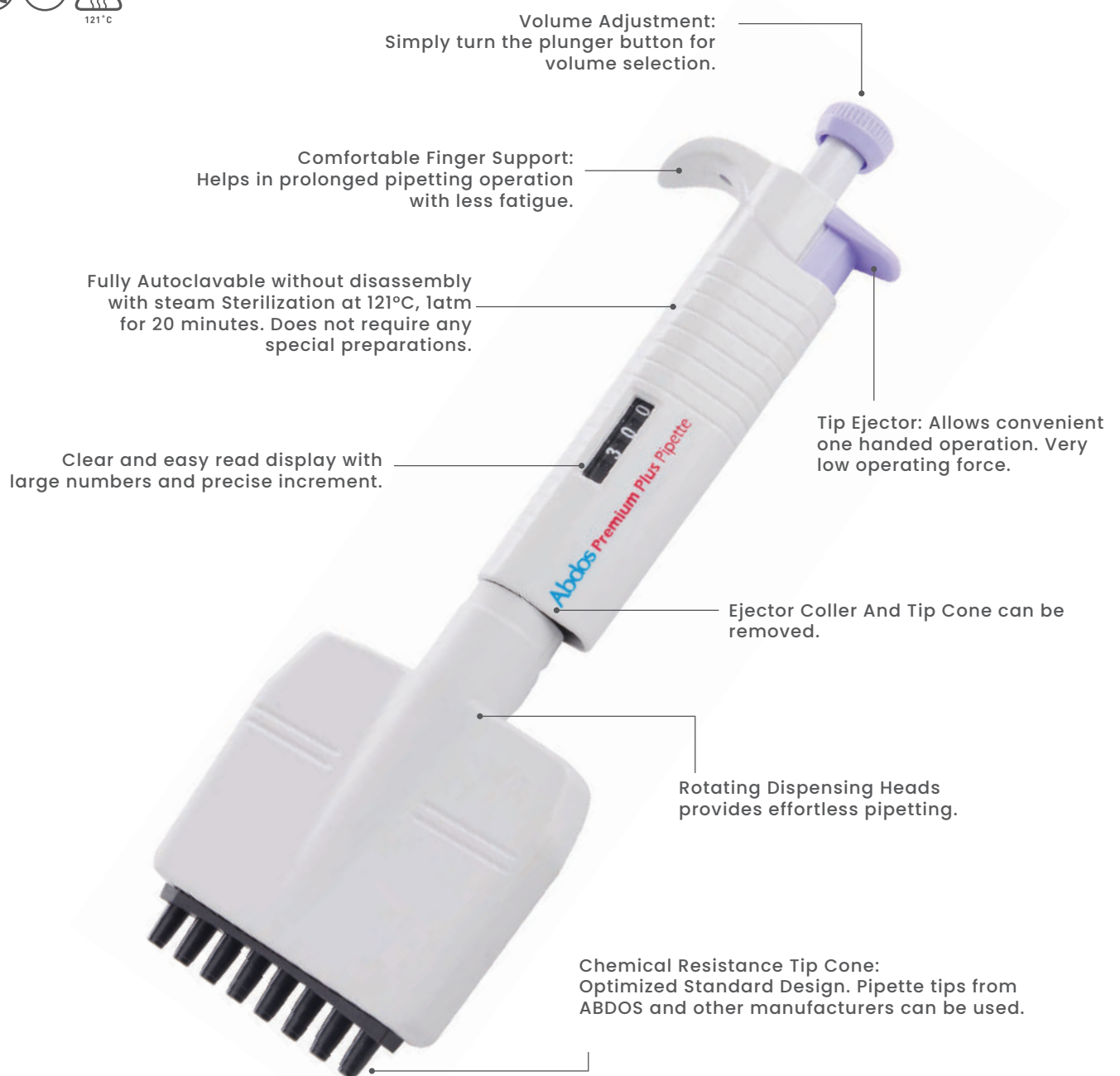
ABDOS Premium Plus Multi-Channel Pipette meets the highest needs in precision and accuracy – combined with ultimate ergonomics and increased flexibility with sophisticated blend of features and functionality.

These fully autoclavable 8-channel and 12-multichannel pipette is available for Standard 96-well plates.

Individual piston and Tip cone assemblies allow 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.



## 35 | Premium Plus 8-Channel Adjustable Multichannel Pipette

- Abdos Premium Plus Multi-channel Pipettes 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.
- The special compound material tip cone design allows visual seal verification and has 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 Pipettes are easy to calibrate and maintain with the tools supplied.
- These pipettes are designed to avoid repetitive strain injuries.
- All Abdos pipettes are supplied with operator manual that provides complete information on recalibration and maintenance of the pipettes.



Code	Capacity	Increment	Test Volume	Maximum Permissible Systematic Error		Maximum Permissible Random Error		No. / Case
				Inaccuracy	Inaccuracy	Imprecision	Imprecision	
E11136	0.5 – 10 µl	0.1 µl	10 µl	± 1.50 %	± 0.15 µl	± 1.50 %	± 0.15 µl	1
			5 µl	± 2.50 %	± 0.125 µl	± 2.50 %	± 0.125 µl	
			1 µl	± 4.00 %	± 0.04 µl	± 4.00 %	± 0.04 µl	
E11137	5 – 50 µl	0.5 µl	50 µl	± 1.00 %	± 0.50 µl	± 0.50 %	± 0.25 µl	1
			25 µl	± 1.50 %	± 0.375 µl	± 1.00 %	± 0.25 µl	
			5 µl	± 3.00 %	± 0.15 µl	± 2.00 %	± 0.10 µl	
E11138	50 – 300 µl	5 µl	300 µl	± 0.70 %	± 2.10 µl	± 0.25 %	± 0.75 µl	1
			150 µl	± 1.00 %	± 1.50 µl	± 0.50 %	± 0.75 µl	
			50 µl	± 1.50 %	± 0.75 µl	± 0.80 %	± 0.40 µl	

## 36 | Premium Plus 12-Channel Adjustable Multichannel Pipette



Code	Capacity	Increment	Test Volume	Maximum Permissible Systematic Error		Maximum Permissible Random Error		No. / Case
				Inaccuracy	Inaccuracy	Imprecision	Imprecision	
E11139	0.5 – 10 µl	0.1 µl	10 µl	± 1.50 %	± 0.15 µl	± 1.50 %	± 0.15 µl	1
			5 µl	± 2.50 %	± 0.125 µl	± 2.50 %	± 0.125 µl	
			1 µl	± 4.00 %	± 0.04 µl	± 4.00 %	± 0.04 µl	
E11140	5 – 50 µl	0.5 µl	50 µl	± 1.00 %	± 0.50 µl	± 0.50 %	± 0.25 µl	1
			25 µl	± 1.50 %	± 0.375 µl	± 1.00 %	± 0.25 µl	
			5 µl	± 3.00 %	± 0.15 µl	± 2.00 %	± 0.10 µl	
E11141	50 – 300 µl	5 µl	300 µl	± 0.70 %	± 2.10 µl	± 0.25 %	± 0.75 µl	1
			150 µl	± 1.00 %	± 1.50 µl	± 0.50 %	± 0.75 µl	
			50 µl	± 1.50 %	± 0.75 µl	± 0.80 %	± 0.40 µl	

## 37 | Pipette Rack Stand, ACRYLIC

- Holds five standard size pipettes.
- Racks are mounted on their own stand.
- Keeps working area or desk free from clutter.



Code	No. of Places	L x W x H	No. / Case
P70201	5	190 x 135 x 265 mm	1



## 38 | Pipette Rack Stand (Carsol Type), PP

- Holds Six standard size pipettes.
- The Carousel Stand rotates smoothly and comfortably.
- Keeps working area or desk free from clutter.



Code	No. of Places	No. / Case
P70203	6	1



## 39 | Premium Electronic Pipette

- Abdos Premium electronic pipette is fast, precise with an ergonomic design that is easy to use in laboratories.
- High accuracy, high performance stepper motor ensures accuracy and repeatability, eliminating manual pipetting errors. A motor driven digital control pipette with multi-function Pipetting, Mixing, Stepper and Dilution.
- 2 buttons handle all operational settings.
- Light weight, ergonomic design, small body dimension for easy handling that guarantees fatigue free pipetting.
- Adjustable speeds for aspiration and dispensing.
- Comprehensive range with easy programming.
- Motor driven with build-in-error control improving pipetting precision and providing reliable results.
- Highly efficient lithium-ion battery offering long running time with each charge makes the Premium Electronic Pipette a work-horse during busy times in the laboratories.
- Lower part is autoclavable.
- Reduces workload and improves the accuracy and precision.
- A bright LED display makes setting and reading easy, thus reducing or eliminating errors.
- User can Self-calibrate by limiting the pipette to a PC via USB connector.



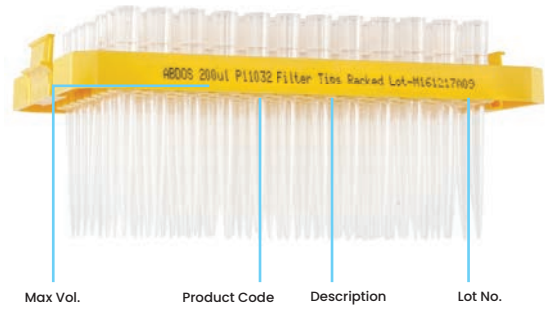
Code	Capacity	Increment	Test Volume	Inaccuracy	Inaccuracy	Imprecision	Imprecision	No. / Case
E11161	0.5 – 10 µl	0.01 µl	10 µl 1 µl	± 1.0 % ± 3.5 %	± 0.10 µl ± 0.035 µl	0.05 *s.d µl 0.03 *s.d µl	0.5 CV% 3.0 CV%	1
E11162	5 – 50 µl	0.1 µl	50 µl 5 µl	± 0.8 % ± 3.0 %	± 0.40 µl ± 0.15 µl	0.15 *s.d µl 0.125 *s.d µl	0.3 CV % 2.5 CV %	1
E11163	30 – 300 µl	1 µl	300 µl 30 µl	± 0.6 % ± 3.0 %	± 1.8 µl ± 0.9 µl	0.6 *s.d µl 0.21 *s.d µl	0.2 CV % 0.7 CV %	1
E11164	100 – 1000 µl	5 µl	1000 µl 100 µl	± 0.6 % ± 3.0 %	± 6.0 µl ± 3.0 µl	2.0 *s.d µl 0.6 *s.d µl	0.2 CV % 0.6 CV %	1



# 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.



# 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.

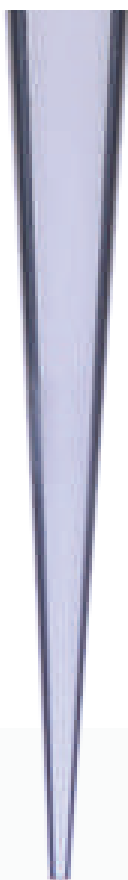






### ABDOS BEVELLED TIPS

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. Bevelled tips prevent accidental damage of gel rupture during loading. Perfect airlock grip on pipette by inner radial rings for accurate pipetting.



### 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 conditions 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.

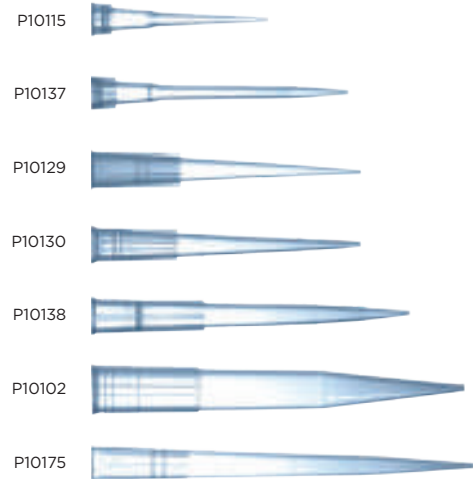


## 40 | Pipette Tips, Bulk in Resealable Bags, PP

- Bulk Micro Tips are offered in resealable zip lock bag.
- The micro Tips can be manually accumulated in empty boxes.
- The product is free from contamination and dust.
- Abdos polyethylene pouches are recyclable.



Code	Capacity	Colour	No. / Case
P10115	0.1 – 10 µl (Graduated)	Natural	1000
P10137	0.1 – 10 µl Extended (Graduated)	Natural	1000
P10129	1 – 200 µl (Bevelled Graduated)	Yellow	1000
P10130	1 – 200 µl (Bevelled Graduated)	Natural	1000
P10101	1 – 200 µl (Ultra Point Tip Orifice)	Yellow	1000
P10105	1 – 200 µl (Ultra Point Tip Orifice)	Natural	1000
P10138	1 – 300 µl (Graduated)	Natural	1000
P10102	100 – 1000 µl	Blue	500
P10106	100 – 1000 µl	Natural	500
P10174	100 – 1000 µl XL (Graduated)	Natural	500
P10175	100 – 1250 µl (Graduated)	Natural	500

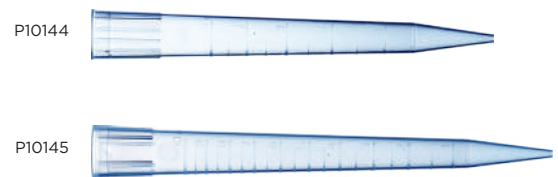


## 41 | Large Volume Pipette Tips, Bulk in Resealable Bags, PP

- 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.



Code	Capacity	Colour	No. / Case
P10144	1 – 5 ml (Graduated)	Natural	100
P10145	1 – 10 ml (Graduated)	Natural	100



## 42 | PureRight™ Pipette Tips, Individually Wrapped, Sterile, PP

- Individually wrapped pipette tips are manufactured as per the sterile purity level.
- Sterile individually wrapped tips have been validated according to ISO 11137 SAL 10<sup>-6</sup>



Code	Capacity	Colour	No. / Case
P10164	0.1 – 10 µl (Graduated)	Natural	400
P10165	0.1 – 10 µl (Extended Graduated)	Natural	400
P10161	1 – 200 µl (Bevelled Graduated)	Natural	400
P10166	1 – 300 µl (Graduated)	Natural	200
P10163	100 – 1000 µl	Natural	200
P10167	100 – 1000 µl XL (Graduated)	Natural	200
P10168	100 – 1250 µl (Graduated)	Natural	200
P10169	100 – 5000 µl (Graduated)	Natural	60
P10170	500 – 10000 µl (Graduated)	Natural	50



## 43 | Pipette Tips, Racked, PP

- Racked Micro Tips are offered in prefilled racks that don't require 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.
- Racks are stackable. Reusable once empty.



Code	Capacity	Colour	No. / Case
PI0116	0.1 – 10 µl (Graduated)	Natural	10 Racks x 96 pcs
PI0139	0.1 – 10 µl Extended (Graduated)	Natural	10 Racks x 96 pcs
PI0140	1 – 200 µl (Bevelled Graduated)	Yellow	10 Racks x 96 pcs
PI0141	1 – 200 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
PI0107	1 – 200 µl (Ultra Point Tip Orifice)	Yellow	10 Racks x 96 pcs
PI0108	1 – 200 µl (Ultra Point Tip Orifice)	Natural	10 Racks x 96 pcs
PI0142	1 – 300 µl (Graduated)	Natural	10 Racks x 96 pcs
PI0109	100 – 1000 µl	Blue	10 Racks x 96 pcs
PI0110	100-1000 µl	Natural	10 Racks x 96 pcs
PI0155	100-1000 µl XL (Graduated)	Natural	10 Racks x 96 pcs
PI0157	100-1250 µl (Graduated)	Natural	10 Racks x 96 pcs
PI0159	100-5000 µl (Graduated)	Natural	6 Racks x 24 pcs
PI0160	500-10000 µl (Graduated)	Natural	6 Racks x 24 pcs



## 44 | Pipette Tips, Sterile Racked, PP



Code	Capacity	Colour	No. / Case
PI0117	0.1 – 10 µl (Graduated)	Natural	10 Racks x 96 pcs
PI0147	0.1 – 10 µl Extended (Graduated)	Natural	10 Racks x 96 pcs
PI0148	1 – 200 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
PI0149	1 – 200 µl (Bevelled Graduated)	Yellow	10 Racks x 96 pcs
PI0111	1 – 200 µl (Ultra Point Tip Orifice)	Yellow	10 Racks x 96 pcs
PI0112	1 – 200 µl (Ultra Point Tip Orifice)	Natural	10 Racks x 96 pcs
PI0150	1 – 300 µl (Graduated)	Natural	10 Racks x 96 pcs
PI0113	100-1000 µl	Blue	10 Racks x 96 pcs
PI0114	100 – 1000 µl	Natural	10 Racks x 96 pcs
PI0156	100-1000 µl XL (Graduated)	Natural	10 Racks x 96 pcs
PI0158	100-1250 µl (Graduated)	Natural	10 Racks x 96 pcs
PI0171	100-5000 µl (Graduated)	Natural	6 Racks x 24 pcs
PI0178	500-10000 µl (Graduated)	Natural	6 Racks x 24 pcs

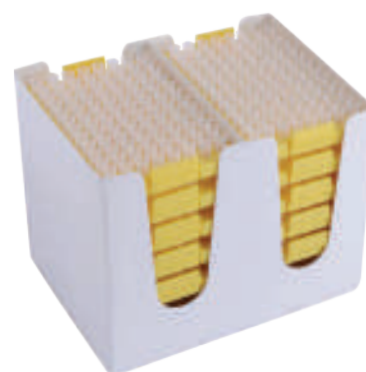


## 45 | Pipette Tips, Refill Pack, PP

- Racked Micro Tips are offered in prefilled trays that can be directly loaded in the box.
- Easy to load and remove into boxes.
- Saves time and costs of manual accumulation in empty boxes.
- More Cost effective and economical than racked micro tips.
- Fits Perfectly onto Abdos Micro Tip Box.
- 12 x 8 Array to align the contents in the box.
- Can be autoclaved when racked.



Code	Capacity	Colour	No. / Case
PI0118	0.1 – 10 µl (Graduated)	Natural	12 Refill Racks x 96 Pcs
PI0152	1 – 200 µl (Bevelled Graduated)	Natural	10 Refill Racks x 96 Pcs
PI0153	1 – 200 µl (Bevelled Graduated)	Yellow	10 Refill Racks x 96 Pcs
PI0119	1 – 200 µl (Ultra Point Tip Orifice)	Yellow	10 Refill Racks x 96 Pcs
PI0120	1 – 200 µl (Ultra Point Tip Orifice)	Natural	10 Refill Racks x 96 Pcs
PI0154	1 – 300 µl (Graduated)	Natural	10 Refill Racks x 96 Pcs
PI0176	100-1000 XL µl (Graduated)	Natural	6 Refill Racks x 96 Pcs
PI0177	100-1250 µl (Graduated)	Natural	6 Refill Racks x 96 Pcs



# LAST DROP™ Low Retention

## Pipette Tips Features



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

Super homogenous surface free sites prevent 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 wall tips with high clarity for better visibility of sample.

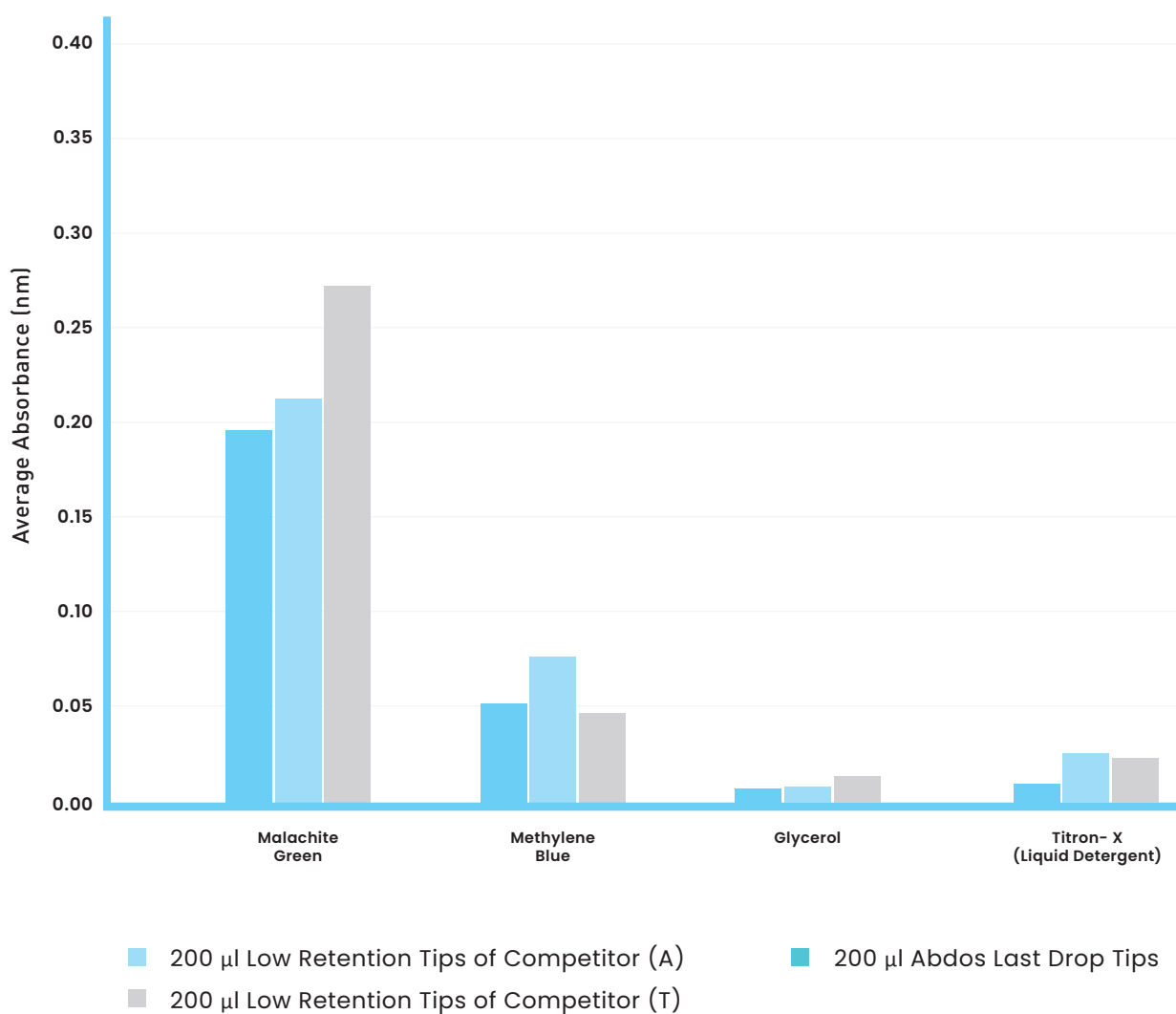
Reduce Sample retention for precision & to save on costly reagents.

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 tips were compared with other low retention tips in combination with an electronic pipette, were used 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 average values established are shown in the table.

## COMPARISON CHART



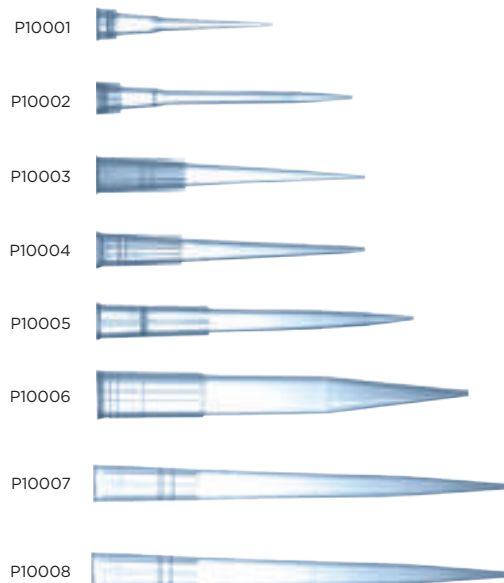
Result: Abdos Last Drop Pipette Tips clearly reduce sample loss. As seen above in the graph, it clearly indicates that Abdos Tips retained least amount of residue and saves on costly reagents.

## 46 | Last Drop™ Low Retention Pipette Tips, Bulk in Resealable Bags, PP

- Bulk Last Drop™ Micro Tips are offered in resealable zip lock bag.
- Tips can be manually accumulated in empty boxes.
- The product is free from contamination and dust.
- Abdos polyethylene pouches are recyclable.

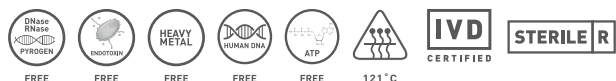


Code	Capacity	Colour	No. / Case
PI0001	0.1 – 10 µl (Graduated)	Natural	1000
PI0002	0.1 – 10 µl Extended (Graduated)	Natural	1000
PI0003	1 – 200 µl (Bevelled Graduated)	Natural	1000
PI0004	1 – 200 µl (Ultra Point Tip Orifice)	Natural	1000
PI0005	1 – 300 µl (Graduated)	Natural	1000
PI0006	100 – 1000 µl	Natural	500
PI0007	100 – 1000 µl XL (Graduated)	Natural	500
PI0008	100 – 1250 µl (Graduated)	Natural	500



## 47 | PureRight™ Last Drop Low Retention Pipette Tips, Individually Wrapped, Sterile, PP

- Individually wrapped pipette tips are manufactured as per the sterile purity level.
- Sterile individually wrapped tips have been validated according to ISO 11137 SAL 10<sup>-6</sup>



Code	Capacity	Colour	No. / Case
PI0010	0.1 – 10 µl (Graduated)	Natural	400
PI0011	0.1 – 10 µl Extended (Graduated)	Natural	400
PI0012	1 – 200 µl (Bevelled Graduated)	Natural	400
PI0013	1 – 300 µl (Graduated)	Natural	200
PI0014	100 – 1000 µl	Natural	200
PI0015	100 – 1000 µl XL (Graduated)	Natural	200
PI0016	100 – 1250 µl (Graduated)	Natural	200



## 48 | Last Drop™ Low Retention Pipette Tips, Racked, PP

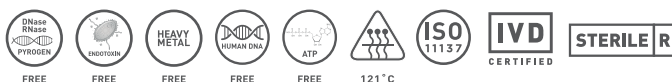
- Racked Last Drop™ Micro Tips are offered in prefilled racks that do not require manual accumulation in empty boxes.
- Polypropylene racks are very robust, sturdy with consistent and thick wall thickness.
- Can be used for repeat autoclaving.
- Racks are hinged with transparent lid & base providing excellent view inside the box.
- Racks are stackable.
- Reusable once empty.



Code	Capacity	Colour	No. / Case
PI0020	0.1 – 10 µl (Graduated)	Natural	10 Racks x 96 pcs
PI0021	0.1 – 10 µl Extended (Graduated)	Natural	10 Racks x 96 pcs
PI0022	1 – 200 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
PI0023	1 – 200 µl (Ultra Point Tip Orifice)	Natural	10 Racks x 96 pcs
PI0024	1 – 300 µl (Graduated)	Natural	10 Racks x 96 pcs
PI0025	100–1000 µl	Natural	10 Racks x 96 pcs
PI0026	100 – 1000 µl XL (Graduated)	Natural	10 Racks x 96 pcs
PI0027	100 – 1250 µl (Graduated)	Natural	10 Racks x 96 pcs



## 49 | Last Drop™ Low Retention Pipette Tips, Sterile Racked, PP



Code	Capacity	Colour	No. / Case
PI0040	0.1 – 10 µl (Graduated)	Natural	10 Racks x 96 pcs
PI0041	0.1 – 10 µl Extended (Graduated)	Natural	10 Racks x 96 pcs
PI0042	1 – 200 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
PI0043	1 – 200 µl (Ultra Point Tip Orifice)	Natural	10 Racks x 96 pcs
PI0044	1 – 300 µl (Graduated)	Natural	10 Racks x 96 pcs
PI0045	100 – 1000 µl	Natural	10 Racks x 96 pcs
PI0046	100 – 1000 µl XL (Graduated)	Natural	10 Racks x 96 pcs
PI0047	100 – 1250 µl (Graduated)	Natural	10 Racks x 96 pcs

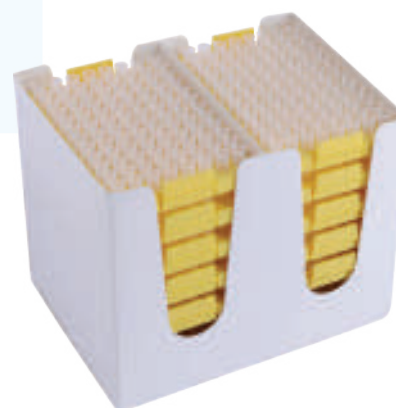


## 50 | Last Drop™ Low Retention Pipette Tips, Refill Pack, PP

- Racked Micro Tips are offered in prefilled trays that can be directly loaded in the box.
- Easy to load and remove into boxes.
- Saves time and costs of manual accumulation in empty boxes.
- Fits Perfectly onto Abdos Micro Tip Box.
- 12 x 8 Array to align the contents in the box.
- Can be autoclaved when racked.

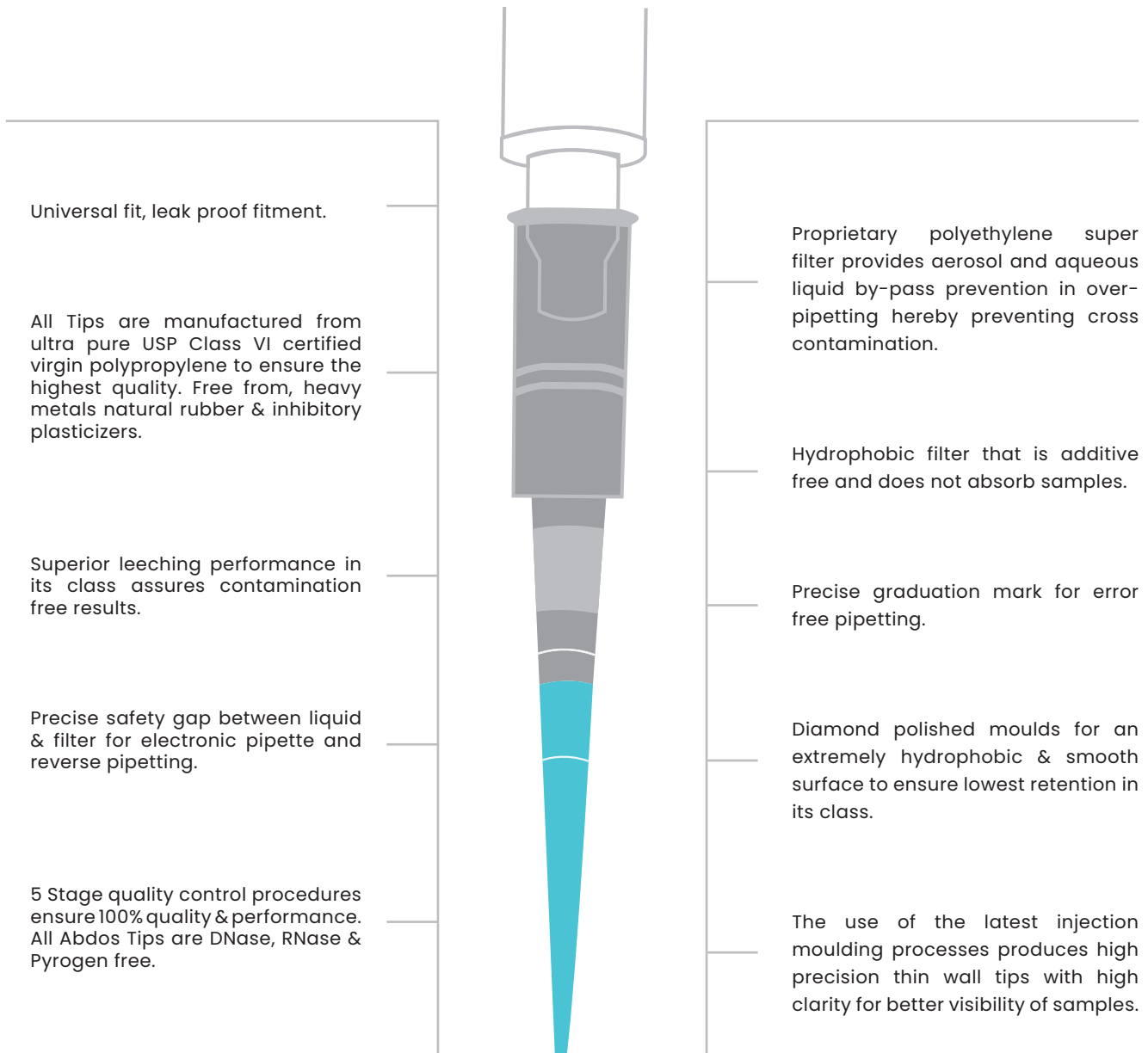


Code	Capacity	Colour	No. / Case
PI0060	0.1 – 10 µl (Graduated)	Natural	12 Refill Racks x 96 pcs
PI0061	1 – 200 µl (Bevelled Graduated)	Natural	10 Refill Racks x 96 pcs
PI0062	1 – 200 µl (Ultra Point Tip Orifice)	Natural	10 Refill Racks x 96 pcs
PI0063	1 – 300 µl (Graduated)	Natural	10 Refill Racks x 96 pcs
PI0064	100 – 1000 µl XL (Graduated)	Natural	6 Refill Racks x 96 pcs
PI0065	100 – 1250 µl (Graduated)	Natural	6 Refill Racks x 96 pcs



# SUPER™ Filter Tips

## Features



Universal fit, leak proof fitment.

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

Superior leeching performance in its class assures contamination free results.

Precise safety gap between liquid & filter for electronic pipette and reverse pipetting.

5 Stage quality control procedures ensure 100% quality & performance. All Abdos Tips are DNase, RNase & Pyrogen free.

Proprietary polyethylene super filter provides aerosol and aqueous liquid by-pass prevention in over-pipetting hereby preventing cross contamination.

Hydrophobic filter that is additive free and does not absorb samples.

Precise graduation mark for error free pipetting.

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

The use of the latest injection moulding processes produces high precision thin wall tips with high clarity for better visibility of samples.

**Best Suited for Biological application.**

**Abdos Filter is 100% pure porous PE. It 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.**

*\*Note: Abdos SUPER™ filter tips are recommended in the WHO & ICMR approved Covid-19 testing protocol.*

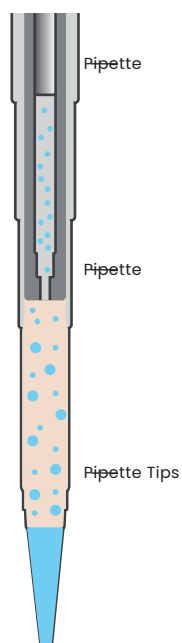


## ABDOS SUPER™ FILTER PREVENTS BOTH LIQUID & AEROSOL PASSING THROUGH THE FILTER

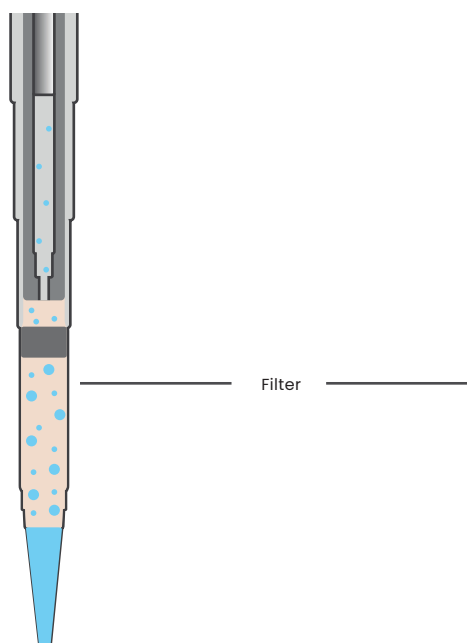
### Case Study:

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 the other; therefore Abdos offers Super filter that prevents both Liquid & Aerosol passing through the filter, thus making pipette shaft contamination free.

Non filter  
Pipette Tips



Selective Barrier  
Pipette Tips



Abdos Super  
Filter Tip



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

Most filter pipette tips do not act as a barrier to both liquid and Aerosol. The Pores of the filter act as a selective barrier thereby contaminating the pipette. While in other filter pipette tips, the liquid touches the filter, the filter becomes wet and locks. Hence, possibility of sample recovery is not possible.

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

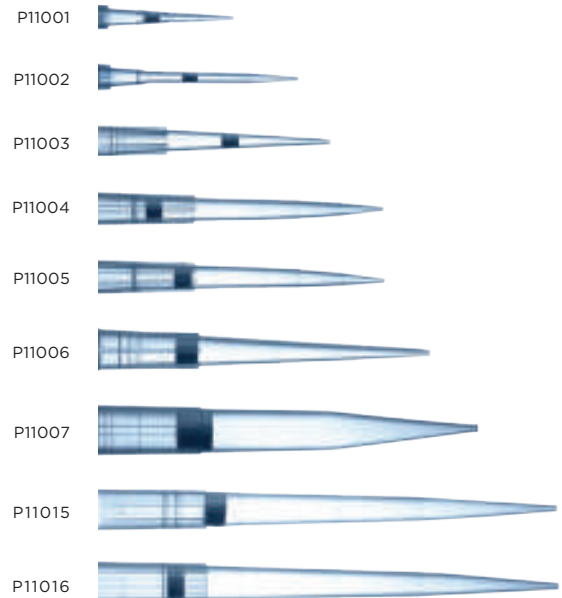
Proprietary Pure Porous Hydrophobic PE filter helps us to recover contamination free samples from wetted filter and does not trap or block the liquid into the filter.

## 51 | Filter Pipette Tips, Bulk in Resealable Bags, PP

- Bulk Filter Pipette Tips are offered in resealable zip lock bag.
- Tips can be manually accumulated in empty boxes.
- The product is free from contamination and dust.
- Abdos polyethylene pouches are recyclable.



Code	Capacity	Colour	No. / Case
P11001	0.1 - 10 µl (Graduated)	Natural	1000
P11002	0.1 - 10 µl Extended (Graduated)	Natural	1000
P11003	1 - 20 µl (Bevelled Graduated)	Natural	1000
P11004	1 - 100 µl (Bevelled Graduated)	Natural	1000
P11005	1 - 200 µl (Bevelled Graduated)	Natural	1000
P11006	1 - 300 µl (Graduated)	Natural	1000
P11007	100 - 1000 µl	Natural	500
P11015	100 - 1000 µl XL (Graduated)	Natural	500
P11016	100 - 1250 µl (Graduated)	Natural	500

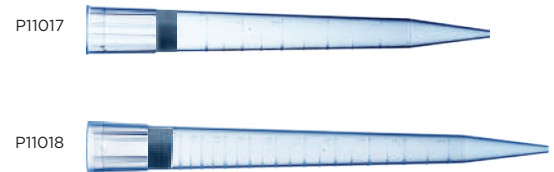


## 52 | Large Volume Filter Pipette Tips, Bulk in Resealable Bags, PP

- 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.

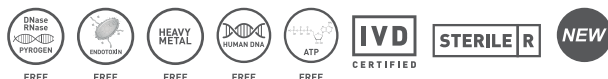


Code	Capacity	Colour	No. / Case
P11017	100 - 5000 µl (Graduated)	Natural	100
P11018	500 - 10000 µl (Graduated)	Natural	100



## 53 | PureRight™ Filter Pipette Tips, Individually Wrapped, Sterile, PP

- PureRight™ Individually Filter Tips are offered in sealed proof packaging.
- These tips are gamma radiated.
- The product is free from contamination and dust.
- Every piece comes with infographics of Lot & Expiry details.
- Abdos polyethylene pouches are recyclable.



Code	Capacity	Colour	No. / Case
P11008	0.1 - 10 µl (Graduated)	Natural	400
P11009	0.1 - 10 µl Extended (Graduated)	Natural	400
P11010	1 - 20 µl (Graduated)	Natural	400
P11011	1 - 100 µl (Graduated)	Natural	400
P11012	1 - 200 µl (Graduated)	Natural	400
P11013	1 - 300 µl (Graduated)	Natural	200
P11014	100 - 1000 µl	Natural	200
P11019	100 - 1000 µl XL (Graduated)	Natural	200
P11049	100 - 1250 µl (Graduated)	Natural	200
P10099	100 - 5000 µl (Graduated)	Natural	60
P10100	500 - 10000 µl (Graduated)	Natural	50



## 54 | Filter Pipette Tips - Racked, PP

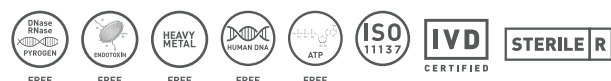
- Racked Filter Tips are offered in prefilled racks that do not require manual accumulation in empty boxes.
- Polypropylene racks are very robust, sturdy with consistent and thick wall thickness.
- Racks are hinged with transparent lid & base providing excellent view inside the box.
- Racks are stackable.
- Reusable once empty.



Code	Capacity	Colour	No. / Case
PI1020	0.1 - 10 µl (Graduated)	Natural	10 Racks x 96 pcs
PI1022	0.1 - 10 µl Extended (Graduated)	Natural	10 Racks x 96 pcs
PI1024	1 - 20 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
PI1026	1 - 50 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
PI1028	1 - 100 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
PI1032	1 - 200 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
PI1034	1 - 300 µl (Graduated)	Natural	10 Racks x 96 pcs
PI1036	100 - 1000 µl	Natural	10 Racks x 96 pcs
PI1038	100 - 1000 µl (Graduated)	Natural	10 Racks x 96 pcs
PI1039	100 - 1250 µl (Graduated)	Natural	10 Racks x 96 pcs
PI1030	100 - 5000 µl (Graduated)	Natural	6 Racks x 24 pcs
PI1031	100 - 10000 µl (Graduated)	Natural	6 Racks x 24 pcs



## 55 | Filter Pipette Tips, Sterile Racked, PP

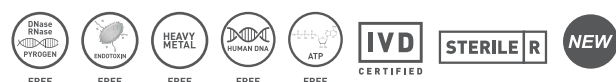


Code	Capacity	Colour	No. / Case
PI1021	0.1 - 10 µl (Graduated)	Natural	10 Racks x 96 pcs
PI1023	0.1 - 10 µl Extended (Graduated)	Natural	10 Racks x 96 pcs
PI1025	1 - 20 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
PI1027	1 - 50 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
PI1029	1 - 100 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
PI1033	1 - 200 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
PI1035	1 - 300 µl (Graduated)	Natural	10 Racks x 96 pcs
PI1037	100 - 1000 µl	Natural	10 Racks x 96 pcs
PI1047	100 - 1000 µl (Graduated)	Natural	10 Racks x 96 pcs
PI1048	100 - 1250 µl (Graduated)	Natural	10 Racks x 96 pcs
PI1072	100 - 5000 µl (Graduated)	Natural	6 Racks x 24 pcs
PI1073	100 - 10000 µl (Graduated)	Natural	6 Racks x 24 pcs

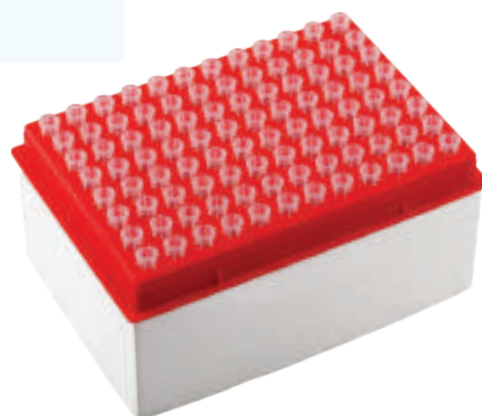


## 56 | Refill Filter Pipette Tips, Sterile PP

- Refill filter Tips are offered in prefilled tray that can be directly loaded in the box.
- Easy to load and remove into box.
- Saves time and costs of manual accumulation in empty box.
- More Cost effective and economical.
- Each Wafer comes in Individual wrapping.

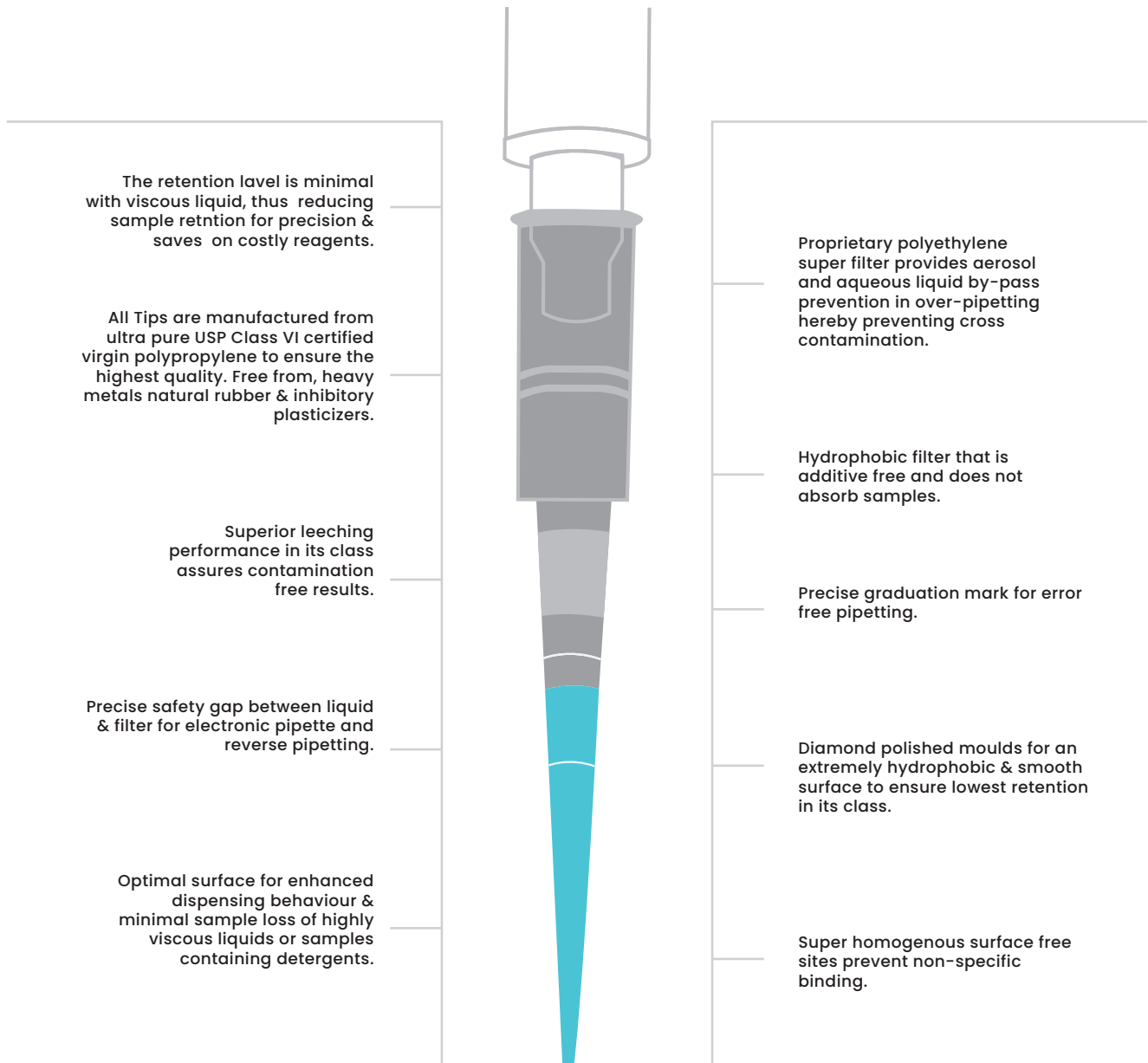


Code	Capacity	Colour	No. / Case
PI1092	0.1 - 10 µl (Graduated)	Natural	10 refill pack x 96 pcs
PI1093	0.1 - 10 µl Extended (Graduated)	Natural	10 refill pack x 96 pcs
PI1094	1 - 20 µl (Graduated)	Natural	10 refill pack x 96 pcs
PI1095	1 - 100 µl (Graduated)	Natural	10 refill pack x 96 pcs
PI1096	1 - 200 µl (Graduated)	Natural	10 refill pack x 96 pcs
PI1097	1 - 300 µl (Graduated)	Natural	10 refill pack x 96 pcs
PI1098	100 - 1000 µl	Natural	10 refill pack x 96 pcs
PI1099	100 - 1000 µl XL (Graduated)	Natural	10 refill pack x 96 pcs
PI1100	100 - 1250 µl (Graduated)	Natural	10 refill pack x 96 pcs



# LAST DROP™ Filter Tips

## Features



Best Suited for Biological application.

Abdos Filter is 100% pure porous PE. It 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).

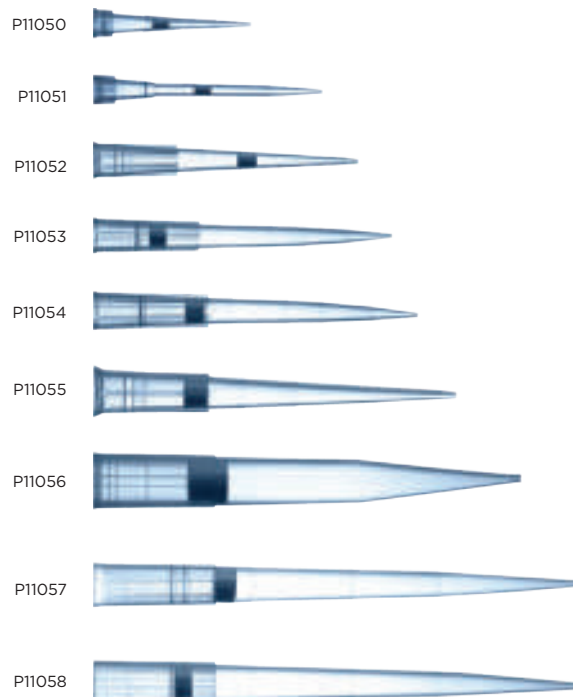
Inert, Hydrophobic Filter does not trap or block the liquid.

## 57 | Last Drop™, Low Retention Filter Pipette Tips, Bulk in Resealable Bags, PP

- Bulk Last Drop™ Filter Tips are offered in resealable zip lock bag.
- The micro Tips can be manually accumulated in empty boxes.
- The product is free from contamination and dust.
- Abdos polyethylene pouches are recyclable.



Code	Capacity	Colour	No. / Case
P11050	0.1 - 10 µl (Graduated)	Natural	1000
P11051	0.1 - 10 µl (Extended Graduated)	Natural	1000
P11052	1 - 20 µl (Bevelled Graduated)	Natural	1000
P11053	1 - 100 µl (Bevelled Graduated)	Natural	1000
P11054	1 - 200 µl (Bevelled Graduated)	Natural	1000
P11055	1 - 300 µl (Graduated)	Natural	1000
P11056	100-1000 µl (Bulk)	Natural	500
P11057	100 - 1000 µl (Graduated)	Natural	500
P11058	100 - 1250 µl (Graduated)	Natural	500



## 58 | PureRight™ Last Drop Low Retention Filter Pipette Tips, Individually Wrapped, Sterile, PP

- Individually Filter Tips are offered in sealed proof packaging.
- These tips are gamma radiated.
- The product is free from contamination and dust.
- Every piece comes with infographics of Lot and Expiry details.
- Abdos polyethylene pouches are recyclable.



Code	Capacity	Colour	No. / Case
P11040	0.1 - 10 µl (Graduated)	Natural	400
P11041	0.1 - 10 µl Extended (Graduated)	Natural	400
P11042	1 - 20 µl (Graduated)	Natural	400
P11043	1 - 100 µl (Graduated)	Natural	400
P11044	1 - 200 µl (Graduated)	Natural	400
P11045	1 - 300 µl (Graduated)	Natural	200
P11046	100 - 1000 µl (Graduated)	Natural	200
P11070	100 - 1000 µl XL, (Graduated)	Natural	200
P11071	100 - 1250 µl, (Graduated)	Natural	200



## 59 | Last Drop™, Low Retention Filter Pipette Tips – Racked, PP

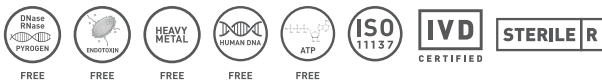
- Racked Last Drop™ Filter Tips are offered in prefilled racks that do not require manual accumulation in empty boxes.
- Polypropylene racks are very robust, sturdy with consistent and thick wall thickness.
- Racks are hinged with transparent lid & base providing excellent view inside the box.
- Racks are stackable. Reusable once empty.



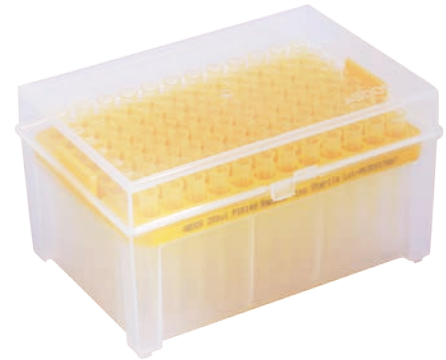
Code	Capacity	Colour	No. / Case
P11060	0.1 – 10 µl (Graduated)	Natural	10 Racks x 96 pcs
P11062	0.1 – 10 µl Extended (Graduated)	Natural	10 Racks x 96 pcs
P11064	1 – 20 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
P11066	1 – 50 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
P11068	1 – 100 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
P11072	1 – 200 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
P11074	1 – 300 µl (Graduated)	Natural	10 Racks x 96 pcs
P11076	100–1000 µl	Natural	10 Racks x 96 pcs
P11078	100 – 1000 µl (XL) (Graduated)	Natural	10 Racks x 96 pcs
P11080	100 – 1250 µl (Graduated)	Natural	10 Racks x 96 pcs



## 60 | Last Drop™, Low Retention Filter Pipette Tips – Sterile Racked, PP



Code	Capacity	Colour	No. / Case
P11061	0.1 – 10 µl (Graduated)	Natural	10 Racks x 96 pcs
P11063	0.1 – 10 µl Extended (Graduated)	Natural	10 Racks x 96 pcs
P11065	1 – 20 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
P11067	1 – 50 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
P11069	1 – 100 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
P11073	1 – 200 µl (Bevelled Graduated)	Natural	10 Racks x 96 pcs
P11075	1 – 300 µl (Graduated)	Natural	10 Racks x 96 pcs
P11077	100–1000 µl	Natural	10 Racks x 96 pcs
P11079	100 – 1000 µl (XL) (Graduated)	Natural	10 Racks x 96 pcs
P11081	100 – 1250 µl (Graduated)	Natural	10 Racks x 96 pcs

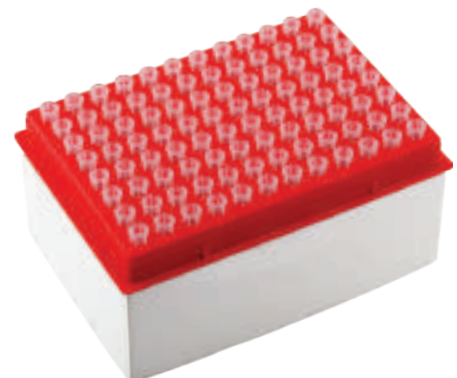


## 61 | Last Drop™, Low Retention Refill Filter Pipette Tips – Sterile, PP

- Refill filter Tips are offered in prefilled tray that can be directly loaded in the box.
- Easy to load and remove into box.
- Saves time and costs of manual accumulation in empty box.
- More Cost effective and economical.



Code	Capacity	Colour	No. / Case
P11082	0.1 – 10 µl (Graduated)	Natural	10 refill pack x 96 pcs
P11083	0.1 – 10 µl Extended (Graduated)	Natural	10 refill pack x 96 pcs
P11084	1 – 20 µl (Graduated)	Natural	10 refill pack x 96 pcs
P11085	1 – 100 µl (Graduated)	Natural	10 refill pack x 96 pcs
P11086	1 – 200 µl (Graduated)	Natural	10 refill pack x 96 pcs
P11087	1 – 300 µl (Graduated)	Natural	10 refill pack x 96 pcs
P11088	100 – 1000 µl	Natural	10 refill pack x 96 pcs
P11089	100 – 1000 µl XL (Graduated)	Natural	10 refill pack x 96 pcs
P11090	100 – 1250 µl (Graduated)	Natural	10 refill pack x 96 pcs



## 62 | Empty Micro Tip Box, PP

- Abdos Micro Tip Boxes 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 spaces are uniformly placed to facilitate easy use in multi channel pipette.
- These boxes are stackable.
- Transparent top cover provides an excellent view of the Micro Tips inside the box.
- Manufactured in high quality polypropylene.
- All Tip Boxes contain 96 Tip holes.
- Can be autoclaved.



Code	Tip Capacity	Places	L x W x H	No. / Case
P20101	0.1 – 10 µl	96	126 x 93 x 70 mm	6
P20102	1 – 200 µl	96	127 x 93 x 70 mm	6
P20104	1 – 300 µl	96	127 x 93 x 77 mm	6
P20103	100 – 1000 µl	96	146 x 99 x 97 mm	6
P20105	100 – 1000 µl (XL) / 1250 µl	96	146 x 99 x 120 mm	6
P20106	100 – 5000 µl	24	125 x 92 x 134 mm	3
P20107	500 – 10000 µl	24	125 x 92 x 172 mm	3



## 63 | Reagent Reservoir, HIPS

- Unique “trough within a trough” maximizes reagent recovery.
- Convenient pour-off spouts on all four corners.
- A wide base provides stability and avoids spills.
- Graduated marks on inside wall.
- Superior design provides stronger sidewalls.
- 100ml reagent reservoir has capacity for extended multi-channel pipetting into microtiter plates.
- This design allows ample clearance for all types of pipettes.

Code	Capacity	No. / Case
PI0501	25 ml	10
PI0503	100 ml	10



# 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	10-100µl	20-200µl	100-1000 µl	0.5 - 10 µl	2-20 µl	10-100µl	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	50-300µl	0.5 - 10 µl	5 - 50 µl	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			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	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						"Nichiry / 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		√		√		√		√				√

Pipettor Brand/ Make			Abdos premium	Abdos premium Plus	ABDOS D. Pipette (Electronic)	Brand Transferpette S	Gilson Pipetman	Eppendorf Research
			Single channel			Single channel		
Abdos Code for Pipette Tips	Abdos Code for Last Drop Pipette Tips	Volume	100-1000µl	100-1000µl	100-1000µl	100-1000µl	100-1000µl	100-1000µl
P10174	P10026	100 - 1000 µl XL	√	√	√	√	√	√
P10175	P10027	100 - 1250 µl	√	√	√	√	√	√

Pipettor Brand/ Make			THERMO (Electronic) Finnpiquette	Thermo Finnpiquette F3	Nichiryo NICHIPET EX	SOCOREX ACURA 825	BIOHIT Proline	ErgoOne Star Lab
			Multi channel	Single channel				
Abdos Code for Pipette Tips	Abdos Code for Last Drop Pipette Tips	Volume	100-1200µl	100-1000µl	100-1000µl	100-1000µl	100-1000µl	100-1000µl
P10174	P10026	100 - 1000 µl XL	√	√	√	√	√	√
P10175	P10027	100 - 1250 µl	√	√	√	√	√	√

# 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 Finnpiquette				Thermo Finnpiquette		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 Axyjet														
			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							✓													✓					

Pipettor Brand/ Make			BRAND		Eppendorf		Biohit Proline plus		Gilson		Thermo		Abdos	
Abdos Code for Filter 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			✓		✓		✓		✓				✓

Pipettor Brand/ Make			Abdos premium	Abdos premium Plus	ABDOS D. Pipette (Electronic)	Brand Transferpette S	Gilson Pipetman	Eppendorf Research
Abdos Code for Filter Pipette Tips	Abdos Code for Last Drop Filter Pipette Tips	Volume	Single channel			Single channel		
			100-1000µl	100-1000µl	100-1000µl	100-1000µl	100-1000µl	100-1000µl
P11015	-	100 - 1000 µl XL	✓	✓	✓	✓	✓	✓
P11016	-	100 - 1250 µl	✓	✓	✓	✓	✓	✓

Pipettor Brand/ Make			THERMO (Electronic) Finnpiquette	Thermo Finnpiquette F3	Nichiryo NICHIPET EX	SOCOREX ACURA 825	BIOHIT Proline	ErgoOne Star Lab
Abdos Code for Filter Pipette Tips	Abdos Code for Last Drop Filter Pipette Tips	Volume	Multi channel	Single channel				
			100-1200µl	100-1000µl	100-1000µl	100-1000µl	100-1000µl	100-1000µl
P11015	P11057	100 - 1000 µl XL	✓	✓	✓	✓	✓	✓
P11016	P11058	100 - 1250 µl	✓	✓	✓	✓	✓	✓

Pipettor Brand/ Make			BRAND		Eppendorf		Biohit Proline plus		Gilson		Thermo		Abdos	
Abdos Code for Filter 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
P10170	1 - 5 ml				✓		✓		✓				✓	
P10171	1 - 10 ml			✓		✓		✓		✓				✓

Note: Variants of all tips are compatible with the pipette's brand mentioned in the above list.

Eg . Type : Tips - Bulk in Resealable Bags

Variants : Pipette Tips, (P10115, P10137, P10129, P10130, P10101, P10105, P10138, P10102, P10106, P10174, P10175)  
 Last Drop™ Low Retention Pipette Tips (P10001, P10002, P10003, P10004, P10005, P10006)  
 Filter Pipette Tips (P11001, P11002, P11003, P11004, P11005, P11006, P11007, P11015, P11016)  
 Last Drop™ Low Retention Filter Pipette Tips (P11050, P11051, P11052, P11053, P11054, P11055, P11056)

Followed with other variants & Types: Tips - Individually wrapped, Racked, Racked Sterile & Refill pack.

## 64 | Stepmate Stepper

- 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 vapour pressure.
- It provides up to 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.



Stepmate Stepper		
Code	Capacity	No. / Case
E11171	0.5 - 50 ml	1

Suitable Tips & Adapter For Stepmate Stepper			
Code	Capacity	Colour	No. / Case
E11172D	0.5 ml	Natural	5
E11173D	1.25 ml	Natural	5
E11174D	2.5 ml	Natural	5
E11175D	5 ml	Natural	5
E11176D	12.5 ml	Natural	5
E11177D	25 ml	Natural	2 pcs piston + 1 pcs adaptor
E11178D	50 ml	Natural	2 pcs piston + 1 pcs adaptor
E11179D	25 & 50 Adaptor	-	10

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

Dial Setting	01	02	03	04	05
Number of Steps	48	23	15	11	8

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





## 65 | Supreme Bottle Top Dispenser

- Supreme is a 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.
- Fully Autoclavable.

### 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



Code	Capacity	Increment	Accuracy	CV	No. / Case
E11701	0.25 – 2.5 ml	0.05 ml	± 0.6 % ± 0.015 ml	± 0.2 % ± 0.005 ml	1
E11702	0.50 – 5 ml	0.1 ml	± 0.6 % ± 0.030 ml	± 0.2 % ± 0.010 ml	1
E11703	1 – 10 ml	0.2 ml	± 0.6 % ± 0.060 ml	± 0.2 % ± 0.020 ml	1
E11704	2.5 – 30 ml	0.5 ml	± 0.6 % ± 0.180 ml	± 0.2 % ± 0.060 ml	1
E11705	5 – 60 ml	1 ml	± 0.6 % ± 0.360 ml	± 0.2 % ± 0.120 ml	1
E11706	10 – 100 ml	2 ml	± 0.6 % ± 0.600 ml	± 0.2 % ± 0.200 ml	1



## 66 | Supreme Plus Bottle Top Dispenser

- 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 valve for redirecting the liquid into the bottle for bubble free dispensing without any loss of reagent.
- Supreme duet has a smooth and soft plunger for easy working in difficult laboratory conditions.
- Fully Autoclavable.

### 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



Code	Capacity	Increment	Accuracy	CV	No. / Case
E11711	0.25 – 2.5 ml	0.05 ml	± 0.6 % ± 0.015 ml	± 0.2 % ± 0.005 ml	1
E11712	0.50 – 5 ml	0.1 ml	± 0.6 % ± 0.030 ml	± 0.2 % ± 0.010 ml	1
E11713	1 – 10 ml	0.2 ml	± 0.6 % ± 0.060 ml	± 0.2 % ± 0.020 ml	1
E11714	2.5 – 30 ml	0.5 ml	± 0.6 % ± 0.180 ml	± 0.2 % ± 0.060 ml	1
E11715	5 – 60 ml	1 ml	± 0.6 % ± 0.360 ml	± 0.2 % ± 0.120 ml	1
E11716	10 – 100 ml	2 ml	± 0.6 % ± 0.600 ml	± 0.2 % ± 0.200 ml	1



## 67 | Supreme Duet Bottle Top Dispenser

- 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 valve 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.
- Fully Autoclavable.

### 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



Code	Capacity	Increment	Accuracy	CV	No. / Case
E11731	0.25 – 2.5 ml	0.05 ml	± 0.6 % ± 0.015 ml	± 0.2 % ± 0.005 ml	1
E11732	0.50 – 5 ml	0.1 ml	± 0.6 % ± 0.030 ml	± 0.2 % ± 0.010 ml	1
E11733	1 – 10 ml	0.2 ml	± 0.6 % ± 0.060 ml	± 0.2 % ± 0.020 ml	1
E11734	2.5 – 30 ml	0.5 ml	± 0.6 % ± 0.180 ml	± 0.2 % ± 0.060 ml	1
E11735	5 – 60 ml	1 ml	± 0.6 % ± 0.360 ml	± 0.2 % ± 0.120 ml	1
E11736	10 – 100 ml	2 ml	± 0.6 % ± 0.600 ml	± 0.2 % ± 0.200 ml	1



## 68 | Serological Pipettes Sterile, PS

- ABDOS serological pipettes are designed for accurate and rapid fluid dispensing.
- ABDOS sterile serological pipettes are pyrogen free and PE filter plugged for a variety of liquid handling applications. The sharp, black, highly legible permanent graduations prevent ambiguity and guarantee precise reading and accurate dispensing to  $\pm 2\%$ .
- Made of transparent medical grade polystyrene, sterilized by gamma irradiation.
- ABDOS serological pipettes are tested for endotoxins (0.005 Eu/ml), cytotoxicity (ISO 10993-5) and are guaranteed non-haemolytic.
- Ideal in Cell culture & tissue culture applications.
- The reverse graduations of ABDOS disposable serological pipettes show volume removed or remaining on all pipettes larger than 1ml. Moreover, the generous negative graduations provide additional pipetting volume.
- ABDOS sterile serological pipettes have an effective filter barrier to prevent overflow of liquid into pipette. Designed to fit with available motorized pipette controllers.



STERILE R



Code	P10601	P10602	P10603	P10604	P10605	P10606
Capacity	1 ml	2 ml	5 ml	10 ml	25 ml	50 ml
Height	262 mm	280 mm	333 mm	354 mm	312 mm	360 mm
No./Case	500	400	200	200	200	100

## 69 | Fast Release Pipette Pump

- Abdos fast release pipette pump ensures quick and accurate operation.
- This 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 disassemble for cleaning.



Code	Capacity	No. / Case
E11219	2 ml	4
E11220	10 ml	4
E11221	25 ml	4

## 70 | Handypette Pipette Aid

- 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 stable fingers for secure hold.
- 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.
- Resistant to acids, alkalis.
- Easily disassemble for cleaning.



Code	Capacity	No. / Case
E11222	2 ml	4
E11218	10 ml	4
E11216	25 ml	4

## 71 | Rave Pipette Controller, PP

- Abdos Rave Pipette Controller is robust, lightweight 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 has autoclavable silicone pipette holder.
- Abdos Rave Pipette Controller is supplied with integral and replaceable 0.3 um filter. The in-line filter prevents contamination.
- Precise Pipetting control is possible in Abdos Rave Pipette Controller.



Rave Pipette Controller		
Code	Product	No. / Case
E11113	Rave Pipette Controller	1

Spare Filters		
Code	Product	No. / Case
E11119	Spare 3.00 um Filter	1

## 72 | Rave Pipette Filler

- 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 & 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.

### 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



Rave Pipette Filler		
Code	Product	No. / Case
E1114	Rave Plus Pipette Filler	1
E11120	Rave Eco Pipette Filler	1

Rave Pipette Filler		
Code	Product	No. / Case
E11116	Spare 0.45 µm Filter	1
E11117	Spare Lithium - ion	1
E11118	Spare Adapter	1



## 73 | Pipette Stand Vertical, PP

- These Polypropylene racks can hold upto 28 glass or plastic pipettes 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 discs to hold the pipette and give it stability. Both Discs can be moved in upward and downward direction to accommodate various lengths of pipette.
- Can be autoclaved.



Code	Places	D x H	No. / Case
P70205	28	232 x 381 mm	1

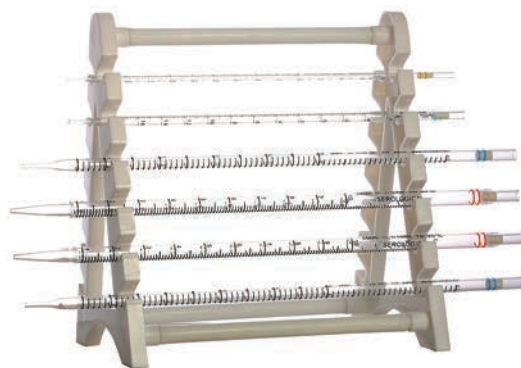


## 74 | Pipette Stand Horizontal, PP

- These Polypropylene racks can hold upto 12 glass or plastic pipettes in horizontal position.
- The rack consists of three polypropylene coated metal rods to provide stability and strength to rack.
- Can be Autoclaved.
- These Racks are available in white colour.
- These racks can be easily assembled or disassembled to save space.



Code	Places	No. / Case
P70204	12	6



## 75 | Pipette Storage Rack with Magnet, ABS

- These racks help to protect and organize glass and plastic pipettes.
- Angled four shelved compartments keep 0.1 to 50 mL pipettes or cans within easy reach while preventing damage and clutter.
- These have cut-out viewing window and come with two removable attachments that hold pipette bulbs, fillers, and pumps.
- These unique innovative magnetized racks have strong magnets on both sides and mount securely to most metal surfaces.

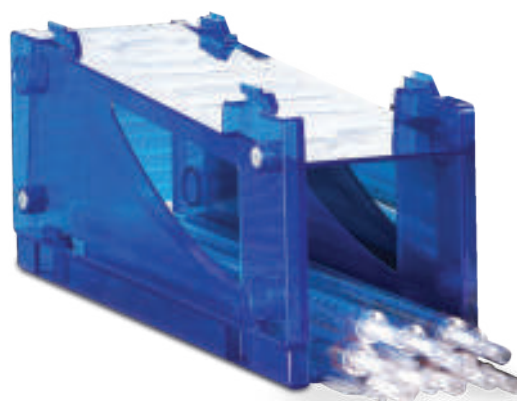
Code	Places	L x W x H	No. / Case
P70202	Store 1 - 50 ml pipette or cans	291 x 88 x 401 mm	1



## 76 | Pipette Storage Rack, ABS

- These racks can be assembled together horizontally or vertically to build the desired configuration, or used as individual holders, using sections.
- Angle shelve design makes these racks compatible to use for storing 0.1 to 50 ml of Serological pipettes.
- Can be used bench-top or can be connected to most metal surfaces.

Code	Size (W x H x D)	Compatible	No. / Case
P10620	301 x 100 x 127.5mm	0.1 ml to 50 ml	3



## 77 | Pasteur Pipettes, LDPE

- Excellent chemical stability.
- Suitable for drawing, transferring and blending various volumes of liquid.
- Transparent with clear graduation markings for easy liquid level observation.
- Manufactured in ISO 8 grade clean room.
- No additive contamination.
- Pipettes can be twisted and contorted for use with micro-vessels & oddly shaped containers.
- High precision and good repeatability.
- The individually packed pipettes are sterilized by Gama radiation.



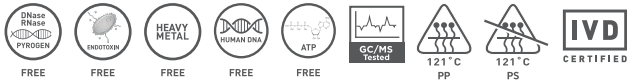
Individually wrapped Pasteur Pipettes



Code	P31207	P31208	P31201	P31202	P31209	P31210	P31205	P31206
Capacity	0.4 ml	0.4 ml Sterile, Individually wrapped	1.0 ml	1.0 ml Sterile, Individually wrapped	2.0 ml	2.0 ml Sterile, Individually wrapped	3.0 ml	3.0 ml Sterile, Individually wrapped
Height	131 mm	131 mm	154 mm	154 mm	152 mm	152 mm	154 mm	154 mm
No./Case	500	500	500	450	500	450	500	450

## 78 | RIA Vial & Cap / Test Tube & Cap

- 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 withstand 3000\*g RCF during centrifugation while the transparent polystyrene tubes can withstand 1400\*g 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.



RIA Vial & Plastic Test Tube				
Code	Φ x h	Material	Capacity	No. / Case
PI0301	12 x 75 mm	PP	5 ml	500
PI0303	12 x 75 mm	PS	5 ml	500
PI0305	12 X 40 mm	PP	2.5 ml	500
PI0306	12 X 40 mm	PS	2.5 ml	500
PI0308	13 X 100 mm	PP	8 ml	500
PI0309	13 X 100 mm	PS	8 ml	500
PI0310	16 X 100 mm	PP	10 ml	500
PI0311	16 X 100 mm	PS	10 ml	500

RIA Vial Cap & Plastic Test Tube Cap			
Code	Φ	Material	No. / Case
PI0304	12 mm	HDPE	500
PI0307	12 mm	PP	500
PI0302	12 mm	LDPE	500
PI0312	13 mm	HDPE	1000
PI0313	16 mm	HDPE	1000

Amber RIA Vial				
Code	Φ x h	Material	Capacity	No. / Case
PI0301A	12 x 75 mm	PP Amber	5 ml	500
PI0301A1	12 x 75 mm	PP Transparent Amber	5 ml	500
PI0305A	12 x 40 mm	PP Amber	2.5 ml	500
PI0305A1	12 x 40 mm	PP Transparent Amber	2.5 ml	500

Amber RIA Vial Cap, HDPE			
Code	Φ	Material	No. / Case
PI0304A	12 mm	HDPE Amber	500
PI0304A1	12 mm	HDPE Transparent Amber	500





## 79 | Sample Container, PP/HDPE

- Ultra clear polypropylene container with polyethylene leak proof screw cap.
- Frosted portion for easy writing.
- Clear and easy to read graduations.
- Sterile container is individually packed in polyethylene pouch.
- Clean room ISO class 8.



Code	Capacity	Colours	Subdivision	Height	No. / Case
P40101	60 ml	Blue, Red & White	10 ml	55 mm	400
P40102	60 ml Sterile, Individually wrapped	Blue, Red & White	10 ml	55 mm	350
P40105	60 ml (Spoon Included)	Blue, Red & White	10 ml	55 mm	400
P40106	60 ml, Sterile Individually Wrapped (Spoon Included)	Blue, Red & White	10 ml	55 mm	350
P40103	120 ml	Blue, Red & White	20 ml	76 mm	200
P40104	120 ml Sterile, Individually wrapped	Blue, Red & White	20 ml	76 mm	200
P40112	200 ml	Blue, Red & White	20 ml	120 mm	150
P40113	200 ml Sterile, Individually wrapped	Blue, Red & White	20 ml	120 mm	100

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



### VALUE ADDITIONS

50 ml Sample Container can withstand up to 95 kPa of pressure, best suitable for vacuum transportation lift for samples at Hospitals.



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

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

Sterile containers are individually wrapped and has been validated according to ISO 11137 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 with 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 8 by high-end Injection Moulding using high precision moulds which ensure smooth and symmetrical End product.

#CommittedtotheEarth



# 04 MICROBIOLOGY

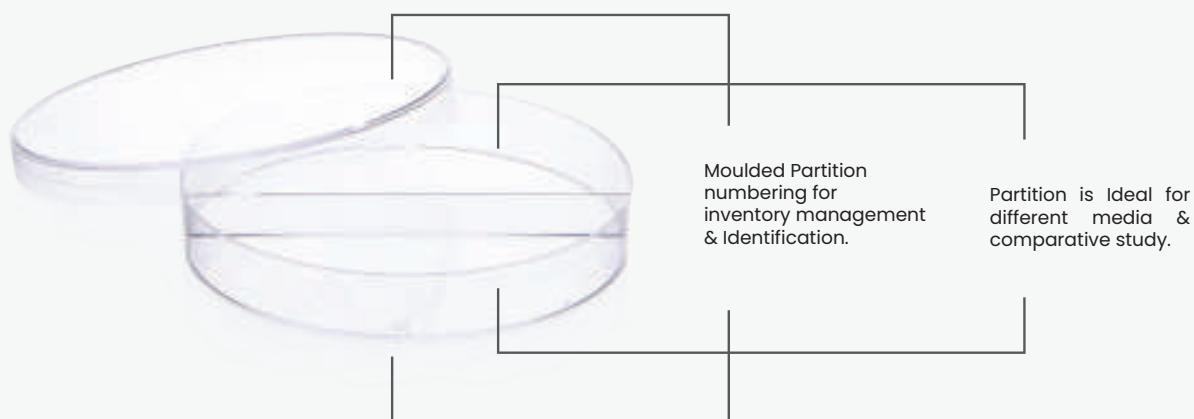
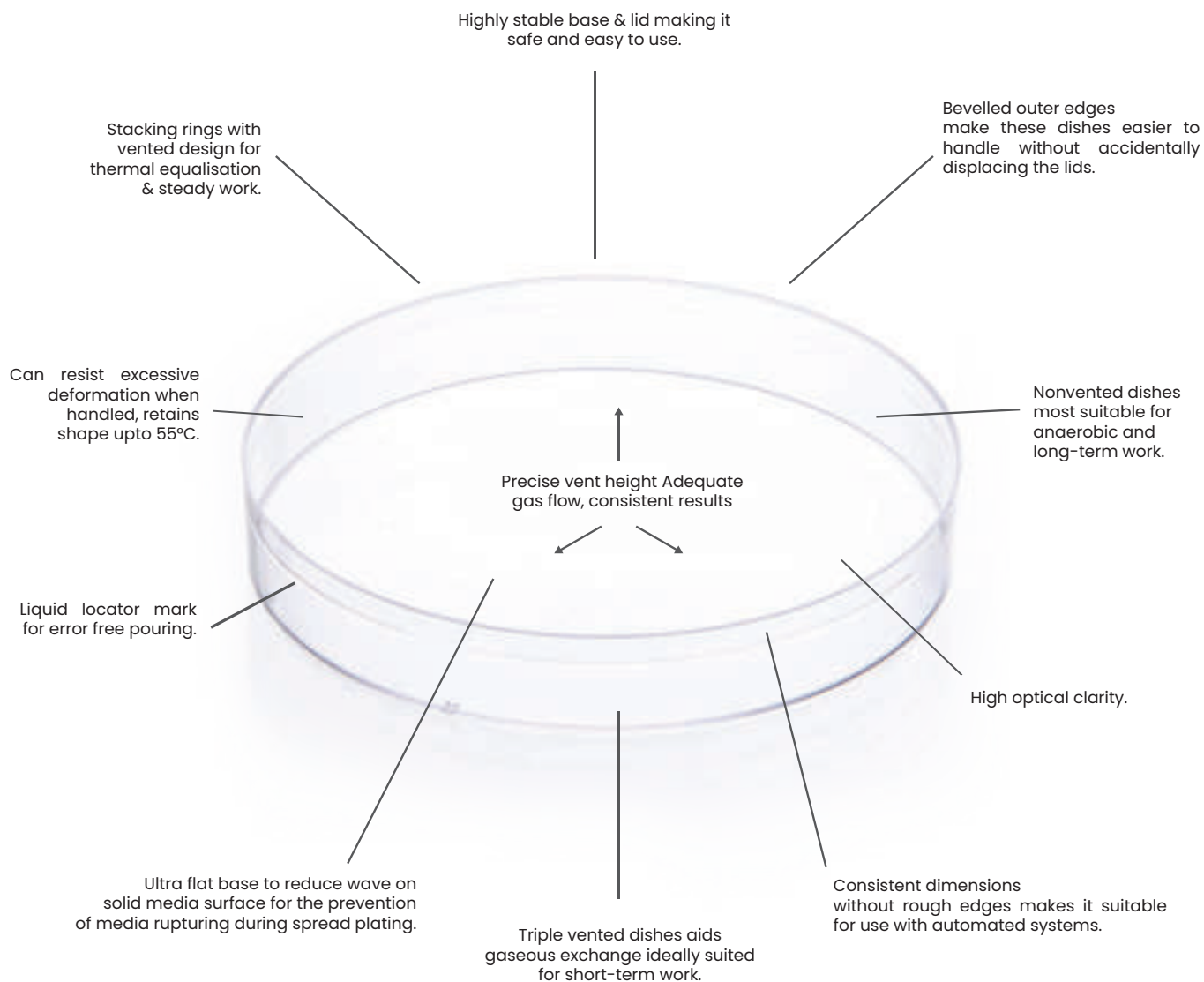
PETRI DISH PS: 60, 90 & 140 MM

HOMOGENIZERS

SOFT INOCULATION LOOPS

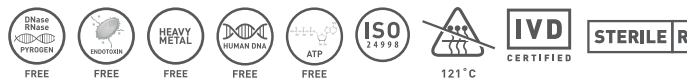
CELL SPREADERS & MORE

# Petri Dish Features



## 80 | Petri Dish, PS

- Abdos high quality disposable Petri Dishes are suitable for all microbiological applications manufactured as per ISO 24998 '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.
- 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 & anaerobic application.
- Shallow dish design allows for maximum use of incubator space.
- Easy to stack.
- Abdos Petri Dishes retain their shape upto 55°C.
- Aseptic Dishes are manufactured in clean room under controlled low bio-burden conditions for best performance in all applications.
- Abdos Petri Dishes are also available in two & three compartments that enable parallel testing of single sample using different agar, solvents and reagents.
- Sterile Plates have been validated according to ISO 11137 for SAL 10<sup>-6</sup>



### Petri Dish – Aseptic, PS

Code	Diameter	Height	Compartment	Vented	Packing	No. / case
PI0931	60 mm	14.20 mm	No	0 Vent	Sleeve of 20	1400
PI0932	60 mm	14.20 mm	No	3 Vent	Sleeve of 20	1400
PI0901	90 mm	15.80 mm	No	3 Vent	Sleeve of 20	480
PI0902	90 mm	15.80 mm	No	3 Vent	Individual Wrapped	380
PI0903	90 mm	15.80 mm	No	0 Vent	Sleeve of 20	480
PI0904	90 mm	15.80 mm	No	0 Vent	Individual Wrapped	380
PI0933	140 mm	17.50 mm	No	0 Vent	Sleeve of 5	180
PI0934	140 mm	17.50 mm	No	3 Vent	Sleeve of 5	180

### Petri Dish – Gamma Radiated Sterile, PS

Code	Diameter	Height	Compartment	Vented	Packing	No. / case
PI0935	60 mm	14.20 mm	No	0 Vent	Sleeve of 20	1400
PI0936	60 mm	14.20 mm	No	3 Vent	Sleeve of 20	1400
PI0905	90 mm	15.80 mm	No	3 Vent	Sleeve of 20	480
PI0906	90 mm	15.80 mm	No	3 Vent	Sleeve of 10	480
PI0907	90 mm	15.80 mm	No	3 Vent	Individual Wrapped	380
PI0908	90 mm	15.80 mm	No	0 Vent	Sleeve of 20	480
PI0909	90 mm	15.80 mm	No	0 Vent	Sleeve of 10	480
PI0910	90 mm	15.80 mm	No	0 Vent	Individual Wrapped	380
PI0937	140 mm	17.50 mm	No	0 Vent	Sleeve of 5	180
PI0938	140 mm	17.50 mm	No	3 Vent	Sleeve of 5	180

### Petri Dish – Gamma Radiated Sterile, Double Wrapped, PS

Code	Diameter	Height	Compartment	Vented	Packing	No. / case
PI0928	90 mm	15.80 mm	No	0 Vent	Sleeve of 18	432
PI0927	90 mm	15.80 mm	No	0 Vent	Sleeve of 8	384
PI0939	90 mm	15.80 mm	No	3 Vent	Sleeve of 18	432
PI0940	90 mm	15.80 mm	No	3 Vent	Sleeve of 8	384

## 2 Compartment Petri Dish – Aseptic, PS

Code	Diameter	Height	Compartment	Vented	Packing	No. / case
PI0911	90 mm	15.80 mm	2 Compartment	3 Vent	Sleeve of 20	480
PI0912	90 mm	15.80 mm	2 Compartment	3 Vent	Individual Wrapped	380
PI0913	90 mm	15.80 mm	2 Compartment	0 Vent	Sleeve of 20	480
PI0914	90 mm	15.80 mm	2 Compartment	0 Vent	Individual Wrapped	380

## 2 Compartment Petri Dish – Gamma Radiated Sterile, PS

Code	Diameter	Height	Compartment	Vented	Packing	No. / case
PI0915	90 mm	15.80 mm	2 Compartment	3 Vent	Sleeve of 20	480
PI0916	90 mm	15.80 mm	2 Compartment	3 Vent	Individual Wrapped	380
PI0917	90 mm	15.80 mm	2 Compartment	0 Vent	Sleeve of 20	480
PI0918	90 mm	15.80 mm	2 Compartment	0 Vent	Individual Wrapped	380



## 3 Compartment Petri Dish – Aseptic, PS

Code	Diameter	Height	Compartment	Vented	Packing	No. / case
PI0919	90 mm	15.80 mm	3 Compartment	3 Vent	Sleeve of 20	480
PI0920	90 mm	15.80 mm	3 Compartment	3 Vent	Individual Wrapped	380
PI0921	90 mm	15.80 mm	3 Compartment	0 Vent	Sleeve of 20	480
PI0922	90 mm	15.80 mm	3 Compartment	0 Vent	Individual Wrapped	380

## 3 Compartment Petri Dish – Gamma Radiated Sterile, PS

Code	Diameter	Height	Compartment	Vented	Packing	No. / case
PI0923	90 mm	15.80 mm	3 Compartment	3 Vent	Sleeve of 20	480
PI0924	90 mm	15.80 mm	3 Compartment	3 Vent	Individual Wrapped	380
PI0925	90 mm	15.80 mm	3 Compartment	0 Vent	Sleeve of 20	480
PI0926	90 mm	15.80 mm	3 Compartment	0 Vent	Individual Wrapped	380



## 81 | Petri Dish Stand, ACRYLIC

- The simple design can hold and secure glass and plastic petri-dishes.
- This stand makes transport safe and easier.
- Clear racks give the visibility to check culture during incubation.



Code	Places	Size (W x H x D)	Compatible Petridish	No. / Case
PI0970	28	213 x 252 x 112mm	90mm	1

## 82 | Soft Inoculation Loop, ABS

- Smooth surface provides uniform and gentle streaking without damaging the gel surface.
- Polygonal shaft improves grip, assists orientation and makes operation easy.
- Available in individual wrapped pack and zip lock sleeve that eliminates the risk of contamination.
- Sterile loops have been validated according to ISO 11137 for SAL 10<sup>-6</sup>



**STERILE R**

Code	Capacity	Colour	Length	Packing	No. / Case
PI0985	1 µl loop + Incorporated Needle	White	200 mm	Sleeve of 20	2000
PI0986	1 µl loop + Incorporated Needle	White	200 mm	Individually Wrapped	500
PI0987	10 µl loop + Incorporated Needle	Blue	200 mm	Sleeve of 20	2000
PI0988	10 µl loop + Incorporated Needle	Blue	200 mm	Individually Wrapped	500



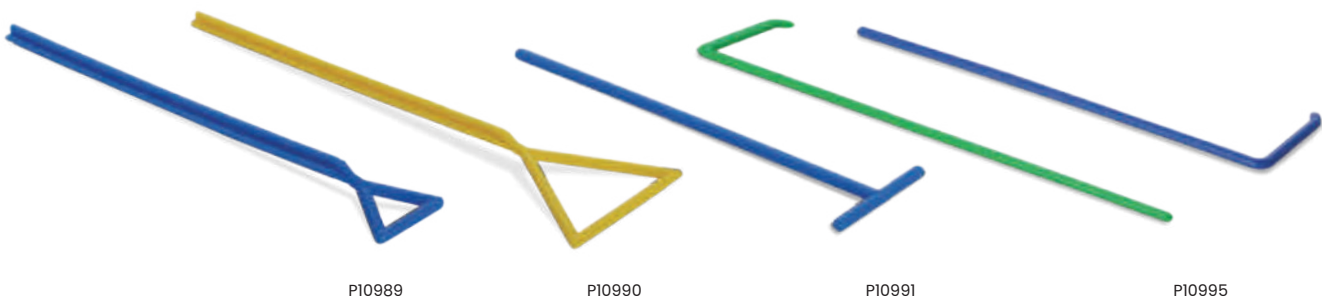
## 83 | Cell Spreader Gamma Radiated Sterile, PP

- Cell spreaders are designed to spread and disperse liquid onto the surface of an agar or any media plate without gouging or cutting the medium.
- Available in Triangular, T-shaped & L-shaped.
- Sterile Cell Spreader has been validated according to ISO 11137 for SAL 10<sup>-6</sup>



**STERILE R**

Code	Shape	Length	Blade Width	Colour	Packing	No. / Case
PI0989	Triangle Shaped	215 mm	30 mm	Blue	Individually Wrapped	100
PI0990	Triangle Shaped	240 mm	60 mm	Yellow	Individually Wrapped	100
PI0991	T- Shaped	140 mm	35 mm	Blue	Individually Wrapped	400
PI0995	L - Shaped	145 mm	37.5 mm	Green	Individually Wrapped	100
PI0996	L - Shaped	145 mm	37.5 mm	Green	Sleeve of 10	500



PI0989

PI0990

PI0991

PI0995

## 84 | Swirlex - Digital Handheld Homogenizer

- ABDOS Swirlex-Digital Handheld Homogenizer is a powerful handheld homogenizer designed to rapidly homogenize, disperse and disintegrate biological samples in 10–30 seconds with adjustable speed ranging from 8,000 rpm up to 30,000 rpm.
- The homogenizer is ideal to use with samples from 0.5ml to 250ml with three types of generator probes available for different sample volume range.
- It is lightweight, can be held with one hand and also mounted to a stand for fatigue-free and longer operation. Complete homogenization of tissues (muscle, liver, breast tissue, etc.) is generally achieved in a few seconds.
- Autoclavable generator shaft is made up of 316L stainless steel Interchangeable generator probes that are easily disassembled for clean-up.
- Optional H-type stand with adjustable height and angle available for more convenient and lengthier operation.

Swirlex-Digital Hand Held Homogenizer			
Code	Product	Volume Range	No. / Case
E12410	Swirlex-Digital Hand Held Homogenizer with Dispersing shaft Supporting for volume 0.1-50 ml & Support Stand	0.1-50 ml	1
E12420	Swirlex-Digital Hand Held Homogenizer with Dispersing shaft Supporting for volume 1-250 ml & Support Stand	1-250 ml	1

Spare Accessories			
Code	Product	Volume Range	No. / Case
E12411	Dispersing Shaft - Length-90mm, process volume- 0.1-50 ml	5 mm	1
E12412	Dispersing Shaft - Length-160mm, process volume- 0.3-50 ml	7 mm	1
E12413	Dispersing Shaft - Length-150mm, process volume-1-250 ml	10 mm	1
E12414	Dispersing Shaft Length-170mm;process volume-2-250 ml	14 mm	1
E12415	Support Stand	-	1

### SPECIFICATIONS :

Voltage	220-240 V
Frequency	50-60 Hz
Motor Type	Universal Motor
Motor Type	AC Carbon Brush Motor
Speed range	8000-30000 rpm
Max. Circum Speed	6.3-14 m/sec
Speed Control Dial Knob	6 Stage
Working Volume (ml, H <sub>2</sub> O)	0.1-50 ml (5mm Dispersing Shaft-E12411) 1-250 ml (10mm Dispersing Shaft-E12413)
Maximum Viscosity	5,000 mPas
Material of Dispersing Shaft	SS 316L Stainless steel, PTFE
Weight	0.6 kg
Dimension (L x W x H)	46 x 55 x 230 mm
Noise	72 dB
Permissible ambient Temperature & Humidity	5-40°C
Permissible relative humidity	80%
Protection Class	IP20



## 85 | Swirlex - Flapping Homogenizer (Stomaker)

- Swirlex-Flapping Homogenizer (Stomaker) is a new generation lab blender, silent, easy-to-use & has a new design, with great new features, along with the silent blending. It is adapted to all kinds of applications and with a guarantee of optimal extraction, it is a great tool for lab analyses avoiding all risk of cross-contamination and damage.
- It can be used to extract bacteria from solid samples as well as homogenization of animal tissues, cosmetics, and biological samples. It is convenient, very quick, mild, accurate and also provides good repeatability.
- To extract bacteria from solid samples, put the original samples and the diluents into a sterile bag. Put the bag then into the homogenizer, through the flapping of the paddles. The material inside the bag can rapidly reach a homogenized state by the pressure, shaking, and vibration inside.
- In order to get a guaranteed uniformity of the effective extraction of the bacteria inside and on the surface of the solid samples, make sure to include all the materials in the sterile bag to the homogenizer. Then the homogenized sample can be used for analysis, the sterile bag avoids the cross-contamination.
- The main advantage of Swirlex -flapping homogenizer is that it is convenient, very quick, mild, accurate and also provides good repeatability. Samples used for the extraction will not be contaminated, damaged, heated, and no sterilization, as well as no container is needed, thus no container cleaning process either.

Swirlex - STOMAKER - Flapping Homogenizer					
Code	Product	Flapping Speed	Exterior Size	Interior Size	No. / Case
EI2430	Stomaker, Stainless Steel Door	Adjustable between 20-600 Stokes/min (10-300rpm/min)	45 x 21 x 24 cm	10 x 19 x 22 cm	1
EI2431	Stomaker Plus, Stainless Steel Door with Observation Window	Adjustable between 20-600 Stokes/min (10-300rpm/min)	45 x 21 x 24 cm	10 x 19 x 22 cm	1

Spare Accessories			
Code	Product	Capacity	No. of bag / Box
EI2432	Sterilization Bag	80 ml	1500 (25 pcs per pack, 60 packs per case)
EI2433	Sterilization Bag	400 ml	500 (25 pcs per pack, 20 packs per case)
EI2435	Sterilization Bag with filter on one side	400 ml	500 (25 pcs per pack, 20 packs per case)
EI2436	Sterilization Bag with overall filter	400 ml	500 (25 pcs per pack, 20 packs per case)
EI2437	Clip for Sterilization Bag	-	1

SPECIFICATIONS :	STOMAKER	STOMAKER PLUS
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Door Design	Stainless Steel Door	Stainless Steel Door with observation window
Capacity Range	50-400 mL	50-400 mL
Flapping Speed	Adjustable between 20-600 Stokes/min(10-300rpm/min)	Adjustable between 20-600 Stokes/min(10-300rpm/min)
Exterior Size (W x D x H)	45 x 21 x 24 cm	45 x 21 x 24 cm
Interior Size (W x D x H)	10 x 19 x 22 cm	10 x 19 x 22 cm







# 05 CELL CULTURE

CELL CULTURE FLASKS, PS

TISSUE CULTURE TREATED PLATES, PS

CELL CULTURE DISHES, PS

BIO REACTION TUBES, PP

ROLLER, MEDIA & BIOFILL BOTTLES

## 86 | Cell Culture Flasks, PS

- Abdos Tissue culture treated plates are made from the highest quality of virgin polystyrene.
- Culture Flasks have been treated with vacuum plasma to assure 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  $\mu\text{m}$ , hydrophobic filter ensure gas exchange without contamination.
- Sterilized by E-beam, Sterile culture flask has been validated according to ISO 11137 for SAL  $10^{-6}$



Code	Capacity	Cap Style	Cell Growth Area	Recommended Medium Volume	No. / Pack	No. / Case
P21010	50 ml	Sealed Cap	25 cm <sup>2</sup>	5 ml - 7.5 ml	10	200
P21011	50 ml	Vent Cap	25 cm <sup>2</sup>	5 ml - 7.5 ml	10	200
P21012	250 ml	Sealed Cap	75 cm <sup>2</sup>	15 ml - 22.5 ml	5	100
P21013	250 ml	Vent Cap	75 cm <sup>2</sup>	15 ml - 22.5 ml	5	100
P21014	750 ml	Sealed Cap	175 cm <sup>2</sup>	35 ml - 52.5 ml	5	40
P21015	750 ml	Vent Cap	175 cm <sup>2</sup>	35 ml - 52.5 ml	5	40
P21016	950 ml	Sealed Cap	225 cm <sup>2</sup>	45 ml - 67.5 ml	5	25
P21017	950 ml	Vent Cap	225 cm <sup>2</sup>	45 ml - 67.5 ml	5	25



Both vent and plug seal caps are available

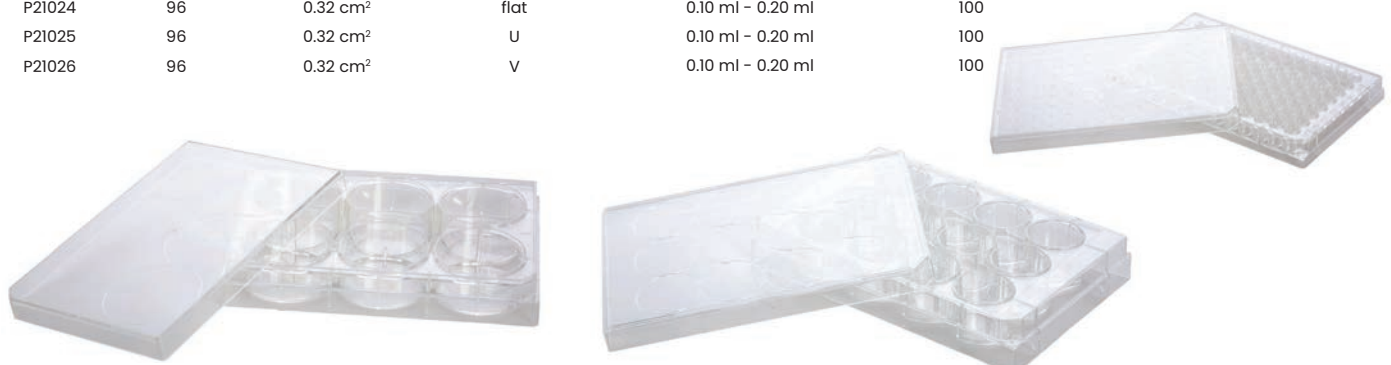


## 87 | Tissue Culture Treated Plates, PS

- Abdos Tissue culture treated plates are made from highest quality of virgin polystyrene.
- Plates are designed with low profile & low-evaporation rate ensuring no loss of samples.
- Vital gaps on the bottom corners of each plate eliminates scraping of the microscopic lens.
- Plates have been treated with vacuum plasma to assure uniform growth.
- Easy to peel-open and individually wrapped blister pack with lot number for traceability.
- Sterilized by E-beam, Sterile plates have been validated according to ISO 11137 for SAL  $10^{-6}$



Code	No. of well	Cell Growth Area	Bottom shape	Recommended Medium Volume	No. / Case
P21020	6	9.5 cm <sup>2</sup>	flat	1.90 ml - 2.90 ml	50
P21021	12	3.6 cm <sup>2</sup>	flat	0.76 ml - 1.14 ml	50
P21022	24	1.9 cm <sup>2</sup>	flat	0.38 ml - 0.57 ml	50
P21023	48	0.88 cm <sup>2</sup>	flat	0.19 ml - 0.28 ml	50
P21024	96	0.32 cm <sup>2</sup>	flat	0.10 ml - 0.20 ml	100
P21025	96	0.32 cm <sup>2</sup>	U	0.10 ml - 0.20 ml	100
P21026	96	0.32 cm <sup>2</sup>	V	0.10 ml - 0.20 ml	100



## 88 | Cell Culture Dish, PS

- Abdos Tissue culture treated plates are made from highest quality of virgin polystyrene.
- Culture dishes are ideal for all types of culturing where microscopic observation is required.
- Dishes have been treated with vacuum plasma to assure uniform growth.
- Flat high clarity polysterene surface for distortion-free observation.
- Sterilized by E-beam, Sterile culture dish has been validated according to ISO 11137 for SAL 10<sup>-6</sup>



Code	Diameter	Height	Cell Growth Area	Recommended Medium Volume	No. / Pack	No. / Case
P21030	35 mm	9 mm	9 cm <sup>2</sup>	1.80 ml - 2.70 ml	20	500
P21031	60 mm	12 mm	21 cm <sup>2</sup>	4.20 ml - 6.30 ml	20	500
P21032	100 mm	17.7 mm	55 cm <sup>2</sup>	11 ml - 16.50 ml	20	300
P21033	150 mm	23.1 mm	152 cm <sup>2</sup>	30.40 ml - 45.60 ml	5	100

## 89 | Cell Scraper, PP/HIPS

- Abdos Cell Scrapers blades are made for HIPS and handle is made of PP.
- Specially designed with free rotating blade to turn as per required direction.
- Sterilized by E-beam, Sterile cell scrapers have been validated according to ISO 11137 for SAL 10<sup>-6</sup>



### APPLICATION

P21040 - T-25/ T-75 Cell Culture flasks, 60 mm cell culture dish

P21041 - T-75/ T-175/ T-225 Cell Culture flasks, 150 mm cell culture dish

Code	Length	Blade Width	No. / Case
P21040	220 mm	13 mm	100
P21041	280 mm	20 mm	100



## 90 | Cell Strainers

- ABDOS Cell strainers are manufactured from a strong medical grade nylon mesh with fine and even spaced pores used for isolating primary cells to suffice tissue culture technique for obtaining uniform single cell suspension from tissues.
- These strainers are available in 3 mesh sizes : 40 µm, 70 µm and 100 µm with 3 different color codings for easy identification.
- The frame of strainer is made of virgin Polypropylene with extended lip for easy handling.
- These strainers provide ideal fitment with ABDOS 50 ml Centrifuge tubes.
- Sterilized by Gamma irradiation, Cell Strainers have been validated according to ISO 11137 for SAL 10<sup>-6</sup>



Code	Pore Size	Colour	No. / Case
P21050	40 µm	Blue	50
P21051	70 µm	White	50
P21052	100 µm	Yellow	50



## 91 | Roller Bottles, PS

- ABDOS Roller bottles are made from the highest quality Polystyrene suitable for high yield of cell growth and multiplication.
- These bottles are available in 3 volumes of 1000ml, 2000ml, 5000ml with wide cell growth area of 490cm<sup>2</sup>, 850cm<sup>2</sup>, 1900cm<sup>2</sup> for adhesions and huge growth volume for cell suspension.
- These bottles are Designed with large knurls on the cap for easy grip and to prevent slip during process.
- These bottles have silk-printed graduation for easy identification.
- Suitable for all the general instruments and automation used in tissue/ cell culture technique.
- Sterilized by Gamma irradiation, sterile roller bottles have been validated according to ISO 11137 for SAL 10<sup>-6</sup>



Code	Capacity	Cap Style	Cell Growth Area	Recommended Medium Volume	Surface treated	No. / Case
P21060	1000 ml	Sealed	490 cm <sup>2</sup>	100 ml - 150 ml	Yes	24
P21061	1000 ml	Vent	490 cm <sup>2</sup>	100 ml - 150 ml	Yes	24
P21062	1000 ml	Sealed	490 cm <sup>2</sup>	100 ml - 150 ml	No	24
P21063	1000 ml	Vent	490 cm <sup>2</sup>	100 ml - 150 ml	No	24
P21064	2000 ml	Sealed	850 cm <sup>2</sup>	180 ml - 260 ml	Yes	12
P21065	2000 ml	Vent	850 cm <sup>2</sup>	180 ml - 260 ml	Yes	12
P21066	2000 ml	Sealed	850 cm <sup>2</sup>	180 ml - 260 ml	No	12
P21067	2000 ml	Vent	850 cm <sup>2</sup>	180 ml - 260 ml	No	12
P21068	5000 ml	Sealed	1900 cm <sup>2</sup>	300 ml - 400 ml	Yes	12
P21069	5000 ml	Vent	1900 cm <sup>2</sup>	300 ml - 400 ml	Yes	12

## 92 | Bio Reaction Tubes, PP

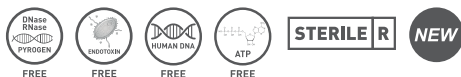
- ABDOS Bio-Reaction tubes are manufactured with high purity virgin Class VI Medical grade polypropylene (PP) conforming to US FDA 21 CFR, free from natural rubber & heavy metal.
- Bioreaction tubes are convenient and economical option for small scale, high density suspension cell culture and are ideal for biological reaction experiments that require aseptic conditions with free gas exchange.
- These tubes consist of ultrasonically welded 0.22µm hydrophobic membrane to allow gas exchange.
- These tubes come with a large unerasable frosting white printed writing area and engraved graduation.
- These tubes are ideal for culture and centrifuge applications. Can withstand maximum 12,000\*g RCF for 15ml tubes, 16,000\*g RCF for 50ml conical bottom tubes, and 6,000\*g RCF for self-standing tubes.



Code	Capacity	Bottom	No. / Pack	No. / Case
P21070	15 ml	Conical	10	100
P21071	50 ml	Conical	10	100
P21072	50 ml	Self-standing	10	100

## 93 | Media Bottles, PETG

- ABDOS Media Bottle is manufactured with high quality PETG that complies US FDA 21 CFR, free from heavy metals.
- The Cap of the bottle is Screw cap made with HDPE (High Density Polyethylene), free of heavy metal.
- These bottles come with embossed graduation on two sided.
- These bottles have a Shelf life of three years from the month of production.
- These bottles are compatible to work in Temperature range from  $-60^{\circ}\text{C}$  to  $60^{\circ}\text{C}$ .



Code	Capacity	Cap	Sterile	No. / Case
P21080	500 ml	Yes	No	24
P21081	500 ml	Yes	Yes	24



## 94 | BIOFILL QUICK-CONNECT PEDESTAL SYSTEM

- BIOFILL Quick-Connect Pedestal System or cradle ring provides hands-free operation. Simply attach your vacuum line to the Quick-Connect hardware. When you are ready to filter, set the BIOFILL Filtration unit onto the base or cradle and open the built-in vacuum control. These units are specially designed to upgrade your efficiency and productivity in various life science applications such as tissue culture, cell therapy, genomics, and drug discovery.
- These two filtering options offer a permanent vacuum hose connection and minimize set-up time. The vacuum hose connects to the back of the pedestal or cradle ring and enables adjustable flow control using the on/off switch. This patented docking system is made from aluminium. Works in conjunction with BIOFILL Bottle Top Filtration system in 15 ml, 50 ml, 250 ml, 500 ml, and 1000 ml.
- Dual Centrifuge Tube Stand holder provides a stationary set-up and preventing spills and tissue culture hood contamination. These optional holders allow for hands-free operation of the filter unit. Works in conjunction with BIOFILL Filtration system in 15 ml & 50 ml.

Code	Product Description	Application	No. / Case
E12400	Vacuum Filtration Pedestal	Works in conjunction with BIOFILL Bottle Top Filtration system in 15 ml, 50 ml, 250 ml, 500 ml and 1000 ml.	1
E12401	Vacuum Filtration Cradle Ring	Works in conjunction with BIOFILL Bottle Top Filtration system in 15 ml, 50 ml, 250 ml, 500 ml and 1000 ml.	1
E12402	Polystyrene Dual Centrifuge Stand	Works in conjunction with BIOFILL Filtration system in 15 ml & 50 ml.	5



## 95 | BIOFILL Bottle Top Filtration System

- BIOFILL Bottle Top Filtration System is available as a Full Assembly or as a bottle top Funnel. ABDOS BIOFILL Bottle Top Filtration Systems are disposable, sterile, vacuum operated systems for the sterile preparation of buffers, tissue culture media, microbiological media, and other biological fluids. Systems are available with asymmetric 0.1 µm, 0.22 µm & 0.45 µm PES membranes. ABDOS PES membrane has low protein binding and is surfactant-free.
- BIOFILL Filtration system is designed for sterilization or clarification of aqueous laboratory fluids. The filters are gamma radiated & manufactured in clean room plant.
- The complete system is composed of a polystyrene filter funnel and receiver bottle, a SECURE grasp cap, and a vacuum hose adapter. Systems are also available with 15 ml and 50 ml polypropylene centrifuge tubes.
- Filtration funnels are compatible with the Quick Connect pedestal system, a cradle ring for use with existing lab stands, & vacuum hose adapters. Quick-Connect pedestal offers one-time vacuum connection and one-handed operation. Quick Connect Pedestal are sold separately.



### BIOFILL Bottle Top Filtration System

Code	Product Description	Funnel capacity Volume	Receiver Capacity Volume	Filter Pore Size	Membrane Diameter	No. / Case
P21090	250ml, 0.2µm High Flow PES Bottle Top Filter Full Assembly, Sterile	250 ml	250 ml	0.2 µm	66 mm	12
P21091	500ml, 0.2µm High Flow PES Bottle Top Filter Full Assembly, Sterile	500 ml	500 ml	0.2 µm	90 mm	12
P21092	1000mL, 0.2µm High Flow PES Bottle Top Filter Full Assembly, Sterile	1000 ml	1000 ml	0.2 µm	90 mm	12
P21093	250ml, 0.45µm High Flow PES Bottle Top Filter Full Assembly, Sterile	250 ml	250 ml	0.45 µm	66 mm	12
P21094	500ml, 0.45µm High Flow PES Bottle Top Filter Full Assembly, Sterile	500 ml	500 ml	0.45 µm	90 mm	12
P21095	1000ml, 0.45µm High Flow PES Bottle Top Filter Full Assembly, Sterile	1000 ml	1000 ml	0.45 µm	90 mm	12
P21096	250ml, 0.1µm High Flow PES Bottle Top Filter Full Assembly, Sterile	250 ml	250 ml	0.1 µm	66 mm	12
P21097	500ml, 0.1µm High Flow PES Bottle Top Filter Full Assembly, Sterile	500 ml	500 ml	0.1 µm	90 mm	12
P21098	1000ml, 0.1µm High Flow PES Bottle Top Filter Full Assembly, Sterile	1000 ml	1000 ml	0.1 µm	90 mm	12
P21099	50ml centrifuge Tube and Funnel , 0.2µm High Flow PES Membrane, Sterile	50 ml	50 ml	0.2 µm	40 mm	24
P21100	15ml centrifuge Tube and Funnel , 0.2µm High Flow PES Membrane, Sterile	50 ml	15 ml	0.2 µm	40 mm	24

### BIOFILL Bottle Top Funnel

Code	Product Description	Funnel capacity Volume	GL Threads	Filter Pore Size	Membrane Diameter	No. / Case
P21101	250ml Funnel Only with 0.2 um PES Membrane, Sterile	250 ml	45	0.2 µm	66 mm	24
P21102	500ml Funnel Only with 0.2 um PES Membrane, Sterile	500 ml	45	0.2 µm	90 mm	24
P21103	1000ml Funnel Only with 0.2 um PES Membrane, Sterile	1000 ml	45	0.2 µm	90 mm	24
P21104	250ml Funnel Only with 0.1 um PES Membrane, Sterile	250 ml	45	0.1 µm	66 mm	24
P21105	500ml Funnel Only with 0.1 um PES Membrane, Sterile	500 ml	45	0.1 µm	90 mm	24
P21106	1000ml Funnel Only with 0.1 um PES Membrane, Sterile	1000 ml	45	0.1 µm	90 mm	24
P21107	250ml Funnel Only with 0.45 um PES Membrane, Sterile	250 ml	45	0.45 µm	66 mm	24
P21108	1000ml Funnel Only with 0.45 um PES Membrane, Sterile	1000 ml	45	0.45 µm	90 mm	24
P21109	1000ml Funnel Only with 0.45 um PES Membrane, Sterile	1000 ml	45	0.45 µm	90 mm	24





# 06 PCR TECHNIQUES

PCR TUBES

PCR PLATES

PCR STRIP CAPS

PCR SEALING FILMS & WORKSTATION

## 96 | PCR Tubes, PP

- Abdos PCR tubes are manufactured in state of the art precision moulded facility using high purity virgin USP Class VI Medical grade polypropylene (PP) conforming to US FDA 21 CFR, free from natural rubber and heavy metal.
- Abdos PCR tubes have thin and consistent wall thickness to reduce insulating effect on the tube.
- Abdos PCR tubes have longer length and even cap insertion that ensures tight fit eliminating risk of sample evaporation.
- The caps are optically clear for real time qPCR.



Code	Capacity	Type	Height	No. / Case
PI0701	0.2 ml	Clear Flat Cap	21.5 mm	1000
PI0702	0.2 ml	Domed Cap	23.16 mm	1000

## 97 | Strip Tubes without Cap – 8 strips & 12 strips, PP

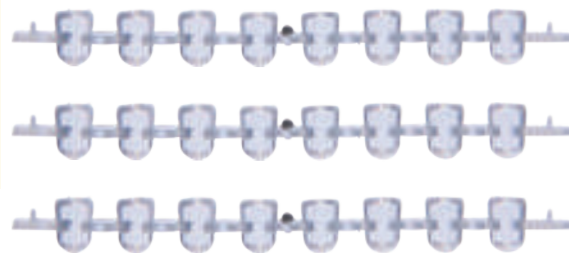
- Abdos PCR Strip Tubes are manufactured in state of the art precision moulded facility using high purity virgin USP Class VI Medical grade polypropylene (PP) conforming to US FDA 21 CFR, free from natural rubber and heavy metal.
- Strip Tubes have uniform ultra thin walls to reduce insulating effect on the strips.
- Optically clear for real time qPCR.
- Strip Tubes are available in both Standard and Low Profile Wells.



Code	Capacity	Type	Height	No. / Case
PI0706	0.2 ml	8 Strip Standard Tubes	20.7 mm	125 strips
PI0708	0.1 ml	8 Strip Low Profile Tubes	16.1 mm	125 strips
PI0707	0.2 ml	12 Strip Standard Tubes	20.7 mm	80 strips
PI0705	0.2 ml	12 Strip Standard Tubes with flat cap	20.7 mm	80 strips

## 98 | Strip Caps, PP

- Abdos Strips PCR Caps are manufactured in state of the art precision moulded facility using high purity virgin USP Class VI Medical grade polypropylene (PP) conforming to US FDA 21 CFR, free from natural rubber and heavy metal.
- Caps feature ultra-clear surface ideal for fluorescent, luminescent and real time PCR applications.
- Optically clear caps for real time qPCR.



Code	Capacity	Type	No. / Case
PI0709	0.2 ml	8 Strip Cap Flat Optically Clear	125 strips
PI0711	0.2 ml	8 Strip Cap Domed	125 strips

\*Strip caps for PI0707 will be available on request

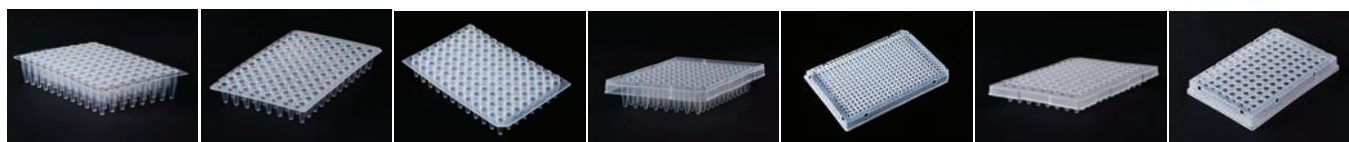
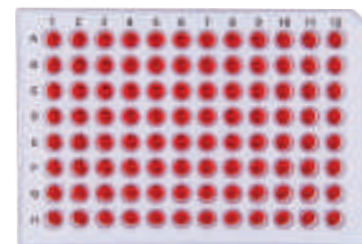


## 99 | PCR Plates Family, PP

- Abdos PCR plates are manufactured in state of the art precision moulded facility using high purity virgin USP Class VI Medical grade polypropylene (PP) conforming to US FDA 21 CFR, free from natural rubber and heavy metal.
- Ultra thin and consistent wall thickness allows precise thermal transfer.
- Maximum G-Force 4000 RCF.
- Abdos PCR plates are qPCR compatible.
- DNase, RNase, Endotoxin and PCR inhibitor free.
- Kindly see Thermal Cycler Compatibility Chart on Page No. 91.



Code	Product	Type	No. / Case
P10713	96 Well standard well	Unskirted Standard Well	25 Plates
P10714	96 Well low profile well	Unskirted Low Profile well	25 Plates
P10715	96 Well elevated top well	Unskirted Elevated Top Standard Well	10 Plates
P10722	96 Well semi-skirted low profile well	Semi-Skirted low profile	25 Plates
P10716	96 Well semi-skirted standard well	Semi - Skirted Standard Well	10 Plates
P10723	96 Well fully skirted low profile well	Fully-Skirted Low Profile Well	10 Plates
P10717	384 Well fully skirted well	Fully - Skirted Well	10 Plates



P10713

P10714

P10715

P10716

P10717

P10722

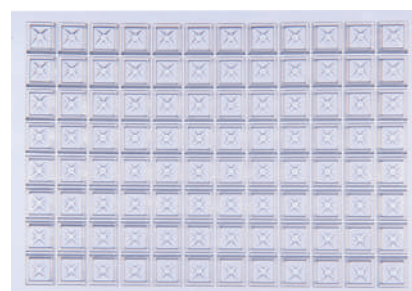
P10723

## 100 | Sealing Mats, Silicone

- These mats are made of silicone 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.

Code	Type	No. / Case
P10721	Silicone Sealing Mats	50 mats

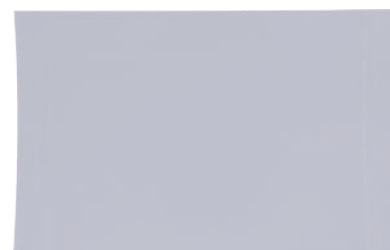
\*These mats are used for sealing all the above PCR plates except P10717.



## 101 | Sealing Films, Polyester

- Abdos sealing films are optically clear and are suitable for use in real-time PCR applications and PCR plates.
- The film is adhesive coated and sticks to the plate.
- Abdos sealing films are disposable and for single use only.

Code	Type	No. / Case
P10718	Clear Seal Film	100 sheets



## 102 | Sealing Films, Aluminium

- 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.



Code	Type	No. / Case
P10719	Silver Seal	100 sheets

## 103 | PCR Workup Rack, PP

- Manufactured in state of the art moulding facility using high purity polypropylene.
- These workup racks 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  $-80^{\circ}\text{C}$  to  $+121^{\circ}\text{C}$ .
- Can be autoclaved.
- Available in colours (Red, Green, Yellow, White & Blue).



Code	Tube Capacity	L x W x H	No. / Case
P11101	1 x 96 well PCR plates, 96 place for individual PCR tube, 12 x 8-well PCR strips	138 x 98 x 39 mm	5

## 104 | PCR workstation rack with lid, PP

- 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 & 2.0 ml micro centrifuge tubes.
- These workstations have moulded alphanumeric indexing for fast and accurate identification.
- These workstations are ideal platform to satisfy all pre or post PCR sampling applications.
- Operating temperature is  $-80^{\circ}\text{C}$  to  $+121^{\circ}\text{C}$ .
- Can be autoclaved.
- Available in colours (Red, Green, Yellow, White & Blue).



Code	Tube Capacity	L x W x H	No. / Case
P11103	24 individual 0.2 ml PCR tubes, 16 x 1.5 or 2.0 ml tubes, 16 x 0.5 ml tubes and 96 well rack for PCR plates	215 x 120 x 50 mm	5

## THERMAL CYCLER COMPATIBILITY GUIDE for ABDOS 96 & 384 Wellplates

Well Shape		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 <small>(Overall well height approx 21 mm, Max. capacity &gt; 350L)</small>		•		•		•			
Low Profile well <small>(Overall well height approx 16 mm; Max capacity approx. 200L)</small>			•		•		•	50 µl	
Manufacturer	Thermal Cycler Model								
APPLIED BIOSYSTEMS									
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)	•		•		•			
AMERSHAM									
Sequencers	Mega BACE 500						•		
	Mega MACE 1000						•		
	Mega BACE 4000							•	
BECKMAN									
Sequencers	CEQ	•							
BIOMETRA									
Thermal Cyclers	Uno	•	•	•		•	•		
	Uno II	•	•	•		•		•	
	T1 Thermal Cycler	•	•	•		•	•	•	
	Tgradient	•	•	•		•	•		
	Trobot	•	•	•		•	•	•	
BIO-RAD / MJ RESEARCH									
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	•		•		•	•	•
Sequencers	Myiq	•		•		•	•		
	IQ5	•		•		•	•		
	BaseStation						•		
CORBETT RESEARCH									
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.

# THERMAL CYCLER COMPATIBILITY GUIDE

## for ABDOS 96 & 384 Wellplates

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

Plates to SBS Specifications foot print. Certified Free From DNase, RNase and Detectable DNA.  
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 PCR is a patented process of Roche Holdings.



# 07 ELECTROPHORESIS SYSTEM

MINI HORIZONTAL UNITS

MIDI HORIZONTAL UNITS

MAXI HORIZONTAL ELECTROPHORESIS SYSTEMS

VERTICAL DUAL MINI ELECTROPHORESIS SYSTEMS

POWER SUPPLIES & MORE

## 105 | ABDOS Mini Horizontal Gel Unit

- The system has moulded basic unit with fixed platinum electrode assembly along with Gel running and Gel casting Tray.
- The combs are adjustable by height to offer complete control over loading volume and well depth, upto a maximum of 32 samples throughput.
- 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.



### ABDOS-Mini Horizontal Electrophoresis System

Code	Product	No. / Case
E12100	Mini Horizontal System includes Basic unit with fixed Platinum Electrode Assembly, Gel Running Trays of 6 x 7.5 cm (1 No.), 16 Well ABS comb with 1.5 mm thickness (2 Nos.), Connecting Cord (1 Pair).	1

### Spare Accessories

Code	Product	No. / Case
E12101	Gel Running Tray : 6 X 7.5 cm	1
E12102	Gel Casting Tray : 6 X 7.5 cm	1
E12103	16 Well Adjustable Comb	1
E12104	Connecting Cord for E12100	2

### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	14 x 25 x 7 cm
Gel Dimensions (W x L)	6 x 7.5 cm
Buffer Volume	325 ml
Maximum Sample Capacity	32
Adjustable Combs	16 Well Adjustable comb (2 Nos)
Comb Thickness	1 mm, 1.5 mm or 2 mm
Comb Throughput	16 samples
Comb Slots	2
UV Trays	Gel Running Tray with inbuilt Casting Gates
Platinum Electrode	Red and Black (1 Pair)
Connecting Cord	Red and Black (1 Each)
Recommended Power Supply	E12376 & E12377



## 106 | ABDOS Mini Plus Horizontal Gel Unit

- The system has moulded basic unit with fixed platinum electrode assembly along with Gel running and Gel casting Tray.
- The combs are adjustable by height to offer complete control over loading volume and well depth, upto a maximum of 80 samples throughput.
- Gel length is a short 10 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.



### ABDOS Mini Plus Horizontal Electrophoresis System

Code	Product	No. / Case
E12126	Mini Plus Horizontal System includes Basic unit with fixed Platinum Electrode Assembly, Gel Running Trays of 10 x 11.5cm (1 No.), 20 Well ABS Comb with 1.5 mm thickness (2 Nos.), Connecting Cord (1 Pair)	1

### Spare Accessories

Code	Product	No. / Case
E12127	Gel Running Tray : 10 X 11.5 cm	1
E12128	Gel Casting Tray : 10 X 11.5 cm	1
E12129	20 Well Adjustable Comb	1
E12130	Connecting Cord for E12126	2

### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	17 x 23.5 x 7 cm
Gel Dimensions (W x L)	10 x 11.5 cm
Buffer Volume	450 ml
Maximum Sample Capacity	80
Adjustable Combs	20 Well Adjustable comb (2 Nos)
Comb Thickness	1, 1.5 or 2 mm
Comb Throughput	20 samples
Comb Slots	4
UV Trays	Gel Running Tray with inbuilt Casting Gates
Platinum Electrode	Red and Black (1 Pair)
Connecting Cord	Red and Black (1 Each)
Recommended Power Supply	E12376 & E12377



## 107 | ABDOS Midi Horizontal Gel Unit

- The system has moulded basic unit with fixed platinum electrode assembly along with Gel running and Gel Casting Tray.
- The combs are adjustable by height to offer complete control over loading volume and well depth, up to a maximum of 112 samples throughput.
- Gel length is a short 10 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.



### ABDOS-Midi Horizontal Electrophoresis System

Code	Product	No. / Case
E12151	Midi Horizontal System includes Basic unit with fixed Platinum Electrode Assembly, Gel Running Trays of 12.8 x 15 cm (1 No.), 28 Well ABS Comb with 1.5 mm thickness (2 Nos.), Connecting Cord(1 Pair)	1

### Spare Accessories

Code	Product	No. / Case
E12152	Gel Running Tray : 12.8 X 15 cm	1
E12153	Gel Casting Tray : 12.8 X 15 cm	1
E12154	28 Well Adjustable Comb	1
E12155	Connecting Cord for E12151	2

### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	21 x 30.5 x 8 cm
Gel Dimensions (W x L)	12.8 x 15 cm
Buffer Volume	900 ml
Maximum Sample Capacity	112
Adjustable Combs	28 Well Adjustable comb (2 Nos)
Comb Thickness	1, 1.5 or 2 mm
Comb Throughput	28 samples
Comb Slots	4
UV Trays	Gel Running Tray with inbuilt Casting Gates
Platinum Electrode	Red and Black (1 Pair)
Connecting Cord	Red and Black (1 Each)
Recommended Power Supply	E12377





## 108 | ABDOS Maxi Horizontal Gel Unit

- The system has large 20 x 20 cm gel Tray that is ideal for high resolution techniques, such as screening PCR Products and RFLP analysis.
- The combs are height adjustable to offer complete control over loading volume and well depth.
- The system has four comb positions along the tray for fast separation of a maximum of 168 samples.
- The Combs in this system are compatible with Multichannel pipette with a maximum of 42 sample throughput to reduce gel loading time.



### ABDOS MAXI Horizontal Electrophoresis System

Code	List of Power Supply Systems	No. / Case
E12176	Maxi Horizontal System includes Basic unit with fixed Platinum Electrode Assembly, Gel Running Trays of 20 x 20cm (1 No.), 42 Well ABS Comb with 1.5 mm thickness (2 Nos.), Connecting Cord(1 Pair)	1

### Spare Accessories

Code	Product	No. / Case
E12177	Gel Running Tray : 20 X 20 cm	1
E12178	Gel Casting Tray : 20 X 20 cm	1
E12179	42 Well Adjustable Comb	1
E12180	Connecting Cord for E12176	2

### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	26 x 47 x 8.5 cm
Gel Dimensions (W x L)	20 x 20 cm
Buffer Volume	2200 ml
Maximum Sample Capacity	168
Adjustable Combs	42 Well Adjustable comb (2 Nos)
Comb Thickness	1, 1.5 or 2 mm
Comb Throughput	42 samples
Comb Slots	4
UV Trays	Gel Running Tray with inbuilt Casting Gates
Platinum Electrode	Red and Black (1 Pair)
Connecting Cord	Red and Black (1 Each)
Recommended Power Supply	E12377



## 109 | ABDOS Maxi Plus Horizontal Gel Unit

- The system has large 25 x 30 cm gel Tray that is ideal for high resolution techniques, such as screening PCR Products and RFLP analysis.
- The combs are height adjustable to offer complete control over loading volume and well depth.
- The system has 12 comb positions at different intervals along the tray for fast separation of a maximum of 624 samples.
- The Combs in this system are compatible with Multichannel pipette with a maximum of 52 sample throughput to reduce gel loading time.



### ABDOS-MAXI Plus Horizontal Electrophoresis System

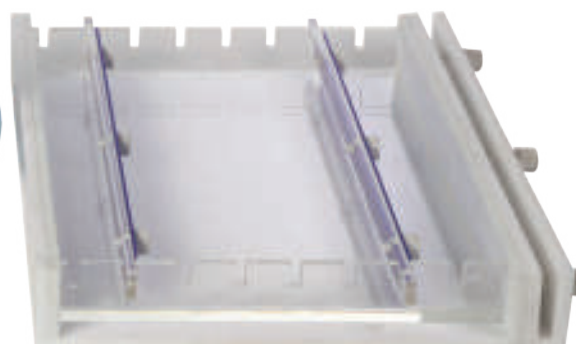
Code	List of Power Supply Systems	No. / Case
E12201	Maxi Plus Horizontal System includes Basic unit with fixed Platinum Electrode Assembly, Gel Running Trays of 25 x 30 cm (1 No.), 52 Well ABS Comb with 1.5 mm thickness (2 Nos.), Connecting Cord (1 Pair)	1

### Spare Accessories

Code	Product	No. / Case
E12202	Gel Running Tray : 25 X 30 cm	1
E12203	Gel Casting Tray : 25 X 30 cm	1
E12204	52 Well Adjustable Comb	1
E12205	Connecting Cord for E12201	2

### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	34 x 57 x 10 cm
Gel Dimensions (W x L)	25 x 30 cm
Buffer Volume	3000 ml
Maximum Sample Capacity	256
Adjustable Combs	52 Well Adjustable comb (6 Nos)
Comb Thickness	1, 1.5 or 2 mm
Comb Throughput	52 samples
Comb Slots	12
UV Trays	Gel Running Tray with inbuilt Casting Gates
Platinum Electrode	Red and Black (1 Pair)
Connecting Cord	Red and Black (1 Each)
Recommended Power Supply	E12377



## 110 | ABDOS Vertical Dual Mini Gel System

- The system is a twin plate 8 x 7 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, 8 x 7cm (W x H) commercially available precast gels.
- Low buffer volume within the inner chamber of the GRM and bottom reservoir economises buffer consumption.
- Combs and spacers available in 0.5 & 1 mm thickness.
- The system has a small footprint area and occupies minimal bench space.



ABDOS Vertical Mini Dual Slab Gel Electrophoresis System		
Code	Product	No. / Case
E12226	Vertical Mini Dual Slab Gel Electrophoresis System - Basic unit includes Dual Vertical Assembly, Glass Plates (Rectangular & Notched) : 2 sets, Comb 0.5 mm Thickness (7 wells) - 2 No's, Comb 1 mm Thickness (7 wells) - 2 No's, Spacer 0.5 mm Thickness - 4 No's, Spacer 1.0 mm Thickness - 4 No's, Gel Casting Stand - 1No, Supporting Screws-2 No's, Safety Lid - 1 No, Connecting Cord - 1 Pair	1

Spare Accessories		
Code	Product	No. / Case
E12227	Glass Plates(Notched & Rectangular)	1 set
E12228	Mini Multiple Gel Casting Unit(For 2 Gels)	1
E12229	Teflon Comb 7 well 0.5 mm	1
E12230	Teflon Comb 7 well 0.75 mm	1
E12231	Teflon Comb 7 well 1.0 mm	1
E12232	Teflon Comb 7 well 1.5 mm	1
E12233	Teflon Comb 10 well 0.5 mm	1
E12234	Teflon Comb 10 well 0.75 mm	1
E12235	Teflon Comb 10 well 1.0 mm	1
E12236	Teflon Comb 10 well 1.5 mm	1
E12237	Teflon Spacers 0.5 mm	6
E12238	Teflon Spacers 0.75 mm	6
E12239	Teflon Spacers 1.0 mm	6
E12240	Teflon Spacers 1.5 mm	6
E12241	ACRYLIC Clamp(1 pcs) and Screws(2 pcs)	1 set
E12242	Gel Developing Tray with Gel Holder 8 x 7 cm(05-02)	1
E12243	Glass Plate Stand	1
E12244	Connecting Cords	2

### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	16 x 20 x 15 cm
Upper Buffer Tank Dimension (L x B x H)	70 x 70 x 43 cm
Lower Buffer Tank Dimension (L x B x H)	150 x 130 x 115 cm
Active Gel Dimension (W X H)	8 x 7 cm
Maximum Sample Capacity	14
Recommended Buffer Volume	Upper Tank : 150 ml Lower Tank : 200 ml
Water Circulation Facility	Yes
No. of Combs	7 well Teflon comb 0.5 & 1.0 mm (2 Nos each)
No. of Teflon Spacer	0.5 & 1 mm (4 Nos each)
Glass plates	Notched & Rectangular (2 Sets)
Platinum Electrode	Red and Black (1 Pair)
Connecting Cord	Red and Black (1 Each)
Recommended power supply	E12377



## 111 | ABDOS Vertical Midi - Gel System

- The system is a single plate 16 x 14 cm midi-gel unit a simple, non-cooled cost-effective solution for low throughput PAGE.
- 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.
- Combs and spacers available in 0.5, 1.0 and 1.5 mm thickness.
- The system has a small footprint area and occupies minimal bench space.



### ABDOS Vertical Midi Slab Gel Electrophoresis System

Code	Product	No. / Case
E12276	Vertical Midi Slab Gel Electrophoresis System- basic unit includes Vertical Assembly, Glass plates (Rectangular and Notched): 2 sets, Comb 0.5 mm Thickness (13 wells) - 1 No, Comb 1 mm Thickness (13 wells) - 1 No, Comb 1.5 mm Thickness (13 wells) - 1 No., Spacer 0.5 mm Thickness - 2 No's, Spacer 1.0 mm Thickness - 2 No's, Spacer 1.5 mm Thickness - 2 No's, Gel Casting Stand - 1No, Supporting Screws-2 No's, Safety Lid-1 No, Connecting cord-1 Pair.	1

### Spare Accessories

Code	Product	No. / Case
E12277	Glass Plates(Notched & Rectangular)	1 set
E12278	Regular Multiple Gel Casting Unit(For 2 Gels)	1
E12279	Gel Developing Tray with Gel Holder for 16 x 14 cm	1
E12280	Gradient Maker, total Capacity 25 + 25 ml	1
E12281	Teflon Comb 13 well 0.5 mm	1
E12282	Teflon Comb 13 well 1.0 mm	1
E12283	Teflon Comb 13 well 1.5 mm	1
E12284	Teflon Comb 20 well 0.5,1.0,1.5 mm	1
E12285	Teflon Spacers 0.5 mm	1 pack (6 pcs per pack)
E12286	Teflon Spacers 1.0 mm	1 pack (6 pcs per pack)
E12287	Teflon Spacers 1.5 mm	1 pack (6 pcs per pack)
E12288	Teflon Spacers 3.0 mm	1 pack (6 pcs per pack)
E12289	ACRYLIC Combprep. 3 well 3.0 mm	1
E12290	ACRYLIC Combprep. 3 well 6.0 mm	1
E12291	ACRYLIC Clamp (1 pcs) and Screws (2 pcs)	1 pack
E12292	Lavelling Screws	3
E12293	Glass Plate Stand	1
E12244	Connecting Cords	2



### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	25 x 20 x 27 cm
Upper Buffer Tank Dimension (L x B x H)	140 x 60 x 25 cm
Lower Buffer Tank Dimension (L x B x H)	200 x 60 x 60 cm
Active Gel Dimension (WX H)	16 x 14cm
Maximum Sample Capacity	13
Recommended Buffer Volume	Upper Tank : 150 ml, Lower Tank : 200ml
No. of Combs	13 well Teflon comb, 0.5, 1.0 & 1.5 mm (1 Nos each)
No. of Spacer	0.5, 1 mm & 1.5 mm (4 Nos each)
Glass plates	Notched and Rectangular (2 Sets)
Gasket	Fixed
Clamp & Screws	4 Sets
No. of Platinum Electrode	Red and Black (1 Pair)
Connecting Cord	Red and Black (1 Each)
Recommended power supply	E12377

## 112 | ABDOS Vertical Dual Midi Gel System

- The system is a twin plate 16 x 14 cm midi-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, 16 x 14cm (W x H) commercially available precast gels.
- Low buffer volume within the inner chamber of the GRM and bottom reservoir economises buffer consumption.
- Combs and spacers available in 0.5 & 1 mm thickness.
- The system has a small footprint area and occupies minimal bench space.



### ABDOS Vertical Midi Dual Slab Gel Electrophoresis System

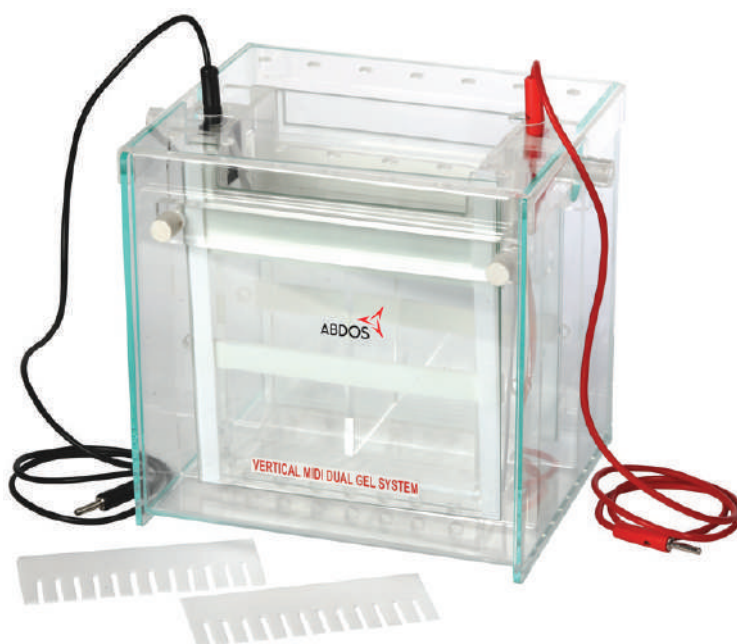
Code	Product	No. / Case
E12326	Vertical Midi Dual Slab Gel Electrophoresis System - Basic unit includes Dual Vertical Assembly, Glass Plates(Rectangular & Notched): 2 sets, Comb 0.5 mm Thickness (13 wells) - 2 No's, Comb 1 mm Thickness (13 wells) - 2 No's, Spacer 0.5 mm Thickness - 4 No's, Spacer 1.0 mm Thickness - 4 No's, Gel Casting Stand - 1 No, Supporting Screws - 4 No's, Safety Lid - 1 No, Connecting Cord-1 Pair	1

### Spare Accessories

Code	Product	No. / Case
E12327	Glass Plates(Notched & Rectangular)	1 set
E12328	Regular Multiple Gel Casting Unit(For 2 Gels)	1
E12329	Gel Developing Tray with Gel Holder for 16 x 14 cm	1
E12330	Gradient Maker,total Capacity 25 + 25 ml	1
E12331	Teflon Comb 13 well 0.5 mm	1
E12332	Teflon Comb 13 well 1.0 mm	1
E12333	Teflon Comb 13 well 1.5 mm	1
E12334	Teflon Comb 20 well 0.5,1.0, 1.5 mm	1
E12335	Teflon Spacers 0.5 mm	6
E12336	Teflon Spacers 1.0 mm	6
E12337	Teflon Spacers 1.5 mm	6
E12338	Teflon Spacers 3.0 mm	6
E12339	ACRYLIC Combprep. 3 well 3.0 mm	1
E12340	ACRYLIC Combprep. 3 well 6.0 mm	1
E12341	ACRYLIC Clamp(1) and Screws(2)	1 pack
E12342	Lavelling Screws	3
E12343	Glass Plate Stand	1
E12244	Connecting Cords	2

### SPECIFICATION :

Material	ACRYLIC
Unit Dimensions (L x B x H)	23 x 18 x 27.5 cm
Upper Buffer Tank Dimension (L x B x H)	140 x 70 x 20 cm
Lower Buffer Tank Dimension (L x B x H)	200 x 160 x 190 cm
Active Gel Dimension (W x H)	16 x 14 cm
Maximum Sample Capacity	26
Recommended Buffer Volume	Upper Tank : 250 ml Lower Tank : 500 ml
Water Circulation Facility	Yes
No. of Combs	13 well Teflon comb 0.5 & 1.0 mm (2 Nos each)
No. of Teflon Spacer	0.5 & 1 mm (4 Nos each)
Glass plates	Notched and Rectangular (2 Sets)
Clamp & Screws	4 Sets
No. of Platinum Electrode	Red and Black (1 Pair)
Gasket	Fixed
Connecting Cord	Red and Black (1 Each)
Recommended power supply	E12377



## 113 | Digital Model Power Supply

- It consists of a small Power supply suitable for most Electrophoresis System tanks and applications. The front panel and graphical display are designed for ease of use. The display provides all useful information during runs.
- Digital Power supplies are the most robust, long lasting and durable electrophoresis power supplies in the market.



### FEATURES :

- Operates in constant Voltage and Constant Current Method
- Digital Display for Volt, Current and Timer
- Runs two gels simultaneously
- Feather Touch Knobs
- Overload protection
- Short Circuit Protection



Code	Product description	No. / Case
E12376	Digital Power Supply 0-300 V ; 0-100 mA ; 30 W Power supply for 230 V main supply; Two(2) output Terminal	1

### SPECIFICATION :

Body	MS with Powder Coated Body
Dimension (LxWxH)	24 x 16 x 11 cm
Input	220-240 V,50-60 Hz, AC
Output Voltage	0 to 300 V DC
Output Current	0 to 100 mA
Timer	0 minutes to 9.99 Hrs cut off timer
Input Power Cable	3-Wire Grounded
Output Power	30 W
Protection	Auto balancing facility for constant voltage (V) and current modes (mA) with overload and short circuit protection
Display	Digital display for Volt, Current and Run time
Output Terminal	Can run 2 units simultaneously

## 114 | Microprocessor based Programmable Power Supply



### FEATURES

- Compact and Lightweight
- LCD Digital Display & Digital Control
- Runs Four Gels simultaneously
- Short circuit & overload production
- Pause Key function to hold the output power
- Auto Recovery after Power failure
- Alarm & Memory option



Code	Product description	No. / Case
E12377	Microprocessor Based Programmable Power Supply 0-300 V; 0-400 mA	1

### SPECIFICATION :

Body	MS with Powder Coated
Dimension (L x W x H)	240 x 260 x 120 mm
Power Requirement	220-240 V,50-60 Hz, AC
Output Voltage	0 to 300 V
Output Current	0 to 400 mA
Timer	0 minutes to 24 Hrs
Parameters	16 programmable
Display	LCD Digital Display
Output Terminal	4 Parallel (4mm Socket)

#CommittedtotheEarth



# 08 MULTIPURPOSE RACKS & BOXES

ROTATOR WORKSTATION  
MULTI COMBINATION RACKS  
REVERSIBLE RACKS  
POLYGRID TEST TUBE RACKS  
& MORE

## 115 | Rotator Workstation, PP

- Abdos rotator workstation is a unique ultimate workstation helping you organize your laboratory work.
- Cube shaped multi-hole rack suitable for different products, has a unique rotate and lock design that helps add or subtract racks according to end user's needs.
- These racks can withstand temperature of  $-80^{\circ}\text{C}$  to  $121^{\circ}\text{C}$ .



Code	Tube Capacity	L x W x H	No. / Case
P20208	PCR Tubes & Plates, 0.5ml & 1.5ml & 2.0ml, 15ml & 50ml	108 x 68 x 108 mm	4 (assorted colours)

Product Compatibility chart for Rotatory Workstation:

PRODUCT	NO. PER UNIT
50 ml Centrifuge Tube	2 per unit
15 ml Centrifuge Tube	8 per unit
1.5 ml or 2.0 ml Micro Centrifuge Tube	9 per unit
0.5 ml Micro Centrifuge Tube	6 per unit
PCR Plates (unskirted or semi skirted 96 well)	1 per 2 unit locked together
PCR 8-tube strip	6 per unit
PCR 12-tube strip	8 per 2 unit
PCR 0.2 ml tubes	48 per unit

Assorted colours consist of Blue (B), Green (G), Yellow (Y) & Red (R).



## 116 | Multi Combination Racks, PP

- Abdos multi combination rack is a unique combination for various tubes and vials.
- Multi-Hole for keeping different products as per own requirement, and has a unique rotate and lock design that helps add or subtract racks according to end user's needs.
- These racks can withstand temperature of  $-80^{\circ}\text{C}$  to  $121^{\circ}\text{C}$ .



Code	Tube Capacity	L x W x H	No. / Case
P20209	0.5ml & 1.5ml & 2.0ml, 12 x 75 Tube, 15ml & 50ml	175 x 90 x 65 mm	4 (assorted colours)

Product Compatibility chart for Rotatory Workstation:

PRODUCT	NO. PER UNIT
50 ml Centrifuge Tube	4 per unit
15 ml Centrifuge Tube	12 per unit
1.5 ml or 2.0 ml Micro Centrifuge Tube	32 per unit
0.5 ml Micro Centrifuge Tube	32 per unit
RIA Vial 12 x 75 mm (5ml tube)	32 per unit

Assorted colours consist of Blue (B), Green (G), Yellow (Y) & Red (R).





## 117 | Expanding Tube Rack, PP

- Abdos Expanding tube racks 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 allows the rack to expand, creating more space for sample handling. When done, simply collapse the rack back to its compact form and its ready for the freezer.
- Stackable, with alphanumeric well identifications.
- Temperature range of  $-80^{\circ}\text{C}$  to  $121^{\circ}\text{C}$ .



Code	Tubes	Capacity	Places	L x W x H	No. / Case
P20230	12 mm	1.5 & 2.0 mL	64	310 x 128 x 335 mm	1
P20231	7.8 mm & 5.1 mm	0.5 ml & 0.2 ml	64 - 0.5 ml & 96 - 0.2 ml	310 x 128 x 310 mm	1



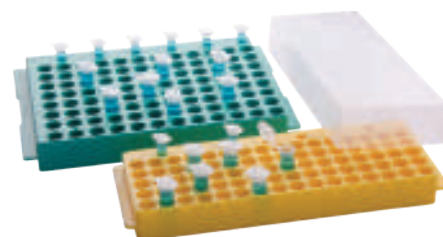
## 118 | Reversible Rack with Cover, PP

- Manufactured in the state of the art moulding facility using high purity virgin polypropylene.
- Holds 1.5/2.0ml micro centrifuge tubes on one side with smaller positions for the 0.5ml tubes on another side.
- 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.
- Moulding Indexing for easy reference of tubes and vials.



Code	Tubes Capacity	Places	L x W x H	No. / Case
P20206	1.5/2.0 ml & 0.5 ml	96 (12 x 8 Array)	220 x 150 x 50 mm	6
P20206 Assorted	1.5/2.0 ml & 0.5 ml	96 (12 x 8 Array)	220 x 150 x 50 mm	6 (2 pieces of each colour)
P20207	1.5/2.0 ml & 0.5 ml	80 (16 x 5 Array)	240 x 85 x 50 mm	6
P20207 Assorted	1.5/2.0 ml & 0.5 ml	80 (16 x 5 Array)	240 x 85 x 50 mm	6 (2 pieces of each colour)

Add colour of your choice- Green (G), Yellow (Y), Blue (B).



## 119 | Twisty Tube Rack, PP

- These racks make dilution and concentration study easier as they can transfer samples between 0.2ml PCR tubes to 0.5, 1.5 and 2.0ml tubes.
- Can be rotated and customized 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  $-80^{\circ}\text{C}$  to  $121^{\circ}\text{C}$ .
- Blue section holds 48 (0.5ml) tubes and reverse side holds 48 (1.5ml) tubes whereas purple section holds 96 (0.2ml) tubes and 48 (1.5ml) tubes on the reverse side.



Code	Tube Capacity	Colour	Places	L x W x H	No. / Case
P20210	0.2ml, 0.5ml, 1.5ml & 2.0 ml	Blue, Purple	0.2 ml - 96 0.5 ml - 48 1.5/2.0 ml - 48	296 x 118 x 34 mm	1 Kit (Blue + Purple)



## 120 | Frosty Mate™ Storage Racks, PC

- These racks have consistent thermal protection to maintain low temperatures.
- 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 & -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.



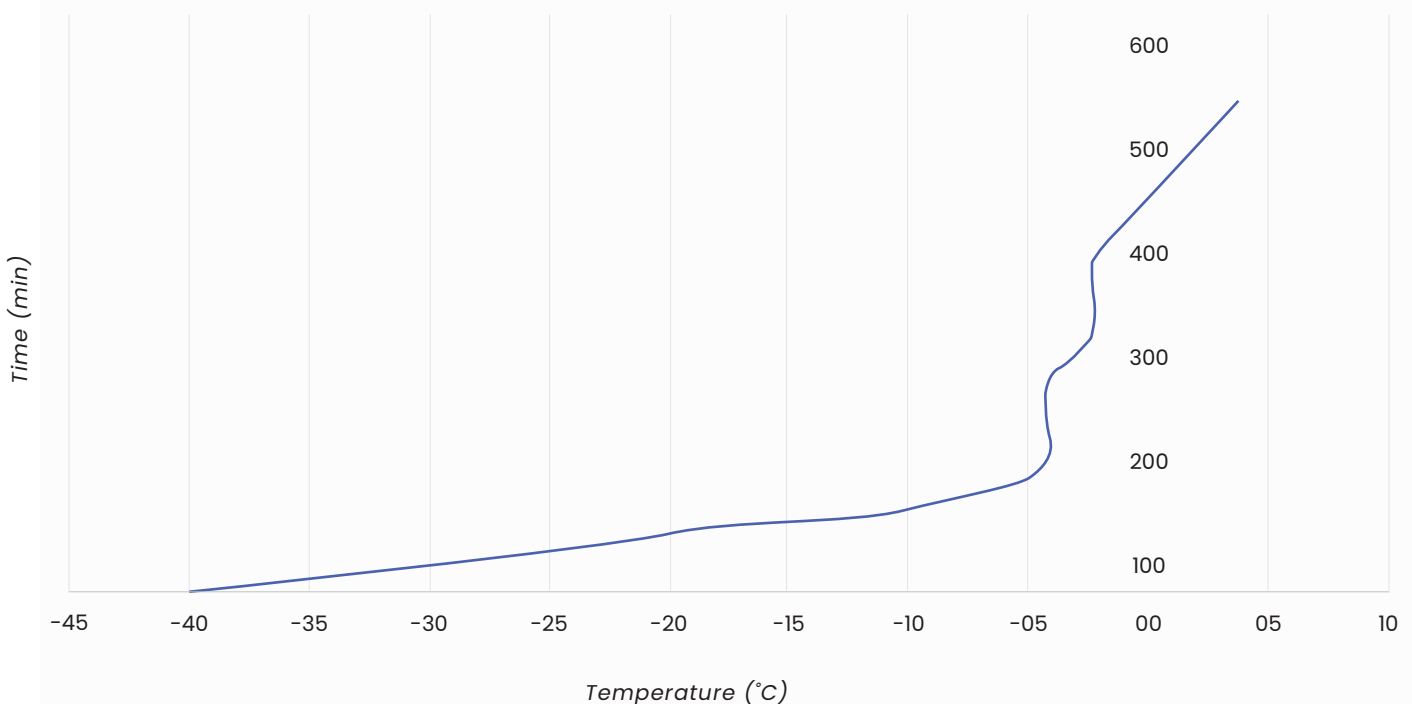
### -20°C Frosty Mate™ Freezer Storage Racks

Code	Capacity	Places	L x W x H	No. / Case
PI1104	1.5 - 2.0 ml Micro Tube, 1.0 - 2.0 ml Cryo Tube & 0.5 ml Micro Tube with external attachment	32 (8 x 4 Array)	240 x 120 x 120 mm	1

### 0°C Frosty Mate™ Freezer Storage Racks

Code	Capacity	Places	L x W x H	No. / Case
PI1105	1.5 - 2.0 ml Micro Tube, 1.0 - 2.0 ml Cryo Tube & 0.5 ml Micro Tube with external attachment	32 (8 x 4 Array)	240 x 120 x 120 mm	1

### Graph representing temperature stability VS Time



Note - Before use, Frosty Mate™ should be kept for 24 hours at - 40°C temperature deep freeze.

## 121 | Frosty Mate™ Colour Change Racks, PP

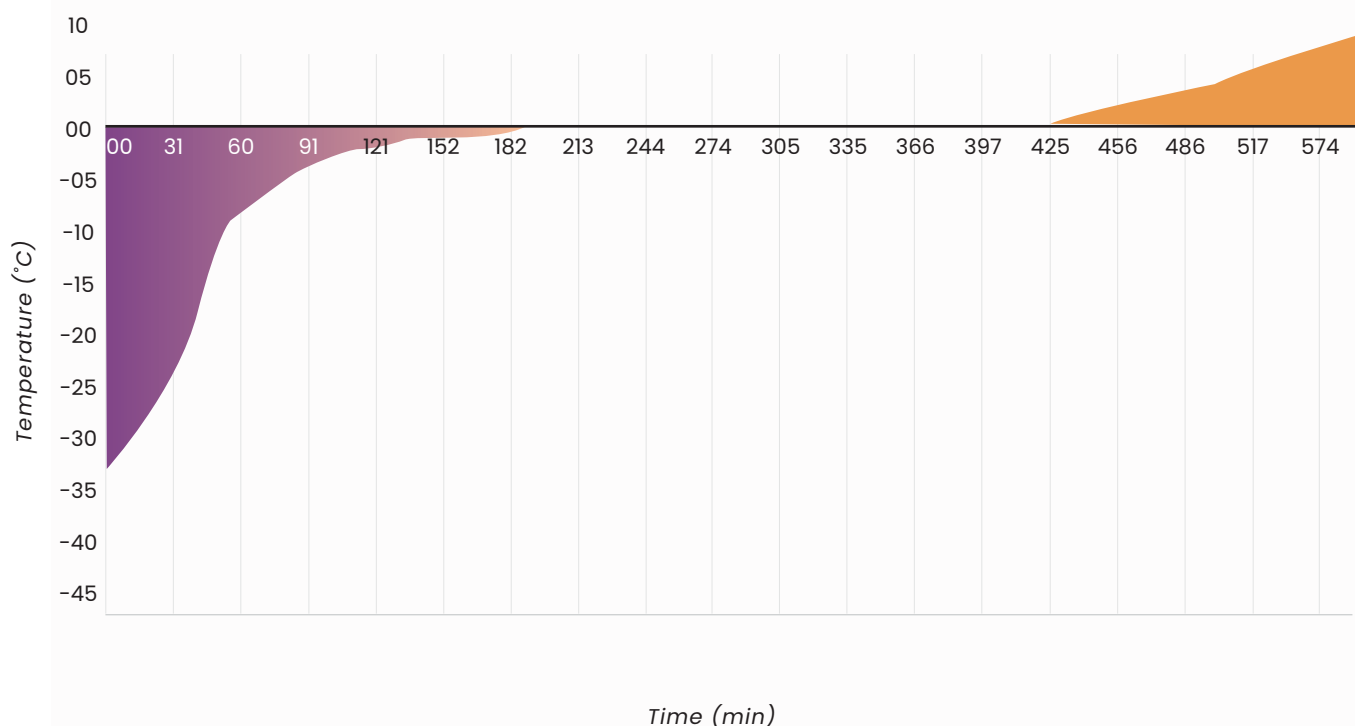
- These racks maintain a temperature of less than 4°C for almost 3.5 hours (with the lid on the rack) at room temperature.
- Frosty Mate™ can be used for transportation of biological samples, chemicals etc. at a stable temperature for a long time.
- Consistently cooled samples – FROSTY MATE™ colour changes dramatically when the temperature of a rack containing samples reaches below 4°C.
- A clear visible colour change from Green to Yellow.



MCT Freezer Change Racks						
Code	Colour at cold temperature	Colour at warm temperature	Capacity	Places	L x W x H, mm	No. / Case
P11106	Green	Yellow	1.5 - 2 ml Micro Tube & 0.5 ml Micro Tube with external attachment	24 (6 x 4 Array)	150 x 100 x 75 mm	1

PCR Freezer Change Racks, PP						
Code	Colour at cold temperature	Colour at warm temperature	Capacity	Places	L x W x H, mm	No. / Case
P11107	Green	Yellow	PCR tubes/ 96 well plates/ strip tubes	96 (12 x 8 Array)	150 x 100 x 75 mm	1

Graph representing temperature stability VS Time



Note - Before use, Frosty Mate™ should be kept for 24 hours at - 40°C temperature deep freeze.

## 122 | Test Tube Rack, RPP & PC

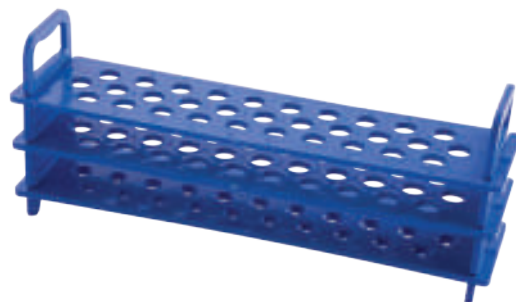
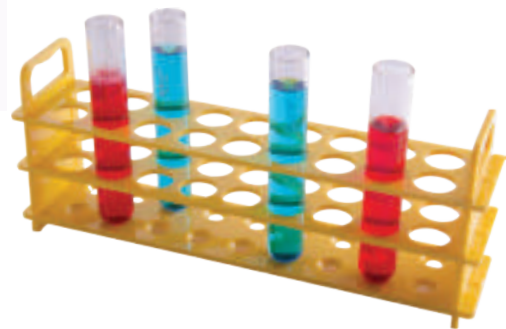
- Holes are keyed with moulded-in numbers and letters for easy identification.
- Ergonomics design facilitates easy handling.
- Can be used in a wide temperature range.
- Superior chemical resistance.



Test Tube Rack, RPP					
Code	Tube	Places	Colour	L x W x H	No. / Case
P20701	13 mm	31 Places	White, Yellow, Blue	275 x 65 x 110 mm	4
P20702	16 mm	31 Places	White, Yellow, Blue	275 x 65 x 110 mm	4
P20703	20 mm	20 Places	White, Yellow, Blue	324 X 73 X 127 mm	4
P20704	25 mm	18 Places	White, Yellow, Blue	324 X 73 X 127 mm	4
P20705	32 mm	12 Places	White, Yellow, Blue	280 X 84 X 127 mm	4

Test Tube Rack, PC					
Code	Tube	Places	Colour	L x W x H	No. / Case
P20706	13 mm	31 Places	White, Yellow, Blue	275 x 65 x 110 mm	4
P20707	13 mm	62 Places	White, Yellow, Blue	275 x 133 x 112 mm	2
P20708	16 mm	31 Places	White, Yellow, Blue	275 x 65 x 110 mm	4
P20709	16 mm	62 Places	White, Yellow, Blue	275 x 133 x 112 mm	2
P20710	20 mm	20 Places	White, Yellow, Blue	324 x 73 x 127 mm	4
P20711	20 mm	40 Places	White, Yellow, Blue	324 x 143 x 127 mm	2
P20712	25 mm	18 Places	White, Yellow, Blue	324 x 73 x 127 mm	4
P20713	25 mm	36 Places	White, Yellow, Blue	324 x 143 x 127 mm	2
P20714	32 mm	12 Places	White, Yellow, Blue	280 x 84 x 127 mm	4
P20715	32 mm	24 Places	White, Yellow, Blue	280 x 170 x 128 mm	2

Add colour of your choice- White (W), Yellow (Y), Blue (B).



## 123 | Double Jumbo Test Tube Rack, RPP

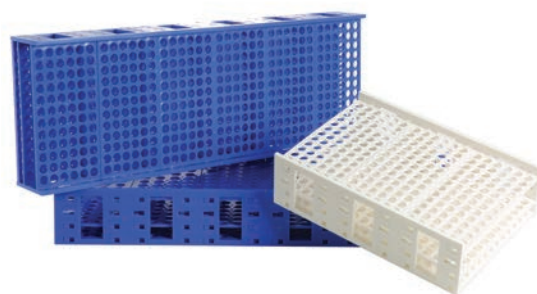
- These innovative double jumbo test tube racks are used for high capacity storage for tubes, vials and vessels.
- Extremely suitable for high throughput labs requiring large sample storage.
- Manufactured from robust, sturdy and lightweight material suitable for easy movement and transport.
- Holes are keyed with moulded-in numbers and letters for easy identification.
- Due to its sheer size, the rack eliminates the risk of using multiple racks. Use these racks for storing various grouping samples.



Double Jumbo Test Tube Rack, RPP					
Code	Tube	Places	Colour	L x W x H	No. / Case
P20441	10 - 13 mm	432 Places	White, Blue	673 x 230 x 80 mm	1
P20442	13 - 16 mm	240 Places	White, Blue	521 x 260 x 89 mm	1

Jumbo Test Tube Rack, RPP					
Code	Tube	Places	Colour	L x W x H	No. / Case
P20443	10 - 13 mm	216 Places	White, Blue	337 x 267 x 91 mm	1
P20444	13 - 16 mm	120 Places	White, Blue	337 x 267 x 91 mm	1

Add colour of your choice- White (W), Blue (B).



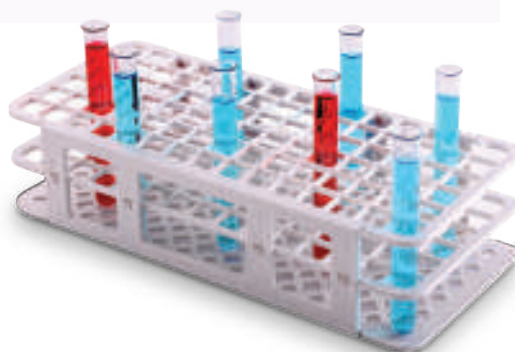
## 124 | Polygrid Test Tube Racks, PP

- Manufactured in the state of the art moulding facility using high purity virgin polypropylene (PP).
- Can be used in a wide temperature range.
- Racks have precise grid and vents.
- Superior chemical resistance.



Code	Tubes	Places	L x W x H	No. / Case
P20716	13 mm	90 Places	248 x 116 x 64 mm	4
P20717	17 mm	60 Places	245 x 118 x 70 mm	4
P20718	21 mm	40 Places	248 x 116 x 70 mm	4

Add colour of your choice- White (W), Blue (B).



## 125 | Polywire Racks, Delrin

- Polywire racks are durably moulded in a single continuous piece, so no assembly required and there are no detachable pieces.
- Manufactured from delrin® which is very tough, highly resistant to acids, bases solvents and heat.
- Superior performance to Nylon.
- Moulded in indexing for easy identification.
- These racks have flat labelling area for easier identification.
- Stable in water bath.
- Can be used in a wide temperature range from - 40°C to 140°C.



Polywire Rack Half, Delrin					
Code	Tube	Places	Colour	L x W x H	No. / Case
P20720	13 mm	36 Places	White, Blue, Red	104 x 104 x 59 mm	4
P20721	16 mm	36 Places	White, Blue, Red	127 x 127 x 70 mm	4
P20722	20 mm (15 ml tube)	20 Places	White, Blue, Red	100 x 127 x 83 mm	4
P20723	25 mm	16 Places	White, Blue, Red	120 x 122 x 92 mm	4
P20724	30 mm (15 ml tube)	9 Places	White, Blue, Red	110 x 110 x 85 mm	4



Polywire Rack Full, Delrin					
Code	Tube	Places	Colour	L x W x H	No. / Case
P20725	13 mm	72 Places	White, Blue, Red	104 x 202 x 59 mm	4
P20726	16 mm	72 Places	White, Blue, Red	127 x 250 x 70 mm	4
P20727	20 mm (15 ml tube)	40 Places	White, Blue, Red	100 x 252 x 83 mm	4
P20728	25 mm	40 Places	White, Blue, Red	120 x 300 x 92 mm	4
P20729	30 mm (15 ml tube)	24 Places	White, Blue, Red	110 x 282 x 85 mm	4

Add colour of your choice- White (W), Blue (B), Red (R).



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# 09 BOTTLE & CARBOYS

NARROW MOUTH BOTTLES,  
WIDE MOUTH BOTTLES,  
ASPIRATOR BOTTLES,  
CARBOYS & MORE

## 126 | Narrow Mouth Bottle Graduated, PP

- These bottles come with inner thread for superior sealing and better security.
- These bottles are used for packing, shipping and storage purposes.
- Superior chemical resistance.
- Complete emptying is guaranteed through inclination of shoulders.



Code	Capacity	Mouth Diameter	Height	No. / case
P11135	4 ml	12.2 mm	39.0 mm	100
P11136	8 ml	17.5 mm	42.3 mm	100
P11137	15 ml	17.5 mm	56.1 mm	100
P11138	30 ml	17.5 mm	60.0 mm	12
P11131	60 ml	17.5 mm	82.4 mm	12
P11132	125 ml	21.0 mm	97.6 mm	12
P11133	250 ml	21.0 mm	130.7 mm	12
P11134	500 ml	24.6 mm	165.5 mm	12



## 127 | Narrow Mouth Bottle Graduated, LDPE

- These bottles come with inner thread for superior sealing and better security.
- These bottles are used for packing, shipping and storage purposes.
- Superior chemical resistance.
- Complete emptying is guaranteed through inclination of shoulders.
- Suitable for storage of low density liquids.



Code	Capacity	Mouth Diameter	Height	No. / case
P11145	4 ml	12.2 mm	39 mm	100
P11146	8 ml	17.5 mm	42.3 mm	100
P11147	15 ml	17.5 mm	56.1 mm	100
P11148	30 ml	17.5 mm	60 mm	12
P11141	60 ml	17.5 mm	82.4 mm	12
P11142	125 ml	21 mm	97.6 mm	12
P11143	250 ml	21 mm	130.7 mm	12
P11144	500 ml	24.6 mm	165.5 mm	12



## 128 | Narrow Mouth Bottle Graduated, HDPE

- These bottles come with inner thread for superior sealing and better security.
- These bottles are used for packing, shipping and storage purposes.
- Superior chemical resistance.
- Complete emptying is guaranteed through inclination of shoulders.
- Suitable for storage of low density liquids.



Code	Capacity	Mouth Diameter	Height	No. / case
P11155	4 ml	12.2 mm	39.0 mm	100
P11156	8 ml	17.5 mm	42.3 mm	100
P11157	15 ml	17.5 mm	56.1 mm	100
P11158	30 ml	17.5 mm	60.0 mm	12
P11151	60 ml	17.5 mm	82.4 mm	12
P11152	125 ml	21.0 mm	97.6 mm	12
P11153	250 ml	21.0 mm	130.7 mm	12
P11154	500 ml	24.6 mm	165.5 mm	12



## 129 | Amber Narrow Mouth Bottle Graduated, HDPE

- 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 purposes.
- Superior chemical resistance.
- Complete emptying is guaranteed through inclination of shoulders.
- Suitable for storage of low density liquids.



Code	Capacity	Mouth Diameter	Height	No. / case
P11155 A	4 ml	12.2 mm	39.0 mm	100
P11156 A	8 ml	17.5 mm	42.3 mm	100
P11157 A	15 ml	17.5 mm	56.1 mm	100
P11158 A	30 ml	17.5 mm	60.0 mm	12
P11151 A	60 ml	17.5 mm	82.4 mm	12
P11152 A	125 ml	21.0 mm	97.6 mm	12
P11153 A	250 ml	21.0 mm	130.7 mm	12
P11154 A	500 ml	24.6 mm	165.5 mm	12

## 130 | Narrow Mouth Bottle (Carboy Type), PP

- These bottles come with long inner thread for superior sealing and better security.
- These bottles are used for packing, shipping and storage purposes.
- Superior chemical resistance.
- Complete emptying is guaranteed through inclination of shoulders.



Code	Capacity	Mouth Diameter	Height	No. / case
P11127	2000 ml	24.9 mm	248.1 mm	6
P11128	4000 ml	25.6 mm	333 mm	6
P11129	8000 ml	38.3 mm	410 mm	6

## 131 | Wide Mouth Bottle Graduated, PP

- These bottles come with inner thread for superior sealing and better security.
- Wide mouth of bottles allows for easy filling and emptying.
- These bottles are used for packing, shipping and storage purposes.
- Superior chemical resistance.
- Complete emptying is guaranteed through inclination of shoulders.



Code	Capacity	Mouth Diameter	Height	No. / case
P11160	30 ml	21.2 mm	58.9 mm	12
P11161	60 ml	24.8 mm	81 mm	12
P11162	125 ml	32 mm	94.5 mm	12
P11163	250 ml	32.2 mm	126.7 mm	12
P11164	500 ml	47.5 mm	163.2 mm	12



## 132 | Wide Mouth Bottle Graduated, LDPE

- These bottles come with inner thread for superior sealing and better security.
- Wide mouth of bottles allows for easy filling and emptying.
- These bottles are used for packing, shipping and storage purposes.
- Superior chemical resistance.
- Complete emptying is guaranteed through inclination of shoulders.



Code	Capacity	Mouth Diameter	Height	No. / case
PI1170	30 ml	21.2 mm	58.9 mm	12
PI1171	60 ml	24.8 mm	81 mm	12
PI1172	125 ml	32 mm	94.5 mm	12
PI1173	250 ml	32.2 mm	126.7 mm	12
PI1174	500 ml	47.5 mm	163.2 mm	12



## 133 | Wide Mouth Bottle Graduated, HDPE

- These bottles come with inner thread for superior sealing and better security.
- Wide mouth of bottles allows for easy filling and emptying.
- These bottles are used for packing, shipping and storage purposes.
- Superior chemical resistance.
- Complete emptying is guaranteed through inclination of shoulders.



Code	Capacity	Mouth Diameter	Height	No. / case
PI1180	30 ml	21.2 mm	58.9 mm	12
PI1181	60 ml	24.8 mm	81 mm	12
PI1182	125 ml	32 mm	94.5 mm	12
PI1183	250 ml	32.2 mm	126.7 mm	12
PI1184	500 ml	47.5 mm	163.2 mm	12



## 134 | Amber Wide Mouth Bottle Graduated, HDPE

- 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 of bottles allows for easy filling and emptying.
- These bottles are used for packing, shipping and storage purposes.
- Superior chemical resistance.
- Complete emptying is guaranteed through inclination of shoulders.



Code	Capacity	Mouth Diameter	Height	No. / case
PI1180 A	30 ml	21.2 mm	58.9 mm	12
PI1181 A	60 ml	24.8 mm	81 mm	12
PI1182 A	125 ml	32 mm	94.5 mm	12
PI1183 A	250 ml	32.2 mm	126.7 mm	12
PI1184 A	500 ml	47.5 mm	163.2 mm	12



## 135 | Aspirator Bottle with Stopcock, PP

- Aspirator bottles are manufactured using high purity virgin USP Class VI Medical grade polypropylene (PP).
- These bottles come with secure sealing cap for better security and long-term storage.
- These bottles 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.
- Comes with high quality and durable stopcock or tap for easy withdrawal of liquids, chemicals, reagents, culture media and standards.
- Can be used at a temperature below 0°C.
- Superior chemical resistance.



121°C

Code	Capacity	Mouth Diameter	Height	No. / case
P11515	5 LTS	51.4 mm	374 mm	1
P11516	10 LTS	51.4 mm	445 mm	1
P11517	20 LTS	51.4 mm	525 mm	1



## 136 | Carboy, PP

- Abdos Carboys are manufactured using high purity virgin USP Class VI Medical grade polypropylene (PP).
- 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.
- Can be used at a temperature below 0°C.
- Superior chemical resistance.



121°C

Code	Capacity	Mouth Diameter	Height	No. / case
P11518	10 LTS	63.8 mm	378 mm	1
P11519	20 LTS	64.2 mm	525 mm	1



## 137 | Carboy with Stopcock, PP

- Abdos Carboys are manufactured using high purity virgin USP Class VI Medical grade polypropylene (PP).
- 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 a temperature below 0°C.
- Superior chemical resistance.



121°C

Code	Capacity	Mouth Diameter	Height	No. / case
P11520	10 LTS	63.8 mm	378 mm	1
P11521	20 LTS	64.2 mm	525 mm	1



## 138 | Carboy Wide Mouth, PP

- Abdos Carboys are manufactured using high purity virgin USP Class VI Medical grade polypropylene (PP).
- 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 wide mouth easy withdrawal and refill of liquids, chemicals, reagents, culture media and standards.
- Can be used at a temperature below 0°C.
- Superior chemical resistance.



121°C

Code	Capacity	Mouth Diameter	Height	No. / case
PI1522	10 LTS	76 mm	378 mm	1
PI1523	20 LTS	85 mm	525 mm	1



## 139 | Heavy Duty Wide Mouth Carboy with Stopcock, HDPE

- Abdos Carboys are manufactured using high purity virgin USP Class VI Medical grade polypropylene (PP).
- 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.
- 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.



121°C

Code	Capacity	Mouth Diameter	Height	No. / case
PI1511	30 LTS	250 mm	440 mm	1
PI1512	50 LTS	250 mm	650 mm	1
PI1513	100 LTS	250 mm	800 mm	1
PI1510	Spare Stopcock	9 mm	NA	1



## 140 | Spray Bottle, LDPE

- 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.



121°C

Code	Capacity	No. / case
PI1191	500 ml	6
PI1192	1000 ml	6
PI1200	Spare Pump	1



## 141 | Dropping Bottle, LDPE

- 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.
- Superior chemical resistance.



121 °C

Code	Capacity	Mouth Diameter	Height	No. / case
P11301	60 ml	23.6 mm	94.2 mm	12
P11302	125 ml	22.8 mm	101.8 mm	12



## 142 | Dropping Bottle Euro Type, LDPE

- 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.
- Superior chemical resistance.



121 °C

Code	Capacity	Mouth Diameter	Height	No. / case
P11305	30 ml	17.5 mm	60 mm	12
P11306	60 ml	17.5 mm	82.4 mm	12
P11307	125 ml	23.6 mm	94.2 mm	12
P11308	250 ml	22.8 mm	101.8 mm	12



## 143 | Wash Bottle, LDPE

- Moulded from high quality virgin low-density polyethylene to ensure excellent results.
- 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.
- Superior chemical resistance.



121 °C

Code	Capacity	Mouth Diameter	Height	No. / case
P11311	250 ml	24 mm	148 mm	12
P11312	500 ml	23.8 mm	173 mm	6



## 144 | Wash Bottle (Comet), LDPE

- Moulded from high quality virgin low-density polyethylene to ensure excellent results.
- 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.
- These bottles are ideal for Distilled water and suitable for foodstuff.



121 °C

Code	Capacity	Mouth Diameter	Height	No. / case
P11313	250 ml	28.2 mm	134.5 mm	12
P11314	500 ml	28.2 mm	165.7 mm	12



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# 10 GENERAL LABORATORY PRODUCTS

BEAKERS & MEASURING CYLINDERS

VOLUMETRIC FLASKS & DESSICATORS

BIOHAZARD & AUTOCLAVE DISPOSABLE BAGS

GLOVES & SAFETY GOGGLES

& MORE

## 145 | Beakers Without Handle, PP & TPX

- Manufactured in state of the art moulding facility using high purity virgin polypropylene (PP) & polymethylpentene (TPX).
- PP Material conforming to US FDA 21 CFR.
- TPX Material has distinct advantage of high transparency & chemical resistivity, also has 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 Without Handle, PP			
Code	Capacity	Height	No. / case
P50601	50 ml	59 mm	12
P50602	100 ml	73 mm	12
P50603	250 ml	94 mm	12
P50604	500 ml	128 mm	6
P50605	1000 ml	150 mm	4
P50606	2000 ml	192 mm	4
P50607	5000 ml	263 mm	2
P50608	10000 ml	328 mm	1

Beakers Without Handle, TPX			
Code	Capacity	Height	No. / case
P50701	50 ml	59 mm	12
P50702	100 ml	73 mm	12
P50703	250 ml	94 mm	12
P50704	500 ml	128 mm	6
P50705	1000 ml	150 mm	4
P50706	2000 ml	192 mm	4
P50707	5000 ml	263 mm	2
P50708	10000 ml	328 mm	1

## 146 | Beakers With Handle, PP & TPX



Beakers With Handle, PP			
Code	Capacity	Height	No. / case
P50802	100 ml	73 mm	6
P50803	250 ml	94 mm	6
P50804	500 ml	128 mm	6
P50805	1000 ml	150 mm	4
P50806	2000 ml	192 mm	4
P50807	5000 ml	263 mm	2
P50808	10000 ml	330 mm	1

Beakers With Handle, TPX			
Code	Capacity	Height	No. / case
P50902	100 ml	73 mm	6
P50903	250 ml	94 mm	6
P50904	500 ml	128 mm	6
P50905	1000 ml	150 mm	4
P50906	2000 ml	192 mm	4
P50907	5000 ml	263 mm	2
P50908	10000 ml	330 mm	1

## 147 | Measuring Cylinder, PP Class "B"

- Moulded-in large easy to read graduation.
- Moulded-in from highest quality translucent virgin polypropylene.
- Cylinders have generous pour spout for smooth flow of liquid during pouring.
- Hexagonal shape gives stability to the base.



Code	Capacity	Sub division	Error Limit	Height	No. / Case
P50301	10 ml	0.2 ml	± 0.2 ml	138 mm	12
P50302	25 ml	0.5 ml	± 0.5 ml	170 mm	12
P50303	50 ml	1 ml	± 1 ml	198 mm	12
P50304	100 ml	1 ml	± 1 ml	257 mm	6
P50305	250 ml	2 ml	± 2 ml	314 mm	6
P50306	500 ml	5 ml	± 5 ml	344 mm	3
P50307	1000 ml	10 ml	± 10 ml	412 mm	3
P50308	2000 ml	20 ml	± 20 ml	482 mm	3



## 148 | Measuring Cylinder, TPX Class "B"

- These transparent graduated cylinders have excellent value.
- Moulded 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.



Code	Capacity	Sub division	Error Limit	Height	No. / Case
P50401	10 ml	0.2 ml	± 0.2 ml	138 mm	12
P50402	25 ml	0.5 ml	± 0.5 ml	170 mm	12
P50403	50 ml	1 ml	± 1 ml	198 mm	12
P50404	100 ml	1 ml	± 1 ml	257 mm	6
P50405	250 ml	2 ml	± 2 ml	314 mm	6
P50406	500 ml	5 ml	± 5 ml	344 mm	3
P50407	1000 ml	10 ml	± 10 ml	412 mm	3
P50408	2000 ml	20 ml	± 20 ml	482 mm	3



## 149 | Measuring Cylinder, TPX Class "A"

- These transparent graduated cylinders have excellent value.
- Moulded 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.



Code	Capacity	Sub division	Error Limit	Height	No. / Case
P50501	10 ml	0.2 ml	± 0.1 ml	138 mm	1
P50502	25 ml	0.5 ml	± 0.25 ml	170 mm	1
P50503	50 ml	1 ml	± 0.5 ml	198 mm	1
P50504	100 ml	1 ml	± 0.5 ml	257 mm	1
P50505	250 ml	2 ml	± 1 ml	314 mm	1
P50506	500 ml	5 ml	± 2.5 ml	343 mm	1
P50507	1000 ml	10 ml	± 5 ml	412 mm	1
P50508	2000 ml	20 ml	± 10 ml	482 mm	1



## 150 | Volumetric flask. TPX, Class B

- These Volumetric Flasks are manufactured from the medical grade TPX polymer conforming to 21 CFR free of heavy metal and natural rubber.
- These Flasks are made from Glass like TPX offering excellent clarity.
- These Volumetric Flasks Come with polypropylene stopper.
- Meet accuracy requirements of class B under "ISO 1042".
- These flasks are recommended to be washed at max 60°C.
- Can be autoclaved.



Code	Capacity	Error Limit	Bulb Diameter	Height with stopper	Neck Size	No. / Case
P50101	25 ml	±0.08 ml	40 mm	115 mm	10/19	1
P50102	50 ml	±0.12 ml	50 mm	150 mm	12/21	1
P50103	100 ml	±0.20 ml	60 mm	180 mm	14/23	1
P50104	250 ml	±0.30 ml	80 mm	235 mm	19/26	1
P50105	500 ml	±0.50 ml	100 mm	270 mm	19/26	1
P50106	1000 ml	±0.80 ml	125 mm	310 mm	24/29	1



## 151 | Volumetric flask. TPX, Class A

- These Volumetric Flasks are manufactured from the medical grade TPX polymer conforming to 21 CFR free of heavy metal and natural rubber.
- These Flasks are made from Glass like TPX offering excellent clarity.
- These Volumetric Flasks Come with polypropylene stopper.
- Meet accuracy requirements of class A under "ISO 1042".
- Supplied with conformity test certificate that indicates batch number & year of production.
- These flasks are recommended to be washed at max 60°C.
- Can be autoclaved.



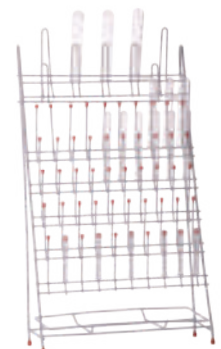
Code	Capacity	Error Limit	Bulb Diameter	Height with stopper	Neck Size	No. / Case
P50201	25 ml	±0.04 ml	40 mm	115 mm	10/19	1
P50202	50 ml	±0.06 ml	50 mm	150 mm	12/21	1
P50203	100 ml	±0.10 ml	60 mm	180 mm	14/23	1
P50204	250 ml	±0.15 ml	80 mm	235 mm	19/26	1
P50205	500 ml	±0.25 ml	100 mm	270 mm	19/26	1
P50206	1000 ml	±0.40 ml	125 mm	310 mm	24/29	1



## 152 | Drying Rack, SS

- These Drying Racks are used for draining and drying test tubes, beakers, flasks & other labware.
- There are 55 pegs in the rack, 50 smaller pegs for products with small diameter & 5 large brackets are designed to hold Erlenmeyer flasks, beakers, etc.
- These pegs are plastic coated for better protection.
- The racks come with a tray at the bottom in order to avoid drops on the surface or table.

Code	Places	L x W x H	No. / Case
P20302	55 places	360 x 160 x 650 mm	1





## 153 | Scoop, HDPE

- These scoops are used for withdrawal and movement of solid, granulates, gels and other samples.
- Round bottom for better use.
- With precise formed filling edge and comfortable, stable and robust handle.
- Natural in colour.
- Superior chemical resistance.



Code	Capacity	Total Length	No. / Case
P11901	100 ml	180 mm	12
P11902	250 ml	240 mm	12
P11903	500 ml	300 mm	6
P11904	1000 ml	360 mm	6
P11905	2500 ml	400 mm	3



## 154 | Dual Purpose Scoop, PS

- ABDOS Dual purpose Scoop is designed to combine the function of a scoop, weigh boat, and funnel to make this product economically beneficial.
- These Scoops are made from high quality anti-static polystyrene that is waterproof and reduces the probability of materials sticking to the scoop.
- These scoops have locking tabs that help to retain materials.
- These scoops can withstand powders, gels, and semi-solids.
- The broad tip design keeps the scoop stable while on the scale and enables materials to be easily scooped and dispensed.
- The dosage requirements for electron beam sterilization that results in sterilized products is determined by procedures that are compliant with ISO 11137.



STERILE E

NEW

Code	Size	Dimension	Color	No. / Case
P11907	Large	127 x 90 mm	White	100
P11908	Small	127 x 63 mm	White	100



## 155 | Conical Flask, PP

- Moulded from high quality virgin Polypropylene to ensure excellent results.
- These Conical Flasks are used for routine storage and pouring applications in the laboratory.
- These Flasks have a screw cap designed with inner thread for superior sealing and better security.



NEW

121°C

Code	Capacity	No. / case
P11620	125 ml	12
P11621	250 ml	12
P11622	500 ml	12



## 156 | Plain and Vacuum Dessicator

### Plain Dessicator

- Dessicators are enclosures containing desiccants for preserving moisture sensitive products.
- These dessicators are moulded-in from 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 dessicators 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 dessicators is white in color.

### Vacuum Dessicator

- Vacuum dessicator 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.
- Polypropylene stopcock with PTFE.
- Bottom part of the dessicators comes with thick perforated polypropylene disc with big holes in the middle for easy lifting.
- Bottom part of the dessicator is transparent in all clear vacuum dessicator.



Plain Dessicator  
(PP/PC)



Vacuum Dessicator  
(PP/PC)



All Clear Vacuum Dessicator  
(PC/PC)

Code	Product	Plate Diameter	Inside Diamter	Flange Outer Diameter	Overall Height	No. / Case
E11601	Plain Dessicator	150 mm	145 mm	170 mm	210 mm	1
E11602	Plain Dessicator	200 mm	195 mm	230 mm	270 mm	1
E11603	Plain Dessicator	250 mm	240 mm	275 mm	330 mm	1
E11604	Plain Dessicator	300 mm	297 mm	338 mm	410 mm	1
E11605	Vacuum Dessicator	150 mm	145 mm	170 mm	210 mm	1
E11606	Vacuum Dessicator	200 mm	195 mm	230 mm	270 mm	1
E11607	Vacuum Dessicator	250 mm	240 mm	275 mm	330 mm	1
E11608	Vacuum Dessicator	300 mm	297 mm	338 mm	410 mm	1
E11609	All Clear Vacuum Dessicator	150 mm	145 mm	170 mm	210 mm	1
E11610	All Clear Vacuum Dessicator	200 mm	195 mm	230 mm	270 mm	1
E11611	All Clear Vacuum Dessicator	250 mm	240 mm	275 mm	330 mm	1
E11612	All Clear Vacuum Dessicator	300 mm	297 mm	338 mm	410 mm	1

### SPARE ACCESSORIES FOR ALL DESICCATOR

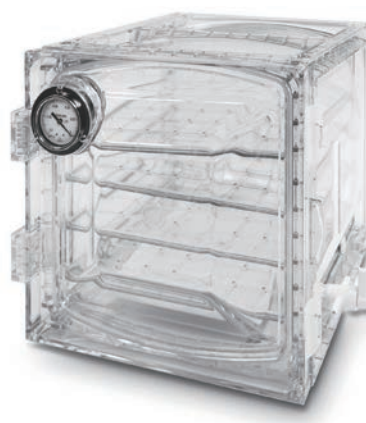
Code	Product	No. / Case
E11620	Stop Cock for Vacuum Dessicator	1
E11621	Silicone Ring for 150 mm Dessicator	1
E11622	Silicone Ring for 200 mm Dessicator	1
E11623	Silicone Ring for 250 mm Dessicator	1
E11624	Silicone Ring for 300 mm Dessicator	1

## 157 | Vacuum Gauge Round / Cubic Dessicator

- These vacuum dessicators 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.
- 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.
- Flange lock holds the top and the bottom together during non-vacuum conditions.
- UV-blocking model minimizes damage and discoloration of light-sensitive samples.
- In Vacuum Gauge Round Dessicator, vacuum gauge is attached at the centre of the lid while it is attached at the front door in Vacuum Gauge Cubic Dessicator.



Vacuum Gauge Round Dessicator



Vacuum Gauge Cubic Dessicator

Code	Capacity	D x H	Colour	No. / Case	Code	Capacity	W x D x H	Colour	No. / Case
E11617	6 LTS	242 x 354 mm	Natural	1	E11613	11 LTS	322 x 285 x 271 mm	Natural	1
E11617 A	6 LTS	243 x 354 mm	Amber	1	E11613 A	11 LTS	323 x 285 x 271 mm	Amber	1
E11618	10 LTS	308 x 400 mm	Natural	1	E11614	23 LTS	420 x 397 x 281 mm	Natural	1
E11618 A	10 LTS	308 x 400 mm	Amber	1	E11614 A	23 LTS	421 x 397 x 281 mm	Amber	1
E11619	20 LTS	385 x 475 mm	Natural	1	E11615	35 LTS	420 x 397 x 381 mm	Natural	1
E11619 A	20 LTS	385 x 475 mm	Amber	1	E11615 A	35 LTS	421 x 397 x 381 mm	Amber	1
					E11616	45 LTS	420 x 397 x 491 mm	Natural	1
					E11616 A	45 LTS	421 x 397 x 491 mm	Amber	1

### SPECIFICATIONS :

Code	E11617 & E11617 A	E11618 & E11618 A	E11619 & E11619 A	E11613 & E11613 A	E11614 & E11614 A	E11615 & E11615 A	E11616 & E11616 A
Internal Volume	6 L / 0.2 cu ft	10 L / 0.4 cu ft	20 L / 0.7 cu ft	11 L / 0.4 cu ft	23 L / 0.8 cu ft	35 L / 1.2 cu ft	45 L / 1.6 cu ft
Gauge Range	0 to -0.1 Mpa	0 to -0.1 Mpa	0 to -0.1 Mpa	0 to -0.1 Mpa	0 to -0.1 Mpa	0 to -0.1 Mpa	0 to -0.1 Mpa
Nozzle Diameter	9.5 mm / 0.37 inch	9.5 mm / 0.37 inch	9.5 mm / 0.37 inch	9.5 mm / 0.37 inch	9.5 mm / 0.37 inch	9.5 mm / 0.37 inch	9.5 mm / 0.37 inch
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	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	Polycarbonate	Polycarbonate	Polycarbonate
Material - Perforated Sample Tray	Polypropylene	Polypropylene	Polypropylene	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Material - Drying Agent Tray / Locker	Polypropylene	Polypropylene	Polypropylene	Polypropylene	Polypropylene	Polypropylene	Polypropylene
Material - Vacuum Seal	Silicone Rubber	Silicone Rubber	Silicone Rubber	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 (Dia X H)	242 x 354 mm	308 x 400 mm	385 x 475 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	1.5 Kg	2.5 Kg	4.2 Kg	4.2 Kg	8.2 Kg	10.8 Kg	12.2 Kg

E11617 A, E11618 A, E11619 A, E11613 A, E11614 A, E11615 A, E11616 A codes are translucent (Amber colour) Vacuum dessicators with Ultra Violet block effect. All models come with vacuum gauge.

## 158 | Funnel, PP

- Designed specifically for analytical chemistry.
- Each size takes a standard size filter paper.
- The body of the funnel is 60° angle.
- Provided with external and internal ribs.



Code	Size Diameter	Internal Diameter	Stem Length	No. / Case
P70314	50 mm	50 mm	50 mm	72
P70315	62 mm	62 mm	67 mm	36
P70316	75 mm	75 mm	77 mm	36
P70317	100 mm	100 mm	95 mm	36



## 159 | Powder Funnel, PP

- These Powder Funnels are used for transferring material in narrow bottles without spillage.
- Various sizes for different container sizes and volumes.
- Moulded from high quality virgin Polypropylene to ensure excellent results.



Code	Internal Diameter	No. / Case
P70318	65 mm	36
P70319	80 mm	36
P70320	100 mm	36



## 160 | Separatory Funnel, PP

- ABDOS Separatory funnel is moulded from high quality virgin Polypropylene to ensure excellent clarity and strength.
- This Funnel is pear shaped and has screw cap for superior sealing and leak proof.
- This funnel comes with PTFE plug for easy usage.
- Push Fit Plugs make the assembly easy and convenient.



Code	Capacity	No. / Case
P70321	125 ml	2
P70322	250 ml	2
P70323	500 ml	2



## 161 | Funnel Holder, PP

- These are corrosion free and can hold funnels with diameter 3 in to 6 in.
- Extra plate provided can be placed to hold funnels with diameter 1 in to 3 in.
- Two tapered wedges are provided to have a firm grip on rods.



Code	Places	No. / Case
P70311	Single	12
P70312	Double	6



## 162 | Separatory Funnel Holder, PP

- These are corrosion free with a front opening that allows a clear view of the solution and allows unobstructed placement of separating funnels.
- Two tapered wedges are provided to have a firm grip on rods.



Code	Places	No. / Case
P70313	Single	12



## 163 | Retort Stand, PP/PE Coated Rod

- Retort stand is used to attach clamp that holds test tubes and other equipment like burettes.
- It is used for titration, distillation and filtering of samples.
- It is available in both central and side holes.
- Base of the stand is PP and the rod is coated in PE.

Code	L x B, mm	Height of Rod	No. / Case
P70211	225 x 150 side hole	750 mm	1
P70212	300 x 200 centre hole	750 mm	1
P70213	301 x 200 side hole	750 mm	1



## 164 | Burette Clamp, PP

- Burette clamps are used to hold burettes, test tubes, etc.
- Completely corrosion proof as it is moulded in polypropylene.
- Spring-loaded jack in the middle provides grip to the burette and prevents it from slipping.
- Two tapered wedges are provided to ensure firm grip on the rods.
- Available in both single and double clamp.

Code	Places	No. / Case
P70601	Single	12
P70602	Double	6



## 165 | Assorted Workstation storage Bin, ACRYLIC

- 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.
- Second section of the bin is used to store and dispense tissue paper, kimwipes and Parafilm M (supplied with super-sharp serrated blade).
- Third section of the bin is used to store and dispense gloves.

Code	No. of Compartment	L x W x H	No. / Case
P70104	5	255 x 135 x 368 mm	1



## 166 | Workstation storage/ Dispenser Bin, ACRYLIC

- Ideal for storing and dispensing small laboratory product such as Pipette tips, Pasteur Pipette, Micro Centrifuge Tubes.
- Removable top cover allows easy filling in to the box.
- Hinged opening at the front to take out items from the bin.
- Holes at the back of the bin help it to be placed or stuck on to the wall.



Code	Size	L x W x H	No. / Case
P70101	Small	200 x 140 x 190 mm	1
P70102	Large	200 x 140 x 275 mm	1

## 167 | Animal Cage, PP/SS

- 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.



Code	Places	L x W x H	No. / Case
P20501	Single Grill	290 x 220 x 140 mm	1
P20502	Single Grill	430 x 270 x 150 mm	1
P20503	Twin Grill	290 x 220 x 140 mm	1
P20504	Twin Grill	430 x 270 x 150 mm	1

## 168 | Water Bottle for Animal Species, PP/SS

- These narrow mouth bottles come with attached stainless steel pipe for release of liquid.
- Easy to fill, empty and wash.
- Leak proof.



Code	Capacity	Mouth Diamter	Height	No. / Case
P20511	125 ml	290 x 220 x 140 mm	97.6 mm	12
P20512	250 ml	430 x 270 x 150 mm	130.7 mm	12



## 169 | Utility Tray

- Moulded from high quality virgin Polypropylene to ensure excellent results.
- These Utility Trays are used for routine washing and keeping labware and transporting material.
- This tray is designed for easy grip and handling heavy loads.



Code	L x W x H	No. / Case
P90115	350 x 275 x 75 mm	10
P90116	360 x 310 x 130 mm	6



## 170 | Biohazard Disposable Bags, PP

- Polypropylene bags include black biohazard symbol and precautionary procedures printed in four languages (English, Spanish, French, German) for added safety.
- These bags are easy to open and close and used to dispose biohazard waste and other plastic laboratory disposables.
- High temperature steam autoclavable to 135°C (275°F).
- Pass ASTM 1922 Tear Resistance and ASTM 1709 Dart Impact Tests.



121°C

Code	W x L	Colour	No. / Case
U40105	12 x 18 inches	Red, Yellow & Natural	200
U40106	12 x 24 inches	Red, Yellow & Natural	200
U40107	16 x 24.5 inches	Red, Yellow & Natural	200
U40103	18 x 22 inches	Red, Yellow & Natural	200
U40104	25 x 35 inches	Red, Yellow & Natural	200
U40114	24 x 31.5 inches	Red, Yellow & Natural	100
U40120	42 x 42 inches	Red, Yellow & Natural	100

Add colour of your choice- Natural (N), Red (R), Yellow (Y).



## 171 | Autoclavable Bags, PP

- These polypropylene autoclave bags made of 2 mil thickness are used for discarding used petri dishes, membrane filters, cell culture flasks, pipettes, culture plates & other plastic products.
- These bags are transparent.



121°C

Code	W x L	No. / Case
U40112	8 x 12 inches	100
U40113	12 x 24 inches	100
U40108	16 x 18 inches	100
U40109	16 x 24 inches	100



## 172 | Transport/ Resealable Bags with Zip Lock, PE

- These Bags can be used to store and ship samples, solids and food/suitable for use with food.
- Though it can be used for all applications it is especially used in food, water, forensic science and quality control laboratory.
- 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.

Code	W x L	No. / Case
U40110	9.8 x 10.2 inches	100
U40111	13 x 13.35 inches	100



## 173 | Sharp Container, PP

- A complete Line of Containers for needle, 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 sharp needles.
- Opening design inhibits hand entry to reduce the risk of needle stick when disposing sharps.
- Clear top and translucent containers allow you to monitor the fill level.
- Puncture-resistant, durable polypropylene, can be autoclaved or incinerated.
- Clearly marked with biohazard label.



Code	Capacity(ml)	No. / Case
P50111	800 ml	40
P50112	1200 ml	60
P50113	3000 ml	60
P50114	5000 ml	60



## 174 | Parafilm M Dispenser, ACRYLIC

- 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.

Code	Capacity	L x W x H	No. / Case
P70401	2 inch & 4 inch	180 x 120 x 160 mm	1

\* Dispenser does not include Parafilm M



## 175 | Parafilm M Dispenser, ABS

- 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.
- These dispensers are designed with safety razor that sides and cuts with no danger to fingers.

Code	Capacity	L x W x H	No. / Case
P70402	2 inch & 4 inch	156 x 120 x 156 mm	1

\* Dispenser does not include Parafilm M



## 176 | Safety Goggles, PC

- 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 the eye.
- U50104 can be worn over spectacles for complete protection of the eyes.

Code	No. / Case
U40101	2
U50103	2
U50104	2



U 40101

U 50103



U 50104



## 177 | Safety Goggles Box, ACRYLIC

- 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.

Code	L x W x H	Size	No. / Case
P70106	23 x 16 x 18 cm	Small	1
P70107	23 x 16 x 25 cm	Large	1



## 178 | Safety Face Shield, PC

- Clear face shield of polycarbonate provides high impact and splash protection.
- Ratched adjustment on the headgear provides comfortable fit.

Code	L x W x H	No. / Case
U40102	15.5 x 8 x 0.04 inches	1



## 179 | Abdos Brand - Derma Guard Blue Nitrile Gloves – 9.5 Inches Length

- These gloves are the ideal product to protect you from exposure to bacteria, viruses and chemicals. They also enhance 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.
- Ambidextrous, textured fingertips and beaded cuff enhanced wet and dry grip.
- Custom design enhances comfort and fit.
- These gloves are powder free, minimizing the potential for powder related complications.
- Conforms to ASTM D6319 and EN 455 Standards.

Code	Sizes	No. / Pack	No. / Case
U20447	X Small	100	1000
U20341	Small	100	1000
U20342	Medium	100	1000
U20343	Large	100	1000
U20448	X Large	100	1000



## 180 | Abdos Brand – Derma Guard White Latex Gloves – 9.5 Inches Length

- These gloves are the ideal product to protect you from exposure to bacteria, viruses and chemicals. They also enhance your ability to offer maximum security against cross-contamination.
- Ambidextrous, textured fingertips and beaded cuff enhanced 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.

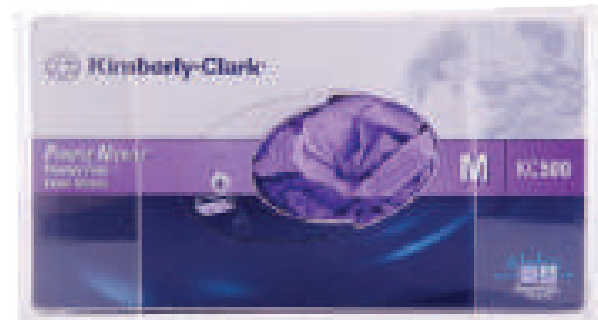
Code	Sizes	No. / Pack	No. / Case
U20449	X Small	100	1000
U20344	Small	100	1000
U20345	Medium	100	1000
U20346	Large	100	1000
U20450	X Large	100	1000



## 181 | Glove Box Holder, ACRYLIC

- They designate a place for gloves.
- Clear and pristine holder to give clean appearance.
- Top loading of the glove box.
- Easy to dispense the gloves through the holder.
- Each holder has holes that help it to be installed in a convenient location to the proximity of your work and tasks.

Code	No. of places	L x W x H	No. / Case
P70301	1	260 x 100 x 138 mm	1
P70302	2	260 x 100 x 270 mm	1
P70303	3	260 x 100 x 415 mm	1



## 182 | Abdos N95 Respirator Mask

- These masks are disposable respirators that provide protection from particulates.
- Bacterial Filtration Efficiency  $\geq 95\%$  approved as per guidelines.
- Confirm Minimum Splash Resistance Pressure.
- Satisfy all regulations of all accredited NABL labs.
- Particulate Filtration Efficiency  $\geq 95\%$  Confirms FFP2 as BIS: IS: 9473-2002 With / Without Expiratory Valve.



Code	Description	Colour	No. / Case
U20417A	N95 Mask	Grey/White	100
U20418A	N95 Mask with Exhalation Valve	Grey/White	100



## 183 | PPE Kit

### Coverall Body Suit with Heat Seal Taped

- Impermeable to blood and body fluids. Thumb / Finger loops to anchor sleeves in place.
- 90 GSM, Single Use. ISO 16603:2004 Certified.
- Free Size suitable for all fits. Colors available: White / Blue.
- Elasticated Hood, Wrist & Ankle.

### Gloves

- Nitrile, Non Sterile, Powder Free.
- Sizes 6.5, 7 & 7.5 can be supplied.

### Shoe Cover

- Made up of the same fabric of coverall, 100 GSM.
- Reaches above ankles.

### Goggles

- Comes with transparent glass, zero power, well fitting, covered from all sides. Seals well with the skin.
- Covers the eye and the surrounding areas. Protects the Mucous Membranes of the Eyes. Flexible frame to easily fit all face contours without too much pressure.
- Fog and scratch resistant.
- May be re-usable (provided appropriate arrangements for decontamination are in place) or disposable.

### 3 Ply Surgical Face Mask

- Triple Layer Surgical mask of non-woven material with elastic band.
- Filter efficiency of 99% for 3 micron particle size.

### N95 Face Mask

- Bacterial Filtration Efficiency  $\geq 95\%$  SITRA approved. Conforms to all regulations of all accredited NABL labs.
- Confirmed Minimum Splash Resistance Pressure.
- Particulate Filtration Efficiency  $\geq 95\%$ .
- Conforms to FFP2 as BIS: IS: 9473-2002.
- With / Without Expiratory Valve.



Code	Description	No. / Pack	No. / Case
U50110	PPE KIT- NON STERILE (with 3 ply mask)	1	10
U50111	PPE KIT- STERILE (with 3 ply mask)	1	10
U50112	PPE KIT - NON STERILE (With N95 Mask)	1	10
U50113	PPE KIT - STERILE (With N95 Mask)	1	10
U50114	PPE KIT -NON STERILE (With N95 Mask With Exhalation Valve)	1	10
U50115	PPE KIT -STERILE (With N95 Mask with Exhalation Valve)	1	10



## 184 | Weighing Boats, PS

- Abdos weighing boats are flexible with smooth surfaces to provide accurate pour-outs with minimal sample loss.
- Biologically inert and resistant to dilute weak acids, aqueous solutions, alcohols, and bases.
- All Abdos weighing boats are anti-static and facilitate the weighing of the static-affected sample.
- These boats can withstand temperature between 10°C to 70°C.
- Can be used with microwave moisture analysers.
- Suitable for use with food.
- 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.



Weighing Boats Standard, PS				
Code	Size	Colour	L x W x H	No. / Case
P70501	Small	Blue	46 x 46 x 8 mm	250
P70502	Medium	Blue	85 x 85 x 24 mm	250
P70505	Large	Blue	140 x 140 x 22 mm	250

Weighing Boat with Pour Spout, PS				
Code	Size	Colour	L x W x H	No. / Case
P70503	Small	White	43 x 58 x 13 mm	250
P70504	Medium	White	83 x 132 x 26 mm	250
P70506	Large	White	108 x 183 x 26 mm	250

## 185 | Spatula, PP

- 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.
- The edge is helpful in breaking up crystals of different salts while the spoon is used to draw salts from containers.
- Suitable for use with food.



Spatula, PP		
Code	Length	No. / Case
P70707	150 mm	12
P70708	200 mm	12



#CommittedtotheEarth



# 11 EQUIPMENTS

MAGNETIC STIRRERS & HOTPLATES  
DIGITAL DRY BATH & THERMO MIX  
ROTATING MIXERS & SHAKERS  
DIGITAL INCUBATORS  
OIL FREE VACUUM PUMPS & MORE

## 186 | Swirltop – Ultra Flat & Eco Magnetic Stirrer

- SWIRLTOP magnetic stirrer is used in biotech labs, provides better mixing & is ideal for application of physical & chemical analysis.
- Its body is made of ABS material.
- It comes with automatic reverse rotation for better mixing result.
- Top plate is made from chemically resistant materials (PET).



Code	Product	Workplate Size	No. / Case
E11307	Ultra Flat Magnetic Stirrer	9 x 9 cm	1
E11308	Eco Magnetic Stirrer	12 x 12 cm	1

### SPECIFICATIONS :

Code	E11307	E11308
Voltage	220-240V	220-240V
Frequency	50-60Hz	50-60Hz
Motor Type	Motor less	Brushless DC Motor
Stirring position	01	01
Speed range	15-1500 rpm	300-2000 rpm
Max. stirring quantity (H <sub>2</sub> O)	0.8L	1.5L
Maximum magnetic bar (length)	40mm	40mm
Dimensions of work plate	90x90mm	120x120mm
Dimensions	175x120x15 mm	150x145x50 mm
Weight	0.3kg	0.3kg
Speed setting	Button	Scale
Permissible ambient Temperature & Humidity	5-40°C	5-40°C
Permissible relative humidity	80%	80%
Protection Class	IP65	IP21



## 187 | Swirltop – Digital (LED) Magnetic Stirrer & Hot Plate

- Swirl Top unit features an extremely durable, chemical resistant white stainless steel ceramic coated surface that allows immediate heat transfer.
- LED Display shows temperature and speed.
- 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 allows quick, precise adjustment and maintains accurate temperature and speed.
- Large, backlit LCD display provides constant visualization of speed and temperature while safety LED indicates when the top plate is above  $50^{\circ}\text{C}$ .
- This digital system is compatible with a wide variety of popular glass beakers, flasks, bottles and vessels.
- Heat resistant ABS casing.



### SWIRLTOP – LED Digital Magnetic Stirrer & Hot Plate

Code	Product	Circular Workplate Size	No. / Case
E11231	LED Digital Magnetic Stirrer & Hot Plate with support rod & external temperature probe	13.5 cm	1
E11234	LED Digital Magnetic Stirrer & Hot Plate	13.5 cm	1

### Spare Accessories

Code	Product	No. / Case
E11232	SP – Support Rod	1
E11233	ETP – External Temperature Probe	1

### SPECIFICATIONS :

Voltage	220-240V
Frequency	50-60Hz
Motor type	DC Motor
Maximum stirring capacity	3L
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



## 188 | Swirltop – Digital (LCD) Magnetic Stirrer & Hot Plate

- Swirl Top unit features an extremely durable, chemical resistant white ceramic work surface.
- It has advanced microprocessor control with convenient turn knobs that allows quick, precise adjustment and maintains accurate temperature and speed.
- Large, backlit LCD display provides 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 an accuracy of  $\pm 0.5^{\circ}\text{C}$ .



### SWIRLTOP – LCD Digital Magnetic Stirrer & Hot Plate

Code	Product	Workplate Size	No. / Case
E11227	Digital Magnetic Stirrer & Hot Plate	16.5 x 16.5 cm	1

### Spare Accessories

Code	Product	No. / Case
E11228	Support Rod	1
E11229	External Temperature Probe	1

### SPECIFICATIONS :

Voltage	220-240V
Frequency	50-60 Hz
Shaking movement	Orbital
Maximum stirring capacity	5 L
Temperature range	5 – 380°C
Speed Range	200-1500rpm
Dimension	177 x 265 x 100mm
Weight	1.8kg
Permissible ambient temperature	5 – 40°C
Permissible relative humidity	80%





## 189 | Swirltop – 7 inch LCD Digital Magnetic Stirrer & Hot Plate

- LCD display for precise monitoring of speed and temperature for Magnetic stirrer & Hot plate.
- Built in PID Controller ensures the safe heating of the medium with overheating and protection.
- Max heating plate temperature 550°C.
- Glass ceramic work plate provides excellent chemical resistant performance and 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 control.
- 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 via RS232 using 3rd Party Software.



SWIRLTOP – LED Digital Magnetic Stirrer & Hot Plate			
Code	Product	Workplate Size	No. / Case
E11650	LCD DIGITAL Magnetic Stirrer & Hotplate with support Rod & External Temperature Probe	18.4 x 18.4 cm	1
E11651	LCD DIGITAL Hotplate with support Rod & External Temperature Probe	18.4 x 18.4 cm	1
E11652	LCD DIGITAL Magnetic Stirrer & Hotplate	18.4 x 18.4 cm	1
E11653	LCD DIGITAL Hotplate	18.4 x 18.4 cm	1

Spare Accessories		
Code	Product	No. / Case
E11654	SS/Support Rod-Seven Inch	1
E11233	ETP - External Temperature Probe	1

### SPECIFICATIONS :

Code	E11650 & E11652	E11651 & E11653
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	184 x 184mm (7Inch)	184 x 184mm (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	LCD
Speed range	100 – 1500 rpm, resolution $\pm 1$ rpm	NA
Maximum magnetic bar (length)	80mm	NA
Dimension	215x360x112mm	215x360x112mm
Weight	5.3kg	5.3kg
Permissible ambient temperature & Humidity	5 – 40°C	5 – 40°C
Permissible relative humidity	80%	80%
Protection class	IP21	IP21



## 190 | Swirltop – Multi Channel Magnetic Stirrer & Hot Plate

- SWIRLTOP Unit features an extremely durable stainless steel plate with anti-slip and anti-corrosion silicon surface.
- SWIRLTOP 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 & quiet operations.



Code	Product	Workplate Size	No. / Case
E11235	10 Channel Magnetic Stirrer	18 x 45 cm	1
E11236	10 Channel Magnetic Stirrer & Hot Plate	18 x 45 cm	1

### SPECIFICATIONS :

Code	E11235	E11236
Voltage	220-240V	220-240V
Frequency	50-60 Hz	50-60 Hz
Dimension of work plate	180 x 450 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	10	10
Maximum Stirring capacity	0.4 L(Each stirring position)	0.4 L(Each stirring position)
Max. Stirring Bar	40 mm	40 mm
Plate Material	Stainless Steel with silicon	Stainless Steel with silicon
Dimension	Film	Film
Weight	182 x 622 x 65mm	182 x 622 x 65mm
Permissible ambient temperature & Humidity	5.3 kg	5.3kg
Permissible relative humidity	5 – 40°C	5 – 40°C
Protection class	80%	80%
	IP42	IP42



## 191 | Swirlmax – Tube Roller

- 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 rollers with small footprints and it is very easy to clean.
- Swirlmax has a quiet DC brushless motor which is reliable, sound free and maintenance free.
- Swirlmax can be used in cold rooms or in incubators.



Code	Product	No. / Case
E11230	Tube Roller	1

### SPECIFICATIONS :

Voltage	220-240V
Frequency	50Hz
Power	25W
Motor Type	DC Motor
Rocking Motion	Rocking and Rolling
Amplitude	24mm
Max. load capacity	4kg
Number of Rollers	6
Roller Size	280mm
Speed Range	0-70rpm
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	IP21



## 192 | HOTBLOCK – LED Digital Dry Bath

- ABDOS–LED Digital Dry Bath Heaters are available in single and dual block configurations and provide a broad temperature range up to 150°C, which makes them useful for a variety of applications in molecular biology, histology, clinical, environmental, and industrial laboratories.
- They have been designed to incorporate the best combination of features including block capacity, dual displays, and an external temperature probe that gives life science researchers the confidence and efficiency they need when working with precious lab samples.
- This is ideal for 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.
- The blocks are precision machined to match the conical size and shape of 0.5, 1.5, 2.0, 15 and 50ml tube sizes, providing unsurpassed temperature transfer. Assorted blocks are available for compatibility with nearly all common laboratory tubes and plates.
- Various optional blocks are available for best performance.
- Protection class according to DIN EN 60529.

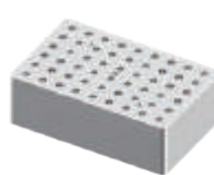


### HOTBLOCK – LED Digital Dry Bath

Code	Product	Block Capacity	Temperature Range	No. / Case
E11330	LED Digital Dry Bath with one Heating Block	Single	Ambient +5°C –120°C	1
E11360	LED Digital Dry Bath with one heating Block	Single	Ambient +5°C –105°C	1
E11370	LED Digital Dry Bath with two Heating Block	Dual	Ambient +5°C –105°C	1
E11380	LED Digital Dry Bath with one heating Block	Single	Ambient +5°C –150°C	1
E11390	LED Digital Dry Bath with two Heating Block	Dual	Ambient +5°C –150°C	1

### Spare Accessories of E11330

Code	Product	Places	No. / Case
E11331	Heating Block, used for 0.2 ml	54	1
E11332	Heating Block, used for 0.5 ml	40	1
E11333	Heating Block, used for 1.5 ml	40	1
E11338	Heating Block, used for 2.0 ml	40	1
E11334	Heating Block, used for 5/15 ml	28	1
E11335	Heating Block, used for 50 ml	8	1
E11336	Heating Block, used for 0.2, 0.5, 1.5/2.0 ml	18	1
E11337	Heating Block, used for 96/384 Microplate	96 /384 Microplate	1
E11339	Heating Block, used for 2.0 ml (Thin)	40	1
E11368	Heating Block, used for 1.5 ml (Thin)	40	1



E11331



E11333



E11335



E11336

### Spare Accessories of E11360, E11370, E11380, E11390

Code	Product	Places	No. / Case
E11361	Heating Block, used for 0.2 ml	30	1
E11362	Heating Block, used for 0.5 ml	20	1
E11363	Heating Block, used for 1.5 ml	20	1
E11364	Heating Block, used for 2 ml	20	1
E11365	Heating Block, used for 5 ml	12	1
E11366	Heating Block, used for 15 ml	12	1
E11367	Heating Block, used for 50 ml	4	1



E11361



E11364



E11365



E11367

SPECIFICATIONS :	E11330	E11360	E11370	E11380	E11390
Voltage	220-240V	220-240V	220-240V	220-240V	220-240V
Frequency	50-60Hz	50-60Hz	50-60Hz	50-60Hz	50-60Hz
Adaptor block material	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Maximum heating rate	5.5°C/min	5.5°C/min	5.5°C/min	5.5°C/min	5.5°C/min
Heating temperature Range	Room Temperature +5-120°C	Room Temperature +5-105°C	Room Temperature +5-105°C	Room Temperature +5-150°C	Room Temperature +5-150°C
Temperature Setting Range	25-120	25-105	25-105	25-150	25-150
Temperature Control accuracy	±0.5°C	25-90 : ±0.3 90-105 : ±0.6	25-90 : ±0.3 90-105 : ±0.6	25-90 : ±0.3 90-150: ±0.6	25-90 : ±0.3 90-150 : ±0.6
Temperature Uniformity @ 37°C	±0.5	±0.2	±0.2	±0.2	±0.2
Sound Alarming Function	-	Yes	Yes	Yes	Yes
Timer	Yes	Yes	Yes	Yes	Yes
Time setting range	1 Min - 99Hr 59Min	0 Min - 99Hr 59Min	0 Min - 99Hr 59Min	0 Min - 99Hr 59Min	0 Min - 99Hr 59Min
Operation type	Continuous/timed operation	Continuous/timed operation	Continuous/timed operation	Continuous/timed operation	Continuous/timed operation
External Sensor	-	Yes	Yes	Yes	Yes
USB Interface	-	Yes	Yes	Yes	Yes
Dimension (W x D x H)	175 x 220 x 85mm	290 x 210 x 120mm	290 x 210 x 120mm	290 x 210 x 120mm	290 x 210 x 120mm
Permissible ambient temperature	5-40°C	5-40°C	5-40°C	5-40°C	5-40°C
Permissible humidity	80%	80%	80%	80%	80%
Protection Class	IP21	IP21	IP21	IP21	IP21



E11330



E11360 &amp; E11380



E11370 &amp; E11390

## 193 | THERMO MIX– LCD Digital

- ABDOS Thermo Mix Series allows for precise and efficient shaking and mixing as well as excellent temperature accuracy and uniformity, offering a wide range of applications, such as Gene Synthesis, Gene Purification, Gene Denaturation, Protein Denaturation, Enzymatic reaction, Bacterial growth and many more.
- ABDOS Thermo Mix is equipped with quick interchange of blocks with magnet Adhesion technology and without any tools.
- It is programmable and has three points calibration with precise temperature control for heating and cooling.

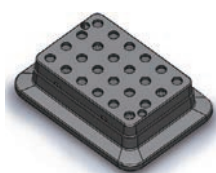


Thermo Mix – LCD Digital		
Code	Product	No. / Case
E11340	LCD Digital Thermo Mix with Heating and Cooling and Mixing with 1.5 ml Heating Block	1
E11341	LCD Digital Thermo Mix with Heating and Cooling with 1.5 ml Heating Block	1
E11342	LCD Digital Thermo Mix with Heating and Mixing with 1.5 ml Heating Block	1

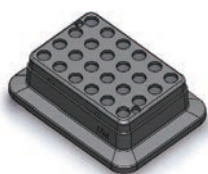
Spare Accessories				
Code	Product	Speed	Places	No. / Case
E11343	Heating Block, used for 0.2 ml / 96 well PCR plate	1500rpm	96	1
E11344	Heating Block, used for 96/384 well microplate	1500rpm	96/384	1
E11345	Heating Block, used for 0.5 ml	1500rpm	24	1
E11346	Heating Block, used for 1.5 ml	1500rpm	24	1
E11347	Heating Block, used for 2.0 ml	1500rpm	24	1
E11348	Heating Block, used for 5 ml (Round Bottom)	1500rpm	8	1
E11358	Heating Block, used for 5ml (Conical Bottom)	1400rpm	8	1
E11349	Heating Block, used for 15 ml	800rpm	8	1
E11350	Heating Block, used for 50 ml	600rpm	4	1

### SPECIFICATIONS :

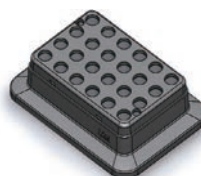
	E11340	E11341	E11342
Code	E11340	E11341	E11342
Voltage	220-240 V	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 hz	50-60 hz
Functions	Heating, cooling & Mixing	Heating & Cooling	Heating & Mixing
Adaptor Block Material	Aluminium	Aluminium	Aluminium
Temperature Range	Heating : 25°C-100°C Cooling : 25°C - below 15°C	Heating : 25°C-110°C Cooling : 25°C - below 25°C	Heating : 25°C-100°C
Setting Temperature Range	0.1-100°C	-5-100°C	15-100°C
Temperature Uniformity @ 20-45°C	±0.5°C	±0.5°C	±0.5°C
Temperature control accuracy@ 20-45°C	±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	9	9	9
Overheating Protection	150°C	150°C	150°C
Dimension(WXDXH)	200 x 235 x 120mm	200 x 235 x 120mm	200 x 235 x 120mm
Weight	7.3 kg	7.3 kg	7.3 kg



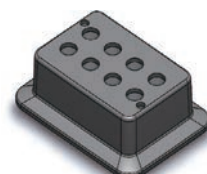
E11345



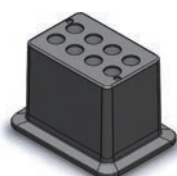
E11346



E11347



E11348



E11349



E11350



E11344



E11343

## 194 | Swirlex – LCD Digital Overhead Stirrer

- 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 hallmarks.
- Digital LCD display for precise monitoring of set and actual speed.
- LCD Torque displays real time information on viscosity changes.
- Protection and safety circuits ensure 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.



### Swirlex – Digital Overhead Stirrer

Code	Product	Maximum Stirring Quantity	No. / Case
E11310	LED Digital Overhead Stirrer with Universal Plate Stand including support holder and fixing device and (E11312) Stainless Steel crossed Stirrer(E11313)	20L	1
E11311	LED Digital Overhead Stirrer with Universal Plate Stand including support holder and fixing device and (E11312) Stainless Steel crossed Stirrer(E11313)	40L	1
E11321	LCD Digital Overhead Stirrer with Timer with Universal Plate Stand including support holder and fixing device and (E11312) Stainless Steel grand crossed Stirrer(E11324)	70L	1
E11322	LCD Digital Overhead Stirrer with Timer with Grand Plate Stand including support holder and fixing device and (E11323) Stainless Steel grand crossed Stirrer(E11324)	70L	1

### Spare Accessories for E11310, E11311, E11321 & E11322

Code	Product	Dimensions	No. / Case
E11312	Universal Plate Stand including support holder & fixing device	20 x 31 cm (L x W)	1
E11313	Stainless Steel Crossed Stirrer	40 x 5 cm (L x $\Phi$ )	1
E11314	Stainless Steel Straight Stirrer	40 x 6 cm (L x $\Phi$ )	1
E11315	Stainless Steel Blade Stirrer	40 x 6.8 cm (L x $\Phi$ )	1
E11316	Stainless Steel Centrifugal Stirrer	40 x 9 cm (L x $\Phi$ )	1
E11317	PTFE Crossed Stirrer	35 x 6.5 cm (L x $\Phi$ )	1
E11318	PTFE Straight Stirrer	35 x 7 cm (L x $\Phi$ )	1
E11319	PTFE Blade Stirrer	35 x 6.8 cm (L x $\Phi$ )	1
E11320	PTFE Centrifugal Stirrer	35 x 8.5 cm (L x $\Phi$ )	1

### Spare Accessories for E11321 & E11322

Code	Product	Dimension	No. / Case
E11323	Universal Grand Plate Stand including support holder & fixing device	33.5 x 46.3 cm (L x W)	1
E11324	Stainless Steel Grand Crossed Stirrer	60 x 10 cm (L x $\Phi$ )	1
E11325	Stainless Steel Grand blade Stirrer	60 x 10 cm (L x $\Phi$ )	1
E11326	Stainless Steel grand anchor Stirrer	60 x 10 cm (L x $\Phi$ )	1
E11327	Stainless Steel grand Centrifugal Stirrer	60 x 10 cm (L x $\Phi$ )	1





## SPECIFICATIONS :

Code	E11310	E11311	E11321 & E11322
Voltage	220-240V	220-240V	220-240V
Frequency	50-60Hz	50-60Hz	50-60Hz
Power	70W	130W	200W
Speed Range	50 – 2200rpm	50 – 2200rpm	50 – 1100rpm
Speed Display	LED	LED	LCD
Max. Stirring Quantity	20L	40L	70L
Max Torque	40Ncm	60Ncm	300Ncm
Max Viscosity	10000mPas	50000mPas	100000mPas
Chuck range diameter	0.5 – 10mm	0.5 – 10mm	0.5 – 10mm
Overload Protection Display	LED Lights, Motor Automatically Stops	LED Lights, Motor Automatically Stops	LED Lights, Motor Automatically Stops
Dimensions	83 x 220 x 186 mm	83 x 220 x 186 mm	83 x 220 x 186 mm
Weight	2.8 kg	2.8 kg	3.2 kg
Data Interface RS232	No	No	Yes
Permissible ambient Temperature	5-40°C	5-40°C	5-40°C
Permissible ambient Humidity	80%	80%	80%
Protection class according to DIN/EN 60529	IP21	IP21	IP21



## 195 | Swirlex – Vortex Shaker

- Swirlex-Vortex is suitable for touch or continuous or fixed operation.
- Used for gentle mixing to vigorous re-suspension of biological cells and canonical liquid components in tubes using eccentric mechanism.
- These vortex shakers contain specially designed silicone feet and steel base excellent for damping vibration.
- Swirlex vortex Shaker is eccentric with oil less ball bearing.
- A wide range of accessories are also available.



SWIRLEX – Vortex Shaker			
Code	Product	Work Plate Diameter	No. / Case
E11190	Swirlex Adjustable Vortex Shaker	4 mm	1

Spare Accessories		
Code	Product	No. / Case
E11191	Tube holding Rod	1
E11192	Universal 100mm top plate with 4 vacuum suction feet	1
E11198	Platform pad for tubes and vessels $\phi$ 99 mm	1
E11197	Tube Adapter for 48 holes test tube $\phi$ 6mm	1
E11193	Tube Adapter for 15 holes test tube $\phi$ 10mm	1
E11194	Tube Adapter for 16 holes test tube $\phi$ 12mm	1
E11195	Tube Adapter for 8 holes test tube $\phi$ 16mm	1
E11196	Tube Adapter for 8 holes test tube $\phi$ 20mm	1

*Kindly Note: E11192 is required to run E11198, E11197, E11193, E11194, E11195, E11196 & E11196 Adapter.*

### SPECIFICATIONS :

Voltage	220-240V
Frequency	50-60Hz
Speed Range	0 – 2500 rpm
Shaking Movement	Orbital
Motor Type	Shaded Pole Motor
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



## 196 | Swirlex – Microplate Mixer

- SWIRLEX–Micro plate 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.



### SWIRLEX – Microplate Mixer

Code	Product	No. / Case
E11200	Swirlex Microplate Mixer Including Microplate Clamp(E11201) as standard	1

### Spare Accessories

Code	Product	No. / Case
E11201	Microplate clamp	1
E11202	Double microplate clamps	1

### SPECIFICATIONS :

Voltage	220–240V
Frequency	50–60Hz
Shaking Movement	Orbital
Speed Range	Single Microplate : 0–1500 rpm Double Microplate : 0–1000 rpm
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

## 197 | Wavex – Classic Tube Rotator

- Wavex tube rotators provide gentle but effective mixing of biological samples, held in 1.5 ml to 50 ml tubes.
- Used in a variety of applications including immune precipitations, prevention of blood coagulation & latex diagnostics.
- Wavex–Classic Tube Rotator has Disk Type Design.



### SWIRLEX – Classic Tube Rotator

Code	Product	No. / Case
E11300	Wavex–Classic Tube Rotator	1

### Spare Accessories

Code	Product	No. / Case
E11301	Plastic Clips for 1.5 ml x 12 micro centrifuge tubes,Disk accessory	12
E11302	Plastic Clips for 15 ml x 12 micro centrifuge tubes, Disk accessory	12
E11303	Plastic Clips for 50 ml x 12 micro centrifuge tubes,Disk accessory	12

### SPECIFICATIONS :

Voltage	220–240V
Frequency	50–60Hz
Power	20W
Motor Type	DC Motor
Tilt Angle	90°
Speed Range	0–80rpm
Speed Display	Scale
Operation Type	Continuous
Dimensions	300 x 220 x 310mm
Weight	2 kg
Permissible ambient Temperature	5–40°C
Permissible ambient Humidity	80%
Protection Class	IP21



## 198 | Wavex – LCD Tube Rotator

- Wavex tube rotators provide gentle but effective mixing of biological samples, held in 1.5 ml to 50 ml tubes.
- Used in a variety of applications including immune precipitations, prevention of blood coagulation & latex diagnostics.
- Wavex tube rotator has a disk type design.
- LCD displays and digital speed control allows procedures to be accurate.
- Speed range of 10 to 70 rpm.
- Wavex tube rotator has an adjustable mixing angle between 0 - 90°.
- Wavex tube rotator has dual dish accessories for larger tubes.



### SWIRLEX – Microplate Mixer

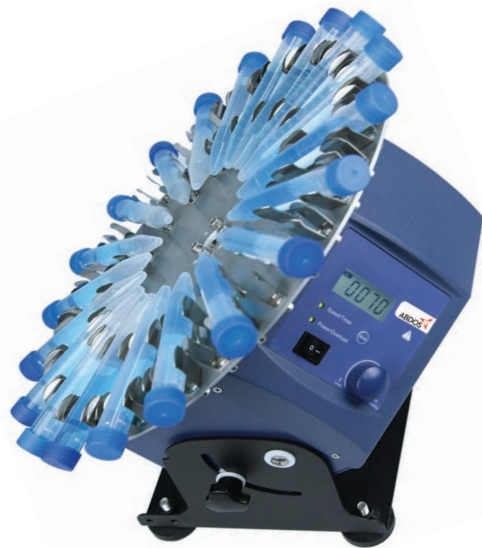
Code	Product	No. / Case
E11270	Wavex-LCD Digital Tube Rotator with Disk accessory for 50ml x 8 Centrifuge Tubes	1

### Spare Accessories

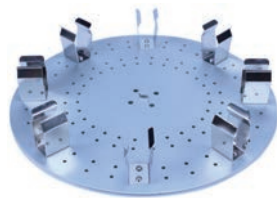
Code	Product	No. / Case
E11271	Disk accessory for 1.5 ml x 60 micro centrifuge tubes	1
E11272	Disk accessory for 50 ml x 8 centrifuge tubes	1
E11273	Disk accessory for 15 ml x 16 centrifuge tubes	1
E11274	Disk support rods used with disk accessories	4

### SPECIFICATIONS :

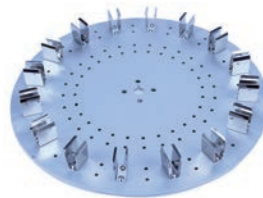
Voltage	220-240V
Frequency	50Hz
Power	40 W
Motor Type	DC Motor
Tilt Angle	0 - 90°
Speed Range	0-70 rpm
Speed & Timer Display	LCD
Time Setting Range	1 - 1199 min.
Operation Type	Continuous / timed operation
Dimensions	510 x 190 x 260 mm
Weight	8 kg
Permissible ambient Temperature	5-40°C
Permissible ambient Humidity	80%
Protection Class	IP 21



E11271



E11272



E11273



E11274

## 199 | Wavex – Classic Rotating Mixer

- Wavex tube rotators provide gentle but effective mixing of biological samples, 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–Classic Tube Rotator has Disk Type Design.



SWIRLEX – Vortex Shaker		
Code	Product	No. / Case
E11305	Wavex–Classic Rotating Mixer	1

Spare Accessories		
Code	Product	No. / Case
E11301	Plastic Clips for 1.5 ml x 12 micro centrifuge tubes,Disk accessory	12
E11302	Plastic Clips for 15 ml x 12 micro centrifuge tubes,Disk accessory	12
E11303	Plastic Clips for 50 ml x 12 micro centrifuge tubes,Disk accessory	12

### SPECIFICATIONS :

Voltage	220–240V
Frequency	50–60Hz
Power	20W
Motor Type	DC Motor
Tilt Angle	90°
Speed Range	0–80rpm
Speed Display	Scale
Operation Type	Continuous
Dimensions	150 x 530 x 190mm
Weight	1.7 kg
Permissible ambient Temperature	5–40°C
Permissible ambient Humidity	80%
Protection Class	IP21



## 200 | Wavex-LCD Rotating Mixer

- Wavex –LCD 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.



### Wavemax - LCD Rotating Mixer

Code	Product	No. / Case
E11280	LCD Digital Rotating Mixer with Rotisserie accessory for 50 ml x 24 centrifuge tubes horizontally	1

### Spare Accessories

Code	Product	No. / Case
E11281	Rotisserie accessory for 1.5 ml x 48 micro centrifuge tubes horizontally	1
E11282	Rotisserie accessory for 50 ml x 24 centrifuge tubes horizontally	1
E11283	Rotisserie accessory for 15 ml x 24 centrifuge tubes horizontally	1
E11284	Rotisserie accessory for 1.5 ml x 32 micro centrifuge tubes vertically	1
E11285	Rotisserie accessory for 50 ml x 16 centrifuge tubes vertically	1
E11286	Rotisserie accessory for 15 ml x 16 centrifuge tubes vertically	1
E11274	Disk support rods with disk accessories	4

### SPECIFICATIONS :

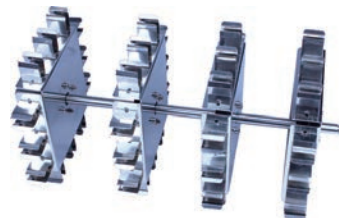
Voltage	220-240V
Frequency	50Hz
Power	40 W
Motor Type	DC Motor
Tilt Angle	0 - 90°
Speed Range	0-70 rpm
Speed & Timer Display	LCD
Time Setting Range	1 - 1199 min.
Operation Type	Continuous / timed operation
Dimensions	510 x 190 x 260 mm
Weight	8 kg
Permissible ambient Temperature	5-40°C
Permissible ambient Humidity	80%
Protection Class	IP 21



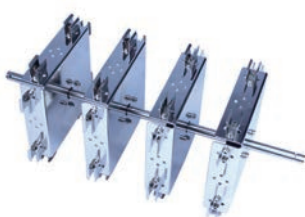
E11281



E11282



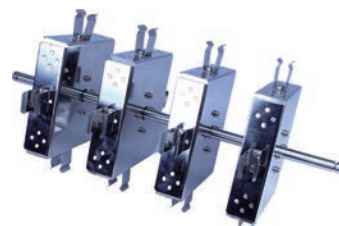
E11283



E11284



E11285



E11286

## 201 | Wavemax – Digital Rocking Shaker

- Abdos Digital rocking shakers are used for staining and destaining gels, hybridization procedures, 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 LED 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.
- Specially designed and developed compact space-saving design fits easily in the incubator.
- Space Accessories have a wide range of platforms for use with a variety of vessels.



WAVEMAX – LED Digital Rocking Shaker		
Code	Product	No. / Case

E11410	Wavemax – Digital Rocking Shaker with platform with Dish Attachment with non-Slip Mat	1
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Spare Accessories for Digital Rocking Shaker (E11410)		
Code	Product	No. / Case

E11451	Universal attachment with 3 Bars	1
E11452	Dish attachment with non-slip mat	1
E11453	Fixing clip attachment	1
E11415	Fixing clip for 25 ml flask	1
E11416	Fixing clip for 50 ml flask	1
E11417	Fixing clip for 100 ml flask	1
E11418	Fixing clip for 200/250 ml flask	1
E11419	Fixing clip for 500 ml flask	1

\* Pls note E11453 is required to run E11415, E11416, E11417, E11418 & E11419.



### SPECIFICATIONS :

Voltage	220-240V
Frequency	50-60Hz
Power	50W
Motor type	DC Motor
Rocking motion	See-saw rocking
Maximum load capacity (With Platform)	3.0 kg
Tilt angle	7°
Speed range	10-70rpm
Speed & timer display	LED
Time range	1 min – 19 h 59 min
Operation Type	Continuous /timed operation
Dimensions	270 x 330 x 130mm
Weight	3.2 Kg
Permissible ambient temperature	5-40°C
Permissible ambient Humidity	80%
Protection class	IP21



Universal attachment with bars



Dish attachment with non-slip mat

## 202 | Wavemax – Digital (3D) Dancing Shaker

- Wavemax classic dancing shakers are used for staining and destaining gels, hybridization procedures, 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 LED dancing shaker boasts of digital speed control and large LED 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.
- Specially designed and developed compact space-saving design fits easily in the incubator.
- Space accessories have a wide range of platforms for use with a variety of vessels.



### WAVEMAX – LED Digital Dancing (3D) Shaker

Code	Product	No. / Case
E11430	Wavemax – Digital Dancing Shaker with platform with Dish Attachment with non-Slip Mat	1

### Spare Accessories for Digital (3D) Dancing Shaker (E11430)

Code	Product	No. / Case
E11451	Universal attachment with 3 Bars	1
E11452	Dish attachment with non-slip mat	1
E11453	Fixing clip attachment	1
E11415	Fixing clip for 25 ml flask	1
E11416	Fixing clip for 50 ml flask	1
E11417	Fixing clip for 100 ml flask	1
E11418	Fixing clip for 200/250 ml flask	1
E11419	Fixing clip for 500 ml flask	1

\*Please note E11453 is required to run E11415, E11416, E11417, E11418 & E11419.



### SPECIFICATIONS :

Voltage	220-240V
Frequency	50-60Hz
Power	40W
Motor type	DC Motor
Rocking motion	3 Dimensional
Maximum load capacity (With Platform)	3.0 kg
Tilt angle	7°
Speed range	10-80 rpm
Speed & timer display	LED
Time range	1 min – 19h59min
Operation Type	Continuous /timed operation
Dimensions	270 x 330 x 130mm
Weight	2.7Kg
Permissible ambient temperature	5-40°C
Permissible ambient Humidity	80%
Protection class	IP21



Universal attachment with bars



Dish attachment with non-slip mat



## 203 | Wavemax – Orbital Shaker Junior

- 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.
- These shakers have a capacity of up to 20 x 50ml, 12 x 125 ml, 8 x 250 ml, 5 x 500 ml, 4 x 1L flasks.



WAVEMAX – Orbital Shaker Junior			
Code	Product	Platform Dimension	No. / Case
E11260	Wavemax – Orbital Shaker Junior with flat mat	9.5" x 8"	1

Spare Accessories			
Code	Product	Platform Dimension	No. / Case
E11261	Universal Magnetic platform for flasks and tube racks	11" x 9.5"	1
E11262	Adjustable Spring platform for unique vessel types	-	1

Kindly Note: Flask clamps and Fixed Platforms are sold separately. See page No. 159 for complete listing

### SPECIFICATIONS :

Voltage	220-240 V
Frequency	50 Hz
Shaking Movement	Orbital
Timer	1min-99hrs59min
Speed Range	50 – 300 rpm, Variable
Speed Increment	10 rpm
Orbit	19 mm
Load Capacity	Maximum 4 kg
Dimension	280 x 270 x 130 mm
Weight	5.5 kg
Permissible ambient temperature	+4 to +65° C
Permissible relative humidity	80%



## 204 | Wavemax – Orbital Shaker

- Abdos powerful orbital shaker is capable of mixing liquids upto a load capacity of 6 kg in bottles, flasks, test tubes & dishes.
- Abdos orbital shaker has digital speed control of upto 300 rpm.
- 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.
- These shakers have horizontal circular 19 mm orbit for aeration and mixing.
- Universal magnetic clamp can be instantly exchanged.



WAVEMAX – Orbital Shaker Junior			
Code	Product	Platform Dimension	No. / Case
E11290	Wavemax – Orbital Shaker with flat mat	13" x 12"	1

Spare Accessories			
Code	Product	Platform Dimension	No. / Case
E11291	Universal Magnetic platform for flasks and tube racks	14" x 12"	1

Kindly Note: Flask clamps and Fixed Platforms are sold separately. See page No. 159 for complete listing

### 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
Dimension	280 x 330 x 75 mm
Weight	11.25 kg
Permissible ambient temperature	+4 to +65° C
Permissible relative humidity	80%



## 205 | Wavemax – LED Digital Orbital & Linear Shaker

- Abdos orbital and linear shakers are capable of mixing and shaking liquids in bottles, flasks, vessels, test tubes & dishes.
- Independent LED display for adjusting speed and time. Speed and timer can be viewed simultaneously.
- Maximum load capacity of 3.0 kg with platform.
- Specially 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 a wide range of platforms for use with a variety of vessels.
- Over speed detection and protection.



### WAVEMAX – Digital Orbital Shaker

Code	Product	No. / Case
E11460	Wavemax – LED Digital Orbital Shaker with dish attachment with non-slip mat.	1

### WAVEMAX – Digital Linear Shaker

Code	Product	No. / Case
E11470	Wavemax – LED Digital Linear Shaker with dish attachment with non-slip mat.	1

### Spare Accessories for E11460 & E11470

Code	Product	No. / Case
E11451	Universal attachment with 3 Bars	1
E11452	Dish attachment with non-slip mat	1
E11453	Fixing clip attachment	1
E11415	Fixing clip for 25 ml flask	1
E11416	Fixing clip for 50 ml flask	1
E11417	Fixing clip for 100 ml flask	1
E11418	Fixing clip for 200/250 ml flask	1
E11419	Fixing clip for 500 ml flask	1

\* Pls note E11453 is required to run E11415, E11416, E11417, E11418 & E11419.

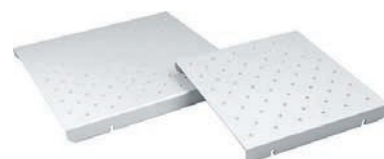
SPECIFICATIONS :	E11460	E11470
Voltage	220-240V	220-240V
Frequency	50-60Hz	50-60Hz
Power	20W	20W
Motor Type	Brushless DC Motor	Brushless DC Motor
Shaking Motion	Orbital	Linear
Orbital Diameter	20mm	20mm
Maximum load capacity (With Platform)	3.0 kg	3.0 kg
Speed Range	40-200rpm	40-200rpm
Speed & Timer Display	LED	LED
Time Range	1 min – 19h59min	1 min – 19h59min
Operation Type	Continuous /timed operation	Continuous/timed operation
Dimensions	270x330x110mm	270x330x110mm
Weight	3.1 Kg	3.1 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

## 206 | Wavemax – Heavy Duty LCD Digital Orbital & Linear Shaker

- Abdos orbital and linear shakers are capable of mixing and shaking liquids in bottles, flasks, vessels, test tubes & dishes.
- Independent LCD display for adjusting speed and time, speed and timer can be viewed simultaneously.
- Maximum load capacity of 7.5 kg with platform.
- Specially 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 a wide range of platforms for use with a variety of vessels.
- Over speed detection and protection.



### WAVEMAX – Heavy Duty LCD Digital Orbital Shaker

Code	Product	No. / Case
E11480	Wavemax – Heavy Duty Orbital Shaker with universal Attachment with 4 Bar	1

### WAVEMAX – Heavy Duty LCD Digital Linear Shaker

Code	Product	No. / Case
E11490	Wavemax – Heavy Duty Linear Shaker with universal Attachment with 4 Bar	1

### Spare Accessories for E11480 & E11490

Code	Product	No. / Case
E11411	Universal attachment with 4 Bars	1
E11413	Dish attachment with non-slip mat & fixed string	1
E11414	Fixing clip attachment	1
E11415	Fixing clip for 25 ml flask	1
E11416	Fixing clip for 50 ml flask	1
E11417	Fixing clip for 100 ml flask	1
E11418	Fixing clip for 200/250 ml flask	1
E11419	Fixing clip for 500 ml flask	1

\* Pls note E11414 is required to run E11415, E11416, E11417, E11418 & E11419.

### SPECIFICATIONS :

	E11480	E11490
Voltage	220-240V	220-240V
Frequency	50-60Hz	50-60Hz
Power	30W	30W
Motor Type	Brushless DC Motor	Brushless DC Motor
Shaking Motion	Orbital	Linear
Orbital Diameter	10 mm	10 mm
Maximum load capacity (With Platform)	7.5kg	7.5kg
Speed Range	100-500 rpm	100-350 rpm
Speed & Timer Display	LCD	LCD
Time Range	1 min – 19 h 59 min	1 min – 19 h 59 min
Operation Type	Continuous /timed operation	Continuous /timed operation
Data Connector	RS232	RS232
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

## 207 | Wavemax-Digital Incubator

- Wavemax-Digital Incubators provide the facility to monitor the chamber temperatures in real time.
- Has 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.



### Wavemax - Digital Incubator

Code	Product	No. / Case
E11355	Heating Digital Incubator	1
E11356	Heating & Cooling Digital Incubator	1

### Spare Accessories

Code	Product	Platform Dimension	No. / Case
E11357	Extra Shelf, 10.5 x 8 inch, Plastic(not autoclavable)	10.5" x 8"	1

### SPECIFICATIONS :

	E11355	E11356
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Temp. Range (Heating)	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	±1.5°C (at 37°C)	±1.5°C (at 37°C)
Temp. Increment	1°C	1°C
Platform Dimensions	235 x 290 mm(9.5x11.5 in)	235 x 290 mm(9.5x11.5 in)
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	260x235x325mm	260x235x325mm
Capacity	20L	20L
Weight	6.5 kg	6.5 kg

\*Minimum temperature is approx. 7°C in 22°C room temp.



## 208 | Wavemax - Incu-shaker Mini

- 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.
- 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.
- Over temperature and over speed controls ensure safety, long life, and sample integrity.
- Advanced motor isolation system minimizes noise and vibration.



WAVEMAX - INCU-SHAKER			
Code	Product	Platform Dimension	No. / Case
E11920	Wavemax-Incu-Shaker Mini with Non-Slip Rubber Mat	9.5" x 11.5"	1

Spare Accessories			
Code	Product	Platform Dimension	No. / Case
E11925	Universal Magnetic Platform for Flasks and Tube racks (For E11920)	9.5" x 11.5"	1

Kindly Note: Flask clamps and Fixed Platforms are sold separately, see page No. 159 for complete listing

### SPECIFICATIONS :

Voltage	220-240V
Frequency	50-60Hz
Speed	Variable, 30 to 300rpm
Speed Adjustment	1rpm
Shaking Orbit	19mm
Temperature Range	Room Temperature +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/continuous
Platform Dimensions	23.5 x 29cm (9.5"x11.5")
Overall Dimensions (W x D x H)	280 x 410 x 330mm
Weight	11.5kg



Spare Accessories for E11260, E11290 & E11920			Spare Accessories for E11290 & E11920		
Code	Product	No. / Case	Code	Product	No. / Case
E11928	Universal Magnetic Clamp for 125ml, 250ml, 500ml flasks	1	E11939	Magnetic Clamp for Tube Rack 4x500ml or 600ml conical bottles	1
E11929	Magnetic Clamp for 1000 ml flask	1	E11940	Magnetic Clamp for Tube Rack 12x1.5/2.0 ml tubes horizontal	1
E11930	Magnetic Clamp for 500 ml flask	1	E11941	Magnetic clamp for tube Rack 4x15ml tubes horizontal	1
E11931	Magnetic Clamp for 250 ml flask	1	E11942	Magnetic Clamp for Tube Rack 2x50ml tubes horizontal	1
E11932	Magnetic Clamp for 125 ml flask	1	E11943	Magnetic Clamp for tilted holder for 15ml and 50ml tube rack	1
E11933	Magnetic Clamp for 50 ml flask	1	E11944	Universal spring Platform	1
E11934	Magnetic Clamp for one Microplate	1	E11948	Platform for 5 x 500 ml	1
E11935	Magnetic Clamp for Tube Rack 30x15ml & 20x50ml tubes	1	E11949	Platform for 8 x 250 ml	1
E11936	Magnetic Clamp for Tube Rack 72x14mm culture tubes	1	E11950	Platform for 1 x 125 ml	1
E11937	Magnetic Clamp for Tube Rack 32x15ml, tubes	1	E11951	Platform for 4 microplates	1
E11938	Magnetic Clamp for Tube Rack 15x50ml, tubes	1			

## 209 | AEROVAC-Oil-Free Vacuum Pumps

- ABDOS Aerovac Oil Free Vacuum Pump is a compact, lightweight and mobile oil-free piston Vacuum 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: Abdos Vacuum Pump is useful for Biology laboratories, Food industry, Microbiological detection, Vacuum extraction, Liquid filtration, Vacuum drying, Suspended solids measurement.



### Oil Free Vacuum Pump

Code	Product	Product Dimension	No. / Case
E11800	Aerovac-300	Vacuum: 100mbar; Max. Flow Rate: 17 L/min(220V)	1
E11801	Aerovac-400	Vacuum: 100 mbar; Max. Flow Rate: 34 L/min(220V)	1
E11802	Aerovac-600	Vacuum: 100 mbar; Max. Flow Rate: 60 L/min(220V)	1
E11803	Aerovac-410	Vacuum: 30 mbar; Max. Flow Rate: 19 L/min(220V)	1
E11804	Aerovac-610	Vacuum:30 mbar; Max. Flow Rate: 40 L/min(220V)	1
E11805	Aerovac-430	Vacuum:150/ 5.5 bar(max.pressure); Max. Flow Rate: 28L/min(220V)	1
E11806	Aerovac-800	Vacuum: 100 mbar; Max. Flow Rate: 80 L/min(220V)	1
E11807	Aerovac-810	Vacuum: 30 mbar; Max. Flow Rate: 50 L/min(220V)	1

### Spare Accssories

Code	Product	Product Dimension	No. / Case
E11810	Connectors	Outlet diameter: 9.5mm	1
E11815	L-shape connector	Outlet diameter: 8mm	1
E11816	Quick connection outlet	Outlet diameter: 12mm	1
E11821	Silencer	Suitable for Aerovac300 / Aerovac400 / Aerovac410	1
E11822	Silencer	Suitable for Aerovac600 / Aerovac610	1
E11823	Vacuum regulator / filter	Incl. pressure gauge	1
E11824	Vacuum regulator / filter	without pressure gauge	1
E11825	Foot pedal	Suitable for Aerovac series vacuum pumps	1
E11826	FEP tubing	Outer diameter: 6mm, Inner diameter: 4mm, Thickness: 1 mm, Length : 1m	1
E11830	Silicon tubing	Outer diameter: 12mm, Inner diameter: 6mm, Thickness: 3mm, Length : 1m	1





SPECIFICATIONS :	E11800	E11801	E11802	E11803	E11804	E11805	E11806	E11807
Volt	220 V	220 V	220 V	220 V	220 V	220 V	220 V	220 V
Frequency	50 Hz	50 Hz	50 hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
Maximum Power	60 W	80 W	190 W	80 W	210 W	125 W	220 W	220 W
Maximum Current	0.3 A	0.4 A	1.0 A	0.4 A	1.0 A	0.6 A	1.0 A	1.0 A
Maximum Vacuum	100 mbar	100 mbar	100 mbar	30 mbar	30 mbar	150/5.5 bar	100 mbar	30 mbar
Maximum Flow Rate	17 L/min	34 L/min	60 L/min	19 L/min	40 L/min	28 L/min	80 L/min	50 L/min
Motor Rotation	1450 rpm	1450 rpm	1450 rpm	1450 rpm	1450 rpm	1450 rpm	1450 rpm	1450 rpm
Dimension (W x D x H)mm	272 x 142 x 165	310 x 152 x 165	340 x 155 x 195	310 x 152 x 165	340 x 155 x 195	247 x 235 x 200	340 x 185 x 195	340 x 185 x 195
Weight	4.4 Kg	5.4 Kg	8.6 Kg	5.4 Kg	8.6 Kg	5.5 Kg	8.6 Kg	8.6 Kg
Noise Level	50 dB	60 dB	52 dB	50 dB	52 dB	50 dB	52 dB	52 dB

# 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 (X1 unit of A = B)	D (X1 unit of B = A)	A	B	C (X1 unit of A = B)	D (X1 unit of B = A)
Inches	Centimetres	2.54	0.3937	Lb. per sq. in	H'd of water (M.)	0.7	1.4285
Feet	Centimetres	30.48	0.0328	Lb. per sq. in	Atmospheres	0.068	14.7
Yards	Metres	0.194	1.094	Tons per sq. in	Kgm. / sq. mm.	1.575	0.635
Miles	Metres	1,609.30	0.000621	Lb. per sq. ft	Kgm. / sq. metre	4.883	0.205
Nautical miles	Metres	1,853.27	0.000539	Lb. per cub. yd.	Kgm. / cub. metre	0.593	1.686
Square inches	Sq. cms	6.45	0.155	Lb. per cub. ft	Kgm. / cub. metre	16.02	0.0624
Square feet	Sq. Metres	0.093	10.764	Lb. per gallon	Kgm. / litre	0.0998	10.02
Square yards	Sq. Metres	0.836	1.196	Foot-lb	K'gram-metres	0.1833	7.23
Cubic inches	Cub. cms	16.39	0.061	Foot-tons	Tonne-metres	0.33	3
Cubic feet	Litres	28.3	0.0353	Hors-Power	Force de Cheval	1.014	0.9861
Cubic feet	Gallons	6.24	0.1602	Hors-Power	Watts	746	0.00134
Cubic yards	Cub. metres	0.765	1.308	Hors-Power	Ft.-lb / min	33,000	0.00003
Pounds (Troy)	Kilogrammes	0.3732	2.68	Hors-Power	Kg.-m. / sec.	73	0.01316
Ounces (Troy)	Grammes	31.1	0.03216	Watts	Ft.-lb. / min	44	0.0227
Pounds (Avoir.)	Kilogrammes	0.4536	2.2046	Watts	Kg.-m. / sec	0.1	10
Pounds (Avoir.)	Grains (Troy)	7,000	0.000143	Heat units	Cal ories	0.252	3.97
Ounces (Avoir.)	Grammes	28.35	0.0353	Atmospheres	Lb. / sq. inch	14.7	0.068
Grains	Grammes	0.065	15.38	German candles	English candles	0.90	1.1111
Cwt.	Kilogrammes	50.8	0.01968	Carrels	Candles.	9.55	0.1047
Tons	Kilogrammes	1,016	0.000984	Joules	Ft. / lb	0.737	1.357
Gallons	Litres	4.546	0.22	Miles / hour	Ft. / Min	88	0.01134
Gallons of water	Pounds	10	0.1	Metres / sec	Ft / Min .	197	0.00508
Pounds of water	Litres	0.454	2.202	C.H.U	B. Th. U .	1.8	0.5555
Lb per sq. in .	Gm./sq. cm.	70.3	0.0142	Centipoise	Lb. force sec. / Sq. ft.	0.208	4.8
Lb per sq. in .	H'd of water (ft.)	2.3	0.434				
<b>To obtain</b>	<b>From</b>		<b>Multiply-by above</b>	<b>To obtain</b>	<b>From</b>		<b>Multiply-by above</b>

# PERIODIC TABLE OF THE ELEMENTS

- Non-Metals
- Other Metals
- Alkali Metals
- Halogens
- Alkaline-Earth Metals
- Transition Metals
- Semi-Metallics
- Inert Gases
- Lanthanides
- Actinides

1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		12.		13.		14.		15.		16.		17.		18.																															
hydrogen 1 <b>H</b> 1.0079		lithium 3 <b>Li</b> 6.941	beryllium 4 <b>Be</b> 9.0122			scandium 21 <b>Sc</b> 44.956	titanium 22 <b>Ti</b> 47.867	vanadium 23 <b>V</b> 50.942	chromium 24 <b>Cr</b> 51.996	manganese 25 <b>Mn</b> 54.938	iron 26 <b>Fe</b> 55.845	cobalt 27 <b>Co</b> 58.933	nickel 28 <b>Ni</b> 58.693	copper 29 <b>Cu</b> 63.546	zinc 30 <b>Zn</b> 65.38	boron 5 <b>B</b> 10.811	carbon 6 <b>C</b> 12.011	nitrogen 7 <b>N</b> 14.007	oxygen 8 <b>O</b> 15.999	fluorine 9 <b>F</b> 18.998	neon 10 <b>Ne</b> 20.180	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	potassium 19 <b>K</b> 39.098	calcium 20 <b>Ca</b> 40.078	strontium 37 <b>Sr</b> 87.62	rubidium 38 <b>Rb</b> 85.468	cesium 55 <b>Cs</b> 132.91	barium 56 <b>Ba</b> 137.33	radium 88 <b>Ra</b> [226]	francium 87 <b>Fr</b> [223]	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]	einsteium 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]	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]	einsteium 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]

**KEY**

hydrogen  
1  
**H**  
1.0079

Atomic Number

Atomic Symbol

Atomic Weight

lanthanum 57 <b>La</b> 138.91	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	europium 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
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# 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 Mrad 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*
Acids, Dilute or Weak	E	E	E	G	E	E	E	E	E	E
Acids, Strong and Concentrated	E	E	N	N	E	F	G	E	E	E
Alcohols, Aliphatic	E	E	G	N	E	E	G	E	E	E
Aldehydes	G	G	F	G	G	N	F	E	E	G
Bases	E	E	N	F	E	E	E	E	E	E
Esters	G	G	N	N	G	N	N	E	G	G
Hydrocarbons, Aliphatic	G	F	F	G	G	N	G	E	E	F
Hydrocarbons, Aromatic	G	F	N	N	F	N	N	E	E	F
Hydrocarbons, Halogenated	F	N	N	N	F	N	N	E	N	N
Ketones	G	G	N	N	G	N	N	E	N	F
Oxidizing Agents, Strong	F	F	N	N	F	N	G	E	G	F

**Resin Code**

HDPE High-density polyethylene  
 LDPE Low-density polyethylene  
 PC Polycarbonate  
 PMMA Polymethyl methacrylate  
 PP Polypropylene  
 PS Polystyrene  
 PSF Polysulfone  
 PTFE Polytetrafluoroethylene  
 PVDF Polyvinylidene fluoride  
 TPX\* Polymethylpentene

### 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 cracking, 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	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	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	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
Bromonaphthalene	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	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	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	F
Butyric acid (butanoic acid)	E	E			F	F	G	F	F	F	G	F			G	G	F	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	E	F	F	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	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	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	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	F
Chloroacetone	E	E															F	F	F	F	F	F	G	G

MEDIUM	PTFE		PMP(PTPX)		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
Cumen(1sopropylbenzene)	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	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	F	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	E	F	F	F	F
Glycerine	E	E	E	E	E	E	E	E	E	E	E	E	E	G	G	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			E					G	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	F	F	F	F						G	F	G	
Hydrogen peroxide, 35%	E	E	E	E	E	E	E	E	E	E	E	E	F	F	F	E	E	F	F	E	E	F	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	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	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	
Methyl ethyl ketone(MEK)	E	E	F	F	E	G	G	F	G	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	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	G	G	E	G	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	
Petroleum ether	E	E							G				E	E	E				E		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								
Phenylhydrazine	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	
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	

Medium	PTFE		PMP(ITPX)		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
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	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	G	F	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  $10^{-6}$

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 3 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 DNBPs ( 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 ( $t_e$ ) 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  $\leq 0.005$  EU/device. Products were tested for Endotoxins as per USP by Chromogenic Assay Method.

### 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.

- A. P11007 Lot no. A261118B
- B. P60116 Lot no. A251019A
- C. P10202 Lot no. M110919C07
- D. P10163 Lot no. A281119A
- E. P10401 Lot no. A110919A
- F. P10301 Lot no. M140919C06
- G. P10901 Lot no. M230919B12

### RESULTS:

Endotoxin levels  $\leq 0.005$  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.



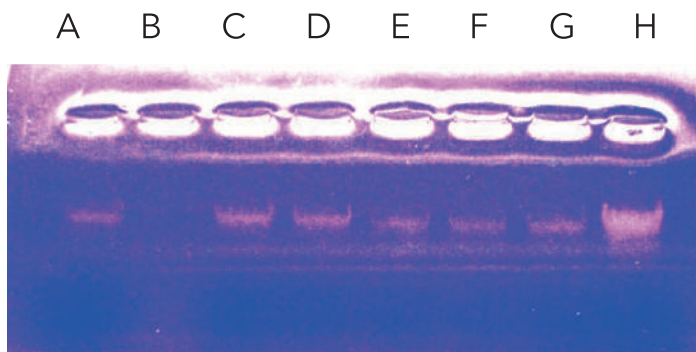
## DNASE FREE CERTIFICATE OF ANALYSIS

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.

## ATP FREE CERTIFICATE OF ANALYSIS

Every Lot of Abdos Micro Tips, Micro Centrifuge Tubes, Centrifuge Tubes, Cryo Vials, & Other Products are tested for ATP Free.

- A. P11007 Lot no. A261118B
- B. P60116 Lot no. A251019A
- C. P10202 Lot no. M110919C07
- D. P10163 Lot no. A281119A
- E. P10401 Lot no. A110919A

### PROCEDURE:

Procedure is to provide guidelines for ATP FREE Test (by Glucose Oxidase/ATP Method). Glucose is a widely distributed simple sugar with an active aldehyde group. Estimation of glucose by glucose oxidase gives the true glucose concentrations eliminating the interference by other reducing sugars.

### PRINCIPLE:

Glucose oxidase catalyses the oxidation of alpha-D-glucose to D-glucono-1,5 lactone (gluconic acid) with the formation of hydrogen peroxide. The oxygen liberated from hydrogen peroxide by peroxidase reacts with the O-dianisidine & oxidizes it to a red chromophore product. Read the colour intensity at 540 through UV Spectrophotometer or at 450 through ELISA.

### Glucose + O<sub>2</sub>

Glucose Oxidase → H<sub>2</sub>O<sub>2</sub> + Gluconic Acid

H<sub>2</sub>O<sub>2</sub> + O-dianisidine Peroxidase → Red colour product

### CONCLUSIONS:

The tested products are free from ATP detectable contamination (<1.0fg).

## HUMAN DNA FREE CERTIFICATE OF ANALYSIS

Every Lot of Abdos Micro Tips, Micro Centrifuge Tubes, Centrifuge Tubes , Cryo Vials, & Other Products are tested for ATP Free.

- A. P11007 Lot no. A261118B
- B. P60116 Lot no. A251019A
- C. P10202 Lot no. M110919C07
- D. P10163 Lot no. A281119A
- E. P10401 Lot no. A110919A

### PROCEDURE:

Nucleic Acid (DNA) extraction and measurement were done by the procedures of Zachleder (50) as applied by Danovaro et al, (9) and Danovaro(10), with a few modifications to enhance DNA extraction from the sediment. Briefly, 1g of sediment (three replicates) was treated with 3.0 ml of 0.5N Perchloric acid, stirred for 3min & sonicated three times for 1min (with intervals of 30 sec). Nucleic acid extraction was carried out 75 °C for 30min under continuous stirring on water bath. After centrifugation (3000 rpm, 10min), the absorbance of the Total Nucleic Acid (TNA) in the supernatant was measured at 260 nm. For RNA take absorbance on 230 nm & for protein on 280 nm.

### CONCLUSIONS:

The tested products are free from Human DNA detectable contamination (<0.5 pg/microliter).

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E11101	34	E11193	146	E11307	134	E11361	140	E11608	122	E11800	160
E11102	34	E11194	146	E11308	134	E11362	140	E11609	122	E11801	160
E11103	34	E11195	146	E11310	144	E11363	140	E11610	122	E11802	160
E11104	34	E11196	146	E11311	144	E11364	140	E11611	122	E11803	160
E11105	34	E11197	146	E11312	144	E11365	140	E11612	122	E11804	160
E11106	34	E11198	146	E11313	144	E11366	140	E11613	123	E11805	160
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