

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

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

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

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

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

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

Team Abdos





ASSURED QUALITY

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



QUALITY OBJECTIVE

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

We will strive to innovate
and respond creatively and
competitively to changes in
external environments 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.

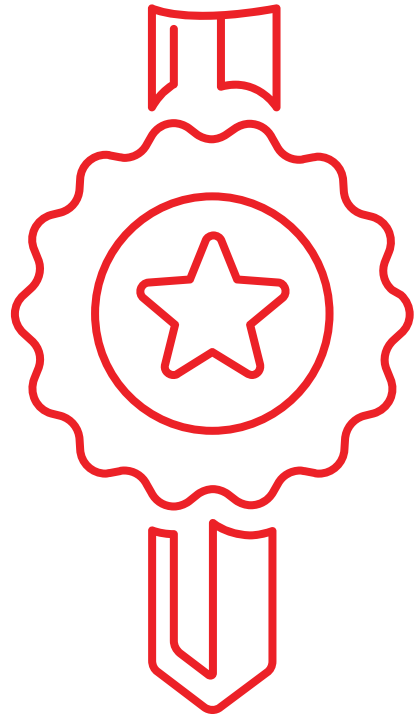
We conduct regular reviews
to ensure our plant and
maintenance systems run
effectively and efficiently
so that there is no
compromise on quality.

QUALITY POLICY

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

QUALITY MANAGEMENT

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



CE MARKING

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



QUALITY CONTROL PROCESS

1

Check In-Coming Products

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

2

On-line Quality Inspection

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

3

Application Tests in Laboratory

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

4

Final Pre-Dispatch Audit

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

QUALITY CERTIFICATION

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



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



**QUALITY
MANAGEMENT SYSTEM
ISO 9001**



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

ABDOS KNOWLEDGE CENTER

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



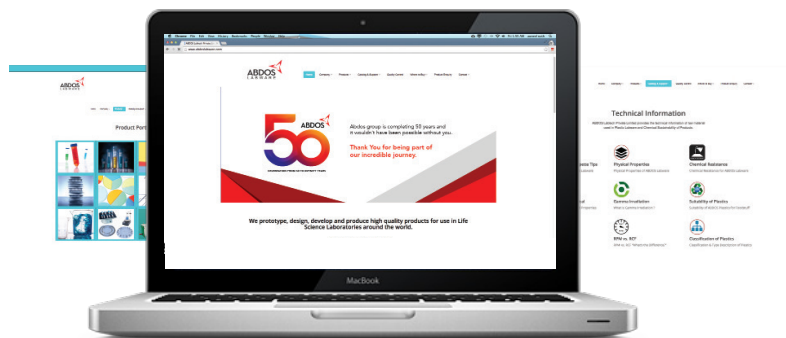
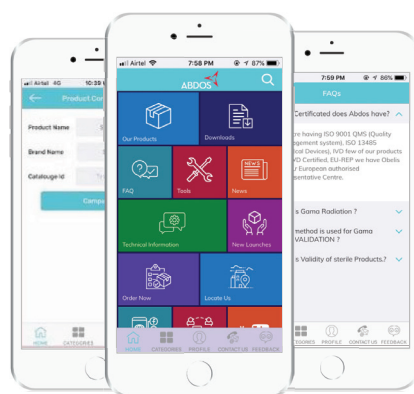
Order now at
www.abdoslifesciences.com/order-catalog

CATALOG

PRODUCT BROCHURES

MOBILE APP

Featuring Data Comparisons, FAQs & More
Download Now From



WEBSITE

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

COMMITTED TO THE EARTH!

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

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

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

STEPS TAKEN FOR BEING GREEN ORGANIZATION

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

Hot runner moulds to save on plastic usage.

Closed water cycle cooling process save energy.

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

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




















As a manufacturer ABDOS has total control over the design and manufacturing of its products, therefore we are able to reduce waste and weight of the plastic, paper, bags and foils generated at both our and our supplier’s plant.

ABDOS drives Digitally, Eliminating Waste in Printing.

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



NOMENCLATURE

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

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

CENTENTS

PRODUCTS

CENTRIFUGE TECHNIQUES

10

Centrifuge Tube, Universal
Centrifuge Tube Rack & More

MICRO BIOLOGY

83

Petri Dish, Inoculation
Loop, Cell Spreaders & More

LIQUID HANDLING

21

Pipette Tips,, Pasteur Pipettes,
Premium Plus Pipette & more

GENERAL LABORATORY PRODUCTS

88

Beakers, Cylinders,
& More

CRYO TECHNIQUES

64

Cryo Vial, Storage Vial
Cryo Box & More

EQUIPMENTS

99

Magnetic Stirrer, Hot Plate,
Shaker & More

MULTI PURPOSE RACKS & BOXES

72

Rotator Workstation,
Puzzle Rack & More

GENERAL INFORMATION

CONVERSION TABLE

126

A Guide To Basic Metric Essentials

INDEX

135

Your Shortcut to Way-Finding

TECHNICAL PROPERTIES OF ABDOS LABWARE

128

TERMS & CONDITIONS

142

CENTRIFUGE TECHNIQUES



Micro Centrifuge
Racks
Self Standing
Conical Bottom
& More

Micro Centrifuge Tubes, PP

01

Micro Centrifuge Tubes, Natural

Code	Capacity (ml)	Outer Diameter (mm)	Height (mm)	No. Per Case
P10201	0.5	10	31.5	1000
P10202	1.5	13	41	500
P10203	2.0	13	41	500

Micro Centrifuge Tubes, Coloured & Amber

Code	Capacity (ml)	Outer Diameter (mm)	Height (mm)	No. Per Case
P10207	0.5 Coloured	10	31.5	1000
P10201A	0.5 Amber	10	31.5	1000
P10204	1.5 Coloured	13	41	500
P10204A	1.5 Amber	13	41	500
P10205	2.0 Coloured	13	41	500
P10203A	2.0 Amber	13	41	500

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

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

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

These tubes are with the integral snap cap.

Can withstand up to 20000 RCF*.

Frosting on the surface of the tubes makes writing easier.

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

Large moulded in graduations make identification easy.



121°C



FREE



635

LEAK TEST



LAST DROP, Low Retention Micro Centrifuge Tubes, PP

02

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

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

Advanced hydrophobic material confirms a samples retention level ten times less than leading brand reducing protein and nucleic acid binding, resulting in better sample recovery.

Can withstand up to 20000 RCF*.

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

These tubes are with the integral snap cap.

Frosting on the surface of the tubes makes writing easier.

Moulded graduations makes identification easy.



NEW



121°C



FREE



635

LEAK TEST



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

03

Rack for Micro Centrifuge Tube, RPP

Code	Tube Capacity (ml)	Places	Colour	L x W x H (mm)	No. per Case
P20205	1.5 & 2	20 Places (10 x 2 Array)	White	215 x 70 x 40	8

Sturdy rack with rubbed support at the bottom for stability.

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

Easy removal and insertion of tubes.

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

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



04

Rack for Micro Centrifuge Tube, PC

Code	Tube Capacity (ml)	Places	Colour	L x W x H (mm)	No. per Case
P20201	1.5 & 2	24 (6 x 4 Array)	White	164 x 100 x 59	8
P20202	1.5 & 2	24 (6 x 4 Array)	Yellow	164 x 100 x 59	8
P20203	1.5 & 2	48 (12 x 4 Array)	White	293 x 100 x 59	8
P20204	1.5 & 2	48 (12 x 4 Array)	Yellow	293 x 100 x 59	8

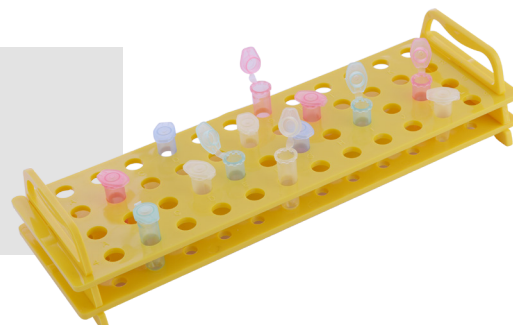
Easy to hold ergonomic design.

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

Racks are stackable when empty or full.

Easy removal and insertion of tubes.

Compatible with both 1.5ml and 2.0 ml Micro Centrifuge Tube



05

Poly Wire Micro Tube Rack, Nylon

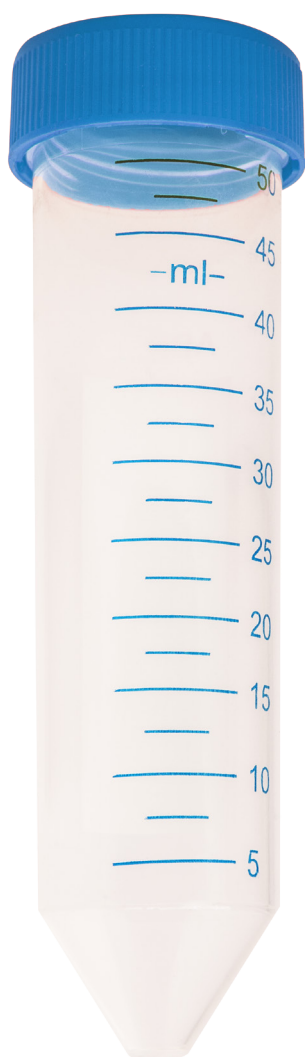
Code	Tube Capacity (ml)	Places	Colour	L x W x H (mm)	No. per Case
P20227	1.5 & 2	24	Blue	143 x 90 x 52	8
P20228	1.5 & 2	96	Blue	210 x 131 x 54	4

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

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

Temperature range -40°C to +140°C.





CENTRIFUGE TUBES FEATURES

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

Perfect grip on screw cap provides secure control on the cap when wet.

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

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

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

Large white frosted portion for easy writing.

Highly transparent (5% less material haze than a competitor).

Hydrodynamic conical bottom for perfect pelleting of sediments.

THE CAP

- Specially designed flat thread Provides a vacuum tightleak proof closure preventing override of cap.
- Unique plug seal ensures perfect sealing.

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

Free from heavy metals, natural rubber & inhibitory plasticizers



06

Centrifuge Tubes Conical Bottom, PP/HDPE

Centrifuge Tube Conical Bottom, PP Natural

Code	Capacity (ml)	Colour of Cap	Outer Diameter (mm)	Height (mm)	No. Per Case
P10430	15 (Bulk)	Blue	16.5	121	500
P10401	15	Blue	16.5	121	500
P10441	15	Red	16.5	121	500
P10402	15 (sterile)	Blue	16.5	121	500
P10442	15 (sterile)	Red	16.5	121	500
P10431	50 (Bulk)	Blue	29.2	116	500
P10403	50	Blue	29.2	116	500
P10443	50	Red	29.2	116	500
P10404	50 (sterile)	Blue	29.2	116	500
P10444	50 (sterile)	Red	29.2	116	500

Centrifuge Tube Conical Bottom, PP Amber

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

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

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

Can withstand up to 15000 RCF*.

Large white frosted area for easy writing.

The option of Amber colour for light sensitive Samples.

Built in plug in the cap makes it leak proof.



STERILE R



Self Standing Centrifuge Tubes, PP/HDPE

07

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

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

Skirted bottom makes it easier to use without any rack.

Large white frosted area for easy writing.

Built in plug in the cap makes it leak proof.

Sterile Tubes have been validated according to EN ISO 11137-2; 2012 for SAL 10^{-6}

Can withstand up to 3500 RCF*



STERILE R



Individually Wrap Centrifuge Tubes, PP/HDPE

08

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

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

The large white frosted portion for easy writing.

Silk-Screen graduation makes identification easy.

Best suited for less number of samples.

Option of Amber colour for light-sensitive samples.

Built in plug in the cap makes it leak proof.

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



Racked Centrifuge Tube Conical Bottom, Paper

09

Code	Capacity (ml)	Height (mm)	No. Per Case
P10409	15 (Rack Only)	47	10
P10410	50 (Rack Only)	48	10
P10411	15 (Racked)	125	750 (25 pcs x 30 racks)
P10412	15 (Racked, Sterile)	125	750 (25 pcs x 30 racks)
P10413	15 (Amber, Racked)	125	750 (25 pcs x 30 racks)
P10414	15 (Sterile Amber, Racked)	125	750 (25 pcs x 30 racks)
P10415	50 (Racked)	123	400 (25 pcs x 16 Racks)
P10416	50 (Racked, Sterile)	123	400 (25 pcs x 16 Racks)
P10417	50 (Amber, Racked)	123	400 (25 pcs x 16 Racks)
P10418	50 (Sterile Amber, Racked)	123	400 (25 pcs x 16 Racks)

These Racks are designed to hold Conical Bottom Centrifuge tubes.

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

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

Available in Red/ Blue Colour Cap.



10

Centrifuge Tubes Conical Bottom, PS/HDPE

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

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

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

Perform well with animal cell culture handling.

The large white frosted portion for easy writing.

Silk-Screen graduation makes identification easy.

Build in plug in the cap makes it leak proof.

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

Can withstand up to 2500 RCF*.



STERILE R



11

Centrifuge Tube Box, PP

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

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

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

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

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



12

Click Together Conical Tube Racks, ABS

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

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

Alphanumeric index aids for tube identification.

Designed for stable use in a water bath.



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

Universal Centrifuge Tube Rack, PP

13

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

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

Accepts tubes and vessels from 16-30 mm.

Moulded indexing for easy identification of tubes and vials.

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

Generous handles for easy transport



Foldable Space Savings Rack, PP

14

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

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

Moulded indexing for easy identification of tubes and vials.

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

Designed to help recognize 15 and 50 ml tubes.



Floating Rack For Micro Centrifuge Tube, PP

15

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

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

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

Not recommended for autoclaving.

Detachable legs provide two options:

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



Swirl Mini Micro Centrifuge

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

Spare Accessories:

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

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

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

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

Swirl uses minimal bench-top space.

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

Swirl adapts a Brushless DC Motor.

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

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



Swirl Maxi Micro Centrifuge

Code	Product	No. per Case
E11510	Swirl Maxi Micro Centrifuge	1

Spare Accessories:

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

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

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

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

Both RPM and G-force can be displayed.

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

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

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

sample warming and allows easy access to samples.

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

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

Specifications

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



Swirl Micro Plate Centrifuge

Code	Product	No. per Case
------	---------	--------------

E11550	Swirl Micro Plate Centrifuge	1
--------	------------------------------	---

Spare Accessories:

Code	Product	No. per Case
------	---------	--------------

E11551	Adapter, 96 x 0.2ml or 12 x PCR strips,	2
--------	---	---

E11552	Rotor with carrier for Deepwell plates upto 35mm tall (Max speed 1500 rpm)	1
--------	--	---

Small footprint (9x10 in) half the size of a conventional centrifuge.

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

A automatic electric break brings the rotor to a quick & smooth stop in just 4.0 seconds on opening.

g-force of 600xg

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

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

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



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



Before & after centrifugation (angled position)



During centrifugation (Horizontal position)





LIQUID HANDLING

Micro Pipettes
Tips
Filter Tips
Sample Containers
Ria Vial
& more

ABDOS PIPETTES

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

1 Comfortable Finger Support:

helps in prolonged pipetting operation with less fatigue.

2 Easy Calibration:

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

3 Ejector:

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

4 Display:

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

5 Slim Pipette Shaft:

Allows Pipetting into narrow vessels.

6 Tip Cone:

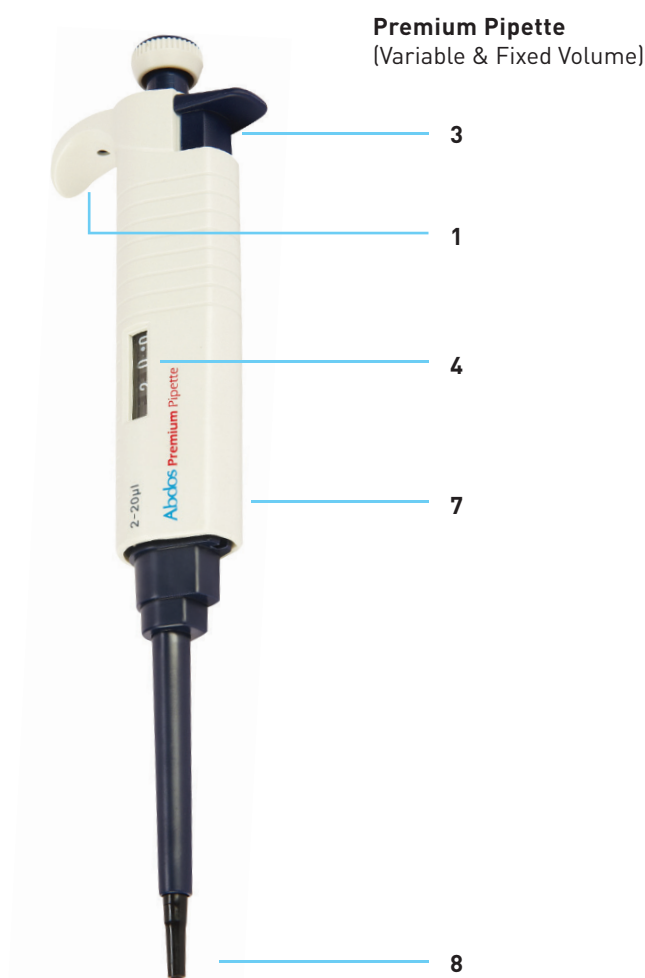
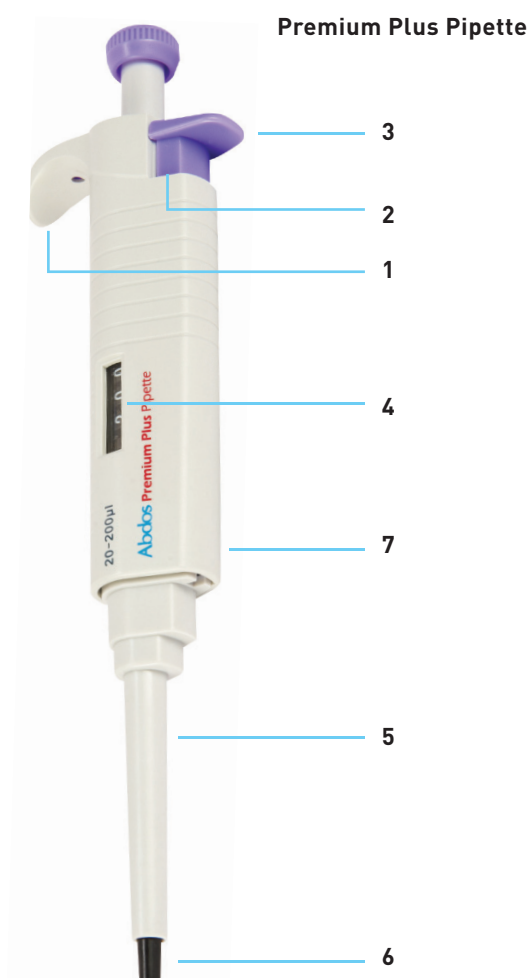
Optimized Standard Design. Pipette tips from ABDOS and other manufacturer's tips can be used.

7 Fully Autoclavable:

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

8 Semi autoclavable:

The lower part can be autoclaved to ensure contamination free operations.



Premium Plus Pipettes, PP

Fully Autoclavable Single Channel Adjustable Premium Plus Pipettes

Specifications

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

Abdos Premium Plus Pipettes are Fully Autoclavable.

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

Volume settings can be clearly read through digital display.

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

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

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



Premium Pipettes, PP

Semi Autoclavable Single Channel Adjustable Premium Pipettes

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

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

Volume settings can be clearly read through digital display.

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

Abdos Premium Pipettes are Semi-Autoclavable.

Abdos Premium Pipettes are designed to avoid repetitive strain injuries.

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



Fixed Premium Pipette, PP

Fixed Volume Pipette

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

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

Volume settings can be clearly read through digital display.

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

Abdos Premium Pipettes are Semi-Autoclavable.

Abdos Premium Pipettes are designed to avoid repetitive strain injuries.

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



Premium Plus Multi-Channel Pipette

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

1 Volume Adjustment:

Simply turn the plunger button for volume selection.

2 Comfortable Finger Support:

Helps in prolonged pipetting operation with less fatigue.

3 Tip Ejector:

Allows convenient one handed operation. Very low operating force

4 Display:

Clear and easy to read display with large numbers and precise increments.

5 Ejector Coller And Tip Cone

can be removed.

6 Rotating Dispensing Heads

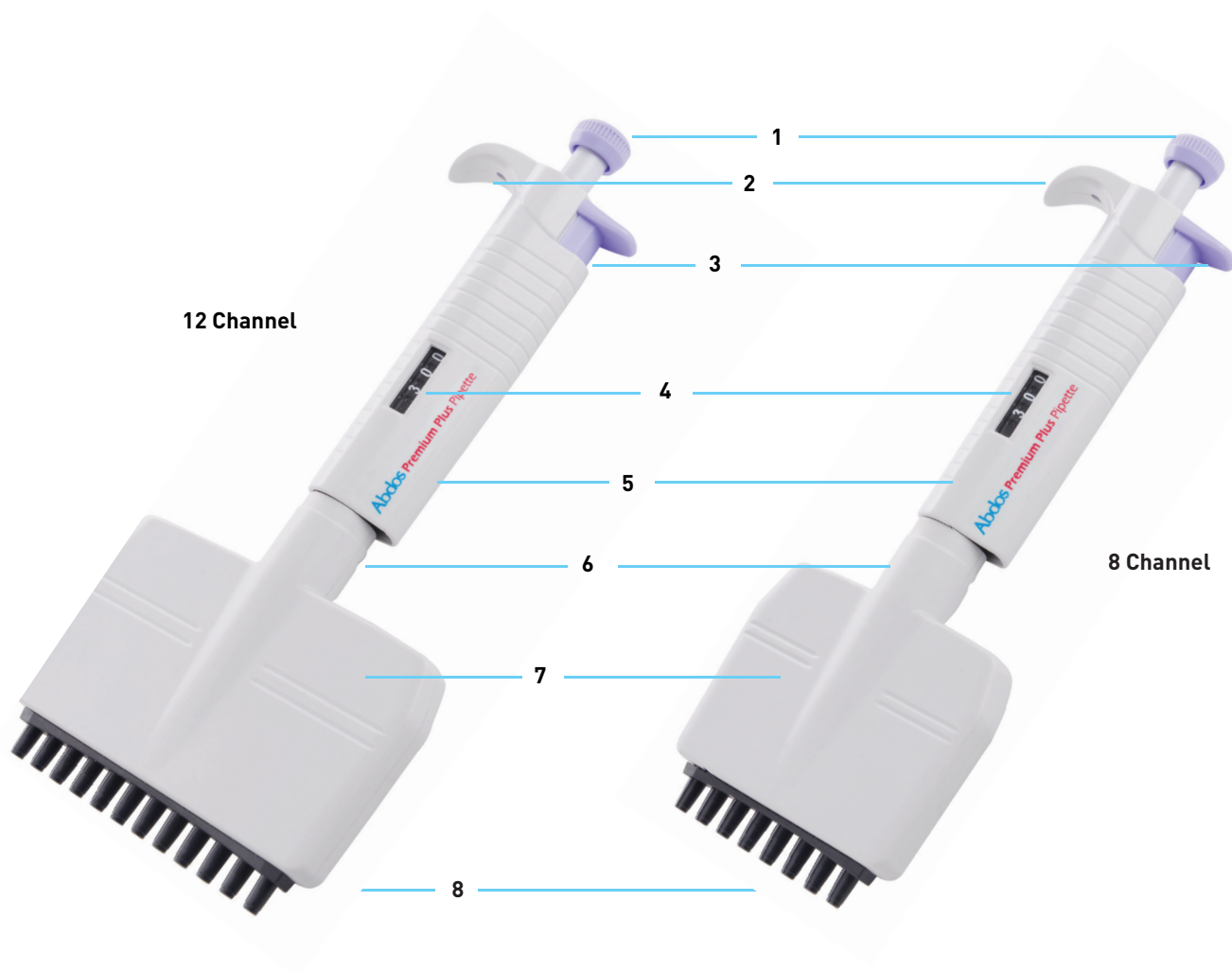
provide effortless pipetting convenience.

7 Fully Autoclavable

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

8 Chemical Resistance Tip Cone:

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



Premium Plus Multi-Channel Pipette, PP

8 - Channel Adjustable Premium Plus Pipettes

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

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 convenience.

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 Pipette 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 an operator manual that provides complete information on recalibration and maintenance of the pipettes.

Premium Plus Multi-Channel Pipette, PP

12 - Channel Adjustable Premium Plus Pipettes

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

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

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

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

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

These pipettes are designed to avoid repetitive strain injuries.

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

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

24

Premium Electronic Pipette

Specifications

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

The Abdos Premium Plus electronic pipettes is fast and precise with an ergonomic design that is easy to use in laboratories.

Comprehensive range with easy programming.

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

Easy display and clear number.

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

Lower part is autoclavable.

Reduces workload and improves the accuracy and precision.

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



Pipet Rack Stand, Acrylic

25

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

Keep your pipettes within easy inside this convenient rack.

Racks are mounted on their own stand.

Holds five standard size pipettors.

Keeps working area or desk free from clutter.



Pipette Rack Stand (Carosol Type), PP

26

Code	Places	No. per Case
P70203	6	1

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

The carousel stand rotates smoothly and comfortable.

Holds six standard size pipettors.

Keeps working area or desk free from clutter.



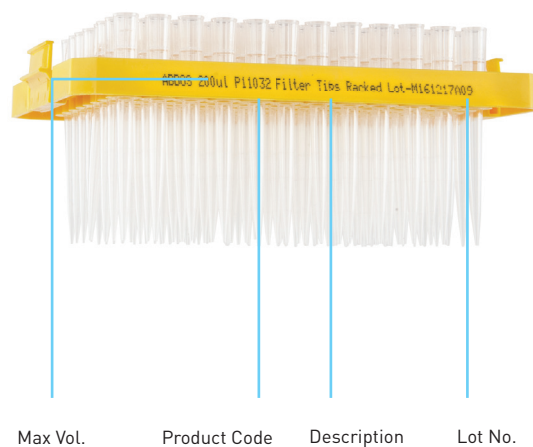
PIPETTE TIPS

PP



WAFFER VALUE ADDITIONS

Each wafer of the rack is printed with Volume Range, Lot Number and product code making it easy to keep your work organized and ensures supplies are traceable





PIPETTE TIPS FEATURES

All Tips are manufactured from ultra pure USP Class VI certified virgin polypropylene to ensure the highest quality & confirms 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 marks for error free pipetting

High clarity for better visibility of samples.

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

ABDOS BEVELLED TIPS



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

Bevelled tip prevents accidental gel rupture during loading of the samples

Bevelled tip prevents accidental gel rupture during loading of the samples

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



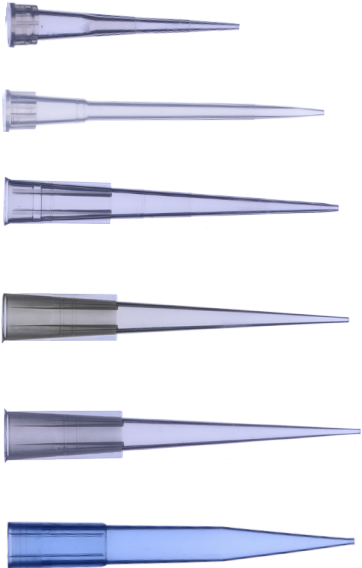
Ultra point orifice for precise work like gel loading & careful pipetting between space as small as 1 mm as in PAGE, electrophoresis & IEF



Ultra clear transparency for two phase pipetting

Pipette Tips, Bulk in Resealable Bags, PP

Code	Capacity (µl)	Colour	No. per Case
P10115	0.2 - 10 (Graduated)	Natural	1000
P10137	0.2 - 10 Extended (Graduated)	Natural	1000
P10129	2 - 200 (Bevelled Graduated)	Yellow	1000
P10130	2 - 200 (Bevelled Graduated)	Natural	1000
P10101	2 - 200 (Ultra Point Tip Orifice)	Yellow	1000
P10105	2 - 200 (Ultra Point Tip Orifice)	Natural	1000
P10138	2 - 300 (Graduated)	Natural	1000
P10102	100 - 1000	Blue	500
P10106	100 - 1000	Natural	500



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

Abdos polyethylene bags are recyclable.



Large Volume Pipette Tips, Bulk PP

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

The ergonomically optimized cone geometry provides the optimal pipette fit on most leading brands.

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



Micro Tips, Individually Wrapped, Sterile

29

Code	Capacity (µl)	Colour	No. per Case
P10164	0.2 - 10 µl (Graduated)	Natural	400
P10161	2 - 200 µl (Bevelled Graduated)	Natural	400
P10163	100 - 1000 µl	Natural	400

Sterile individually wrapped tips have been validated according to ENISO 11137-2; SAL 10^{-6}


STERILE R

Pipette Tips, Racked PP

30

Code	Capacity (µl)	Colour	No. Per Case
P10116	0.2 - 10 (Graduated)	Natural	10 Racks x 96 pcs (960 pcs)
P10139	0.2 - 10 Extended (Graduated)	Natural	10 Racks x 96 pcs (960 pcs)
P10140	2-200 (Bevelled Graduated)	Yellow	10 Racks x 96 pcs (960 pcs)
P10141	2-200 (Bevelled Graduated)	Natural	10 Racks x 96 pcs (960 pcs)
P10107	2-200 (Ultra Point Tip Orifice)	Yellow	10 Racks x 96 pcs (960 pcs)
P10108	2-200 (Ultra Point Tip Orifice)	Natural	10 Racks x 96 pcs (960 pcs)
P10142	2-300 (Graduated)	Natural	10 Racks x 96 pcs (960 pcs)
P10109	100 - 1000	Blue	10 Racks x 96 pcs (960 pcs)
P10110	100-1000	Natural	10 Racks x 96 pcs (960 pcs)

Polypropylene racks are very robust, sturdy with consistent and thick wall thickness can be used for repeat autoclaving.

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

Racks are stackable & reusable once empty.



Pipette Tips, Sterile Racked, PP

Sterile by Gama Radiation

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

Polypropylene racks are very robust, sturdy with consistent and thick wall thickness can be used for repeat autoclaving.

Racks are stackable & reusable once empty.

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

* Sterile Tips has been validated according to ENISO 11137-2; 2012 for SAL 10⁻⁶



STERILE R



Pipette Tips, Refill Pack, PP

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

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 accumulating in empty boxes.

More cost effective solution.

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



LAST DROP™

LOW RETENTION PIPETTE TIP

FEATURES



Samples retention is ten times lesser than our standard pipette tips.

Highly homogenous surface prevents non-specific binding.

DNase, RNase and Pyrogen free.

Tips are free from Bacteriostatic & Fungistatic properties suitable for microbiology.

Optimal surface for enhanced dispensing
Minimal sample loss of highly viscous liquids or samples containing detergents

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

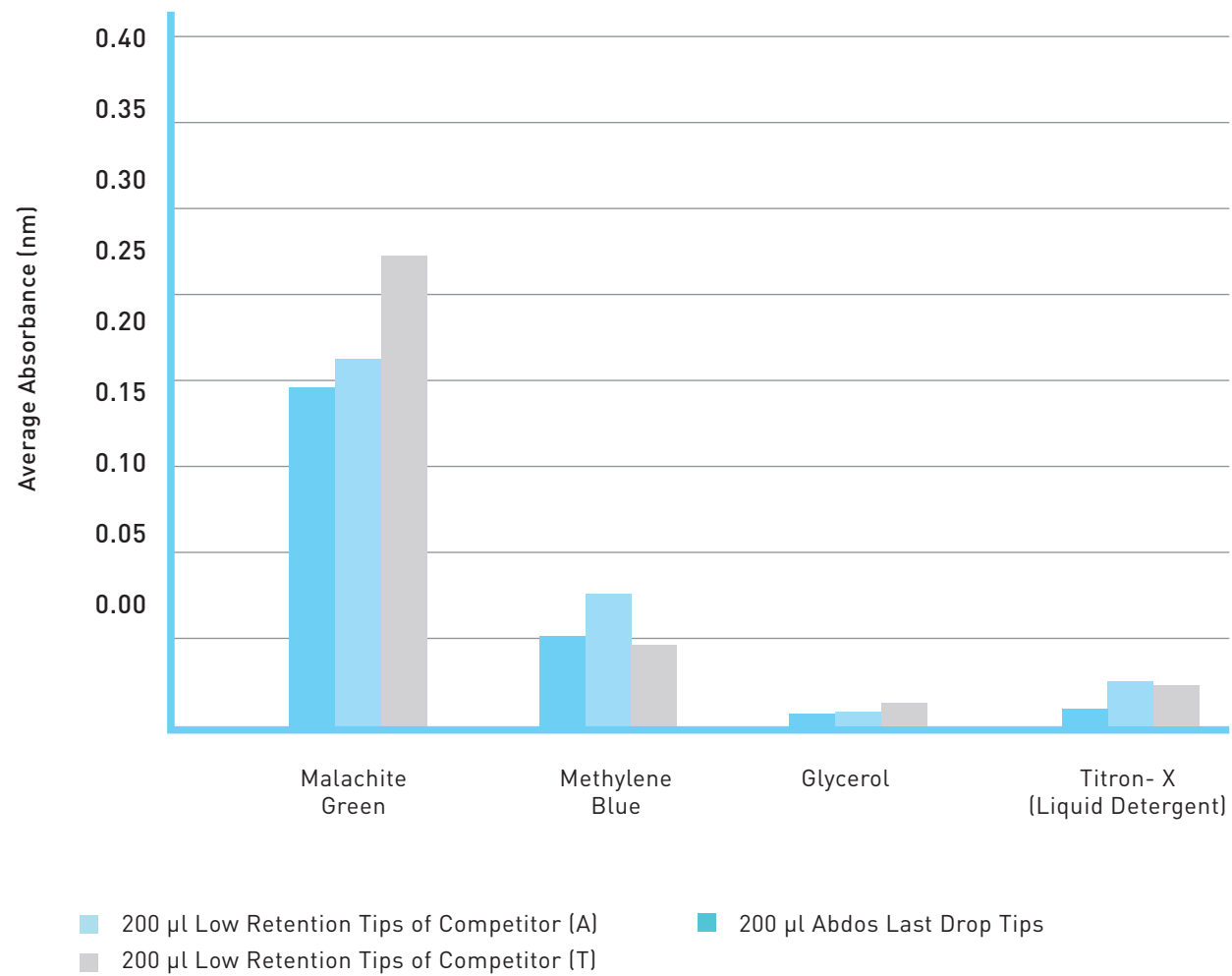
Save money on costly reagents.

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

Comparison with leading brands of low retention tips using electronic pipette of 100µl using Malachite Green, Methylene Blue, Glycerol & Titron-X (liquid detergent) as test agent at a constant pipetting speed, Residual in the pipette was washed out by repeated rinsing with 200µl of water into a cuvette and compared photometrically. The test was repeated 10 times for each tip. The average values established are shown in the table.

COMPARISON CHART



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

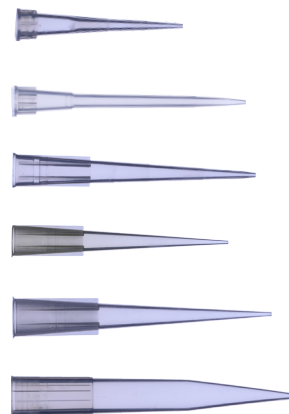
33

Last Drop™ Pipette Tips in Resealable Bulk, PP

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

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

Abdos polyethylene bags are recyclable.



34

Last Drop™ Pipette Tips, Racked PP

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

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.



Last Drop™ Pipette Tips, Sterile Racked, PP

Sterile by Gama Radiation.

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

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.

* Sterile Tips has been validated according to ENISO 11137-2; 2012 for SAL 10⁻⁶



STERILE R



Last Drop™ Pipette Tips, Refill Pack, PP

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

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

Saves time and costs of manual accumulating in empty boxes.

Easy to load and remove into boxes.

More cost effective solution.

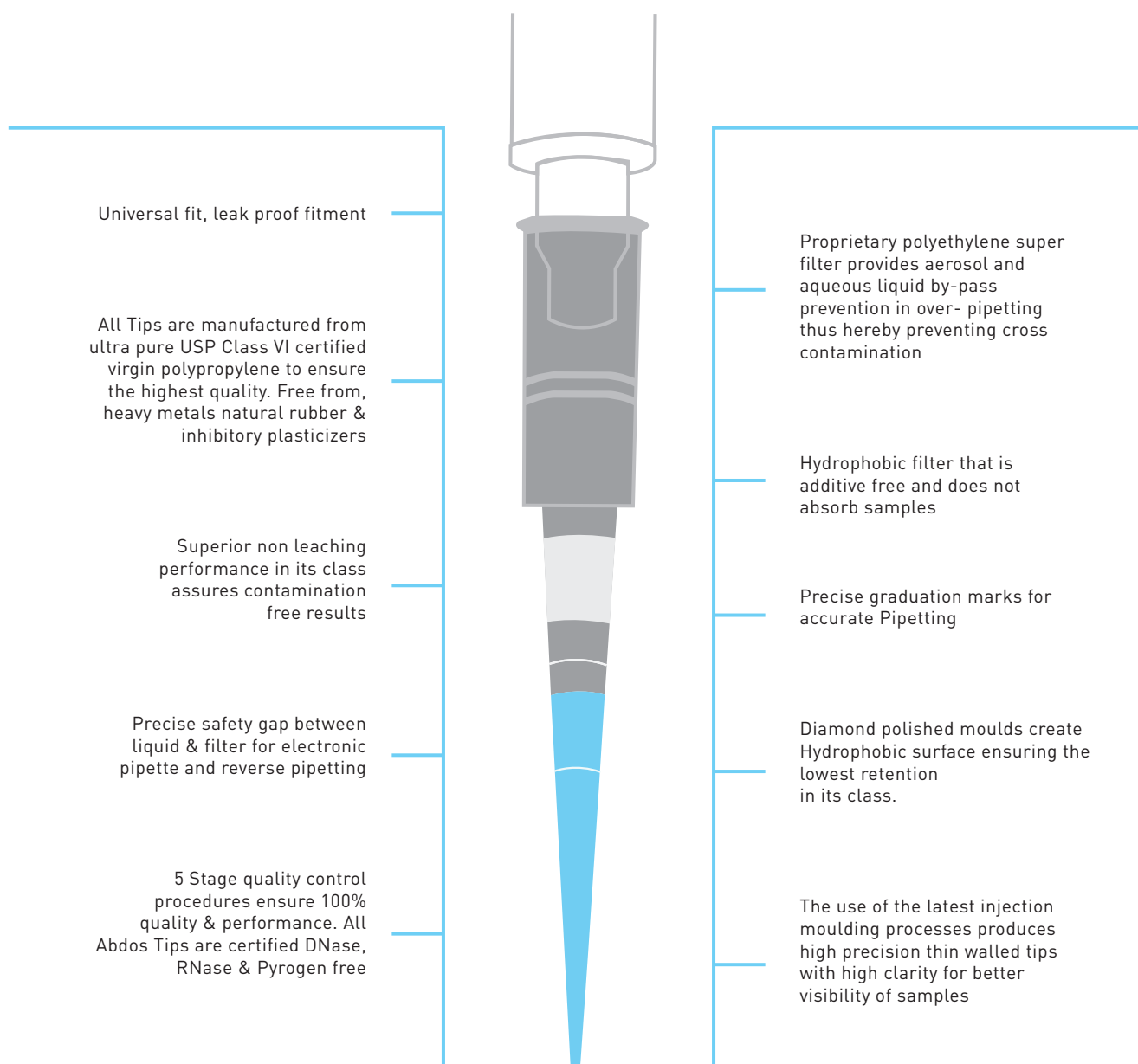
12 x 8 Array to align the contents in the box.

Can be autoclaved when racked.



FILTER PIPETTE TIPS

FEATURES



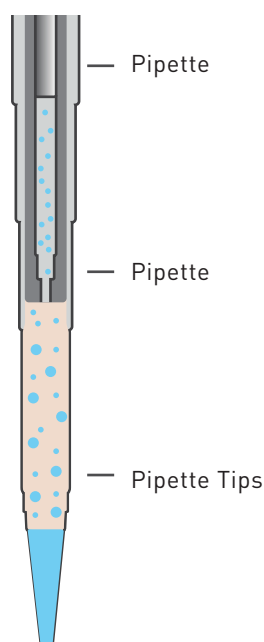
- Suitable for biological applications.
- The Abdos Filters are 100% pure porous PE making the Recovery of Samples from Wetted, Filtered without Contamination
- Non Cytotoxic (ISO 10993-5 MRM, Minimal Essential Media Elution, GLP Compliant)
- 99.9% Bacterial Aerosol Filtration Efficiency (BFE), (ASTM F21012)
- Non Hemolytic (Modified ASTM F 756-08 Hemolysis Direct Contact GLP with Human Blood)
- Inert, hydrophobic filter does not trap or block the liquid

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

Case Study:

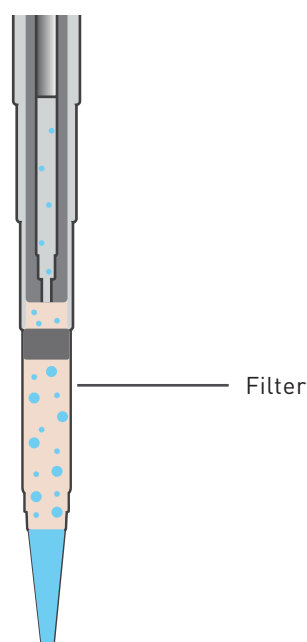
Contamination is one of the major issues we face while working in our labs, contamination is mainly caused when pipetting samples from one source to another, therefore Abdos offers the Super filter that prevents both liquid & aerosols passing through the filter thus making the pipette shaft contamination free.

**Non filter
Pipette Tips**



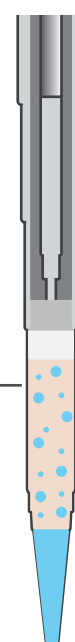
May lead to contamination of the pipette as there is no barrier to prevent liquid or aerosol entering into the shaft. Thus can affect your experiment & you may lose your precious samples.

**Selective Barrier
Pipette Tips**



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

**Abdos Super
Filter Tip**



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

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

37

Filter Tips, Bulk in Resealable Bags

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

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

Abdos polyethylene bags are recyclable.



38

Filter Tips - Racked, PP

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

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.



Filter Tips - Sterile Racked, PP

39

Code	Capacity (µl)	Colour	No. Per Case
P11021	0.2-10 (Graduated)	Natural	10 Racks x 96 Pcs
P11023	0.2-10 Extended (Graduated)	Natural	10 Racks x 96 Pcs
P11025	2-20 (Graduated)	Natural	10 Racks x 96 Pcs
P11027	2-50 (Graduated)	Natural	10 Racks x 96 Pcs
P11029	2-100 (Graduated)	Natural	10 Racks x 96 Pcs
P11033	2-200 (Graduated)	Natural	10 Racks x 96 Pcs
P11035	2-300 (Graduated)	Natural	10 Racks x 96 Pcs
P11037	100 -1000	Natural	10 Racks x 96 Pcs

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.

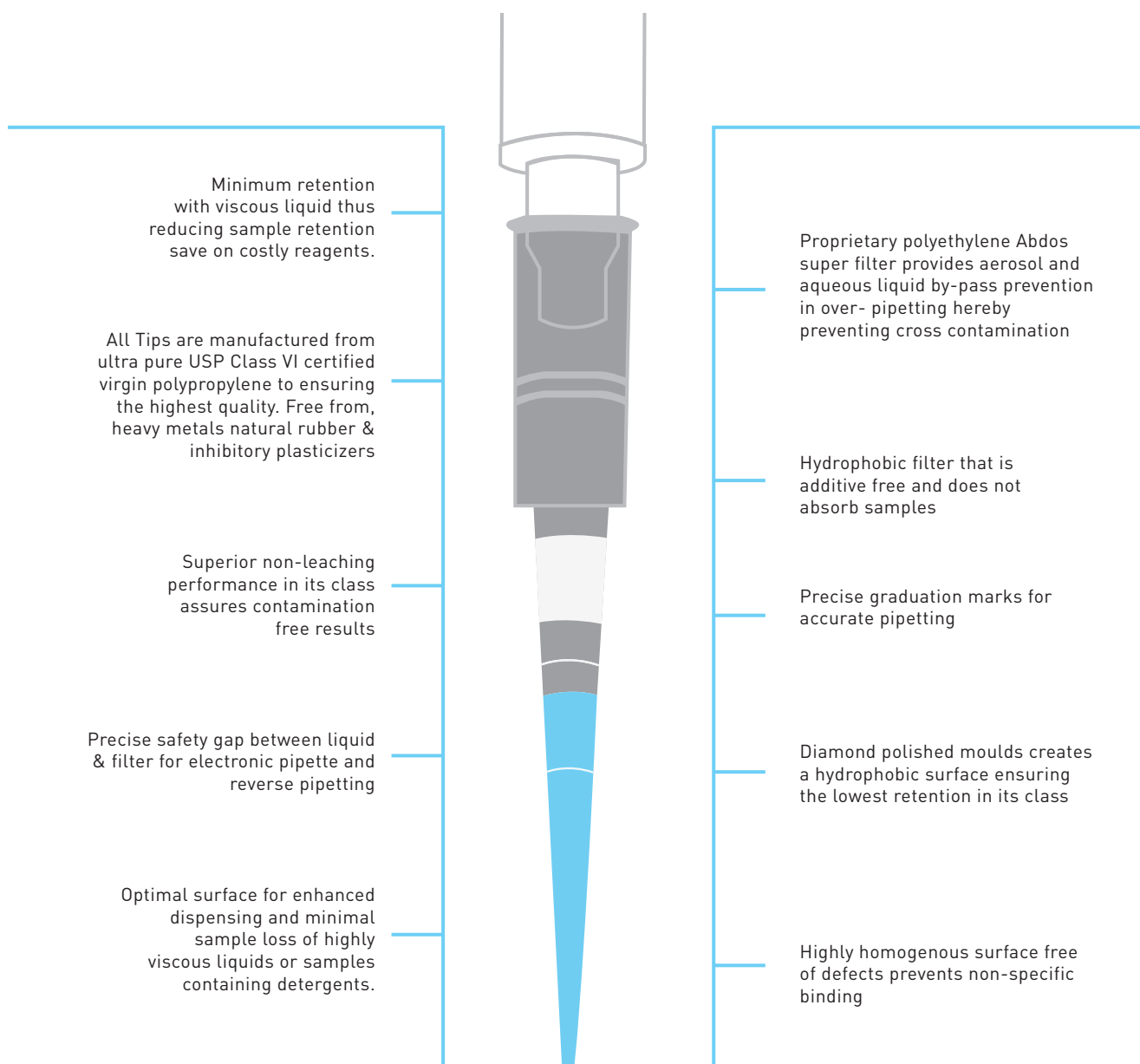
* Sterile Tips has been validated according to ENISO 11137-2; 2012 for SAL 10⁻⁶



LAST DROP™ FILTER PIPETTE TIPS

LOW RETENTION PIPETTE TIP

FEATURES



- Suited for biological application.
- The Abdos Filter are 100% pure porous PE makes Recovery of Samples from Wetted, Filtered without Contamination
- Non Cytotoxic (ISO 10993-5 MRM, Minimal Essential Media Elution, GLP Compliant)
- 99.9% Bacterial Aerosol Filtration Efficiency (BFE), (ASTM F21012)
- Non Hemolytic (Modified ASTM F 756-08 Hemolysis Direct Contact GLP with Human Blood)
- Inert, Hydrophobic Filter does not trap or block the liquid

Last Drop™, Low Retention Filter Tips,
Bulk in Resealable Bags

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



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

Abdos polyethylene bags are recyclable.



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

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

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.



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

Code	Capacity (µl)	Colour	No. Per Case
P11061	0.2-10 (Graduated)	Natural	10 Racks x 96 Pcs
P11063	0.2-10 Extended (Graduated)	Natural	10 Racks x 96 Pcs
P11065	2-20 (Graduated)	Natural	10 Racks x 96 Pcs
P11067	2-50 (Graduated)	Natural	10 Racks x 96 Pcs
P11069	2-100 (Graduated)	Natural	10 Racks x 96 Pcs
P11073	2-200 (Graduated)	Natural	10 Racks x 96 Pcs
P11075	2-300 (Graduated)	Natural	10 Racks x 96 Pcs
P11077	100 -1000	Natural	10 Racks x 96 Pcs

Polypropylene racks are very robust, sturdy with consistent and thick wall thickness can be used for repeat autoclaving.

Racks are stackable & reusable once empty.

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

* Sterile Tips has been validated according to ENISO 11137-2; 2012 for SAL 10⁻⁶



STERILE R



ABDOS TIPS & LAST DROP PIPETTE TIPS COMPATIBILITY CHART

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

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

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

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

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

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

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

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

Pipettor Brand/ Make			Labnet Labpette					Labnet Labpette				Labnet BioPette E						"Nichiryo / Oxford Benchmate"					
			Single Channel					Multi Channel				Single Channel			Multi Channel			Single Channel & Multi Channel					
Abdos Code for Pipette Tips	Abdos Code for Last Drop Pipette Tips	Volume	0.1-2µl	0.5-10µl	2-20µl	10-100µl	20-200µl	100-1000µl	1-10µl	5-50µl	20-200µl	50-300µl	0.5-10µl	2-20µl	10-200µl	100-1000µl	0.5-10µl	2-20µl	10-50µl	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 Axypet												
			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								✓													✓					

LIQUID HANDLING

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

ABDOS FILTER TIPS & LAST DROP FILTER PIPETTE TIPS COMPATIBILITY CHART

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

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

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

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

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

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

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

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

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

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

Empty Micro Tip Box, PP

43

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

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

Abdos Micro Tip Box can accommodate

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

Manufactured in high quality polypropylene.

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

These boxes are stackable.

All Tip Boxes contain 96 Tip holes.

Can be autoclaved.



121°C

Reagent Reservoir, HIPS

44

Code	Capacity (ml)	No. per Case
P10501	25	10
P10503	100	10

Unique "trough within a trough" maximizes reagent recovery.

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

A wide base provides stability and avoids spills.

Graduated marks on inside wall.

Convenient pour-off spouts on all four corners.

Superior design provides stronger sidewalls.



Stepmate Stepper

45

Code	Capacity (ml)	No. per Case
E11171	0.5 - 50	1

Suitable Tips & Adapter for Stepmate Stepper

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

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

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

Specifications

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

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

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

It provides upto 48 dispensing steps and improves work efficiently.

It is lightweight and ergonomic.

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

Factory fitted calibration.



Supreme Bottle Top Dispenser

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

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

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

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

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



Supreme Plus Bottle Top Dispenser

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

Material Specifications

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

Specifications

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

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

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

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



Supreme Duet Bottle Top Dispenser

Code	Capacity (ml)	No. per Case
E11731	0.25 - 2.5	1
E11732	0.50 - 5	1
E11733	1.0 - 10	1
E11734	2.5 - 30	1
E11735	5.0 - 60	1
E11736	10 - 100	1

Material Specifications

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

Specifications

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

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

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

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

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



Rave Plus Pipette Filler

49

Code	Product	No. per Case
E11114	Rave Plus Pipette Filler	1
E11120	Rave Eco Pipette Filler	1

Spare Filters

Code	Product	No. per Case
E11116	Spare 0.45 µm Filter	1
E11117	Spare Lithium-ion	1
E11118	Spare Adapter	1

Specifications

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

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

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

Abdos Rave Plus Pipette Filler is powerful and can fill a 50 ml

Pipette in less than 10 seconds. Motor and pump operate quietly with very low vibration.

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

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



Rave Pipette Controller

50

Code	Product	No. per Case
E11113	Rave Pipette Controller	1

Spare Filters

Code	Product	No. per Case
E11119	Spare 3.00 µm Filter	1

Abdos Rave Pipette Controller is, light weight and is simple to use making it ideal for repetitive pipetting.

Users can use Volumetric and serological pipettes ranging from 1 ml to 100 mL.

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

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

The Abdos Rave Pipette Controller Have an autoclavable silicone pipette holder



Pipette Stand Horizontal, PP

51

Code	Places	No. per Case
P70204	12	6

These polypropylene racks can hold up-to 12 glass or plastic pipette in horizontal position.

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

Can be autoclaved.

These racks are available in white colour.

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



Pipette Stand Vertical, PP

52

Code	Places	D x H, (mm)	No. per Case
P70205	28	232 x 381	1

These polypropylene racks can hold up-to 28 glass or plastic pipette a in vertical position.

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

Racks can be disassembled to save space.

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

Can be autoclaved.



Pipette Storage Rack with Magnet, ABS

53

Code	Description	L x W x H (mm)	No. per Case
P70202	Store 1 - 50 ml pipette or cans	291 x 88 x 401	1

These Rack have cut-out viewing window and come with two removable attachments that hold pipette bulbs, fillers, and pumps.

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

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

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



Serological Pipettes Sterile, PS

54

Code	Length (mm)	Capacity (ml)	No. per Case
P10601	270	1	500
P10602	270	2	400
P10603	295	5	200
P10604	295	10	200
P10605	298	25	200
P10606	300	50	100

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

Lot numbers are printed on each pipette wrapper.

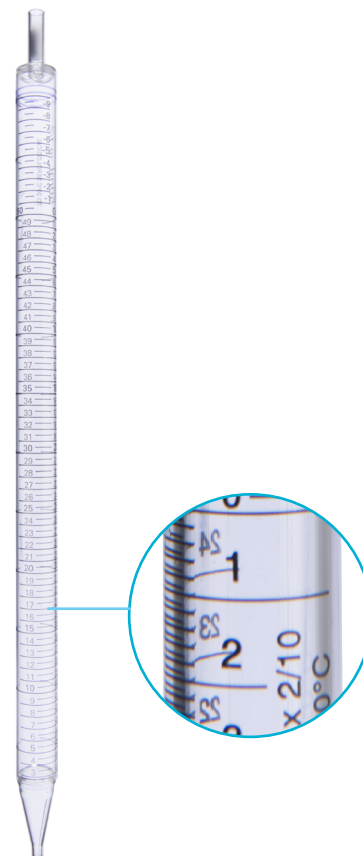
Unique color-coded plug allows easy size identification.

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

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



STERILE | E



Pasteur Pipettes, LDPE

55

Code	Length (mm)	Capacity (ml)	No. per Case
*P31207	130	0.5	500
*P31208	130	0.5 Sterile	500
P31201	154	1.0	500
P31202	154	1.0 Sterile	500
*P31209	156	2.0	500
*P31210	156	2.0 Sterile	500
P31205	154	3.0	500
P31206	154	3.0 Sterile	500

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

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

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

Sterile and non-sterile options available.

Can be sealed and refrigerated.

STERILE | EO



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

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

Radioimmunoassay (RIA) Vial

Code	Ø x h (mm)	Material	Capacity (ml)	No. per Case
P10301	12 x 75	PP	5	500
P10303	12 x 75	PS	5	500
P10305	12 x 40	PP	2.5	500
P10306	12 x 40	PS	2.5	500

Radioimmunoassay (RIA) Vial Cap

Code	Ø (mm)	Material	No. per Case
P10304	12	HDPE	500
P10307	12	PP	500
P10302	12	LDPE	500

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

Amber Radioimmunoassay (RIA) Vial

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

Amber Radioimmunoassay (RIA) Vial Cap

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

Plastic Test Tube

Code	Ø x h (mm)	Material	Capacity (ml)	No. per Case
P10308	13 x 100	PP	8	500
P10309	13 x 100	PS	8	500
P10310	16 x 100	PP	10	500
P10311	16 x 100	PS	10	500

Plastic Test Tube Cap

Code	Ø (mm)	Material	No. per Case
P10312	13	HDPE	1000
P10313	16	HDPE	1000

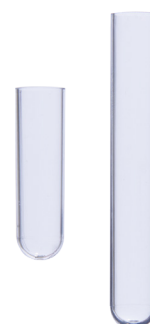
Abdos Ria Vials are polypropylene/polystyrene tubes generally used in Radioimmuno Assay –a scientific method used to test antigens (for sample, hormone levels in the blood) without the need to use a bioassay.

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

The PP tubes can accept common acids, alkalis & solvents at room temperature while the PS tubes are suitable for 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.



Sample Container, PP/HDPE

Code	Capacity (ml)	Sub Division (ml)	Height (ml)	No. Per Case
P40101	60	10	58	400
P40102	60 (Sterile)	10	58	350
P40105	60 (with Spoon)	10	58	400
P40106	60 (Sterile with Spoon)	10	58	350
P40103	120	20	80	200
P40104	120 (Sterile)	20	80	200
*P40112	200	20	120	100
*P40113	200 (Sterile)	20	120	100

Ultra clear polypropylene container with polyethylene leak proof screw cap.

Frosted portion for easy writing.

Clear and easy to read graduations.

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

The Sterile container is individually packed in a polyethylene pouch.

* P40112 & P40113 will be available January 2019 onwards.



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



VALUE ADDITIONS

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



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

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

Sterile containers are individually wrapped and have been validated according to ENISO 11137-2; 2012 for SAL 10⁻⁶

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.

IVD CERTIFIED PRODUCTS are recommended for diagnostics. A leak proof screw cap is of when transporting hazardous material. Ideal for transport and storage of urine, sputum and most liquids or particulate samples.

Sample containers are 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 a controlled and validated Clean Room ISO Class 7 by high-end injection moulding using high precision moulds which ensure smooth and symmetrical end product.

CRYO TECHNIQUES

Cryo Vial
Storage Vial
Cryo Box
& More



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

Code	Capacity (ml)	Outer Diameter (mm)	Height (mm)	No. per Case
P60115	1.0 Sterile Star Foot	12.00	41.00	1000
P60116	1.8 Sterile Star Foot	12.00	48.5	1000
P60117	1.8 Sterile Round Bottom	12.00	47.5	1000
P60118	4.5 Sterile Skirted Foot	11.36	86.5	500

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

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

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

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

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

There is a large white frosted portion for easy writing.

Graduation in silk-screen printing makes identification easy.

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

Available in self-standing reclosable zipper bags.

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

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



P60115



P60116



P60117

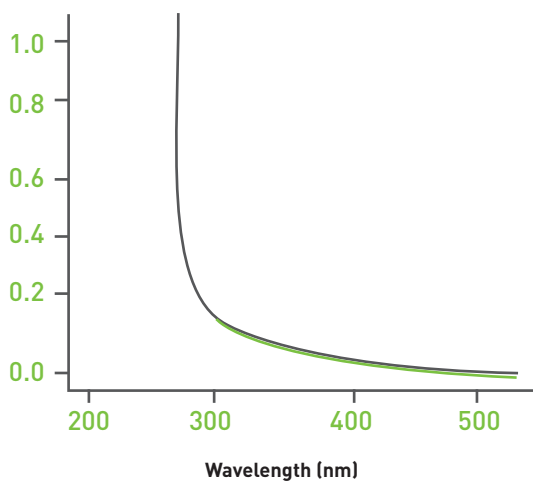


P60118



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

Leaching Performance Report with DMSO



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

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



Abdos Cryo Vial being taken out from a liquid Nitrogen cannister

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

Code	Capacity (ml)	Outer Diameter (mm)	Height (mm)	No. Per Case
P60108	1.0 Sterile Star Foot	12.3	41.2	1000
P60109	1.8 Sterile Star Foot	12.3	47.5	1000
P60110	1.8 Sterile Round	12.3	46.2	1000
P60112	4.5 Sterile Star Foot	12.3	90.3	500
P60113	4.5 Sterile Round Bottom	12.3	89	500

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

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

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

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

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

There is a large white frosted portion for easy writing.

Graduation in silk-screen printing makes identification easy.

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

Available in self-standing reclosable zipper bags.

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

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

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



P60113



P60112



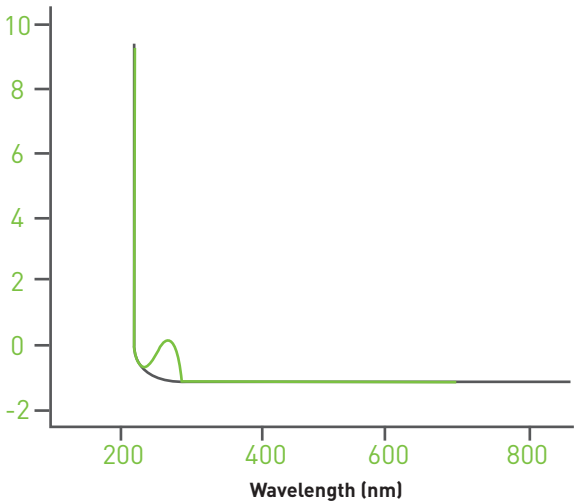
P60110



P60109



Leaching Performance Report with DMSO



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

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



P60108

Cryo Coders for External & Internal Threaded Vials, HDPE

60

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

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

Available in wide range of colours.

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



Storage Vial, PP

61

Storage Vial, Natural

Code	Capacity (ml)	Outer Diameter (mm)	Height (mm)	No. Per Case
P60119	1.0	12	41	1000
P60106	2.0	11.8	47.2	1000
P60107	5.0	11.8	88	1000

Storage Vial, Amber

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

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

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

The HDPE screw closure is leak proof.

Can be used at low temperatures.

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



121°C



FREE



635

LEAK TEST



CERTIFIED

Single Hand Cryo Holder Rack, PC

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

P20616	1 - 2	40 (10 x 4 Array)	201 x 105 x 22	4
--------	-------	-------------------	----------------	---

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

Inbuilt numbered and letters grid for sample identification.

The rack has a secure locking system in each well that will not allow the Cryo Vial to turn on either side.

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

Anti-skid rubber feet support the rack.



*Sterile Vial Are Also Available On Request



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

Cryo Box, PC

Code	Tube Capacity(ml)	Places	L xW x H (mm)	No. per Case
------	-------------------	--------	---------------	--------------

P20601	1 - 2	25 (5 x 5 Array)	75 x 75 x 54	8
--------	-------	------------------	--------------	---

P20601 Assorted	1 - 2	25 (5 x 5 Array)	75 x 75 x 54	8
-----------------	-------	------------------	--------------	---

P20602	1 - 2	81 (9 x 9 Array)	133 x 132 x 54	4
--------	-------	------------------	----------------	---

P20602 Assorted	1 - 2	81 (9 x 9 Array)	133 x 132 x 54	4
-----------------	-------	------------------	----------------	---

P20603	5	81 (9 x 9 Array)	133 x 132 x 97	4
--------	---	------------------	----------------	---

P20603 Assorted	5	81 (9 x 9 Array)	133 x 132 x 97	4
-----------------	---	------------------	----------------	---

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

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

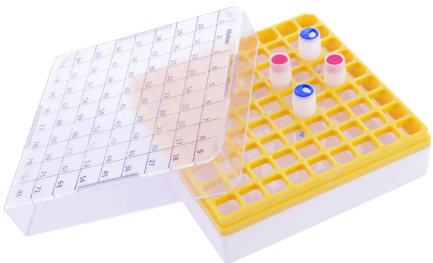
Transparent lids permit viewing of contents.

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

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

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

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



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

Cryo Box, System 100 Place, PC

64

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

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

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

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

These boxes create a 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.



121°C



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

Cryo Cube Box / Storage Cube Box, PP

65

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

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

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

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

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

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

Inbuilt numbers and letters grid for sample identification.



121°C



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

Freezing Cardboard Cryo Boxes, Cardboard

66

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

Designed for storage and preservation of frozen samples.

Can withstand ultra-low temperature in deep freezers.

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

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

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



Cryo Gloves

67

Code	Size	No. per case
U20307	Wrist S	1 Pair
U20308	Wrist M	1 Pair
U20309	Wrist L	1 Pair
U20310	Wrist XL	1 Pair
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



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

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

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

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

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

Cryo Apron

68

Code	Size (inch)	No. per Case
U20331	36	1
U20332	42	1
U20333	48	1
U20334	54	1

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

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

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

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



Water Proof Cryo Gloves

69

Code	Size	No. per Case
U20319	Wrist S	1 Pair
U20320	Wrist M	1 Pair
U20321	Wrist L	1 Pair
U20322	Wrist XL	1 Pair
U20323	Mid Arm S	1 Pair
U20324	Mid Arm M	1 Pair
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

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

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

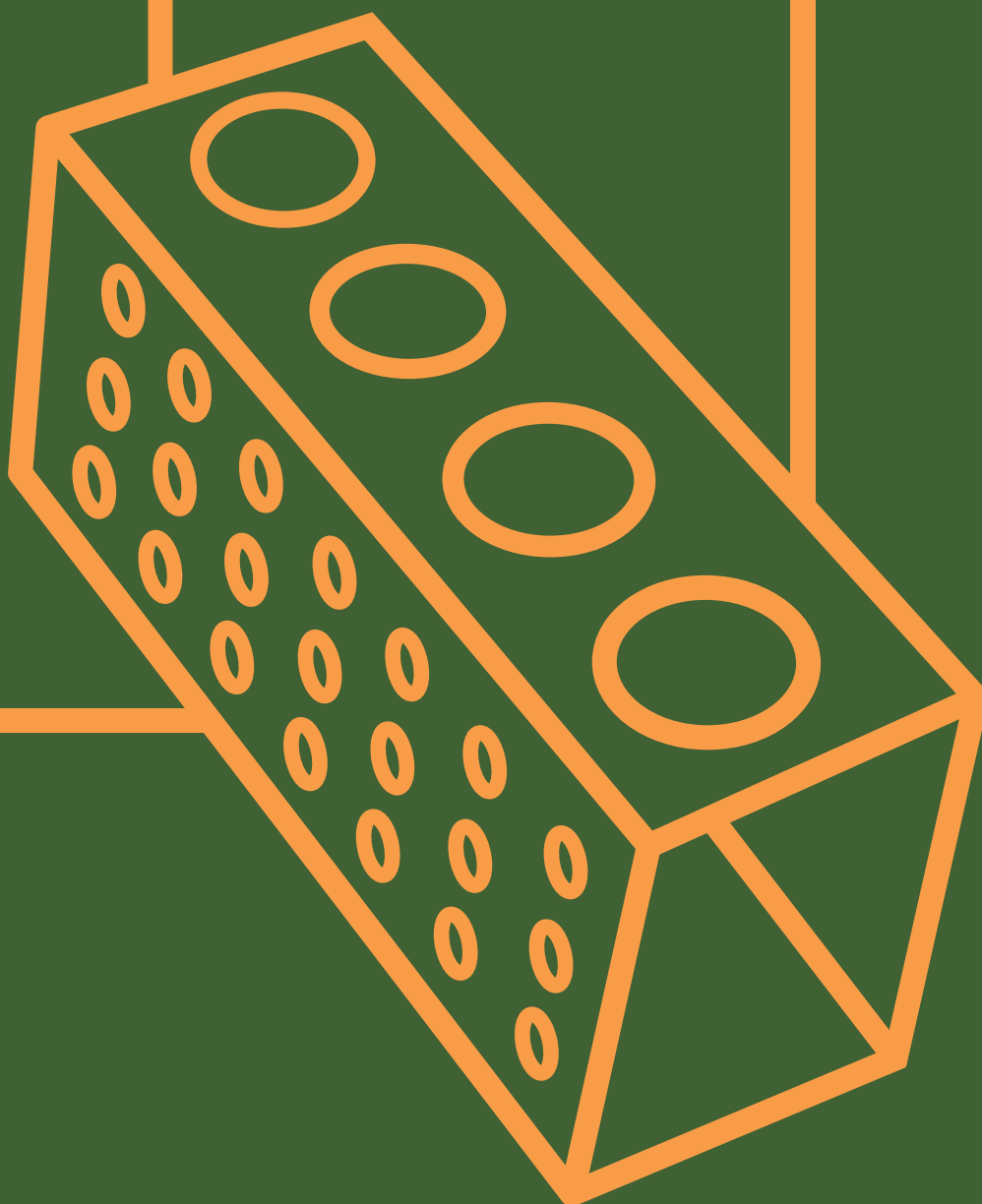
These gloves are designed to provide a high level of thermal protection where the exposure to cryogenic fluids might exist.

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

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



MULTI PURPOSE RACKS & BOXES



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

Rotator Workstation, PP

70

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

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

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

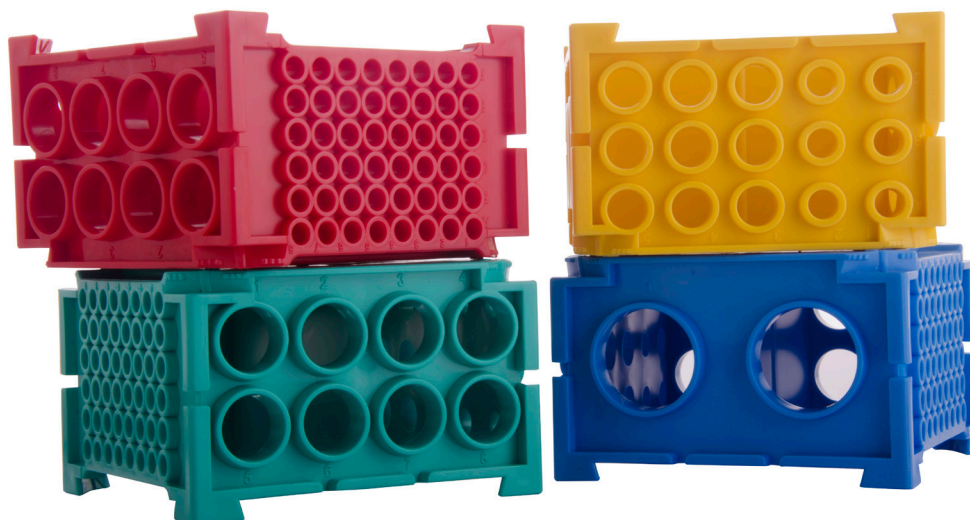
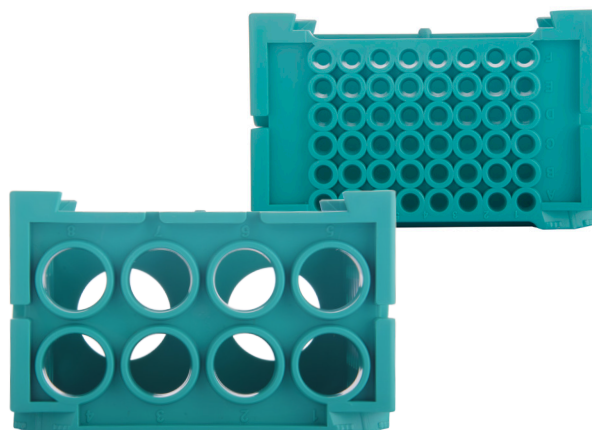
These racks can withstand temperature of -80 °C to 121°C.

The Cube Type Multi-Hole rack has a unique rotate and lock design that allow you to add or subtract racks according to your need.



Product compatibility chart for Rotator Workstation:

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



Multi Combination Racks, PP

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

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

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

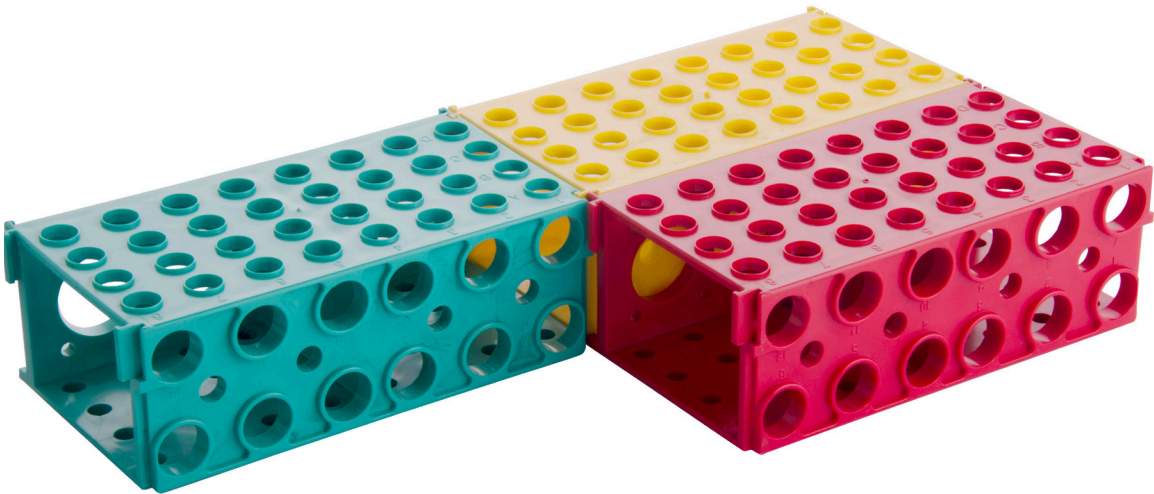
The rack has a unique rotate and lock design that allows you to racks according to your needs.

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



Product compatibility chart for Multi Combination Racks:

Product	No. per unit
50 ml Centrifuge Tubes	4 per unit
15 ml Centrifuge Tubes	12 per unit
1.5 ml or 2.0 ml Micro Centrifuge Tubes	32 per unit
0.5 ml Micro Centrifuge Tubes	32 per unit
Ria Vial 12 x 75 mm	32 per unit



Expanding Tube Rack, PP

72

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

Abdos Expanding 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 room for sample manipulation, When done, simply collapse the rack back to its compact form and it's ready for the freezer.

Stackable, with alphanumeric well identifications

Temperature range -80 to 121°C



3 Way Rack, PP

73

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

Interlock multiple racks to increase tube storage.

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

Polypropylene racks connect to one another on either end.

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

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

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

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



Reversible Rack with Cover, PP

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

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

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

Moulding Indexing for easy reference of tubes and vials.

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

Available in bright and attractive colour.



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

Twisty Tube Rack, PP

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

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

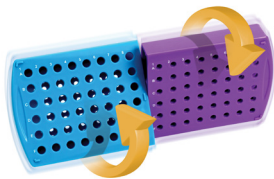
Can be rotated and customized according to end-user application.

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°C to 121°C.

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



Frosty Mate™ Storage Racks, PC

76

-20 °C Freezer Storage Racks

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

0°C Freezer Storage Racks

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

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

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

Moulded indexing makes identification faster and easier.

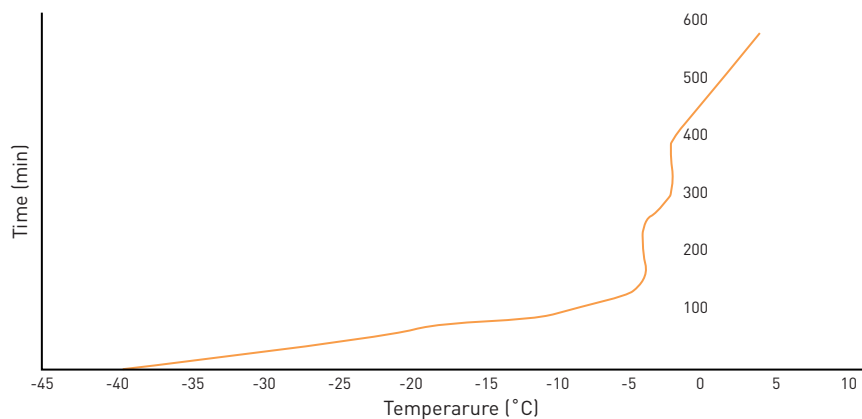
These racks are available in two temperature ranges:

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

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



Graph representing temperature stability VS Time



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

Frosty Mate™ Colour Change Racks, PP

MCT Freezer Change Racks

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

PCR Freezer Change Racks

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

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

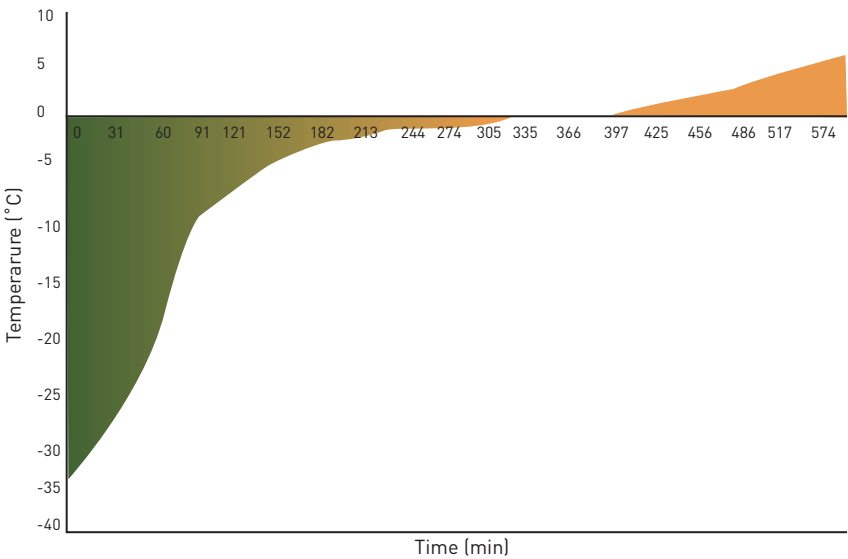
Can be used for transportation of biological samples, chemicals etc.. at a stable temperature for a long time with FROSTY MATE

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

A clear visible colour change From Yellow to Green



Graph representing temperature stability (Indicating colour) VS Time



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

Test Tube Rack, RPP & PC

Test Tube Rack, RPP

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

Test Tube Rack, PC

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

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

Ergonomics design for easy handling.

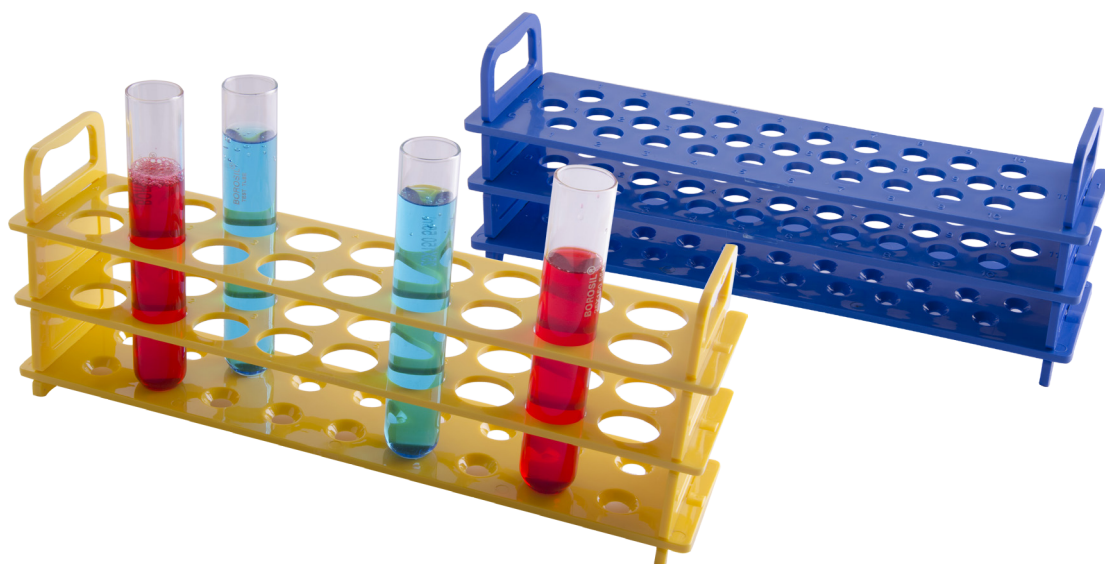
Can be used in a wide temperature range.

Superior chemicals resistance.

Wide range available in different colours



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



Double / Jumbo Test Tube Rack, RPP

Double Jumbo Test Tube Rack

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

Jumbo Test Tube Rack

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

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 sturdy and lightweight material suitable for easy movement and transport.

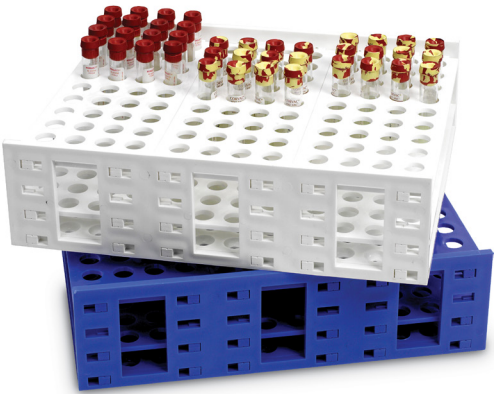
Holes are keyed with moulded- in numbers and letters for easy identification.

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

These Racks are available in white, and blue.



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



Polygrid Test Tube Racks, PP

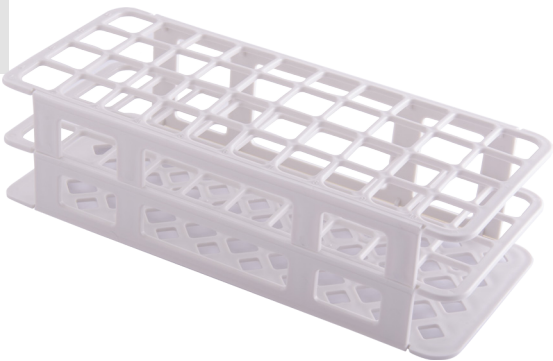
Code	Tube Diameter (mm)	Places	L x W x H (mm)	No. per Case
P20716	13	90	248 x 116 x 64	4
P20717	17	60	245 x 118 x 70	4
P20718	21	40	248 x 116 x 70	4

Can be used in the wide temperature range.

Superior chemical resistance.



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



Polywire Racks, Delrin

Polywire Rack Full, Delrin

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

Polywire Rack Half, Delrin

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

Polywire racks are durably moulded in a single continuous piece so no assembly required.

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

Superior reinforced nylon.

Moulded in indexing for easy identification.

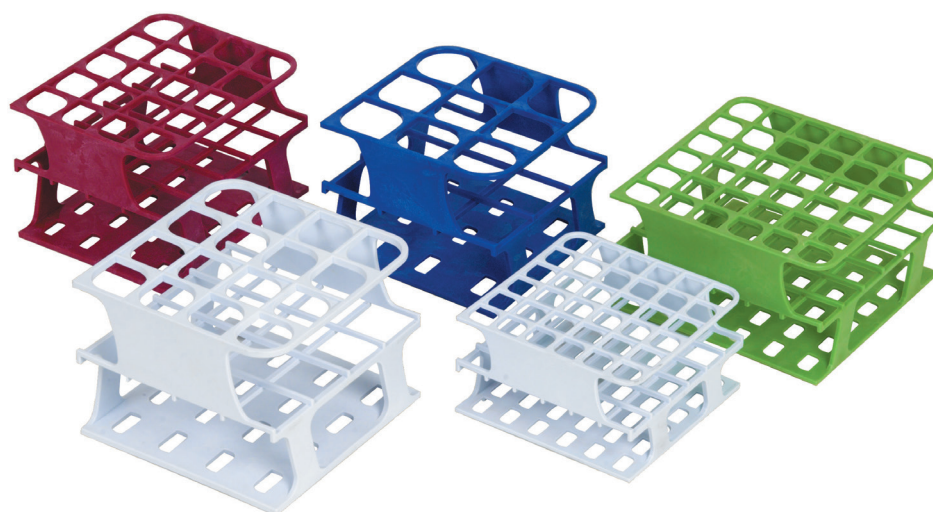
These racks have flat labelling area for easier identification.

Stable in a water bath.

Can be used in a wide range of temperatures from - 40° C to 140° C.



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



PCR Workup Rack, PP

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

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

These workup rack can be easily stackable.

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

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

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



PCR Workstation Rack With Lid, PP

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

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

These workstation are easily stackable.

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

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

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

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

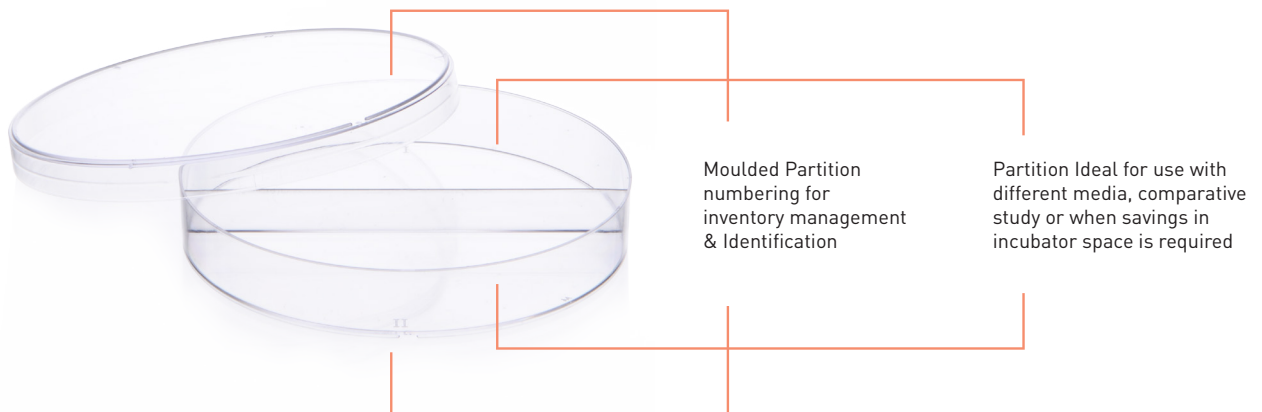
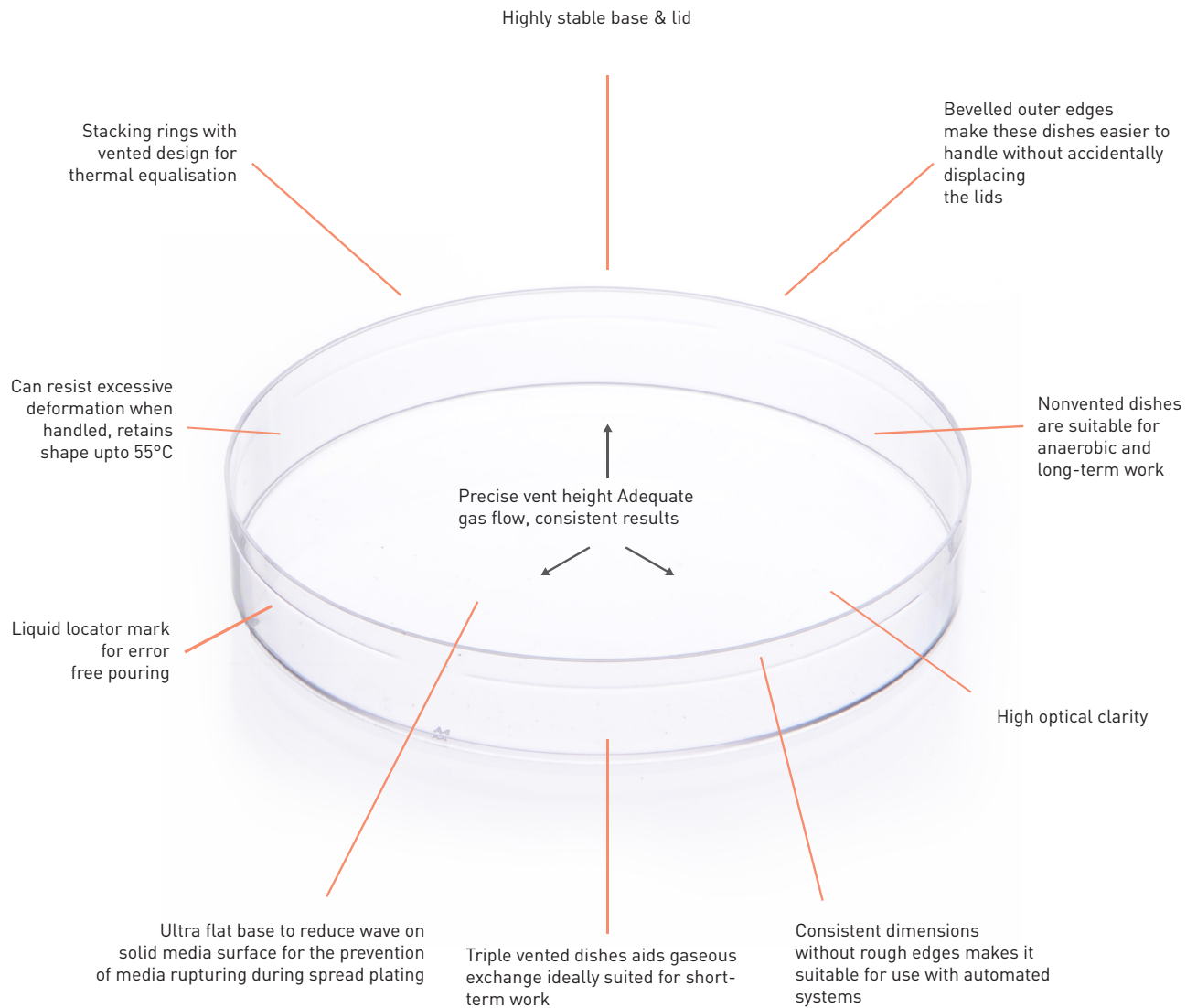


The background is a solid dark blue. Overlaid on this are several thick orange lines. At the top, a horizontal line runs across the width of the page. Below it, a vertical line descends from the center, passing through the middle of a large orange circle. To the right of the circle, another vertical line descends from the top horizontal line. A diagonal line runs from the bottom left towards the center, intersecting the circle. The text 'MICRO BIOLOGY' is positioned to the left of the circle, between the top horizontal line and the circle's center.

MICRO BIOLOGY

Petri Dish
2 & 3 Compartment
Soft Inoculation Loop
Cell Spreaders

PETRI DISH FEATURES



Petri Dish, PS

Petri Dish - Aseptic

Code	Diameter (mm)	Height (mm)	Compartment	Vented	Packing	No. per Case
P10901	90	15.8	No	3 Vent	Sleeve of 20	480
P10902	90	15.8	No	3 Vent	Individual Wrapped	380
P10903	90	15.8	No	0 Vent	Sleeve of 20	480
P10904	90	15.8	No	0 Vent	Individual Wrapped	380

Petri Dish - Gama Radiated Sterile

Code	Diameter (mm)	Height (mm)	Compartment	Vented	Packing	No. per Case
P10905	90	15.8	No	3 Vent	Sleeve of 20	480
P10906	90	15.8	No	3 Vent	Sleeve of 10	480
P10907	90	15.8	No	3 Vent	Individual Wrapped	380
P10908	90	15.8	No	0 Vent	Sleeve of 20	480
P10909	90	15.8	No	0 Vent	Sleeve of 10	480
P10910	90	15.8	No	0 Vent	Individual Wrapped	380

Petri Dish - Gama Radiated Sterile, Double Wrapped

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

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

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

Extremely high optical clarity for easy view on microscope.

Abdos Petri Dishes retain their shape upto 55° C.

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

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

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

Easy to stack.

Shallow dish design allow for maximum use of incubator space.

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

Sterile Plates have been validated according to EN ISO 11137-2; 2012 for SAL 10⁻⁶



2 Compartment Petri Dish - Aseptic

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

2 Compartment Petri Dish - Gama Radiated Sterile

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

**3 Compartment Petri Dish - Aseptic**

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

3 Compartment Petri Dish - Gama Radiated Sterile, PS

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



Soft Inoculation Loop Gama Radiated Sterile, ABS

85

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

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

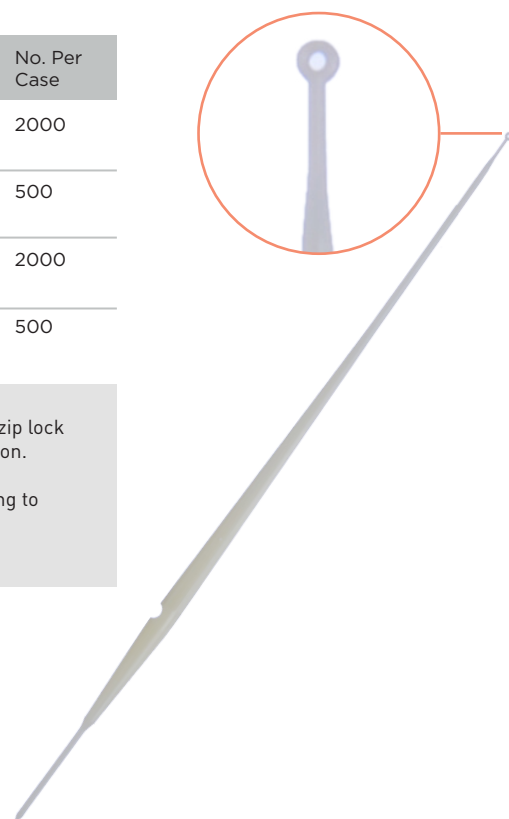
Polygonal shaft improves grip, assists orientation and makes operation easy.

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

Sterile loops have been validated according to EN ISO 11137-2; 2012 for SAL 10^{-6}



STERILE R



Cell Spreaders Gama Radiated Sterile, PP

86

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

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

Available in Triangular and T-shaped.

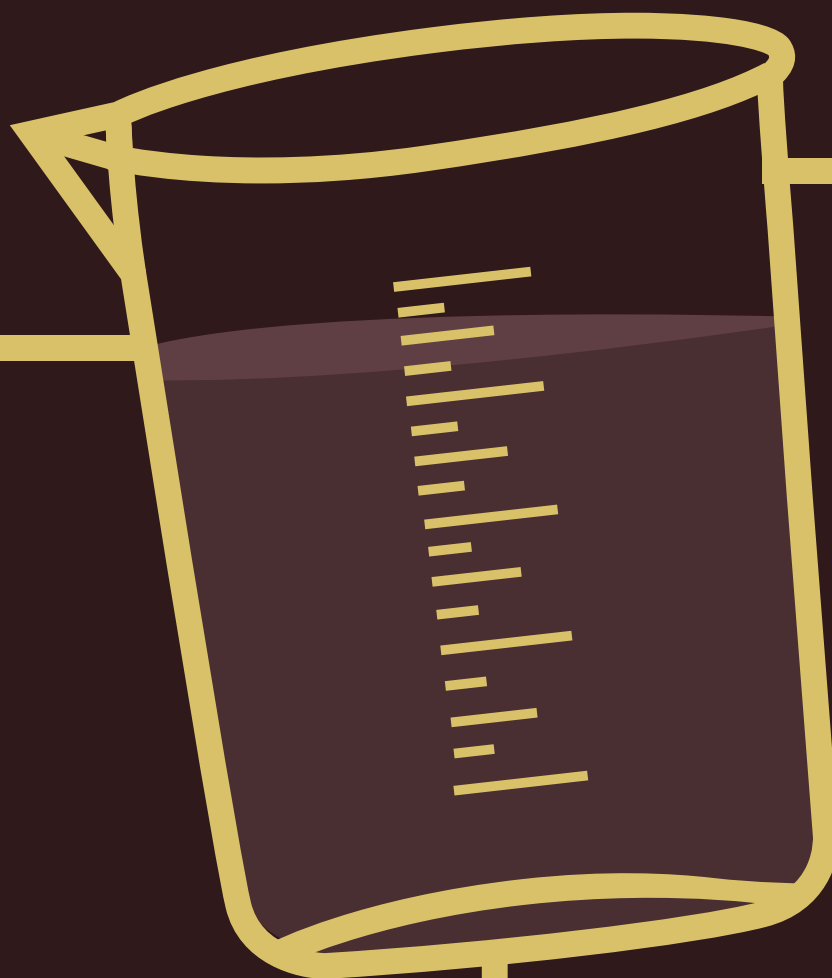
Sterile Cell Spreader have been validated according to EN ISO 11137-2; 2012 for SAL 10^{-6}



STERILE R



GENERAL LABORATORY PRODUCTS



Beakers
Measuring Cylinder
Workstation Storage
& More

Beakers without Handle, PP & TPX

Beakers without Handle, PP

Code	Capacity (ml)	Height (mm)	No. per Case
P50601	50	59	12
P50602	100	73	12
P50603	250	94	12
P50604	500	128	6
P50605	1000	150	4
P50606	2000	192	4
P50607	5000	263	2
P50608	10000	328	1



Beakers without Handle, TPX

Code	Capacity (ml)	Height (mm)	No. per Case
P50701	50	59	12
P50702	100	73	12
P50703	250	94	12
P50704	500	128	6
P50705	1000	150	4
P50706	2000	192	4
P50707	5000	263	2
P50708	10000	328	1



Manufactured in state of the art moulding facility using high purity virgin polypropylene (PP) and polymethylpentene (TPX).

PP Material conforming to US FDA 21 CFR.

TPX material is highly transparent chemical resistant higher temperature tolerance than PP beakers

Tapered stacking style saves space and makes it easy to handle.

All sizes have easy to read silk-screened graduations.

Precise pouring spouts.



Beakers with Handle, PP & TPX

Beakers with Handle, PP

Code	Capacity (ml)	Height (mm)	No. per Case
P50802	100	73	6
P50803	250	94	6
P50804	500	128	6
P50805	1000	150	4
P50806	2000	192	4
P50807	5000	263	2
P50808	10000	330	1



Beakers with Handle, TPX

Code	Capacity (ml)	Height (mm)	No. per Case
P50902	100	73	6
P50903	250	94	6
P50904	500	128	6
P50905	1000	150	4
P50906	2000	192	4
P50907	5000	263	2
P50908	10000	330	1

Manufactured in states of the art moulding facility using high purity virgin polypropylene (PP) and polymethylpentene (TPX).

PP Material confirming to US FDA 21 CFR.

TPX Material have distinct advantage of highly transparent & chemical resistivity, also have higher thermal withstand capacity over PP beakers.

Tapered stacking style saves space and makes it easy to handle.

All sizes have easy to read silk-screened graduations.

Precise pouring spouts.



Measuring Cylinder, PP Class “B”

89

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

Molded in large, easy to read graduations.

Molded in the highest quality translucent virgin polypropylene.

Cylinders have generous pour spout for smooth flow of liquid during pouring.

Hexagonal shape gives stability to the base.



Measuring Cylinder, TPX Class “B”

90

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

These transparent graduated cylinders have excellent value.

Molded in large neat and easy to read graduations.

Hexagonal shape gives stability to the base.

Cylinders have generous pour spout for smooth flow of liquid during pouring



Measuring Cylinder, TPX Class “A”

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

Molded in large 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 indicating batch number and year of production that is also marked on the cylinder.



Scoop, HDPE

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

These scoops are used for withdrawal and movement of solid, granulates, gels and other samples.

With precise formed filling edge and comfortable, stable and robust handle.

Natural in colour.

Round bottom for better use.

Superior chemical resistance.



Plain and Vacuum Desiccator

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

SPARE ACCESSORIES

CODE	Product	No. per case
E11620	Stop Cock for Vacuum Desiccator	1
E11621	Silicone Ring for 150 mm Desiccator	1
E11622	Silicone Ring for 200 mm Desiccator	1
E11623	Silicone Ring for 250 mm Desiccator	1
E11624	Silicone Ring for 300 mm Desiccator	1

Plain Desiccator

Desiccators are enclosures containing desiccants for preserving moisture sensitive products.

These desiccators are moulded in high quality plastics which are light and easy to handle.

Silicone O-ring assures tight seal down to 0°C without using grease.

Bottom part of the desiccators comes with thick perforated polypropylene disc with big holes in the middle for easy lifting.

Use with disposable or reusable desiccant.

Bottom part of the desiccators is white in colour.



Plain Desiccator



Vacuum Desiccator

Vacuum Desiccator

Vacuum desiccators are molded in high quality plastics which is light and easy to handle.

Bottom part of the desiccators comes with thick perforated polypropylene disc with big holes in the middle for easy lifting.

Polypropylene stopcock with PTFE.

Silicone O-ring assures tight seal down to 0°C without using grease.

Bottom part of the desiccators is white in colour / transparent in all clear vacuum desiccator.



All Clear Vacuum Desiccator

94

Workstation Storage / Dispenser Bin, Acrylic

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

Users can organize most of their commonly used laboratory disposables in one location.

First section of the bins can be used to store tubes, vials, pipette tips, hair cap or masks.

Third section of the bins is used to store and dispense gloves.

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



95

Workstation Storage 3 Compartment, Acrylic

Code	No. of Compartment	L x W x H (mm)	No. per Case
P70103	3	410 x 200 x 190	1

Ideal for storing and dispensing small laboratory product such as Pipette tips, Pasture Pipette, Micro Centrifuge Tubes.

Removable cover to allow easy filling into 3 separate compartments.

Hinged opening at the front to take out items from the bin.

Holes at the back of each compartment help it to be placed or struck on to the wall.

Fills, protect and dispenses three supplies.

Easy to move, easy to load, easy to use.



96

Bench Top Beta Shield, Acrylic

Code	L x W x H (cm)	No. per case
P70105	45 x 30 x 30	1

Abdos Beta shields are designed to be used in the laboratory during procedures that handle β -emitting isotopes.

These Beta shields protect the lab work and its angled top allows contents of the tube located behind the shield to be viewed from the top.

Thickness 11 mm.

The Base of the Beta Shield provides a large flat work surface and minimizes the risk of "hot spots" on the lab bench.



Glove Box Holder, Acrylic

97

Code	No. of Places	L x W x H (mm)	No. per Case
P70301	1	260 x 100 x 138	1
P70302	2	260 x 100 x 270	1
P70303	3	260 x 100 x 415	1

Clear and pristine holder to give clean appearance.

Easy to dispense the gloves through the holder.

Top loading glove box.

Each holder has holes that help it to be installed in a convenient location to the proximity of your work and tasks.



Parafilm M Dispenser, ABS

98

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

Ideal for storing, dispensing and cutting Parafilm® M, tape and labels.

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

Openable top lid allows easy filling into the Dispenser.

These dispensers can hold both 2 inches and 4 inches Rolls.



Parafilm M Dispenser, Acrylic

99

Code	Capacity (Inch)	L x W x H (mm)	No. per Case
P70401	2 & 4	180 x 120 x 160	1

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 inch and 4 inch Rolls.

Tapes and Labels can be easily cut through super-sharp serrated blades.



Drying Rack

100

Code	Places	L x W x H (mm)	No. per Case
P20302	55 places	360 x 160 x 680	1

These Dryers are used for draining and drying test tubes, beakers, flasks and other labware.

There are 55 pegs in the rack 50 smaller pegs for products with small diameter and 5 large brackets designed to hold Erlenmeyer flasks, beakers etc

The racks comes with a tray at the bottom in order to avoid drops on the surface or table.



Safety Goggles, PC

101

Code	No. per Case
U40101	2
U50103	2
U50104	2

Polycarbonate lens with side shield.

Impact resistant and lightweight frames for comfortable eyewear.

99.9% UVA/UVB protection.

U50103 are best suitable for the complete protection of eye.

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



U40101



U50103



U50104

Safety Goggles Box, Acrylic

102

Code	L x W x H (mm)	Size	No. per Case
P70106	23 x 16 x 18	Small	1
P70107	23 x 16 x 25	Large	1

This safety box can be set on the bench top or mounted on the wall for storage of goggles, glasses and other small lab products.

Safety lid keeps the box free of dust and contamination.

Clear window helps to view the inventory from the outside.



Safety Face Shield

103



Code	L x B x T (Inch)	No. per Case
U40102	15.5 x 8 x 0.04	1

Clear face shield of polycarbonate provides high impact and splash protection.

Ratchet adjustment on the headgear provides comfortable fit.

Biohazard Disposable Bags, PP

104

Code	Size (Inch)	No. per Case
U40105	12 x 18	200
U40106	12 x 24	200
U40103	18 x 22	200
U40104	25 x 35	200
U40120	42 x 42	100

Bright red colour polypropylene bags are easy to open and are used to dispose used Micro Tips, Tubes and other plastic products.

These bags are printed with a biohazard symbol, writing indicator white patch and pass ASTM 1922 tear resistance and ASTM 1709 dart impact tests.



Add Colour Code of your choice:
RED (R), YELLOW (Y), NATURAL (N)



Autoclavable Bags, PP

105

Code	L x W (inch)	No. per case
U40112	8 x 12	100
U40113	12 x 24	100
U40108	16 x 18	100
U40109	16 x 24	100

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

These bags are transparent.



Transport / Resealable Bags with Zip Lock, PE

106

Code	Size (Inch)	No. per Case
U40110	10.2 x 9.8	100
U40111	13.35 x 13	100

These Bags can be used to store and ship samples, solids and food.

Though it can be used for all applications it is especially used in food, water, forensic science and quality control laboratories.

Suitable for use with food.

Using the rim and channel closure the bag can be closed by finger pressure and reopened repeatedly.



Laboratory Work Book

107

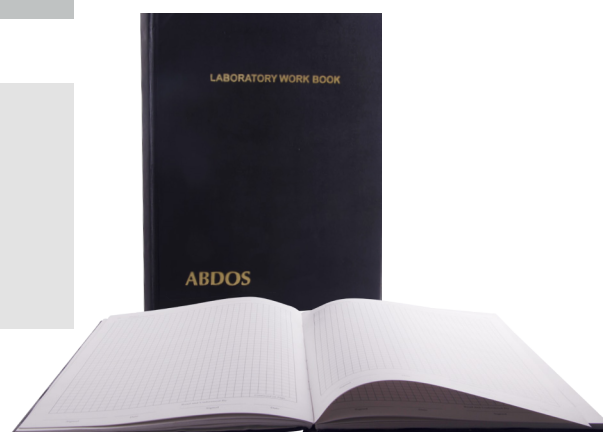
Code	No. of Pages	No. per Case
U50101	100	3

Abdos Laboratory workbooks are used to keep important indispensable data such as lab work, details on experiment and design and development.

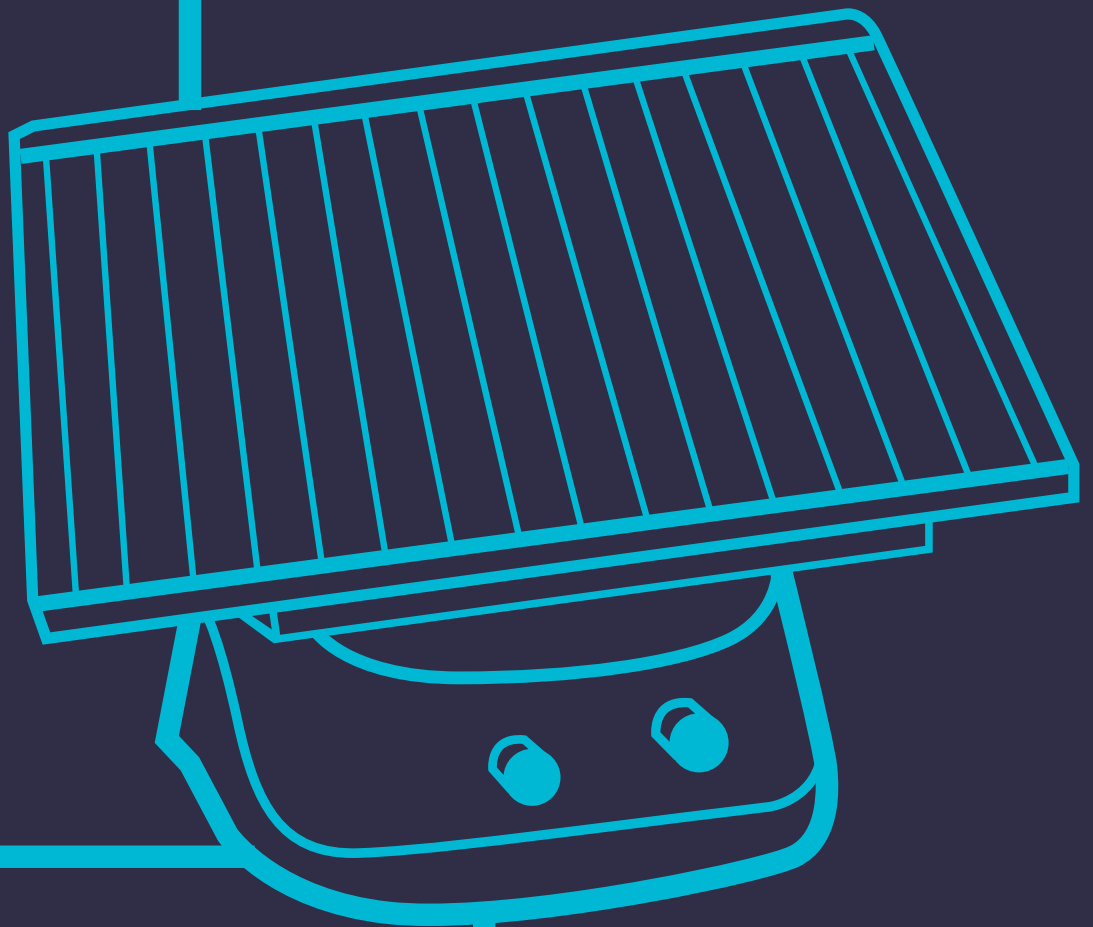
All pages are numbered with enough space for date, title, project number, page number and signature.

The cover of the book is water-proof and is chemical resistant.

These workbooks contain important information like periodic tables and conversion tables.



EQUIPMENTS



Magnetic Stirrer &
Hot Plates
Digital Dry Bath
Microplate Mixer
Orbital Shaker
& More

SWIRLTOP – Ultra Flat & Eco Magnetic Stirrer

108

Code	Product	Workplate Size (cm)	No. per Case
E11307	Ultra Flat Magnetic Stirrer	9 x 9	1

E11308	Eco Magnetic Stirrer	12x12	1
--------	----------------------	-------	---

SWIRLTOP magnetic stirrers are used in biotech labs, provides better mixing and is ideal for application of physical and chemical analysis.

It comes with automatic reverse rotation for superior mixing.

Body is made of ABS material.

Top plate is made from chemically resistant materials (PET).

Slip proof and stable.

Specifications

Code	E11307	E11308
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Stirring position	1	1
Speed range	15-1500 rpm	300-2000 rpm
Max. stirring quantity(H ₂ O)	0.8 L	1.5 L
Maximum magnetic bar(length)	40mm	40mm
Dimensions of work plate	90x90 mm	120x120 mm
Dimensions	175x120x15 mm	150x145x50 mm
Weight	0.3 kg	0.3 kg
Speed setting	Button	Scale
Permissible ambient Temperature & Humidity	5-40° C	5-40° C
Permissible relative humidity	80%	80%
Protection Class	IP65	IP21



E11307



E11308

SWIRLTOP – Digital (LED) Magnetic Stirrer & Hot Plate

109

Code	Product	Workplate Size (Ø cm)	No. per Case
E11231	LED Digital Magnetic Stirrer & Hot Plate with Support Rod & External Temperature Probe	13.5	1
E11234	LED Digital Magnetic Stirrer & Hot Plate	13.5	1

Spare Accessories

Code	Product	No. per Case
E11232	SS / Support Rod	1
E11233	ETP / External Temperature Probe	1

Swirl Top unit features an extremely durable, chemical resistant white stainless steel ceramic coated surface that allows immediate heat transfer.

External Temperature sensor accessory is available with accuracy of $\pm 0.5^{\circ}\text{C}$.

Extremely accurate digital control system is ideal for applications of analytical and biological laboratory.

Swirl Top has advanced microprocessor control with convenient turn knobs that allow quick, precise adjustment and

maintains accurate temperature and speed.

Large, backlit LED display provides constant visualization of speed and temperature while safety LED indicates when the top plate is above 50°C .

LED Display shows temperature and speed.

This digital system is compatible with a wide variety of popular glass beakers, flasks, bottles and vessels.

Heat resistant ABS casing.

Specifications

Voltage	220-240V
Frequency	50-60 Hz
Motor type	Brushless DC Motor
Maximum stirring capacity	3 L
Work plate dimensions diameter	Diameter 5 Inch
Work plate material	SS Cover Ceramic
Shaking movement	Orbital
Temperature range	Room Temperature – 280°C
Speed range	200 – 1500 rpm
Dimension	150 x 260 x 80 mm
Weight	1.8 kg
Permissible ambient temperature	$5 - 40^{\circ}\text{C}$
Permissible relative humidity	80%
Protection Class	IP21



SWIRLTOP - Digital (LCD)
Magnetic Stirrer & Hot Plate

Code	Product	Workplate Size (cm)	No. per Case
E11225	Digital Magnetic Stirrer	16.5 x 16.5	1
E11226	Digital Hot Plate	16.5 x 16.5	1
E11227	Digital Magnetic Stirrer & Hot Plate	16.5 x 16.5	1

Spare Accessories

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

Swirl Top unit features an extremely durable, chemical resistant white ceramic work surface.

It has advanced microprocessor control with convenient turn knobs that allow quick, precise adjustment and maintains accurate temperature and speed.

Large, backlit LCD display 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.

The Optional probe is available to monitor precise temperature control. When connected the probe provides direct feedback to the microprocessor that continuously adjusts and maintains the selected temperature in the sample within accuracy of ±0.5° C

Specifications	
Voltage	220 - 240 V
Frequency	50 Hz
Shaking Movement	Orbital
Maximum stirring capacity	5 L
Temperature Range	5 - 380° C
Speed Range	200 - 1500 rpm
Dimension	177 x 267 x 102 mm
Weight	2.2 kg
Permissible ambient temperature	5 - 40° C
Permissible relative humidity	80%



SWIRLTOP – 7Inch Digital Magnetic Stirrer & Hot Plate

111

Code	Product	Workplate Size (cm)	No. per Case
E11650	Magnetic Stirrer & Hotplate with support Rod & External Temperature Probe	18.4 x 18.4	1
E11652	Magnetic Stirrer & Hotplate	18.4 x 18.4	1
E11651	Hotplate with support Rod & External Temperature Probe	18.4 x 18.4	1
E11653	Hotplate	18.4 x 18.4	1

Spare Accessories

Code	Product	No. per Case
E11232	SP - Support Rod	1
E11233	ETP - External Temperature Probe	1

Built in PID Controller ensures the safe heating of the medium with overheating and protection.

Max heating plate temperature 550°C

Glass ceramic work place provides excellent chemical resistant performance and most efficient heat transfer.

External temperature control is made possible by connecting the temperature sensor (PT 1000) with an accuracy at $\pm 0.2^{\circ}\text{C}$.

Digital speed controlling.

Maximum Speed at 1500rpm.

Outstanding brushless DC motor performance enables more stirring power.

Two rotating knobs enable the easy and direct change of speed and temperature

HOT WARNING will flash when the work plate temperature is above 50°C or even the hot plate is turned off.

Remote Function provides PC Control and data transmission.

Specifications

Code	E11650	E11651
Voltage	220-240V	220-240V
Frequency	50-60 Hz	50-60 Hz
Motor Type	Brushless DC Motor	Brushless DC Motor
Maximum stirring capacity	20 L	NA
Work plate dimensions diameter	184x184mm(7Inch)	184x184mm (7Inch)
Work plate material	Glass Ceramic	Glass Ceramic
Temperature range	Room Temperature – 550°C , Increment 1°C	Room Temperature – 550°C , Increment 1°C
Overheating protection	580°C	580°C
Temperature control accuracy	$\pm 0.1^{\circ}\text{C}$	$\pm 0.1^{\circ}\text{C}$
Speed display	LCD	NA
Temperature display	LCD	LED
Speed range	100 – 1500 rpm, resolution $\pm 1\text{ rpm}$	100 – 1500 rpm, resolution $\pm 1\text{ rpm}$
Maximum magnetic bar (length)	80mm	NA
Dimension	215x360x112mm	215x360x112mm
Protection class	IP21	IP21



SWIRLTOP –Multi Channel Magnetic Stirrer & Hot Plate

Code	Product	Workplate Size (cm)	No. per Case
E11235	10 Channel Magnetic Stirrer	18 x 45	1
E11236	10 Channel Magnetic Stirrer & Hot Plate	18 x 45	1
E11237	16 Channel Magnetic Stirrer	36.5 x 34.5	1

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

Swirl Top advanced Microprocessor based electronic speed control motor provides constant speed.

High performance multi-position magnetic stirrer with uniform temperature distribution.

Micro-processor based stirring controls to provide consistency with various samples.

Brushless DC Motor for maintenance free & quite operations.

Specifications

Product	16 Channel	10 Channel
Voltage	220-240V	220-240V
Frequency	50-60Hz	50-60Hz
Dimension of work plate	365 x 345 mm	180 x 450 mm
Speed Display	Scale	Scale
Shaking movement	Orbital	Orbital
Temperature range	NA	Room Temperature-120°C
Motor type	DC Motor	DC Motor
Stirring speed	0-1100 rpm	0-1100 rpm
Stirring position	16	10
Max. Stirring capacity	0.4L(each stirring position)	0.4L(each stirring position)
Max. magnetic bar	40mm	40mm
Plate material	Stainless Steel with Silicone Film	Stainless Steel with Silicone Film
Dimensions (WxDXH)	500 x 380 x 65 mm	182 x 622 x 65 mm
Protection class	IP21	IP21



E11235



E11237

HOTBLOCK - LED Digital Dry Bath

113

Code	Product	Block Size (cm)	No. per Case
E11330	LED Digital Dry Bath with heating block for 1.5 / 2.0 ml	15 x 9.5	1

Spare Accessories

Code	Product	Places	No. per Case
E11331	Heating Block for 0.2 ml	54	1
E11332	Heating Block for 0.5 ml	40	1
E11333	Heating Block for 1.5/2.0 ml	40	1
E11334	Heating Block for 5/15 ml	28	1
E11335	Heating Block for 50 ml	8	1
E11336	Heating Block for 0.2, 0.5, 1.5/2.0 ml	18	1
E11337	Heating Block, used for 96/384 micro plate	-	1

ABDOS LED Digital Dry Bath is ideal for molecular biology, histology, clinical, environmental and industrial laboratories including melting and boiling point determination, enzyme reactions, incubation and activation of cultures, immunoassays, DNA denaturation, culture and media tests, coagulation, tests, blood urea nitrogen determinations and in-situ hybridizations.

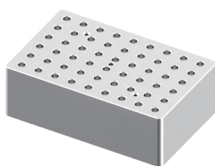
In-Built over temperature protection.

Various optional blocks are available for best performance

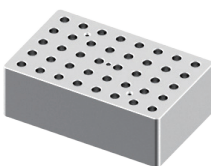
Protection class according to DIN EN 60529



Specifications	
Voltage	220-240 V
Frequency	50-60 HZ
Adaptor block material	Aluminium
Maximum heating rate	5.5°C/min
Power	160 W
Heating temperature Range	Room Tempearture-120°C
Control accuracy	±0.5°C
Safety temperature	140°C
Timer	Yes
Time setting range	0 min-99h 59 min
Operation type	Continuous/timed operation
Dimensions	175 X 290 X 85 mm
Weight	1.6 kg (Without heating Block)
Permissible ambient temperature	5-40° C
Permissible ambient Humidity	80%
Protection Class	IP21



E11331



E11332



E11333



E11334



E11335



E11336

THERMO MIX - LCD Digital

114

Code	Product	No. per case
E11340	LCD Digital Thermo Mix with Heating, 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

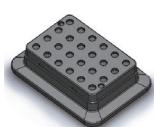
Spare Accessories

Code	Product	Places	No. per case
E11343	Heating Block, used for 0.2 ml / 96 well PCR plate	96	1
E11344	Heating Block, used for 96 /384 well micro plate	96/384	1
E11345	Heating Block, used for 0.5 ml	24	1
E11346	Heating Block, used for 1.5 ml	24	1
E11347	Heating Block, used for 2.0 ml	24	1
E11348	Heating Block, used for 5 ml	8	1
E11349	Heating Block, used for 15 ml	8	1
E11350	Heating Block, used for 50 ml	4	1

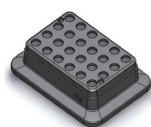
ABDOS Thermo Mix Series allow for precise and efficient shaking and mixing as well as excellent temperature accuracy. Uniform mixing offers a wide range of applications, such as Gene Synthesis, Gene Purification, Gene Denaturation, Protein Denaturation, Enzymatic reaction Bacterial growth and many more.



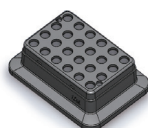
Specifications			
Code	E11340	E11341	E11342
Voltage	220 - 240 V	220 - 240 V	220 - 240 V
Frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Functions	Heating, cooling & Mixing	Heating & Cooling	Heating & Mixing
Adaptor Block Material	Aluminium	Aluminium	Aluminium
Temperature Range	Heating :25°C-100°C Cooling :25°C - below15°C	Heating :25°C-110°C Cooling : 25°C - below25°C	Heating :25°C-100°C
Temperature Uniformity	Max ±0.5°C	Max ±0.5°C	Max ±0.5°C
Temperature Accuracy	±0.5°C	±0.5°C	±0.5°C
Maximum Heating Rate	5.5°C/min	5.5°C/min	5.5°C/min
Maximum Cooling Rate	5.5°C/min(100°C-25°C) 0.5°C/min(below 25°C)	2.5°C/Min(100°C-25°C) 0.5°C/Min(below 25°C)	
Mixing Frequency	200-1500 rpm	NA	200-1500 rpm
Mixing Orbit	3 mm	NA	3 mm
Program	6	9	6
Overheating Protection	150°C	150°C	150°C
Dimension(WXDXH)	200x235x120mm	200x235x120mm	200x235x120mm
Weight	7.3 kg	7.3 kg	7.3 kg



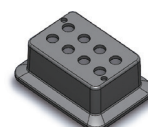
E11345



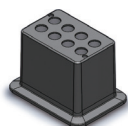
E11346



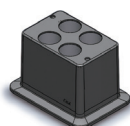
E11347



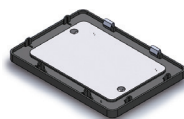
E11348



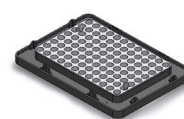
E11349



E11350



E11344



E11343

SWIRLEX – LCD Digital Overhead Stirrer

115

Code	Product	Maximum Stirring Quantity (Lts)	No. per Case
E11310	Digital Overhead Stirrer with Universal Plate Stand including support holder and fixing device & (E11313) Stainless Steel Crossed Stirrer	20	1
E11311	Digital Overhead Stirrer with Universal Plate Stand including support holder and fixing device & (E11313) Stainless Steel Crossed Stirrer	40	1

Spare Accessories

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

Swirlex overhead stirrer is widely used in chemical synthesis, pharmaceutical synthesis, physical and chemical analysis, petrochemical industry and more.

Digital LCD display for precise monitoring of actual speed.

LCD Torque displays real time information on viscosity changes.

Protection and safety circuits ensures automatic cut-off in an anti-stall or overload conditions.

Provides a constant speed even with changes in viscosities of sample.

RS232 interface PC can control and document all operation values via RS232 interface.



Specifications		
Voltage	E11310	E11311
Frequency	220-240V	220-240V
Power	50-60 HZ	50-60 HZ
Speed Range	70 W	130 W
Speed Display	50 – 2200 rpm	50 – 2200 rpm
Accuracy	±3 rpm	±3 rpm
Max. Stirring Quantity	20 L	40 L
Max Torque	40 Ncm	60 Ncm
Max Viscosity	10000 mPas	50000 mPas
Chuck range diameter	0.5 – 10 mm	0.5 – 10 mm
Overload Protection Display	LED Lights, Motor Automatically Stops	LED Lights, Motor Automatically Stops
Motor Protection Display	LED Lights, Motor Automatically Stops	LED Lights, Motor Automatically Stops
Dimensions	83 x 220 x 186 mm	83 x 220 x 186 mm
Weight	2.6 kg	2.8 kg
Permissible ambient Temperature	5-40° C	5-40° C
Permissible ambient Humidity	80%	80%
Protection class according To DIN/EN 60529	IP 21	IP 21



E11312



E11313



E11314



E11315



E11316



E11317



E11318



E11318



E11319

SWIRLEX - Vortex Shaker

116

Code	Product	Work Plate Size	No. per case
E11190	Swirlex - Adjuststable Vortex Shaker	4mm	1

Spare Accessories

Code	Product	No. per case
E11191	Tube holding rod	1
E11192	Universal 100 mm top plate with 4 vacuum suction feet	1
E11198	Platform pad for tubes and vessels Ø 99 mm	1
E11197	Tube adapter for 48 holes test tubes Ø 6 mm	1
E11193	Tube adapter for 18 holes test tubes Ø 10 mm	1
E11194	Tube adapter for 12 holes test tubes Ø 12 mm	1
E11195	Tube adapter for 8 holes test tubes Ø 16 mm	1
E11196	Tube adapter for 8 holes test tubes Ø 20 mm	1

*E11192 is required to run Abdos E11198, E11197, E11193, E11194, E11195 & E11196 adapters.

Swirlex-Vortex is suitable for touch or continuous or fixed operation.

Used for gentle mixing to vigorous re-suspension of cells biological and canonical liquid components in tubes using eccentric mechanism.

A wide range of accessories is also available.

Swirlex vortex Shaker is eccentric with oil free ball bearings.

These vortex shakers contain specially designed silicone feet and a steel base which is excellent for damping vibration.

Specifications

Code	E11190
Voltage	220-240V
Frequency	50-60Hz
Speed Range	0 – 2500 rpm
Shaking Movement	Orbital
Outer Diameter	4mm
Speed Display	Analog Type
Run Type	Continuous/Touch operation
Dimensions	127x130x160 mm
Weight	3.5 kg
Power	60W
Permissible ambient Temperature	5-40° C
Permissible relative humidity	80%
Protection Class	IP21



SWIRLEX- MICROPLATE MIXER

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

Spare Accessories

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

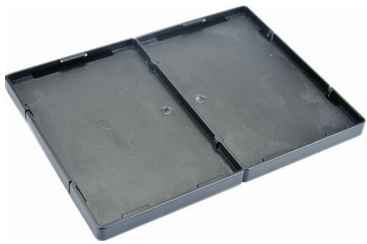
SWIRLEX-Microplate Mixer is used for holding single or double micro plates with an SBS footprint.

This is widely used in life sciences including microbiology, cell and molecular biology,

immunology and biotechnology for various mixing applications with optional adapters The high speed and small diameter combine to offer a true vortexing action in each well of the micro plate. This action ensures both complete and uniform mixing.

Specifications

Speed Range:	Single Microplate :0-1500 rpm Double Microplate :0-1000 rpm
Voltage	220-240V
Frequency	50-60Hz
Shaking Movement:	Orbital
Orbit Diameter:	4.5 mm
Maximum Shaking Weight (With accessory)	0.5 Kg
Motor Type :	Brushless DC Motor
Dimensions:	260x150x80mm
Permissible ambient temperature	5-40° C
Permissible relative humidity	80%
Protection Class	IP21



E11202



WAVEX- CLASSIC TUBE ROTATOR

118

Code	Product	No. per Case
E11300	Wavex- Classic Tube Rotator	1

Spare Accessories

Code	Product	No. per Case
E11301	Plastic Clips for 1.5 ml x 12 micro centrifuge tubes, Disk accessory	1
E11302	Plastic Clips for 15 ml x 12 micro centrifuge tubes, Disk accessory	1
E11303	Plastic Clips for 50 ml x 12 micro centrifuge tubes, Disk accessory	1

The Abdos Wavex rotating mixer gives gentle but effective mixing of biological samples to be held in 1.5ml to 50 ml tubes used in a variety of applications including immune precipitations, prevention of blood coagulation and latex diagnostics.

Wavex rotating mixer has a Disk type design.

Specifications

Voltage	220-240 V
Frequency	50 Hz
Power	20 W
Motor Type	DC Motor
Speed Range	0 - 80 rpm
Operation Type	Continuous
Dimensions	300 X 220 X 310 mm
Permissible ambient Temperature	5-40° C
Permissible ambient Humidity	80%
Protection Class	IP 21



WAVEX – LCD TUBE ROTATOR

Code	Product	No. per Case
E11270	Wavex- LCD Tube Rotator with Disk accessory for 50 ml x 8 centrifuge tubes	1

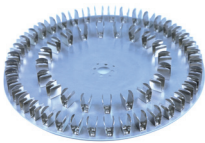
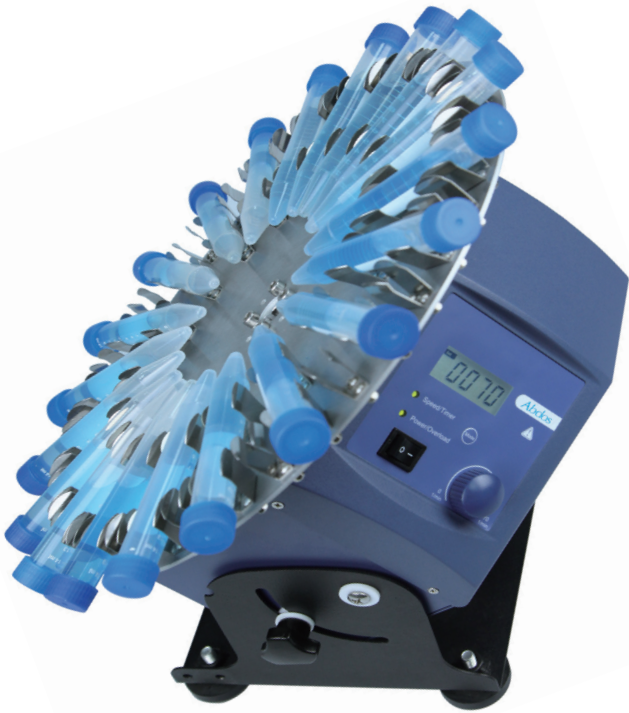
Spare Accessories

Code	Product	No. per 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 tubes	1
E11274	Disk support rods used with disk accessories	4

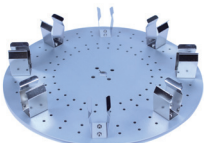
The Abdos Wavex rotating mixer give gentle but effective mixing of biological samples to be held in 1.5ml to 50 ml tubes used in a variety of applications including immune precipitations, prevention of blood coagulation and latex diagnostics.

Wavex rotating mixer has a Disk type design.

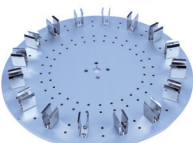
Specifications	
Voltage	220-240 V
Frequency	50 Hz
Power	40 W
Motor Type	DC Motor
Tilt Angle	0 - 90°
Speed Range	10 - 70 rpm
Speed & Timer Display	LCD
Time Setting Range	1 - 1199 min
Operation Type	Continuous / timed operation
Dimensions	280 x 210 x 300 mm
Weight	8 kg
Permissible ambient Temperature	5-40° C
Permissible ambient Humidity	80%
Protection Class	IP 21



E11271



E11272



E11273



E11274

WAVEX – Classic Rotating Mixer

120

Code	Product	No. per Case
E11305	WAVEX- Classic Rotating Mixer	1

Spare Accessories

Code	Product	No. per Case
E11301	Plastic Clips for 1.5 ml x 12 micro centrifuge tubes.	1
E11302	Plastic Clips for 15 ml x 12 micro centrifuge tubes.	1
E11303	Plastic Clips for 50 ml x 12 micro centrifuge tubes .	1

The Abdos Wavex tube rotators give gentle but effective mixing of biological samples to be held in 1.5 ml to 50 ml tubes used in a variety of applications including immune precipitations, prevention of blood coagulation and latex diagnostics.

Specifications



Voltage	220-240 V
Frequency	50-60 Hz
Power	20 W
Motor Type	DC Motor
Tilt Angle	0 - 90°
Speed Range	0-80 rpm
Speed & Timer Display	Scale
Time Setting Range	1 - 1199
Operation Type	Continuous
Dimensions	150 x 530 x 190 mm
Weight	8 kg
Permissible ambient Temperature	5-40° C
Permissible ambient Humidity	80%
Protection Class	IP21



WAVEX – LCD Rotating Mixer

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

Spare Accessories

Code	Product	No. per 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 used with disk accessories	4

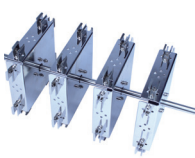
The Abdos Wavex rotating mixer give gentle but effective mixing of biological samples to be held in 1.5 ml to 50 ml tubes used in a variety of applications including immune precipitations, prevention of blood coagulation and latex diagnostics.

Wavex rotating mixer has a rotisserie type design.

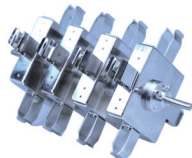
LCD displays and digital speed control allows procedures to be accurate.

Specifications

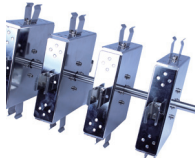
Voltage	220-240 V
Frequency	50-60 Hz
Power	40 W
Motor Type	DC Motor
Tilt Angle	0 - 90°
Speed Range	0-70 rpm
Speed & Timer Display	LCD
Time Setting Range	1 - 1199 min
Operation Type	Continuous / timed operation
Dimensions	220 x 510 x 260 mm
Weight	8 kg
Permissible ambient Temperature	5-40° C
Permissible ambient Humidity	80%
Protection Class	IP21



E11284



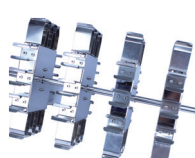
E11285



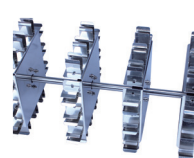
E11286



E11281



E11282



E11283

Wavemax - Classic Rocking Shaker & LCD Digital Rocking Shaker

122

Classic Rocking Shaker

Code	Product	No. per Case
E11401	Wavemax - Classic Rocking Shaker with flat mat	1

LCD Digital Rocking Shaker

Code	Product	No. per Case
E11410	Wavemax - Digital Rocking Shaker with flat mat	1

Spare Accessories for Rocking Shaker

Code	Product	No. per 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 for 25 ml flask	1
E11416	Fixing clip for for 50 ml flask	1
E11417	Fixing clip for for 100 ml flask	1
E11418	Fixing clip for for 200/250 ml flask	1
E11419	Fixing clip for for 500 ml flask	1

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

The Abdos classic rocking shakers is used for staining and destaining gel, hybridization procedure, haematology and blotting techniques. Designed to provide precise speed and tilt angles required for broad range of molecular and biological mixing applications

It boasts digital speed control and large LCD display, speed and timer can be viewed simultaneously.

The Aluminium-alloyed platform provides strong bearing capability, with a non-slip mat that holds vessels and prevents it from slipping.

Specially designed and developed as a compact space-saving design fits easily in the incubator.

Space Accessories have a wide range of platforms for use with variety of vessels.



Specifications		
Code	E11401	E11410
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Power	20 W	50W
Motor type	DC Motor	DC Motor
Rocking motion	See-saw rocking	See-saw rocking
Maximum load capacity (With Platform)	3.0kg	5.0kg
Tilt angle	7°	9°
Speed range	0-80 rpm	10-70 rpm
Speed & timer display	Analog	LCD
Time range	NA	1 min – 19h59min
Operation Type	Continuous operation	Continuous /timed operation
Dimensions	270 x 330 x 130 mm	360 x 430 x 106 mm
Weight	2.7 Kg	9.0 Kg
Permissible ambient temperature	5-40° C	5-40° C
Permissible ambient Humidity	80%	80%
Protection class	IP21	IP21



Universal attachment with bars

Dish attachment with non-slip mat

Wavemax – Classic Dancing (3D) Shaker & LCD Digital (3D) Dancing Shaker

Classic Dancing (3D) Shaker

Code	Product	No. per Case
E11420	Wavemax – Classic Dancing Shaker with flat mat	1

LCD Digital Dancing (3D) Shaker

Code	Product	No. per Case
E11430	Wavemax – Digital Dancing Shaker with flat mat	1

Spare Accessories for Rocking Shaker

Code	Product	No. per 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 for 25 ml flask	1
E11416	Fixing clip for for 50 ml flask	1
E11417	Fixing clip for for 100 ml flask	1
E11418	Fixing clip for for 200/250 ml flask	1
E11419	Fixing clip for for 500 ml flask	1

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

Wavemax classic dancing shakers are used for staining and destaining gel, hybridization procedure, haematology and blotting techniques.

This three dimensional shaker is designed to provide precise speed and tilt angles required for a broad range of molecular and biological mixing applications.

The Abdos LCD dancing shaker boasts digital speed control and large LCD display, speed and timer can be viewed simultaneously.

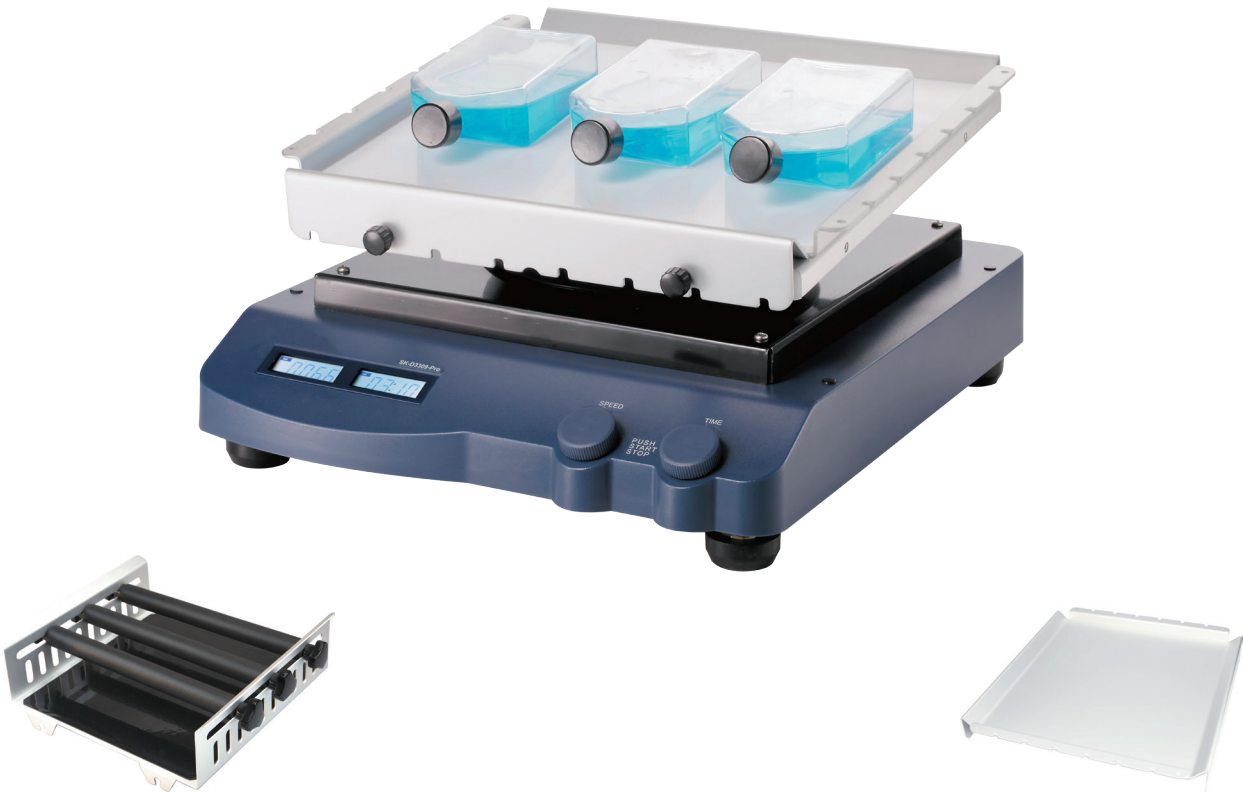
The Aluminium-alloyed platform provides a strong bearing capability, with a non-slip mat that holds vessels and prevents it from slipping.

The Specially designed and developed compact space-saving design fits easily in the incubator.

Space accessories have a wide range of platforms for use with variety of vessels.



Specifications		
Code	E11420	E11430
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Power	20 W	40 W
Motor Type	DC Motor	DC Motor
Rocking Motion	3 Dimensional orbital	3 Dimensional Orbital
Maximum load capacity (With Platform)	3.0kg	10 kg
Tilt Angle	7°	9°
Speed Range	0-80 rpm	10-70 rpm
Speed & Timer Display	Analog	LCD
Time Range	NA	1 min - 19h59 min
Operation Type	Continuous operation	Continuous /timed operation
Dimensions	270 x 330 x 130 mm	360 x 410 x 200 mm
Weight	3.2 Kg	9.0 Kg
Permissible ambient Temperature	5-40° C	5-40° C
Permissible ambient Humidity	80%	80%
Protection Class	IP21	IP21



Universal attachment with bars

Dish attachment with non-slip mat

WAVEMAX - Classic Orbital & Linear Shaker

124

Classic Orbital Shaker

Code	Product	No. per Case
E11440	Wavemax - Classic Orbital	1

Classic Linear Shaker

Code	Product	No. per Case
E11450	Wavemax - Classic Linear Shaker	1

The Abdos orbital and linear shakers is capable of mixing and shaking liquids in bottles, flasks, vessels, test tubes and dishes.

The Specially designed and developed compact space-saving design fits easily in the incubator and refrigerator.

Space Accessories have wide range of platforms for use with a variety of vessels.

Specifications



Code	E11440	E11450
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Power	30 W	30 W
Motor Type	DC Motor	DC Motor
Shaking Motion	Orbital	Linear
Orbital Diameter	20mm	20mm
Maximum load capacity (With Platform)	3 kg	3 kg
Speed Range	0-200 rpm	0-200 rpm
Operation Type	Continuous operation	Continuous /timed operation
Dimensions	270 x 330 x 110 mm	270 x 330 x 110 mm
Weight	3 Kg	3 Kg
Permissible ambient Temperature	5-40° C	5-40° C
Permissible ambient Humidity	80%	80%
Protection Class	IP21	IP21



WAVEMAX - LCD Digital Orbital & Linear Shaker

LCD Digital Orbital Shaker

Code	Product	No. per Case
E11460	Wavemax - Orbital Shaker with Universal attachment with 3 Bars	1

LCD Digital Linear Shaker

Code	Product	No. per Case
E11470	Wavemax - Linear Shaker with Universal attachment with 3 Bars	1

Spare Accessories for E11440, E11450, E11460 & E11470

Code	Product	No. per 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 for 25 ml flask	1
E11416	Fixing clip for for 50 ml flask	1
E11417	Fixing clip for for 100 ml flask	1
E11418	Fixing clip for for 200/250 ml flask	1
E11419	Fixing clip for for 500 ml flask	1

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

The Abdos orbital and linear shakers is capable of mixing and shaking liquids in bottles, flasks, vessels, test tubes and dishes.

Independent LCD display for adjusting speed and time. Speed and timer can be viewed simultaneously.

Maximum load capacity of 2.5 kg with platform.

The 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 variety of vessels.

Over speed detection and protection.





Specifications		
Code	E11460	E11470
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Power	30 W	30 W
Motor Type	Brushless DC Motor	Brushless DC Motor
Shaking Motion	Orbital	Linear
Orbital Diameter	4 mm	4 mm
Maximum load capacity (With Platform)	2.5 kg	2.5 kg
Speed Range	100-800 rpm	100-350 rpm
Speed & Timer Display	LCD	LCD
Time Range	1 min - 19h59 min	1 min - 19h59 min
Operation Type	Continuous /timed operation	Continuous /timed operation
Dimensions	300 x 340 x 100 mm	300 x 340 x 100 mm
Weight	8.1 Kg	8.1 Kg
Permissible ambient Temperature	5-40° C	5-40° C
Permissible ambient Humidity	80%	80%
Protection Class	IP21	IP21



Universal attachment with bars

Dish attachment with non-slip mat

Fixing clamp attachment

Wavemax - Heavy Duty Lcd Digital Orbital & Linear Shaker

LCD Digital Orbital Shaker

Code	Product	No. per Case
E11480	Wavemax - Heavy Duty Orbital Shaker with Universal attachment with 4 Bars	1

LCD Digital Linear Shaker

Code	Product	No. per Case
E11490	Wavemax - Heavy Duty Linear Shaker with Universal attachment with 4 Bars	1

Spare Accessories for E11480, E11490

Code	Product	No. per 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 for 25 ml flask	1
E11416	Fixing clip for for 50 ml flask	1
E11417	Fixing clip for for 100 ml flask	1
E11418	Fixing clip for for 200/250 ml flask	1
E11419	Fixing clip for for 500 ml flask	1

The Abdos orbital and linear shakers are capable of mixing and shaking liquids in bottles, flasks, vessels, test tubes and dishes.

Independent LCD display for adjusting speed and time, speed and timer can be viewed simultaneously.

The Specially designed and developed compact space-saving design fits easily in the incubator and refrigerator.

Maximum load capacity of 7.5 kg with platform.

Electronic time switching clock controls time or continuous operation mode.

Space Accessories have wide range of platforms for use with variety of vessels.

Over speed detection and protection.

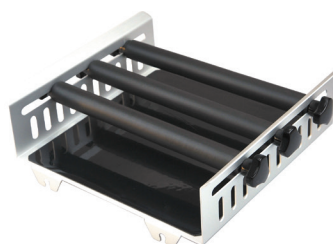




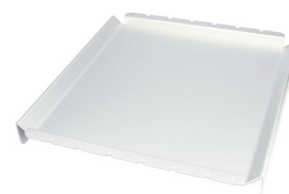
Specifications		
Code	E11480	E11490
Voltage	220-240 V	220-240 V
Frequency	50-60 Hz	50-60 Hz
Power	30 W	30 W
Motor Type	Brushless DC Motor	Brushless DC Motor
Shaking Motion	Orbital	Linear
Orbital Diameter	10 mm	10 mm
Maximum load capacity (With Platform)	7.5 kg	7.5 kg
Speed Range	100-500 rpm	100-350 rpm
Speed & Timer Display	LCD	LCD
Time Range	1 min – 19h59 min	1 min – 19h59min
Operation Type	Continuous /timed operation	Continuous /timed operation
Dimensions	370 x 420 x 100 mm	370 x 420 x 100 mm
Weight	13.5 Kg	13.5 Kg
Permissible ambient Temperature	5-40° C	5-40° C
Permissible ambient Humidity	80%	80%
Protection Class	IP21	IP21



Fixing Clamps



Universal attachment with bars



Dish attachment with non-slip mat

GENERAL CONVERSION TABLE

Instructions for using the Table

To Convert one unit of (A) into (B) multiply by (C)

To Convert one unit of (B) into (A) multiply by (D)

A	B	C (X 1 unit of A = B)	D (X 1 unit of B = A)
Inches	Centimetres	2.54	0.3937
Feet	Centimetres	30.48	0.0328
Yards	Metres	0.194	1.094
Miles	Metres	1, 609.30	0.000621
Nautical miles	Metres	1, 853.27	0.000539
Square inches	Sq. cms	6.45	0.155
Square feet	Sq. Metres	0.093	10.764
Square yards	Sq. Metres	0.836	1.196
Cubic inches	Cub. cms.	16.39	0.061
Cubic feet	Litres	28.3	0.0353
Cubic feet	Gallons	6.24	0.1602
Cubic yards	Cub. metres	0.765	1.308
Pounds (Troy)	Kilogrammes	0.3732	2.68
Ounces (Troy)	Grammes	31.1	0.03216
Pounds (Avoir.)	Kilogrammes	0.4536	2.2046
Pounds (Avoir.)	Grains (Troy)	7, 000	0.000143
Ounces (Avoir.)	Grammes	28.35	0.0353
Grains	Grammes	0.065	15.38
Cwt.	Kilogrammes	50.8	0.01968
Tons	Kilogrammes	1, 016	0.000984
Gallons	Litres	4.546	0.22
Gallons of water	Pounds	10	0.1
Pounds of water	Litres	0.454	2.202
Lb per sq. in.	Gm. / sq. cm.	70.3	0.0142
Lb per sq. in.	H'd of water (ft.)	2.3	0.434

A	B	C (X 1 unit of A = B)	D (X 1 unit of B = A)
Lb. per sq. in	H'd of water (M.)	0.7	1.4285
Lb. per sq. in	Atmospheres	0.068	14.7
Tons per sq. in	Kgm. / sq. mm.	1.575	0.635
Lb. per sq. ft	Kgm. / sq. metre	4.883	0.205
Lb. per cub. yd.	Kgm. / cub. metre	0.593	1.686
Lb. per cub. ft	Kgm. / cub. metre	16.02	0.0624
Lb. per gallon	Kgm. / litre	0.0998	10.02
Foot-lb	K'gram-metres	0.1833	7.23
Foot-tons	Tonne-metres	0.33	3
Hors-Power	Force de Cheval	1.014	0.9861
Hors-Power	Watts	746	0.00134
Hors-Power	Ft.-lb / min	33, 000	0.00003
Hors-Power	Kg.-m. / sec..	73	0.01316
Watts	Ft.-lb. / min	44	0.0227
Watts	Kg.-m. / sec	0.1	10
Heat units	Calories	0.252	3.97
Atmospheres	Lb. / sq. inch	14.7	0.068
German candles	English candles	0.90	1.1111
Carrels	Candles.	9.55	0.1047
Joules	Ft. / lb	0.737	1.357
Miles / hour	Ft. / Min	88	0.01134
Metres / sec	Ft / Min.	197	0.00508
C.H.U	B. Th. U.	1.8	0.5555
Centipoise	Lb.force sec. / Sq. ft.	0.208	4.8

To obtain F

rom

Multiply-by
above

To obtain F

rom

Multiply-by
above

PERIODIC TABLE OF THE ELEMENTS

[illegible]

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 crazing, cacking, loss of strength or discoloration.
- N = Not Recommended - Not for continuous use. Immediate damage may occur.

*TPX is the registered Trade Mark of Mitsui & Company Limited

Thermoplastics Chemical and Properties

CHEMICAL STABILITY OF PLASTICS

Medium	PTFE		PMP(TPX)		PP		HDPE		LDPE		PC		POM		PA		SAN		PMMA		PS		NR
	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C
Acetaldehyde	E	E	G	F	E	F	E	G	E	F	G	F	E	E	G		F	F	F	F	F	F	F
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	G
Acetonitrile	E	E	G	F	E	G	E	G	E	G	F	F	E		E		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
Acetyl chloride (acetic acid chloride)	E	E			E		E		E		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
Acrylic acid(2- propenic acid)	E	E	E		E		E		E		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
Adipic acid	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	E	E	E	E	E	E
Allyl alcohol(2-propan-1-ol)	E	E	E	G	E	E	E	E	E	E	G	G	E	E	G		G	F	F	F	G	G	G
Aluminium chloride	E	E	E	E	E	E	E	E	E	E	F	F	E	G	G	F	E	E	E	E	E	E	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	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
Ammonium chloride	E	E	E	E	E	E	E	E	E	E	G	G	E	E	E		E	E	G	G	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
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
Ammonium sulphate	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
Amyl alcohol (pentanol)	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	E			G	G	G
Amyl chloride (chloropentane)	E	E	F	F	F	F	F	F	F	F	F	F	E	E	E		F	F	F	F	F	F	F
Aniline	E	E	E	G	E	E	E	E	E	G	G	F	G	G	G	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
Barium chloride	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
Benzene	E	E	G	G	E	G	E	E	G	F	F	F	E	G	E		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
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
Benzyl chloride	E	E											E		E						F	F	F
Benzylamine	E	E	G		G		G		G	F	F	F	E				F	F	F	F	F	F	F
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
Bromine	E	E	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
Bromoform	E	E	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Bromonapthalene	E	E															F	F			F	F	
Butanediol	E	E	E	E	E	E	E	E	E	E			E	E	E		F	F			F	F	G
1-Butanol (butyl alcohol)	E	E	E	G	E	E	E	E	E	E	G	G	E	E	E	G	E	G	G	F	G	F	E
n-Butyl acetate (acetic acid n-butyl ester)	E	E	E	G	G	G	E	E	G	G	F	F	E	G	E		F	F	F	F	F	F	F
Butyl methyl ether	E	E	E	F	E	G	G	F	G	F	F	F	E	E			F	F	F	F	F	F	F
Butylamine	E	E											E	E			F	F			F	F	F
Butyric acid (butanoic acid)	E	E			F	F	G	F	F	F	G	F			G	G	F	F			F	F	F
Calcium carbonate	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Calcium Chloride	E	E	E	E	E	E	E	E	E	E	E	E	E	E	F	F	E	E	E	E	E	E	E
Calcium hydroxide	E	E	E	E	E	E	E	E	E	E	F	F	E	E	E		E	G	E	E	E	G	E
Calcium hypochlorite	E	E	E	G	E	E	E	E	E	E	G	F	E	E	E	F	E	E	G	G	E	E	F
Carbon disulphide	E	E	F	F	F	F	F	F	F	F	F	F	E	E	G		F	F	F	F	F	F	F
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
Chloroacetaldehyde, 45%	E	E														F	F	F	F	F	F	F	
Chloroacetic acid (monochloroacetic acid)	E	E	E	G	E	G	E	E	E	E	G	F	F	F	F	F	F	F	G	F	G	F	F
Chloroacetone	E	E															F	F	F	F	F	F	G

Medium	PTFE		PMP[TPX]		PP		HDPE		LDPE		PC		POM		PA		SAN		PMMA		PS		NR
	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C	20°C
Chlorobenzene	E	E	F	F	F	F	F	F	F	F	F	F			F	F	F	F	F	F	F	F	F
Chlorobutane	E	E	G	F	G	F	G	F	G	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
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
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
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
Copper sulphate	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	E	G
Cresol	E	E	F	F	G	G	G	F	F	F	F	F			F	F					F	F	F
Cumene[Isopropylbenzene]	E	E	F	F	G	F	E	G	G	F	F	F	E	F			F	F	F	F	F	F	F
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
Dibenzyl ether	E	E	G		E		E						E				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
Di-chloroacetic acid	E	E	E	E	G	F	G	G	G	F	G	F			F	F					G	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
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
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
Diethanolamine	E	E			G		G				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
Di-ethylamine	E	E	G	G	G	F	G	F	F	F	F	F									G	G	G
1,2 Diethylbenzene	E	E	F	F	F	F	G	F	F	F	G	F									F	F	F
Dimethyl sulphoxide(DMSO)	E	E	E	E	E	E	E	E	E	E	F	F					F	F	F	F	F	F	
Dimethylaniline	E	E									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	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
Diphenyl ether	E	E											G		G		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	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
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
Ethyl methyl Ketone(MEK)	E	E	F	F	E	G	G	F	G	F	F	F	F	F	E		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
Ethylene Oxide	E	E	G	F	G	F	G	G	G	G	G	F	E	E	G		F	F	F	F	F	F	F
Fluroacetic acid	E										F	F	F	F			F	F	F	F	F	F	F
Formaldehyde, 40%	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	G	E	E	F	F	F	F	G
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
Gasoline	E	E	G	G	G	G	E	E	G	F	G	F	E	E	E		F	F	E		F	F	F
Glycerine	E	E	E	E	E	E	E	E	E	E	E	E	G	G	E	E	E	E	E	E	E	E	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
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
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
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
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

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	
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
Hydrogen bromide	E	E	E	E	E	E	E	E	E	E	E	E	F	F	F	F					G	F	G
Hydrogen peroxide, 35%	E	E	E	E	E	E	E	E	E	E	E	E	E	F	F	F	E	E	F	F	E	E	F
Hydroiodic acid	E	E	E	E	E	E	E	E	E	E													
Isoamyl alcohol (3-methyl-1-butanol)	E	E	E	E	E	E	E	E	E	E			E	E									G
Isobutanol (isobutyl alcohol)	E	E	E	E	E	E	E	E	E	E	E	E	E	E			G	F	G	F	G	G	E
Isooctane	E	E									G				E		G	F			G	F	F
Isopropanol (2-propanol)	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	F	G	F	G	G	E
Isopropyl ether	E	E	F	F	F	F	F	F	F	F	F	F			F	F					F	F	F
Lactic acid (2-hydroxypropionic acid)	E	E	E	E	E	E	E	E	E	E	E	E	E	F	G	F	E	E	G	F	E	E	G
Lugol's solution (Iodine/potassium iodine solution)	E	E	E	G	E	E	F	F	F	F	G	F	G	G			G	F	F	F	G	F	E
Mercury	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	E	E	E	E	E	E
Mercury chloride	E	E	E	E	E	E	E	E	E	E	E	E	G	G	F	F	E	E	E	E	E	G	E
Methanol	E	E	E	E	E	E	E	E	E	G	E	G	E	E	G		G	F	F	F	G	F	G
Methoxybenzene	E	E									F	F	G				F	F	F	F	F	F	F
Methyl butyl ether	E	E	E	G	E	E	G	F	F	F	F	F	G				F	F	F	F	F	F	F
Methyl ethyl ketone(MEK)	E	E	F	F	E	G	G	F	G	F	F	F	F	F			F	F	F	F	F	F	F
Methyl formate (formic acid methyl ester)	E	E									F	F	E				F	F	F	F	F	F	F
Methyl propyl ketone	E	E	G	G	E	G	E	E	E	G	F	F	E	E			F	F	F	F	F	F	F
Methylene chloride (dichloromethane)	E	E	F	F	G	F	G	F	G	F	F	F	F	F	G	F	F	F	F	F	F	F	F
Mineral oil	E	E	E	E	E	E	E	E	E	G	F	F	E	E			E		E	E	E		F
Monochloroacetic acid	E	E	E	G	E	G	E	E	E	E	G	F	F	F	F	F	F	F	G	F	G	F	F
Nitric acid, 10%	E	E	E	E	E	E	E	E	E	E	E	G	F	F	F	F	E	G	E	G	F	F	F
Nitric acid, 30%	E	E	G	F	G	F	G	F	G	G	E	G	F	F	F	F	G	F	G	G	F	F	F
Nitric acid, 70%	E	E	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Nitrobenzene	E	E	F	F	F	F	G	F	F	F	F	F	G	F	F	F	F	F	F	F	F	F	F
Oleic acid	E	E													G		F	F	F	F	F	F	F
Oxalic acid	E	E	E	E	E	E	E	E	E	E	E	E	E	E	F	F	E	E	E	E	E	E	G
Ozone	E	E	E	E	G	F	G	F	G	F	F	F	F	F	F	F	G	G	E	G	G	G	F
n-Pentane	E	E													G								F
Peracetic acid	E	E									F	F	F	F									
Perchloric acid	E	E	G	F	E	F	E	F	E	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Perchloroethylene	E	E	F	F	F	F	F	F	F	F	F	F	E	G	F	F	G	G	G	F	F	F	F
Petroleum	E	E	G	G	G	F	G	F	G	F	G	G	E	E	E				E		F	F	F
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

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	50°C
Sodium Chloride	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	E	E	E	E	E	E	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	E
Sodium fluoride	E	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	E	G
Sulphuric acid, 60%	E	E	E	E	E	E	E	E	E	E	G	G	F	F	F	F	E	G	F	F	F	F	F	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	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	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	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	F
Tri-ethylene glycol	E	E	E	E	E	E	E	E	E	E	E	G	E	G			E	E	G	G	E	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	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	F
Trichloroethylene	E	E	F	F	F	F	G	F	F	F	F	F	F	F	G		F	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	F
Urea	E	E	E	E	E	E	E	E	E	E	F	F	E	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	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	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	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 5 yrs from date of Radiation.

SUITABILITY OF ABDOS PLASTICS FOR FOODSTUFF

The phthalates for which opinions have been given by EFSA (European Food Safety Authority and TDI's (Tolerable Daily Intake) established for use in plastics for containers in food application, are not intentionally added in the manufacture of or the formulation of this product. The phthalates are di-isobutyl phthalate (DIBP), di-(2-ethylhexyl) phthalate (DEHP), di-n-butyl phthalate (DBP), di-isodecyl phthalate (DIDP), butylbenzyl phthalate (BBP). In addition, di-isobutyl phthalate (DIBP) has recently been classified by TC C&L of ECB (Commission Working Group on Classification & Labeling – European Chemicals Bureau) in accordance with the requirements of Directive 67/548/EC (Classification and labeling of dangerous substance), taking into account a NOAEL, the toxicity of DIBP is more than 100 times lower than DNBP's (product assessed by EFSA for use in plastics in contact with food). Phthalates are not used in the manufacture of or the formulation of any Abdos manufactured products.

Abdos manufactured products have passed the USP tests for a Class VI, physio-chemical testing and meets USP limits.

Abdos manufactured products are made from the base resin which meets the FDA requirements contained in the Code of Federal Regulation in 21 CFR 177.1520 (a)(3)(i) and (c)3.1a. 3.2a. All other ingredients meet the requirements of their respective FDA regulations and 21 CFR 177.1520(b). All Abdos manufactured products meet the FDA criteria in 21 CFR 177.1520 for food contact applications, including cooking.

AUTOClave GUIDE LINE

To ensure successful steam sterilization of your plastic labware please adhere to the following guideline: Autoclave all plastic consumables at 121°C for 20 minutes, 15psi/1 atm. Do not use a dry cycle as this may cause deformation or weakening of the plastic. Allow temperature within the autoclave to return to at least 80°C before removing product.

Autoclaving (steam sterilisation) is defined as the destruction or irreversible inactivation of all reproducible microorganisms under exposure to "saturated steam at a minimum of 120 °C." (DIN 58946-1, 1987). DIN EN 285 specifies a minimum exposure time (te) of 20 minutes (killing time and safety margin) at a sterilisation temperature of 121 °C. For the correct sterilisation procedure, including biological safety (DIN EN285), please contact your hygiene specialist.

Prior to autoclaving plastic labware, ensure that no soiling or residual contamination remains on the equipment. Otherwise, the residual contamination will bake on solidly during the autoclaving process. Even substances that have no effect on the plastic at room temperature can still lead to destruction of the plastic during the autoclaving process. Additionally, microorganisms might not be killed effectively if they are protected by the residual contamination.

NOTES ON AUTOCLAVING

- Containers with screw tops or stoppers must be open during autoclaving to allow for pressure equalisation.
- Autoclaving of a closed container will lead to the deformation or destruction of the container.
- Plastic labware should be stood upright on a level surface during autoclaving to avoid shape deformation.
- Plastic labware should not be laid on its side during autoclaving.
- No mechanical stresses should be present during autoclaving.
- For example, do not stack items.
- Do not autoclave any container that contains residual contamination or even rinsing agent.
- Not all plastics are resistant to steam sterilisation! For example, polycarbonate loses its tensile strength.
- Mind the temperature limits for the plastics.
- Autoclavable products are identified with a "121 °C" symbol in this catalogue.

The surfaces of some plastics can be attacked by chemicals present during autoclaving, which can cause persistent clouding. Some transparent plastics can absorb minute quantities of steam, which can lead to reversible clouding. This clouding disappears upon drying, which can be accelerated through the use of a drying oven.

RPM VS. RCF "WHAT'S THE DIFFERENCE?"

RPM – stands for "Revolutions Per Minute" and is the speed that your rotor spins in your centrifuge.

RPM is specific to individual centrifuge brands and rotor sizes.

RCF – stands for "Relative Centrifugal Force" and is better known as g-force. This indicates the actual force resulting from the spinning action in the centrifuge.

It is g-force that drives sample separation.

The following equation can be used to convert RPM to RCF for any model centrifuge.

$$RCF = 0.0001118 \times \text{radius of rotation (cm)} \times \text{RPM}^2$$

Note: radius of rotation is given by the distance of the furthest most point of the tube from the axis of rotation. Please refer to your centrifuge user guide for radius value.

NON-PYROGENIC CERTIFICATE OF ANALYSIS

Every lot of Abdos Micro Tips, Micro Centrifuge Tubes, Centrifuge Tubes, Cryo Vials, Petri Dish, Radioimmunoassay (Ria) Vials, Pasteur Pipette & other products are tested for Pyrogenic.

This report certifies that samples of the above products obtained from finished products are Non-Pyrogenic. Endotoxin levels are < 0.06 EU/ml. Products were tested for Endotoxins by the Limulus Amebocyte Lysate (LAL) Gel Clot Assay.

PROCEDURE:

Lot samples of the products were extracted according to current FDA guidelines in Pyrogen free water and the extract solution was then assayed along with the positive and negative controls. The sensitivity of the LAL Gel Clot Assay was 0.06 EU/ml.

(A) P10105 Lot No-1503001 , (B) P60102 Lot No-1503007, (C) P10202 Lot No-,1503036 (D) P10401 Lot No-1503009, (E) P10403 Lot No-1503010

RESULTS:

Endotoxin levels <0.06 EU/ml.

COMMENTS:

Current FDA/USP guidelines set endotoxin limits for medical devices at 0.5 EU/ml, and 0.06 EU/ml for devices that contact cerebral spinal fluid. We test products according to the guidelines for medical devices that contact cerebral spinal fluid.

RNASE FREE CERTIFICATE OF ANALYSIS

Every lot of Abdos Micro Tips, Micro Centrifuge Tubes, Centrifuge Tubes, Cryo Vials, Petri Dish, Radioimmunoassay (Ria) Vials, Pasteur Pipette & other products are tested for RNase.

This report certifies that samples of the above products obtained from finished products are free of any detectable RNase contamination. Products were tested for RNase activity by the following protocol.

PROCEDURE:

Products were extracted in RNase free water. The extract was then added to an RNA standard. The RNA standard was incubated at 37°C for 1 hour then heated to 65°C for 5 minutes. RNA samples were then run on an agarose gel, photographed, and evaluated for degradation.

Lane (A) P10105 Lot No-1503001.(B) P60102 Lot No-1503007.(C) RNA standard exposed to RNase as a positive control (D) unexposed RNA standard as a negative control

CONCLUSIONS:

No visible degradation is present in the product samples confirming that the products can be considered RNase free.



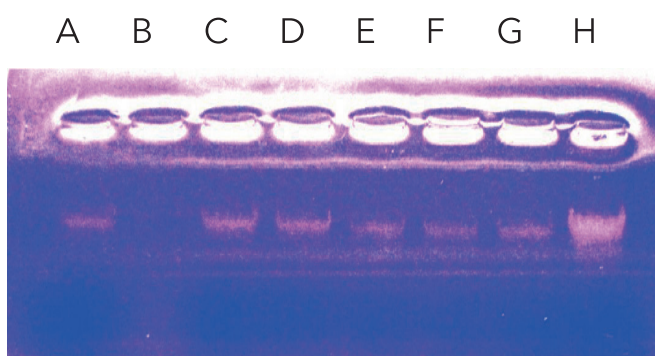
DNASE FREE CERTIFICATE OF ANALYSIS

Every lot of Abdos Micro Tips, Micro Centrifuge Tubes, Centrifuge Tubes, Cryo Vials, Petri Dish, Radioimmunoassay (Ria) Vials, Pasteur Pipette & other products are tested for DNase.

This report certifies that samples of the above products obtained from the finished products are free of any detectable DNase contamination. Products were tested for DNase activity by the following protocol.

PROCEDURE:

Products were extracted in DNase free water. The extract was then added to a DNA standard. The DNA standard was incubated at 37°C for 1 hour then heated to 65°C for 5 minutes. DNA samples were then run on an agarose gel, photographed, and evaluated for degradation.



Lane (A) unexposed DNA standard as a negative control , (B) DNA standard exposed to DNase as a positive control, (C) P10105 Lot No-1503001 , (D) P60102 Lot No-1503007, (E) P10202 Lot No-,1503036 (F) P10401 Lot No-1503009,(G) P10403 Lot No-1503010, (H) P60103 Lot No-1502010

CONCLUSIONS:

No visible degradation is present in the product samples confirming the products can be considered DNase free.

INDEX

CODE	PAGE NO.	CODE	PAGE NO.	CODE	PAGE NO.	CODE	PAGE NO.
E10001	25	E11147	23	E11286	116	E11416	117, 119, 122, 124
E10002	25	E11161	28	E11300	113	E11417	117, 119, 122, 124
E10003	25	E11162	28	E11305	115	E11418	117, 119, 122, 124
E10004	25	E11163	28	E11307	100	E11419	117, 119, 122, 124
E10005	25	E11164	28	E11308	100	E11420	119
E10006	25	E11171	55	E11310	109	E11430	119
E10007	25	E11190	111	E11311	109	E11440	121
E10008	25	E11191	111	E11312	109	E11450	121
E10009	25	E11192	111	E11313	109	E11451	122
E10010	25	E11193	111	E11314	109	E11452	122
E11100	24	E11194	111	E11315	109	E11453	122
E11101	24	E11195	111	E11316	109	E11460	122
E11102	24	E11196	111	E11317	109	E11470	122
E11103	24	E11197	111	E11318	109	E11480	124
E11104	24	E11198	111	E11319	109	E11490	124
E11105	24	E11200	112	E11320	109	E11501	18
E11106	24	E11201	112	E11330	105	E11502	18
E11107	23	E11202	112	E11331	105	E11503	18
E11108	23	E11225	102	E11332	105	E11510	19
E11109	23	E11226	102	E11333	105	E11511	19
E11110	23	E11227	102	E11334	105	E11512	19
E11111	23	E11228	102	E11335	105	E11513	19
E11112	24	E11229	102	E11336	105	E11550	20
E11113	59	E11230	105	E11337	105	E11551	20
E11114	59	E11231	101	E11340	107	E11552	20
E11116	59	E11232	101, 103	E11341	107	E11601	93
E11117	59	E11233	101, 103	E11342	107	E11602	93
E11118	59	E11234	101	E11343	107	E11603	93
E11119	59	E11235	104	E11344	107	E11604	93
E11120	59	E11236	104	E11345	107	E11605	93
E11131	24	E11237	104	E11346	107	E11606	93
E11132	24	E11270	115	E11347	107	E11607	93
E11134	23	E11271	115	E11348	107	E11608	93
E11136	27	E11272	115	E11349	107	E11609	93
E11137	27	E11273	115	E11350	107	E11610	93
E11138	27	E11280	116	E11401	117	E11611	93
E11139	27	E11281	116	E11410	117	E11612	93
E11140	27	E11282	116	E11411	117, 119, 124	E11620	93
E11141	27	E11283	116	E11413	117, 119, 124	E11621	93
E11145	23	E11284	116	E11414	117, 119, 124	E11622	93
E11146	23	E11285	116	E11415	117, 119, 122, 124	E11623	93

CODE	PAGE NO.	CODE	PAGE NO.	CODE	PAGE NO.	CODE	PAGE NO.
E11624	93	P10107	33	P10301A1	62	P10444	14
E11650	103	P10108	33	P10302	62	P10449	14
E11651	103	P10109	33	P10303	62	P10450	14
E11652	103	P10110	33	P10304	62	P10451	15
E11653	103	P10111	34	P10304A	62	P10452	15
E11701	56	P10112	34	P10304A1	62	P10453	15
E11702	56	P10113	34	P10305	62	P10501	54
E11703	56	P10114	34	P10305A	62	P10503	54
E11704	56	P10115	32	P10305A1	62	P10601	61
E11705	56	P10116	33	P10306	62	P10602	61
E11706	56	P10117	34	P10307	62	P10603	61
E11711	57	P10118	34	P10308	62	P10604	61
E11712	57	P10119	34	P10309	62	P10605	61
E11713	57	P10120	34	P10310	62	P10606	61
E11714	57	P10129	32	P10311	62	P10901	85
E11715	57	P10130	32	P10312	62	P10902	85
E11716	57	P10137	32	P10313	62	P10903	85
E11731	58	P10138	32	P10401	14	P10904	85
E11732	58	P10139	33	P10402	14	P10905	85
E11733	58	P10140	33	P10403	14	P10906	85
E11734	58	P10141	33	P10404	14	P10907	85
E11735	58	P10142	33	P10405	14	P10908	85
P10001	37	P10144	32	P10406	14	P10909	85
P10002	37	P10145	32	P10407	14	P10910	85
P10003	37	P10147	34	P10408	14	P10911	86
P10004	37	P10148	34	P10409	15	P10912	86
P10005	37	P10149	34	P10410	15	P10913	86
P10006	37	P10150	34	P10411	15	P10914	86
P10020	37	P10152	34	P10412	15	P10915	86
P10021	37	P10153	34	P10413	15	P10916	86
P10022	37	P10154	34	P10414	15	P10917	86
P10023	37	P10161	33	P10415	15	P10918	86
P10024	37	P10163	33	P10416	15	P10919	86
P10025	37	P10164	33	P10417	15	P10920	86
P10040	38	P10201	11	P10418	15	P10921	86
P10041	38	P10201A	11	P10419	16	P10922	86
P10042	38	P10202	11	P10421	16	P10923	86
P10043	38	P10203	11	P10423	14	P10924	86
P10044	38	P10203A	11	P10424	14	P10925	86
P10045	38	P10204	11	P10425	15	P10926	86
P10060	38	P10204A	11	P10426	15	P10927	85
P10061	38	P10205	11	P10427	15	P10928	85
P10062	38	P10207	11	P10430	14	P10985	87
P10063	38	P10208	11	P10431	14	P10986	87
P10101	32	P10209	11	P10432	14	P10987	87
P10102	32	P10210	11	P10441	14	P10988	87
P10105	32	P10301	62	P10442	14	P10989	87
P10106	32	P10301A	62	P10443	14	P10990	87

CODE	PAGE NO.	CODE	PAGE NO.	CODE	PAGE NO.	CODE	PAGE NO.
P10991	87	P11081	55	P20225	17	P20725	81
P11001	41	P11082	55	P20226	17	P20726	81
P11002	41	P11083	55	P20227	12	P20727	81
P11003	41	P11084	55	P20228	12	P20728	81
P11004	41	P11085	55	P20230	75	P20729	81
P11005	41	P11086	55	P20231	75	P31201	61
P11006	41	P11089	55	P20234	75	P31202	61
P11007	41	P11090	55	P20302	96	P31205	61
P11020	41	P11091	55	P20441	80	P31206	61
P11021	42	P11092	55	P20442	80	P31207	61
P11022	41	P11093	55	P20443	80	P31208	61
P11023	42	P11094	55	P20444	80	P31209	61
P11024	41	P11095	55	P20601	68	P31210	61
P11025	42	P11096	55	P20602	68	P40101	63
P11026	41	P11101	82	P20603	68	P40102	63
P11027	42	P11103	82	P20604	16	P40103	63
P11028	41	P11104	77	P20605	16	P40104	63
P11029	42	P11105	77	P20606	70	P40105	63
P11032	41	P11106	78	P20607	69	P40106	63
P11033	42	P11107	78	P20611	69	P40112	63
P11034	41	P11901	92	P20612	69	P40113	63
P11035	42	P11902	92	P20613	70	P50301	91
P11036	41	P11903	92	P20614	69	P50302	91
P11037	44	P11904	92	P20615	69	P50303	91
P11050	44	P11905	92	P20616	68	P50304	91
P11051	44	P11908	55	P20701	79	P50305	91
P11052	44	P11909	55	P20702	79	P50306	91
P11053	44	P20101	54	P20703	79	P50307	91
P11054	44	P20102	54	P20704	79	P50308	91
P11055	44	P20103	54	P20705	79	P50401	91
P11056	44	P20104	54	P20706	79	P50402	91
P11060	44	P20201	12	P20707	79	P50403	91
P11061	45	P20202	12	P20708	79	P50404	91
P11062	44	P20203	12	P20709	79	P50405	91
P11063	45	P20204	12	P20710	79	P50406	91
P11064	44	P20205	12	P20711	79	P50407	91
P11065	45	P20206	76	P20712	79	P50408	91
P11066	44	P20207	76	P20713	79	P50501	92
P11067	45	P20208	73	P20714	79	P50502	92
P11068	44	P20209	74	P20715	79	P50503	92
P11069	45	P20210	76	P20716	80	P50504	92
P11072	44	P20212	17	P20717	80	P50505	92
P11073	45	P20213	17	P20718	80	P50506	92
P11074	44	P20214	17	P20720	81	P50507	92
P11075	45	P20215	17	P20721	81	P50508	92
P11076	44	P20216	17	P20722	81	P50601	89
P11077	45	P20218	16	P20723	81	P50602	89
P11080	55	P20219	16	P20724	81	P50603	89

CODE	PAGE NO.	CODE	PAGE NO.	CODE	PAGE NO.
P50604	89	P60113	66	U20315	70
P50605	89	P60114 B	67	U20316	70
P50606	89	P60114 G	67	U20317	70
P50607	89	P60114 R	67	U20318	70
P50608	89	P60114 W	67	U20319	71
P50701	89	P60114 Y	67	U20320	71
P50702	89	P60115	65	U20321	71
P50703	89	P60116	65	U20322	71
P50704	89	P60117	65	U20323	71
P50705	89	P60118	65	U20324	71
P50706	89	P60119	67	U20325	71
P50707	89	P60119A	67	U20326	71
P50708	89	P60119A1	67	U20327	71
P50802	90	P70101	94	U20328	71
P50803	90	P70102	94	U20329	71
P50804	90	P70103	94	U20330	71
P50805	90	P70105	94	U20331	71
P50806	90	P70106	96	U20332	71
P50807	90	P70107	96	U20333	71
P50808	90	P70201	28	U20334	71
P50902	90	P70202	60	U40101	96
P50903	90	P70203	28	U40102	97
P50904	90	P70204	60	U40103	97
P50905	90	P70205	60	U40104	97
P50906	90	P70301	95	U40105	97
P50907	90	P70302	95	U40106	97
P50908	90	P70303	95	U40108	97
P60106	67	P70401	95	U40109	97
P60106A	67	P70402	95	U40110	98
P60106A1	67	U20307	70	U40111	98
P60107	67	U20308	70	U40112	97
P60107A	67	U20309	70	U40113	97
P60107A1	67	U20310	70	U40120	97
P60108	66	U20311	70	U50101	98
P60109	66	U20312	70	U50103	96
P60110	66	U20313	70	U50104	96
P60112	66	U20314	70		

	PRODUCT	Page No.		PRODUCT	Page No.
A	AUTOCCLAVABLE BAGS, PP	97	L	LAST DROP™ PIPETTE TIPS, STERILE RACKED, PP	38
B	BEAKERS WITH HANDLE, PP	90	M	MEASURING CYLINDER, PP CLASS "B"	91
	BEAKERS WITH HANDLE, TPX	90		MEASURING CYLINDER, TPX CLASS "A"	92
	BEAKERS WITHOUT HANDLE, PP	89		MEASURING CYLINDER, TPX CLASS "B"	91
	BEAKERS WITHOUT HANDLE, TPX	89		MICRO CENTRIFUGE TUBES, PP	11
	BENCH TOP BETA SHEALD, ACRYLIC	94		MICRO TIPS, INDIVIDUALLY WRAPPED, STERILE	33
	BIOHAZARD DISPOSABLE BAGS, PP	97		MULTI COMBINATION RACKS, PP	74
C	CELL SPREADERS GAMA RADIATED STERILE, PP	87	P	PARAFILM M DISPENSER, ABS	95
	CENTRIFUGE TUBE BOX, PP	16		PARAFILM M DISPENSER, ACRYLIC	95
	CENTRIFUGE TUBE CONICAL BOTTOM, PP NATURAL	14		PASTEUR PIPETTES, LDPE	61
	CENTRIFUGE TUBES CONICAL BOTTOM, PS/HDPE	16		PCR WORKSTATION RACK WITH LID, PP	82
	CLICK TOGETHER CONICAL TUBE RACKS, ABS	16		PCR WORKUP RACK, PP	82
	CRYO APRON	71		PETRI DISH, PS	85
	CRYO BOX, PC	68		PIPET RACK STAND, ACRYLIC	28
	CRYO BOX, SYSTEM 100 PLACE, PC	69		PIPETTE RACK STAND (CAROSOL TYPE), PP	52
	CRYO CODERS FOR EXTERNAL & INTERNAL THREADED VIALS, HDPE	67		PIPETTE STAND HORIZONTAL, PP	60
	CRYO CUBE BOX / STORAGE CUBE BOX, PP	69		PIPETTE STAND VERTICAL, PP	60
	CRYO GLOVES	70		PIPETTE STORAGE RACK WITH MAGNET, ABS	60
	CRYO VIAL EXTERNAL THREADED STERILE, PP (- 196° C)	65		PIPETTE TIPS, BULK IN RESEALABLE BAGS, PP	32
	CRYO VIAL INTERNAL THREADED STERILE WITH SILICONE SEAL, PP	66		PIPETTE TIPS, RACKED PP	33
D	DOUBLE / JUMBO TEST TUBE RACK, RPP	80		PIPETTE TIPS, REFILL PACK, PP	34
	DRYING RACK	96		PIPETTE TIPS, STERILE RACKED, PP	34
E	EMPTY MICRO TIP BOX, PP	54		PLAIN AND VACUUM DESICCATOR	93
	EXPANDING TUBE RACK, PP	75		POLY WIRE MICRO TUBE RACK, NYLON	12
F	FILTER TIPS - RACKED, PP	41		POLYGRID TEST TUBE RACKS, PP	80
	FILTER TIPS - STERILE RACKED, PP	42		POLYWIRE RACKS, DELRIN	81
	FILTER TIPS, BULK IN RESEABLE BAGS	41		PREMIUM ELECTRONIC PIPETTE	28
	FIXED PREMIUM PIPETTE, PP	25		PREMIUM PIPETTES, PP	24
	FLOATING RACK FOR MICRO CENTRIFUGE TUBE, PC	17	R	PREMIUM PLUS MULTI-CHANNEL PIPETTE, PP	27
	FOLDABLE SPACE SAVINGS RACK, PP	17		PREMIUM PLUS PIPETTES, PP	23
	FREEZING CARDBOARD CRYO BOXES, CARDBOARD	70		RACK FOR MICRO CENTRIFUGE TUBE, PC	12
	FROSTY MATE™ COLOUR CHANGE RACKS, PP	78		RACK FOR MICRO CENTRIFUGE TUBE, RPP	12
	FROSTY MATE™ STORAGE RACKS, PC	77		RACKED CENTRIFUGE TUBE CONICAL BOTTOM, PAPER	15
G	GLOVE BOX HOLDER, ACRYLIC	95		RADIOIMMUNOASSAY (RIA) VIAL & CAP (PLASTIC TEST TUBE)	62
H	HOTBLOCK - LED DIGITAL DRY BATH	105		RAVE PIPETTE CONTROLLER	59
I	INDIVIDUALLY WARP CENTRIFUGE TUBES, PP/HDPE	15		RAVE PLUS PIPETTE FILLER	59
L	LABORATORY WORK BOOK	98	S	REAGENT RESERVOIR, HIPS	54
	LARGE VOLUME PIPETTE TIPS, BULK PP	32		REVERSIBLE RACK WITH COVER, PP	76
	LAST DROP, LOW RETENSION FILTER TIPS - RACKED, PP	44		ROTATOR WORKSTATION, PP	73
	LAST DROP, LOW RETENSION FILTER TIPS - STERILE RACKED, PP	45		SAFETY FACE SHIELD	97
	LAST DROP, LOW RETENSION FILTER TIPS, BULK IN RESEABLE BAGS	44		SAFETY GOGGLES BOX, ACRYLIC	96
	LAST DROP, LOW RETENTION MICRO CENTRIFUGE TUBES, PP	11		SAFETY GOGGLES, PC	96
	LAST DROP™ PIPETTE TIPS IN RESEALABLE BAGS, PP	37		SAMPLE CONTAINER	63
	LAST DROP™ PIPETTE TIPS, RACKED PP	37		SCOOP, HDPE	92
	LAST DROP™ PIPETTE TIPS, REFILL PACK, PP	38		SELF STANDING CENTRIFUGE TUBES, PP/HDPE	14
				SEROLOGICAL PIPETTES STERILE, PS	61
				SINGLE HAND CRYO HOLDER RACK, PC	68
				SOFT INOCULATION LOOP GAMA RADIATED STERILE, ABS	87
				STEPMATE STEPPER	55
				STORAGE VIAL, PP	67

	PRODUCT	Page No.
S	SUITABLE TIPS & ADAPTER FOR STEPMATE STEPPER	55
	SUPREME BOTTLE TOP DISPENSER	56
	SUPREME DUET BOTTLE TOP DISPENSER	58
	SUPREME PLUS BOTTLE TOP DISPENSER	57
	SWIRL MAXI MICRO CENTRIFUGE	19
	SWIRL MICRO PLATE CENTRIFUGE	20
	SWIRL MINI MICRO CENTRIFUGE	18
	SWIRLEX – LCD DIGITAL OVERHEAD STIRRER	109
	SWIRLEX - VORTEX SHAKER	111
	SWIRLEX- MICROPLATE MIXER	112
	SWIRLTOP – 7INCH DIGITAL MAGNETIC STIRRER & HOT PLATE	103
	SWIRLTOP – DIGITAL (LCD) MAGNETIC STIRRER & HOT PLATE	102
	SWIRLTOP – DIGITAL (LED) MAGNETIC STIRRER & HOT PLATE	101
	SWIRLTOP – ULTRA FLAT & ECO MAGNETIC STIRRER	100
	SWIRLTOP –MULTI CHANNEL MAGNETIC STIRRER & HOT PLATE	104
T	TEST TUBE RACK, RPP & PC	79
	THERMO MIX - LCD DIGITAL	107
	TRANSPORT / RESEALABLE BAGS WITH ZIP LOCK, PE	98
	TWISTY TUBE RACK, PP	76
U	UNIVERSAL CENTRIFUGE TUBE RACK, PP	17
W	WATER PROOF CRYO GLOVES	71
	WAVEMAX – CLASSIC DANCING (3D) SHAKER & LCD DIGITAL (3D) DANCING SHAKER	118
	WAVEMAX - CLASSIC ORBITAL & LINEAR SHAKER	121
	WAVEMAX - CLASSIC ROCKING SHAKER & LCD DIGITAL ROCKING SHAKER	117
	WAVEMAX - HEAVY DUTY LCD DIGITAL ORBITAL & LINEAR SHAKER	124
	WAVEMAX - LCD DIGITAL ORBITAL & LINEAR SHAKER	122
	WAVEX – CLASSIC ROTATING MIXER	115
	WAVEX – LCD ROTATING MIXER	116
	WAVEX – LCD TUBE ROTATOR	114
	WAVEX- CLASSIC TUBE ROTATOR	113
	WORKSTATION STORAGE 3 COMPARTMENT, ACRYLIC	94
	WORKSTATION STORAGE/ DISPENSER BIN, ACRYLIC	94
	3 WAY RACK, PP	75

TERMS & CONDITIONS OF SALE

Buyer:

The person, firm or company who purchases Goods from the company.

Company / Manufacturer :

Abdos Labtech Pvt. Ltd., India

Brand:

Unless otherwise agreed, products will be supplied under Abdos brand name.

Contract:

Any Contract between the company and Buyer for the sale and purchase of the Goods, incorporating these conditions.

Goods:

Any Goods agreed in the Contract to be supplied to the Buyer by the Company [including any part of parts of them].

Price:

All prices are quoted as per Inco-terms 2010. The initial Purchase Price will be decided at the time of prevailing orders. At any time before delivery, the Company reserve the rights and may adjust the price to reflect any increase in the costs of supplying the Goods.

Currency:

The prime currency of contract will be US Dollar or Euro unless otherwise specified or agreed for any other currency.

Purchase Order:

Once a final purchase order has been placed by Buyer and accepted by Company, it shall not be cancelled or modified by Buyer without the written consent of Manufacturer, except in the case of manifest error.

Delivery:

Any dates specified by the Company for delivery of the Goods are intended to be an estimate and time for delivery shall not be made of the essence by notice. If no dates are so specified, delivery shall be within a reasonable time.

Payment Terms:

Abdos standard payment terms either 100% Advance along-with the order or 100% through Confirmed, Irrevocable & Freely Negotiable L/C Payable at Sight.

Shipping Terms:

Abdos standard shipping terms are ex-works. However, no additional charges will be borne by Abdos, we also supply goods on FCA, FAS, FOB, C&F, CFR, CIF, CIP & DAP Shipping Terms based on Buyer's specific requirement.

Delivery and Safety:

All Products delivered pursuant to the above terms & conditions shall be considered delivered when suitably packed for shipment in Manufacturer's standard shipping containers, marked for shipment at Buyer's address, and placed with a carrier Inco-terms 2010. Buyer shall pay all applicable taxes, customs, duties, insurance and similar charges that may be assessed against the Products after delivery by Manufacturer to the carrier.

Note:

Before you place an order, please check the Adapter plug, Power & frequency as per your requirement.



ABDOS LABTECH PRIVATE LIMITED

Reg. Office : 13A, Govt. Place East, 2nd Floor, Kolkata – 700069, West Bengal – INDIA

Work : Shiv Ganga Industrial Estate, Plot No. 1 Lakeshwari, Bhagwanpur, Roorkee - 247667 Uttarakhand, INDIA

Europe : Columbusweg 10, 5928 LC Venlo, NETHERLANDS

Head Office: Unit No. 720, 721 & 722, 7th Floor, DLF Tower - A, DDA District Center, Jasola, New Delhi - 110025, INDIA

Ph : +91 11 44800980 - 986 **F :** +91 11 44800987 **E :** lifesciences@abdosindia.com **W :** www.abdoslifesciences.com