

NEPTUNE™

Tools for Life Sciences



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22+ Years of Liquid Handling

Industry 1st to create a tip reload system

Neptune's patented Environmentally Sustainable Pack (ESP) reduces plastic waste by up to 90%

Industry 1st to design an Aerosol Barrier Tip

specifically engineered to reduce cross contamination

Industry 1st to develop a low retention polymer

S³ (Sample Saving Surface) virtually eliminates sample hold-up

Introducing

NEPTUNE[™] 2.0

A new and improved line of Neptune products was introduced January 2011. Inspired by customer needs coupled with a comprehensive assessment of our product portfolio, Neptune's improved line of laboratory consumables delivers product features that offer genuine benefits to researchers worldwide. The new Neptune products include:

Pipette Tip Enhancements:

- **Universal Fit:** Thin wall crown provides an optimum seal for both single and multichannel pipettors
- **Graduated Tips:** Provides a visual confirmation of draw volume for added confidence
- **Expanded Barrier Tip Line:** New graduated 1000XL and 300 µl barrier tips to meet growing market demand
- **Sample Saving Surface[™]:** A new and improved low retention technology to further reduce sample hold up and ensure accurate sample delivery

Packaging Optimizations:

- **Eco-Friendly Racks:** Manufactured using recyclable materials and designed to use the least amount of plastic possible
- **Ink Jet Identification:** Each rack precisely identified with manufacturing lot and product catalog number for increased traceability
- **ESP (Environmentally Sustainable Pack)[™]:** The most comprehensive recyclable reload systems in 10 µl, 10XL, 20 µl, 200 µl, 300 µl, 1000 µl and 1000XL configurations



COMMITMENT TO QUALITY

Our tips are manufactured under stringent controls in Neptune's ISO 9001:2008 certified facility. Neptune's advanced manufacturing process continually monitors the quality of products and individual batch testing ensures Neptune products are certified RNase, DNase, DNA and Endotoxin-free.

Test	Product	Assay Description
Function	Tips	Our custom built robotic equipment precisely measures insertion force, checks each tip for vacuum pressure loss, and constantly monitors the function of Neptune tips so that you can be assured of reliable performance.
	Tubes	Neptune tube samples are extensively centrifuged and boil tested to ensure they meet the highest standards.
	Plates	Neptune PCR and microtiter plate dimensions are checked against SBS specifications and vacuum tested on customized fixtures to ensure that each plate is flat and leak-free.
Sterility	Process	Neptune pre-sterile products have undergone electron beam irradiation and bioburden testing by an independent laboratory.
Molecular Purity	Nucleic acids	Neptune products are PCR tested and certified to be free of contaminating nucleic acids.
	Nucleases	Neptune plastics are tested and certified to be free of nucleases, with a test sensitivity level of less than 3.4×10^{-11} Kunitz units of RNase and 1.7×10^{-11} Kunitz units of DNase.
	Endotoxins/Pyrogens	LAL coagulation testing demonstrates these products are free of endotoxins, test sensitivity is 0.06 EU/ml.
Traceability	Process	Each product contains a 5 digit lot number located on the rack, pack and case of each finished good. With Neptune's advanced manufacturing process all raw materials are able to be traced for maximum quality assurance.

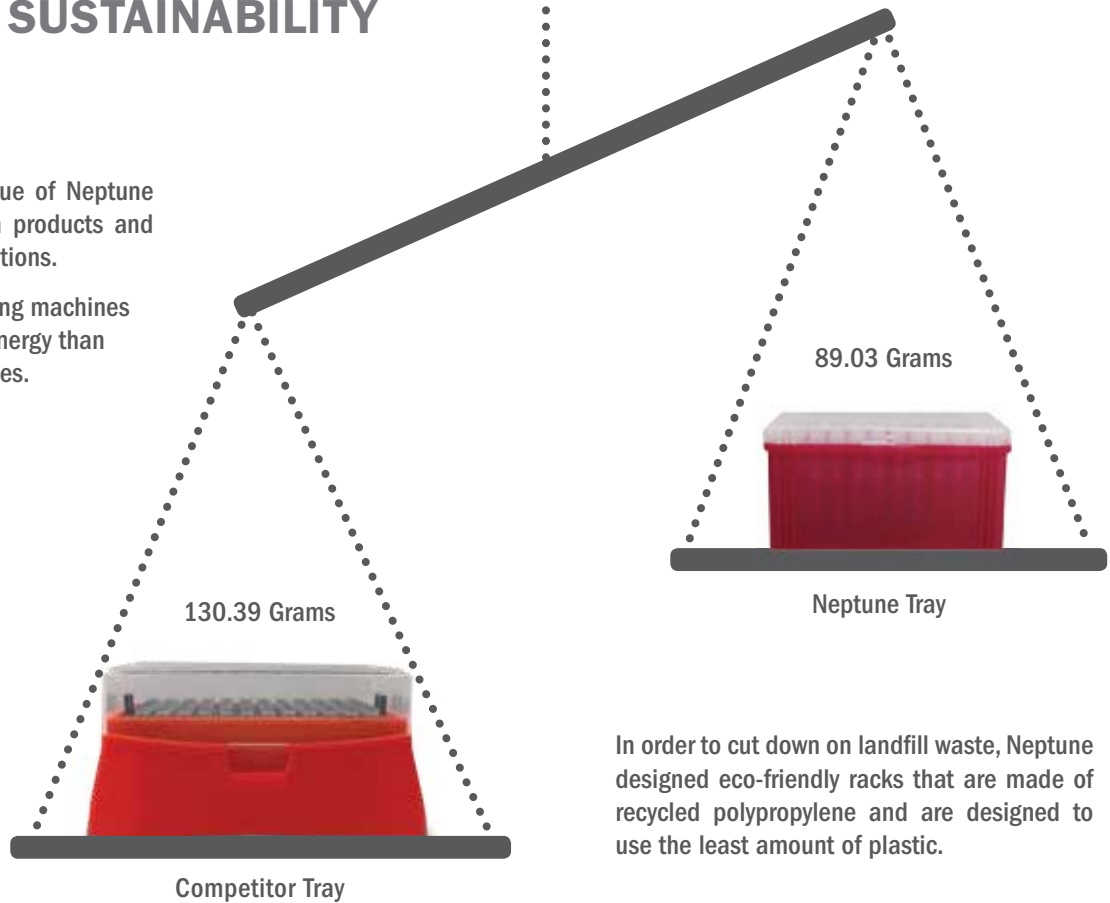


STANCE ON SUSTAINABILITY

A long standing core value of Neptune has been to make green products and strive for sustainable solutions.

Neptune's injection molding machines consume one-third less energy than standard molding machines.

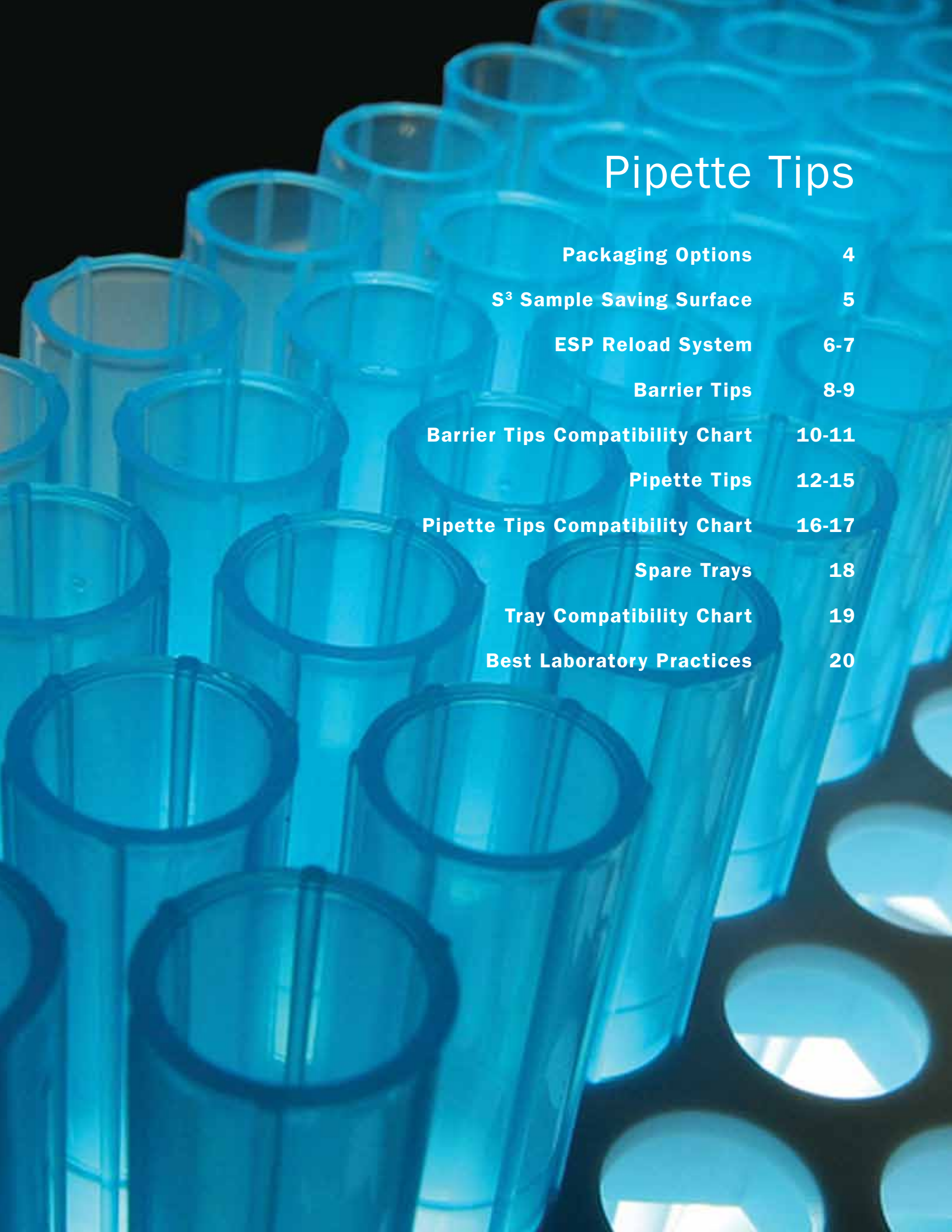
Stance on Sustainability



In order to cut down on landfill waste, Neptune designed eco-friendly racks that are made of recycled polypropylene and are designed to use the least amount of plastic.

To reduce our carbon footprint, Neptune packaging was created to be as compact as possible. When buying a competitor's product, it would require twice as many containers in order to ship the equivalent of Neptune product. Neptune saves energy for our environment and shipping cost for the consumer.





Pipette Tips

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PACKAGING OPTIONS



Bulk



Racked



Rack & Stack



ESP™ Reload System

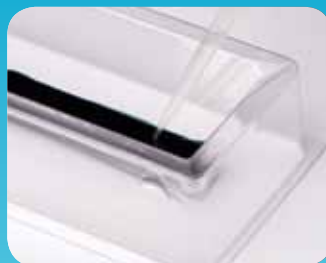


BT-ESP™





NEPTUNE



Before Pipetting



Fluid Drawn



Sample Dispensed

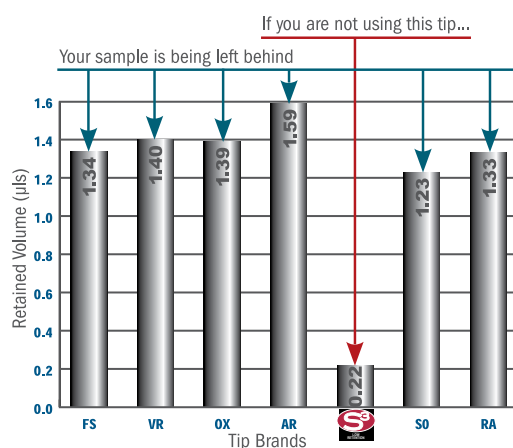
COMPETITION



Neptune's exclusive S³ polymer was designed to increase pipetting accuracy by virtually eliminating tip retention and sample hold-up. S³ pipette tips deliver volumes within 0.1% of the indicated volume, versus 0.7% for standard polymer tips. This provides a more accurate application.

Pipette tips produced from standard polymers will variably retain biological solutions, preventing accurate and repeatable results. Diamond polishing of the mold reduces the number of imperfections, producing a smoother surface. Silicone treatment of tips further reduces retention, but can leach out and interfere with reactions or degrade at autoclaving temperatures.

Neptune was the first to address this challenge with the development of a novel polymer technology that produces a Sample Saving Surface on plastics. Neptune's third generation S³ polymer system results in a surface that virtually eliminates sample hold-up, providing the most accurate and consistent sample delivery possible in the industry.



ESP RELOAD SYSTEM



ESP[™]
ENVIRONMENTALLY
SUSTAINABLE PACK

FEATURES:

- Reload up to 10 trays in 90 seconds
- Requires 57% less storage space
- Reuse existing trays
- Generates 90% less packaging waste
- Available in standard and filtered pipette tip format

The Neptune ESP (Environmentally Sustainable Pack) System was designed to meet industry demands to minimize plastic waste by 90% and provide an environmentally friendly solution. ESP tips provide a low cost alternative compared with racked product, while saving time not having to load bulk tips.

Neptune's revolutionary transfer system allows you to reload your empty trays with new tips in a single movement. The patented transfer card is designed to prevent contamination by minimizing the amount of handling when reloading

empty tip racks. The ESP system fits the widest range of tip trays on the market and is available in both standard and filtered pipette tip reloads. We offer ESP reloads in both pre-sterile and non-sterile formats. Look for the **E** symbol on the pipette chart (under packaging) on pages 8-15. When buying the ESP system for the first time, be sure to purchase an empty tray (page 18) by following the tray guide on page 19.



Standard ESP System



Engage the alignment plate by firmly pressing down on the plate.



Insert the tips into your empty tray.



Secure plate by firmly pressing on all four corners of the alignment plate.



Firmly depress the release button using your index finger.

1000 µl Extended Length ESP System



Press down firmly on the alignment plate and engage the side posts into the slots on the insert card.



Hold the alignment card away from the side posts and insert the tips into your empty tray.



Secure plate by firmly pressing on all four corners of the alignment plate.



Squeeze the side posts of the alignment plate and pull up to disengage from the insert card.

ESP System for Barrier Tips



BT-ESP reloads are individually packaged to preserve the integrity of the aerosol barrier.



Remove alignment plate from the packaging base by gripping alignment plate using the upper portion of the clamshell packaging.



Insert the tips into your empty tray.



Secure plate by firmly pressing on all four corners of the alignment plate.

BARRIER TIPS

Neptune Barrier Tips are pre-sterile and tested to be free of:

- DNA
- DNase & RNase
- Endotoxins (Pyrogens)



	Neptune PN	Tip Type	Packaging	Quantity
BT10 Series – 10 µl Barrier Tip  Actual size	BT10	S ³	 R	10 trays of 96/pack
				5 packs/case
BT10XL Series – 10 µl Extended Length Barrier Tip  Actual size	BT10XLS3	S ³	 R	10 trays of 96/pack
	BT10XL	NP	 R	5 packs/case
BT10E Series – 10 µl Eppendorf™ Style Barrier Tip  Actual size	BT10E	S ³	 R	10 trays of 96/pack
				5 packs/case
BT10F Series – 10 µl Finn™ Style Barrier Tip  Actual size	BT10F	S ³	 R	10 trays of 96/pack
				5 packs/case
BT20 Series – 20 µl Barrier Tip  Actual size	BT20	S ³	 R	10 trays of 96/pack
	BT20-ESP	S ³	 E	5 packs/case
				10 inserts of 96/pack
				4 packs/case

FEATURES S³ Sample Saving Surface

 Pre-Sterile

NP Natural Polypropylene

PACKAGING OPTIONS R Racked

E ESP Reload System
Empty rack needed (pg 18)

B Bulk



Product Identification

- Increases lot traceability while simultaneously making racks recyclable
- Printed catalog number simplifies the reordering process

	Neptune PN	Tip Type	Packaging	Quantity
BT100 Series – 100 µl Barrier Tip  Actual size	BT100		 	10 trays of 96/pack
				5 packs/case
BT200 Series – 200 µl Barrier Tip  Actual size	BT200		 	10 trays of 96/pack
	BT200-ESP		 	5 packs/case
BT300 Series – 300 µl Barrier Tip  Actual size	BT300		 	10 inserts of 96/pack
				4 packs/case
BT1000 Series – 1000 µl Barrier Tip  Tip image has been reduced to 85% of actual size	BT1000.96		 	8 trays of 96/pack
	BT1000.96.N		 	4 packs/case
BT1250 Series – 1000-1250 µl Extended Length Barrier Tip  Tip image has been reduced to 72% of actual size	BT1250		 	8 trays of 96/pack
	BT1250.N		 	4 packs/case

FEATURES  Sample Saving Surface

 Pre-Sterile

 Natural Polypropylene

PACKAGING OPTIONS  Racked

 ESP Reload System
Empty rack needed (pg 18)

 Bulk

BARRIER TIP COMPATIBILITY CHART

Barrier Tip Compatibility Chart

Pipettor Brand/Model	Biohit™	Biohit Proline™	Biohit Proline Plus™	Brand Transferpette S™	Brand Transferpette Electronic™	Capp™	CLP Beta-Pette™	CLP Poseidon™	CLP Poseidon Electronic™	Eppendorf Reference™
BT10 Series - 10 µl Barrier Tip 		0.5-10 µl		0.5-10 µl		0.5-10 µl	0.1-2 µl 0.5-10 µl	0.2-2 µl 0.5-10 µl	2-20 µl	0.5-10 µl
BT10XL Series - 10 µl Extended Length Tip 		0.5-10 µl		0.5-10 µl		0.5-10 µl	0.1-2 µl 0.5-10 µl	0.2-2 µl 0.5-10 µl	2-20 µl	0.1-2.5 µl 0.5-10 µl
BT10E Series - 10 µl Eppendorf™ Style Barrier Tip 		0.5-10 µl		0.5-10 µl		0.5-10 µl	0.1-2 µl 0.5-10 µl	0.2-2 µl 0.5-10 µl	2-20 µl	0.1-2.5 µl 0.5-10 µl
BT10F Series - 10 µl Finn™ Style Barrier Tip 	M100 M200		10-100 µl 20-200 µl	2-20 µl 10-100 µl 20-200 µl	15-300 µl	5-50 µl 10-100 µl 30-300 µl	2-20 µl 10-100 µl 20-200 µl	5-50 µl 10-100 µl 20-200 µl 30-300 µl	10-200 µl	2-20, 10-100, 50-200 µl
BT20 Series - 20 µl Barrier Tip 	M100 M200		10-100 µl 20-200 µl	2-20 µl 10-100 µl 20-200 µl	15-300 µl	5-50 µl 10-100 µl 30-300 µl	2-20 µl 10-100 µl 20-200 µl	5-50 µl 10-100 µl 20-200 µl 30-300 µl	10-200 µl	2-20, 10-100, 50-200 µl
BT100 Series - 100 µl Barrier Tip 	M100 M200		20-200 µl	20-200 µl	15-300 µl	5-50 µl 10-100 µl 30-300 µl	20-200 µl	5-50 µl 10-100 µl 20-200 µl 30-300 µl	10-200 µl	50-200 µl
BT200 Series - 200 µl Barrier Tip 	M100 M200		20-200 µl	20-200 µl	15-300 µl	5-50 µl 10-100 µl 30-300 µl	20-200 µl	5-50 µl 10-100 µl 20-200 µl 30-300 µl	10-200 µl	50-200 µl
BT300 Series - 300 µl Barrier Tip 	M100 M200		20-200 µl	20-200 µl	15-300 µl	5-50 µl 10-100 µl 30-300 µl	20-200 µl	5-50 µl 10-100 µl 20-200 µl 30-300 µl	10-200 µl	50-200 µl
BT1000 Series - 1000 µl Barrier Tip 		200-1000 µl		100-1000 µl		100-1000 µl	100-1000 µl	100-1000 µl	100-1000 µl	100-1000 µl
BT1250 Series - 1000-1250 µl Extended Length Barrier Tip 		200-1000 µl		100-1000 µl		100-1000 µl	100-1000 µl	100-1000 µl	100-1000 µl	100-1000 µl

100-1000 µl	100-1000 µl	20-200 µl 30-300 µl	20-200 µl 30-300 µl	20-200 µl 30-300 µl	20-200 µl 30-300 µl	2-20 µl 10-100 µl 20-200 µl 30-300 µl	0.1-2.5 µl 0.5-10 µl	0.1-2.5 µl 0.5-10 µl	0.5-10 µl	Eppendorf Research™
100-1000 µl	100-1000 µl	50-200 µl	50-200 µl	50-200 µl	50-200 µl	2-20 µl 10-100 µl	0.1-2.5 µl 0.5-10 µl	0.1-2.5 µl 0.5-10 µl	0.5-10 µl	Eppendorf Research Plus™
100-1000 µl 200-1000 µl	100-1000 µl 200-1000 µl	5-50 µl 20-200 µl 30-300 µl	5-50 µl 20-200 µl 30-300 µl	5-50 µl 20-200 µl 30-300 µl	5-50 µl 20-200 µl 30-300 µl	2-20 µl 5-50 µl 20-200 µl 30-300 µl	0.5-10 µl 5-50 µl	0.5-10 µl 5-50 µl	0.5-10 µl 5-50 µl	Finnpipette™
100-1200 µl	100-1200 µl	30-300 µl	30-300 µl	30-300 µl	30-300 µl	30-300 µl	1-10 µl	1-10 µl	1-10 µl	Finnpipette Electronic™
							1-10 µl	1-10 µl	1-10 µl	Finnpipette FI™
P1000	P1000	P200	P200	P200	P200	P20 P100 P200	P2 P10	P2 P10	P2 P10	Gilson Pipetman™
		U200	U200	U200	U200	U20 U200				Gilson Pipetman Ultra™
100-1000 µl	100-1000 µl	2.5-25 µl 10-100 µl 30-300 µl	2.5-25 µl 10-100 µl 30-300 µl	2.5-25 µl 10-100 µl 30-300 µl	2.5-25 µl 10-100 µl 30-300 µl	2.5-25 µl 10-100 µl 30-300 µl	0.2-2 µl 1-10 µl	0.2-2 µl 1-10 µl	0.2-2 µl 1-10 µl	Hamilton™
100-1200 µl	100-1200 µl									Labnet BioPette E™
100-1000 µl	100-1000 µl	20-200 µl	20-200 µl	20-200 µl	20-200 µl	2-20 µl 10-100 µl 20-200 µl	0.5-10 µl	0.5-10 µl	0.5-10 µl	Nichiryo Nichipet EX™
						2-20 µl	0.1-2 µl	0.1-2 µl	0.1-2 µl	Nichiryo Oxford Benchmate™
		50-300 µl	50-300 µl	50-300 µl	50-300 µl	5-50 µl 50-300 µl	0.5-10 µl	0.5-10 µl	0.5-10 µl	Nichiryo Oxford Multimate™
100-1000 µl	100-1000 µl	20-200 µl	20-200 µl	20-200 µl	20-200 µl	10-100 µl 20-200 µl	1-10 µl	1-10 µl	1-10 µl	Socorex Calibra 822™
100-1000 µl	100-1000 µl	20-200 µl	20-200 µl	20-200 µl	20-200 µl	2-20 µl 20-200 µl				VWR Ergonomic High Performance™
100-1000 µl	100-1000 µl	20-200 µl	20-200 µl	20-200 µl	20-200 µl	2-20 µl 10-100 µl 20-200 µl	0.1-2 µl 0.5-10 µl	0.1-2 µl 0.5-10 µl	0.1-2 µl 0.5-10 µl	VWR Ultra High Performance™

PIPETTE TIPS



FEATURES:

- Eco-friendly racks designed for minimum plastic consumption
- Easy-insertion, easy-ejection
- S³ technology assures the highest recovery of your precious sample

	Neptune PN	Tip Type	Packaging	Quantity
2040 Series – 10 µl Micro Tip  Actual size	2040	S ³	B	1000 tips/bag 20 bags/case
	2042	S ³	R	10 trays of 96/pack 5 packs/case
	2042.S	S ³	 R	10 trays of 96/pack 5 packs/case
	2047	S ³	E	20 cards of 96/pack 4 packs/case
	2047.S	S ³	 E	20 cards of 96/pack 4 packs/case
2340 Series – 10 µl Extended Length Tip  Actual size	2340	NP	B	1000 tips/bag 20 bags/case
	2342	NP	R	10 trays of 96/pack 5 packs/case
	2342.S	NP	 R	10 trays of 96/pack 5 packs/case
	2340S3	S ³	B	1000 tips/bag 20 bags/case
	2342S3	S ³	R	10 trays of 96/pack 5 packs/case
	2342S3.S	S ³	 R	10 trays of 96/pack 5 packs/case
	2347	S ³	E	10 cards of 96/pack 10 packs/case
	2347.S	S ³	 E	10 cards of 96/pack 10 packs/case
	2347.N	NP	E	10 cards of 96/pack 10 packs/case
	2347.NS	NP	 E	10 cards of 96/pack 10 packs/case

FEATURES S³ Sample Saving Surface

 Pre-Sterile

NP Natural Polypropylene

PACKAGING OPTIONS R Racked

RS Rack & Stack

E ESP Reload System
Empty rack needed (pg 18)

B Bulk

	Neptune PN	Tip Type	Packaging	Quantity
2140 Series – 10 µl Eppendorf™ Style Tip  <i>Actual size</i>	2140	S ³	B	1000 tips/bag 20 bags/case
	2142	S ³	R	10 trays of 96/pack 5 packs/case
	2142.S	S ³	 R	10 trays of 96/pack 5 packs/case
2100 Series – 200 µl Universal Tip  <i>Actual size</i>	2100.N	NP	B	1000 tips/bag 10 bags/case
	2100	S ³	B	1000 tips/bag 10 bags/case
	2102.N	NP	R	10 trays of 96/pack 5 packs/case
	2102.NS	NP	 R	10 trays of 96/pack 5 packs/case
	2102	S ³	R	10 trays of 96/pack 5 packs/case
	2102.S	S ³	 R	10 trays of 96/pack 5 packs/case
	2101.N	NP	RS	5 inserts of 192/pack 5 packs/case
	2101	S ³	RS	5 inserts of 192/pack 5 packs/case
	2107.N	NP	E	10 cards of 96/pack 10 packs/case
	2107	S ³	E	10 cards of 96/pack 10 packs/case
	2107.S	S ³	 E	10 cards of 96/pack 10 packs/case
2100 Series – 200 µl Yellow Universal Tip  <i>Actual size</i>	2100.YN	NP	B	1000 tips/bag 10 bags/case
	2100.Y	S ³	B	1000 tips/bag 10 bags/case
	2102.YN	NP	R	10 trays of 96/pack 5 packs/case
	2102.YNS	NP	 R	10 trays of 96/pack 5 packs/case
	2102.Y	S ³	R	10 trays of 96/pack 5 packs/case
	2102.YS	S ³	 R	10 trays of 96/pack 5 packs/case
	2107.YN	NP	E	10 cards of 96/pack 10 packs/case
	2107.Y	S ³	E	10 cards of 96/pack 10 packs/case
	2107.YS	S ³	 E	10 cards of 96/pack 10 packs/case

FEATURES S³ Sample Saving Surface

 Pre-Sterile

NP Natural Polypropylene

PACKAGING OPTIONS R Racked

RS Rack & Stack

E ESP Reload System
Empty rack needed (pg 18)

B Bulk

PIPETTE TIPS

	Neptune PN	Tip Type	Packaging	Quantity
2016 Series – 200 µl Extended Length Gel Tip  <i>Actual size</i>	2016	NP	R	5 racks of 204/pack 5 packs/case
	2016.S	NP	 R	5 racks of 204/pack 5 packs/case
	2150	NP	B	1000 tips/bag 5 packs/case
	2152	NP	R	8 racks of 204/pack 3 packs/case
2090 Series – 300 µl Universal Tip  <i>Tip image has been reduced to 78% of actual size</i>	2090.N	NP	B	1000 tips/bag 10 bags/case
	2090	S ³	B	1000 tips/bag 10 bags/case
	2092.N	NP	R	10 trays of 96/pack 5 packs/case
	2092.NS	NP	 R	10 trays of 96/pack 5 packs/case
	2092	S ³	R	10 trays of 96/pack 5 packs/case
	2092.S	S ³	 R	10 trays of 96/pack 5 packs/case
	2097.N	NP	E	10 cards of 96/pack 10 packs/case
	2097.NS	NP	 E	10 cards of 96/pack 10 packs/case
	2097	S ³	E	10 cards of 96/pack 10 packs/case
	2097.S	S ³	 E	10 cards of 96/pack 10 packs/case
	2110	NP	B	1000 tips/bag 4 bags/case
	2112	NP	R	16 trays of 60/case
	2112.S	NP	 R	16 trays of 60/case
	2110.B	NP	B	1000 tips/bag 4 bags/case
2110 Series – 1000 µl Blue Traditional Shaped Tip  <i>Tip image has been reduced to 84% of actual size</i>	2112.B	NP	R	16 trays of 60/case
	2112.BS	NP	 R	16 trays of 60/case

FEATURES S³ Sample Saving Surface  Pre-Sterile NP Natural Polypropylene

PACKAGING OPTIONS R Racked E ESP Reload System Empty rack needed (pg 18) B Bulk



	Neptune PN	Tip Type	Packaging	Quantity
2160 Series – 1000 µl Universal Tip  Tip image is 85% of actual size	2160	NP	B	1000 tips/bag 4 bags/case
	2162	NP	R	16 trays of 60/case
	2162.S	NP	 R	16 trays of 60/case
	2167	NP	E	16 cards of 60/pack 4 packs/case
	2167.S	NP	 E	16 cards of 60/pack 4 packs/case
2370 Series – 1000-1250 µl Extended Length Tip  Tip image is 72% of actual size	2370.N	NP	B	1000 tips/bag 4 bags/case
	2372.N	NP	R	8 trays of 96/pack 4 packs/case
	2372.NS	NP	 R	8 trays of 96/pack 4 packs/case
	2372	S ³	R	8 trays of 96/pack 4 packs/case
	2372.S	S ³	 R	8 trays of 96/pack 4 packs/case
	2377.N	NP	E	10 cards of 96/pack 5 packs/case
	2377.NS	NP	 E	10 cards of 96/pack 5 packs/case
	2377	S ³	E	10 cards of 96/pack 5 packs/case
	2377.S	S ³	 E	10 cards of 96/pack 5 packs/case
2250 Series – 5000 µl Tip  Tip image is 58% of actual size	2250	NP	B	250 tips/bag 10 bags/case
	2252.S	NP	 R	10 trays of 50/case

FEATURES S³ Sample Saving Surface  Pre-Sterile NP Natural Polypropylene

PACKAGING OPTIONS R Racked E ESP Reload System  Bulk
Empty rack needed (pg 18)

PIPETTE TIP COMPATIBILITY CHART

*Pipette tip series marked with asterisk are not compatible with multichannel pipettors.

Pipettor Brand/Model	Biohit™	Biohit Proline™	Biohit Proline Plus™	Brand Transferpette S™	Brand Transferpette Electronic™	Capp™	CLP Beta-Pette™	CLP Poseidon™	CLP Poseidon Electronic™	Eppendorf Reference™
2040 Series – 10 µl Micro Tip 		0.5-10 µl		0.5-10 µl		0.5-10 µl	0.1-2 µl 0.5-10 µl	0.2-2 µl 0.5-10 µl	2-20 µl	0.1-2.5 µl 0.5-10 µl
2340 Series – 10 µl Extended Length Tip 		0.5-10 µl		0.5-10 µl		0.5-10 µl	0.1-2 µl 0.5-10 µl	0.2-2 µl 0.5-10 µl	2-20 µl	0.1-2.5 µl 0.5-10 µl
2140 Series – 10 µl Eppendorf™ Style Tip 		0.5-10 µl		0.5-10 µl		0.5-10 µl	0.1-2 µl 0.5-10 µl	0.2-2 µl 0.5-10 µl	2-20 µl	0.1-2.5 µl 0.5-10 µl
2100 Series – 200 µl Universal Tip 	M100 M200		10-100 µl 20-200 µl	2-20 µl 10-100 µl 20-200 µl	15-300 µl	5-50 µl 10-100 µl 30-300 µl	2-20 µl 10-100 µl 20-200 µl	5-50 µl 10-100 µl 20-200 µl 30-300 µl	10-200 µl	2-20 10-100 50-200 µl
2016 Series – 200 µl Extended Length Gel Tip* 	M100 M200		10-100 µl 20-200 µl	2-20 µl 10-100 µl 20-200 µl	15-300 µl	5-50 µl 10-100 µl 30-300 µl	2-20 µl 10-100 µl 20-200 µl	5-50 µl 10-100 µl 20-200 µl 30-300 µl	10-200 µl	2-20 10-100 50-200 µl
2150 Series – 200 µl Extended Length Tip* 	M100 M200		10-100 µl 20-200 µl	2-20 µl 10-100 µl 20-200 µl	15-300 µl	10-100 µl 30-300 µl	20-200 µl	5-50 µl 10-100 µl 20-200 µl 30-300 µl	10-200 µl	2-20 10-100 50-200 µl
2090 Series – 300 µl Universal Tip 	M100 M200		10-100 µl 20-200 µl	20-200 µl	15-300 µl	5-50 µl 10-100 µl 30-300 µl	20-200 µl	5-50 µl 10-100 µl 20-200 µl 30-300 µl	10-200 µl	50-200 µl
2110 Series – 1000 µl Traditional Shaped Tip* 		200-1000 µl		100-1000 µl		100-1000 µl	100-1000 µl	100-1000 µl	100-1000 µl	100-1000 µl
2160 Series – 1000 µl Universal Tip* 		200-1000 µl		100-1000 µl		100-1000 µl	100-1000 µl	100-1000 µl	100-1000 µl	100-1000 µl
2370 Series – 1000-1250 µl Extended Length Tip 		200-1000 µl		100-1000 µl		100-1000 µl	100-1000 µl	100-1000 µl	100-1000 µl	100-1000 µl
2250 Series – 5000 µl Tip 										

	100-1000 µl	100-1000 µl	100-1000 µl	20-200 µl 30-300 µl	2-20 µl 10-100 µl 20-200 µl 30-300 µl	2-20 µl 10-100 µl 20-200 µl 30-300 µl	2-20 µl 10-100 µl 20-200 µl 30-300 µl	2-20 µl 10-100 µl 20-200 µl 30-300 µl	0.1-2.5 µl 0.5-10 µl	Eppendorf Research™
	100-1000 µl	100-1000 µl	100-1000 µl	50-200 µl	2-20 µl 10-100 µl	2-20 µl 10-100 µl	2-20 µl 10-100 µl	2-20 µl 10-100 µl	0.1-2.5 µl 0.5-10 µl	Eppendorf Research Plus™
	100-1000 µl 200-1000 µl	100-1000 µl 200-1000 µl	100-1000 µl 200-1000 µl	5-50 µl 20-200 µl 30-300 µl	2-20 µl 5-50 µl 20-200 µl 30-300 µl	2-20 µl 5-50 µl 20-200 µl 30-300 µl	2-20 µl 5-50 µl 20-200 µl 30-300 µl	2-20 µl 5-50 µl 20-200 µl 30-300 µl	0.5-10 µl 5-50 µl	Finnpipette™
	100-1200 µl	100-1200 µl	100-1200 µl	30-300 µl	30-300 µl	30-300 µl	30-300 µl	30-300 µl	1-10 µl	Finnpipette Electronic™
									1-10 µl	Finnpipette FI™
P5000	P1000	P1000	P1000	P200	P100 P200	P20 P100 P200	P20 P100 P200	P20 P100 P200	P2 P10	Gilson Pipetman™
U5000				U200	U200	U20 U200	U20 U200	U20 U200		Gilson Pipetman Ultra™
	100-1000 µl	100-1000 µl	100-1000 µl	2.5-25 µl 10-100 µl 30-300 µl	2.5-25 µl 10-100 µl 30-300 µl	2.5-25 µl 10-100 µl 30-300 µl	2.5-25 µl 10-100 µl 30-300 µl	2.5-25 µl 10-100 µl 30-300 µl	0.2-2 µl 1-10 µl	Hamilton™
	100-1200 µl	100-1200 µl	100-1200 µl							Labnet BioPette E™
	100-1000 µl	100-1000 µl	100-1000 µl	20-200 µl	10-100 µl 20-200 µl	2-20 µl 10-100 µl 20-200 µl	2-20 µl 10-100 µl 20-200 µl	2-20 µl 10-100 µl 20-200 µl	0.5-10 µl	Nichiryo Nichipet EX™
						2-20 µl	2-20 µl	2-20 µl	0.1-2 µl	Nichiryo Oxford Benchmark™
				50-300 µl				5-50 µl 50-300 µl	0.5-10 µl	Nichiryo Oxford Multimate™
	100-1000 µl	100-1000 µl	100-1000 µl	20-200 µl	10-100 µl 20-200 µl	10-100 µl 20-200 µl	10-100 µl 20-200 µl	10-100 µl 20-200 µl	1-10 µl	Socorex Calibra 822™
	100-1000 µl	100-1000 µl	100-1000 µl	2-20 µl 20-200 µl	20-200 µl	2-20 µl 20-200 µl	2-20 µl 20-200 µl	2-20 µl 20-200 µl		VWR Ergonomic High Performance™
	100-1000 µl	100-1000 µl	100-1000 µl	2-20 µl 10-100 µl 20-200 µl	10-100 µl 20-200 µl	2-20 µl 10-100 µl 20-200 µl	2-20 µl 10-100 µl 20-200 µl	2-20 µl 10-100 µl 20-200 µl	0.1-2 µl 0.5-10 µl	VWR Ultra High Performance™

SPARE TRAYS



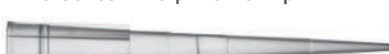
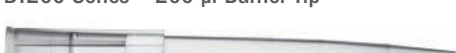
Manufactured from recycled polypropylene and developed to use the least amount of plastic. These spare trays are designed to fit Neptune's 10 µl, 10XL, 20 µl, 200 µl, 300 µl, 1000 µl and 1000XL pipette tips.

FEATURES:

- *Recyclable tray*
- *Maximum space saving design*
- *Less waste – reduce plastic waste by up to 90% over conventional trays in combination with our patented ESP reload system*

Neptune PN	Rack Size	Packaging	Quantity
2042.T	10 µl	Tray with insert card for bulk tips	1 tray
			50 trays/case
2047.T	10 µl	Tray without insert card for ESP reload	1 tray
			48 trays/case
2342.T	10XL	Tray with insert card for bulk tips	1 tray
			50 trays/case
2347.T	10XL	Tray without insert card for ESP reload	1 tray
			50 trays/case
2102.T	200 µl	Tray with insert card for bulk tips	1 tray
			50 trays/case
2107.T	200 µl	Tray without insert card for ESP reload	1 tray
			48 trays/case
2092.T	300 µl	Tray with insert card for bulk tips	1 tray
			50 trays/case
2097.T	300 µl	Tray without insert card for ESP reload	1 tray
			50 trays/case
2162.T	1000 µl	Tray with insert card for bulk tips & ESP reload	1 tray
			30 trays/case
2372.T	1000XL	Tray with insert card for bulk tips	1 tray
			32 trays/case
2377.T	1000XL	Tray without insert card for ESP reload	1 tray
			32 trays/case

TRAY COMPATIBILITY CHART

	2042.T	2047.T	2342.T	2347.T	2102.T	2107.T	2092.T	2097.T	2162.T	2372.T	2377.T
2040 Series – 10 µl Micro Tip 	B	E									
2340 Series – 10 µl Extended Length Tip 			B	E							
2140 Series – 10 µl Eppendorf™ Style Tip 			B								
2100 Series – 200 µl Universal Tip 					B	E					
2090 Series – 300 µl Universal Tip 							B	E			
2110 Series – 1000 µl Traditional Shaped Tip 									B		
2160 Series – 1000 µl Universal Tip 									B E		
2370 Series – 1000-1250 µl Extended Length Tip 										B	E
BT20 Series – 20 µl Barrier Tip 						E					
BT200 Series – 200 µl Barrier Tip 								E			

PACKAGING OPTIONS **E** ESP Reload System **B** Bulk

BEST LABORATORY PRACTICES

Autoclaving: Staying within the Parameters

Dry Goods Sterilization

All tips and tubes are classified as “dry goods” for sterilization procedures. This means they have thin cross-sections, limited mass, hard surfaces, and require - MINIMUM AUTOCLAVE EXPOSURE. **Do not mix liquid-cycle or other types of materials with dry goods for sterilization.** During autoclaving the aerosols formed by evaporation of cell culture materials, agars, and other solutions will coat all exposed surfaces in the autoclave, including your tips and tubes.

When Autoclaving Neptune products, please stay within the parameters specified below:

Heat Exposure Recommendations for Autoclaving

Setting Temperature Time

121 °C 10-15 minutes

Pressure at 15 PSI (approximately 1 atm.)

CAUTION: Over-Autoclaving Distortion

Pipette tips and tubes are precision manufactured to tolerances of less than 0.005 inches. Over autoclaving produces unseen distortions caused by excess heat and/or exposure time. Tubes that “pop” during boiling and loose fitting bent tips are often the result. To limit distortion, all tubes should be open during autoclaving and tips should be racked in trays. Do not exceed the time and temperature recommendations shown in the table. Excessive heating can also produce color changes in tubes or tray hot-stamped logos. **Do not “overcook” your plastic products.**

RCF Ratings for Centrifuge Tubes

Two important specifications for centrifuges are Revolutions Per Minute (RPM) and Relative Centrifugal Force (RCF). Of the two specifications, Relative Centrifugal Force (RCF), or G force, is a standard unit of measure across all centrifuges and can be calculated using the formula below. Setting the RCF too high can cause a centrifuge tube to crack, and shatter. It is imperative that the end user confirms their RCF setting before beginning centrifugation.

RCF Value Equation

$$\text{RCF} = 0.00001118 \times \text{radius} \times \text{RPM}^2$$

RCF: Relative centrifugal force

Radius: rotor radius in centimeters

RPM: maximum RPM

Cryogenic Storage for Neptune Cryovials and Cryotubes

Liquid vs. Vapor Phase Storage

All cryogenic containers are designed for vapor phase storage, but can withstand contact with liquid phase nitrogen. We advise against routine liquid phase storage because of the explosive potential of liquid N₂ when exposed to room temperatures.

Tubes

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TUBES OVERVIEW



**0.6 ml
Microcentrifuge
Tubes**

page 23



**1.6 ml
Microcentrifuge
Tubes**

page 23



**2.0 ml
Microcentrifuge
Tubes**

page 23



0.2 ml PCR Tubes

pages 26-27



Cryotubes & Cryovials

page 25

Microcentrifuge Tubes

Neptune offers a full line of quality tubes for laboratory use. Neptune microcentrifuge tubes are ideal for a wide array of laboratory procedures, can withstand up to 20,000 RCF and are boil safe. We also offer a fine selection of cryovials and cryotubes designed for cryogenic sample storage. Available with and without locking bases, these tubes feature special thread designs and silicone o-rings to ensure sample viability for long term storage.

Minitube System

The minitube system by Neptune is designed for labs in need of the functionality of a tube, but require the 96-well format for robotics. The system features a standard 8 x 12 format with pre-racked 1.1 ml single or 8 strip mini-tubes. Product is available in both pre-sterile and non-sterile formats.

PCR Tubes

Neptune offers a collection of high quality 0.2 to 0.6 ml thin walled tubes specifically manufactured for PCR applications. Thin walled tubes improve conduction between the PCR reaction and the thermal cycler block, improving cycling efficiency. The clarity of the thin walled tubes enables visualization of components being mixed. Our strip tubes are available with attached caps to reduce splash and cross contamination, or with detached caps for high throughput labs.

All of our pre-sterile packaged products are electron beam irradiated and are certified RNase, DNase and Endotoxin free.



MICROCENTRIFUGE TUBES

0.6, 1.6, and 2.0 ml Microcentrifuge Tubes

These flat-cap graduated tubes are frosted on the top and sides for convenient sample labeling. Graduations from 0.1 ml to 2.0 ml make them ideal for many uses. Assorted colors are mixed in a unit pack.



FEATURES:

- Labeled graduations at 100 µl
- Spin: 20,000 RCF
- Frosted side & cap for sample labeling
- Made of virgin polypropylene
- Flat Cap
- DNase, RNase and Endotoxin-Free
- Autoclavable (121°C, 15 psi, 15 minutes)

	Neptune PN	Tube Type	Packaging	Quantity
0.6 ml Graduated Microcentrifuge Tubes  Actual size	3735.X	NP	B TC	1000 tubes/pack 10 packs/case
	3735.A.X	NP AC	B TC	1000 tubes/pack 10 bags/case
	3735.S.X	NP	☼ B TC	500 tubes/pack 10 bags/case
	3735.AS.X	NP AC	☼ B TC	500 tubes/pack 10 packs/case
	4445.X	NP	B TC	500 tubes/pack 10 packs/case
	4445.A.X	NP AC	B TC	10 bags of 50 tubes/pack 10 packs/case
	4445.S.X	NP	☼ B TC	10 bags of 50 tubes/pack 10 bags/case
	4445.AS.X	NP AC	☼ B TC	10 bags of 50 tubes/pack 10 bags/case
1.6 ml Graduated Microcentrifuge Tubes – Easy Seal Series  Tube image is 80% of actual size	3745.X	NP	B TC	500 tubes/pack 10 packs/case
	3745.A.X	NP AC	B TC	500 tubes/pack 10 packs/case
	3745.S.X	NP	☼ B TC	250 tips/pack 10 packs/case
	3745.AS.X	NP AC	☼ B TC	250 tubes/pack 10 packs/case
1.6 ml Graduated Microcentrifuge Tubes – Tight Seal Series  Tube image is 80% of actual size	3765.X	NP	B TC	500 tubes/pack 10 bags/case
	3765.A.X	NP AC	B TC	500 tubes/pack 10 bags/case
	3765.S.X	NP	☼ B TC	250 tubes/pack 10 packs/case
2.0 ml Graduated Microcentrifuge Tubes  Actual size	3765.X	NP	B TC	500 tubes/pack 10 bags/case
	3765.A.X	NP AC	B TC	500 tubes/pack 10 bags/case
	3765.S.X	NP	☼ B TC	250 tubes/pack 10 packs/case

FEATURES ☼ Pre-Sterile NP Natural Polypropylene
PACKAGING B Bulk TC Tubes & Caps

AC Assorted Colors: Blue, Green, Yellow, Orange, Red, Lavender
 AC Assorted Colors: Blue, Green, Yellow, Red, Lavender

MINITUBE SYSTEM & MICROTUBES

Minitube System

This system provides you with pre-racked 1.1 ml minitubes in standard 96-well format, with single tubes or strips of 8. This is an ideal system for microplate-to-tube transfer, and features a standard 8 x 12 format. The alphanumeric labeled, non-reversing rack and lid

ensure positive sample identification. Condensation rings above each tube minimize cross contamination between wells, and the system is completely autoclavable (except for optional mini-cap strips). The rack base is fully compatible with popular robotic instruments.

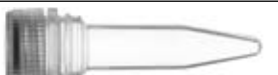
	Neptune PN	Tube Type	Packaging	Quantity
	2600.X	NP	B T	960 tubes/bag 5 bags/case
	2600.8.X	NP	B T	120 strips/bag 5 bags/case
	2601.X	NP	R T	10 trays of 96/pack 5 packs/case
	2601.S.X	NP	☼ R T	10 trays of 96/pack 5 packs/case
	2601.8.X	NP	R T	10 trays of 96/pack 5 packs/case
	2601.8S.X	NP	☼ R T	10 trays of 96/pack 5 packs/case
	2602.8.X	NP	B C	120 strip caps/pack 5 packs/case
	2602.8S.X	NP	☼ B C	120 strip caps/pack 5 packs/case

FEATURES ☼ Pre-Sterile NP Natural Polypropylene **PACKAGING** B Bulk R Racked C Caps Only T Tubes Only

Screw Cap Microtubes

70 durometer EPDM rubber seals on Neptune screw cap microtubes ensure a positive leak-proof seal, retaining sample integrity under the most

challenging conditions. They are ideal for freezer storage, centrifugation up to 30 min. at 30,000 RCF, and fit most standard microcentrifuge rotors.

	Neptune PN	Tube Type	Packaging	Quantity
0.5 ml 	3733.S.X	NP	☼ B TC	250 tubes/bag 10 bags/case
1.5 ml 	3743.S.X	NP	☼ B TC	250 tubes/bag 10 bags/case
2.0 ml 	3763.S.X	NP	☼ B TC	250 tubes/bag 10 bags/case
0.5 ml 	3734.S.X	NP	☼ B TC	250 tubes/bag 10 bags/case
1.5 ml 	3744.S.X	NP	☼ B TC	250 tubes/bag 10 bags/case
2.0 ml 	3764.S.X	NP	☼ B TC	250 tubes/bag 10 bags/case

FEATURES ☼ Pre-Sterile NP Natural Polypropylene **PACKAGING** B Bulk TC Tubes & Caps

CRYOTUBES & CRYOVIALS

Cryotubes

Neptune cryotubes with locking bases offer significant advantages over traditional cryovial storage. Neptune cryotubes are manufactured from virgin polypropylene with silicone O-rings to seal at temperatures from -196 to $+121^{\circ}\text{C}$. Dimensions: 0.51 x 1.85 in. (13 x 47 mm)

	Neptune PN	Tube Type	Packaging	Quantity
0.5 ml 	3470.X	NP	 B TC	10 bags of 50/case
1.5 ml 	3471.X	NP	 B TC	10 bags of 50/case
1.8 ml 	3472.X	NP	 B TC	10 bags of 50/case
 <i>Cap Inserts Assorted Colors</i>	3121.A.X	AC	B	500 inserts/case

FEATURES  Pre-Sterile  Natural Polypropylene **PACKAGING** **B** Bulk **TC** Tubes & Caps  Assorted Colors

Cryovials

Neptune cryovials are designed for the storage of biological material at temperatures as low as -190°C . The cap features a long skirt for one hand aseptic techniques and a specially designed lip inside the cap ensures a leak-proof seal. The cap and tube are made of virgin polypropylene with matched thermal coefficients to further ensure leak-proof performance. Diameter: 0.492 in. (12.5 mm) Autoclavable

	Neptune PN	Tube Type	Packaging	Quantity
2.0 ml 	3102.X	NP	 B TC	100 tubes/bag
				10 bags/case
3.0 ml 	3103.X	NP	 B TC	100 tubes/bag
				10 bags/case
4.0 ml 	3104.X	NP	 B TC	100 tubes/bag
				10 bags/case
 <i>Cap Inserts Assorted Colors</i>	3120.A.X	AC	B	500 inserts/case

FEATURES  Pre-Sterile  Natural Polypropylene **PACKAGING** **B** Bulk **TC** Tubes & Caps  Assorted Colors
Using gamma radiation

PCR TUBES

Our Neptune 0.2 ml microtubes for PCR are made of high quality virgin polypropylene and feature thin walls for efficient heat transfer. They are available in single tube format, strip tubes with attached caps and with separate caps. Neptune PCR tubes are compatible with most leading thermal cyclers. Tubes and caps are available in assorted colors.

FEATURES:

- Thin walled tube for best heat transfer
- Made of virgin polypropylene
- Domed and flat caps available
- DNase, RNase and Endotoxin-Free

	Neptune PN	Tube Type	Packaging	Quantity
0.2 ml PCR Tubes with Flat Cap 	3423.X	NP CL	B TC	1000 tubes/pack 10 packs/case
	3423.A.X	NP AC	B TC	10 bags of 100/pack 10 packs/case
	3423.S.X	NP CL	Pre-Sterile B TC	10 bags of 100/pack 10 packs/case
	3423.AS.X	NP AC	Pre-Sterile B TC	10 bags of 100/pack 10 packs/case
0.2 ml PCR Tubes with Domed Cap 	3425.X	NP CL	B TC	1000 tubes/pack 10 packs/case
	3425.A.X	NP AC	B TC	10 bags of 100/pack 10 packs/case
	3425.S.X	NP CL	Pre-Sterile B TC	10 bags of 100/pack 10 packs/case
	3425.AS.X	NP AC	Pre-Sterile B TC	10 bags of 100/pack 10 packs/case
0.6 ml PCR Tubes with Flat Cap 	3737.X	NP CL	B TC	1000 tubes/pack 10 packs/case
	3737.A.X	NP AC	B TC	1000 tubes/pack 10 packs/case
	3737.S.X	NP CL	Pre-Sterile B TC	1000 tubes/pack 10 packs/case
	3737.AS.X	NP AC	Pre-Sterile B TC	1000 tubes/pack 10 packs/case
0.2 ml PCR 8-Strip Tubes with attached Domed Cap 	3428.8.X	NP CL	B TC	10 bags of 12/pack 10 packs/case
	3428.8A.X	NP AC	B TC	10 bags of 12/pack 10 packs/case
	3728.8S.X	NP CL	Pre-Sterile B TC	10 bags of 12/pack 10 packs/case
	3728.8AS.X	NP AC	Pre-Sterile B TC	10 bags of 12/pack 10 packs/case

FEATURES  Pre-Sterile  Natural Polypropylene  Clear  Assorted Colors: Blue, Green, Lavender, Red, Yellow
PACKAGING OPTIONS  Bulk  Tubes Only  Caps Only  Tubes & Caps  Assorted Colors: Blue, Orange, Lavender, Red, Yellow

	Neptune PN	Tube Type	Packaging	Quantity
0.2 ml PCR 8-Strip Tubes with Separate Strip Caps 	3426.8.X	NP CL	B T	5 bags of 25/pack 10 packs/case
	3426.8A.X	NP AC	B T	5 bags of 25/pack 10 packs/case
	3426.8S.X	NP CL	* B T	5 bags of 25/pack 10 packs/case
	3426.8AS.X	NP AC	* B T	5 bags of 25/pack 10 packs/case
	3427.8.X	NP CL	B C	125 strip caps/pack* 10 packs/case
	3427.8A.X	NP AC	B C	125 strip caps/pack* 10 packs/case
	3427.8S.X	NP CL	* B C	125 strip caps/pack* 10 packs/case
	3427.8AS.X	NP AC	* B C	125 strip caps/pack* 10 packs/case
	3459.8.X	NP CL	B TC	5 bags of 25/pack 10 packs/case
0.2 ml PCR 12-Strip Tubes with Separate Strip Caps 	3426.12.X	NP CL	B T	80 strip tubes/pack 10 packs/case
	3426.12A.X	NP AC	* B T	80 strip tubes/pack 10 packs/case
	3726.12S.X	NP CL	* B T	80 strip tubes/pack 10 packs/case
	3726.12AS.X	NP AC	* B T	80 strip tubes/pack 10 packs/case
	3427.12.X	NP CL	B C	80 strip caps/pack 10 packs/case
	3427.12A.X	NP AC	B C	80 strip tubes/pack 10 packs/case
	3727.12S.X	NP CL	* B C	80 strip caps/pack 10 packs/case
	3727.12AS.X	NP AC	* B C	80 strip tubes/pack 10 packs/case

FEATURES * Pre-Sterile NP Natural Polypropylene CL Clear AC Assorted Colors: Blue, Green, Lavender, Red, Yellow
PACKAGING OPTIONS B Bulk T Tubes Only C Caps Only TC Tubes & Caps AC Assorted Colors: Blue, Orange, Lavender, Red, Yellow
 *Each pack includes 10 bags of 12 strips, and 1 bag of 5 strips

PLATES & SEALS



PCR Plates

page 30



Microtiter Plates

page 29



PCR Plates and Seals

page 31

Neptune offers an expansive line of plates for high throughput PCR and related lab procedures.

All PCR plates are molded from high performance polypropylene and feature thin walls for efficient heat transfer. Compatible with many of the latest thermal cyclers on the market, our Neptune PCR plates are available in 96-well low profile, non-skirted, semi-skirted and fully skirted versions. Please refer to our plate selection chart (see pages 32-33) for specific thermal cycler compatibility.

For non-PCR applications we offer a line of Neptune microtiter plates. These plates are designed with working volumes greater than 0.65 ml and are ideal for cell culture and storage applications. With Megatiter™ plates you get the 96-well format with the largest working volume: 2.2 ml per well. All of our Microtiter plates adhere to SBS standards and are compatible with many of today's automated laboratory workstations.

Neptune plate seals work with all of our plates, forming seamless integration between research and storage. Please see individual product description pages for plate seal compatibility.

MICROTITER PLATES AND REAGENT RESERVOIRS

Minititer™ 0.65 ml Plate

Neptune's 0.65 ml plate features a raised rim design which offers a secure seal and helps prevent cross contamination.

Megatiter™ Plate

Neptune's 2.2 ml plate offers the working volume of a culture tube and the convenience of a 96-well format. With a conical bottom, it provides easy sample retrieval.

	Neptune PN	Packaging	Quantity
Minititer Plate 	2406.X	B	50 plates/case
	2405.X	B	24 plates/case
Megatiter Plate 	2405.S.X	 1/bag	24 plates/case

PACKAGING  Pre-Sterile **B** Bulk

Labcor™ Reagent Reservoirs

Our sturdy reagent reservoirs are designed with a V-shaped bottom and are compatible with 8 and 12 channel pipettors. The inside walls of these disposable reservoirs are graduated for accurate filling and corners are indented for easy pour off.

Both Polystyrene and PVC materials allow the solution level to be viewed through the side of the units. Lids for pre-sterile reagent reservoirs minimize evaporation, eliminate contamination and are constructed from ultra-clear APET (Amorphous Polyethylene Terphthalate).

FEATURES:

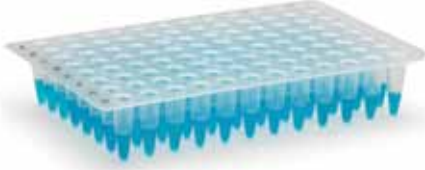
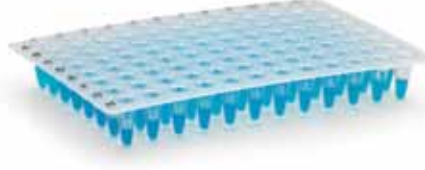
- Easy-tear pre-sterile packaging
- Durable body construction



	Neptune PN	Reservoir Type	Packaging	Quantity
Labcor Reagent Reservoirs 	55 ml Reagent Reservoirs			
	730-001	PVC	B	100 reservoirs/case
	730-004	P	 1/bag	80 reservoirs/case
	730-006	P	 5/bag	160 reservoirs/case
	730-021	APET	B	20 lids/case
	100 ml Reagent Reservoirs			
	730-011		 B	100 reservoirs/case
	730-014	P	 1/bag	80 reservoirs/case
	730-016	P	 5/bag	160 reservoirs/case

RESERVOIR TYPE  Pre-Sterile **P** Polystyrene **PACKAGING** **B** Bulk

PCR PLATES

	Neptune PN	Packaging	Quantity
Full Profile Plate 	3730.X	B	10 plates/pack 10 packs/case
Low Profile Plate 	3438.X	B	20 plates/pack 5 packs/case
8 Strip Caps for PCR plates 	3731.X	B	125 strips/pack 10 packs/case

PACKAGING **B** Bulk

Please refer to the PCR plate compatibility chart on pages 32-33

	Neptune PN	Packaging	Quantity
Fully Skirted Plate 	3732.X	B	10 plates/pack 10 packs/case
Semi Skirted Plate 	3742.X	B	10 plates/pack 10 packs/case
8 Strip Caps for PCR plates 	3731.X	B	125 strips/pack 10 packs/case

PACKAGING **B** Bulk

Please refer to the PCR plate compatibility chart on pages 32-33

PLATE SEALS

Plate Sealing Tape

Our plate sealing tape is a 2 mm thick, non-pierceable polypropylene film. This seal is not recommended for sealing raised rim plates. Functional temperature range: -40°C to 125°C

	Neptune PN	Packaging	Quantity
	2412.X	B	100/case

PACKAGING **B** Bulk

SilverSeal

SilverSeal, our Aluminum sealing tape, is ideal for PCR and sample storage. It is chemically resistant, yet is soft enough to conform to the plate and pierceable for robotic systems. Functional temperature range: -70°C to 120°C

	Neptune PN	Packaging	Quantity
	2410.X	B	100/case

PACKAGING **B** Bulk

PCR and Real-Time PCR Plate Seal

Our 2 mm optically clear plate seal offers the clarity essential in real-time reactions; an aggressive seal perfect for reducing evaporation experienced during thermal cycling. The tape is backed with a smooth, non-absorbing, non-fluorescing medical-grade adhesive for superior performance. Functional temperature range: -40°C to 120°C

	Neptune PN	Packaging	Quantity
	2409.X	B	100/case

PACKAGING **B** Bulk

PCR PLATE COMPATIBILITY CHART

Plate PN		3730.X	3438.X	3742.X	3732.X
Standard well (Overall height approx. 21 mm, max capacity > 350 µl)		●		●	
Low well (Overall height approx. 16 mm, max capacity > 200 µl)			●		●
Applied Biosystems					
Thermal Cyclers	2700	●		●	
	9600	●		●	
	9700	●		●	
	9800 "Fast"				
	Veriti 0.1mL				
	Veriti 0.1mL				
	Veriti 384				
"Real Time" Thermal Cyclers	5700	●		●	
	PRISM 7000	●		●	
	7300	●		●	
	7500	●		●	
	7500 "Fast"				
	7700	●		●	
	7900HT	●		●	
	Step One				
	Step One plus				
Sequencers	PRISM 310	●		●	
	PRISM 3100	●		●	
	3130 (XL)	●		●	
	3700	●		●	
	PRISM 3730 (XL)	●		●	
Amersham					
Sequencers	MegaBACE 500				●
	MegaBACE 1000				●
Beckman					
Sequencers	CEQ	●			
Biometra					
Thermal Cyclers	Uno	●	●	●	●
	Uno II	●	●	●	●
	T1 Thermal Cycler	●	●	●	●
	Tgradient	●	●	●	●
	Trobot	●	●	●	●
Bio-Rad/MJ Research					
Thermal Cyclers	Gene Cycler	●		●	
	PTC-100	●	●		●
	PTC-200	●	●		●
	PTC-225 Tetrad	●	●		●
	Dyad/Dyad Disciple	●	●		●
	iCycler	●			●
	Mycycler	●			
"Real Time" Thermal Cyclers	Opticon/Opticon2	●	●		●
	Chromo-4		●		●
	iCycler	●			●
	MyiQ	●			●
	iQ5	●			●
	CFX96				●
	CFX384				
Sequencers	BaseStation				●
Corbett Research (Qiagen)					
Thermal Cyclers	Palm Cycler 96		●		●
	Palm Cycler 384				
	RotorGene				

Plate Part Number		3730.X	3438.X	3742.X	3732.X
Eppendorf					
Thermal Cyclers	Mastercycler				
	Mastercycler Gradient				
	Mastercycler ep				
	Mastercycler M384				
"Real Time" Thermal Cyclers	Mastercycler ep Realplex				
Ercom					
"Real Time" Thermal Cyclers	Power Block I				
	Deltacycler I				
	Deltacycler II				
	Single Block				
	Twin Block				
Esco					
Thermal Cyclers	Swift				
G-Storm					
Thermal Cyclers	GS1				
	GS4				
	GSX				
	GSXs				
MWG					
Thermal Cyclers	Primus 96				
	Primus 384				
Stratagene					
Thermal Cyclers	Robocycler 96				
	Robocycler Gradient				
"Real Time" Thermal Cyclers	Mx4000				
	Mx3000				
TaKaRa					
Thermal Cyclers	TP240				
	TP3000				
Techno					
Thermal Cyclers	Touchgene				
	Cyclogene				
	Genius				
	Genius Quad				
	Genius (TC412)				
	Flexigene				
	Touchgene X				
	Touchgene Gradient (TC512)				
"Real Time" Thermal Cyclers	Quantica				
Thermo Hybald					
Thermal Cyclers	PCR Sprint				
	MBS Satellite System				
	Px2				
	PxE				
	PCR Express				
	Omni-E				
	Touchdown				
	Omnigene				
Transgenomic					
Sequencers	WAVE System				

BEST PRACTICES

Pipette Tips

For more than 22 years, Neptune has provided great value and proven quality. Our extensive line of universal fit pipette tips and barrier tips address the liquid handling needs of some of the busiest academic, clinical and research laboratories around the world. To ensure that Neptune pipette tips perform as well in your hands as they do in ours, we've outlined some best practices for using tips in the lab.

Compatibility

The single greatest contributing factor to liquid handling performance is fit. Pipette tips work with pipettors as a unified “system”, and the better the fit, the greater the overall accuracy and precision. Verify the compatibility of Neptune tips with your pipettor by referring to the Neptune Product Catalog or online at www.neptunescientific.com. If you do not find your specific pipettor in the compatibility chart, request a sample for confirmation of fit.

Mounting tips onto a pipettor should be done with firm downward pressure. You should not have to repeatedly pound the pipettor onto the tips. This can not only cause damage to your pipettor, but also increase your risk for repetitive stress disorder (RSD).

A good seal will ensure complete draw and dispense of your sample. However, you should also verify that the pipettor you are using has been calibrated. Verify that your pipettor is both accurate and precise. For pipettors that are used daily, it is recommended to have them calibrated every three months.



Precise, but not Accurate



Accurate, but not Precise



Precise and Accurate

Product Handling

When stored properly, Neptune pipette tips have a long shelf life and maintain high quality performance. Store tips at room temperature and practice a first in, first out (FIFO) program for managing inventory. When not in use, keep the lids closed on tip racks to prevent contamination from airborne particulates. Avoid touching pipette tips with your fingers, even when gloved.

Depending on the sample solution that you are working with, there are options to consider in tips and pipetting technique. For example, Neptune tips with S3 technology are ideal for viscous and/or precious samples where delivery of every drop counts. In the next section are general guidelines for pipetting with air displacement pipettes. Note that most all pipettor manufacturers will recommend a pre-rinsing of the pipette tip to improve accuracy, but this is seldom done in practice and is only noticed as an improvement in positive displacement pipettes.

Forward Pipetting Techniques

- Press the operating button to the first stop
- Dip the tip into the solution and then slowly release the operating button
- Dispense the solution by pressing the operating button down to the first stop. Then continue pressing down to the second stop, known as the “blow-out”. Avoid tilting the pipettor sideways in your hand
- Release the operating button and eject tip

Reverse Pipetting Techniques

The reverse technique is used for pipetting solutions that are highly viscous (i.e., whole blood or serum) or have a tendency to foam. An alternative is to use Neptune pipette tips with S3 technology.

- Press the operating button all the way down to the second stop
- Dip the tip into the solution and slowly release the operating button. This will fill the tip with a volume that is larger than the set volume
- Wait 1-2 seconds and withdraw the tip from the solution
- Dispense the solution by pressing the operation button gently and steadily to the first stop. This volume is equal to the set volume. Hold the button in this position. Some liquid will remain in the tip and should not be dispensed
- Release the operating button to the ready position and eject tip

Avoiding Contamination

Never directly touch or handle pipette tips, even when wearing gloves — tips should only make contact with a pipettor and solution. Change tips after pipetting of each sample and keep the pipettor vertical to prevent sample from running into the pipette shaft. Release the dispensing button slowly to prevent aerosol generation. Always use barrier filter tips when working with PCR, bacteria, viruses, or other sensitive substrates that can easily cross-contaminate via aerosols.

If autoclaving is required by your lab protocol, or if you are using bulk tips that are hand-racked in your lab, please adhere to the following guidelines:

- Make sure that tips are loaded into the tip rack. Autoclaving tips when they are not racked risks warping the tips. A tip which is no longer straight can result in upwards of 10% error in accuracy
- Use a piece of autoclave indicator tape to secure the lid of the tip rack
- Set autoclave for 121 °C, 15 PSI (1 atm) for 15 minutes
- Unlike glassware, do not use a “dry cycle” as this may distort and warp the tips
- Remove tips when autoclave has cooled and store as described in the Product Handling section above

Microcentrifuge Tubes

Microcentrifuge tubes (MCTs) are the workhorse of today's lab. Neptune's complete line of 0.6, 1.6, and 2.0 ml tubes were designed to meet the challenges of a wide array of lab procedures - from assays, to centrifugation, to sample storage.

Chemical Resistance

Neptune microcentrifuge tubes are made from medical grade polypropylene resin. This enables us to provide tubes without contaminating extractables, while maintaining high chemical resistance to a broad range of reagents and solvents. Before initiating use of these products for a new assay, please refer to the chemical resistance chart in the Neptune Product Catalog, or by going to www.neptunescientific.com.

Use in Centrifugation

MCTs from Neptune can withstand centrifugation up to 20,000 RCF. Before you use tubes for centrifugation, it is important to understand the difference between Revolutions Per Minute (RPM) and Relative Centrifugal Force (RCF). Of the two specifications, RCF, or G force, is a standard unit of measurement across all centrifuges and can be calculated using the formula provided here. Setting the RCF too high can cause a centrifuge tube to crack and shatter. Make sure that you are using the appropriate RCF speed, and not RPM.

Calculating RCF

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

Sample Storage in Freezer

Neptune MCT's can withstand freezing down to -80 °C and are often used for shorter term storage of samples. Water density expands by approximately 8 1/3% upon freezing, so be sure to have allowance for expansion when placing your samples in the tubes.

Avoiding Contamination

Always wear gloves when handling laboratory consumables. When removing MCTs from the product bag, never reach into the bag with your hands. Instead, pour the tubes out from the bag. This avoids contamination and the ziplock seal of the bag preserves the remaining tubes for future use.

If autoclaving is required by your lab protocol, please adhere to the following guidelines:

- Pour MCTs into a sterile beaker
- Cover the beaker with aluminum foil and use a piece of autoclave indicator tape to secure the foil to the beaker
- Set autoclave for 121 °C, 15 PSI (1 atm) for 15 minutes
- Unlike glassware, do not use a "dry cycle" as this may distort the plastic of the tubes
- Keep tube sealed in beaker until use

PCR Tubes

Neptune offers a collection of high quality 0.2 to 0.6ml thin walled tubes specifically manufactured for PCR applications. The rigorous quality standards of this product line ensure peak performance in even the most sensitive of PCR assays.

Compatibility

The uniform thin-wall dimensions of Neptune PCR tubes make them compatible with thermocycler blocks on the market that accept industry standard tubes. Good block-tube contact is important for efficient thermocycling reactions, so it is always recommended to verify fit and contact of the tubes with your particular system. Also, be sure to check the heated lid of your system. Many thermocyclers come with heated lids with adjustable heights, so make sure that yours is set to optimize the seal and avoid the effects of condensation within the tube cap.

Product Handling

Neptune PCR tubes are made of virgin polypropylene and have a long shelf life when properly stored. Maintaining room temperature storage, away from prolonged sun exposure, will help prevent the tubes from becoming brittle and yellow over time. Maintain a First In, First Out (FIFO) process for tube inventory.

When assembling your PCR, do so in a separated area. Always use aerosol barrier pipette tips and be sure to use a new tip every time you touch your stock solution and reagents to avoid cross-contamination.

Avoiding Contamination

Always wear gloves when handling products to set up a PCR reaction. When removing PCR tubes from the product bag, never reach into the bag with your hands. Instead, pour the tubes out from the bag. This avoids contamination and the ziplock seal of the bag preserves the remaining tubes for future use. Autoclaving thin-walled PCR tubes is not recommended as it may impact the integrity of the seal. If sterility is a concern, purchase pre-sterile Neptune PCR tubes.

If autoclaving is required by your lab protocol, please adhere to the following guidelines:

- Pour PCR tubes into a sterile beaker
- Cover the beaker with aluminum foil and use a piece of autoclave indicator tape to secure the foil to the beaker
- Set autoclave for 121 °C, 15 PSI (1 atm) for 15 minutes
- Unlike glassware, do not use a "dry cycle" as this may distort the plastic of the tubes
- Keep tube sealed in beaker until use

PCR Plates

Neptune offers an expansive line of 96-well PCR plates. Whether using the full profile, low profile, fully skirted, or semi-skirted plates, the rigorous quality standards of this product line ensure peak performance in even the most sensitive of PCR assays.

Compatibility

PCR plates from Neptune are molded from medical grade, high performance polypropylene and feature uniform thin-walls for superior heat transfer. The many options of plate styles (full profile, low profile, fully skirted and semi-skirted) means broader compatibility with the leading thermocyclers on the market. Good block-well contact is important for efficient thermocycling reactions, so be sure to refer to the PCR plate compatibility chart in the Neptune Product Catalog or on www.neptune-scientific.com when considering your plate. Also, be sure to check the heated lid of your system. Many thermocyclers come with heated lids with adjustable heights, so make sure that yours is set to optimize the seal and avoid the effects of condensation within the plate.

Product Handling

Neptune PCR plates are made of virgin polypropylene and have a long shelf life when properly stored. Maintaining room temperature storage, away from prolonged sun exposure, will help prevent the tubes from becoming brittle and yellow over time. Maintain a First In, First Out (FIFO) process for plate inventory.

When assembling your PCR, do so in a separate "Pre-PCR" area and always wear fresh gloves when handling products. Always use aerosol barrier pipette tips and be sure to use a new tip every time you touch your stock solution and reagents to avoid cross-contamination. Use the appropriate plate sealing tape for your application to reduce evaporation during cycling.

Avoiding Contamination

Neptune PCR plates are manufactured and tested to ensure the highest level of purity. Because they are certified as RNase, DNase, DNA, and endotoxin-free, it is not necessary to autoclave the plates before use. In fact, there have been several published reports where autoclaves have introduced contamination to products, particularly in busy labs that share the same autoclave. Additionally, autoclaving PCR plates may result in product warpage, which may impact fit and compatibility in your thermocycler. After cycling, always perform a quick spin of the plate to pull down condensation and prevent cross contamination when removing the sealing tape.

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