Biotix®

Innovation in Liquid Handling

2019 Biotix Catalog

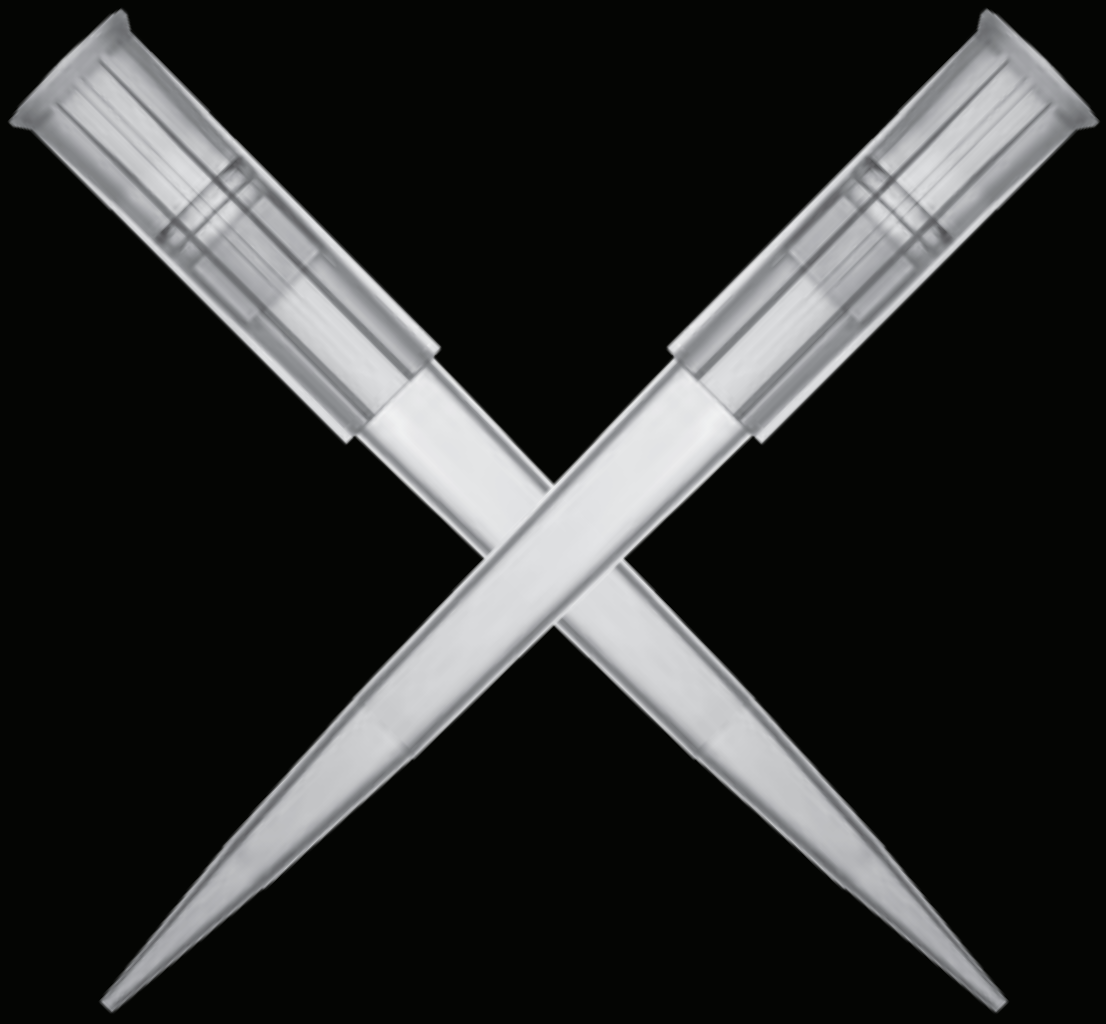
What you do every day matters.

When you were young, anything seemed possible. Isn't that why you decided to pursue a career in science?

You, researcher, play a critical role in the state of our planet and the needs of humanity. What you do every day makes a significant impact in the world. With every successful assay, a problem is solved and new possibilities are brought to life. With every failure, a potential answer is ruled out and a new question arises. It is an awesome process that drives innovation in health, safety and the overall condition of the world.

INNOVATION IN LIQUID HANDLING.

TOGETHER WE CHANGE THE WORLD.



Innovation is at the heart of Biotix Engineering. Our product development starts with questions. How can we create a product that enables researchers to achieve more accurate and precise results? How can we engineer products to use fewer resources? How can we drive this innovation across the research community and beyond to make a significant and overwhelmingly positive impact?

We invite you to join our quest for game-changing innovation one aspiration at a time.

Xtreme Quality®

At Biotix, the quality of our products is such a primary focus that we needed to trademark a name for it.

Xtreme Quality means producing six sigma, the highest quality manual and automation tips in the industry. Our quality process begins long before the manufacturing stage. It starts with understanding your needs. Our production floor is a tightly controlled environment where everything from temperature and humidity to air particulates are monitored. These production measures, coupled with our rigorous inspection requirements, ensure that our products are molded to strict quality specifications, making us the most consistent tip producer in the industry.

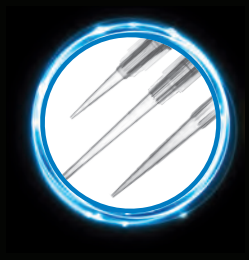
We use a technically superior lot control system to maintain total quality control down to the smallest detail. With serial numbering down to the individual tip tray and CV testing data printed on every box, you can see for yourself the stringency of our processes. As a result of these efforts, you are guaranteed the best possible product for your laboratory.

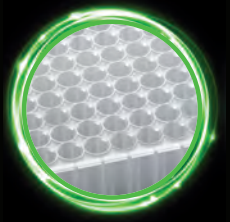
Xtreme Quality means:

- Every lot undergoes rigorous testing for the highest engineering and quality standards
- Products that are BioReady®, free of RNase, DNase, Pyrogen, Endotoxins, Nucleic Acid, trace metal and PCR inhibitors
- Excellence in customer service
- Open two-way communication with our customers
- ISO 9001 Certified Facility
- FDA registered for Medical Device Assembly (Class I)

Table of Contents

Innovation in liquid handling. Great data starts here.





MANUAL PIPETTE TIPS

uTIP™ FOR UNIVERSAL PIPETTES

xTIP4® FOR RAININ LTS PIPETTES

PACKAGING OPTIONS

Biotix is committed to providing more innovation while using less resources. Explore our packaging options.

Tip innovation for universal pipettes and for Rainin LTS pipettes.

Innovation in a pipette tip? Absolutely. Accurate and precise liquid handling is critical to the integrity of your data. Biotix manual tips are designed for ease-of-use, sample preservation, accuracy and precision.

You provide the brains, we'll provide the liquid handling tools to get you the reproducible data you need to make a difference in the world.

Biotix Manual Tips

uTIP™ Pipette Tips for universal pipettes.
xTIP4® Pipette Tips for Rainin® LTS™ pipettes.

Biotix offers two lines of pipette tips with the same tip technology:

- ✓ **uTIP:** Designed to improve the performance of universal pipettes.
- ✓ **xTIP4:** Engineered to fit securely on the Rainin Lite Touch Pipette.

Biotix tip innovation increases reproducibility, reduces chances of pipetting errors and improves ergonomics, giving you an unparalleled pipetting experience.

As with all Biotix liquid handling products, Biotix Manual Tips are BioReady® certified to be free of RNase, DNase and endotoxin (pyrogens) and are available in sterile and non-sterile options.

No banging required with FlexFit® Technology

The flexible proximal end ensures confidence in a secure seal on the most popular and widest range of major brand pipettes. It also reduces pipetting forces required, improving ergonomics.

Built-in low retention with X-Resin® Technology

Our patented X-Resin technology helps ensure reproducible data by diminishing the presence of residual fluid in pipette tips.

Say goodbye to "Tip Touch Off" with Blade® Technology

Achieve accurate results while saving time. By minimizing the surface tension at the distal end of the tip, Blade technology eliminates hanging droplet formation.

because your data matters, your tip matters

uTIP™ Filter Tips

Engineered for a perfect fit on universal pipettes

	SKU	PACKAGING	QUANTITY	DESCRIPTION
2 µL uTIP 	M-0002-9FC	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
10 µL uTIP 	M-0010-9FC	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
10 µL XL uTIP 	M-0011-9FC	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
20 µL uTIP 	M-0020-9FC	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
100 µL uTIP 	M-0100-9FC	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
200 µL uTIP 	M-0200-9FC	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
300 µL uTIP 	M-0300-9FC	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
1000 µL uTIP 	M-1000-9FC	Racked	10 racks of 96/pack 4 packs/case	Sterile, Low Retention
1250 µL uTIP 	M-1250-9FC96	Racked	10 racks of 96/pack 4 packs/case	Sterile, Low Retention

uTIP™ Non-Filter Tips

Engineered for a perfect fit on universal pipettes

	SKU	PACKAGING	QUANTITY	DESCRIPTION
10 µL uTIP 	M-0010-9SC	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
	M-0010-9NC	Racked	10 racks of 96/pack 5 packs/case	Low Retention
	M-0010-9TS	CleanPak™ Reload	10 cards of 96/pack 5 packs/case	Sterile, Low Retention
	M-0010-9TN	CleanPak Reload	10 cards of 96/pack 5 packs/case	Low Retention
	M-0010-BC	Bulk	1,000 tips/bag 10 bags/case	Low Retention
10 µL XL uTIP 	M-0011-9SC	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
	M-0011-9NC	Racked	10 racks of 96/pack 5 packs/case	Low Retention
	M-0011-9TS	CleanPak Reload	10 cards of 96/pack 5 packs/case	Sterile, Low Retention
	M-0011-9TN	CleanPak Reload	10 cards of 96/pack 5 packs/case	Low Retention
	M-0011-BC	Bulk	1,000 tips/bag 10 bags/case	Low Retention
200 µL uTIP 	M-0200-9SC	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
	M-0200-9NC	Racked	10 racks of 96/pack 5 packs/case	Low Retention
	M-0200-9TS	CleanPak Reload	10 cards of 96/pack 5 packs/case	Sterile, Low Retention
	M-0200-9TN	CleanPak Reload	10 cards of 96/pack 5 packs/case	Low Retention
	M-0200-BC	Bulk	1,000 tips/bag 10 bags/case	Low Retention
250 µL uTIP 	M-0250-9SC	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
	M-0250-9NC	Racked	10 racks of 96/pack 5 packs/case	Low Retention
	M-0250-9TS	CleanPak Reload	10 cards of 96/pack 5 packs/case	Sterile, Low Retention
	M-0250-9TN	CleanPak Reload	10 cards of 96/pack 5 packs/case	Low Retention
	M-0250-9BC	Bulk	1,000 tips/bag 10 bags/case	Low Retention

uTIP™ Non-Filter Tips

Engineered for a perfect fit on universal pipettes

	SKU	PACKAGING	QUANTITY	DESCRIPTION
300 µL uTIP 	M-0300-9SC	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
	M-0300-9NC	Racked	10 racks of 96/pack 5 packs/case	Low Retention
	M-0300-9TS	CleanPak™ Reload	10 cards of 96/pack 5 packs/case	Sterile, Low Retention
	M-0300-9TN	CleanPak Reload	10 cards of 96/pack 5 packs/case	Low Retention
	M-0300-BC	Bulk	1,000 tips/bag 10 bags/case	Low Retention
1000 µL uTIP 	M-1000-9SC	Racked	10 racks of 96/pack 4 packs/case	Sterile, Low Retention
	M-1000-9NC	Racked	10 racks of 96/pack 4 packs/case	Low Retention
	M-1000-9TS	CleanPak Reload	10 cards of 96/pack 4 packs/case	Sterile, Low Retention
	M-1000-9TN	CleanPak Reload	10 cards of 96/pack 4 packs/case	Low Retention
	M-1000-BC	Bulk	1,000 tips/bag 4 bags/case	Low Retention
1250 µL uTIP 	M-1250-9SC96	Racked	10 racks of 96/pack 4 packs/case	Sterile, Low Retention
	M-1250-9NC	Racked	10 racks of 96/pack 4 packs/case	Low Retention
	M-1250-9TS	CleanPak Reload	10 cards of 96/pack 4 packs/case	Sterile, Low Retention
	M-1250-9TN	CleanPak Reload	10 cards of 96/pack 4 packs/case	Low Retention
	M-1250-BC	Bulk	1,000 tips/bag 4 bags/case	Low Retention

"These are great tips. We've tried numerous others and found that we got consistently lower CVs between replicate wells in our assays in utilizing the Biotix tips vs others. When the assays are costing us hundreds and we have limited sample, these tips are well worth the money and I would highly recommend."

– Review posted to SelectScience

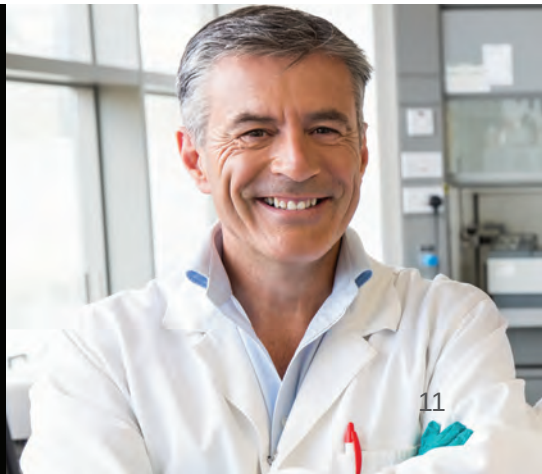
xTIP4® Filter Tips

Engineered for a perfect fit on Rainin LTS Pipettes

	SKU	PACKAGING	QUANTITY	DESCRIPTION
20 µL xTIP4 	63300931	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
200 µL xTIP4 	63300001	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
300 µL xTIP4 	63300002	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
1000 µL xTIP4 	63300003	Racked	10 racks of 96/pack 4 packs/case	Sterile, Low Retention
1200 µL xTIP4 	63300004	Racked	10 racks of 96/pack 4 packs/case	Sterile, Low Retention

“Pipette tips aren’t usually something to get excited about... that is until I used the new Biotix X-Tip. After a cross-comparison between other tips – I found Biotix to be highly effective, precise, and accurate. Amazingly low retention compared to other leading tips.”

– Review posted to SelectScience



xTIP4® Non-Filter Tips

Engineered for a perfect fit on Rainin LTS Pipettes

	SKU	PACKAGING	QUANTITY	DESCRIPTION
20 µL xTIP4 	63300005	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
	63300020	Racked	10 racks of 96/pack 5 packs/case	Low Retention
	63300015	Tip Eject® Reload	10 cards of 96/pack 5 packs/case	Sterile, Low Retention
	63300010	CleanPak™ Reload	10 cards of 96/pack 5 packs/case	Sterile, Low Retention
	63300025	CleanPak Reload	10 cards of 96/pack 5 packs/case	Low Retention
250 µL xTIP4 	63300006	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
	63300021	Racked	10 racks of 96/pack 5 packs/case	Low Retention
	63300016	Tip Eject Reload	10 cards of 96/pack 5 packs/case	Sterile, Low Retention
	63300011	CleanPak Reload	10 cards of 96/pack 5 packs/case	Sterile, Low Retention
	63300026	CleanPak Reload	10 cards of 96/pack 5 packs/case	Low Retention
300 µL xTIP4 	63300007	Racked	10 racks of 96/pack 5 packs/case	Sterile, Low Retention
	63300022	Racked	10 racks of 96/pack 5 packs/case	Low Retention
	63300012	CleanPak Reload	10 cards of 96/pack 5 packs/case	Sterile, Low Retention
	63300027	CleanPak Reload	10 cards of 96/pack 5 packs/case	Low Retention
1000 µL xTIP4 	63300008	Racked	10 racks of 96/pack 4 packs/case	Sterile, Low Retention
	63300023	Racked	10 racks of 96/pack 4 packs/case	Low Retention
	63300018	Tip Eject Reload	10 cards of 96/pack 4 packs/case	Sterile, Low Retention
	63300013	CleanPak Reload	10 cards of 96/pack 4 packs/case	Sterile, Low Retention
	63300028	CleanPak Reload	10 cards of 96/pack 4 packs/case	Low Retention
1200 µL xTIP4 	63300009	Racked	10 racks of 96/pack 4 packs/case	Sterile, Low Retention
	63300024	Racked	10 racks of 96/pack 4 packs/case	Low Retention
	63300029	Tip Eject Reload	10 cards of 96/pack 4 packs/case	Sterile, Low Retention
	63300014	CleanPak Reload	10 cards of 96/pack 4 packs/case	Sterile, Low Retention
	63300029	CleanPak Reload	10 cards of 96/pack 4 packs/case	Low Retention

"Wish I had known about these tips sooner!…Considering we are using some chemicals that cost between $15,000 and $20,000 per gram, the low retention is great. I no longer have to shake the last few drops of liquid down to the bottom of the pipette tip."

– Reviewer on SelectScience

"More accurate pipetting = reduced variability in experimental data (e.g. enzyme assays)… Exceeds expectations."

– Reviewer on SelectScience

"With less retention in the tips, we should have our precious samples and reagents last longer."

– Academic reviewer

"The low retention tips were excellent for virus manipulation and worked true to its low retention ability, with little loss of virus material during aliquots."

– Review from Tailored Genes, Inc.

"I don't have to make sure they seal each time, they seem to make a secure seal without beating the pipet into the tip."

– Researcher at a top ranked medical school

"We achieve high quality, reproducible results. All 8 lab members use the tips and are very happy with the results."

– Reviewer on SelectScience

Packaging Options

Packaging solutions for your lab’s requirements.

Racked in the eco-minded B3 Rack

Tip Eject Reload® System
for xTIP4 non-filter tips

CleanPak™ Reload System
for uTIP and xTIP

Bulk Tips
for uTIP non-filter tips

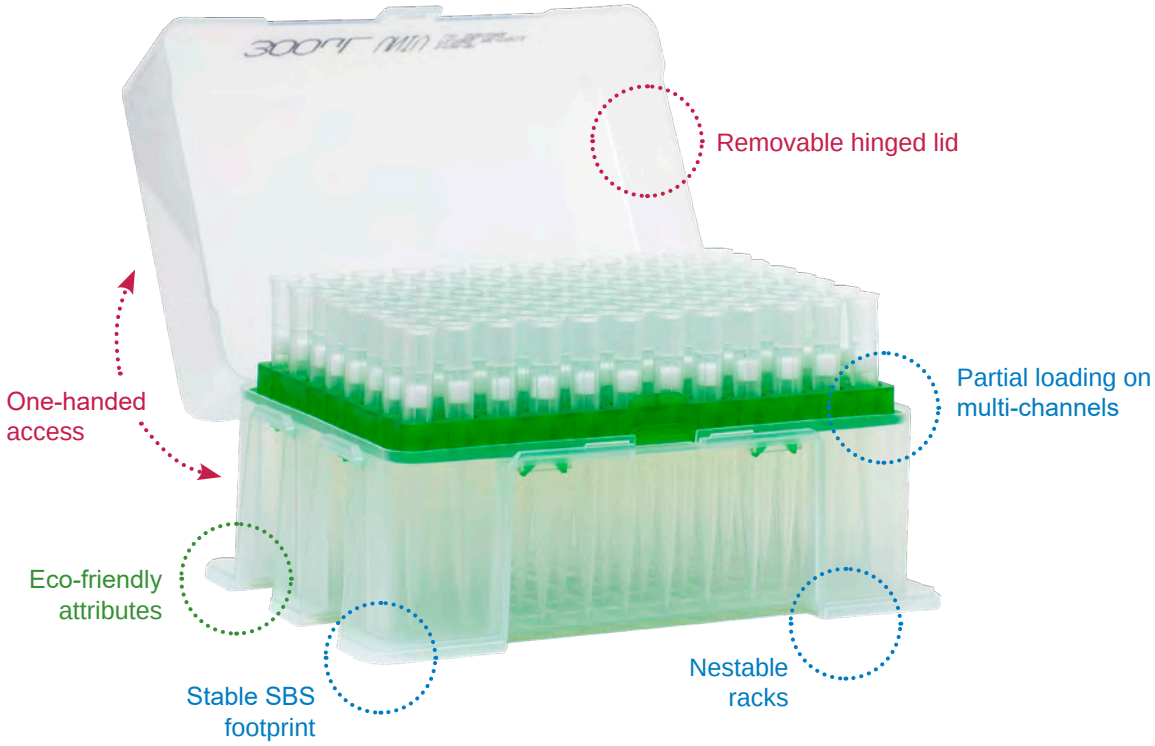
Rack Innovation by Biotix

Available for both uTIP™ and xTIP4®!

Improving the entire pipetting experience!

Meet the Optimus Rack, the latest evolution of the Biotix tip rack, available in two versions: a hinged rack for uTIP and xTIP4. Optimus is designed to provide the optimal pipetting experience while using substantially less resources. To go leaner and greener, use with the Biotix CleanPak™ reload inserts.

uTIP Rack with Hinged Lid

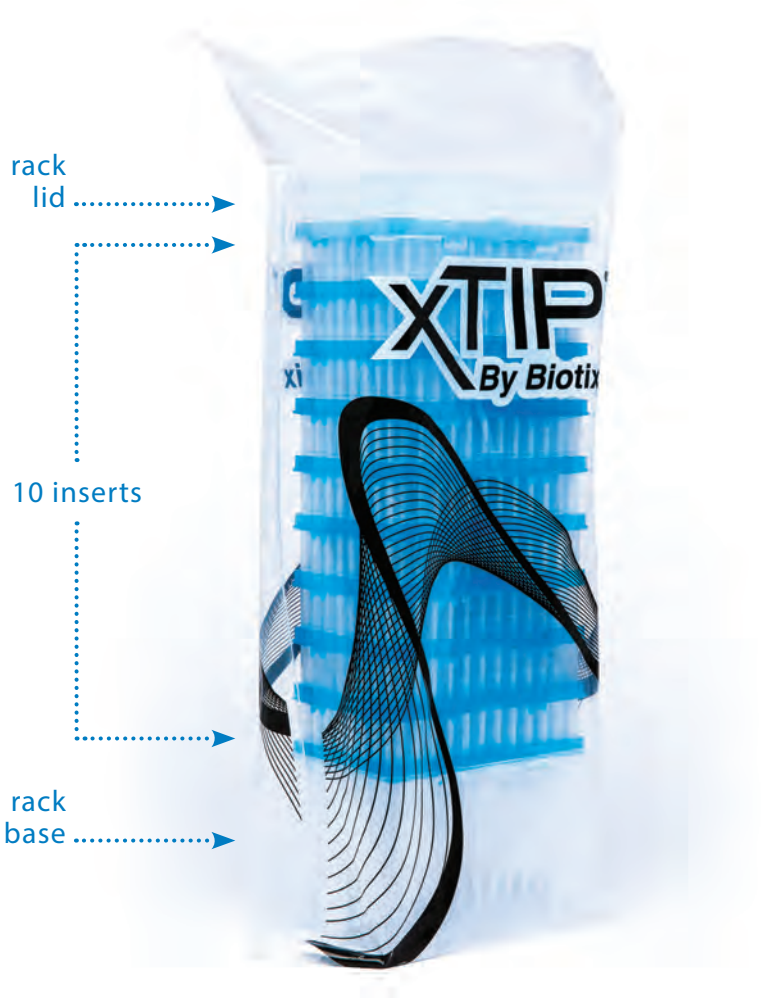


Convenience	Sustainability	User Centered Design
Removable hinged lid for uTIP (Universal pipettes) users and a lift-off lid for xTIP (Rainin LTS) users.	Approximately 30% less plastic than competitor racks	Snapcard designed for multi-channel pipetting
Clear rack and color-coded snapcards for easy identification	100% recyclable	Nestable racks for safe and easy stacking and transport
Autoclavable over 100 times	Reusable rack base as a manual/automation 96-well reservoir	Superior, stable SBS footprint for secure pipette tip loading

CleanPak™ Reload

The lean, green reload solution for xTIP® and uTIP™

CleanPak is the reload solution for the lab that is looking to maximize lab space and reduce their environmental footprint. Reducing the chance of contamination is an important step toward reproducible data, so we eliminated the first source of tip contamination, PAPER!



CleanPak arrives hermetically sealed and the re-sealable reload sleeve protects the tip cards from the laboratory environment while stored.

Convenience

960 tips easily stored on your bench using the same surface area as one rack

Inserts are easy to transfer to your empty rack, one at a time or all at once

Clear casing and colored snapcards for easy tip volume identification

Sustainability

100% recyclable packaging

Uses ~70% less plastic than racked tips

Contamination Prevention

Resealable bag with sterile and non-sterile options

Arrives hermetically sealed

Contains no contaminating cardboard or paper

CleanPak™ Reload

Available for both uTIP™ and xTIP4®!

See instructions below to see how easy it is to use the CleanPak System.

1

Prep rack.

Remove snapcard from your empty Biotix rack.

2

Open bag.

Tear the strip at the top of the bag and remove the protective cover.

3

Transfer a card to the empty rack.

You will hear a click when the snapcard is secured.

4

Replace lid in bag.

Keep the extra lid with your unused inserts. At the bottom of this bag is an extra rack!

5

Seal for later use.

Tip Eject® Reload

When every detail matters, trust Tip Eject.

Reload your racks without coming into contact with the tips. Tip Eject provides a clean reload solution with easy one-handed loading. Tip Eject's rigid plastic covering shields tips from the laboratory environment from the top down, keeping contamination out, an important step toward reproducible data.

When you've got the need for speed and only one free hand, Tip Eject is the solution.

Usability

Clear casing and colored snapcards for easy tip volume identification

Snapcards click into place

Easily operated with one hand with no contact with tips or snapcard

Takes 1/5th the bench space compared to a pack of racked tips

Sustainability

Recyclable packaging

Compatible with our eco-friendly base

Reduces plastic use by up to 44% by reusing the base

Rack base doubles as a large volume, SBS-footprint reagent reservoir

Contamination Prevention

Tips are shielded from the environment and user handling

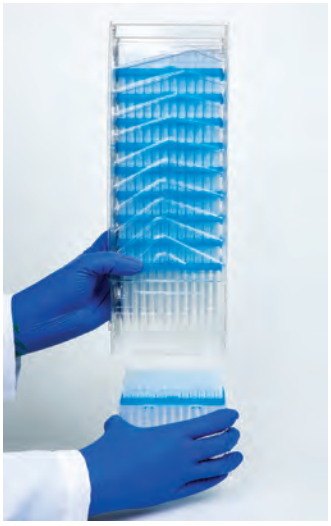
Rigid plastic case provides a cleaner reload than cardboard alternatives

All Tip Eject reloads come sterile and ready to use

Tip Eject® Reload

Available for xTIP4®

Follow these instructions for the easy, hands-free reloading experience of the Tip Eject Reload System

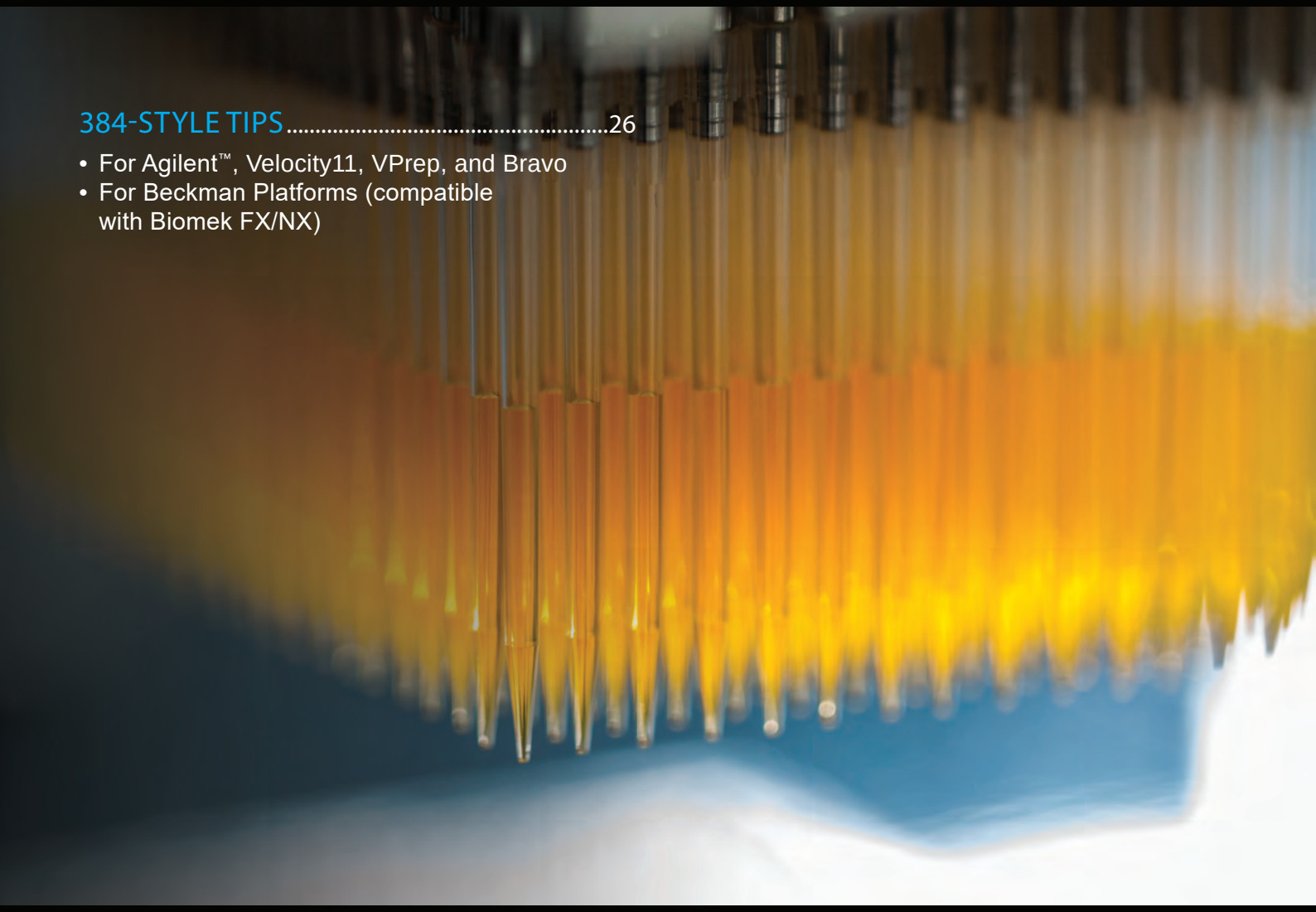
1	2	3	4
			
Remove lower protective rack base.	Align Tip Eject over empty Biotix rack.	Push down until a “click” is heard, indicating tips are locked into the rack.	Replace over rack base.

Before you begin:

1. Open the Tip Eject packaging only when it is placed flat and secure on the lab bench. The label holds the unit together. The first rack will pop out from the bottom when the label is removed.

2. Remove the empty snapcard to prepare to load your tips:
   - Place thumb in small notch at front of rack.
   - Lift up to disengage the front of the snapcard.
   - Using your wrist as a leverage point, pull up from the side to disengage the card.

AUTOMATION TIPS



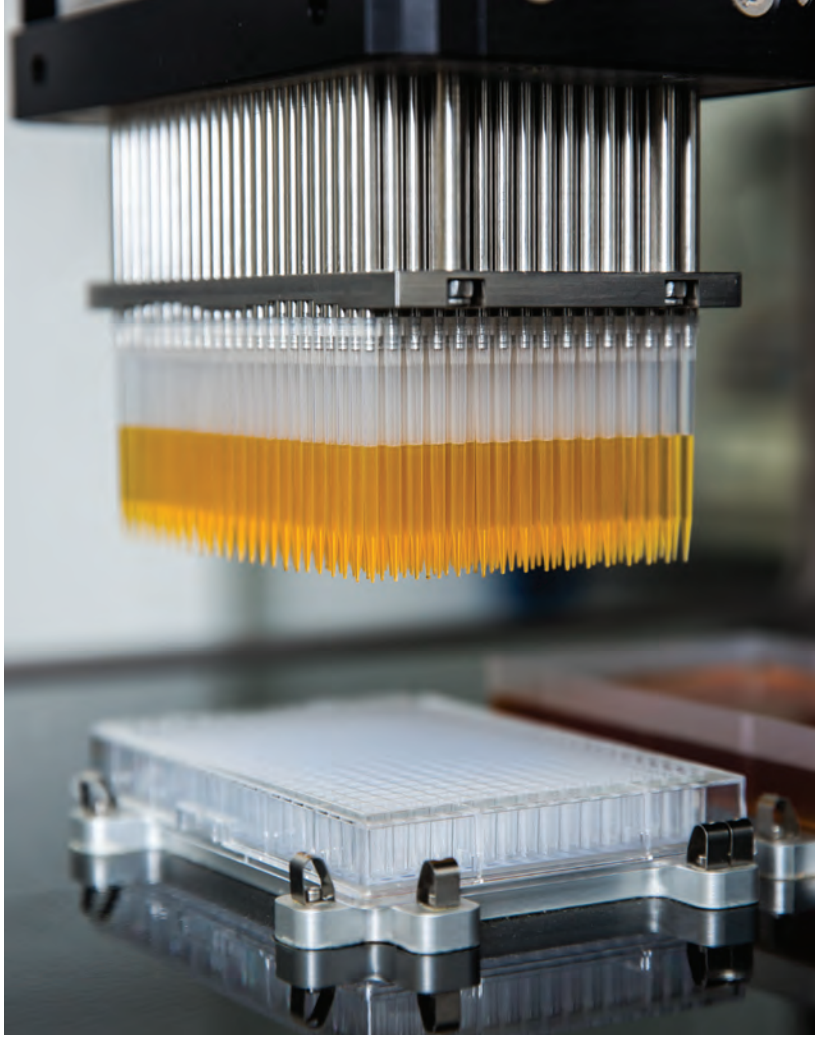
- For Agilent™, Velocity11, VPrep, and Bravo
- For Beckman Platforms (compatible with Biomek FX/NX)

Biotix aTIP™, error-reducing innovation for automation platforms.

From our innovative error-reducing technologies to our in house lot testing, Biotix aTIP™ Pipette Tips for automation are engineered to get you the accurate data you rely on. With specifications to ensure complete compatibility, no changes in programming scripts should be necessary to make an immediate switch to Biotix tips.

As with all Biotix liquid handling products, aTIP pipette tips are BioReady® certified to be free of RNase, DNase and endotoxin (pyrogens) and are available in sterile and non-sterile options.

Automation Tips



Automation Laboratory

Each lot of Biotix automation tips are tested on the intended automation platform in our on-site laboratory to verify the highest level of performance.

Statix®

Static can cause unmanned pieces of high-throughput equipment to jam and ruin an experiment, or worse, damage the automation head. To combat this destructive force, Biotix developed Statix, a copper grounding tab combined with a conductive pillow that displaces static.

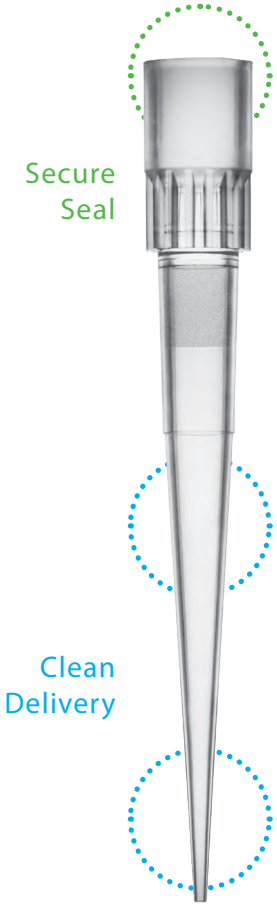
FlexFit® Technology

The flexible proximal tip end, ensures a secure seal even on 384 platforms.

*Available in most of the Biotix aTIP line.

Blade® Technology

Biotix tips are engineered with technology designed to eliminate formation of hanging droplets, ensuring sample delivery.

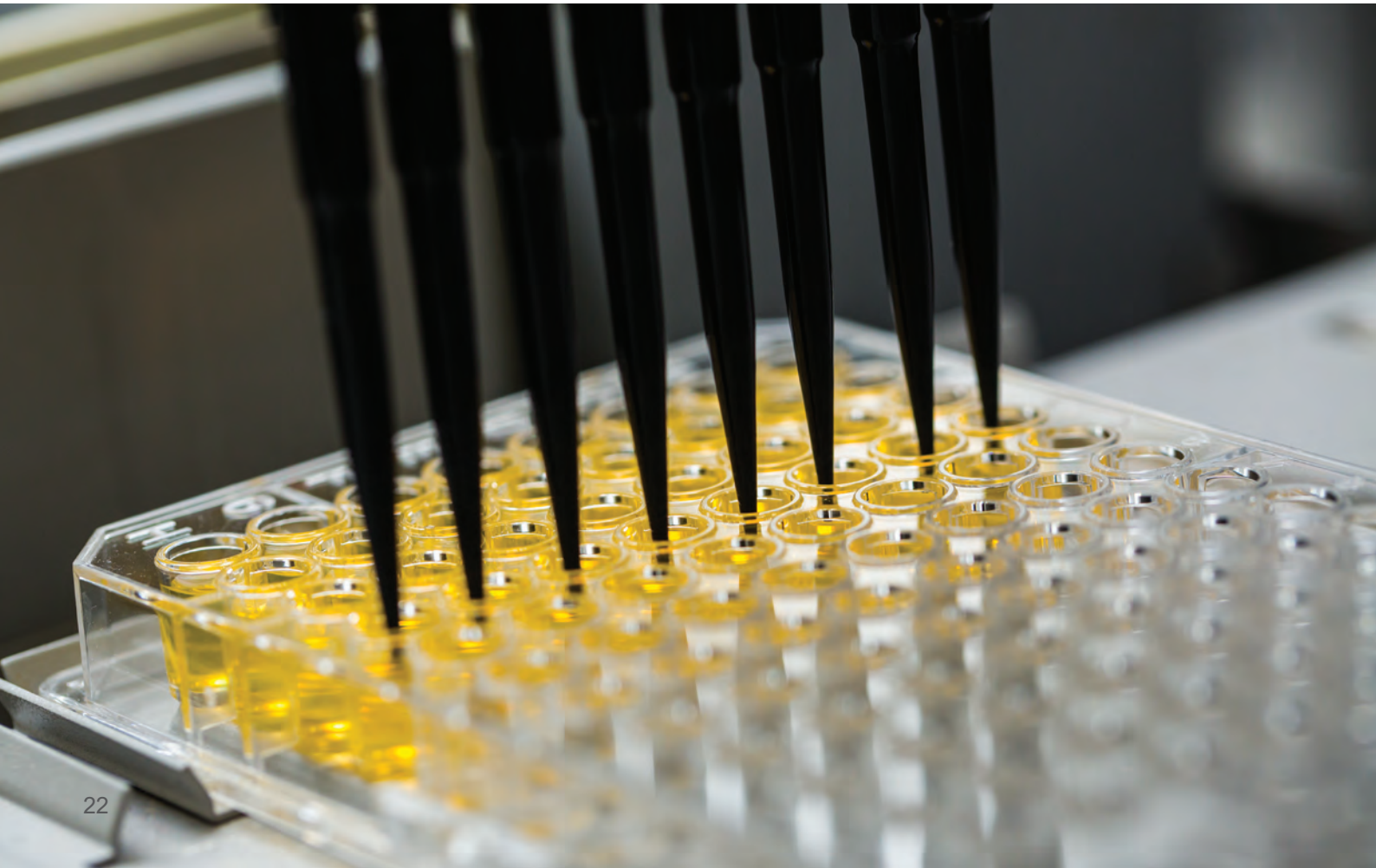


Automation Tips

Eliminate the risk of leaky seals, inconsistent draws, and jamming with Biotix aTIP™ pipette tips.

All Biotix automation tips (aTIP) are manufactured to the highest engineering standards in automation. The ultra-straight tips target the center of microplate wells precisely, delivering exceptional accuracy and precision without risk of jamming, inconsistent seals, or dripping.

- ✓ No changes in programming scripts are necessary to use Biotix tips. Use of the standard definitions bundled in the automation software program is sufficient.
- ✓ Manufactured under stringent quality control in an ISO 9001 certified facility, each lot is tested for accuracy and precision on the tips intended platform.
- ✓ Tips are BioReady® certified to be free of RNase, DNase, and Endotoxins (pyrogens), and are available in nonsterile or pre-sterile formats.
- ✓ Each pack of tips has the coefficient of variation (CV) printed directly on the box for your reference.
- ✓ FlexFit Technology, found in most aTIP pipette tips for 384 platforms, ensures a secure seal.
- ✓ Each 384 tip rack comes with Statix® technology, a copper grounding tab combined with a conductive pillow that displaces static.



Automation Tips

FOR AGILENT 384 PLATFORMS COMPATIBLE WITH VPREP AND BRAVO WITH 384-HEAD				
	BIOTIX PART NUMBER	DESCRIPTION	VOLUME	PACKAGING
Agilent Velocity 11® VPrep® and Bravo® with 384-head	VB-0030-3FC 	Filtered automation tip, 384-head, Clear, Pre-sterile	15 µL	10 racks/pack 5 packs/case
	VB-0030-3SC 	Automation tip, 384-head, Clear, Pre-sterile	30 µL	10 racks/pack 5 packs/case
	VB-0030-3SB 	Automation tip, 384-head, Black, Pre-sterile	30 µL	10 racks/pack 5 packs/case
	VB-0071-3FC 	Filtered automation tip, 384-head, Clear, Pre-sterile	70 µL	10 racks/pack 5 packs/case
	VB-0071-3SC 	Automation tip, 384-head, Clear, Pre-sterile	70 µL	10 racks/pack 5 packs/case

FOR BECKMAN 384 PLATFORMS COMPATIBLE WITH BIOMEK FX/NX WITH 384-HEAD				
	BIOTIX PART NUMBER	DESCRIPTION	VOLUME	PACKAGING
Beckman Biomek® FX/NX with 384-head	BA-0051-3FC 	P30 XL Filtered automation tip, 384-head, Clear, Pre-sterile, featuring FlexFit®	45 µL	10 racks/pack 5 packs/case
	BA-0051-3SC 	P30 XL Automation tip, 384-head, Clear, Pre-sterile, featuring FlexFit	50 µL	10 racks/pack 5 packs/case

COBRA® MANUAL PIPETTES

Meet your new friend Cobra.

The latest air displacement technology combined with advanced ergonomic research make the Cobra Pipette unrivaled in comfort. The extremely low pipetting forces required reduce the risk of repetitive stress disorder while the advanced control settings ensure accuracy in ranges from 0.2 µL to 1000 µL. Don't let the lightweight design fool you, this pipette is strong, sturdy and even fully autoclavable. Cobra pipettes come with a 1-year warranty. Read on to learn more about why this Cobra belongs in your lab.

Cobra® Pipettes

Designed for comfort and accuracy.

LIGHT-WEIGHT DESIGN
INCORPORATES
THE PRECISION OF
STAINLESS-STEEL.

1 Easily used by left-handed or right-handed users thanks to the adjustable tip-ejector button. The extra length of the ejector button increases your leverage, reducing the amount of force needed to eject a tip.

2 Extra-long finger hook rests securely into hands of all sizes for a firm grip.

3 Stainless-steel piston provides precision and durability.

4 Fully autoclavable at 121° C, 1 atm for 20 minutes.

5 FlexFit® technology provides flexibility on the proximal end of tips, reducing the necessary insertion and ejection forces between pipettor and pipette tips. The Cobra pipette combined with Biotix Universal tips with FlexFit technology results in a perfect fit!

The Cobra Pipette

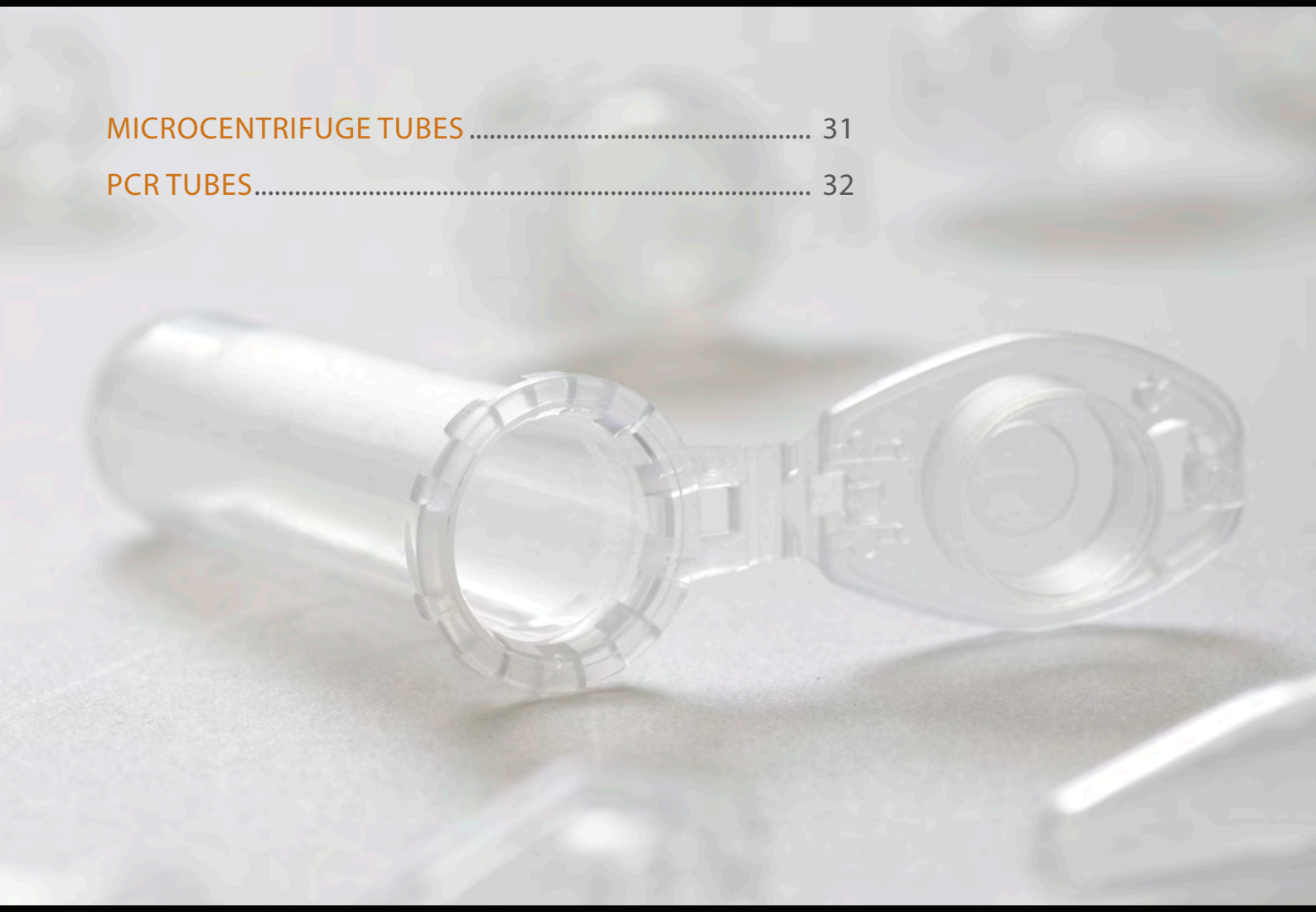
SINGLE CHANNEL			
BIOTIX CAT. NO.	VOLUME RANGE (µL)	SYSTEMATIC ERROR/ACCURACY (%)	RANDOM ERROR/PRECISION (%)
BTX-2	.2 to 2 µl	±13.2% - ±1.7%	≤6.6% - 0.8%
BTX-10	1 to 10 µl	±2.8% -±1.1%	≤1.3%- 0.4%
BTX-20	2 to 20 µl	±5.5%-±1.0%	≤1.7%- 0.3%
BTX-100	10 to 100 µl	±3.9%-±0.8	≤1.1%- 0.2%
BTX-200	20 to 200 µl	±2.8%-±0.8%	≤1.1%- 0.2%
BTX-1000	100 to 1000 µl	±3.3%-±0.8%	≤0.7%-0.2%

8-CHANNEL (MULTI-CHANNEL)			
BIOTIX CAT. NO.	VOLUME RANGE (µL)	SYSTEMATIC ERROR/ACCURACY (%)	RANDOM ERROR/PRECISION (%)
BTX-8X-10	0.5 to 10 µl	±17.6%-±2.2%	≤8.8%-1.1%
BTX-8X-20	2 to 20 µl	±5.5%-±2.0%	≤4.4%- 0.8%
BTX-8X-200	20 to 200 µl	±2.8%- ±1.1%	≤1.4%- 0.3%
BTX-8X-300	20 to 300 µl	±3.7%- ±1.1%	≤1.3%- 0.4%

12-CHANNEL (MULTI-CHANNEL)			
BIOTIX CAT. NO.	VOLUME RANGE (µL)	SYSTEMATIC ERROR/ACCURACY (%)	RANDOM ERROR/PRECISION (%)
BTX-12X-10	0.5 to 10 µl	±17.6%-±2.2%	≤8.8%-1.1%
BTX-12X-20	2 to 20 µl	±5.5%-±2.0%	≤4.4%- 0.8%
BTX-12X-200	20 to 200 µl	±2.8%- ±1.1%	≤1.4%- 0.3%
BTX-12X-300	20 to 300 µl	±3.7%- ±1.1%	≤1.3%- 0.4%

COBRA® PIPETTE ACCESSORIES	
BIOTIX CAT. NO.	PRODUCT TITLE
BTX-CAR-STAND	Carousel Stand for 7 Pipettes

TUBES



Biotix Microcentrifuge and PCR Tubes

Biotix tubes are manufactured under stringent QC protocols with medical-grade virgin polypropylene. Built with our users in mind, the caps click closed to secure the leak-proof seal. The MCT tubes won't pop open under boiling temperatures and our PCR tubes are just as secure, yet Biotix tubes can be opened with only one hand. Read on to learn about all the benefits of Biotix tubes.

Microcentrifuge Tubes

Biotix microcentrifuge tubes are manufactured with medical grade virgin polypropylene for superior clarity. These snapcap tubes are leak resistant, boil proof, and able to withstand 20,000 RCF.

MCT tubes you can trust:

- ✓ Sizes include 0.65 mL, 1.5 mL, and 2.0 mL.
- ✓ Graduation marks for convenient reference and verification.
- ✓ Snapcap which clicks closed to ensure a non-leaking seal that is boil proof.
- ✓ The cap can be partially closed to make constant opening and closing with your thumb easy and secure.
- ✓ Available in low binding for dealing with sticky and viscous samples.
- ✓ These tubes are low bind for nucleic acids and proteins
- ✓ Frosted exterior wall and cap for easy marking.
- ✓ Certified free of DNase, RNase, endotoxins (pyrogens) and PCR inhibitors.

	BIOTIX PART NUMBER	DESCRIPTION	VOLUME	PACKAGING
	MT-0065-BC	Clear	0.65 mL	1,000 tubes/bag 10 bags/case
	MT-0065-BCS	Clear, Pre-sterile	0.65 mL	500 tubes/bag 10 bags/case
	MTL-0065-BC	Clear, Low Retention	0.65 mL	1,000 tubes/bag 10 bags/case
	MT-0065-R	Assorted Colors (blue/yellow/green/orange/red)	0.65 mL	1,000 tubes/bag 10 bags/case (2 bags of each color)
	MT-0150-BC	Clear	1.5 mL	500 tubes/bag 10 bags/case
	MT-0150-BCS	Clear, Pre-sterile	1.5 mL	250 tubes/bag 10 bags/case
	MTL-0150-BC	Clear, Low Retention	1.5 mL	500 tubes/bag 10 bags/case
	MT-0150-R	Assorted Colors (blue/yellow/green/orange/red)	1.5 mL	500 tubes/bag 10 bags/case (2 bags of each color)
	MT-0200-BC	Clear	2.0 mL	500 tubes/bag 10 bags/case
	MT-0200-BCS	Clear, Pre-sterile	2.0 mL	250 tubes/bag 10 bags/case
	MTL-0200-BC	Clear, Low Retention	2.0 mL	500 tubes/bag 10 bags/case
	MT-0200-R	Assorted Colors (blue/yellow/green/orange/red)	2.0 mL	500 tubes/bag 10 bags/case (2 bags of each color)

PCR Tubes

Quality PCR Tubes

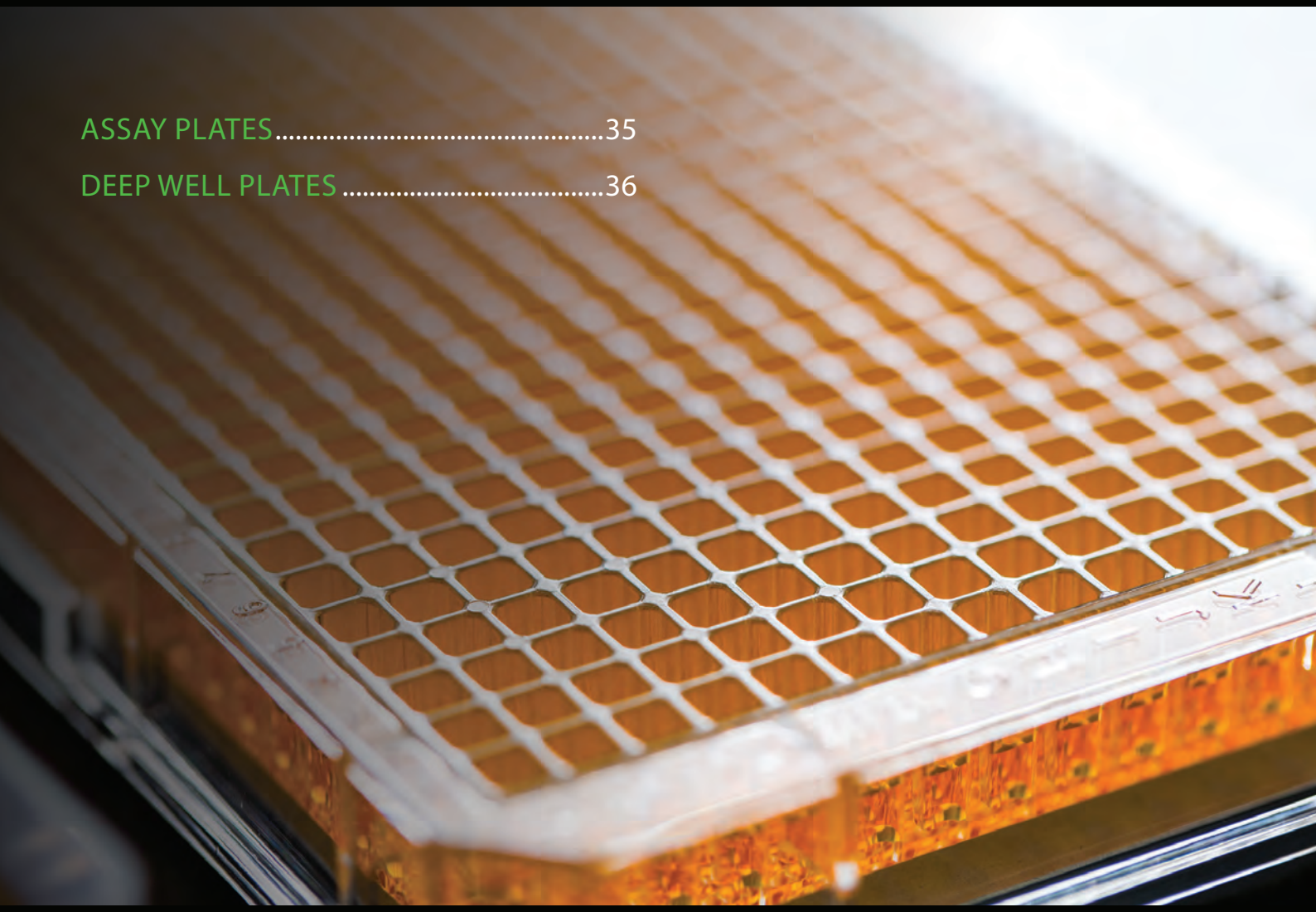
Biotix PCR tubes are manufactured under stringent QC protocols with medical-grade virgin polypropylene. These tubes consist of a thin and uniform wall thickness that provides equal thermal transfer though the tube for optimal amplification.

Why Biotix PCR tubes are a great choice:

- Precision engineered caps which prevent leaking and evaporative effects when heated.
- Certified free of DNase, RNase, endotoxins (pyrogens) and PCR inhibitors.
- Flat cap which is easy to open and close one handed.
- These tubes click closed so you know you've made a secure seal.

PCR TUBES	DESCRIPTION	VOLUME	PACKAGING
PCT-0002-1CT 	Flat Cap, Clear	0.2 mL	1,000 tubes/pack 10 packs/case
PCT-0002-8C 	8-Strip, Clear	0.2 mL	125 tubes/pack 10 tubes/case
PCT-0002-8CF 	8-Strip Flat Caps	n/a	125 caps/pack 10 packs/case

ASSAY & DEEP WELL PLATES



Biotix plates for reliability and convenience.

Biotix plates are built with your needs in mind. Our plates are lot-to-lot tested to be certified for the most sensitive assays.

- ✓ Manufactured from non-treated, medical-grade virgin polypropylene.
- ✓ Certified free of DNase, RNase, human DNA and endotoxins (pyrogens).
- ✓ Available in V-bottom and U-bottomed wells.
- ✓ Alphanumeric grid to help with sample identification and organization.
- ✓ Notched corner to be used as a reference for plate orientation.

Assay Plates

Ideal for compound libraries, combinatorial chemistry, and luminescent assays, Biotix assay plates are made of non-treated, medical-grade virgin polypropylene in 96-well format. These plates are certified free of DNase, RNase, human DNA and endotoxins (pyrogens).

Why choose Biotix assay plates:

- Large well diameter with raised “chimney” style wells which help reduce the chance of cross-contamination and allow a secure seal for sealing mats and sealing films.
- Alphanumeric grid to help with sample identification and organization.
- Notched bottom corner to be used as a reference for plate orientation.
- Available in V-bottom and U-bottom wells dependent on your assay requirements.

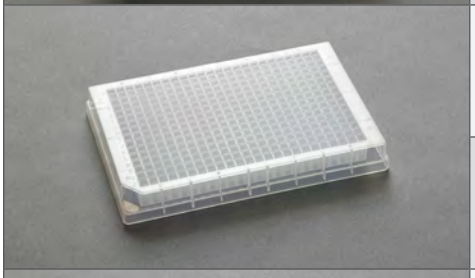
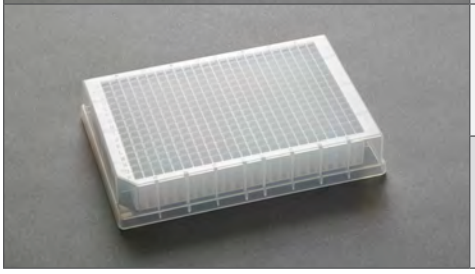
ASSAY PLATES	BIOTIX PART NUMBER	DESCRIPTION	VOLUME/WELL	PACKAGING
	AP-0350-9CV	96-well, V-Bottom	330 µL	10 plates/pack 10 packs/case
	AP-0350-9CVS	96-well, V-Bottom, Pre-sterile	330 µL	10 plates/pack 10 packs/case
	AP-0350-9CU	96-well, U-Bottom	350 µL	10 plates/pack 10 packs/case
	AP-0350-9CUS	96-well, U-Bottom, Pre-sterile	350 µL	10 plates/pack 10 packs/case

Deep Well Plates

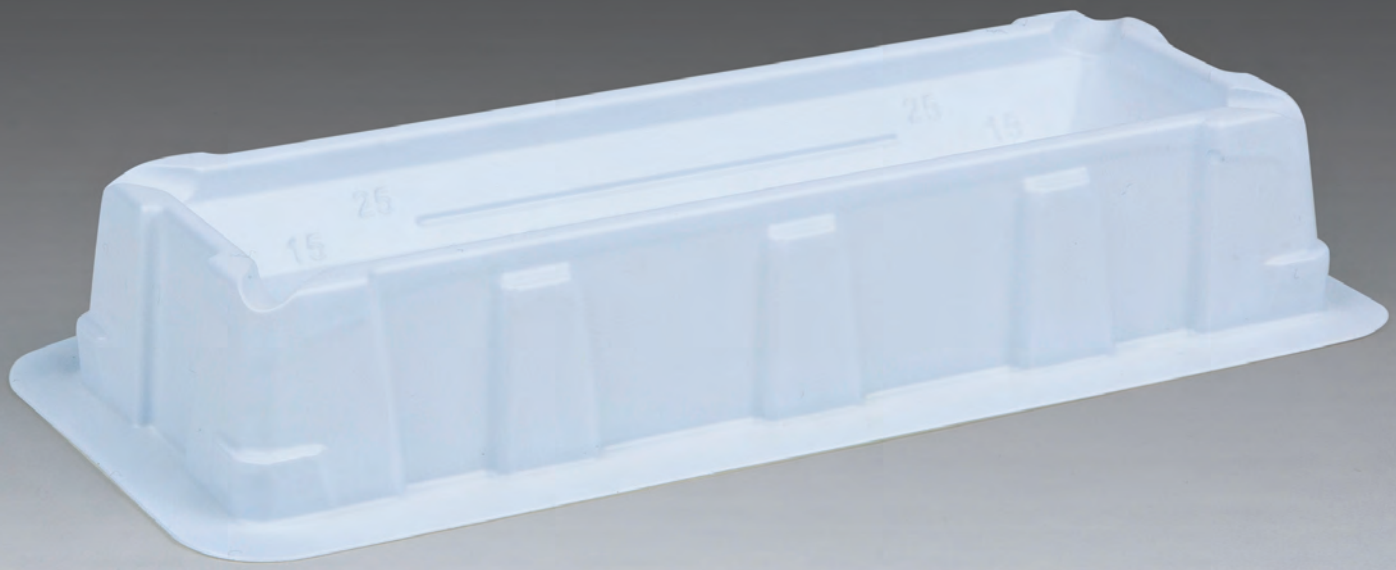
Biotix deep well plates are made of non-treated medical-grade virgin polypropylene. These plates are functional in a temperature range from –80 to 121°C with excellent chemical resistance. The plates conform to SBS standards to be used with automated workstations and can withstand up to 6,000 RCF in a microplate rotor.

Advantages include:

- Alphanumeric grid to help with sample identification.
- Notched corner as a reference point for plate orientation.
- Stackable for easy storage in freezers or incubators.
- Biotix deep well plates are certified free of RNase, DNase, human DNA, Pyrogens and PCR Inhibitors.

DEEP WELL MICROPLATES	BIOTIX PART NUMBER	DESCRIPTION	VOLUME/WELL	PACKAGING
	DP-1200-9CU	96-round well, U-Bottom	1.2 mL	5 plates/pack 10 packs/case
	DP-1200-9CUS	96-round well, U-Bottom, Pre-sterile	1.2 mL	5 plates/pack 10 packs/case
	DP-2200-9CV	96-square well, V-Bottom	2.2 mL	5 plates/pack 10 packs/case
	DP-2200-9CVS	96-square well, V-Bottom, Pre-sterile	2.2 mL	5 plates/pack 10 packs/case
	DP-0120-3CS	384-square well	120 µL	10 plates/pack 10 packs/case
	DP-0120-3CSS	384-square well, Pre-sterile	120 µL	10 plates/pack 10 packs/case
	DP-0190-3CS	384-square well	190 µL	10 plates/pack 10 packs/case
	DP-0190-3CSS	384-square well, Pre-sterile	190 µL	10 plates/pack 10 packs/case

RESERVOIRS

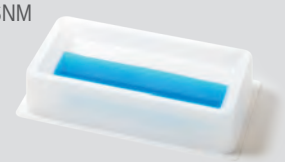
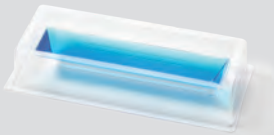
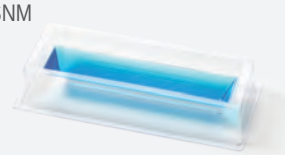
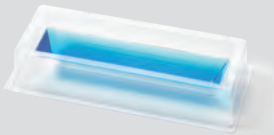


Biotix Reagent reservoirs are certified free of DNase, RNase, and endotoxins (pyrogens). Manufactured under stringent controls in an ISO 9001 certified facility. Every lot is tested for engineering compliance and accuracy. All raw materials are traceable.

How our Biotix Reservoirs can help your lab:

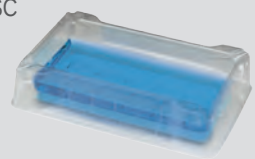
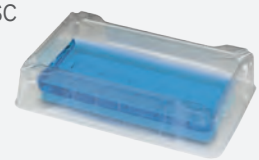
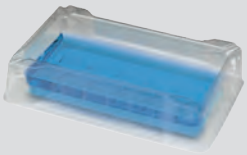
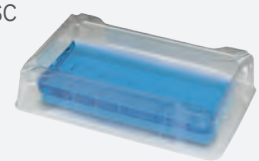
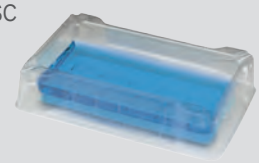
- ✓ Designed for use in multi-channel pipetting applications and fully compatible with 12-channel pipettors.
- ✓ Angled sides and a V-shaped bottom allow for maximum reagent recovery.
- ✓ Manufactured with Internal volume graduation lines and pour-spouts on the corners.
- ✓ Available in polyvinyl chloride (PVC) or polystyrene (PS).

Reagent Reservoirs

SINGLE WELL			
BIOTIX PART NUMBER	DESCRIPTION	VOLUME	PACKAGING
SR-0100-5SNM 	Polystyrene, Pre-sterile	100 mL	5 reservoirs/bag 10 bags/pack 4 packs/case
SR-0100-1SNM 	Polystyrene, Pre-sterile	100 mL	1 reservoir/bag 20 bags/pack 4 packs/case
SR-0100-BNM 	Polystyrene	100 mL	Bulk 100 reservoirs/pack 4 packs/case
SR-0055-5SNM 	Polystyrene, Pre-sterile	55 mL	5 reservoirs/bag 10 bags/pack 4 packs/case
SR-0055-1SNM 	Polystyrene, Pre-sterile	55 mL	1 reservoir/bag 20 bags/pack 4 packs/case
SR-0055-BNM 	PVC	55 mL	Bulk 100 reservoirs/pack 4 packs/case
SL-0055-BCM 	Lid, APET	n/a	20 lids/pack 5 packs/case
SR-0025-5SWM 	Polystyrene, Pre-sterile	25 mL	5 reservoirs/bag 10 bags/pack 4 packs/case
SR-0025-1SWM 	Polystyrene, Pre-sterile	25 mL	1 reservoir/bag 20 bags/pack 4 packs/case
SR-0025-BWM 	Polystyrene	25 mL	Bulk 100 reservoirs/pack 4 packs/case

Reagent Reservoirs

3-WELL DIVIDED			
BIOTIX PART NUMBER	DESCRIPTION	VOLUME	PACKAGING
SR-0025-53SWM 	Polystyrene, Pre-sterile	25 mL	5 reservoirs/bag 10 bags/pack 4 packs/case
SR-0025-13SWM 	Polystyrene, Pre-sterile	25 mL	1 reservoir/bag 20 bags/pack 4 packs/case
SR-0025-B3WM 	Polystyrene	25 mL	Bulk 100 reservoirs/pack 4 packs/case

AUTOMATION			
BIOTIX PART NUMBER	DESCRIPTION	VOLUME	PACKAGING
SR-0050-5SC 	Polystyrene, SBS Compliant; Pre-sterile	50 mL	5 reservoirs/bag 200/case
SR-0050-1SC 	Polystyrene, SBS Compliant, Pre-sterile	50 mL	1 reservoir/bag 100/case
SR-0050-BC 	Polystyrene, SBS Compliant	50 mL	Bulk 100/case
SR-0100-5SC 	Polystyrene, SBS Compliant, Pre-sterile	100 mL	5 reservoirs/bag 200/case
SR-0100-1SC 	Polystyrene, SBS Compliant, Pre-sterile	100 mL	1 reservoir/bag 100/case
SR-0100-BC 	Polystyrene, SBS Compliant	100 mL	Bulk 100/case

Tip Selection Basics

Choosing the right pipette tips for your research needs

The tip selection process may feel daunting or it may seem like a less important decision than choosing your next automation platform, however your pipette tip should never be overlooked. The accuracy and precision of even the best calibrated pipette can be wiped out if used with the wrong kind of tips. If you have a pipetting error, the experiment will be doomed from the start. Depending on the experiment you are doing, incorrect tip selection can also make your pipette a source of contamination, lead to waste of precious samples or reagents — or even cause you physical harm in the form of repetitive stress injury (RSI). Here are some tip tips for selecting the right tip for your needs.

Choose high quality pipette tips for precision and accuracy

Cutting corners on tips can increase costs in the long run. Cheap tips may have variation even within the same batch that will lead to precision issues. Only trust tip manufacturers that invest in stringent quality control measures to ensure that the tip you are using today is identical to the tip you will be using tomorrow. Reproducibility is an impossible task if your liquid handling supplies are varying lot to lot.

Think about the seal – you shouldn't need to "bang or slam" your pipette into the tips

Pipetting accuracy is directly related to the seal. If there is a poor seal between your pipette barrel and tip, the final volume dispensed will not be absolutely correct. Many researchers find themselves banging their pipette into their tips to make sure they have a secure seal. This can cause physical injury and is not necessary when using Biotix tips. Our tips are designed and tested to fit the most popular and widest range of manual pipettes thanks to FlexFit® technology. With Biotix tips, the proximal tip end is flexible causing it to create a secure seal with very low insertion forces. Banging your pipette into a Biotix tip will create an extremely secure seal, but will increase ejection force. Always apply Biotix tips with low force. This improves your ergonomics with each aspiration, and you can rest easy knowing the tip will fit securely.

To filter or not to filter…

While widely known as "filter tips", aerosol barrier tips are not intended to filter your sample or reagent...their purpose is to block your sample/reagent and help keep contamination out of your work. Filter pipette tips are fitted with a filter inside the proximal part of the tip. This filter protects the pipette from aerosols and aspirating solutions into the barrel, which can contaminate and damage the pipette. Biotix tips come pre-sterilized and BioReady™ certified to be free of RNase, DNase, and Endotoxins (pyrogens). Do you need an aerosol barrier for your research?

You need to consider three things:

- **The end user:** Will you have novice users who may be prone to overdrawing?
- **The sample:** Is your sample volatile, corrosive, toxic or infectious?
- **The impact:** Is your application sensitive and could sample carry-over be a concern? (e.g., qPCR, genomic research, bloodwork)

Do you need a low-retention tip?

If you need all of your sample, the answer is "yes." Reagents and samples can cost thousands, but the cost of limited and precious samples is priceless. Low retention is the best option to minimize sample loss. Our X-Resin® low retention tips are manufactured using a hydrophobic resin. This means the liquid wants to be dispensed from the tip, versus wanting to stick to the inside of the tip. Low quality tip providers may be using a low retention coating. This coating can leach into your sample and impact results. With Biotix and other high quality tips, the low retention qualities are naturally occurring in the resin.

Best Practices for Laboratory Plastics

With our Xtreme Quality® philosophy, Biotix produces laboratory consumables that are among the highest quality in the industry.

Our tightly controlled ISO 9001 certified production facility, coupled with our rigorous inspection requirements, ensure that our products are molded to strict quality specifications to produce the best results in your laboratory. By utilizing best practices for storing and using laboratory plastics, Biotix products will perform as you would expect innovative research product to, with better precision and accuracy.

Storage

When stored properly, Biotix products have a long shelf life and maintain high quality performance. Store at room temperature and away from sun exposure which can yellow plastics over time. Maintain a First In, First Out (FIFO) process for inventory control.

Autoclaving

All products from Biotix are BioReady® Certified to be free of detectable RNase, DNase, Nucleic Acids, Endotoxins (pyrogens) and PCR inhibitors. Biotix recommends purchasing Pre-Sterile products if an additional level of purity is required. If your laboratory procedure requires autoclaving non-sterile purchased products, please adhere to the following guidelines:

- 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 damage plastic products
- Remove product from autoclave after it has cooled and store appropriately

Biotix discourages autoclaving of aTIP™ pipette tips for automation platforms, PCR tubes and PCR plates due to the warping/distortion that autoclaving can introduce to these high precision products.

Chemical Resistance

Before initiating use of laboratory plastic consumables for a new assay, please review the chemical resistance chart to verify compatibility. Because of the unique applications in life science research (temperature, pressure, contact duration, material stress, etc.), it is always a best practice to carry out a performance test to your unique protocol.

Use of Plates & Tubes in Centrifugation

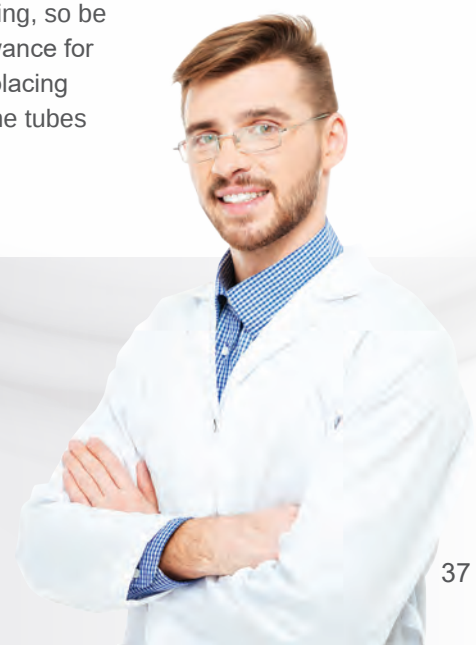
Before using any plate or tube in centrifugation, please refer to the product specifications to determine maximum centrifugation speeds. It is also important to understand the difference between Revolutions Per Minute (RPM) and Relative Centrifugal Force (RCF). Of the two specifications, RCF, or G force, is a standard unit of measurement across all centrifuges and can be calculated using the formula provided below. Setting the RCF too high can cause products to crack and shatter. Make sure you are using the appropriate RCF speed, and not RPM.

Calculating RCF

RCF = 0.00001118 x radius of centrifuge rotor (cm) x RPM2

Sample Storage in Freezer

Products such as Biotix microcentrifuge tubes and deep-well plates are often used for sample storage as they can withstand temperatures as low as -80°C. Water density expands by approximately 81/3% upon freezing, so be sure to have allowance for expansion when placing your samples in the tubes and plates.



for detailed product specification sheets and technical studies, visit www.biotix.com/support

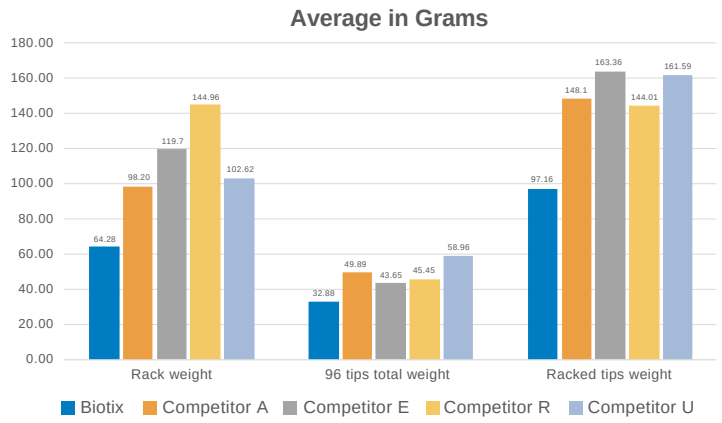
Sustainability

Awesome things are accomplished using laboratory consumables but this comes with an environmental cost. At Biotix, we do more with less. More innovation, less waste.

Leave nothing behind®

Reducing how much plastic goes into each product:

Biotix tips contain about a third less plastic than competitor tips, but that wasn't enough for us. We've launched multiple plastic reducing initiatives including reducing the thickness of our shrinkwrap, redesigning our rack to use 1/3 less plastic than competitor racks, and launching bulk tips and multiple new reload systems. Learn about our initiatives and stay tuned for more exciting launches in the works at **www.biotix.com/neweco**



"As an engineer, I am always striving for greater efficiency. Our team develops technologies around 5 core principles: Save time, waste less, precision & accuracy, safety, and passion. Every time we need to solve for something and create or alter a product, we ask, 'Will it improve one of these without doing harm to the other four principles?' If the answer is yes, we work with our customers to develop and test the innovative solution they are seeking. Sometimes people don't realize there is a problem until they see the solution–once the researcher sees the technology first hand and uses one of our tips, they will want to switch to Biotix."

– Arta Motadel, CTO and Biotix Founder

Do more with less!

Learn how you can get started reducing plastic waste in your own lab here:

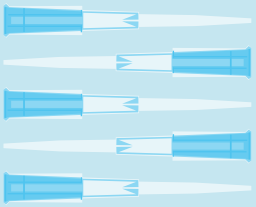
Biotix.com/sustainability

Biotix

What eco-impact can I make?

What if I used Biotix racked tips that contain 1/3 less plastic?

Save 800 lbs
of plastic each year!



What if 50,000 labs switched to Biotix CleanPak Reloads for 30 years?

1,875,000,000 lbs
of plastic saved!
Equivalent to the weight of
100,000+ dinosaurs!
Stretching from
San Diego to Austin!

What if I used Biotix racked tips over my career in the lab?*

Save 24,000 lbs
of plastic, equivalent to the weight of a T-Rex driving an SUV

What if 50,000 labs used less plastic with Biotix CleanPak Reloads?

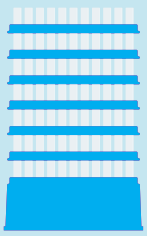
62,500,000 lbs
of plastic saved!

What if I used Biotix CleanPak my entire career?*

37,000 lbs
of plastic saved!

What if I switched to the Biotix CleanPak Reload?

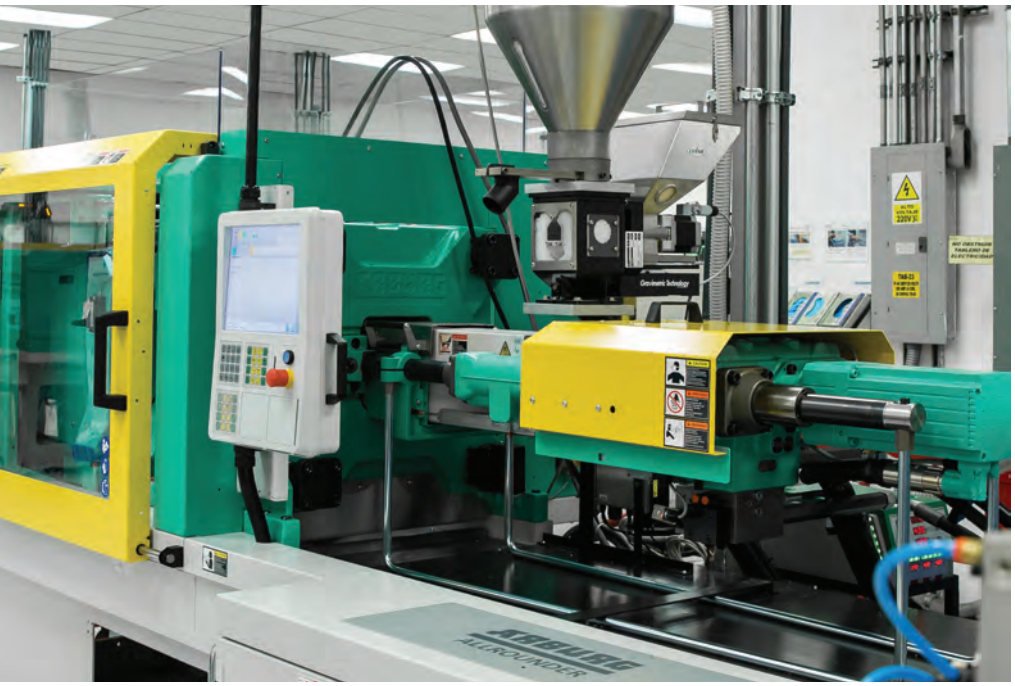
Save 1,200 lbs
of plastic each year!



*Weight comparisons are based on a lab using 100 cases of racked tips per year. Tip weight comparison made between the average weight of racked tips from of a highly recognized pipette tip provider compared to the average weight of racked tips from Biotix. Laboratory career based on a time period of 30 years.

OUR COMMITMENT TO MANUFACTURING EXCELLENCE

We are committed to innovating toward increasingly sustainable practices and products. At Biotix, sustainability starts before the tips are manufactured.



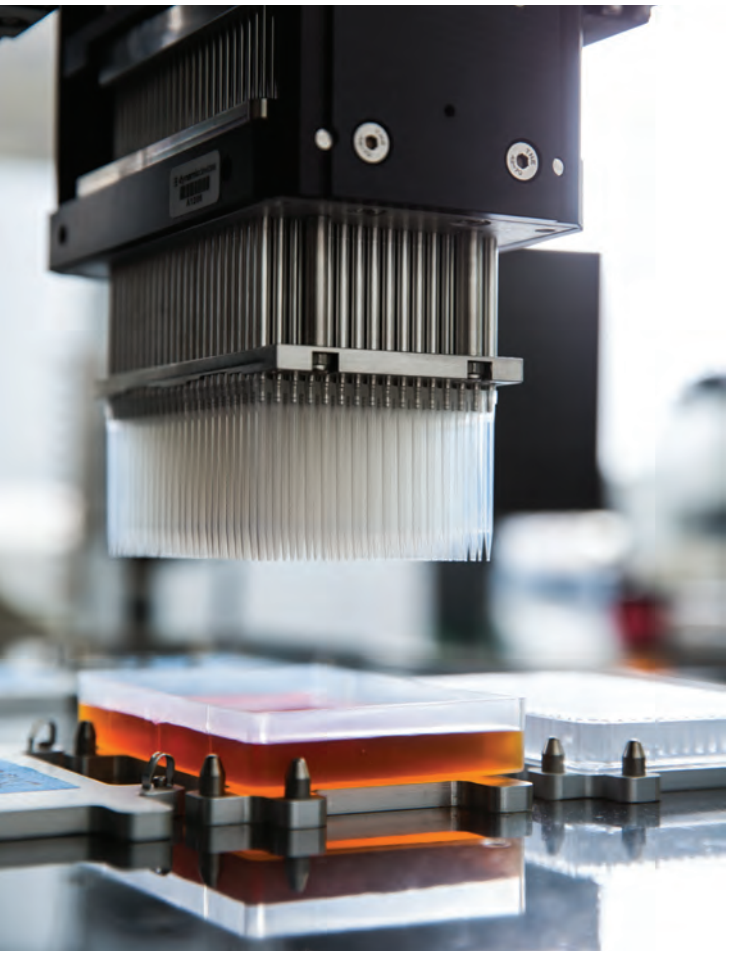
Hybrid Molding

Our plastics are produced on a new generation of electric and hybrid molding machines which consume 30% less electricity than traditional Hydraulic systems while increasing accuracy.

Streamlining Processes for Quality, Efficiency and Sustainability

At Biotix sustainability starts before the tips are manufactured. We have an ongoing commitment to lean manufacturing. Because we follow lean manufacturing processes, in 2015 and 2016 we routinely achieved Six Sigma quality standards on tip production with an acceptance ratio of 99.99966%. These continuous improvements mean fewer defects, less waste with better use of raw material, and more efficient production processes. Many strive for this, few achieve it.

Kanban process on molding components creates an efficient working environment where time is managed effectively and rare defects can be caught between steps.



Ensuring Reproducibility

At every stage of the manufacturing process, Biotix has implemented quality checks to ensure that only products that meet our stringent criteria arrive to your lab. For example, we calculate CV values during production for every lot that leaves our facility and confidently print each lot's unique CV value on every pack of manual and automation tips.

Providing a Secure Working Environment

Between 2012-2016 we have experienced zero accidents on the manufacturing floor. This is due to a commitment to best practices in production processes and safety. By implementing rigorous quality control and limiting human contact in the molding and assembly process we are able to efficiently and safely produce a reliable supply of liquid handling tools for our customers.

Chemical Resistance Chart

The information in this chart has been supplied to Biotix by various reputable raw material manufacturers, and is to be used only as a guide in selecting products for appropriate chemical compatibility. These values are based on laboratory tests with raw materials. Plastic components produced from these raw materials are frequently subject to influences that cannot be recognized in standard tests (temperature, pressure, material stress, etc.). In critical cases, it is essential that a test is carried out first to your unique protocol. Biotix does not warrant (neither express nor implied) that the information in this chart is accurate or complete, or that any material is suitable for any purpose. No legal claims can be derived from this information, nor do we accept any liability for it.

General Physical Properties

Classes of substances; 20°C	HDPE	LDPE	PC	PP
Acids, weak or dilute	E	E	E	E
Acids, strong or concentrated	E	E	G	E
Alcohols, aliphatic	E	E	G	E
Aldehydes	G	G	F	G
Bases	E	E	N	E
Esters	G	G	N	G
Hydrocarbons, aliphatic	F	G	F	G
Hydrocarbons, aromatic	F	G	N	F
Hydrocarbons, halogenated	N	F	N	F
Ketones	G	G	N	G
Oxidizing agents, strong	F	F	N	F

Plastics Acronym Chart

LowDensityPolyethylene	LDPE
HighDensityPolyethylene	HDPE
Polycarbonate	PC
Polypropylene	PP

Explanation of Footnotes

1 - Satisfactory to 72°F (22°C)
2 - Satisfactory to 120°F (48°C)
3 - Satisfactory to 90°F (32°C)
4 - Satisfactory to 120°F (93°C)

A = No effect
B = Minor Effect
C = Moderate Effect
D = Severe Effect; Not Recommended
E = No damage after 30 days of constant exposure
G = Little or no damage after 30 days of constant exposure
F = Some effect after seven days of constant exposure; may see cracking, crazing, loss of strength
N = Not recommended for continuous use
- = Not Available

Chemical Resistance Chart

Reagent	HDPE	LDPE	PC	PP
Acetaldehyde	C	C	C1	A1
Acetamide	A	A	D	A1
Acetate Solvent	A	A	-	B1
Acetic Acid	A	A2	B1	B1
Acetic Acid 20%	A	A	A1	A1
Acetic Acid 80%	A	D	B1	A
Acetic Acid, GlacialD	D	B1	A1	D
Acetic Anhydride	C	D	D	B1
Acetone, 50% water	-	-	-	A
Acetone	D	B1	D	A
Acetonitrile	A	A	D	A1
Acetophenone	C	D	D	C
Acetyl Chloride (dry)	-	D	D	D
Acetylene	-	D	D	A1
Acrylonitrile	A	A	D	A1
Adipic Acid	A	A	-	B2
Alanine	A	A	A	A
Alcohols				
- Amyl	A	B2	B1	B1
- Benzyl	B	D	-	A
- Butyl	-	A	A2	A
- Diacetone	A	B1	-	B2
- Ethyl	A	B	B2	A
- Isobutyl	A	A2	-	A1
- Isopropyl	a	A2	A2	A2

Reagent	HDPE	LDPE	PC	PP
- Methyl	A	A1	B1	A2
- Propyl	-	A2	-	A
Allyl Chloride	A	-	-	A
Aluminum Acetate (satured)	-	-	-	A
Aluminum Chloride	A	B2	A1	A
Aluminum Chloride 20%	A	B2	A1	A
Aluminum Fluoride	A	A2	-	A
Aluminum Hydroxide	A	A2	B1	A
Aluminum Nitrate	-	A2	A1	A2
Aluminum Potassium Sulfate 10%	A	A2	A1	A
AluminumPotassiumSulfate100%	A	A2	A2	A
Aluminum Sulfate	A	A2	A	A
Alums	-	A	-	A
Amines	B	C1	-	B2
Ammonia 10%	A	C1	D	A2
Ammonia Nitrate	-	A	-	A
Ammonia anhydrous	A	B2	D	A
Ammonia liquid	A	C1	D	A2
Ammonia Acetate	A	A	-	A
Ammonia Bifluoride	-	A2	-	A
Ammonium Carbonate	B	B2	-	A
Ammonium Chloride	A	A2	A2	A
Ammonium Flouride 25%	A	-	-	A2
Ammonium Hydroxide	A	A1	D	A
Ammonium Glycolate	A	A	B	A

Reagent	HDPE	LDPE	PC	PP
Ammonium Nitrate	A	A1	-	A
Ammonium Oxalate	a	-	A1	A
Ammonium Persulfate	A	A2	-	A
Ammonium Phosphate, Dibasic	-	A2	A2	A
AmmoniumPhosphate,Monobasic	-	A	-	A
Ammonium Phosphate, Tribasic	-	C	-	A
Ammonium Sulfate	A	A1	A2	A
Ammonium Sulfite	B	B2	-	A
Amyl Acetate	-	C1	D	B1
Amyl Alcohol	A	B2	B1	B1
Amyl Chloride	B	D	-	D
Aniline	B	C	D	A1
Aniline Hydrochloride	-	D	D	D
Antifreeze	-	-	-	D
Antimony Trichloride	B	B2	A2	A
AquaRegia(80%HCL,20%HNO3)	D	B1	D	B1
Arochlor 1248	-	C1	-	D
Aromatic Hydrocarbons	-	C	-	D
Arsenic Acid	B	B2	A1	A
Arsenic Salts	-	B	-	-
Barium Carbonate	-	B2	A2	A
Barium Chloride	B	A1	A	A
Barium Cyanide	-	B	-	D
Barium Hydroxide	-	B2	D	B
Barium Nitrate	-	B2	D	A
Barium Sulfate	B	B2	D	B1
Barium Sulfide	A	B2	-	B
Benzaldehyde	B	A1	D	D
Benzenamine	B	A	D	A
Benzene	D	D	D	D
Benzene Sulfonic Acid	A	A1	D	D
Benzoic Acid	A	A1	B1	B1
Benzol	-	C1	D	B
Benzyl Chloride	-	-	-	C1
Bleach	-	-	-	D
Bleaching liquors	-	A1	-	A1
Borax (Sodium Borate)	A	A2	-	B
Boric Acid	A	A2	-	A
Bromine	D	D	C1	D
Bromofone	D	D	D	D
Butadiene	D	D	D	C
Butane	-	C1	D	A1
Butanol (Butyl Alcohol)	-	B2	B1	A1
Butyl Amine	-	C1	D	B1
Butyl Ether	-	-	-	D
Butyl Phthalate	A	C1	D	B2
Butyl Acetate	B	C1	D	B1
Butyric Acid	D	D	D	B1

Reagent	HDPE	LDPE	PC	PP
Calcium Bisulfide	-	B1	-	A
Calcium Bisulfite	A	A1	D	A
Calcium Carbonate	-	B	C2	A
Calcium Chloride (30% in water)	A	B2	-	A2
Calcium Chloride (saturated)	A	-	-	A
Calcium Hydroxide 10%	A	-	-	A
Calcium Hydroxide (saturated)	A	-	-	A
Calcium Hydroxide	A	A2	D	A2
Calcium Hypochlorite 30%	A	-	-	A
CalciumHypochlorite(saturated)	A	-	-	A
Calcium Nitrate	B	A1	A2	A2
Calcium Oxide	-	B1	-	A
Calcium Sulfate	-	B1	A2	A
Calcium Sulfide	-	-	-	A
Carbolic Acid (Phenol)	-	D	D	B
Carbon Bisulfide	-	-	-	D
Carbon Dioxide (dry)	-	A1	-	A2
Carbon Dioxide (wet)	-	A1	-	A2
Carbon Disulfide	D	D	D	D
Carbon Monoxide	-	A2	-	A
Carbon Tetrachloride	C	D	D	D
Carbon Tetrachloride (dry)	C	D	-	D
Carbon Tetrachloride (wet)	C	-	-	D
Carbonic Acid	B	B2	A1	A
Cellulose Acetate	-	-	-	A
Chloral Hydrate	D	-	-	D
Chlorine Water	C	B1	-	D
Chlorine Anhydrous Liquid	C	D	C	D
Chlorine (dry)	B	D	-	D
Chloroacetic Acid	A	D	D	C1
Chlorobenzene (Mono)	D	C1	D	C1
Chlorobromomethane	-	A	-	A
Chloroform	D	C1	D	C1
Chlorosulfonic Acid	D	D	C1	D
Chromic Acid 5%	A	A	B	D
Chromic Acid 10%	A	A	B	D
Chromic Acid 30%	A	A	C	D
Chromic Acid 50%	A	A	D	D
Citric Acid	A	D	A1	A
Citric Oils	B	-	-	A
Copper Chloride	-	-	-	A
Copper Cyanide	-	B2	D	A
Copper Nitrate	-	B2	D	A
Copper Sulfate 5%	A	A2	A1	A
Copper Sulfate >55	A	A2	A1	A
Cresols	D	C1	D	D
Cresylic Acid	-	B1	D	A1
Cupric Acid	-	B1	A1	A2

Chemical Resistance Chart continued

Reagent	HDPE	LDPE	PC	PP
Cyclohexane	D	B1	B	D
Cyclohexanon	B	D	D	D
Detergents	A	D	A1	A
Dextrin	A	-	-	A
Dextrose	A	-	-	A
Diacetone Alcohol	A	A	D	A1
Dichlorobenzane	-	-	D	C1
Dichloroethane	C	C1	D	D
Diesel Fuel	D	C1	A2	A1
Diethyl Ether	D	-	D	A1
Diethylamine	D	D	D	A1
Diethylene Glyol	A	B2	B1	A2
Dimethyl Aniline	B	-	D	D
Dimethyl Formamide	A	A	D	A
Diphenyl	-	-	-	D
Diphenyl Oxide	-	-	-	D
Disodium Phosphate	A	-	-	A
Epson Salts (Magnesium Sulfate)	-	A2	A1	A
Ethane	-	-	-	D
Ethanol	A	B	B2	A
Ethanolamine	-	-	-	D
Ether	D	D	-	D
Ethyl Acetate	A	A	D	A1
Ethyl Benzoate	B	C2	D	B1
Ethyl Chloride	C	C1	D	D
Ethyl Ether	D	D	-	D
Ethylene Bromide	-	D	D	D
Ethylene Chloride	C	D	D	C1
Ethylene Chlorohydrin	-	D	D	D
Ethylene Dichloride	D	D	D	D
Ethylene Glycol	A	A2	B1	A
Ethylene Oxide	B	A	C1	D
Fatty Acids	A	D	B1	A
Ferric Chloride	D	A1	A2	A
Ferric Nitrate	-	A2	A1	A
Ferric Sulfate	-	A2	A1	A
Ferrous Chloride	A	A2	D	A
Ferrous Sulfate	-	A2	A1	A
Fluboric Acid	A	A2	-	A
Flourine	D	D	C	D
Fluosilicic Acid	B	A2	A1	A
Formaldehyde 40%	A	D	A1	A
Formaldehyde 100%	A	B	A2	C
Formic Acid	A	D	A1	A1
Freon 11	A	C	-	A
Freon 12	-	A1	-	A2
Freon 22	-	-	-	B

Reagent	HDPE	LDPE	PC	PP
Freon 113	-	-	B1	D
Freon TF	B	-	-	D
Fuel Oils	C	B	B1	A
Furan Resin	-	D	-	D
Furfural	A	D	D	D
Gallic Acid	A	A	-	A
Gasoline (high-aromatic)	B	A	A	A
Gasoline , leaded, ref.	B	-	A2	B
Gasoline, unleaded	B	-	A2	C1
Gelatin	A	A2	-	A
Glucose	A	A2	A1	A
Glycerin	A	A1	A2	A
Glycolic Acid	-	A2	-	A
Heptane	B	B1	B	C2
Hexane	C	D	D	B1
Hydraulic Oil (Petro)	A	C	-	D
Hydraulic Oil (Synthetic)	A	A	-	D
Hydrazine	D	-	D	C
Hydrobromic Acid 20%	D	B2	-	A2
Hydrobromic Acid 100%	D	B1	-	C1
Hydrochloric Acid 20%	A	A2	B1	B2
Hydrochloric Acid 37%	A	B2	D	C
Hydrochloric Acid 100%	D	-	D	B1
Hydrochloric Acid, Dry Gas	D	A2	-	B
Hydrocyanic Acid	A	A2	-	A
Hydrocyanic Acid (Gas 10%)	A	-	B1	A
Hydrofluoric Acid 20%	A	A2	D	A2
Hydrofluoric Acid 50%	A	A1	D	A2
Hydrofluoric Acid 75%	B	C1	D	C1
Hydrofluoric Acid 100%	D	-	D	C1
Hydrofluosilicic Acid 20%	B	B2	-	A
Hydrofluosilicic Acid 100%	C	B1	-	A
Hydrogen Gas	A	A2	A2	A
Hydrogen Peroxide 10%	A	A	A2	A
Hydrogen Peroxide 30%	A	C2	A2	B1
Hydrogen Peroxide 50%	A	C2	A2	B1
Hydrogen Peroxide 100%	A	C2	A	B1
Hydrogen Sulfide (aqua)	A	A	A	A1
Hydrogen Sulfide (dry)	A	A	-	A1
Hydroquinone	-	A	-	A
Iodine	B	A1	-	C
Isooctane	B	B	B1	A2
Isopropyl Acetate	B	B1	D	B1
Isopropyl Ether	D	B	D	B
Isotane	-	-	-	D
Kerosene	B	C1	D	B
Ketones	D	C1	D	C

Reagent	HDPE	LDPE	PC	PP
Laquer Thinners	D	A	B	D
Laquers	D	A	D	D
Lactic Acid	A	A1	B	B
Latex	-	-	-	A2
Lead Acetate	A	A2	-	A1
Lead Nitrate	A	A2	-	A2
Lead Sulfamate	-	A1	A1	A2
Linoleic Acid	-	A	-	B1
Lithium Chloride	D	A2	B1	A2
Lye: KOH Potassium Hydroxide	B	A	D	A
Lye: NaOH Sodium Hydroxide	B	D	D	A
Lye: Ca(OH)2 Calcium Hydroxide	B	A2	D	A2
Magnesium Bisulfate	-	-	A1	A2
Magnesium Carbonate	-	B	A1	A
Magnesium Chloride	A	A1	A2	A2
Magnesium Hydroxide	B	A2	A1	A
Magnesium Nitrate	B	A2	A1	A
Magnesium Sulfate (Epson Salts)	A	A2	A1	A
Maleic Acid	A	B2	-	A
Maleic Anhydride	A	D	-	D
Malic Acid	-	B2	-	A1
Melamine	-	-	-	A
Mercuric Chloride (dilute)	A	A	A	B
Mercuric Cyanide	-	A	-	B
Mercurous Nitrate	-	A	A2	A
Mercury	A	A	D	B
Methane	-	-	-	A
Methanol (Methyl Alcohol)	A	A1	B1	A2
Methyl Acetate	C	B1	D	D
Methyl Acrylate	-	-	-	D
Methyl Alcohol 10%	A	A1	B1	A2
Methyl Bromide	-	C1	-	C
Methyl Butyl Ketone	-	-	D	D
Methyl Cellusolve	-	-	D	B
Methyl Chloride	-	C1	D	D
Methyl Dichloride	-	-	-	D
Methyl Ethyl Ketone	D	D	D	B2
Methyl Isobutyl Ketone	D	C	D	A
Methyl Methacrylate	-	-	-	D
Methylamine	-	A1	-	A2
Methylene Chloride	D	D	D	B1
Mineral Spirits	D	B	C	B
Monoethanolamine	-	C	-	B
Morpholine	-	-	D	B2
Naphtha	-	A1	B	B
Naphthalene	B	C	-	B
Natural Gas	-	A	-	A

Reagent	HDPE	LDPE	PC	PP
Nickel Chloride	B	A	A2	A
Nickel Nitrate	B	A	D	A2
Nickel Sulfate	B	A	A	A
Nitrating Acid (<1%)	-	-	-	C
Nitrating Acid (<15% H2SO4)	-	-	-	C
Nitrating Acid (>15% H2SO4)	-	-	-	C
Nitrating Acid (<15% HNO3)	-	-	-	C
Nitric Acid (5-10%)	A	B	A	A
Nitric Acid (20%)	B	C	B1	A2
Nitric Acid (50%)	D	B1	B	B
Nitric Acid (Concentrated)	D	C1	C1	D
Nitrobenzene	D	C1	D	B1
Nitromethane	D	A	D	B2
Nitrous Acid	-	-	-	A
Nitrous Oxide	-	C	-	D
Oleic Acid	C	C2	-	B1
Oleum 25%	-	D	-	D
Oleum 100%	-	D	-	D
Oxalic Acid (cold)	A	A2	-	A2
Ozone	A	C1	A1	B
Palmitic Acid	-	-	-	B1
Parafin	B	B	A1	A1
Pentane	-	D	A	D
Perchloric Acid	D	B	-	C
Perchloroethylene Acid	D	D	D	D
Petrolatum	-	B	-	D
Petroleum	D	C1	-	B1
Phenol (10%)	D	B	B1	B1
Phenol (Carbolic Acid)	D	D	D	B
Phosphoric Acid (<40%)	A	A	A	A2
Phosphoric Acid (>40%)	A	B1	A	A2
Phosphoric Acid (crude)	B	B1	A	B2
Phosphoric Acid (molten)	D	-	-	D
Phosphoric Acid Anhydride	A	-	D	A
Phosphorus	-	B	-	A
Photographic Developer	-	A	A2	A
Photographic Solutions	A	A	A1	A2
Phthalic Acid	B	B2	-	A
Phthalic Anhydride	-	-	A1	D
Picric Acid	D	A	D	B1
Potash (Potassium Carbonate)	B	A1	-	A
Potassium Bicarbonate	B	A	-	A
Potassium Bromide	B	A	A1	A
Potassium Chlorate	B	A1	A1	A
Potassium Chloride	A	A1	A	A
Potassium Chromate	-	A	-	A
Potassium Cyanide Solutions	-	A	-	A

Chemical Resistance Chart continued

Reagent	HDPE	LDPE	PC	PP
Potassium Dichromate	B	A	A1	A
Potassium Ferricyanide	-	A2	-	A2
Potassium Ferrocyanide	-	A1	-	A
Potassium Hydroxide (Caustic Potato)	A	A	D	A
Potassium Iodite	B	B1	-	A2
Potassium Nitrate	B	A	A1	A
Potassium Permanganate	A	A	A2	A1
Potassium Sulfate	B	A2	A1	A
Potassium Sulfide	-	A2	-	A
Propane (liquefied)	D	C1	C1	A
Propylene Glycol	A	B2	B1	A2
Pyridine	D	B1	D	A2
Pyrogallic Acid	-	-	-	A
Salicylic Acid	-	B2	A1	A1
Silicone	-	-	A2	A
Silver Nitrate	A	A	A2	A1
Soap Solutions	B	D	A1	A
Soda Ash (see Sodium Carbonate)	A	B	A	A
Sodium Acetate	A	A	A1	A
Sodium Aluminate	-	-	-	-
Sodium Benzoate	B	A2	A2	A2
Sodium Bicarbonate	A	A2	A2	A
Sodium Bisulfate	B	A2	A1	A
Sodium Borate (Borax)	B	A2	A1	A2
Sodium Carbonate	A	B2	A2	A
Sodium Chlorate	-	B2	A1	A
Sodium Chloride	A	A2	A2	A
Sodium Cyanide	B	A2	-	A
Sodium Ferrocyanide	-	A	-	A
Sodium Fluoride	-	A2	-	A
Sodium Hydroxide (20%)	C	B	A2	A
Sodium Hydroxide (50%)	C	B	D	A
Sodium Hydroxide (80%)	C	-	D	A
Sodium Hypochlorite (100%)	C	B2	-	B
Sodium Hypochlorite (<20%)	A	A	C	A
Sodium Metaphosphate	B	A1	-	A1
Sodium Metasilicate	-	-	-	A
Sodium Nitrate	B	A2	-	A
Sodium Perborate	-	A1	-	A
Sodium Peroxyde	B	A	A2	B
Sodium Polyphosphate	B	A	-	A
Sodium Silicate	A	A2	-	A
Sodium Sulfate	-	A2	A2	A

Reagent	HDPE	LDPE	PC	PP
Sodium Sulfide	B	A2	D	A
Sodium Sulfite	B	B1	-	A2
Sodium Thiosulfate	-	A1	D	A2
Stannic Chloride	-	A2	A1	A
Stannous Chloride	-	B2	-	A
Stearic Acid	A	B1	A1	A2
Stoddard Solvent	-	C2	A2	C
Sulfate (Liquors)	A	A2	-	A
Sulfur Chloride	-	C1	-	C1
Sulfur Dioxide	D	B1	-	A1
Sulfur Dioxide (dry)	A	A1	A1	A1
Sulfur Hexafluoride	-	B	-	-
Sulfur Trioxide	-	-	-	C
Sulfur Trioxide (dry)	-	C1	-	D
Sulfuric Acid (<10%)	A	A1	A1	A2
Sulfuric Acid (10 - 75%)	A	A1	B1	A1
Sulfuric Acid (75 - 100%)	B	C	D	C1
Sulfuric Acid (cold concentrated)	B	D	-	A2
Sulfuric Acid (hot concentrated)	B	D	D	D
Sulfurous Acid	B	B2	-	A
Tannic Acid	A	B2	C	A
Tartaric Acid	A	A1	-	A
Tetrachloroethane	-	-	-	C
Tetrachloroethylene	C	B	D	D
Tetrahydrofuran	C	C1	D	C2
Tin Salts	-	-	-	A
Toluene	D	C1	D	C1
Trichloroacetic Acid	C	A	D	A
Trichlorethane	D	-	D	C
Trichloroethylene	D	D	-	C1
Tricresylphophate	-	B1	-	A1
Triethlamine	-	-	-	D
Trisodium Phosphate	A	A	-	A
Turpentine	B	D	D	D
Urea	A	A	D	A
Urine	A	A2	-	A
Vinegar	A	A	A2	A
Vinyl Acetate	D	A	-	B1
Water, Deionized	A	-	-	A2
Water, Distilled	A	A2	A2	A
Water, Salt	A	A2	A2	A
Xylene	D	B	D	B
Zinc Chloride	A	A1	A2	A
Zinc Sulfate	A	A2	A2	A

Index

BECAUSE YOUR DATA QUALITY MATTERS,
YOUR TIPS MATTER.

Biotix

www.biotix.com