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Transferpette® S

The Transferpette® S pipettes have been benchmarked against leading pipettes for premium performance, light weight, comfort and easy service.

- **Thumb-tip Volume Selection:** Set and secure the volume without even shifting your hand position!
- **Short Pipetting Stroke:** Shortest range of pipetting motion among premium pipettes reduces risk of repetitive strain injury.
- **Fully Autoclavable at 121°C:** Repeatedly autoclavable without disassembly or recalibration.
- **Light Weight and Rugged:** Made with precision advanced materials for chemical resistance, dimensional stability and light weight.
- **Full Pipetting Range:** Adjustable and fixed-volume single channel pipettes from 0.1µL to 10mL; multichannels from 0.5µL to 300µL.
- **Economical:** Fast, in-house cleaning, repair and calibration (without tools) for long, economical service. Accepts most manufacturers' tips.



The Transferpette® S.
The performance standard in pipetting.



Single & multichannel pipettes

Comfortable

Broad, curved for ergonomic tip ejection.

Secure

A volume brake helps protect against accidental volume changes.

Clearly Accurate

4-digit display for precise volume settings; always remains visible during pipetting.

Reduced Static Strain

Pipette suspends from relaxed hand.

Calibration Adjustment Without Tools

Easy Calibration™ makes it quick. Calibration flag indicates adjustment from factory settings.

Smooth Operation

Specially selected sealing material provides uniformly smooth pipetting stroke.

Low Strain

Resilient V-rings and the stepped design of the tip ejector reduce tip mounting and ejection forces. V-rings support broad tip compatibility. Two O-ring design on 0.5-10µL model provides directional accuracy and improved fit.

Convenient

Manifold rotates 360° in both directions to allow you to pipette from any angle.



Transferpette® S single & multichannel pipettes

The Transferpette® S family of pipettes provides unparalleled comfort and ease-of-use in a central-button pipette.

- Innovative materials reduce weight, improve corrosion resistance and protect accuracy, even after repeated autoclaving.
- Short pipetting stroke reduces the risk of RSI (repetitive strain injury), and enhances comfort for operators with smaller hands. Curved finger rest supports pipette for a relaxed grip.
- True one-handed operation. Volume can be set and secured with the tip of the thumb - even while wearing gloves.
- Large separate tip ejector for reduced tip ejection forces.
- Pistons in multichannel models are light, dimensionally stable and corrosion resistant.
- Easy Calibration™ technology ensures fast, easy, in-lab calibration adjustments without tools for ISO/GLP compliance. (See description of Easy Calibration™, page 56).
- CE-IVD compliant.

Color Coded

Easy selection of the right tip.



Maximum compatibility

Tip cone design offers excellent fit with BRAND tips and broadest compatibility with tips from other manufacturers.

Items supplied

The Transferpette® S is supplied with the following items:

- Performance certificate
- Operating manual
- Shelf mount



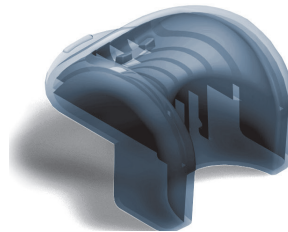
Easy thumb-tip volume setting



Covered nameplate—identifies pipettes without messy tape!



Red recalibration flag indicates adjustment from factory specifications



Shelf mount included with Transferpette® S single and multichannel pipettes



Carousel stand for handy storage of up to six Transferpette® S single or multichannel pipettes

Transferpette® S single and multichannel pipettes



NEW!

Transferpette® S Adjustable Volume Single Channel Pipettes

Capacity, µL**	Model	A* < ± %	CV* ≤ %	Subdivision, µL	Cat. No.	2014 List Price
0.1-1	D-1	2	1.2	0.001	704768	\$342.00
0.1-2.5	D-2.5	1.4	0.7	0.002	704769	311.00
0.5-10	D-10	1	0.5	0.01	704770	311.00
2-20	D-20	0.8	0.4	0.02	704772	311.00
10-100	D-100	0.6	0.2	0.1	704774	311.00
20-200	D-200	0.6	0.2	0.2	704778	311.00
100-1000	D-1000	0.6	0.2	1	704780	311.00
500-5000 (0.5-5mL)	D-5000	0.6	0.2	5	704782	311.00
1000-10000 (1-10mL)	D-10000	0.6	0.2	10	704784	311.00



Transferpette® S Fixed Volume Single Channel Pipettes

Capacity, µL	Model	A* < ± %	CV* ≤ %	Subdivision, µL	Cat. No.	2014 List Price
10	F-10	1	0.5	—	704708	169.00
20	F-20	0.8	0.4	—	704716	169.00
25	F-25	0.8	0.4	—	704720	169.00
50	F-50	0.8	0.4	—	704728	169.00
100	F-100	0.6	0.2	—	704738	169.00
200	F-200	0.6	0.2	—	704744	169.00
500	F-500	0.6	0.2	—	704754	169.00
1000	F-1000	0.6	0.2	—	704762	169.00

Transferpette® S Single channel pipettes are supplied with performance certificate, operating manual, shelf mount and three year warranty



Transferpette® S Single Channel Starter Sets

Starter Set	Includes following Transferpette® S models	Cat. No.	2014 List Price
Micro	D-1, D-10, D-100	704790	\$745.00
Mid-Size	D-20, D-200, D-1000	704791	745.00
Macro	D-1000, D-5000, D-10000	704792	745.00
Standard	D-10, D-100, D-1000	704793	745.00

Starter Sets include three pipettes with performance certificates, operating manual, three shelf mounts, and three filled Tip-Boxes with appropriate sized tips.



Transferpette® S -8/-12 Multichannel Pipettes

Capacity, µL**	A* < ± %	CV* ≤ %	Subdivision, µL	Transferpette® S -8 Channel	2014 List Price	Transferpette® S -12 Channel	2014 List Price
0.5-10	1.6	1.0	0.01	703700	\$760.00	703720	\$938.00
5-50	0.8	0.4	0.1	703706	760.00	703726	938.00
10-100	0.8	0.3	0.2	703708	760.00	703728	938.00
20-200	0.8	0.3	0.2	703710	760.00	703730	938.00
30-300	0.6	0.3	0.5	703712	760.00	703732	938.00

Transferpette® S -8/-12 pipettes supplied with performance certificate, operating manual, shelf mount, two tip boxes, reagent reservoir, pack of replacement V-rings. One-year warranty.

Accessories

	Cat. No.	2014 List Price
Carousel Stand - for up to six Transferpette® S single or multichannel pipettes, pack of 1	704805	\$134.00
Individual Multichannel Stand - for all Transferpette® S, Transferpette® electronic and Transferpette® multichannel pipettes, pack of 1	703440	38.00
Shelf Mount - for all Transferpette® S single or multichannel pipettes, pack of 1	704810	28.00
Autoclavable Reagent Reservoirs – PP, with translucent lids, pack of 10	703459	33.00
Autoclavable Reagent Reservoirs – PP, sterile, individually wrapped, 100 pieces total	703411	274.00
Autoclavable Reagent Reservoirs – PP, sterile, 40 packs of five, 200 pieces total	703409	251.00

A*=Accuracy, CV*=Coefficient of Variation

* The value of accuracy and coefficient of variation are final test values referring to the delivered nominal volume, instrument and distilled water at equilibrium with ambient temperature (20°C/68°F) and with smooth operation.

** Tip selection chart see page 24

Transferpette® single & multichannel pipettes

BRAND Transferpette® pipettes are lightweight, reliable tools designed for use in research and routine laboratory applications.

Ease Liquid-Handling Tasks: Every function has a dedicated control to simplify operation as well as limit inadvertent tip ejection or volume adjustment.

Secure, Comfortable Tip Ejector

Tip ejector is mounted high, next to the pipetting key to limit unintended tip ejection.

The thumb sweeps comfortably sideways from the pipetting key, allowing you to deliver the needed force with the minimum of strain.

Ergonomic Design

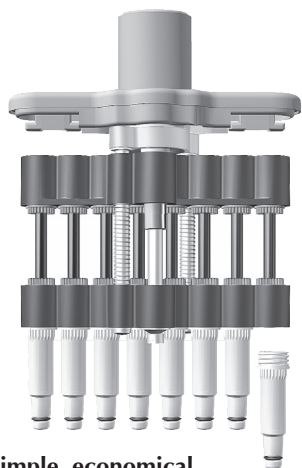
The side-mounted pipetting key reduces hand fatigue, especially during serial pipetting applications. The unique hook-shaped handle lets the light-weight pipette suspend freely from the operator's hand.

Easy-To-Read Settings



Simple Operation

The volume adjustment knob turns easily without snagging gloves.



Simple, economical, in-lab service

All Transferpette® eight- and twelve-channel pipettes feature patented individually removable tip cones for easy cleaning and seal replacement. This is especially handy if faults are discovered during calibration, as only the individual channel needs service.

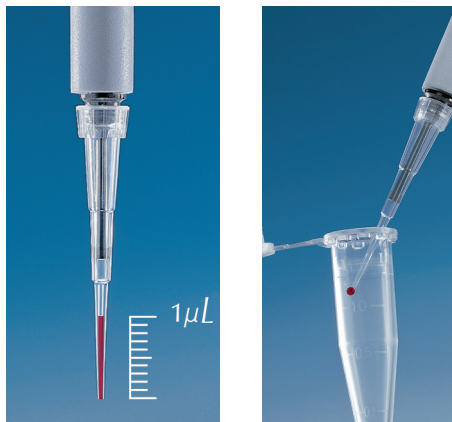
All Transferpette® single channel pipettes can be disassembled for cleaning and reassembled in seconds without tools. Integrated spring/seal construction simplifies in-lab service.



Transferpette® single and multichannel pipettes

SUB-MICRO PIPETTES

The Transferpette® S and Transferpette® 0.1-1µL can pipette small volumes with unparalleled accuracy and precision. The pipette, when used with BRAND nano-cap™ tips, drastically reduces the column of air between the piston and sample. The ultra-thin bore and walls allow visual confirmation of sample volume and precise placement into vials.



Transferpette® Adjustable Volume Single Channel Pipettes — ship with operating manual, performance certificate, & three-year warranty.

Capacity, µL**	A* < ±		CV* ≤		Subdivision, µL	Cat. No.	2014 List Price
	%	µL	%	µL			
0.1-1	2	0.02	1.2	0.012	0.005	704101	\$342.00
0.5-10	1	0.1	0.8	0.08	0.05	704102	311.00
2-20	0.8	0.16	0.4	0.08	0.1	704103	311.00
2-20	0.8	0.16	0.4	0.08	0.1	704104	311.00
5-50	0.8	0.4	0.4	0.2	0.1	704172	311.00
10-100	0.6	0.6	0.2	0.2	0.1	704174	311.00
20-200	0.6	1.2	0.2	0.4	1	704178	311.00
100-1000	0.6	6	0.2	2	1	704180	311.00
500-5000 (0.5-5mL)	0.6	30	0.2	10	10	704182	311.00

Transferpette®-8 Eight Channel Pipettes — ship with pipette stand, reagent reservoir, two tip boxes, spare V-rings, performance certificate, & one-year warranty.

0.5-10	1.6	0.16	1.0	0.1	0.05	703600	724.00
2-20	1.0	0.2	0.6	0.12	0.1	703602	724.00
2.5-25	1.0	0.25	0.6	0.15	0.1	703604	724.00
5-50	0.8	0.4	0.4	0.2	0.1	703606	724.00
10-100	0.8	0.8	0.3	0.3	0.1	703608	724.00
20-200	0.8	1.6	0.3	0.6	1	703610	724.00
30-300	0.6	1.8	0.3	0.9	1	703612	724.00

Transferpette®-12 Twelve Channel Pipettes — ship with pipette stand, reagent reservoir, two tip boxes, spare V-rings, performance certificate, & one-year warranty.

0.5-10	1.6	0.16	1.0	0.1	0.05	703620	893.00
2-20	1.0	0.2	0.6	0.12	0.1	703622	893.00
2.5-25	1.0	0.25	0.6	0.15	0.1	703624	893.00
5-50	0.8	0.4	0.4	0.2	0.1	703626	893.00
10-100	0.8	0.8	0.3	0.3	0.1	703628	893.00
20-200	0.8	1.6	0.3	0.6	1	703630	893.00
30-300	0.6	1.8	0.3	0.9	1	703632	893.00

Accessories

Benchtup Pipette Stand - for up to six single channel pipettes, pack of 1	703208	190.00
Wall-Mounted Pipette Rack - for up to three single channel pipettes, pack of 1	703210	80.00
Stand for Transferpette®-8/-12 multichannel pipettes - holds one pipette, pack of 1	703440	38.00
V-ring/O-ring (green) for Transferpette®-8/-12 ultra-micro tip cones (0.5-10µL, 2-20µL), pack of 24	703380	28.60
V-ring/O-ring (black) for Transferpette®-8/-12 tip cones - all other sizes, pack of 24	703491	30.60

A*=Accuracy, CV*=Coefficient of Variation

* The value of accuracy and coefficient of variation are final test values referring to the delivered nominal volume, instrument and distilled water at equilibrium with ambient temperature (20°C/68°F) and with smooth operation.

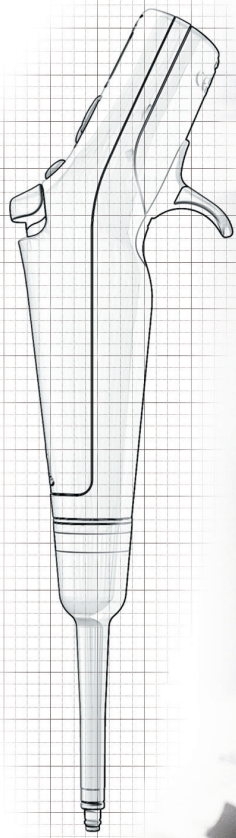
** Tip selection chart see page 24

Transferpette® electronic

The BRAND *Transferpette*® *electronic* single- and multichannel pipettes combine the innovation of the *Transferpette*® with the convenience and automation of motorized, electronic pipettes. The result is an accurate, ergonomic instrument for use in most laboratory applications. Both single- and multichannel models are available in five volume ranges, and feature an autoclavable pipette shaft or manifold, respectively.

- **Delivers Precise, Accurate Volumes**
- **Increases Sample Throughput**
- **Reduces Maintenance Downtime:** All models, both single- and multichannel, can be disassembled for cleaning. The multichannel models also feature BRAND's innovative user-removable, individual tip cones for easy in-lab maintenance or replacement.
- **Maximizes Pipetting Comfort**

Transferpette® *electronic* pipettes from BRAND. Performance, Value, and Unbelievable Comfort.



Single Channel Stand



Charging Stand

for up to three single channel pipettes (excluding 5mL)



Single & multichannel pipettes

Clear, Legible LCD Screen



Intuitive Interface

User-friendly design allows easy operation, even for new lab techs.

Soft Touch Pipetting Key



Adjustable Finger Rest

The adjustable finger rest adapts the instrument to your most comfortable hand position.

Rechargeable Battery

Over 4000 pipetting cycles between charges means well over a full day of uninterrupted pipetting.

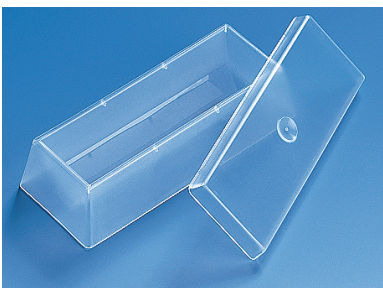
Multichannel V-rings

V-rings on tip cones of multichannel models improve tip fit and reduce mounting and ejection forces.



Easy Maintenance

Multichannel manifolds disassemble easily for cleaning or service. See page 6 for more details on the manifolds of BRAND'S mechanical and electronic pipettes.



60mL Reagent Reservoir

- Polypropylene with translucent lid
- Autoclavable at 121°C (250°F) for 20 minutes
- Ten reservoirs per pack
- Sterile version available



Transferpette® electronic single and multichannel pipettes

Innovative Ergonomics

The *Transferpette® electronic* pipettes are the first single and multichannel pipettes respectively, to be independently certified “Ergonomics Approved” by a Nationally Recognized Testing Laboratory (NRTL), TÜV Rheinland. The combination of ergonomic features and intuitive design resulted in outstanding user acceptance ratings of 1.54 and 1.55.

Reduce pipetting strain!

From the very beginning, the development of the *Transferpette® electronic* was driven by the goal of reducing the strain of pipetting without sacrificing performance. It was that focus that led to such innovations as the adjustable finger rest.



Five Operating Modes

Quickly and easily scroll to one of five convenient operating modes that support all of the most common pipetting applications

Pipetting (PIP Mode)

Previously set volume is aspirated into the pipette tip and then discharged.



Mixing of Samples (PIPmix Mode)

Program for mixing liquids. The sample is repeatedly aspirated and discharged and the number of cycles is displayed.



Reverse Pipetting (revPIP Mode)

Program especially designed for greater accuracy when pipetting liquids with a high viscosity, high vapor pressure or low surface tension.



Pipetting for Electrophoresis (GEL mode)

Patented program for loading of electrophoresis gels. (Not available on 1000µL and 5mL instruments).



Dispensing (DISP Mode)

A single aspirated volume is dispensed in a selected number of smaller, equal aliquots.



Transferpette® electronic single and multichannel pipettes

Items supplied

The *Transferpette® electronic* is supplied with the following items:

- Battery
- 120V AC adapter with charging cable (except instruments 705339, 705340, 705343, 705346, and 705347)
- One pipette tip sample pack (single channels only)
- Silicone oil
- Operating manual
- One-year warranty

Additional Items supplied

Multichannel models also include:

- Pipette stand
- One TipBox
- One TipRefill
- Reagent reservoir
- Tip cone tool
- Set of replacement V- rings



Transferpette® electronic Single Channel Pipettes

Capacity, µL**	A* < ±		CV* ≤		Subdivision, µL	Cat. No.	2014 List Price
	%	µL	%	µL			
0.5-10 with AC charger	1.0	0.1	0.4	0.04	0.01	705319	\$510.00
2-20 with AC charger	1.0	0.2	0.4	0.08	0.02	705320	510.00
20-200 with AC charger	0.8	1.6	0.2	0.4	0.2	705323	510.00
100-1000 with AC charger	0.6	6	0.2	2	1.0	705326	510.00
500-5000 (0.5-5mL) with charger	0.6	30	0.2	10	5.0	705327	510.00
0.5-10 without charger	1.0	0.1	0.4	0.04	0.01	705339	479.00
2-20 without charger	1.0	0.2	0.4	0.08	0.02	705340	479.00
20-200 without charger	0.8	1.6	0.2	0.4	0.2	705343	479.00
100-1000 without charger	0.6	6	0.2	2	1.0	705346	479.00
500-5000 (0.5-5mL) without charger	0.6	30	0.2	10	5.0	705347	479.00

Transferpette®-8 electronic Eight Channel Pipette

0.5-10	1.2	0.12	0.8	0.08	0.01	705419	917.00
1-20	1.0	0.2	0.5	0.1	0.02	705420	917.00
5-100	0.8	0.8	0.25	0.25	0.1	705423	917.00
10-200	0.8	1.6	0.25	0.5	0.2	705424	917.00
15-300	0.6	1.8	0.25	0.75	0.5	705426	917.00

Transferpette®-12 electronic Twelve Channel Pipette

0.5-10	1.2	0.12	0.8	0.08	0.01	705469	1097.00
1-20	1.0	0.2	0.5	0.1	0.02	705470	1097.00
5-100	0.8	0.8	0.25	0.25	0.1	705473	1097.00
10-200	0.8	1.6	0.25	0.5	0.2	705474	1097.00
15-300	0.6	1.8	0.25	0.75	0.5	705476	1097.00

Accessories

Spare NiMH battery	705500	57.00
Single Channel Charging Stand - for up to three pipettes (excluding 5mL), pack of 1	705392	295.00
Single Channel Stand - for 5mL & 10mL, pack of 1	705386	88.00
Stand for Transferpette®-8/-12 multichannel pipettes - holds one pipette, pack of 1	703440	38.00
120V AC Charger-for <i>Transferpette® electronic</i>	705352	54.00

A*=Accuracy, CV*=Coefficient of Variation

* The value of accuracy and coefficient of variation are final test values referring to the delivered nominal volume, instrument and distilled water at equilibrium with ambient temperature (20°C/68°F) and with smooth operation.

** Tip selection chart see page 24

Pipette Tips and Filter Tips

NEW!

BRAND Pipette tips and filter tips are manufactured in a cleanroom under the most modern production conditions. They are automatically rack packed and packaged to ensure consistently high quality.

- High-purity polypropylene, free from DiHEMDA and oleamide
- Manufactured without lubricants
- Cadmium-free pigments
- Graduation for a quick volume check
- All rack-packed tips and filter tips up to 1000 μ L are free of DNA (<40fg), RNase (<8.6fg), endotoxins (<1pg) and ATP (<1fg)
- Autoclavable at 121 $^{\circ}$ C (2bar), acc. DIN EN 285
- Environmentally friendly packaging systems
- CE-marked according to IVD-Directive 98/79 EC
- BIO-CERT[®] tips are sterile according to ISO 11 137 and the AAMI guidelines; a SAL of 10⁻⁶ is obtained.

**Superior Quality Tips.
Priced for Value.**



High Quality Tips

Pipette tips are the most frequently used disposables in the laboratory. As laboratory tests have become increasingly sensitive, tip requirements have become more stringent over time. From the raw materials, to the molding machines, and quality control procedures, many parameters need to be considered to meet the highest standards for research and standardized applications.

For the manufacturing of pipette tips and filter tips, BRAND exclusively uses raw materials that are free from the additives di(2-hydroxyethyl) methyl dodecyl ammonium (DiHEMDA) and 9-octadecenamide (oleamide). These additives are often found in raw polypropylene, and can interfere with biological tests, leading to false results. Only highly polished molds are used, so that no parting agents or demolding aids are needed.



One of the world's largest cleanroom facilities



BRAND disposable items for the life sciences are produced using the most advanced cleanroom techniques in one of the world's largest cleanrooms for laboratory disposable items. The ongoing cleanroom monitoring includes continuous measurements of air particulates, positive air pressure, air exchange rate, room temperature, and the relative humidity, among other things. This ensures that the actual parameters can immediately be checked against the nominal values. Deviations are detected immediately and suitable countermeasures can be taken before the limit values are exceeded. The high-precision control of environmental conditions provides a very high degree of stability in the corresponding parameters, especially the room temperature. This uniformity, together with quality testing of the final product by batch, guarantees the consistently high quality in the life science products from BRAND. For the production of disposable items, Class 8, 7, and 5 cleanrooms are available, all validated according to ISO 14 644-1. Compliance with ISO 14 644-1 is certified by external, independent auditors.

New packaging options

TipBox/TipRefill System

Transparent window

For easy visual inspection.

Usable with a partially loaded multichannel pipette

The rimless tip-tray border enables problem-free loading of individual pipette tips with multichannel instruments.

Colored tip-trays with side panel labeling

The contents of the box are always clearly visible.

Dual function hinged and push-on lid

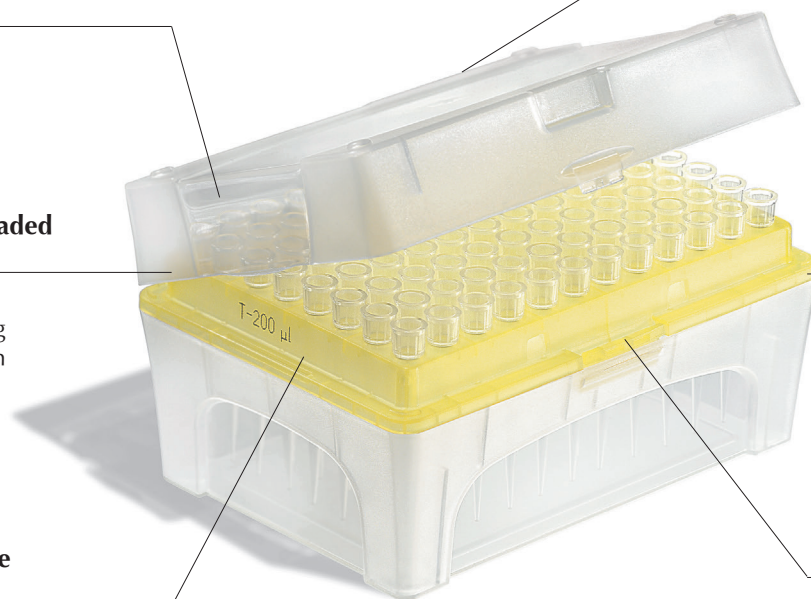
Simply rotate 180° to change closure method.

No deflection during tip loading

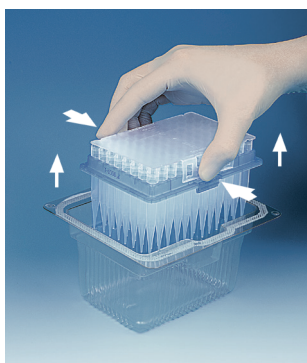
The tip-tray is fabricated from especially rigid polypropylene.

Opening and closing with one hand

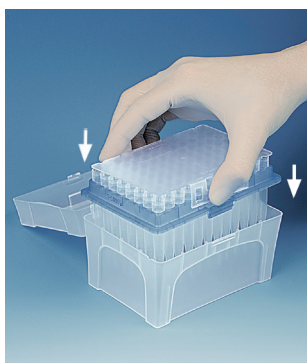
The clamping mechanism holds the tip-tray securely in the box.



Sterile reloading



Press the long sides of the transfer aid together and continue pressing them together while withdrawing the tip-tray. Ensure that the holding straps for the transfer aid are correctly positioned.



Insert the filled tip-tray perpendicularly from above into the previously sterilized TipBox until it locks into place.



Remove the transfer aid from the mounting plate. Finished – all without tip contact!

Dual function lid



TipBox features a unique dual function lid design. To change closure method from hinged to push-on, simply remove lid and rotate 180 degrees.

TipRefill, TipStack™ and Transfer Aid

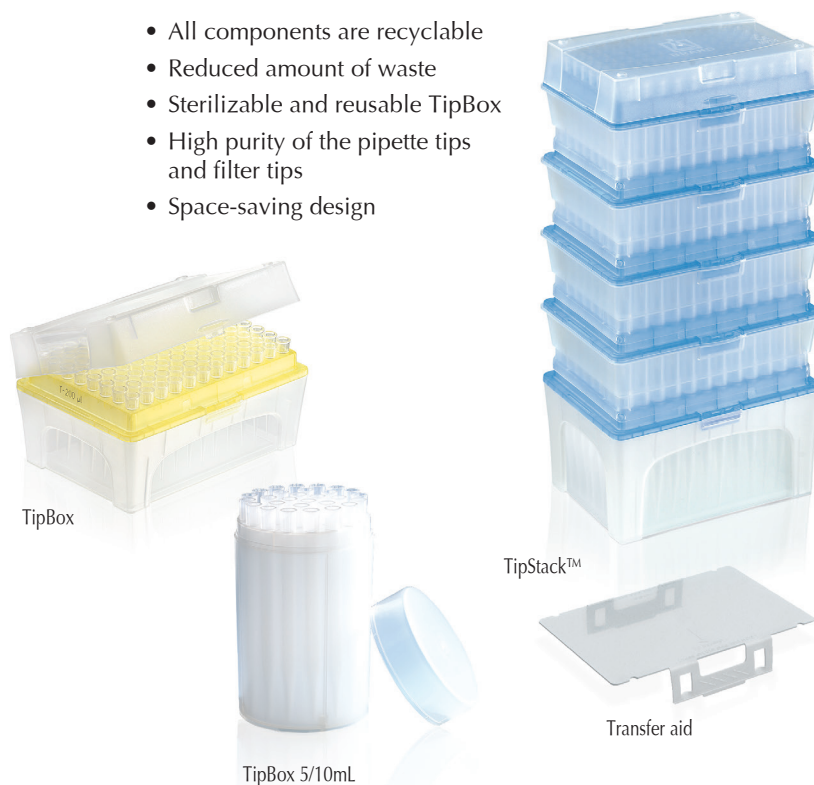
TipRefill

Compared to the filled TipBoxes, the amount of waste with the new refill units is reduced by over 20%. All pipette tips and filter tips up to 1000µL are free of DNA, RNases, endotoxins and ATP (for detailed information see page 12). TipRefills in BIO-CERT® quality are sterile according to ISO 11 137 and the AAMI guidelines, a SAL of 10⁻⁶ is obtained. These racks are supplied with a transfer aid that enables simple, contamination-free transfer into a previously sterilized TipBox. Product information is printed on one side of all tip-trays

**TipStack™**

A tip tower containing 5 filled tip-trays and a TipBox constitute the new, space-saving refill system for 20µL, 200µL and 1000µL tips. Tightly sealing spacers prevent the tips from getting stuck together, and ensure them to be free from DNA, RNases, endotoxins and ATP. The sterile TipStacks (BIO-CERT® quality) are supplied with a transfer aid for contamination-free use in a previously sterilized TipBox

- All components are recyclable
- Reduced amount of waste
- Sterilizable and reusable TipBox
- High purity of the pipette tips and filter tips
- Space-saving design

**TipRefills NEW!**
sterile and non-sterile

For TipBox. Refill unit, protected in an environmentally compatible packaging of recyclable PET. Sterile TipRefills are supplied with a transfer aid for sterile handling when inserting into a previously autoclaved box.

Bulk packed in bags,
non-sterile

All tips and filter tips are produced under supervised state-of-the-art clean-room conditions and automatically shrink-wrapped in reclosable bags and packaged in cardboard boxes. The batch number is printed on every bag.

TipBox NEW!
sterile and non-sterile

Polypropylene with hinged lid/push-on lid. Stackable and repeatedly autoclavable at 121°C (2bar), acc. DIN 285. (Empty tip box, ordering information see page 18)

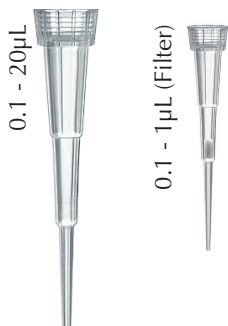
TipBox 5/10mL,
non-sterile

The 5mL and 10mL tips are only available in the TipBox configuration.

TipStack™ NEW!
sterile and non-sterile

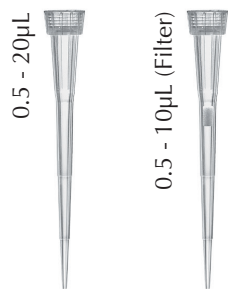
Space-saving, environmentally compatible refill system for TipBox. 5 racks, of 96 tips and 1 TipBox. Sterile TipStacks are supplied with a transfer aid for sterile handling when inserting into a previously autoclaved box.

Pipette Tip Size & Descriptions



0.1 - 20µL
0.1 - 1µL (Filter)

The nano-cap™ tip was specially developed for the nanoliter range and hence is ideal for molecular biological applications such as PCR. It is 37mm long, and features a capillary rise that is even visible to the naked eye at 0.1µL. The capillary part of the tip conveniently fills gel wells for gel electrophoresis systems from most manufacturers. Suitable for pipettes up to 20µL. The racked tips are colorless and placed into a grey-colored tip tray.



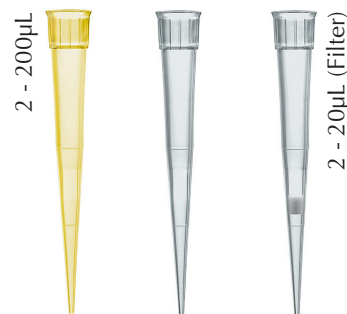
0.5 - 20µL
0.5 - 10µL (Filter)

The slender design and 46mm length allow pipetting in microtubes and microplates without touching the walls. Graduation at 2µL and 10µL for quick volume check. The racked tips are colorless and placed into a grey-colored tip tray.



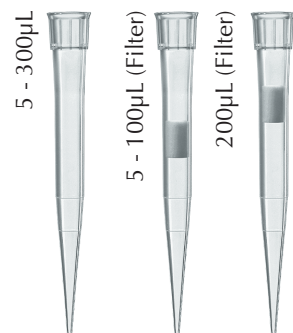
1 - 50µL
1 - 20µL (Filter) NEW!

With a length of 50mm, the tip is ideal for working down to the bottom of narrow containers. Graduation at 2.5, 10, 25 and 50µL for quick volume check. The racked tips are colorless and placed into a grey-colored tip tray.



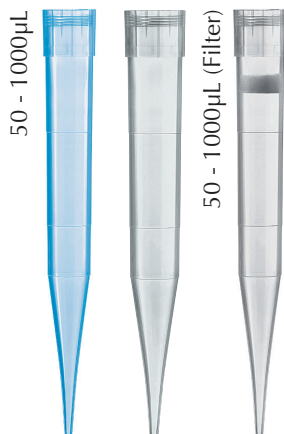
2 - 200µL
2 - 20µL (Filter)

A tested and proven thin-walled tip. Lighter in weight, 50mm long and can be used for virtually all pipettes with yellow color code. Graduation at 20µL and 100µL for quick volume check. Bulk tips are yellow colored. The racked tips are colorless and placed into a yellow-colored tip tray.



5 - 300µL NEW!
5 - 100/200µL (Filter)

The thin-walled tip is suitable for reverse pipetting and plate washing. It is 53mm long and can also be used for pipettes with yellow color code. It is particularly suited for working with multichannel pipettes. Graduation at 50 and 100 for quick volume check. The racked tips are colorless and placed into a green-colored tip tray.



50 - 1000µL
50 - 1000µL (Filter)

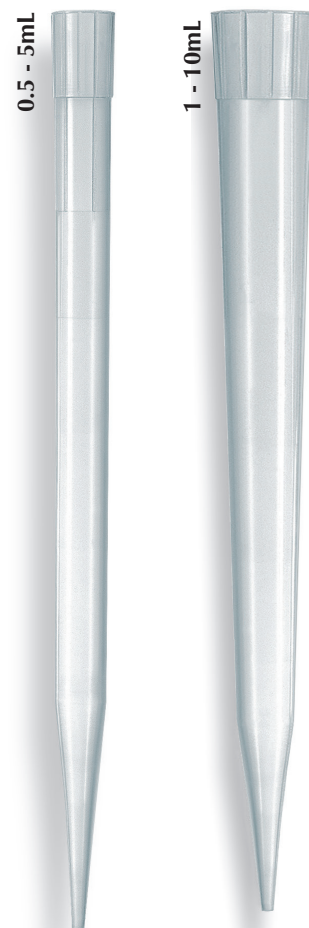
Proven thin-walled tip for routine laboratory and research pipetting. Its length is 70mm. Graduation at 250, 500 and 1000µL for a quick volume check. Bulk tips are blue colored. The racked tips are colorless and placed into a blue-colored tip tray.

0.5 - 5mL

Particularly slender shape, at 160 mm length and approx. 9.6mm diameter! This allows pipetting even from narrow volume measuring equipment such as volumetric flasks with NS 12/21. Suitable for microliter pipette Transferpette® and Thermo Fisher Scientific FINNPIPETTE®.

1 - 10mL

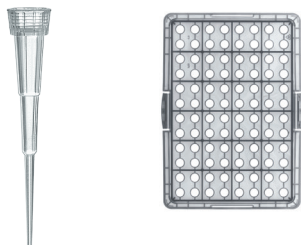
156.5mm length and approx. 15mm diameter! Ideal for working with the microliter pipette Transferpette® S 10mL. Compatible with Eppendorf® systems.



Pipette Tips

ORDERING INFORMATION

0.1 - 20µL



	Quantity	Pack of	Non-Sterile Cat. No.	2014 List Price	Sterile Cat. No.	2014 List Price
Pipette tips, 0.1-20µL						
				Non-Sterile		Sterile
bulk	2000	2 bags, 1000 each	732002	\$91.00	—	—
bulk, xxl	10000	10 bags, 1000 each	732022	384.00	—	—
Tip-Refill	960	10 TipRefills, 96 each	732102	104.00	732122	\$158.00
TipBox	480	5 boxes, 96 each	732202	77.00	—	—
TipBox Sterile	960	10 boxes, 96 each	—	—	732222	158.00

0.5 - 20µL



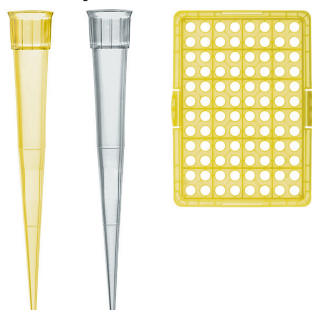
	Quantity	Pack of	Non-Sterile Cat. No.	2014 List Price	Sterile Cat. No.	2014 List Price
Pipette tips, 0.5-20µL						
				Non-Sterile		Sterile
bulk	2000	2 bags, 1000 each	732004	70.00	—	—
bulk, xxl	10000	10 bags, 1000 each	732024	297.00	—	—
Tip-Refill	960	10 TipRefills, 96 each	732104	51.00	732124	139.00
TipBox	480	5 boxes, 96 each	732204	30.00	—	—
TipBox Sterile	960	10 boxes, 96 each	—	—	732224	139.00
TipStack™	960	2x5 refills, 96 each	732244	88.00	732264	139.00

1 - 50µL



	Quantity	Pack of	Non-Sterile Cat. No.	2014 List Price	Sterile Cat. No.	2014 List Price
Pipette tips, 1 -50µL						
				Non-Sterile		Sterile
bulk	2000	2 bags, 1000 each	732006	70.00	—	—
bulk, xxl	10000	10 bags, 1000 each	732026	297.00	—	—
Tip-Refill	960	10 TipRefills, 96 each	732106	51.00	732126	139.00
TipBox	480	5 boxes, 96 each	732206	30.00	—	—
TipBox Sterile	960	10 boxes, 96 each	—	—	732226	139.00

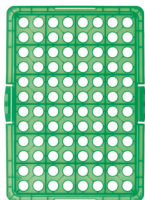
2 - 200µL



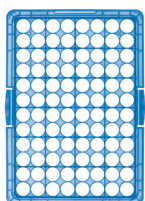
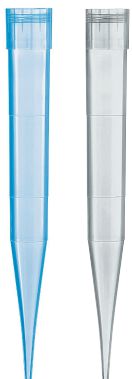
	Quantity	Pack of	Non-Sterile Cat. No.	2014 List Price	Sterile Cat. No.	2014 List Price
Pipette tips, 2-200µL (bulk tips are yellow colored)						
				Non-Sterile		Sterile
bulk	1000	1 bag, 1000 each	732008	19.00	—	—
bulk, xxl	10000	10 bags, 1000 each	732028	142.00	—	—
Tip-Refill	960	10 TipRefills, 96 each	732108	35.00	732128	105.00
TipBox	480	5 boxes, 96 each	732208	23.00	—	—
TipBox Sterile	960	10 boxes, 96 each	—	—	732228	105.00
TipStack™	960	2x5 refills, 96 each	732248	39.00	732268	105.00

Pipette Tips

5 - 300µL



50 - 1000µL



0.5 - 5mL



1 - 10mL



ORDERING INFORMATION

	Quantity	Pack of	Non-Sterile Cat. No.	2014 List Price	Sterile Cat. No.	2014 List Price
Pipette tips, 5 – 300µL				Non-Sterile		Sterile
bulk	1000	1 bag, 1000 each	732010	\$28.00	—	—
bulk, xxl	10000	10 bags, 1000 each	732030	209.00	—	—
Tip-Refill	960	10 TipRefills, 96 each	732110	82.00	732130	\$106.00
TipBox	480	5 boxes, 96 each	732210	50.00	—	—
TipBox Sterile	960	10 boxes, 96 each	—	—	732230	106.00

Pipette tips, 50 – 1000µL (bulk tips are blue colored)

	Quantity	Pack of	Non-Sterile Cat. No.	2014 List Price	Sterile Cat. No.	2014 List Price
Pipette tips, 50 – 1000µL (bulk tips are blue colored)				Non-Sterile		Sterile
bulk	1000	2 bags, 500 each	732012	21.00	—	—
bulk, xxl	5000	10 bags, 500 each	732032	78.00	—	—
Tip-Refill	960	10 TipRefills, 96 each	732112	49.00	732132	179.00
TipBox	480	5 boxes, 96 each	732212	37.00	—	—
TipBox Sterile	960	10 boxes, 96 each	—	—	732232	184.00
TipStack™	960	2x5 refills, 96 each	732252	100.00	732272	184.00

Pipette tips, 0.5 – 5mL

	Quantity	Pack of	Non-Sterile Cat. No.	2014 List Price	Sterile Cat. No.	2014 List Price
Pipette tips, 0.5 – 5mL				Non-Sterile		Sterile
bulk	200	1 bag, 200 each	702595	41.00	—	—
bulk, xxl	1000	5 bags, 200 each	702600	193.00	—	—
TipBox 5mL	28	1 box, 28 each	702605	43.00	—	—

Pipette tips, 1 – 10mL

	Quantity	Pack of	Non-Sterile Cat. No.	2014 List Price	Sterile Cat. No.	2014 List Price
Pipette tips, 1 – 10mL				Non-Sterile		Sterile
bulk	200	2 bags, 100 each	702603	81.00	—	—
bulk, xxl	1000	10 bags, 100 each	702604	364.00	—	—
TipBox 10mL	18	1 box, 18 each	702608	85.00	—	—

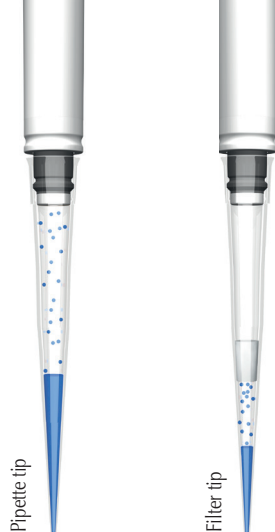
TipBox, with tip-tray, empty



ORDERING INFORMATION

	Cat. No.	2014 List Price
TipBox, with tip-tray PP, stackable, pack of 1		
up to 20µL	732990	\$4.60
for 200µL	732992	4.60
for 300µL	732994	4.60
for 1000µL	732996	4.60

Filter Tips



Non-self-sealing filter tips from BRAND have a PE filter that is free from chemical additives. Permeability is controlled by the combination of pore size and filter length, so that no aerosols can reach the pipette shaft. These filters function with consistent reliability. On the other hand, liquids can pass very slowly should they accidentally contact the filter. Since the filter does not

swell as in the case of self-sealing filter tips, the sample can be recovered from the filter by simply actuating the pipette's blow-out function, or by centrifugation if necessary. This is clearly an important advantage of non-self-sealing filters, especially when working with valuable samples. As an added advantage, the absence of filter additives protects samples from contamination.

0.1 - 1µL (Filter)



ORDERING INFORMATION

	Quantity	Pack of	Sterile Cat. No.	2014 List Price
Filter tips, 0.1 – 1µL				
TipRefill	960	10 Tip Refills, 96 each	732622	\$215.00
TipBox Sterile	960	10 boxes, 96 each	732722	328.00

0.5 - 10µL (Filter)



Filter tips, 0.5 – 10µL

TipRefill	960	10 Tip Refills, 96 each	732624	193.00
TipBox Sterile	960	10 boxes, 96 each	732724	239.00

1 - 20µL (Filter)

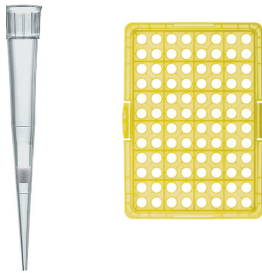


Filter Tips, 1 – 20µL

TipRefill	960	10 Tip Refills, 96 each	732626	193.00
TipBox Sterile	960	10 boxes, 96 each	732726	239.00

Filter Tips

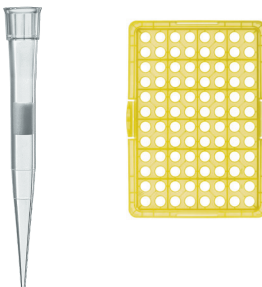
2 – 20µL (Filter)



ORDERING INFORMATION

	Quantity	Pack of	Sterile Cat. No.	2014 List Price
Filter Tips, 2 – 20µL				
TipRefill	960	10 Tip Refills, 96 each	732628	\$162.00
TipBox Sterile	960	10 boxes, 96 each	732728	239.00

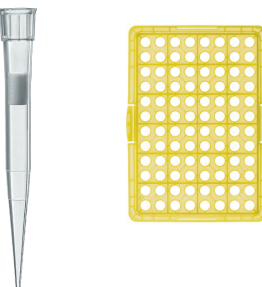
5 - 100µL (Filter)



Filter Tips, 5 – 100µL

TipRefill	960	10 Tip Refills, 96 each	732630	162.00
TipBox Sterile	960	10 boxes, 96 each	732730	239.00

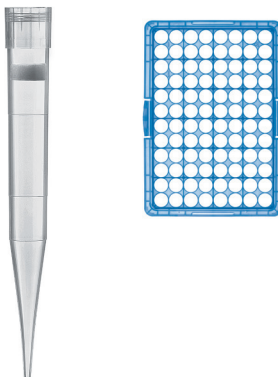
5 - 200µL (Filter)



Filter Tips, 5 – 200µL

TipRefill	960	10 Tip Refills, 96 each	732632	162.00
TipBox Sterile	960	10 boxes, 96 each	732732	239.00

50 - 1000µL (Filter)



Filter Tips, 50 – 1000µL

TipRefill	960	10 Tip Refills, 96 each	732634	299.00
TipBox Sterile	960	10 boxes, 96 each	732734	305.00

Pipette Tips and Filter Tips in Standard and Ultra Low Retention Quality

Optimum results are achieved in combination with BRAND microliter pipettes. BRAND quality tips seat perfectly for precise analyses.

Pipette and filter tips from BRAND are tested for BRAND pipettes and most of the pipette types of GILSON®, Thermo Fisher Scientific FINNPIPETTE®, Eppendorf® and BIOHIT®/sartorius®. The 5mL tip is exclusively tested for BRAND pipettes and Thermo Fisher Scientific FINNPIPETTE®. The 10mL tip is suitable for BRAND and Eppendorf®.

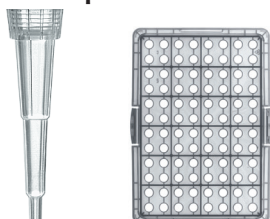
Ultra-Low Retention Pipette Tips



The surfaces of the Ultra Low Retention tips are produced through a special, patented physicochemical process. The homogeneous, defect-free surface thus produced has extremely low surface tension – over 50% less than PTFE (see table, page 22). This significantly reduces sample loss and provides substantially higher reproducibility when working with critical media.

- Ideal for biological samples that contain detergents such as TRITON™ X-100, SDS, Tween etc.
- High chemical resistance. Ideal for working with solvents.
- No additives that can be leached out! No siliconization of the surface!
- The tips can be autoclaved at 121°C (2bar) without damaging the material properties.

0.1 - 20µL



ULTRA-LOW RETENTION PIPETTE TIPS

	Quantity	Pack of	Non-Sterile Cat. No.	2014 List Price	Sterile Cat. No.	2014 List Price
Pipette tips, 0.1 – 20µL						
TipBox, ULR	480	5 boxes, 96 each	732302BT	\$59.00	—	—
TipBox Sterile, ULR	960	10 boxes, 96 each	—	—	732322	\$163.00

0.5 - 20µL



				Non-Sterile		Sterile
Pipette tips, 0.5-20µL						
TipBox, ULR	480	5 boxes, 96 each	732304	39.00	—	—
TipBox Sterile, ULR	960	10 boxes, 96 each	—	—	732324	107.00
TipStack™, ULR	960	2x5 refills, 96 each	732344	60.00	732364	107.00

1 - 50µL



				Non-Sterile		Sterile
Pipette tips, 1 -50µL						
TipBox, ULR	480	5 boxes, 96 each	732306	39.00	—	—
TipBox Sterile, ULR	960	10 boxes, 96 each	—	—	732326	107.00

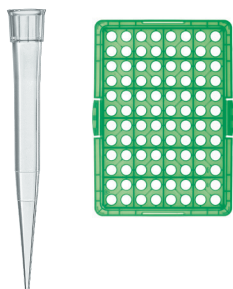
2 - 200µL



				Non-Sterile		Sterile
Pipette tips, 2-200µL						
TipBox, ULR	480	5 boxes, 96 each	732308	29.00	—	—
TipBox Sterile, ULR	960	10 boxes, 96 each	—	—	732328	101.00
TipStack™, ULR	960	2x5 refills, 96 each	732348	51.00	732368	98.00

Ultra-Low Retention Pipette Tips

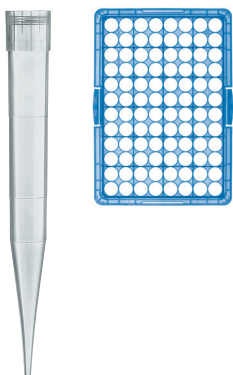
5 - 300µL



ULTRA-LOW RETENTION PIPETTE TIPS

	Quantity	Pack of	Non-Sterile Cat. No.	2014 List Price	Sterile Cat. No.	2014 List Price
Pipette tips, 5 – 300µL						
TipBox, ULR	480	5 boxes, 96 each	732310	\$39.00	—	—
TipBox Sterile, ULR	960	10 boxes, 96 each	—	—	732330	\$101.00

50 - 1000µL

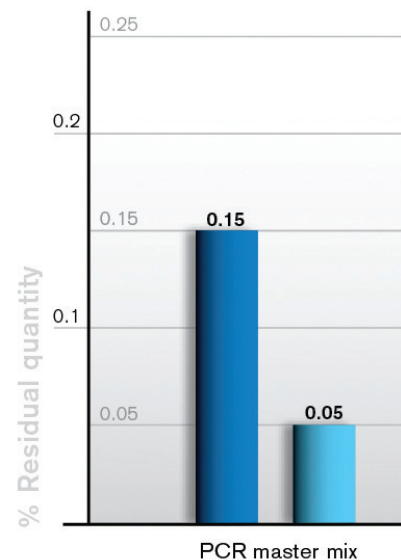
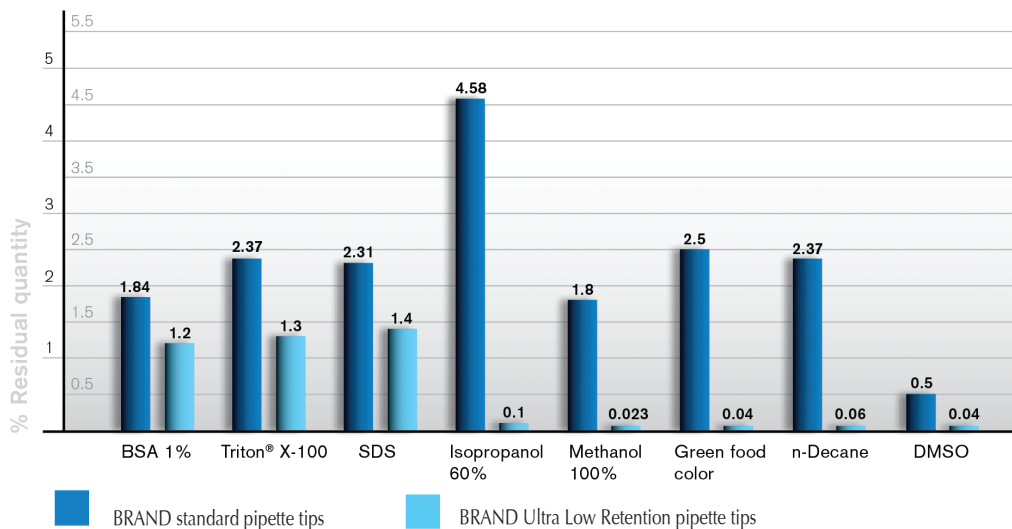


Pipette tips, 50 – 1000µL

	Quantity	Pack of	Non-Sterile	Sterile
TipBox, ULR	480	5 boxes, 96 each	732312 \$47.00	—
TipBox Sterile, ULR	960	10 boxes, 96 each	—	732332 \$122.00
TipStack™, ULR	960	2x5 refills, 96 each	732352 84.00	732372 168.00

Comparison chart

Post pipetting media retention levels of 200µL Standard and Ultra Low Retention pipette tips from BRAND. Measurements performed by rinsing and subsequent photometric analysis. For a demonstration of the process visit www.brandtech.com/ULRvideo



Filtered Ultra-Low Retention Pipette Tips

0.1 - 1µL (Filter)



ULTRA-LOW RETENTION FILTER TIPS

	Quantity	Pack of	Sterile Cat. No.	2014 List Price
Filter tips, 0.1 – 1µL				
TipBox Sterile, ULR	960	10 boxes, 96 each	732822	\$240.00

0.5 - 10µL (Filter)



Filter tips, 0.5 – 10µL				
TipBox Sterile, ULR	960	10 boxes, 96 each	732824	187.00

1 - 20µL (Filter)



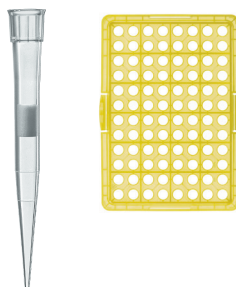
Filter Tips, 1 – 20µL				
TipBox Sterile, ULR	960	10 boxes, 96 each	732826	187.00

2 - 20µL (Filter)



Filter Tips, 2 – 20µL				
TipBox Sterile, ULR	960	10 boxes, 96 each	732828	187.00

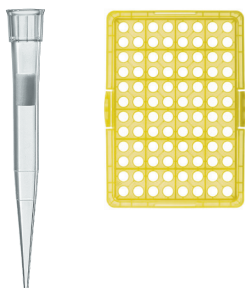
5 - 100µL (Filter)



Filter Tips, 5 – 100µL				
TipBox Sterile, ULR	960	10 boxes, 96 each	732830	182.00

Filtered Ultra-Low Retention Pipette Tips

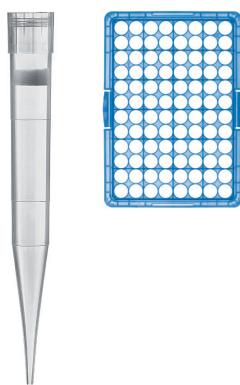
50 - 200µL (Filter)



ULTRA-LOW RETENTION FILTER TIPS

	Quantity	Pack of	Sterile Cat. No.	2014 List Price
Filter Tips, 5 – 200µL				
TipBox Sterile, ULR	960	10 boxes, 96 each	732832	\$182.00

50 - 1000µL (Filter)



Filter Tips, 50 – 1000µL

TipBox Sterile, ULR	960	10 boxes, 96 each	732834	235.00
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Pipette tips Filter tips Volume range	Transferpette® single channel** Nominal volume													Transferpette® multichannel** Nominal volume									
	1µL	2.5µL	5µL	10µL	20µL	20µL***	25µL	50µL	100µL	200µL	500µL	1000µL	2mL	5mL	10mL	10µL	20µL	25µL	50µL	100µL	200µL	300µL	
0.1 - 20µL	✓	✓		✓	✓											✓	✓						
0.5 - 20µL		✓		✓	✓											✓	✓						
1 - 50µL		✓		✓	✓											✓	✓						
2 - 200µL*			✓			✓	✓	✓	✓	✓								✓	✓	✓	✓	✓	✓
5 - 300µL			✓			✓	✓	✓	✓	✓								✓	✓	✓	✓	✓	✓
50 - 1000µL*											✓	✓											
0.5 - 5mL													✓	✓									
1 - 10mL															✓								
0.1 - 1µL	✓			✓												✓							
0.5 - 10µL		✓		✓	✓											✓	✓						
1 - 20µL		✓		✓	✓											✓	✓						
2 - 20µL			✓			✓	✓	✓	✓	✓								✓	✓	✓	✓	✓	✓
5 - 100µL			✓			✓	✓	✓	✓	✓								✓	✓	✓	✓	✓	✓
5 - 200µL										✓								✓	✓	✓	✓	✓	✓
50 - 1000µL											✓	✓											

✓ = Tip volume less than pipettes nominal volume

*) Bulk tips are yellow or blue colored, racked tips are colorless in a yellow-colored or blue-colored tip tray

***) Electronic pipettes are not available in all specified volumes *** Transferpette® with yellow color code

PLT™ Pipette Leak Testing Unit

Improve process reliability with functional validation of air-displacement pipettes!

The most frequent cause of inaccuracy in piston-operated pipettes is leakage. This arises from damage either to the seals, pistons, or tip cones. Often not detectable by the naked eye, leaks lead to significant volume errors. The BRAND PLT™ Pipette Leak Tester (patent pending) detects even the smallest leaks in air displacement pipettes within seconds.

- Limit values for all common sizes of single and multichannel pipettes in the volume range 1µL to 10mL are pre-programmed.
- Test with or without tips
- Results in seconds

To ensure accurate results, air-displacement pipettes must be checked at regular intervals and the results must be compared with the ISO 8655-2 error limits. However, a calibration certificate only reflects the results at the time of testing. The time between calibrations is crucial, since leaks can occur at any time. Well over 80% of pipettes sent in for repair have leaks and are outside their volume tolerances, even if they do not drip.

While the PLT unit cannot replace regular gravimetric testing, daily pipette checks can provide a safeguard during the periods between calibrations. Even the smallest leaks are detected and quantified! Process reliability for the pipettes is thus significantly improved.

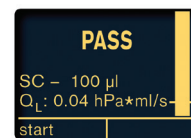
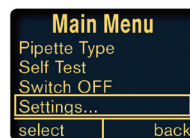
Testing with and without the tip

To check the overall pipette system, the test is conducted with a tip mounted. When a leak has been identified, the test can be repeated without a tip to determine whether the leak arises from the tip cone/tip coupling region.

Dynamic or static test?

Dynamic test the pipette button must be pushed down numerous times during the measurement period.

In the **static test**, the pipette button is not pressed during the test procedure, i.e. the piston does not move.



Quantifiable results are generated, with pass/fail criteria for each pipette size, based on over 35 years of experience.

Items supplied:

The PLT unit is supplied with universal power supply (100-240V, 50/60Hz), single-channel adapters for testing with and without tips and carrying/storage case.

Description	Cat. No.	2014 List Price
PLT Pipette Leak Testing Unit	703970	\$1,571.00
Multichannel Pipette Adapter, Pack of 1	703977	205.00
Filters, PE, for Pipette Adapter, Pack of 10	703978	10.60



Transferpettor™

The Transferpettor™ positive displacement pipette is the ideal tool for use with liquids that render traditional air-displacement pipettes ineffective. Unlike air displacement pipettes, the piston of the Transferpettor™ directly expels the media from the tip, wiping the tip walls completely clean. This results in negligible residual wetting and highly accurate, reproducible results, especially with viscous, foaming, high-vapor-pressure, and other “problematic” liquids.

- **Works in a Broad Range of Applications:** The Transferpettor™ is an excellent tool for applications in wastewater treatment plants, biochemical, genetics and molecular biology laboratories, wineries, breweries, refineries, and more.
- **Dispenses Glycerin:** For use with viscous solutions up to 40,000cSt (mm²/s) and high density media (up to 13.6g/cm³) such as concentrated protein solutions, oils, fats, resins, and glycerin.
- **Dispenses Surfactants:** Use the Transferpettor™ to accurately pipette surfactants such as Tween® 20, Mucosol®, and more.
- **Dispenses Acetone:** The Transferpettor™ is designed for use with high-vapor-pressure media (up to 500mbar), including alcohols, acetone, and hydrocarbons that would otherwise vaporize into an air displacement tip.
- **Reduces Sample Prep Costs:** Because residual wetting is negligible, the Transferpettor™ reduces lab costs by eliminating the need to discard tips after each use.



Transferpettor™ Station

The Ideal Tool for Pipetting Problematic Media.



Transferpettor™ positive displacement pipette

Technical Data

Operating limits and exclusions

Liquids unsuitable for use with the Transferpettor™ include, but are not limited to those with:

- A density exceeding 13.6g/cm³
- A viscosity exceeding 40,000cSt (mm²/s), depending on instrument capacity.
- A vapor pressure exceeding 500mbar
- Chemicals that attack either PP or PE. See page 126.
- Temperature of instrument and reagents must be between 15° and 40°C (59° and 104°F)
- Instrument, tips and seals are not autoclavable.

Items supplied

The Transferpettor™ pipette includes:

- One tip and seal
- Seal mounting/removal tool
- Performance certificate
- Operating manual
- One-year warranty

ORDERING INFORMATION

Capacity, µL	A* < ±		CV* ≤		Max Viscosity mm ² /sec.	Subdivision, µL	Color, µL	Cat. No.	2014 List Price
	%	µL	%	µL					
Transferpettor™									
100-500µL	0.5	2.5	0.2	1.0	40,000	1.0	Green	702804	\$346.00
200-1000µL	0.5	5.0	0.2	2.0	20,000	1.0	Yellow	702806	346.00
1-5mL	0.5	25.0	0.2	10.0	6,000	10	Red	702810	346.00
2-10mL	0.5	50.0	0.2	20.0	2,000	10	Orange	702812	346.00
Reusable Transferpettor™ Tips - Polypropylene, pack of 10									
For Transferpettor™, 100-500µL							Green	702852	20.00
For Transferpettor™, 200-1000µL							Yellow	702854	20.00
For Transferpettor™, 1-5mL							Red	702858	20.00
For Transferpettor™, 2-10mL							Orange	702860	20.00
Reusable Transferpettor™ Piston Seals - Polyethylene, pack of 10									
For Transferpettor™, 100-500µL							Green	702864	33.00
For Transferpettor™, 200-1000µL							Yellow	702866	33.00
For Transferpettor™, 1-5mL							Red	702870	33.00
For Transferpettor™, 2-10mL							Orange	702872	33.00
Transferpettor™ Station Keeps 2 instruments, tips, and seals conveniently at hand in the workplace								702890	112.00

* The value of accuracy and coefficient of variation are final test values referring to the delivered nominal volume, instrument and distilled water at equilibrium with ambient temperature (20°C/68°F) and with smooth operation.

A*=Accuracy, CV*=Coefficient of Variation



HandyStep® S

The BRAND HandyStep® S repeating pipette provides unprecedented versatility in a purely mechanical repeating pipette. In conjunction with BRAND PD-Tip™ syringe tips, the HandyStep® S offers nearly sixty different volume settings with accuracy, precision and dependability.

- **Comfortable:** The slim design of the HandyStep® S is lightweight, well-balanced, and provides a convenient control layout for smooth dispensing and one handed volume selection.
- **Reliable:** Robust construction, inspired design and innovative polymers deliver a dependable instrument.
- **Ready-To-Go:** A purely mechanical design with no batteries to charge or replace means the HandyStep® S is ready when you are. A convenient integrated volume table provides a quick reference for dispensed volumes.
- **Flexible:** Ten sizes of PD-Tip™ syringe tips allow the HandyStep® S to dispense 59 different volumes. Open design allows use of third party tips—no more being locked into a sole source!
- **Contact-Free:** A tip ejection system allows the user to remove tips without handling.

More than just precise –
slim, light and dependable!



Technical Data

Operating limits and exclusions

Liquids unsuitable for use with the HandyStep® S include, but are not limited to, those with:

- Vapor pressure exceeding 500mbar
- Viscosity: 20mPa S with 50mL PD-Tips™; 260mPa S with 5mL PD-Tips™; 977mPa S with 1mL PD-Tips™
- Reagents that attack PP (PD-Tip™ cylinder), HDPE (PD-Tip™ piston), LCP (PD-Tip™ piston 0.1mL) or PC/PBT and polycarbonate
- Temperature of instrument and reagent must be between 15° and 40°C (59° and 104°F).
- Instrument and tips must not be autoclaved

Items supplied

The HandyStep® S is supplied with the following items:

- Performance certificate
- Shelf/rack mount
- One each: 0.1mL, 1mL and 10mL PD-Tip™ syringe tips
- Operating manual
- Two-year warranty

HandyStep® S repeating pipette

Setting At a Glance

Large, legible volume setting indicator.

Perfectly Aligned

Optimally positioned dispensing lever for easy thumb movement.

Simple

Unified piston locking/filling lever makes aspiration easy.

Hands-Free Disposal

Ergonomic eject button, for contact-free, safe ejection of contaminated dispenser tips.

Chart Topper

Two-sided tip/volume chart assists in setting and tip selection.

Big Wheel

Volume adjustments are easily made with a simple thumb movement.

Comfortable

Finger rest is optimally located for both balance and convenient control access. Relaxed even when performing long pipetting tasks.

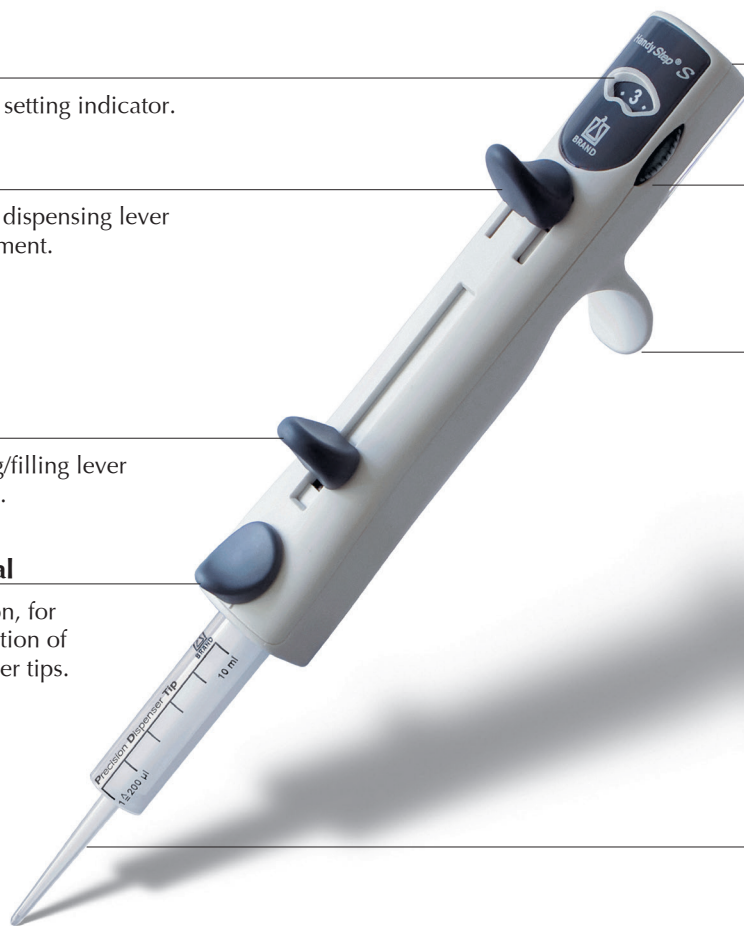
Shelf/Rack Mount

Shelf/rack mount to keep your HandyStep® S close at hand. Also retrofits to Transferpette® S carousel stand.



Flexible

The HandyStep® S is compatible with PD-Tip™ syringe tips, as well as third-party, and dealer private label tips.



Accuracy Table HandyStep® S with BRAND PD-Tip™ Syringe Tips

Nominal Volume PD-Tip, mL	Volume Range, µL	Stroke setting ^ % of nominal volume (A* ≤ ± %)			Stroke setting ^ % of nominal volume (CV* ≤ %)		
		1 Δ 2%	3 Δ 6%	5 Δ 10%	1 Δ 2%	3 Δ 6%	5 Δ 10%
0.1	2-10	4.0	2.4	1.6	6.0	3.0	2.0
0.5	10-50	2.5	1.5	1.0	2.5	1.5	1.0
1	20-100	2.5	1.5	1.0	2.0	1.2	0.8
1.25	25-125	2.5	1.4	0.9	2.0	1.1	0.7
2.5	50-250	1.8	1.1	0.7	1.5	0.9	0.6
5	100-500	1.8	1.1	0.7	1.5	0.9	0.7
10	200-1000	1.8	1.1	0.7	2.0	1.2	0.8
12.5	250-1250	1.8	1.1	0.8	3.2	2.0	1.4
25	500-2500	1.5	0.9	0.6	3.04	1.5	1.0
50	1000-5000	1.5	0.8	0.5	5.0	1.8	1.2

* Error limits refer to the partial volume set relative to the PD-Tip, obtained when instrument, PD-Tip and distilled water are equilibrated at ambient temperature (20°C/68°F) and with smooth operation. The testing is according to DIN EN ISO 8655-5.

A*=Accuracy, CV*=Coefficient of Variation

Note: the nominal volume is the maximum adjustable partial volume for each PD-Tip™ size.

Tip Size, mL

Setting	0.1	0.5	1	1.25	2.5	5	10	12.5	25	50	Steps
1	2	10	20	25	50	100	200	250	500	1000	49
1.5	3	15	30	37.5	75	150	300	375	750	1500	32
2	4	20	40	50	100	200	400	500	1000	2000	24
2.5	5	25	50	62.5	125	250	500	625	1250	2500	19
3	6	30	60	75	150	300	600	750	1500	3000	15
3.5	7	35	70	87.5	175	350	700	875	1750	3500	13
4	8	40	80	100	200	400	800	1000	2000	4000	11
4.5	9	45	90	112.5	225	450	900	1125	2250	4500	10
5	10	50	100	125	250	500	1000	1250	2500	5000	9

Volume, µL

ORDERING INFORMATION

Description	Cat. No.	2014 List Price
HandyStep® S Repeating Pipette	705110	\$378.00
HandyStep® S Shelf/rack mount	705130	29.00

HandyStep[®] electronic

The BRAND HandyStep[®] electronic is a microprocessor-controlled, motorized repeating pipette that combines broad tip compatibility and user comfort with the convenience and efficiency of an electronic pipette.

- **Works with All Standard Tips:** The HandyStep[®] electronic is compatible with BRAND PD-Tip[™] syringe tips, Eppendorf[®] Combitips advanced[®], and more.
- **Recognizes Tips Automatically:** The pipette automatically recognizes the size of encoded BRAND PD-Tip[™] syringe tips upon tip insertion and displays the tip's volume, default dispensing volume, and default number of dispensing steps.
- **Reduces Repetitive Motion by up to 97%:** The instrument features a unique Auto-Dispense operating mode in which the pipette "learns" the operator's dispensing rhythm and dispenses at that rhythm as long as the control button is depressed – no programming needed!

Battery Compartment

The battery compartment opens easily to allow users to swap batteries in seconds for virtually continuous pipetting.



Control Button

Just a subtle squeeze of the index finger on this button controls aspiration and dispensing for effortless pipetting.



Tip Recognition Mechanism

The rugged tip recognition mechanism enables the instrument to automatically display the tip volume and default dispensing volume, when a BRAND PD-Tip[™] syringe tip is inserted.

Rapid, Relaxed, and Reliable Repetitive Pipetting from BRAND.



HandyStep® electronic

Technical Data & Ordering Information

Operating limits and exclusions

Liquids unsuitable for use with the *HandyStep® electronic* and PD-Tip™ syringe tips include, but are not limited to, those with:

- vapor pressure exceeding 500mbar
- viscosity: 20mPa S with 50mL PD-Tips™; 260mPa S with 5mL PD-Tips™; 977mPa S with 1mL PD-Tips™
- chemicals incompatible with tips used. See page 32 for PD-Tip™ materials of construction.
- Temperature of instrument and reagents must be between 15° and 40°C (59° and 104°F)
- The *HandyStep® electronic* cannot be autoclaved

Items supplied

Each *HandyStep® electronic* includes:

- NiMH battery
- Charging stand with power supply
- Five assorted volume PD-Tip™ syringe tips
- Performance certificate
- Operating manual
- One-year warranty

Use the tips you want

The only electronic repetitive pipette compatible with all standard syringe tips, the *HandyStep® electronic* accepts:

- BRAND PD-Tip™ syringe tips
- Rainin® Encode™ syringe tips
- Eppendorf® Combitips® advanced
- Fisherbrand® Dispenser Tips
- VWR® Combi-Syringes
- Gilson® Repet-Tips

Accuracy and Precision for the *HandyStep® electronic*

PD-Tip™	Range	Subdivision Between	Increment	A* < ±				CV* ≤			
				100%	50%	10%	1%	100%	50%	10%	1%
0.1mL	1µL-100µL	1µL-100µL	0.1µL	1.0	1.2	1.6	16	0.5	1.0	2.0	12
		5µL-500µL	0.1µL								
0.5mL	5µL-500µL	100µL-500µL	1µL	0.9	0.9	0.9	9	0.25	0.5	1	6
1mL	10µL-1mL	10µL-1mL	1µL	0.6	0.6	0.9	8	0.2	0.3	0.6	4
		12.5µL-100µL	0.5µL								
1.25mL	12.5µL-1250µL	100µL-1000µL	1µL								
		1mL-1.25mL	10µL	0.6	0.6	0.9	8	0.15	0.3	0.6	3.5
2.5mL	25µL-2500µL	25µL-1000µL	1µL								
		1mL-2.5mL	10µL	0.5	0.5	0.8	8	0.1	0.2	0.4	2.5
5mL	50µL-5000µL	50µL-1000µL	1µL								
		1mL-2.5mL	10µL	0.5	0.5	0.8	8	0.08	0.15	0.3	1.5
10mL	100µL-10mL	100µL-10mL	10µL	0.4	0.4	0.5	5	0.08	0.15	0.25	1.25
		125µL-1000µL	5µL								
12.5mL	125µL-12.5mL	1mL-10mL	10µL								
		10mL-12.5mL	100µL	0.4	0.4	0.5	5	0.08	0.15	0.25	1.25
25mL	250µL-25mL	250µL-10mL	10µL								
		10mL-25mL	100µL	0.3	0.3	0.3	3	0.08	0.15	0.25	1.25
50mL	500µL-50mL	500µL-10mL	10µL								
		10mL-50mL	100µL	0.3	0.3	0.3	3	0.08	0.25	0.5	2.5

A*=Accuracy, CV*=Coefficient of Variation

* Results were achieved using PD-Tip™ syringe tips from BRAND, with an aqueous solution, obtained after instruments and solution had equilibrated at ambient temperature. Empirical values may differ from values obtained under test conditions due to variations in factors beyond our control, including temperature.

The predetermined ISO 8655-5 tolerances were not exceeded.

Description	Cat. No.	2014 List Price
HandyStep® electronic with charging stand & NiMH battery, 110V, 50-60Hz	705002	\$1019.00
Spare Parts and Accessories		
Spare NiMH battery	705025	58.00
Charging Stand	705020	194.00
AC Adapter	705052	75.00

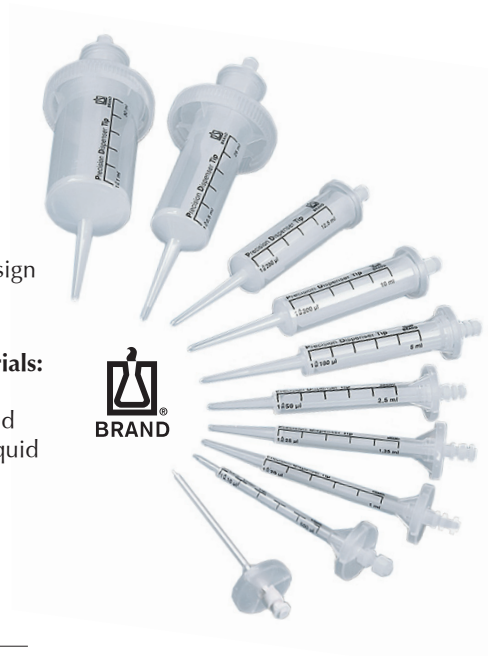


PD-Tip™ Syringe Tips

The Perfect Tips for Your Repeating Pipette.

BRAND encoded PD-Tip™ syringe tips are manufactured from high-quality virgin plastics for use with all standard repeating pipettes in a wide variety of applications.

- Compatible with Most Pipettes:** PD-Tip™ syringe tips are an excellent choice for the BRAND HandyStep® S and HandyStep® electronic repeating pipettes; the black-handled Eppendorf® Repeater®*; the FisherBrand repeating pipette; the Rainin® AutoRep™ E and AutoRep™ M; the Gilson® Repetman®; and all other repeating pipettes using standard tips. PD-Tip™ syringe tips are encoded for automatic recognition by the BRAND HandyStep® electronic repeating pipette, the Rainin® AutoRep™ E pipette, and the Gilson® Repetman®.
- Reliable:** A precision seal between the piston and cylinder ensure smooth operation, increased accuracy, and increased precision. Extended piston design minimizes dead volume and maximizes fluid utilization.
- Manufactured from High Quality Materials:** PD-Tip™ syringe tips are made entirely from high-quality virgin polyethylene and polypropylene. (Piston of 0.1mL tip is liquid crystal polymer-LCP).

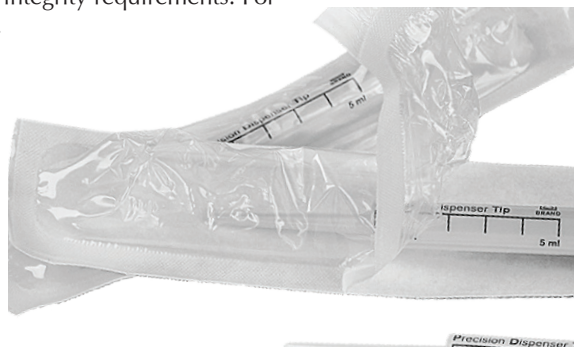


Preserve Sample Integrity with BIO-CERT® Quality Sterile Tips

BIO-CERT® PD-Tip™ syringe tips are sterile, individually wrapped and certified free of DNA, RNase, endotoxins, and ATP to meet the most stringent sample integrity requirements. For more information on the sterility and purity levels, see page 12.

Calibration Support

BRAND PD-Tip™ syringe tips are supplied with a batch Certificate of Performance which documents tip accuracy and precision testing.



PD-Tip™ Syringe Tips, Syringe Tips, BIO-CERT® sterile, individually wrapped

Capacity, mL	Pack of	Cat. No.	2014 List Price
0.1mL	100	702683	167.00
0.5mL	100	702684	160.00
1mL	100	702685	160.00
1.25mL	100	702686	160.00
2.5mL	100	702688	160.00
5mL	100	702690	160.00
10mL	100	702691	160.00
12.5mL	100	702692	160.00
25mL, (one adapter included)	25	702694	47.00
50mL, (one adapter included)	25	702696	48.00
Adapter for 25mL and 50mL PD-Tip™ BIO-CERT® sterile, PP, autoclavable	15	702699	74.00

*The Eppendorf Repeater Plus, Repeater® M4, Repeater Pro, Stream, and XStream are designed to preclude their operation with any tips other than Eppendorf Combitips advanced®.

PD-Tip™ Syringe Tips, non-sterile

Capacity, mL	Pack of	Cat. No.	2014 List Price
0.1mL	100	702402	\$125.00
0.5mL	100	702370	117.00
1mL	100	702406	117.00
1.25mL	100	702372	117.00
2.5mL	100	702374	117.00
5mL	100	702376	117.00
10mL	100	702407	117.00
12.5mL	100	702378	117.00
25mL, (one adapter included)	50	702380	73.00
50mL, (one adapter included)	25	702382	42.00
PD-Tip™ Syringe Tips, non-sterile, assorted pack 0.5, 1, 1.25, 2.5, 5, 10 and 12.5mL sizes	20/size	702368	158.00
Adapter for 25mL and 50mL PD-Tip™ Syringe Tips non-sterile, PP, autoclavable	10	702398	94.00

Dispensette®

Dispensette® III, and Dispensette® Organic, bottletop dispensers improve accuracy, safety, and reagent conservation in a broad range of applications. They mount directly on most solvent and reagent bottles for faster, more convenient dispensing. Instruments are autoclavable at 121°C (250°F) for use with sterile reagents.

- Dispense Most Lab Reagents:** Choose the Dispensette® III for acids, bases, saline solutions, as well as many organic solvents; the Dispensette® Organic for organic solvents, combinatorial chemistry solvents, concentrated acids such as HCl and HNO₃, trifluoroacetic acid (TFA), tetrahydrofuran (THF), and peroxides. See Selection Chart on page 38 for help selecting the best dispenser.
- Deliver Accurate, Precise Volumes:** Dispensers are accurate to 0.5% (1% for 0.5mL models), with coefficients of variation of 0.1% (0.2% for 0.5mL). Digital models feature accurate and reproducible volume settings via a mechanical digital display. Easy Calibration™ technology simplifies ISO/GLP compliance.
- Increase Laboratory Safety:** Dispensers mount on reagent bottles to reduce poured reagent transfers. They include a number of safety features to reduce the risk of injury from inadvertent dispensing and splashes. SafetyPrime™ valve system enhances reagent conservation and safety. Many accessories are available for remote, serial and drum dispensing.
- Resist Wear and Damage:** Unique design ensures smooth operation and eliminates wearing parts. Dispensers disassemble easily to simplify cleaning and maintenance.
- HF and Trace Analysis Dispensing:** For dispensing of high purity acids and solvents, or hydrofluoric acid, choose the Dispensette® TA. For details, see page 37



The Standard in Bottletop
Dispensing For Over 40 Years.



Dispensette® bottle-top dispensers

Dispensette® Organic

(Analog-adjustable model)

Discharge Tube Safety Screw Cap

One-twist cap helps protect against reagent contact and is easy to attach and remove, even while wearing gloves.

SafetyPrime™ Recirculation Valve

Optional SafetyPrime™ valve reduces splashes during instrument priming and reduces reagent waste. Control lever clearly indicates valve position.

Fits Most Reagent Bottles

The 45mm standard thread, plus included adapters, ensure compatibility with most common reagent bottles. Telescoping filling tube adjusts easily to different size bottles – without measuring or cutting.

Easy Calibration™

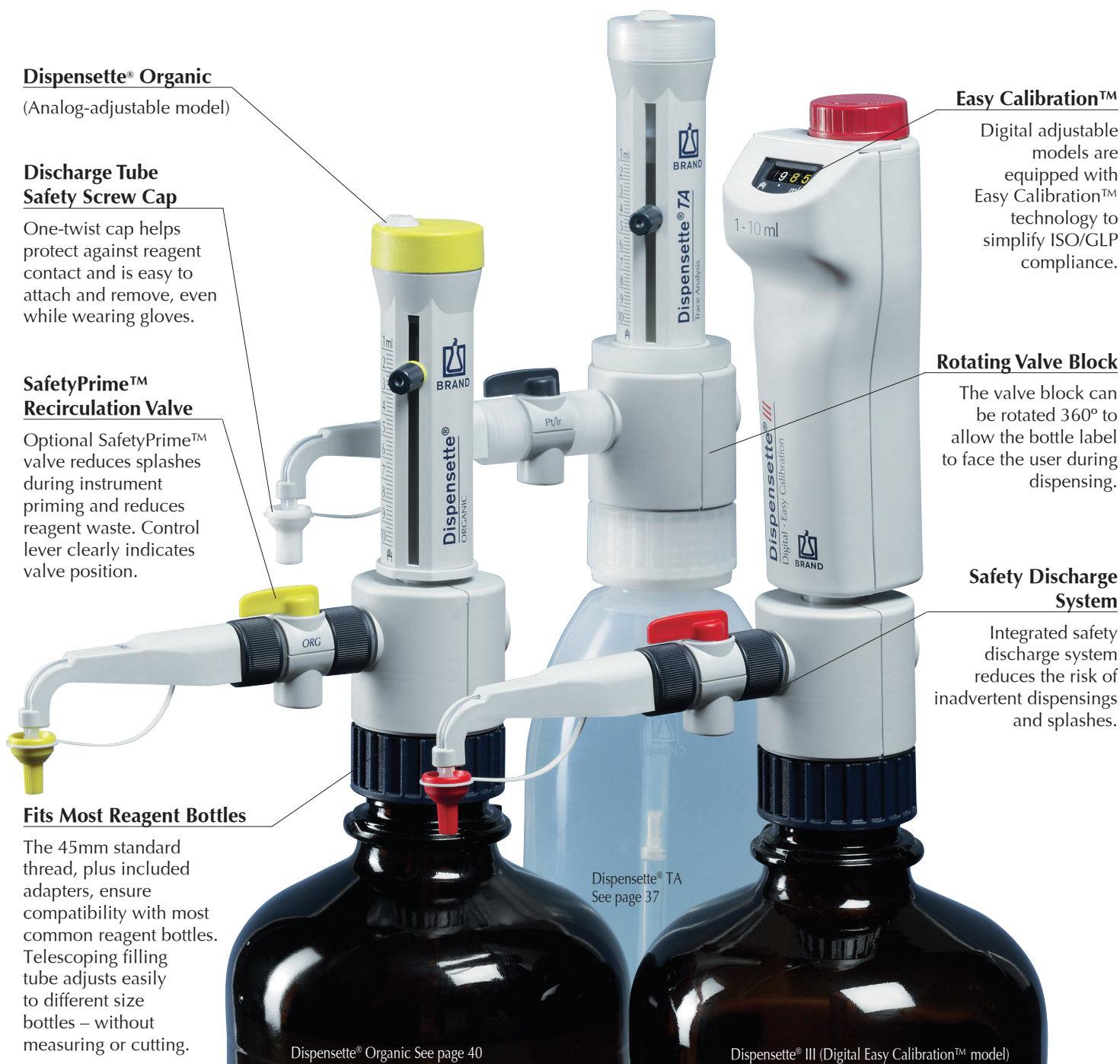
Digital adjustable models are equipped with Easy Calibration™ technology to simplify ISO/GLP compliance.

Rotating Valve Block

The valve block can be rotated 360° to allow the bottle label to face the user during dispensing.

Safety Discharge System

Integrated safety discharge system reduces the risk of inadvertent dispensings and splashes.



Dispensette® Organic See page 40

Dispensette® TA
See page 37

Dispensette® III (Digital Easy Calibration™ model)

Dispensette® bottle-top dispensers

Dispensette® Volume Adjustment

Product Features:

Both the Dispensette® III and Dispensette® Organic are constructed using the “floating piston” principle.

Each piston is matched individually with precise tolerances to the cylinder of the instrument. A thin film of the dispensed liquid of just a few µm thick acts as a non-wearing seal that reduces friction, so dispensing is easy and convenient.

- The 45mm standard thread, plus included adapters, fit most common lab bottles.
- The valve block can be rotated 360° so that the bottle label always faces the user for safety.
- A telescoping filling tube adjusts to different bottle sizes.
- The instrument is easy to disassemble for cleaning.
- Valves are replaceable for simple, economical service.
- Dispensette® III and Dispensette® Organic are autoclavable at 121°C.
- Easy to calibrate and adjust in order to comply with ISO 9001 and GLP guidelines. A positive indicator automatically indicates adjustment from factory settings.
- An extensive line of accessories facilitates specialized dispensing tasks like sterile applications or dispensing from large containers.



Digital Easy Calibration™ models

- Digital Easy Calibration™ models enable accurate and reproducible volume setting with an easy-to-read display and a convenient adjustment knob. Simply turn the knob. The mechanical adjustment mechanism displays the volume in digits.
- Features unique Easy Calibration™ technology (see page 56) for calibration adjustment in seconds without tools.
- Excellent for labs with multiple users, and in circumstances requiring frequent volume changes to precise volumes.



Analog-adjustable models

- Analog slide enables rapid volume adjustments
- Calibration adjustments are simplified with included tool



Fixed-volume models

- Fixed-volume for standardized applications
- Calibration adjustments are simplified with included tool

Dispensette® bottle-top dispensers

Applications



One-handed operation

“Floating piston” design eliminates the seals that often wear and fail on other dispensers. This allows the Dispensette® piston to move very smoothly, permitting safe, simple, one-handed dispensing, even with a nearly-empty reagent bottle.



Dispensing sterile fluids

Dispensette® bottle-top dispensers (except Dispensette® TA) are autoclavable at 121°C (250°F) and can be fitted with an optional microfilter to prevent contamination of bottle contents. Sterile technique must be followed.



Serial dispensing

The optional flexible discharge tube speeds serial dispensing tasks, and permits fast and precise dispensing even into narrow test tubes. Functions of SafetyPrime™ valve and safety discharge system are fully maintained with the flexible discharge tube.



Dispensing sensitive reagents

Optional drying tube screws into the accessory port of the Dispensette® to protect sensitive reagents from humidity or CO₂. (Absorbing agent not included.)

Dispensing from bulk containers minimizes risk of contaminating high-purity reagents

Simply connect the Dispensette® III or Dispensette® Organic to the optional Remote Dispensing System for accurate dispensing from drums and other bulk containers up to 10m (30 feet) away. Maximum delivery height is 1.2 meters. A quick-release connector with integrated valves simplifies changing the bulk container. The drum adapter air inlet filter minimizes risk of contaminating high-purity reagents.

NOTE: Not for use with SafetyPrime™ recirculation valve, pressurized vessels, peroxides (which will react with the platinum-iridium spring), HF or other liquids which attack borosilicate glass, alumina ceramic, PFA, ETFE, FEP or PTFE. Observe all safety instructions, operating exclusions, and limitations of the operating manuals of the Dispensette® bottle-top dispensers.



Dispensette® TA Trace Analysis

For dispensing high-purity chemicals

The Dispensette® TA provides outstanding performance for precise-volume dispensing of high-purity media for trace analysis. The Dispensette® TA is also suitable for dispensing HF (platinum iridium model.)

The components of the fluid path have been selected to only contain the highest purity materials, such as fluoroplastics and sapphire. Depending on application, either platinum-iridium or tantalum valve springs can be chosen. The volume range is from 1 to 10mL.

- Especially well suited for dispensing acids, bases and hydrogen peroxide (TA models only).
- Trace metal content of dispensed liquid is generally in the low ppb range, or, depending on application, even in the low ppt range.

Dispensing of high-purity chemicals in trace analysis

- Plastics in contact with media consist of high-purity materials such as PTFE, ETFE, FEP, and PFA. The purest sapphire is used for replaceable valves. Depending on the application, platinum-iridium or tantalum are available as spring materials.
- A field-tested cleaning process before use in trace analysis is described in the operating manual.
- Easy to disassemble for replacement of the dispensing cartridge.

Recommended Application Range

Dispensing Medium	Valve spring: Pt-Ir	Valve spring: Ta
Acetic acid	+	+
Ammonia solution	+	+
Bromine	+	+
Hydrochloric acid	+	+
Hydrofluoric acid	+	-
Hydrogen peroxide	-	+
Nitric acid	+	+
Perchloric acid	+	+
Sodium hydroxide, 30%	+	-
Sulfuric acid	+	+
Water	+	+

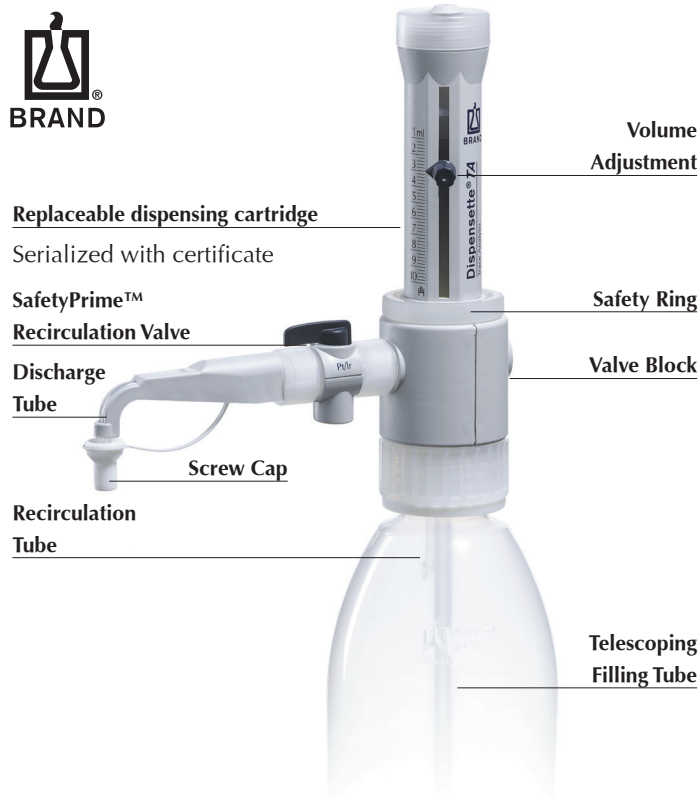
+ suitable – not suitable

* Hydrofluoric acid reacts slightly with sapphire resulting in mildly elevated aluminum values. To reduce these values we recommend discarding 3-5 dispensings of 2 ml each before performing the analysis.

The above recommendations reflect testing completed prior to publication. Always follow instructions in the operating manual of the instrument as well as the reagent manufacturer's specifications. Should you require information on chemicals not listed, please feel free to contact BrandTech®.
Status as of: 0713/2

Performing Trace Analysis?

See the VITLAB® PFA trace analysis labware on page 110.



Technical data

The high-purity materials release virtually no metal ions after appropriate cleaning. This makes the Dispensette® TA bottletop dispenser a superior choice for trace analysis.

Replaceable Dispensing Cartridge

If the piston seal is worn after a long period of use, the entire dispensing cartridge can easily be replaced without tools by the user. The cartridge is fully adjusted at the factory and delivered with a performance certificate. No calibration is required after replacement.

Serial Dispensing

For easy serial dispensing, an optional flexible discharge tube with textured safety handle (not approved for HF) permits fast and precise dispensing, even into narrow test tubes. Full functionality of the SafetyPrime™ recirculation valve and the safety discharge system is maintained after installation.

Areas of application / Suggested dispenser (as of July 2013)

■ Dispensette® III (Disp. III) ■ Dispensette® Organic (Disp. Organic)

Reagent	Disp. III	Disp. Organic	Reagent	Disp. III	Disp. Organic	Reagent	Disp. III	Disp. Organic
Acetaldehyde	+	+	Cyclohexane	+	+	Mineral oil (Engine oil)	+	+
Acetic acid (glacial), 100%	+	+	Cyclohexanone	+	+	Monochloroacetic acid	+	+
Acetic acid, 96%	+	+	Cyclopentane	+	+	Nitric acid, 30%	+	+
Acetic anhydride	+	+	Decane	+	+	Nitric acid, 30-70% *	+	+
Acetone	+	+	1-Decanol	+	+	Nitrobenzene	+	+
Acetonitrile	+	+	Dibenzyl ether	+	+	Oleic acid	+	+
Acetophenone	+	+	Dichloroacetic acid	+	+	Oxalic acid	+	+
Acetyl chloride	+	+	Dichlorobenzene	+	+	n-Pentane	+	+
Acetylacetone	+	+	Dichloroethane	+	+	Peracetic acid	+	+
Acrylic acid	+	+	Dichloroethylene	+	+	Perchloric acid	+	+
Acrylonitrile	+	+	Dichloromethane	+	+	Perchloroethylene	+	+
Adipic acid	+	+	Diesel oil (Heating oil), bp 250-350 °C)	+	+	Petroleum, bp 180-220°C	+	+
Allyl alcohol	+	+	Diethanolamine	+	+	Petroleum ether, bp 40-70°C	+	+
Aluminium chloride	+	+	Diethyl ether	+	+	Phenol	+	+
Amino acids	+	+	Diethylamine	+	+	Phenylethanol	+	+
Ammonia, 20%	+	+	1,2 Diethylbenzene	+	+	Phenylhydrazine	+	+
Ammonia, 20-30%	+	+	Diethylene glycol	+	+	Phosphoric acid, 85%	+	+
Ammonium chloride	+	+	Dimethyl sulfoxide (DMSO)	+	+	Phosphoric acid, 85% + Sulfuric acid, 98%, 1:1	+	+
Ammonium fluoride	+	+	Dimethylaniline	+	+	Piperidine	+	+
Ammonium sulfate	+	+	Dimethylformamide (DMF)	+	+	Potassium chloride	+	+
n-Amyl acetate	+	+	1,4 Dioxane	+	+	Potassium dichromate	+	+
Amyl alcohol (Pentanol)	+	+	Diphenyl ether	+	+	Potassium hydroxide	+	+
Amyl chloride (Chloropentane)	+	+	Essential Oil	+	+	Potassium permanganate	+	+
Aniline	+	+	Ethanol	+	+	Propionic acid	+	+
Barium chloride	+	+	Ethanolamine	+	+	Propylene glycol (Propanediol)	+	+
Benzaldehyde	+	+	Ethyl acetate	+	+	Pyridine	+	+
Benzene (Benzol)	+	+	Ethylbenzene	+	+	Pyruvic acid	+	+
Benzine (Petroleum benzin), bp 70-180 °C	+	+	Ethylene chloride	+	+	Salicylaldehyde	+	+
Benzoyl chloride	+	+	Fluoroacetic acid	+	+	Scintillation fluid	+	+
Benzyl alcohol	+	+	Formaldehyde, 40%	+	+	Silver acetate	+	+
Benzylamine	+	+	Formamide	+	+	Silver nitrate	+	+
Benzylchloride	+	+	Formic acid, 100%	+	+	Sodium acetate	+	+
Boric acid, 10%	+	+	Glycerol	+	+	Sodium chloride	+	+
Bromobenzene	+	+	Glycol (Ethylene glycol)	+	+	Sodium dichromate	+	+
Bromonaphthalene	+	+	Glycolic acid, 50%	+	+	Sodium fluoride	+	+
Butanediol	+	+	Heating oil (Diesel oil), bp 250-350°C	+	+	Sodium hydroxide, 30%	+	+
1-Butanol	+	+	Heptane	+	+	Sodium hypochlorite	+	+
n-Butyl acetate	+	+	Hexane	+	+	Sulfuric acid, 98%	+	+
Butyl methyl ether	+	+	Hexanoic acid	+	+	Tartaric acid	+	+
Butylamine	+	+	Hexanol	+	+	Tetrachloroethylene	+	+
Butyric acid	+	+	Hydriodic acid	+	+	Tetrahydrofuran (THF) */ **	+	+
Calcium carbonate	+	+	Hydrobromic acid	+	+	Tetramethylammonium hydroxide	+	+
Calcium chloride	+	+	Hydrochloric acid, 20%	+	+	Toluene	+	+
Calcium hydroxide	+	+	Hydrochloric acid, 20-37%	+	+	Trichloroacetic acid	+	+
Calcium hypochlorite	+	+	Hydrogen peroxide, 35%	+	+	Trichlorobenzene	+	+
Carbon tetrachloride	+	+	Isoamyl alcohol	+	+	Trichloroethane	+	+
Chloro naphthalene	+	+	Isobutanol	+	+	Trichloroethylene	+	+
Chloroacetaldehyde, 45%	+	+	Isooctane	+	+	Trichlorotrifluoro ethane	+	+
Chloroacetic acid	+	+	Isopropanol (2-Propanol)	+	+	Triethanolamine	+	+
Chloroacetone	+	+	Isopropyl ether	+	+	Triethylene glycol	+	+
Chlorobenzene	+	+	Lactic acid	+	+	Trifluoro ethane	+	+
Chlorobutane	+	+	Methanol	+	+	Trifluoroacetic acid (TFA)	+	+
Chloroform	+	+	Methoxybenzene	+	+	Turpentine	+	+
Chlorosulfonic acid	+	+	Methyl benzoate	+	+	Urea	+	+
Chromic acid, 50%	+	+	Methyl butyl ether	+	+	Xylene	+	+
Chromosulfuric acid	+	+	Methyl ethyl ketone	+	+	Zinc chloride, 10%	+	+
Copper sulfate	+	+	Methyl formate	+	+	Zinc sulfate, 10%	+	+
Cresol	+	+	Methyl propyl ketone	+	+			
Cumene (Isopropyl benzene)	+	+	Methylene chloride	+	+			

* use ETFE/PTFE bottle adapter

** use PTFE seal

The above recommendations reflect testing completed prior to publication. Always follow instructions in the operating manual of the instrument as well as the reagent manufacturer's specifications. In addition to these chemicals, a variety of organic and inorganic saline solutions (e.g., biological buffers), biological detergents and media for cell culture can be dispensed. Should you require information on chemicals not listed, please feel free to contact BrandTech Scientific. Status as of: 0713/12

Dispensette® TA Pt-Ir

For dispensing HF, we recommend the use of the Dispensette® TA bottle-top dispenser with platinum-iridium valve spring (Cat. No. 4741041, page 37).

Dispensette® bottle top dispensers technical data

Operating limitations (all instruments)

Liquids which form deposits may make the piston difficult to move or may cause jamming (e.g., crystallizing solutions or concentrated alkaline solutions).

When dispensing inflammable media, make sure to avoid the buildup of static charge, e.g., do not dispense into plastic vessels; do not wipe instruments with a dry cloth.

The Dispensette® is designed for general laboratory applications and complies with the relevant standards, e.g., DIN EN ISO 8655. Compatibility of the instrument for a specific application (e.g., trace material analysis, food sector, etc.) must be checked by the user. Approvals for specific applications, e.g., for production and administration of food, pharmaceuticals and cosmetics are not available.

Items supplied

Each Dispensette® III, Dispensette® Organic, Dispensette® TA includes:

- Certificate of performance
- Discharge tube
- Valve Mounting/Calibration tool
- Adapters and filling tube
- Operating manual
- One-year warranty

Supplied Adapters and Filling Tubes

Nominal Volume, mL	Adapter for bottle thread, mm	Filling tube length, mm
For Dispensette® III and Dispensette® Organic (PP)		
0.5	24, 28, 33, 38	125-240
1, 2, 5, 10	28, 33, 38	125-240
25, 50, 100	33, 38	170-330
For Dispensette® TA		
10	28, 33, S 40	125-240

Limitations of use (all instruments)

This instrument is designed for dispensing liquids, observing the following physical limits:

- use between +15°C and +40°C (59°F and 104°F) of instrument and reagent
- vapor pressure up to max. 600mbar. Aspirate slowly above 300mbar, in order to prevent the liquid from boiling
- kinematic viscosity up to 500mm²/s (dynamic viscosity [mPas] = kinematic viscosity [mm²/s] x density [g/cm³])
- density: Dispensette® III/Dispensette® Organic: up to 2.2g/cm³ and Dispensette® TA up to 3.8g/cm³

Operating Exclusions – Dispensette® III

Never use the Dispensette® III with:

- liquids attacking Al₂O₃-ceramic, ETFE, FEP, PFA and PTFE (e.g., dissolved sodium azide*)
- liquids attacking borosilicate glass (e.g., hydrofluoric acid)
- liquids which are decomposed catalytically by platinum-iridium (e.g., H₂O₂)
- hydrochloric acid > 20% and nitric acid > 30%
- tetrahydrofuran
- trifluoroacetic acid
- explosive liquids (e.g., carbon disulfide)
- suspensions (e.g., of charcoal) as solid particles may clog or damage the instrument
- liquids attacking PP (screw cap)

Operating Exclusions – Dispensette® Organic

Never use the Dispensette® Organic with:

- liquids attacking Al₂O₃-ceramic, tantalum, ETFE, FEP, PFA and PTFE (e.g., dissolved sodium azide*)
- liquids attacking borosilicate glass (e.g., hydrofluoric acid)
- bases and saline solutions
- explosive liquids (e.g., carbon disulfide)
- suspensions (e.g., of charcoal) as solid particles may clog or damage the instrument
- liquids attacking PP (screw cap)

Operating limits and exclusions – Dispensette® TA

Never use the Dispensette® TA with:

- liquids attacking Al₂O₃, sapphire or fluoroplastics like ETFE, FEP, PFA and PTFE (e.g., dissolved sodium azide*)
- liquids which are decomposed catalytically by platinum-iridium (e.g., H₂O₂) or tantalum, depending on the construction of the instrument
- organic solvents
- trifluoroacetic acid
- explosive liquids (e.g., carbon disulfide)
- suspensions (e.g., of charcoal) as solid particles may clog or damage the instrument
- The Dispensette®TA must not be autoclaved

*Dissolved sodium azide permitted up to a concentration of max 0.1%

Dispensette® bottle-top dispensers

ORDERING INFORMATION

Dispensette® III						Without SafetyPrime™ valve		With SafetyPrime™ valve	
Volume, mL	Increments, mL	A* < ±		CV* ≤		Cat. No.	2014		
		%	µL	%	µL		List Price	List Price	

Dispensette® III, Digital Easy Calibration™									
0.2-2	0.01	0.5	10	0.1	2	4701320	\$472.00	4701321	\$514.00
0.5-5	0.02	0.5	25	0.1	5	4701330	472.00	4701331	514.00
1-10	0.05	0.5	50	0.1	10	4701340	472.00	4701341	514.00
2.5-25	0.1	0.5	125	0.1	25	4701350	646.00	4701351	682.00
5-50	0.2	0.5	250	0.1	50	4701360	657.00	4701361	693.00

Dispensette® III, Analog-adjustable									
0.05-0.5	0.01	1.0	5	0.2	1	4701100	419.00	4701101	441.00
0.2-2	0.05	0.5	10	0.1	2	4701120	419.00	4701121	441.00
0.5-5	0.1	0.5	25	0.1	5	4701130	419.00	4701131	441.00
1-10	0.2	0.5	50	0.1	10	4701140	419.00	4701141	441.00
2.5-25	0.5	0.5	125	0.1	25	4701150	588.00	4701151	615.00
5-50	1.0	0.5	250	0.1	50	4701160	605.00	4701161	629.00
10-100	1.0	0.5	500	0.1	100	4701170	935.00	4701171	966.00

Dispensette® III, Fixed-volume									
1		0.5	5	0.1	1	4701210	419.00	4701211	441.00
2		0.5	10	0.1	2	4701220	419.00	4701221	441.00
5		0.5	25	0.1	5	4701230	419.00	4701231	441.00
10		0.5	50	0.1	10	4701240	419.00	4701241	441.00

Dispensette® Organic						Without SafetyPrime™ valve		With SafetyPrime™ valve	
Volume, mL	Increments, mL	A* < ±		CV* ≤		Cat. No.	2014		
		%	µL	%	µL		List Price	List Price	

Dispensette® Organic, Digital Easy Calibration™									
0.5-5	0.02	0.5	25	0.1	5	4731330	\$514.00	4731331	\$542.00
1-10	0.05	0.5	50	0.1	10	4731340	514.00	4731341	542.00
2.5-25	0.1	0.5	125	0.1	25	4731350	690.00	4731351	710.00
5-50	0.2	0.5	250	0.1	50	4731360	714.00	4731361	742.00

Dispensette® Organic, Analog-adjustable									
0.5-5	0.1	0.5	25	0.1	5	4731130	462.00	4731131	472.00
1-10	0.2	0.5	50	0.1	10	4731140	462.00	4731141	472.00
2.5-25	0.5	0.5	125	0.1	25	4731150	647.00	4731151	657.00
5-50	1.0	0.5	250	0.1	50	4731160	657.00	4731161	668.00
10-100	1.0	0.5	500	0.1	100	4731170	1,015.00	4731171	1,035.00

Dispensette® TA							With SafetyPrime™ valve		
Volume, mL	Valve Spring	Subdivision, mL	A* < ± %		CV* ≤ %		Cat. No.	2014	
			%	µL	%	µL		List Price	List Price

Dispensette® TA, Analog-adjustable									
1-10	Platinum-iridium	0.2	0.5	50	0.1	10	4741041	\$1,090.00	
1-10	Tantalum	0.2	0.5	50	0.1	10	4741241	1,090.00	

* The value of accuracy and coefficient of variation are final test values referring to the delivered nominal volume, instrument and distilled water at equilibrium with ambient temperature (20°C/68°F) and with smooth operation.

A*=Accuracy, CV*=Coefficient of Variation



Dispensette® III Digital Easy Calibration™



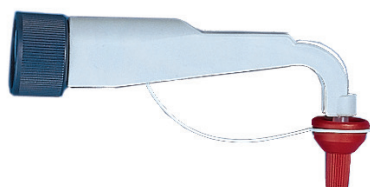
Dispensette® Organic Digital Easy Calibration™



Dispensette® TA with Safety Prime™ Valve

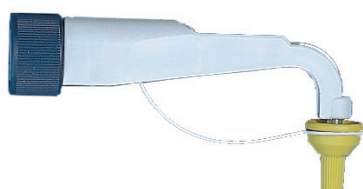
Dispensette® bottle-top dispensers

Dispensette® Accessories



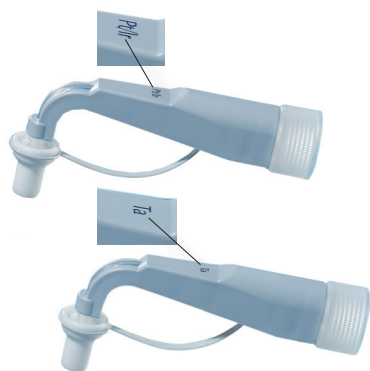
For Disp. III ♦ cap

Discharge tube with integrated valve	Shape	Length, mm	Cat. No.	2014 List Price/each
For Nominal Volume, mL				
0.5, 1, 2, 5, 10	fine tip	90	707915	\$58.00
5, 10	standard	90	707916	54.00
25, 50, 100	standard	120	707917	54.00
25, 50, 100	fine tip	120	707918	54.00



For Disp. Organic ♦ cap

Discharge tube with integrated valve	Shape	Length, mm	Cat. No.	2014 List Price/each
For Nominal Volume, mL				
0.5, 1, 2, 5, 10	fine tip	90	707935	\$58.00
5, 10	standard	90	707936	55.00
25, 50, 100	standard	120	707937	64.00
25, 50, 100	fine tip	120	707938	64.00



For Disp. TA ♦ cap

Discharge tube with integrated valve	Shape	Length, mm	Cat. No. Pt - Ir	Cat. No. Ta.	2014 List Price/each
For Nominal Volume, mL					
5, 1, 2, 5, 10	fine tip	90	707955		\$78.00
5, 1, 2, 5, 10	fine tip	90		707956	\$78.00



Flexible discharge tube

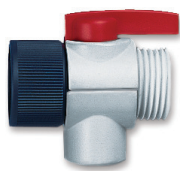
Flexible discharge tube (for Dispensette® III, Dispensette® Organic)

	Cat. No.	2014 List Price/each
PTFE, coiled, length 800mm (= 31.5") with safety handle		
<i>Not suitable for use with peroxides due to platinum-iridium valve spring.</i>		
For Nominal Volume, mL		
1, 2, 5, 10	707925	\$105.00
25, 50, 100	707926	115.00

Flexible discharge tubes for Dispensette® TA NOT FOR USE WITH HF

Platinum-Iridium	707945	237.00
Tantalum	707946	237.00

Dispensette® bottle top accessories



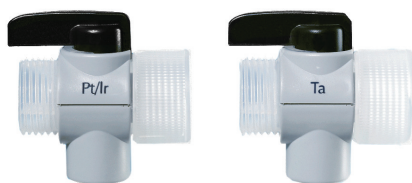
SafetyPrime™ valves



Recirculation tube



Dispensing Cartridge



Valve spring, Platinum-iridium and Tantalum



Filling valve with sealing washer



Seals



Drying tube

SafetyPrime™ valves (supplied with seal & recirculation tube)

	Valve Lever	Cat. No.	2014 List Price/each
For Dispensette® III, 0.5mL	Red	706081	\$85.00
For Dispensette® III, 1-100mL	Red	706080	85.00
For Dispensette® Organic	Yellow	706090	85.00
Recirculation tube only	—	8317	8.20

Replacement Parts Dispensette® TA (supplied with seal & recirculation tube)

SafetyPrime™ valves			
Valve spring, Platinum-iridium		706086	\$101.00
Valve spring, Tantalum		706087	101.00
Dispensing Cartridge with Safety Ring			
Nominal volume 10mL, calibrated, includes quality certificate		707542	490.00

Filling valve with sealing washer

	Cat. No.	2014 List Price
For Dispensette® III and Organic, nominal volume, mL		
0.5, 1, 2, 5, 10, each	6697	\$41.00
25, 50, 100, each	6698	46.00
For Dispensette® TA, each	6622	81.00

Filling valve with olive-shaped nozzle (for frequent autoclaving), Dispensette® III and Organic

For Nominal Volume, mL		
0.5, 1, 2, 5, 10, each	6637	\$44.00
25, 50, 100, each	6638	50.00

Seals

PTFE. With sealing washer.		
Pack of 5 seals each for discharge, SafetyPrime™ and filling valves.	6696	\$19.20

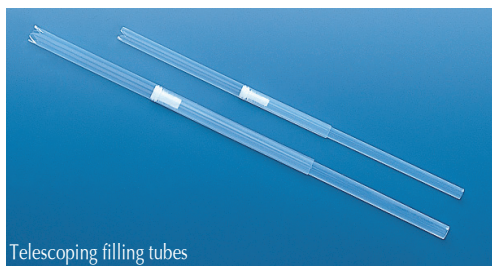
Drying tube

Without drying agent, each	707930	\$39.00
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Micro filter connector assembly with Luer-slip connection

To fit 0.2µm filter for sterile dispensing. Autoclavable (photo page 36).	704495	\$16.80
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Dispensette® bottletop accessories



Telescoping filling tubes

Telescoping filling tubes FEP

For Nominal Volume, mL	Length, mm (inches)	Cat. No.	2014 List Price/each
0.5, 1, 2, 5, 10	70 - 140 (2.6" - 5.5")	704202	\$14.60
0.5, 1, 2, 5, 10	125 - 240 (4.9" - 9.5")	704203	16.40
0.5, 1, 2, 5, 10	250 - 480 (9.8" - 18.9")	704201	19.40
0.5, 1, 2, 5, 10	195-350mm (7.7"-13.8")	704208	31.00
25, 50, 100	170 - 330 (6.7" - 13.0")	704204	20.40
25, 50, 100	250 - 480 (9.8" - 18.9")	704205	22.40



Amber Bottle



Amber Bottle - Ethylene-acrylate Coated

	Cat. No.	2014 List Price/each
Threaded Bottle, PP screw cap, LDPE pouring ring , 250mL, 33mm	704004	\$19.40
Threaded Bottle, PP screw cap, LDPE pouring ring , 500mL, 33mm	704006	26.60
Threaded Bottle, PP screw cap, LDPE pouring ring , 1000mL, 45mm	704008	33.80
Bottle Stand, PP, 225mm x 160mm x 325mm	704275	220.00



Bottle thread adapters

Bottle thread adapters	PP Cat. No.	2014 List Price/each	ETFE Cat. No.	2014 List Price/each
24mm	704325	17.80	704375	\$18.00
28mm/S28mm	704328	17.80	704378	21.40
33mm	704396	17.80	704398	24.60
38mm	704397	17.80	704399	24.60
S40mm	704343	17.80	704391	36.00
Fits STJ19/32	704419	23.40	—	—
Fits STJ24/40	704424	23.40	—	—
Fits STJ29/42	704429	27.60	—	—



Remote Dispensing System for Dispensette®

Remote Dispensing (for Dispensette® III, Dispensette® Organic)

	Cat. No.	2014 List Price/each
NOWPak® Remote Dispensing System for Dispensette® (not suitable for use with peroxides)	704284	251.00

Accessories

Filling tube, FEP, 10m, outer 7.6mm	704267	211.00
Filling tube, FEP, 1m, outer 6.9mm	704269	19.40
Thread adapter, Steel, outer thread 2", inner thread 3/4"	704270	101.00
Thread adapter, PTFE, inner thread 3/4" (33mm), for direct mounting of Dispensette® on drum	704281	69.00
Thread adapter, PTFE, inner thread 3/4" (33mm), to connect remote dispensing system with drums with GL outer thread	704282	64.00
Support rod connector, for wall mounting unit	704268	60.00
Table/shelf clamp, for wall mounting unit	704272	28.60

seripettor®

The seripettor® bottle-top dispenser is an economical wiping seal dispenser suitable for many commonly used reagents in biological, clinical, medical, and chemical laboratories. It precisely dispenses a wide variety of liquids. Optional accessories, such as the flexible discharge tube, are available to increase productivity and convenience.

- **Dispenses Most Non-Aggressive Liquids:** The seripettor® is a low-cost, reliable tool for dispensing measured volumes of weak acids, alkaline solutions, polar solvents, isotonic solutions, methanol, and acetylacetone. See selection guide on page 47.
- **Simplifies Dispensing:** Notched volume selector allows for quick and exact volume adjustment. Spring-driven refill function enables one-handed operation.
- **Convenient Cleaning and Maintenance:** Innovative design permits simple disassembly and rapid replacement of wearing parts, extending instrument life.
- **Fits Most Reagent Containers:** The 45mm standard thread plus the included adapters with 33mm and 40mm thread fits most common lab bottles.
- **Dispenses Sterile Media:** Accessories are available for sterile dispensing



A Rugged,
Economical Tool for
Routine Dispensing.



seripettor® bottletop dispenser

Technical data

Operating limits and exclusions

Never use this instrument with:

- liquids attacking FEP, PP, PE or EPDM
- non-polar solvents like hydrocarbons and halogenated hydrocarbons
- concentrated or oxidizing acids
- explosive liquids (e.g., carbon disulfide)

This instrument is designed for dispensing liquids, observing the following limits:

- vapor pressure up to 500mbar
- density up to 2.2g/cm³
- temperature of use between 15° and 40°C (59° and 104°F of instrument and reagent) (agar cultures up to 60°C)
- viscosity
 - 2mL instrument: 300mm²/s
 - 10mL instrument: 150mm²/s
 - 25mL instrument: 75mm²/s
 - (dynamic viscosity [mPas] = kinematic viscosity [mm²/s] x density [g/cm³])

Sterile dispensing

Optional accessories are available to make dispensing of agar and other sterile liquids quick and easy with the seripettor®. These include:

- Sterile dispensing cartridges
- Valve block cap
- Special filling tube for autoclaving
- 0.2µm membrane filter



Sterile dispensing cartridge installation.



[1] Dispensing cartridge, non-sterile



[2] Dispensing cartridge, sterile



[3] Flexible discharge tube



[4] Valve block cap



[5] 0.2µm Membrane filter



[6] Discharge Tube

Items supplied

Each seripettor® bottletop dispenser includes:

- Spare dispensing cartridge
- Discharge tube
- Telescoping filling tube
- Operating manual
- Two PP adapters, 45/S40mm and 45/33mm. See page 43 for other adapters
- One-year warranty

ORDERING INFORMATION

volume, mL	Subdivision, mL	A* < ± %	CV* ≤ %	Cat. No.	2014 List Price
NEW! seripettor®					
0.2-2	0.04	1.2	0.2	4720120	\$132.00
1-10	0.2	1.2	0.2	4720140	132.00
2.5-25	0.5	1.2	0.2	4720150	167.00

* The value of accuracy and coefficient of variation are final test values referring to the delivered nominal volume, instrument and distilled water at equilibrium with ambient temperature (20°C/68°F) and with smooth operation.

A*=Accuracy, CV*=Coefficient of Variation

Description	Photo	Pack of	Cat. No.	2014 List Price
Replacement Parts				
Dispensing cartridge, for 2mL seripettor®, non-sterile	1	3	704500	\$45.00
Dispensing cartridge, for 10mL seripettor®, non-sterile	1	3	704502	45.00
Dispensing cartridge, for 25mL seripettor®, non-sterile	1	3	704504	63.00
Dispensing cartridge, for 2mL seripettor®, sterile	2	7	704507	118.00
Dispensing cartridge, for 10mL seripettor®, sterile	2	7	704506	118.00
Dispensing cartridge, for 25mL seripettor®, sterile	2	5	704508	125.00
Flexible discharge tubing for 25mL seripettor® PTFE, 800mm	3	1	704523	114.00
Flexible discharge tubing for 2mL & 10mL seripettor® PTFE, 800mm	3	1	704522	92.00
Discharge tube for 2mL seripettor®	6	1	704518	28.00
Discharge tube for 10mL and 25mL seripettor®	6	1	704520	28.00
Valve block cap for 2mL & 10mL seripettor®, PP	4	1	704552	25.60
Valve block cap for 25mL seripettor®, PP	4	1	704554	25.60
Filling tube for sterile applications, 250mm		1	704536	8.00
Filling tube for sterile applications, 500mm		1	704538	11.20
Membrane filter, 0.2µm, non-sterile	5	10	26535	84.00

Bottles & Adapters

See detailed listing on page 43

seripettor® pro

The seripettor® pro is a bottletop dispenser designed to handle a wider range of liquids than the regular seripettor® for customers who do not require all of the features of the Dispensette®. Like the regular seripettor®, it features an easily-replaceable wiping seal dispensing cartridge, making it especially suitable for liquids that tend to form crystals.

- **Wide Chemical Range:** Valves and seals on the seripettor® pro allow a broader range of liquids to be dispensed than the regular seripettor®.
- **Protects Light-sensitive Reagents:** Pump assembly with Hastalloy stainless steel spring. An opaque upper sleeve helps protect liquid from UV-light during dispensing operations, while permitting observation of cylinder to confirm purging of bubbles.
- **Replaceable Dispensing Cartridge:** Quick-change cartridge makes service a breeze and keeps life-time service costs low. If wiping seals wear out, or are damaged by crystallizing reagents, just change the inexpensive cartridge, and you're back in business!
- **Telescoping Filling Tube:** Adjusts to fit many bottles without cutting.
- **Discharge tube with a threaded Safety Screw Cap:** Attaches and removes with a quick twist
- **Spring-loaded Piston:** Permits one-handed, semi-automatic operation.
- **Threaded Safety Cap:** Attaches and removes with a quick twist.

An Economical, Versatile Wiping-Seal Dispenser.

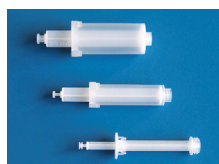


ORDERING INFORMATION

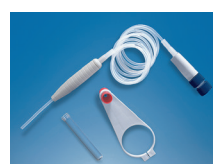
Volume, mL	Subdivision, mL	A* \pm %	CV* \leq %	Cat. No.	2014 List Price
0.2-2	0.04	1.2	0.2	4720420	\$332.00
1-10	0.2	1.2	0.2	4720440	332.00
2.5-25	0.5	1.2	0.2	4720450	474.00

A*=Accuracy, CV*=Coefficient of Variation

* The value of accuracy and coefficient of variation are final test values referring to the delivered nominal volume, instrument and distilled water at equilibrium with ambient temperature (20°C/68°F) and with smooth operation.



[1] Dispensing cartridge, non-sterile



[2] Flexible discharge tube



[3] Telescoping filling tubes, FEP

Description	Photo	Pack of	Cat. No.	2014 List Price
Dispensing cartridge				
Dispensing cartridge, for 2mL seripettor® pro, non-sterile	1	3	704500	\$45.00
Dispensing cartridge, for 10mL seripettor® pro, non-sterile	1	3	704502	45.00
Dispensing cartridge, for 25mL seripettor® pro, non-sterile	1	3	704504	63.00
Flexible discharge tube for 2mL & 10mL seripettor® pro	2	1	704522	92.00
Flexible discharge tube for 25mL seripettor® pro	2	1	704523	114.00
Discharge tube for 2mL seripettor® pro	1	1	707915	58.00
Discharge tube for 10mL seripettor® pro	1	1	707916	54.00
Discharge tube for 25mL seripettor® pro	1	1	707918	54.00

Bottle Thread Adapters

See detailed thread adapter listing on page 43.

Telescoping filling tubes

For Nominal Volume, mL	Length, mm (inches)	Photo	Pack of	Cat. No.	2014 List Price
2, 10	70 - 140 (2.6 - 5.5)	3	1	704202	\$14.60
2, 10	125 - 240 (4.9 - 9.5)	3	1	704203	16.40
2, 10	250 - 480 (9.8 - 18.9)	3	1	704201	19.40
2, 10	195 - 350 (7.7 - 13.8)	3	1	704208	31.00
25	170 - 330 (6.7 - 13.0)	3	1	704204	20.40
25	250 - 480 (9.8 - 18.9)	3	1	704205	22.40

seripettor® *pro* bottle top dispenser

Operating limits and exclusions

Never use this instrument with:

- liquids attacking PP, PE, Al₂O₃ - ceramic, ETFE, FEP, PFA and PTFE (e.g., dissolved sodium azide*)
- liquids attacking borosilicate glass (e.g., hydrofluoric acid)
- liquids which are decomposed catalytically by platinum-iridium (e.g., H₂O₂)
- non-polar solvents like hydrocarbons and halogenated hydrocarbons
- concentrated or oxidizing acids (excluding HCl)
- explosive liquids (e.g., carbon disulfide)
- suspensions (e.g., of charcoal) as solid particles may clog or damage the instrument

This instrument is designed for dispensing liquids, observing the following limits:

- vapor pressure up to 500mbar
- density up to 2.2g/cm³
- temperature 15° to 40°C (59° to 104°F)
- viscosity
2mL instrument: 1300mm²/s
10mL instrument: 150mm²/s
25mL instrument: 75mm²/s
(dynamic viscosity [mPas] = kinematic viscosity [mm²/s] x density [g/cm³])

*Dissolved sodium azide permitted up to a max. of 0.1%

Items supplied

Each seripettor® *pro* bottle top dispenser includes:

- Spare dispensing cartridge
- Discharge tube
- Telescoping filling tube
- Two PP adapters, 45/S40mm and 45/33mm. See page 43 for other adapters
- Operating manual
- One-year warranty



Areas of application / Chemical selection list (as of January 2014)

■ seripettor® dispenser ■ seripettor® *pro* dispenser

Reagent	seripettor®	seripettor® <i>pro</i>	Reagent	seripettor®	seripettor® <i>pro</i>
Acetaldehyde		+	Glycol (Ethylene glycol)	+	+
Acetic acid, 5%	+	+	Glycolic acid, 50%	+	+
Acetic acid, 96%		+	Hexanoic acid	+	+
Acetic acid (glacial), 100%		+	Hexanol		+
Acetone		+	Hydriodic acid	+	+
Acetonitrile		+	Hydrobromic acid		+
Acetophenone	+		Hydrochloric acid, 37%		+
Acetylacetone	+	+	Hydrogen peroxide, 35%	+	
Acrylic acid		+	Isoamyl alcohol		+
Acrylonitrile		+	Isobutanol	+	+
Adipic acid	+	+	Isopropanol (2-Propanol)	+	+
Agar (60°C)	+	+	Lactic acid	+	+
Allyl alcohol	+	+	Methanol	+	+
Aluminium chloride	+	+	Methyl benzoate		+
Amino acids	+	+	methyl ethyl ketone		+
Ammonia 30%	+	+	Methyl propyl ketone		+
Ammonium chloride	+	+	Mineral oil (Engine oil)		+
Ammonium fluoride	+	+	Monochloroacetic acid		+
Ammonium sulfate	+	+	Nitric acid, 10%		+
Amyl alcohol (Pentanol)	+	+	Oxalic acid	+	+
n-Amyl acetate		+	Perchloric acid		+
Aniline		+	Phenol		+
Barium chloride	+	+	Phosphoric acid, 85%		+
Benzaldehyde		+	Piperidine		+
Benzyl alcohol		+	Potassium chloride	+	+
Benzylamine		+	Potassium dichromate	+	+
Benzylchloride		+	Potassium hydroxide	+	+
Boric acid, 10%	+	+	Potassium hydroxide in ethanol	+	+
Butanediol	+	+	Potassium permanganate	+	+
1-Butanol		+	Propionic acid	+	+
Butylamine		+	Propylene glycol (Propanediol)	+	+
n-Butyl acetate		+	Pyridine		+
Calcium carbonate	+	+	Pyruvic acid	+	+
Calcium chloride	+	+	Salicylaldehyde		+
Calcium hydroxide	+	+	Salicylic acid	+	+
Calcium hypochlorite		+	Silver acetate	+	+
Chloroacetaldehyde, 45%		+	Silver nitrate	+	+
Chloroacetic acid		+	Sodium acetate	+	+
Chromic acid, 50%		+	Sodium chloride	+	+
Copper sulfate	+	+	Sodium dichromate	+	+
Cumene (Isopropyl benzene)		+	Sodium fluoride	+	+
Diethylene glycol	+	+	Sodium hydroxide, 30%	+	+
Dimethyl sulfoxide (DMSO)		+	Sodium hypochlorite (active Chlorine approx. 10%)		+
Dimethylaniline		+	Sulfuric acid, 10%	+	+
Ethanol	+	+	Tartaric acid		+
Formaldehyde, 40%	+	+	Urea	+	+
Formamide	+	+	Zinc chloride, 10%	+	+
Formic acid, 100%		+	zinc sulfate, 10%	+	+
Glycerol	+	+			

The above recommendations reflect testing completed prior to publication. Always follow instructions in the operating manual of the instrument as well as the reagent manufacturer's specifications. In addition to these chemicals, a variety of organic and inorganic saline solutions (e.g., biological buffers), biological detergents and media for cell culture can be dispensed. Should you require information on chemicals not listed, please feel free to contact BrandTech. Status as of: 0114/9.

NOTE: The seripettor® & seripettor® *pro* bottle top dispensers cannot be used with hydrofluoric acid (HF). See page 37 of the BrandTech 2014/2015 catalog for description of the Dispensette® TA Pt-Ir dispenser which is the only BRAND dispenser designed for use with HF.

For the most current version of this chart, visit our website www.brandtech.com.

piccolo™

NEW!



The piccolo™ is a compact wiping seal dispenser for dispensing small measured quantities of liquids in all areas of biochemical and medical research.

Made from high quality materials, its small size and semi-automatic operation make it a natural for standardized procedures and kits where small volumes of reagents need to be dispensed. The spring loaded piston design enables one-handed operation.

The piccolo™ comes in two versions: The piccolo™ 1 is a fixed volume instrument, while piccolo™ 2 model has two preset volumes.

Never use the piccolo™ with aggressive media. The piccolo™ is especially designed for applications in connection with aqueous and highly diluted agents.

All piccolo™ instruments are supplied with a GL 28 thread, valve mounting tool, 150mm filling tube and operating manual.

ORDERING INFORMATION

Instrument type	Volume setting(s), µL	A* ≤±%	CV* ≤%	Cat. No.	2014 List Price
piccolo™ 1	100	3.0	0.4	V1610501	\$399.00
piccolo™ 1	200	2.5	0.4	V1610502	399.00
piccolo™ 1	250	2.0	0.4	V1610503	399.00
piccolo™ 1	500	1.5	0.3	V1610504	399.00
piccolo™ 1	1000	1.0	0.2	V1610506	399.00
piccolo™ 2	100 / 250	2.0	0.4	V1611503	450.00
piccolo™ 2	500 / 1000	1.0	0.2	V1611506	450.00
piccolo™ 2	1000 / 2000	1.0	0.2	V1611508	450.00

A*=Accuracy, CV*=coefficient of variation according to DIN EN ISO 8655-5
Other volumes are available upon request.

An adapter is available to mount the piccolo™ to GL 32/33mm threaded bottles. Inquire about other thread adapters for the piccolo™.

ORDERING INFORMATION

Description	Dispenser Thread	Bottle thread	Cat. No.	2014 List Price
piccolo™ thread adapter	GL28	GL32	V1670145	\$23.40



Titrette® Bottletop Burette

The BRAND Titrette® bottletop burette makes routine titrations faster, easier, and more accurate. The Titrette® avoids the risk of spills from poured transfers to glass or plastic burettes, eliminates meniscus reading errors and offers accuracy that satisfies the tolerances for Class A glass burettes. The instrument is well suited for general chemistry, water treatment applications, food/beverage analysis, industrial titrations, and environmental work in the lab or field.

- **High Accuracy:** Precise titrations within the error limits of Class A glass burettes.
- **Smooth Operation:** Mechanism fills and titrates smoothly and easily, for exceptionally sensitive drop-wise titrations.
- **Compact Design:** The Titrette® operates in a fixed position on top of titrant bottles. The low-profile design is stable and fits readily under shelves and cabinets.
- **Easy Handling:** The Titrette® switches automatically between filling and titrating modes. The titrating tube adjusts vertically and horizontally to match receiving vessels, and operation is cordless, using economical commercial batteries that are protected from corrosive vapors.
- **Simple Maintenance:** The Titrette® can be disassembled for cleaning, ensuring long, reliable service even with crystallizing titrants. Easy Calibration™ technology simplifies ISO/GLP compliance.
- **Special Options:** Amber windows (included) protect light-sensitive reagents. Optional drying tube protects moisture-sensitive titrants.
- **PC Interface:** Models available with direct data transmission to a PC.

The World's Only
Bottletop Burette With
Class A Precision.



Titrette® bottletop burette



Digital Display

User selectable resolution of two or three decimal places.

Power Button

Power on/off with user adjustable autoOFF function.

Inspection Window

Allows visual confirmation of the absence of bubbles, amber windows included for light sensitive reagents.

Titration and Recirculating Valve

Eliminates reagent waste and spurting during priming.

Titrating Tube

Horizontally and vertically adjustable.

Threaded Safety Cap

Coarse thread allows fingertip on/off.

CLEAR/Select button

Multifunction button clears display, transfers data via optional PC interface.

PC interface (optional)

Eliminates transcription.

User Replaceable Batteries

Pause Button

Stops incrementing of display, useful for re-priming of instrument.

Hand Wheels

Non-slip handwheels provide variable titration speed from steady stream to dropwise.

Drying Tube (optional)

Port for drying tube (rear) affords protection of moisture-sensitive titrants.

Freely Rotating Valve Block

GL 45mm thread allows bottle label to always face user.

Telescoping Filling Tube (inside bottle)

Adjusts easily to a broad range of bottle sizes. No measuring or cutting is required!

Titrette® bottle-top burette

Easy Handling



Smooth operation

The large, easy-to-grip hand wheels provide exceptionally smooth operation. With the optimized gear ratio, you can fill the device quickly and titrate dropwise with great sensitivity.



Class A precision

The Titrette® bottle-top burette has an innovative new measuring system which matches the Class A error limits of glass burettes according to DIN EN ISO 385 and volumetric tolerances per ASTM E287. If needed, it can display 3 decimal places for volumes below 20mL.



No switching needed

To change between filling and titration, no switching is needed. The instrument automatically detects whether you are filling or titrating by the direction of hand wheel rotation. Pressing the Pause button allows you to interrupt the titration if priming was incomplete. Simply push the button again to resume titration.

Chemical Applicability

The Titrette® is suitable for use with the following titrating agents up to a concentration of 1mol/L

Acetic acid

Alcoholic potassium hydroxide solution

Ammonium iron (II) sulfate solution

Ammonium thiocyanate solution

Barium chloride solution

Bromide bromate solution

Cerium (IV) sulfate solution

EDTA solution

Hydrochloric acid

Hydrochloric acid in acetone

Iodide iodate solution*

Iodine solution*

Iron (II) sulfate solution

Nitric acid

Oxalic acid solution

Perchloric acid

Perchloric acid in glacial acetic acid

Potassium bromate solution

Potassium bromide bromate solution

Potassium dichromate solution

Potassium hydroxide solution

Potassium iodate solution

Potassium permanganate solution*

Potassium thiocyanate solution

Silver nitrate solution*

Sodium arsenite solution

Sodium carbonate solution

Sodium chloride solution

Sodium hydroxide solution

Sodium nitrite solution

Sodium thiosulfate solution

Sulfuric acid

Tetra-n-butylammonium hydroxide solution

Triethanolamine in acetone*

Zinc sulfate solution

This partial list reflects testing completed prior to publication of this catalog. For information on reagents not listed, please contact us.

* Use lightshield inspection window

Titrette® bottletop burette



Lightweight and compact

All components move within the housing, reducing headroom requirements. The compact design and the light weight ensure good stability. The titrating tube can be adjusted horizontally and vertically. This provides flexibility when positioning the instrument, e.g., when using a magnetic stirrer or different bottle sizes.



User serviceable

The Titrette® can be disassembled quickly and easily — in a matter of minutes — for cleaning, to replace the piston/cylinder, or to replace the batteries. Now you can carry out maintenance conveniently and easily in the lab, and in a few minutes the instrument is ready to go again!



Light protection

For protection of light-sensitive media, you can replace the clear inspection windows with the included amber colored windows. It's quick and easy, because the windows just clip into place.

Additional Features



Adjustment with Easy Calibration™

With Easy Calibration™ technology, you can easily make calibration adjustments of the instrument “at the push of a button.”



Two or Three Decimal Places

For use as a micro-burette, you can switch the titrated volume display from 2 to 3 decimal places under “dP” (decimal point). Above 20.00mL, the display automatically switches to 2 decimal places.



Auto Power Off

User adjustable power-off time from 1 to 30 minutes



Calibration schedule

To save a date for the next calibration, simply store it under “GLP”. The date can be called up each time the instrument is turned on.

Titrette® bottle-top burette

Technical data

Operating limits and exclusions

This instrument is designed for titrating liquids, observing the following limits:

- Temperature of instrument and reagents must be between 15° and 40°C (59° and 104°F)
- Vapor pressure up to 500mbar
- Viscosity up to 500mm²/s
- Altitude: maximum 3000m above sea level
- Relative humidity: 20% to 90%

Chemically resistant materials

When the instrument is properly handled, dispensed liquid will only come into contact with the following chemically resistant materials: borosilicate glass, Al₂O₃, ETFE, PFA, FEP, PTFE, platinum-iridium; PP (screw cap).

Limitations of use

- Chlorinated and fluorinated hydrocarbons or chemical combinations which form deposits may make the piston difficult to move or may cause jamming.
- Suitability of the instrument for a special application (e.g., trace material analysis) must be checked by the user.
- For additional information, please contact the manufacturer.
- The instrument is NOT autoclavable!

Comparison of error limits

Volume mL	Partial volume mL	Titrette® bottle-top burette				Bottle-top burettes according to DIN EN ISO 8655-3				Glass burettes Class A according to DIN EN ISO 385 and ASTM E287
		A* ≤ ± %	μL	CV* ≤ %	μL	A* ≤ ± %	μL	CV* ≤ %	μL	EL** (DIN EN ISO) Volumetric Tolerance (ASTM) ±μL
10	10	0.10	10	0.05	5	0.3	30	0.1	10	20
	5	0.20	10	0.10	5	0.6	30	0.2	10	20
	1	1.00	10	0.50	5	3	30	1	10	20
25	25	0.07	18	0.025	6	0.2	50	0.1	25	30
	12.5	0.14	18	0.05	6	0.4	50	0.2	25	30
	2.5	0.70	18	0.25	6	2	50	1	25	30
50	50	0.06	30	0.02	10	0.2	100	0.1	50	50
	25	0.12	30	0.04	10	0.4	100	0.2	50	50
	5	0.60	30	0.20	10	2	100	1	50	50



Items supplied

- Titrette® bottle-top burette
- 45mm thread
- Performance certificate
- Telescoping filling tube, 170-330mm
- Recirculation tube
- 2 batteries, AAA/UM4/LR03
- 3 PP bottle adapters, 45/33mm, 45/540mm, and 33mm/STJ29/42
- 2 colored light shield inspection windows
- Operating manual
- One-year warranty

Storage conditions

Store the instrument and accessories at dry conditions.

Storage temperature: -20°C to +50°C (-4°F to +122°F)

Relative air humidity: 5% to 95%

* Error limits related to the nominal capacity (= maximum volume) indicated on the instrument, obtained when instrument and distilled water are equilibrated at ambient temperature (20°C/68°F) and with smooth operation.

** Error limit: EL = A + 2CV

A*=Accuracy, CV*=Coefficient of Variation

The maximum resolution of the display: The titration volume is displayed in steps of 1μL for instruments with 10mL and 25mL size and in steps of 2μL for 50mL size instruments. For titration volumes above 20mL the display will automatically switch to steps of 10μL.

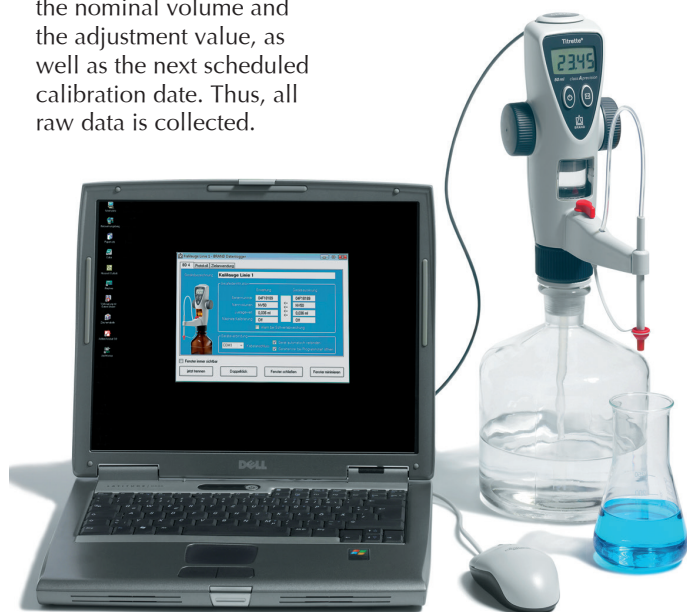
NOTE: If you need an official certification which confirms the error limits that are much stricter than those of DIN EN ISO 8655-3, we recommend a calibration certificate from an accredited calibration laboratory (e.g., the DAkS laboratory at BRAND).

Titrette® bottle-top burette

PC interface (optional)

The instrument is available with an optional RS232 communications interface.

- The titration results are automatically transmitted to the PC by double-clicking on the CLEAR key. This eliminates transcription errors while recording primary data, and complies with an important requirement of GLP.
- With each data transfer, the burette sends the titrated volume, the serial number of the instrument, the nominal volume and the adjustment value, as well as the next scheduled calibration date. Thus, all raw data is collected.
- The transmitted data is recognized as keyboard inputs by the PC. This universal input format ensures that the instrument is compatible with all PC applications that accept keyboard inputs.
- To connect the instrument to a USB interface, simply use a standard USB/RS232 adapter.

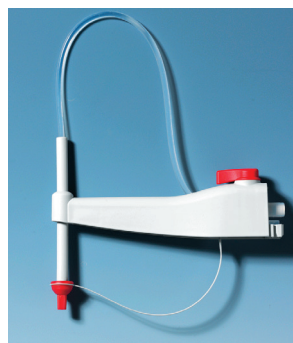


Instruments with a factory DKD certificate are available. Contact BrandTech® Scientific for more information.

Description	Cat. No.	2014 List Price
Titrette® bottle-top burette		
10mL (standard) NEW!	4760141	\$1,025.00
10mL with RS232 interface* NEW!	4760241	1,427.00
25mL (standard)	4760151	1,025.00
25mL with RS232 interface*	4760251	1,427.00
50mL (standard)	4760161	1,025.00
50mL with RS232 interface*	4760261	1,427.00

* Additionally included: connector cable (Sub-D plug connector, 9-pin), one CD (driver software and open RS232 communication protocol). The CD also includes an example application in XLS-file format, as well as a special operating manual.

Accessories/Spare Parts



Titrating tube

With screw cap and integrated discharge and recirculation valve. Pack of 1

For 10mL volume

Cat. No. 707525 \$58.00

For 25mL & 50mL volume

Cat. No. 707529* 58.00

*Manufactured from Jan 2012 onwards (serial #01K)



Dispensing cylinder with valve head Pack of 1

For 10mL volume

Cat. No. 707533 \$93.00

For 25mL volume

Cat. No. 707535* \$93.00

For 50mL volume

Cat. No. 707537* \$93.00

*Manufactured from Jan 2012 onwards (serial #01K)



Filling valve

With olive-shaped nozzle and sealing ring for Titrette®. Pack of 1

Cat. No. 6636 \$50.00



Inspection window

1 set colorless and 1 set amber colored (light shield).

Cat. No. 6783 \$14.80



Piston head

Pack of 1

For 10mL volume

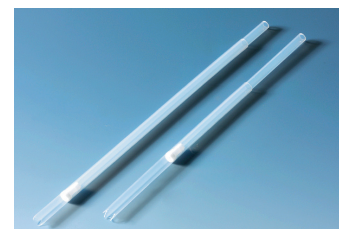
Cat. No. 707531 \$47.00

For 25mL volume

Cat. No. 707530 \$47.00

For 50mL volume

Cat. No. 707532 \$47.00



Telescoping filling tube

FEP. Pack of 1

170-330mm

Cat. No. 704204 \$20.40

250-480mm

Cat. No. 704205 \$22.40



Drying Tube with sealing-ring (without drying agent).

Pack of 1

Cat. No. 707930 \$39.00

EASYCAL™ Calibration Software

Calibrations without Calculations

EASYCAL™ 4.0 simplifies the tedious task of calibrating liquid handling, glass, and plastic volumetric instruments to ISO 9001 and GLP standards. Easy-to-follow procedures are outlined step-by-step and all calculations are performed automatically by the software. Weighing values may be entered manually into the software or imported directly from the balance via serial port. EASYCAL™ 4.0 generates reports to document the calibration testing in accordance to ISO 8655, ISO 4787 etc., all test records can be saved in a database for subsequent use and tracking of instrument performance.

- Simplifies Data Entry
- Organizes All Test Data
- Includes SOPs
- Clearly arranged test record

Demonstration software

Download free, fully-functional demo version at www.brand.de

Description	Cat. No.	2014 List Price
EASYCAL™ professional calibration software	708440	\$672.00
EASYCAL™ testing tubes for pipettes <50µL, 250 pieces	708462	33.00
Micro-weighing container, includes 10 filters and 3 cover caps	708470	64.00
Filter pack, 20 replacement filters (capacity apx. 1000µL)	708471	48.00
Pipette holder (clip)	708605	74.80
Cover cap set, 3 spare closures	708472	44.00

EASYCAL™ 4.0 supports many balances from A&D, Denver, Kern, Ohaus, Precisa, sartorius, Scotec, and YMC. Please contact your balance manufacturer for the appropriate interface cable.



Technical Data

Items supplied

- EASYCAL™ 4.0 software on one CD-ROM (English, French, German, Portuguese and Spanish)
- Installation instructions
- Operating manual
- CD-ROM also contains SOPs (English, French, German and Spanish) for Titrette®, HandyStep® S, HandyStep® electronic, Dispensette®, Transferpette™, and all Transferpette® models from BRAND, as well as BLAUBRAND glassware.

System requirements

- PC with 32 MB RAM
- Microsoft® Windows® 98/NT with SP6/ME/2000/XP
- SVGA graphics card with 256 colors
- Mouse
- CD-ROM drive
- Microsoft® Paint



Pipette holder (clip) & testing tube

EASY Calibration™

Many of BRAND's instruments feature Easy Calibration™ technology, making compliance to ISO 9001 and GLP standards simple. Easy Calibration™ technology enables calibration adjustments to be completed in just seconds, without tools.

If gravimetric testing yields a delivered volume that is different from the set volume, the instrument can be adjusted in just a few easy steps. The steps are essentially the same for all BRAND instruments featuring Easy Calibration™ technology. The process is outlined below, specific instructions can be found in the instrument operating manual.

- Perform gravimetric testing to determine Accuracy (%) and Coefficient of Variation (%). If accuracy specification is greater than the stated error limits for the instrument than perform a calibration adjustment.
- Disengage the volume display mechanism.
- Set the volume display to match the actual dispensed volume.
- Reengage the volume display mechanism.
- Calibration adjustment is complete, no further testing or adjustment required! Adjustment from factory setting is indicated by a red recalibration flag.

The process is shown in more detail below for the Transferpette® S pipette and Dispensette® III Digital Easy Calibration™ instruments.

Example

Gravimetric testing yields a delivered volume of 98.5µL at a set volume of 100µL. The instrument can be adjusted in five easy steps.



Step 1

Remove the label window and the label. Push the hook forward, raise it slightly and then pull it back.



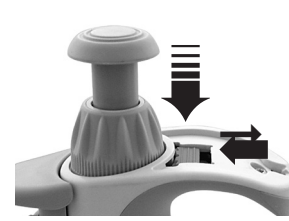
Step 2

Remove the protective film. Push the red adjustment slider completely back, and raise the volume-setting wheel and release the adjustment slider.



Step 3

Set displayed volume to actual value (e.g., 98.5µL).



Step 4

Push the adjustment slider back, push the volume-setting wheel downwards and release the adjustment slider.

Step 5

Reinsert the label and window. It's calibrated!

Dispensette® III Easy Calibration™



Step 1

Open housing by moving slide lock.



Step 2

Lift the red lever on right, slide knob left to disengage gears; set the display to actual delivered volume (e.g., 9.90mL), restore knob and lever position.



Step 3

Replace housing – done! Adjustment from factory setting is indicated by a red recalibration flag.

accu-jet[®] *pro*

The BRAND accu-jet[®] *pro* pipette controller incorporates comfort and performance features that make it one of the most popular pipette controllers in the market.

- **Comfort:** The accu-jet[®] *pro* is contoured for better fit for small and large hands. It is light weight and well balanced for low-fatigue pipetting.
- **Control:** Pressure-sensitive buttons control pipetting speed, plus a motor-speed-limiter control thumbwheel adds extra assurance with pipettes as small as 0.1 mL.
- **Charge Indicator:** Do not worry about your pipette controller failing on you in the middle of your work. An LED indicates when approximately 2 hours of charge time is left. Instrument can be operated while charging.
- **Advanced Electronics:** The accu-jet[®] *pro* features a long-life, environmentally-friendly Nickel-Metal hydride battery, with a special pulsed-mode charger to eliminate "lazy-battery effect." Instrument supplies approximately 8 hours of continuous pipetting (with a 10 mL pipette) without recharging! LED indicates low battery.
- **Ergonomic Design:** The accu-jet[®] *pro* weighs only 190g (6.7oz.) and features a smoothly curved shape to eliminate pressure points for operator comfort.
- **Corrosion Protection:** A built-in check valve protects against liquid penetration. The unique active vapor exhaust system vents externally to protect internal components.



The New Standard in
Pipette Controllers.



accu-jet[®] pro pipette controller

User-Accessible Battery Compartment

Easy-access battery compartment makes changes a snap! Two covers are included - one with ridges to allow inverted storage of the accu-jet[®] pro on the bench.

Low Battery Indicator

Red LED lights up when there are two hours of pipetting left in the battery.

Hydrophobic Filter

Includes 0.2µm filter for tissue and cell culture applications. Optional 3µm filters are available for pipetting to Class A tolerances.

Silicone Adapter (inside)

The silicone adapter with a built-in check valve provides a firm fit for glass and plastic pipettes from 0.1 to 200mL with a suction tube outer diameter of max. 9.2mm and reduces risk of over-aspiration. Adapter support, silicone adapter and integral membrane filter are autoclavable at 121°C (250°F).

Mode Switch

Select either powered delivery for tissue and cell culture applications, or gravity delivery for analytical applications.

Motor Speed Control Thumbwheel

Adjust maximum pipetting speed for enhanced control with small volume pipettes.

Intuitive Push-Button Control

Press gently for smooth, slow aspiration or dispensing, press more for increased speed. Use in conjunction with the motor-speed control thumbwheel for unsurpassed control for small and large volume pipettes.

Charging Socket

The charging socket is conveniently located on the bottom of the grip, keeping the cord out of the way when charging and pipetting simultaneously.

Sculpted Grip

Contoured grip eliminates pressure points for comfort in small and large hands.



accu-jet® pro pipette controller

Relaxed Operation

Mission: Control

The accu-jet® pro adds a motor speed limiter to the pressure-sensitive buttons to provide accurate, intuitive control for the complete spectrum of pipettes from 0.1mL to 200mL.

- **Filling** Simply adjust the overall pipetting speed using the speed limiter thumbwheel, and use the upper button to bring liquid into the pipette; the powerful internal pump can draw 50mL in less than ten seconds.
- **Gravity-delivery mode** Free descent of meniscus for volumetric accuracy—ideal for analytical applications.
- **Power-delivery mode** Continuously adjustable dispensing speed from powered stream to dropwise dispensing including soft blowout—ideal for tissue culture applications.

Speed limiter for extra assurance

For extra protection against over-aspiration or excessively powered discharge, set the speed limiter dial at low. For faster or larger volume, set at high. Pipette controller buttons still provide touch-sensitive speed control within the selected speed range.

Recharging

Dual-mode charger provides a quick charging of the environmentally-friendly NiMH battery in only four hours. After the full charge is complete, the charger switches automatically to a pulsed mode, to eliminate “lazy battery effect.” The accu-jet® pro is fully functional during recharging.

Storage

Ridged battery cover allows inverted storage of the instrument on the benchtop. To save bench space, an included wall support comes with snap tapes for easy cleaning.



accu-jet® pro pipette controller

Technical Data

Available in colors

The accu-jet® pro comes in four different color accents for personal preference or color-coding by laboratory or application. Select from Dark Blue, Magenta, Green or Royal Blue.

Operating limits

Temperature of instrument and reagents must be between 10° and 40°C (50° and 104°F).

Items supplied

The accu-jet® pro pipette controller is supplied with:

- Wall support, gray
- NiMH battery
- Two battery covers; one smooth, one ridged
- Two spare, sterile* 0.2µm membrane filters
- Charger (US plug models listed, others available)
- Operating manual
- One-year warranty

ORDERING INFORMATION

Description	Cat. No.	2014 List Price
accu-jet® pro Pipette Controller with wall support, spare membrane filters (0.2µm) & charger (100-240V, 50-60Hz, US plug)		
accu-jet® pro Pipette Controller, Dark Blue	26330	\$407.00
accu-jet® pro Pipette Controller, Magenta	26331	407.00
accu-jet® pro Pipette Controller, Green	26332	407.00
accu-jet® pro Pipette Controller, Royal Blue	26333	407.00

Spare Parts and Accessories

Wall support, gray	26540	44.00
Silicone adapter with PTFE check valve	26508	25.60
Snap tapes, 12 x 65mm	26542	22.40
Spare NiMH battery	26630	26.60
AC adapter Input: AC 100-240V, 50-60Hz, US plug Output: DC 5V/200mA	26603	59.00
Membrane filter, 0.2µm, blister pack, sterile*, each	26530	10.40
Membrane filter, 0.2µm, non-sterile, pack of 10	26535	84.00
Membrane filter for Class A pipetting, 3µm, blister pack, non-sterile, each	26052	12.60
Membrane filter for Class A pipetting, 3µm, non-sterile, pack of 10	26056	68.40

* Sterilized with ethylene oxide (EO)



NEW!

A laboratory standard for decades, the macro™ pipette controller has been completely redesigned for even finer control of all volumetric and serologic pipettes from 0.1-200mL. All of the function that made this the world's favorite manual pipette controller has been retained - from the "one-size-fits-all" silicone adapter, the reinforced ridge for easy tip wiping, and the sensitive toggle for smooth aspiration and dispensing.

- **Simplifies Pipetting:** Operation is as simple as squeezing the suction bellows and adjusting a lever. One squeeze of the bellows powers aspiration and dispensing up to 50mL. Equipped with a convenient blow-out bulb to empty "to contain" pipettes. The macro™ is an excellent tool for laboratories with multiple and novice users.
- **Fits Most Pipettes:** The macro™ is compatible with glass and plastic 0.1 to 200mL serological, volumetric and graduated pipettes with a maximum suction tube outer diameter of 9.2mm, calibrated "to deliver" and "to contain." The modified control mechanism allows finer control with small volume pipettes.
- **Improves Lab Ergonomics:** The macro™ eliminates the awkward hand positioning associated with rubber pipette bulbs while increasing control of meniscus-level and flow rate. Relaxed grip design, low weight 125g (4oz.), and low-resistance operation minimize strain from prolonged pipetting.
- **Pipettes to Class A Tolerances:** A 3µm hydrophobic membrane filter (included) reduces cross-contamination, protects against overaspiration, and allows proper drain times for Class A pipettes.
- **Autoclavable for Decontamination and Sterile Pipetting:** The macro™ withstands repeated autoclaving at 121°C (250°F).

The improved macro™. Comfortable, convenient meniscus control.



macro™ pipette controller

Suction Bellows

Just a simple squeeze of the suction bellows powers the aspiration of up to 50mL. Need to fill a 100mL pipette? Just squeeze the bellows again and continue! The bellows are replaceable, if necessary, after years of use.

Blow-Out Bulb

Simply press the convenient blow-out bulb to empty the last drop from blow-out pipettes.





Unique Valve System (inside)

Wide air channels allow fast filling of large pipettes. Sensitive valves give precise control of low-volume pipettes. The replaceable valve system is designed to ensure appropriate drain times for accurate measurement.

Pressure Release Valve (inside)

Facilitates easy compression of the suction bellows.

ORDERING INFORMATION

Description	Cat. No.	2014 List Price
macro™ Pipette Controller with spare 3µm filter and operating manual		
Gray 	26200	\$84.00
Blue 	26202	84.00
Magenta 	26203	84.00
Green 	26201	84.00
Membrane filter, 3µm (PP, PTFE), non-sterile, each	26052	12.60
Membrane filter, 3µm (PP, PTFE), non-sterile, pack of 10	26056	68.40
Silicone adapter, 44mm long, each	26146	8.20
Adapter housing (gray PP) 49mm long, each	26220	8.20
Silicone suction bellows with gray PP screw ring, each	26225	30.60
Valve system (PP, PTFE, Silicone), each	26128	33.00



Simple thumb pressure controls aspiration and dispensing speed.

Pipetting Lever

A single lever controls filling, meniscus setting, and delivery speed, improved for finer control with small volume pipettes. Aspirate quickly for productivity, or slowly for meniscus control. Press down gently on the lever to dispense drops; press firmly for a steady stream.

Pipette Adapter with Filter (inside)

Detachable, autoclavable silicone adapter fits 0.1-200mL pipettes. Hydrophobic filter limits over aspiration into unit.



QuikSip™ Bottletop Aspirator

The QuikSip™ is a convenient bottletop aspirator that removes supernatants, cell culture media, and other biological liquids from dishes, flasks, culture bottles, centrifugation tubes, multiwell plates, and more. It is small, portable, and doesn't require an external vacuum or power source.

- **Moves Easily Between Labs:** The QuikSip™ works without any external vacuum source, allowing it to be easily transferred between workstations. Each plunger stroke powers up to 25mL of aspiration.
- **Provides Fingertip Aspiration Control:** The QuikSip™ includes a unique thumb-operated controller that is compatible with disposable pipette tips, micropipettes, and glass Pasteur pipettes.
- **Adapts to Sterile Environments:** All wetted parts are autoclavable (except piston/cylinder cartridge). Sterile piston/cylinders are available for use in sterile applications.
- **Fits Most Reagent Containers:** Mounts on most common reagent bottles with its 45mm thread and included 45/33mm and 45/S40mm adapters. Other thread adapters available.

The Economy Aspirator for Biological Fluids.

Technical Data

Operating limits and exclusions

Liquids unsuitable for use with the QuikSip™ bottletop aspirator include, but are not limited to:

- concentrated or oxidizing acids
- non-polar solvents, such as hydrocarbons and halogenated hydrocarbons
- hydrofluoric acid (HF)
- those that attack PP, PE, EPDM and silicone
- temperature of instrument and reagents must be between 15° and 40°C (59° and 104°F)
- piston/cylinder cartridge and pump housing are not autoclavable

Items supplied

- QuikSip™ aspirator includes:
- QuikSip™ controller with 200cm (78in.) of silicone tubing
 - Spare piston/cylinder cartridge
 - Two PP thread adapters 45/33mm and 45/S40mm. See page 43 for other adapters
 - Operating manual
 - One-year warranty



QuikSip™ aspirator shown with optional autoclavable 8-channel manifold.

ORDERING INFORMATION

Description	Cat. No.	2014 List Price
QuikSip™ bottletop aspirator	4723150	\$325.00
8-channel manifold; PP, autoclavable, pack of 1	704526	14.40
25mL replacement piston/cylinder cartridge, pack of 3	704504	63.00

Bottles & Adapters

see detailed listing on page 43.

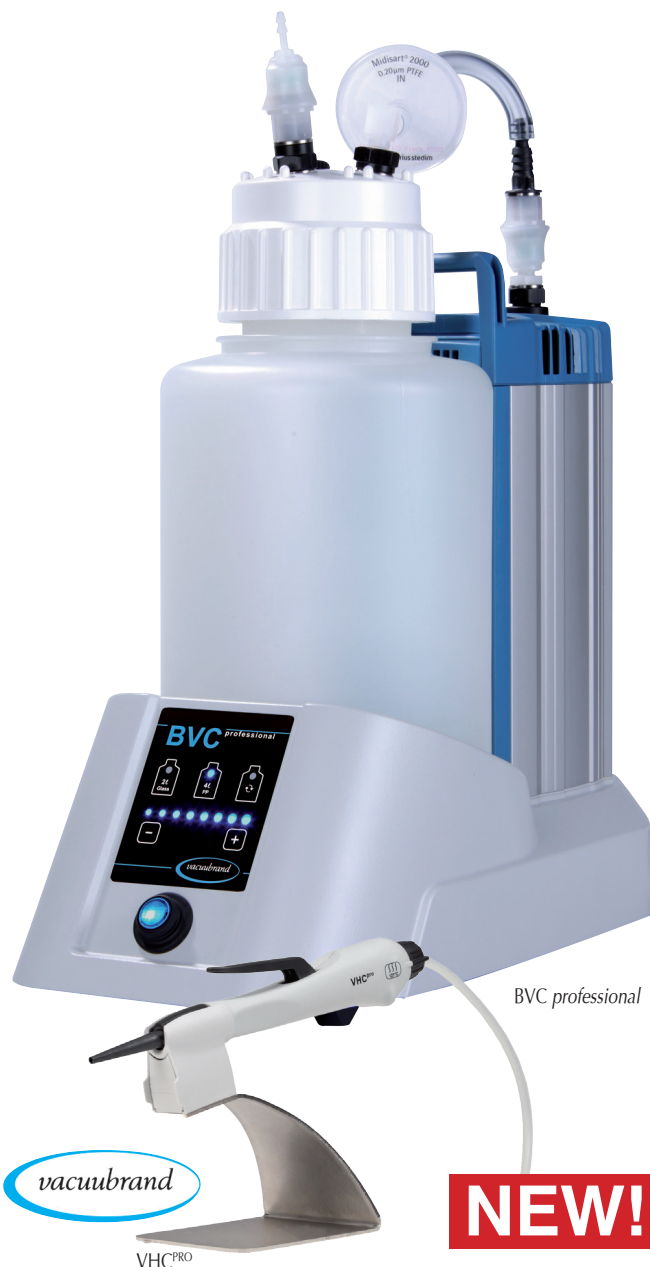
BVC Fluid Aspiration Systems

The new family of BVC fluid aspiration systems are the first to account for the needs of a modern Biology laboratory.

- **Three models:** *basic*, *control* and *professional* to serve your fluid aspiration needs. The *control* & *professional* models include integrated vacuum pump; the *basic* requires an external vacuum source.
- **Containment:** 2 or 4 liter vessels for safe collection and disposal of your biological waste; an autoclavable hydrophobic 0.2µm biofilter protects the pump or other vacuum supply from biohazardous aerosols. The VHC^{PRO} hand controller keeps all fluid within the aspiration tubing for the ultimate in containment and cleaning convenience.
- **“Bleach proof”:** “G” models feature a 2 liter glass collection vessel with scratch and fragment protection coating for true bleach resistance. Standard versions include a 4 liter heavy duty polypropylene vacuum bottle for increased capacity.
- **Reliable aspiration capability:** The *control* and *professional* models feature powerful VACUUBRAND® chemistry-design vacuum pumps with exceptionally long service life and enough power for two users. The *professional* model includes a contact-free liquid level sensor for worry-free aspiration. High quality components mean years of trouble-free operation even when working with aggressive disinfectants. This results in low cost of operation.
- **Compact, quiet and stylish:** Streamlined design incorporates bottle, controls and pump (*control* & *professional* models), in a lab friendly small footprint.
- **NEW! Ergonomic VHC^{PRO} hand controller** allows easy, comfortable fluid aspiration in a number of different hand positions. One included with every BVC system.

ORDERING INFORMATION

Description	Cat. No.	2014 List Price
BVC BioChem VacuuCenter Systems		
BVC <i>basic</i> with 4 liter polypropylene bottle	727000	\$1,049.00
BVC <i>basic G</i> with 2 liter glass bottle	727100	1,149.00
BVC <i>control</i> , with 4 liter polypropylene bottle, 100-120V, 50-60Hz	727203	2,091.00
BVC <i>control G</i> , with 2 liter glass bottle, 100-120V, 50-60Hz	727303	2,195.00
BVC <i>professional</i> , with 4 liter polypropylene bottle, 100-120V, 50-60Hz	727403	2,549.00
BVC <i>professional G</i> , with 2 liter glass bottle, 100-120V, 50-60Hz	727503	2,549.00
Accessories		
4 liter collection bottle, polypropylene, with aspiration cap	635810	419.00
2 liter collection bottle, glass, with aspiration cap	635809	471.00
2 liter bottle adapter for BVC <i>control</i> and BVC <i>professional</i> (included in BVC <i>control G</i> and BVC <i>professional G</i>)	635839	73.00
NEW! VHC ^{PRO} Vacuum Hand Controller with 2.5 meters of tubing	688061	225.40
NEW! 8-channel pipette tip adapter, with ejector for VHC ^{PRO}	635679	399.00
Pipette tip adapter w/ ejector for VHC ^{PRO}	635638	73.00
Stand for VHC ^{PRO}	635680	139.00
Connector, to add second VHC ^{PRO} to BVC bottle aspiration cap	699943	58.00
Aerosol filter, 0.2µm	638264	32.00
Quick coupling to connect VHC ^{PRO} to bottle	635807	157.00
Quick coupling to connect bottle to pump	635808	137.00
8-channel manifold; PP, autoclavable, pack of 1	704526	14.40
BVC Shuttle - allows easy movement of BVC under Biosafety cabinet	696880	195.00



BVC *basic*

BVC *professional G*

VACUUBRAND® Vacuum Products

A complete range of vacuum solutions

VACUUBRAND has been a pioneer in laboratory vacuum for over 40 years, and brings convenience, performance, reliability, and economy to laboratory vacuum supply. VACUUBRAND® pump-control options also offer distinct productivity advantages compared with uncontrolled pumps, central vacuum system, and competitive vacuum products.

Being the only manufacturer that manufactures nothing but vacuum technology for laboratory applications gives VACUUBRAND a unique perspective on the market. It gives them the ability to make “no compromise” application-specific solutions, for rotary evaporators, vacuum ovens, gel dryers, biofluid aspiration and more. Why choose a VACUUBRAND® pump instead of an oil-sealed pump or a competitive oil-free pump?

- **Oil-Free and Chemically Resistant without Compromise:** VACUUBRAND® chemistry-design diaphragm pumps combine dry operation, fluoropolymer flowpaths, and distinctive engineering for excellent corrosion-resistance and low maintenance.
- **Whisper Quiet:** These are among the quietest diaphragm vacuum pumps available, operating at decibel levels comparable to a quiet conversation.
- **Lower Lifetime Cost:** The high flow rates, corrosion-resistant flow path materials, reliability (typical service intervals well in excess of 15,000 working hours) and durability of VACUUBRAND® pumps can save thousands of dollars per pump per year in operation and maintenance costs. Visit www.brandtech.com for details.
- **High Performance:** Working vacuum flow rates of VACUUBRAND® pumps are up to 100% better than competitive dry pumps for faster evaporative applications and higher productivity.



PC3001 VARIO^{PRO}

Quiet. Powerful. Low Maintenance. Unbeaten Economy.

Become a Vacuum Expert: A Short Course in Lab Vacuum

How deep of a vacuum do I need?

Vacuum pump specifications are typically stated as ultimate vacuum and flow rate. The ultimate vacuum required is task dependant. Most laboratory applications operate best in the range of 1-100mbar. For filtration, liquid aspiration and other pressure-differential (“fluid movement”) applications, 100mbar is sufficient, achieving 90% of the possible “force” i.e. potential pressure difference. An ultimate vacuum of 7mbar is effective for rotary evaporation of most solvents more volatile than water. For challenging applications like rotary evaporation of very high temperature boiling point solvents or centrifugal concentration of high boilers like DMF, a 2mbar ultimate vacuum is needed. VACUUBRAND® oil-free diaphragm pumps can do the job for all the above applications. VACUUBRAND® oil-free pumps are whisper quiet, economical and environmentally friendly, requiring no costly oil changes, or cold traps to protect the pump. A good rule of thumb is “never use an oil pump when an oil-free pump will do the job.” Freeze drying requires deeper vacuum typically referred to as “fine vacuum” in the range of 10^{-3} -1mbar. Rotary vane or hybrid pumps are required for these applications.

Control

Gauges and controllers enable you to monitor and manage your laboratory vacuum applications. Whether you simply need to monitor your application, provide on/off control, need flow rate control or require precise adaptive vacuum control, VACUUBRAND offers mercury free gauges and controllers, as well as integrated systems to meet your requirements.

What about “flow rate?”

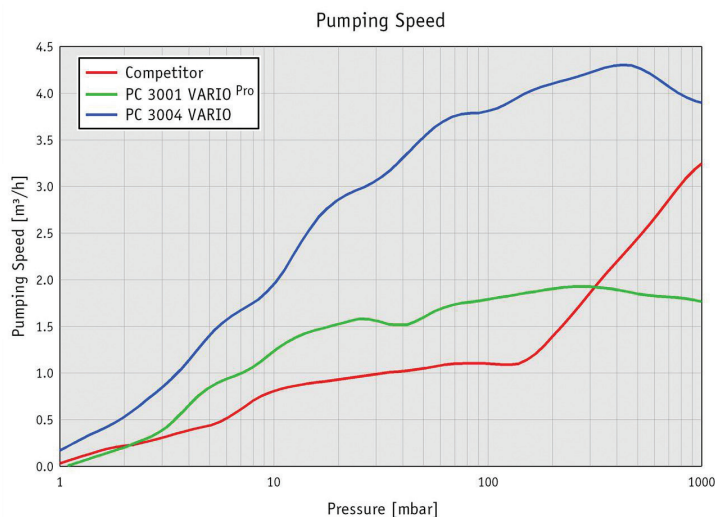
The flow rate required for an application is determined by the application, system leakage and your time requirements. The “free air capacity” (also known as displacement) specification of a vacuum pump represents its peak ability to move vapor at atmospheric pressure. It is important to note that actual flow rate decreases from the displacement specification to zero as a pump reaches its ultimate vacuum. A pump’s flow curve illustrates its working flow rate through its operating range and can be useful for the selection of the correct pump for an application (see figure to the right). If a pump can’t provide enough flow under vacuum, the application will proceed more slowly or in some cases not at all. VACUUBRAND® pumps are designed to retain more flow rate throughout their working range, and only drop off sharply close to their ultimate vacuum.

Solvent Recovery

Catchpots and condensers protect the pump and your lab atmosphere from application vapors. An inlet catchpot captures condensed vapors from the vacuum line before they degrade pump performance. The outlet condenser (cooled by external means) and catchpot provide near 100% recovery of vapors that pass harmlessly through the pump’s corrosion-resistant fluoropolymer flowpath, typically eliminating the need for a cold trap to protect the pump or environment. For more details on the economic benefits of eliminating cold traps, see page 76. Depending on the temperature of your application and the vapor pressure of your solvent, you may not even need a condenser, an outlet catchpot may be sufficient.

Corrosion Resistance

Evaporative and other corrosive applications can be very destructive to ordinary vacuum pumps. Conventional rotary vane pumps require frequent oil changes and cold traps to minimize the damaging effects of corrosive chemical vapors. VACUUBRAND® oil-free chemistry-design pumps incorporate a fully chemistry resistant fluoropolymer flow path for excellent corrosion resistance and low maintenance. For non-corrosive, non-evaporative applications, VACUUBRAND also offers a comprehensive line of high-performance Aluminum-FKM diaphragm pumps.



New & Innovative Vacuum Products



MZ1C Vacuum Pump

MZ1C

For small scale evaporative applications using volatile solvents, the new MZ1C is an excellent choice. It provides 12 millibar (9 torr) ultimate vacuum and 0.5cfm (14lpm) free air capacity in a functional, space saving package. The MZ2C provides a well-proven and extraordinarily long diaphragm life time in excess of 15,000 operating hours. It is whisper quiet with low vibration. The functional, space saving and innovative design with readily accessible top mounted power switch ensures convenient and quick operation. It features robust PTFE diaphragms and valves for optimal chemical resistance with a full fluoropolymer flowpath, for a complete chemistry-design pump. Suitable for gel dryers and small rotary evaporators when vacuum control and solvent condensation is not an issue.

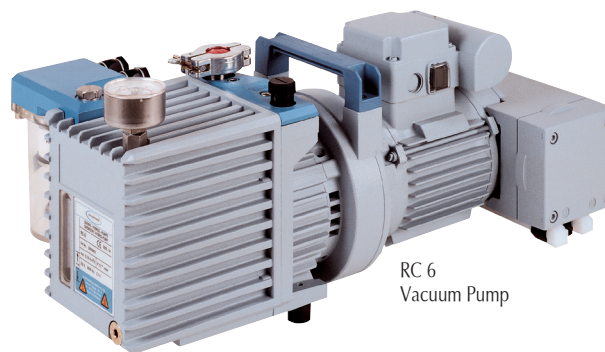
CVC3000 detect

The CVC3000 *detect* vacuum controller adds performance to any stand-alone laboratory diaphragm vacuum pump – from VACUUBRAND, or any other manufacturer. Integrated with a high performance solenoid valve for ease of use, the new *detect* mode will find the first boiling point in a rotary evaporator automatically, and then provide 2-point control. Additionally, the CVC3000 *detect* allows programming of multistep programs for standardized routines. A simple jogwheel interface, and menus in fourteen different languages allow easy use by anyone in the lab. Available in a benchtop version, and a version that mounts to lab frames and ring-stands; both come with a universal power supply standard.



RC6 chemistry-HYBRID™

The RC6 chemistry-HYBRID™ pump is a combination of a two-stage rotary vane pump and a two-stage chemistry diaphragm pump for optimized corrosion resistance. It's an excellent pump for lyophilization and other chemistry applications requiring the deeper vacuum provided by rotary vane pumps. The unique design, combining two pump types, drastically reduces oil changes and maintenance costs while ensuring peak performance. The diaphragm pump maintains the oil reservoir under vacuum in order to keep the partial pressures of solvent vapors at levels below their condensation points and to reduce largely the concentration of oxygen and corrosive gases. Therefore the RC6 chemistry-HYBRID™ pump has a much higher solvent vapor pumping capability and resistance to aggressive gases than conventional rotary vane pumps.



RC 6 Vacuum Pump

Large-scale applications

VACUUBRAND® makes a number of large vacuum pumps, in both Aluminum-FKM and fluoropolymer Chemistry-design models. An excellent choice for your scale-up processes and kilo labs. Contact BrandTech® Scientific for information.



MD 12 NT Vacuum Pump

ORDERING INFORMATION

Description	Cat. No.	2014 List Price
NEW! MZ1C	724103	\$1091.00
NEW! CVC3000 <i>detect</i> benchtop version, 100-230V, 50-60Hz	2614860	3,285.00
NEW! CVC3000 <i>detect</i> support rod version, 100-230V, 50-60Hz	2614120	3,285.00
RC6 Chemistry-HYBRID pump, 120V, 50-60Hz	698563	7,375.00

The Essential Vacuum Pump

The Essential Oil-Free, Corrosion-Resistant Vacuum Pump

High performance VACUUBRAND® chemistry-design diaphragm pumps provide dry vacuum levels as deep as 0.6mbar, making them an excellent choice for most applications from benchtop research to pilot plant installations. Pumps without controls are well-suited to high flow applications like vacuum ovens, or for applications in which the control is provided by the vacuum application apparatus. Even operations that don't require solvent recovery or sophisticated control benefit from a pump designed with your applications in mind.

Continuous Condensate Purge

All chemistry-design multistage models feature an integrated gas ballast that permits continuous purging of condensed vapor from the pump.

Whether your vacuum application requires a simple pump or a fully integrated vacuum system with solvent recovery and electronic control, VACUUBRAND has the right pump for your lab.



MZ2C NT Vacuum Pump
7mbar, 1.4cfm

Small Footprint

Compact pumps fit easily on benchtops or under hoods.

The VACUUBRAND nameplate – the sign of a quality product

VACUUBRAND continuously works to perfect an integrated management system in all departments; conforming with ISO 9001 and ISO 14001. The standard of performance is quality, customer focus, employee involvement and environmental orientation. Each vacuum pump goes through a performance test of hours to days at the VACUUBRAND facility, measuring specifications and equipment reliability with computer-controlled measuring and test

instruments, with a fully automated final test. An interlock system prevents the manufacturing of a serialized nameplate until all test parameters are met. This ensures that every vacuum pump bearing the VACUUBRAND name is not only designed to an exceptionally high level engineering standard, but also offers extraordinary lifetime economy because of their low service costs and above-average lifetimes.

Networked Vacuum

VACUU•LAN® Mini-Network

The VACUU•LAN® Mini-Network is a great way to perform up to three applications from a single pump, increasing utility without eating up valuable lab space. It builds on VACUUBRAND's pioneering technology in vacuum local area networks for new laboratories and renovations, transferring the technology into a simple-to-install unit to add capability to existing labs. Three VACUU•LAN® vacuum ports with flow control are mounted onto a bar—each port has an integrated check valve to minimize

interference and the possibility of cross-contamination. Corrosion resistant materials are used throughout the vapor flowpath for long life in chemistry labs. The bar can be mounted to ring stands or laboratory framework with the pre-installed mounting support rods, or can be easily attached to walls. Vacuum can be supplied by any VACUUBRAND® chemistry-design pump, or even diaphragm pumps from other manufacturers.



ORDERING INFORMATION

Description	Cat. No.	2014 List Price
VACUU•LAN® Mini-Network	2614455	\$1,360.00



VACUU•LAN® Networks for New Lab Construction and Renovation

Fully-customized VACUU•LAN® vacuum local area networks can provide the vacuum for your laboratory construction or renovation project. The modular network can be integrated into laboratory furniture and fume hoods, and powered by a quiet, compact VACUUBRAND® chemistry design vacuum pump that fits under your lab bench. With a VACUU•LAN® vacuum local area network, you have high-performance vacuum (as deep as 2mbar/1.5Torr) at each bench or fume hood port, without the instability and user interference of a central vacuum system, and without the bench space required for individual pumps. Individual ports can even be configured for electronic control, for fully programmable vacuum supply directly from the network. This modular approach offers long-term flexibility; install the vacuum you need where you need it, only when you need it.

Two decades of global experience developing VACUU•LAN® laboratory vacuum local area networks, for small college labs and major research institutions, make this VACUUBRAND innovation the smart choice for your laboratory vacuum. For more information on this innovative technology, contact BrandTech® Scientific.

Vacuum Pumps with Adaptive Electronic Control



Self-regulating Electronic Control – VARIO®

VACUUBRAND® VARIO® vacuum systems offer users unsurpassed control of critical vacuum applications. A low maintenance chemistry-design pump is integrated with a variable speed motor and a mercury-free, digital controller. The system automatically finds and follows boiling curves, continuously optimizing the vacuum level without having to program presets. It's the ultimate productivity tool! VARIO® pumps are an excellent choice for reactors.

- **Faster:** Because the vacuum level is continuously optimized, evaporation times are up to 30% faster when compared to other electronically-controlled pumps.
- **Easier:** Just press "Start" and the VARIO® pump begins pumping down, and finds the first boiling point. It maintains and continually optimizes vacuum levels to vapor flow — even for mixtures!
- **Sustainable:** VARIO® technology greatly reduces energy consumption by reducing pumping speed to only what is necessary for optimal process performance. This greatly extends service intervals. No dry ice cold traps required for pump protection, and no oil changes massively reduce the carbon footprint.
- **Less "Babysitting":** The VARIO® controller automatically adjusts vacuum levels, reducing the need for manual adjustment or complex pumping programs. The pump even shuts itself off at pre-set levels or when evaporation is complete.
- **Virtually No Bumping:** The VARIO® controller automatically reduces the pumping speed as each boiling point is approached so "overpumping" is substantially reduced.
- **Less Maintenance:** Because the pump only operates enough to maintain optimum vacuum, wear is reduced, extending the service interval greatly.
- **Computer Interface:** An integrated bidirectional RS232 port allows control and monitoring of every parameter for process validation, and the execution of complex pumping programs. Use our VACUU•CONTROL™ software (PC only) for easy control and monitoring (call for details).



PC3001 VARIO^{PRO}
Vacuum System
2mbar, 1.2cfm

Low-profile outlet
condenser reduces
height requirements.



PC3001 basic Vacuum System

The PC3001 basic provides 2mbar ultimate vacuum and 34lpm with a speed control knob for manual vacuum control. This compact, quiet, energy efficient, low maintenance pumping unit can be upgraded to a PC3001 VARIO^{PRO} system with two supplemental modules. Module 1 adds an inlet catchpot to protect the pump and full VARIO® control. Module 2 adds an outlet condenser for solvent recovery. Add one or both!

More information at
www.brandtech.com.

ORDERING INFORMATION

Description	Cat. No.	2014 List Price
PC3001 basic		
100-120V/200-230V, 50-60Hz	696723	\$5,252.00
Supplemental Module 1	699921	2,391.00
Supplemental Module 2	699922	507.00

Vacuum Pumps with Manual Control

Vacuum Pumps with Manual Control

Popular VACUUBRAND® chemistry-design vacuum pumps are available with manual flow control to provide the most basic management of vacuum where electronic control is unnecessary to achieve good results.

Centrifugal concentration, gel drying, and even simple rotary evaporation applications can often be effectively managed with manual control systems.

Outlet Condenser with Catchpot

An outlet condenser is an effective way to capture vapors that pass through a chemistry diaphragm pump, helping protect the lab atmosphere and the environment. With the vapors at the outlet being at atmospheric pressure, the extremely cold temperatures required with an inlet side cold trap are not necessary. For most applications tap water is sufficient, or in line with a rotary evaporator condenser coil.



PC101 NT
Vacuum System
7mbar, 1.4cfm

Inlet Catchpot

Most VACUUBRAND® PC systems feature an “AK” inlet catchpot. This helps protect the pump from any condensation in the vacuum line, as well as particles that may be generated by the application, preserving the performance of the pump for consistent operation. VACUUBRAND® catchpots are safety coated to help protect against breakage.

Diaphragm Valve

A manually controlled PTFE diaphragm valve restricts the flow into the pump. The vacuum level is determined by the equilibrium between the vapor flow from the application balanced against the restricted flow. Using this method of control for evaporative applications is significantly quieter than less expensive bleeder valves.

Bourdon Analog Gauge

Dial (Bourdon) relative pressure gauge provides approximate vacuum levels and trend indication on the PC101 NT and PC201 NT.

Dual Application Vacuum Systems

Pumps with Dual Application Control

VACUUBRAND® dual application vacuum systems harness the power of the VACUUBRAND® oil-free pumps to increase lab efficiency and reduce the cost of vacuum generation. Operating two different applications from a single pump saves money and lab bench space.

These vacuum systems are available with manual control, electronic control, or both. Integrated check valves minimize interaction between applications.

All dual application systems include a high-performance 7mbar or 1.5mbar VACUUBRAND® NT series vacuum pump. Select a 7mbar system (MZ2C NT Synchro™, PC511 NT, or PC520 NT) for most lab applications and 1.5mbar systems (MD4C NT Synchro™, PC611 NT, PC620 NT) for larger applications or those with higher boiling point solvents.



MZ2C NT Synchro™
Vacuum System
7mbar, 1.4cfm



Manual Control

PTFE diaphragm valve provides approximate control of vacuum levels for less demanding applications.

Electronic Control

Solenoid valve, operated by a CVC3000 controller, provides precise two-point electronic control for important applications.

PC511 NT (shown)	PC611 NT (not shown)
Vacuum System	Vacuum System
7mbar, 1.4cfm	1.5mbar, 2.2cfm



PC520 NT (7mbar) and PC620 NT (1.5mbar) systems have two electronically controlled vacuum ports for precise automated control of two applications running simultaneously.

PC520 NT
Vacuum System
7mbar, 1.4cfm

MZ2C NT Synchro™ (7mbar) and MD4C NT Synchro (1.5mbar)

Vacuum systems feature two manually-controlled vacuum ports. These manual controllers regulate flow, providing approximate vacuum levels suitable for less critical applications. Synchro pumps can be easily upgraded to electronic control with the purchase of the CVC3000 *detect* controller with integrated solenoid valve. See page 84.

Have more than 2 applications?

Expanding on the concept of the dual-application system, VACUUBRAND offers the VACUU•LAN® system - a modular integrated Vacuum Local Area Network for laboratories. Far more than a "small central vacuum system," VACUU•LAN® provides performance that approaches that of individual diaphragm vacuum pumps dedicated to each application, but with less bench space, noise and cost. A modular design allows for easy reconfiguration, upgrading or even relocation. VACUU•LAN® systems can be installed in new laboratories, or retrofitted into existing ones. VACUU•LAN® is also popular for lab renovations and science parks, see page 69. For more information, contact BrandTech Scientific.

Vacuum Pumps with Two-Point Electronic Control

Pumps with Two-Point Electronic Control

Many applications that require a specific vacuum level to operate properly, such as most rotary evaporation, will benefit significantly by adding electronic control to the vacuum pump. VACUUBRAND employs a digital controller and solenoid valve to provide “two-point control.”



Controller

When mated to a VACUU•BUS™ solenoid valve, the mercury-free, digital CVC3000 controller provides two-point vacuum control. A digital readout shows actual vacuum levels, while a digitally simulated analog indicator simplifies trend and “at-a-glance” monitoring. See page 85 for more details.

Solenoid valve

The CVC3000 controller opens and closes the high performance solenoid valve to keep vacuum levels between pre-set tolerances as vapor flow from the application changes.

PC510 NT
Vacuum System
7mbar, 1.4cfm

Save money with a VACUUBRAND® system!

Because VACUUBRAND® pumps provide high flow-rates at working vacuum levels, they can provide cost savings, both initially, and over the life of the pump.

- Synchro™ Multi-tasking systems harness the power of the VACUUBRAND® pump for two applications, reducing the cost per application. See page 72 for more about dual application pumps and page 69 for VACUU•LAN® systems.
- No Cold Trap Required! VACUUBRAND® pumps require no cold trap to protect the pump in most applications; a huge cost saving in purchase and refrigerant costs.
- Productivity savings with the self-adjusting VARIO® systems free you up to perform other work with minimal pump oversight. Their continually optimized vacuum levels speed evaporation by up to 30%!

vacuum pumps at www.brandtech.com.

Find out more details on how to save money with VACUUBRAND®

VACUUBRAND® Rotary Vane Pumps

VACUUBRAND XS-Series Rotary Vane Vacuum Pumps for Fine Vacuum Applications

- **Quiet:** XS-pumps are extremely low-noise and low vibration, even compared to earlier VACUUBRAND® rotary vane models.
- **Rugged:** The XS series have been designed from the ground-up for service in chemistry labs. They provide exceptional water vapor tolerances with minimal impact on ultimate vacuum. Internal components have been redesigned to improve corrosion resistance, reduce wearing forces, enhance performance and simplify maintenance. Internal steel surfaces have even been nitrogen-plasma treated for chemical resistance and mechanical hardness.

- **Energy Efficient:** Pumps have very low power consumption, and generate low levels of waste heat compared to competitive models.
- **Great Value:** On top of all of these advantages, VACUUBRAND® XS-series rotary vane pumps are competitively priced with other popular pumps.



Big vacuum in a small package!
VACUUBRAND® RZ2.5

Extremely compact compared to popular pump models

- Compared with a belt-drive pump, the RZ2.5 takes up 1/3 of the bench space, weighs half as much, and occupies less than 1/4 the volume, despite superior flowrates.
- Compared with competitive direct drive pumps, the RZ2.5 takes up half of the space and weighs half as much.

For a detailed comparison see http://www.brandtech.com/RVpumpcompare_2011.pdf.



Don't forget...

Adding accessories to your rotary vane pump can extend the pump lifetime and make your workplace more pleasant.

- **Inlet Hose Barbs:** Match the pump to your vacuum hose. A 10mm (3/8") polypropylene hose barb is included with RZ2.5 and RZ6 pumps, inlet centering and clamping rings (and outlet, where applicable) are included with the pump.
- **Inlet Catchpot:** Collects condensates and particles from the vacuum line, before they can contaminate pump oil and can reduce pump lifetime.
- **Oil Mist Filter:** Captures up to 99% of oil-mist from the outlet of your pump, keeping your lab atmosphere and bench top clean (included with RC6).
- **Pump Oil B:** For best performance, and long life, use Pump Oil B (supplied with all new pumps). Its special high-viscosity formula is an excellent choice for VACUUBRAND® pumps.

Description	Cat. No.	2014 List Price
Accessories for your VACUUBRAND® rotary vane pump and RC6		
KF16 to 10mm (3/8") hose barb, fits RZ2.5, RZ6, and RC6 inlet, aluminum	662511	\$40.00
KF25 to 12mm (1/2") hose barb, fits RZ9 inlet and outlet, aluminum	662518	50.00
KF25 to 19mm (3/4") hose nipple, fits RZ9 inlet and outlet, aluminum	662532	55.00
Other flanges, clamping rings and centering rings available.		
Inlet catchpot for RZ2.5	698000	387.00
Inlet catchpot for RZ6 and RC6	698006	567.00
Inlet catchpot for RZ9	698007	486.00
Oil mist filter for RZ2.5, and RZ6	698003	538.00
Oil mist filter for RZ9	698017	664.00
Pump Oil B, 1 liter bottle	687010	50.00
Pump Oil B, 5 liter can	687011	175.00

Model	Free Air Capacity 60Hz (cfm) ¹	Ultimate vacuum w/o gas ballast	Ultimate vacuum w/ gas ballast	Flange Inlet Connection	Outlet Connection (hose barb)	Cat. No. 120V US plug	2014 List Price
RZ2.5	1.65	2 x 10 ⁻³	1 x 10 ⁻²	KF16	10mm	698123	\$2,495.00
RZ6	4.0	2 x 10 ⁻³	1 x 10 ⁻²	KF16	10mm	698133	3,427.00
RZ9	6.0	2 x 10 ⁻³	1 x 10 ⁻²	KF25	KF25	698143	4,395.00

¹ Pumping speed at 50Hz is 83% of stated value

Vacuum Pump Ordering Information

CHEMISTRY DESIGN PUMPS

Model	Controller(s)	Solvent Recovery	Ultimate Vacuum		Free Air Capacity at 60Hz		Cat. No.*	2014 List Price
			mbar	Torr	cfm	lpm		
Oil-Free Chemistry Design Diaphragm Vacuum Pumps								
ME1C	No	No	100	75	0.5	14	721103	\$1,091.00
ME2C NT	No	No	< 70	< 52	1.4	38	730103	1,995.00
ME4C NT	No	No	< 70	< 52	2.6	73	731203	2,948.00
ME8C NT	No	No	< 70	< 52	4.7	133	734203	4,995.00
ME16C NT	No	No	< 70	< 52	6.8	193	741303	Inquire
MZ1C NEW!	No	No	12	9	0.5	14	724103	1,936.00
MZ2C NT	No	No	7	~ 5	1.4	38	732303	2,949.00
MZ2C NT+2AK	No	Yes**	7	~ 5	1.4	38	732503	3,851.00
MD1C	No	No	2	1.5	0.88	25	696613	3,560.00
MD1C+AK+EK	No	Yes	2	1.5	0.88	25	696633	5,651.00
MD4C NT	No	No	1.5	1.1	2.2	63	736403	6,629.00
MD12C	No	No	2	1.5	7.2	205	743303	Inquire
MV10C	No	No	9x10 ⁻¹	7x10 ⁻¹	6.36	178	744303	Inquire

Chemistry-HYBRID Vacuum Pumps

RC6	No	No	2x10 ⁻³	1.5x10 ⁻³	4.1	115	698563	7,375.00
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Oil-Free Chemistry Design Single Application Vacuum System

MZ2C NT+AK+M+D	1 Manual	No	7	5	1.4	38	732703	4,045.00
PC101 NT	1 Manual	Yes	7	5	1.4	38	733003	4,253.00
PC510 NT	1 Electronic	Yes	7	5	1.4	38	733103	7,069.00
PC3001 basic 100-120V/200-230V, 50-60Hz	1 Manual	No	2	1.5	1.2	34	696723	5,252.00
PC201 NT	1 Manual	Yes	1.5	1.1	2.2	63	737003	7,997.00
PC610 NT	1 Electronic	Yes	1.5	1.1	2.2	63	737103	11,009.00

Oil-Free Chemistry Design Dual Application Vacuum Systems

MZ2C NT Synchro™	2 Manual 1 Electronic +1 Manual	Yes	7	5	1.4	38	732803	4,987.00
PC511 NT	Manual	Yes	7	5	1.4	38	733203	7,669.00
PC520 NT	2 Electronic	Yes	7	5	1.4	38	733303	10,403.00
MD4C NT Synchro™	2 Manual 1 Electronic +1 Manual	Yes	1.5	1.1	2.2	63	736803	8,853.00
PC611 NT	Manual	Yes	1.5	1.1	2.2	63	737203	11,534.00
PC620 NT	2 Electronic	Yes	1.5	1.1	2.2	63	737303	14,161.00

Oil-Free Chemistry Design VARIO® Adaptive Single Application Vacuum Systems

ME16C NT VARIO	Adaptive	No	70	53	11.4	322	741703	Inquire
MZ2C NT VARIO	Adaptive	No	7	5	1.7	47	732403	6,711.00
MD4C NT VARIO	Adaptive	No	1.5	1.1	2.7	77	736503	10,434.00
MV10C NT VARIO	Adaptive	No	6x10 ⁻¹	4.5x10 ⁻¹	5.0	143	710603	Inquire
PC3001 VARIO ^{PRO}	Adaptive	Yes	2	1.5	1.2	34	696703	8,588.00
PC3002 VARIO	Adaptive	Yes	7	5	1.7	47	733503	8,230.00
PC3003 VARIO	Adaptive	Yes	6x10 ⁻¹	4.5x10 ⁻¹	1.7	47	738403	12,310.00
PC3004 VARIO	Adaptive	Yes	1.5	1.1	2.7	77	737503	11,750.00
PC3010 NT VARIO	Adaptive	Yes	6x10 ⁻¹	4.5x10 ⁻¹	6.8	193	744803	Inquire
PC3012 NT VARIO	Adaptive	Yes	1.5	1.1	7.5	215	743803	Inquire
PC3016 NT VARIO	Adaptive	Yes	70	53	11.4	322	741803	Inquire

ROTARY VANE PUMPS

Model	Controller(s)	Solvent Recovery	Ultimate Vacuum		Free Air Capacity at 60Hz		Cat. No.*	2014 List Price
			mbar	Torr	cfm	lpm		
RZ2.5	No	No	2x10 ⁻³	1.5x10 ⁻³	1.6	47	698123	2,495.00
RZ6	No	No	2x10 ⁻³	1.5x10 ⁻³	4	113	698133	3,427.00
RZ9	No	No	2x10 ⁻³	1.5x10 ⁻³	6.0	170	698143	4,395.00
RZ16, 230V, 50-60Hz, CEE plug	No	No	2x10 ⁻³	1.5x10 ⁻³	11.2	318	698050	5,368.00

* All pumps 120V, 60Hz unless noted

**Outlet catchpot for solvent collection only

Selecting the Best Pump for Your Application

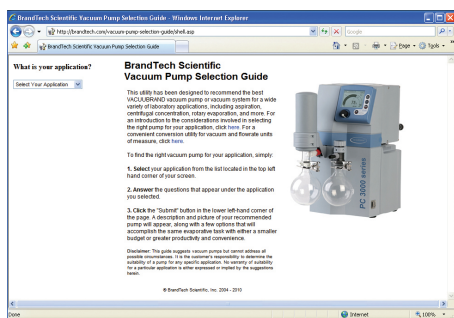
Vacuum Pump Selection Guide—Online!

Not sure which vacuum pump or system is best for your lab? Find out using the BrandTech® Scientific Vacuum Pump Selection Guide!

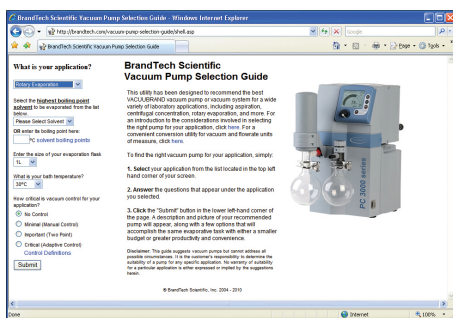
This free guide has been designed to recommend the best VACUUBRAND® vacuum pump or system for a wide variety of laboratory applications, including fluid aspiration, centrifugal concentration, rotary evaporation, and more.

Simply choose Product Selection Help located under the Support tab at www.brandtech.com to find the guide. Answer a few simple questions about your application. The software suggests the pump, controls, and solvent capture accessories that are right for your application. It even offers options for limited budgets or applications where control is critical.

It's as easy as 1,2,3...



1 Select your application from the list located in the top left hand corner of your screen.



2 Answer a few questions about your application, and click on the "Submit" button.



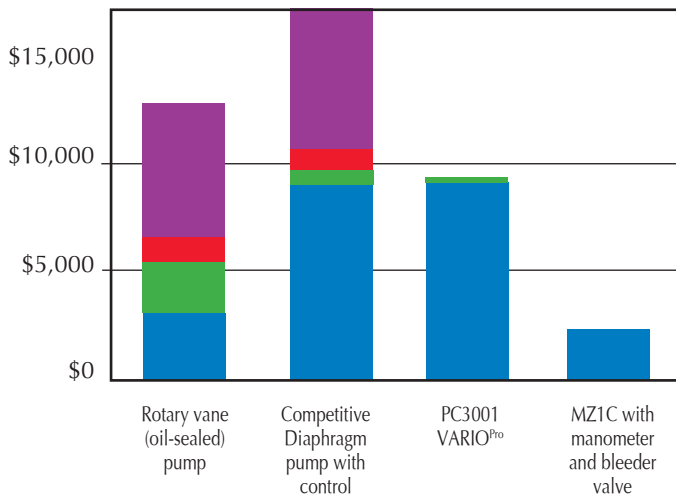
3 It's that simple! A photo and description of your recommended pump will appear on the right of your screen. The software even recommends other options with more control or lower cost.

Pump Economy and Sustainability

Where comparing the costs of vacuum pumps, it is important to include accessories that are needed and lifetime repair and maintenance costs. Rotary vane pumps require mist filters, catchpots, cold traps (including dry ice, liquid nitrogen or electricity costs) plus frequent oil changes. Competitive diaphragm pumps have much shorter service intervals (3,000-4,000 hours) compared with VACUUBRAND® dry pumps (15,000+ hours), and competitive diaphragm pumps often recommend cold traps to enhance performance, adding substantially to operating costs and inconvenience.

pumps have much shorter service intervals (3,000-4,000 hours) compared with VACUUBRAND® dry pumps (15,000+ hours), and competitive diaphragm pumps often recommend cold traps to enhance performance, adding substantially to operating costs and inconvenience.

5-Year Cost Comparison—Vacuum Pumps



Refrigerant: 5lb. dry ice per day, \$1/lb. for 250 days/year
Added Accessories: exhaust filter and cold trap
Maintenance: oil changes, filter replacements, service parts
Pump Purchase Cost

Vacuum for Filtration and SPE

Filtration, SPE and Aspiration

Fluid movement applications, such as filtration, fluid aspiration and solid phase extraction, typically don't require deep vacuum levels or high flow rates. For fluid aspiration, the best choice is usually an integrated solution like our *BVC control* or *professional* (see page 64).

However when using an unpowered collection system, like the *BVC Basic*, or for filtration or SPE, these types of applications are best served by the VACUUBRAND® ME1C and ME4C NT. Users seeking additional capability or users with special circumstances, however,

may want to consider the VACUUBRAND® MZ2C NT+2AK or MD1C+AK+EK pumps with integrated solvent recovery.

When choosing the pump for your filtration or solid phase extraction application, consider the following factors:

How much vacuum do I need?

Vacuum filtration and solid phase extraction typically require just enough vacuum depth to generate a pressure differential between atmospheric pressure and the receiving vessel. These applications do not usually require control unless the vacuum level is too deep and may cause filtrate boiling.

The ME1C vacuum pump is an excellent selection for most fluid movement applications. It is a simple, compact, stand alone pump with sufficient vacuum and flow to perform effective vacuum filtration or solid phase extraction and is powerful enough to support up to two simultaneous applications.

How much flow do I need?

Labs running more than three simultaneous filtration applications may require a pump with higher flow rates to maintain sufficient vacuum at all workstations.

The ME4C NT vacuum pump is an excellent pump for these circumstances. Like the ME1C, it is a simple, compact stand alone pump. However, its higher flow rate ensures better results and faster process times in large-scale filtration and solid phase extraction labs.

Do I need solvent recovery?

During normal filtration and solid phase extraction applications, solvent recovery is not typically needed. However, pumps with higher performance (MZ2C NT+2AK) and solvent recovery (MD1C+AK+EK) can support a broader range of applications. They are an excellent choice for labs seeking to support several different applications with only one pump.



ME1C Vacuum Pump
100mbar, 0.5cfm



MZ2C NT+2AK
Vacuum Pump
7mbar, 1.4cfm

ORDERING INFORMATION

Model	Controller(s)	Solvent Recovery	Ultimate Vacuum		Free Air Capacity at 60Hz		Cat. No.*	2014 List Price
			mbar	Torr	cfm	lpm		
Oil-Free Diaphragm Vacuum Pumps								
ME1C	No	No	100	75	0.5	14	721103	\$1,091.00
ME2C NT	No	No	<70	<52	1.4	38	730103	1,995.00
ME4C NT	No	No	<70	<52	2.6	73	731203	2,948.00
MZ2C NT+2AK	No	Yes**	7	5	1.4	38	732503	3,851.00
MD1C+AK+EK	No	Yes	2	1.5	0.88	25	696633	5,651.00
ME4C NT+2AK 100-120V/200-230V, 50-60Hz	No	Yes**	<70	<52	2.5	73	2614080	3,851.00

Accessories

Vacuum regulation valve with manometer for ME1C

696843

336.00

Power Cord 120V, US

637655

42.00

* All pumps 120V, 60Hz unless noted

**Outlet catchpot for solvent collection only

Vacuum Oven/Gel Dryer Vacuum Solutions

Vacuum Oven Solutions

How much vacuum do I need?

Vacuum ovens typically require a pump with deeper vacuum levels than other heated applications because the evaporative effect of elevated temperature is often offset by the poor thermal transfer of the oven environment.

How much flow do I need?

Vacuum ovens also require higher vacuum pump flow rates than other lab applications due to the relatively large sample capacity of most vacuum ovens. Strictly speaking flow rate requirements are determined by solvent load, but some assumptions can be made based on oven size.

The MZ2C NT+2AK vacuum pump is an excellent selection for labs with smaller vacuum ovens (<1.0 cubic foot in capacity) and semi-dry samples. Its performance, small footprint, and integrated catchpots for solvents make it a popular choice. Evaporation of higher boiling point solvents, however, may require a more powerful pump, such as the MD1C+AK+EK.

Laboratories with larger ovens (one or more cubic feet in capacity) or with samples having a high moisture content do well with the PC201 NT. It can generate vacuum levels for evaporation of most solvents, and its high flow rate reduces process times.

Use a Cold Trap?

Using a cold trap for solvent recovery gives users greater flexibility when selecting a pump for vacuum ovens. The cold trap reduces vapor loads, and eliminates the need for solvent capture by the pump. These applications are typically best-served by a stand alone pump such as the compact, economical MD1C vacuum pump.



PC201 NT
Vacuum System,
1.5mbar, 2.2cfm

Gel Dryer Vacuum Solutions

How much vacuum do I need?

The vacuum level required for gel drying applications is usually determined by the concentration of SDS-PAGE. For standard-sized gels with SDS-PAGE concentrations up to 10%, select the MZ2C NT+2AK. It has the power to provide excellent results in most gel-drying applications and its two catchpots capture condensing vapors for clean operation.



MZ2C NT+2AK
Vacuum Pump
7mbar, 1.4cfm

For SDS-PAGE concentrations greater than 10%, choose the MD1C+AK+EK. Its integral pump achieves deeper vacuum levels for enhanced evaporative performance, and the catchpots and condenser protect the pump and the lab atmosphere without the cost and inconvenience of a cold trap.



MD1C+AK+EK
Vacuum Pump
2mbar, 0.88cfm

ORDERING INFORMATION

Model	Model Controller(s)	Solvent Recovery	Ultimate Vacuum		Free Air Capacity at 60Hz		Cat. No.*	2014 List Price
			mbar	Torr	cfm	lpm		
Oil-Free Diaphragm Vacuum Pumps								
MZ2C NT+2AK	No	Yes**	7	5	1.4	38	732503	\$3,851.00
MD1C	No	No	2	1.5	0.88	25	696613	3,560.00
MD1C+AK+EK	No	Yes	2	1.5	0.88	25	696633	5,651.00
Oil-Free Single Application Vacuum Systems								
PC201 NT	1 Manual	Yes	1.5	1.1	2.2	63	737003	7,997.00

* All pumps 120V, 60Hz unless noted

**Outlet catchpot for solvent collection only

Rotary Evaporation Vacuum Solutions

Vacuum pumps provide the operational muscle for your rotary evaporator. Apart from the vacuum control, your evaporator is just rotating glassware! In fact, you can get better control of your application directly from your vacuum pump. As such VACUUBRAND offers a full range of pumps and systems with integrated control that help optimize your rotary evaporation application.

To find the vacuum pump or system that best meets your needs, answer the following questions:

Adaptive Vacuum Control

The best way to prevent bumping is with a self-regulating, hysteresis-free vacuum control. Adaptive control, an innovation exclusive to VACUUBRAND® VARIO® pumps and systems, combines an electronic controller and a speed-controlled motor. Fifteen years of proprietary software refinement allows our VARIO® pumps to automatically perform the following tasks:

- Find and follow boiling points, hysteresis-free, without programming even for solvent mixtures or changing conditions
- Evaporate up to 30 percent faster
- Shut the pump off when evaporation is completed

For most benchtop rotary evaporators, the PC3001 VARIO^{PRO} vacuum system is an excellent choice. The powerful integral pump provides a deep 2mbar ultimate vacuum – enough to evaporate DMSO at a bath temperature of 50°C!



PC3001 VARIO^{PRO}
Vacuum System
2mbar, 2.0cfm

How much vacuum do I need?

The vacuum capacity required from a pump to support a rotary evaporation application is determined by the typical application temperatures and the solvents being evaporated. Virtually all rotary evaporation applications can be accomplished with diaphragm vacuum pumps. The vacuum pump should have the ability to reach the vapor pressure of the solvent at the application temperature.

Manual Control

For applications that require only minimal control, select the economical PC101 NT vacuum system for basic evaporation and vapor capture. It includes the same 7mbar MZ2C NT pump as the PC510 NT (below) along with a stand, inlet catchpot and outlet condenser, but substitutes a manual flow-control valve and dial gauge for economy. It's an excellent choice for basic evaporation! Or support 2 evaporators with an economical, space-saving Synchro system! See pages 72, 75 & 80 for description and ordering information.



PC101 NT Vacuum System
7mbar, 1.4cfm

How much control do I need?

Rotary evaporation applications often require significant oversight and control because the heat and high surface area increase evaporation rates. This can lead to solvent “bumping” or boiling over.

Electronic Control

Some rotary evaporation applications might benefit from control, but not require the precision of adaptive control. The PC510 NT system is an excellent choice for these applications. It is a great workhorse system for evaporation of many common solvents in rotary evaporators up to 5 liters in size. The integrated MZ2C NT pump evaporates all but the highest boiling point solvents at reasonable bath temperatures, and the system includes a controller that allows preset or semi-automatic setting of vacuum level, with appropriate hysteresis adjustment. Solvent recovery is provided by an inlet catchpot and outlet condenser.

Need to run two evaporators? Consider the PC520 NT. See pages 72 & 75 for description and ordering information. They'll provide different conditions to two applications at once, saving bench space and the cost of an additional pump or system. If you anticipate needing a second electronically controlled port in the future, consider a PC511 NT or PC611NT. The second flow-controlled port adds minimal cost, but can easily be upgraded to full electronic control with the purchase of a CVC3000 *detect* (see page 84).



PC510 NT
Vacuum System
7mbar, 1.4cfm

Rotary Evaporation Vacuum Solutions

Do I need solvent recovery?

Solvent vapor that makes it past the evaporator's condenser can condense in the vacuum line. For best pump performance, an inlet catchpot "AK" can keep these condensed vapors out of the pump. Solvent vapors that pass through the pump can be captured efficiently at atmospheric pressure at the diaphragm pump outlet with an outlet condenser "EK," minimizing pollution of the laboratory environment.

Consider the MD1C+AK+EK for labs that already have a stand-alone vacuum controller, or one integrated into their evaporator. It features the same chemistry-design pump and solvent recovery as the 2mbar PC3001 VARIO^{PRO} system, but without control.

For applications that do not require either control or solvent recovery, consider a stand alone pump such as the MZ1C or MD1C. They provide superior flow rates at working vacuum to competitive pumps, with a significantly lower price and very small footprint. Integrated gas ballast provides high condensate tolerance. The MD1C is also preferred by customers who address vacuum control and solvent recovery through other methods.

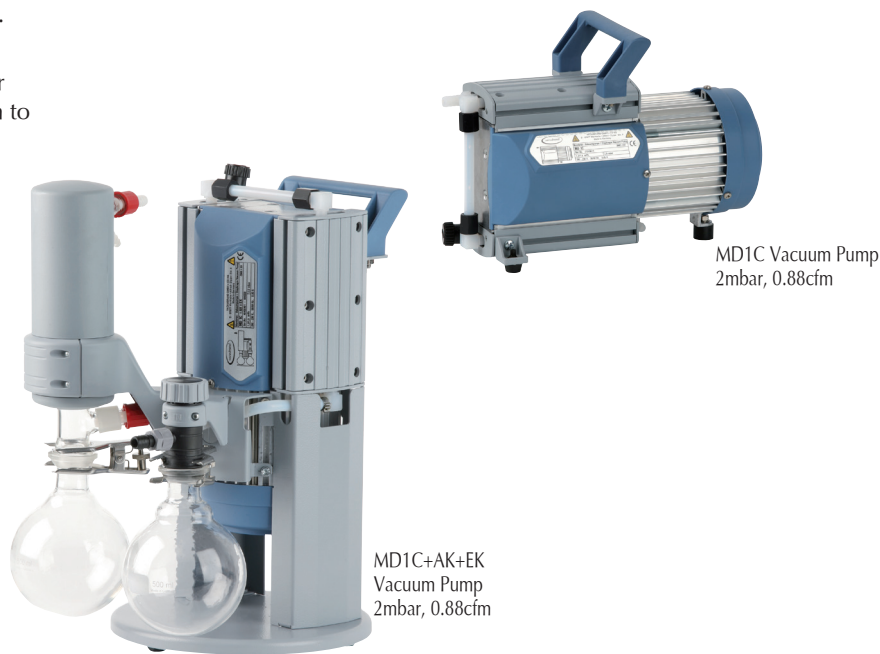
What about larger or multiple rotary evaporators?

BrandTech[®] and VACUUBRAND offer the most comprehensive line of chemistry-design diaphragm vacuum pumps, including models that can operate rotary evaporators up to 100 liters or larger, with or without integrated VARIO[®] adaptive control.

We also offer systems that will run two different evaporation applications simultaneously without interference! Still not sure? Contact BrandTech[®] Scientific for more information.

NOT SURE WHAT PUMP IS RIGHT FOR YOUR NEEDS?

Learn about our Vacuum Pump Selection Guide see page 76.



MD1C Vacuum Pump
2mbar, 0.88cfm

MD1C+AK+EK
Vacuum Pump
2mbar, 0.88cfm

ORDERING INFORMATION

Model	Controller(s)	Solvent Recovery	Ultimate Vacuum		Free Air Capacity at 60Hz		Cat. No.*	2014 List Price
			mbar	Torr	cfm	lpm		
Oil-Free Diaphragm Vacuum Pumps								
MZ1C	No	No	12	9	0.5	14	724103	\$1,936.00
MZ2C NT	No	No	7	5	1.4	38	732303	2,949.00
MZ2C NT + 2AK	No	Yes**	7	5	1.4	38	732503	3,851.00
MD1C	No	No	2	1.5	0.88	25	696613	3,560.00
MD1C+AK+EK	No	Yes	2	1.5	0.88	25	696633	5,651.00
MD4C NT	No	No	1.5	1.1	2.2	63	736403	6,629.00
Oil-Free Single Application Vacuum Systems								
PC101 NT	1 Manual	Yes	7	5	1.4	38	733003	4,253.00
PC510 NT	1 Electronic	Yes	7	5	1.4	38	733103	7,069.00
PC3001 basic 100-120V/200-230V, 50-60Hz	1 Manual	No	2	1.5	1.0	28	696723	5,252.00
Oil-Free VARIO[®] Adaptive Single Application Vacuum Systems								
PC3001 VARIO ^{PRO}	Adaptive	Yes	2	1.5	1.0	28	696703	8,588.00
PC3002 VARIO	Adaptive	Yes	7	5	1.7	47	733503	8,230.00
PC3003 VARIO	Adaptive	Yes	6x10 ⁻¹	4.5x10 ⁻¹	1.5	42	738403	12,310.00
PC3004 VARIO	Adaptive	Yes	1.5	1.1	2.7	77	737503	11,750.00
Add Dual Application Vacuum Systems								
MZ2C +NT +AK +Synchro +EK	2 Manual	Yes	7	5	1.4	38	732803	4,987.00
PC511 NT	1 Manual, 1 Electronic	Yes	7	5	1.4	38	733203	7,669.00
PC520 NT	2 Electronic	Yes	7	5	1.4	38	733303	7,669.00

* All pumps 120V, 60Hz unless noted **Outlet catchpot for solvent collection only

Centrifugal Concentration Vacuum Solutions

The high performance and convenience of VACUUBRAND® pumps and systems makes them an excellent choice for most centrifugal concentration applications. VACUUBRAND offers a wide variety of pumps for excellent, reproducible results. When selecting the best pump for your lab, consider the following issues.

How much vacuum do I need?

Centrifugal concentration generally requires greater ultimate vacuum than other evaporative applications because it is usually performed at room temperature. Fortunately, VACUUBRAND® diaphragm pumps are available with enough power for room temperature evaporation of solvents with boiling points as high as that of DMF.

The performance demands of most tabletop concentrators are often well served with one of VACUUBRAND®'s three-stage vacuum pumps, the MD1C or MD4C NT. Both of these pumps are powerful enough to evaporate DMF. Select the MD1C for supporting smaller concentrators and the MD4C NT with its higher flow rate for larger benchtop concentrators. For more volatile solvents, a pump like an MZ2C NT would be an excellent choice.

For very high boiling point solvents at room temperature such as DMSO or ethylene glycol, rotary vane technology may be required. We suggest the unique RC6 Chemisty-HYBRID pump for deeper vacuum with maximum convenience.

Do I need solvent recovery?

Large centrifugal concentrators often come with cold traps, reducing the need for integrated solvent recovery with the pump. Concentrators without cold traps should have solvent recovery integrated with the pump to prevent pump contamination and pollution of the laboratory.

When using a small concentrator without a cold trap, choose the MD1C+AK+EK. It provides excellent flow rates at working vacuum to effectively operate a smaller concentrator without a cold trap (something not possible with competitive pumps) and captures solvent vapors itself.

Are my samples prone to bumping?

When samples often bump in a centrifugal concentrator, control may be necessary to prevent cross-contamination. Depending on the volatility, flow control—as in our PC101 NT or PC201 NT—may be sufficient. For more volatile solvents, use our VARIO® systems that adjust vacuum levels automatically.

What about larger concentrators?

VACUUBRAND® pumps are available for “mega” sized concentrators used in combinatorial chemistry and the drug discovery marketplace. Please contact BrandTech® Scientific for assistance in selecting the best pump for these applications.

Model	Controller(s)	Solvent Recovery	Ultimate Vacuum		Free Air Capacity at 60Hz		Cat. No.*	2014 List Price
			mbar	Torr	cfm	lpm		
Oil-Free Diaphragm Vacuum Pumps								
MZ2C NT	No	No	7	5	1.4	38	732303	\$2,949.00
MD1C	No	No	2	1.5	0.88	25	696613	3,560.00
MD1C+AK+EK	No	Yes	2	1.5	0.88	25	696633	5,651.00
MD4C NT	No	No	1.5	1.1	2.2	63	736403	6,629.00
Chemistry-HYBRID Vacuum Pumps								
RC6	No	No	2x10 ⁻³	1.5x10 ⁻³	4.1	115	698563	7,375.00
Oil-Free Single Application Vacuum Systems								
MZ2C NT + AK + EK	1 Manual	Yes	7	5	1.4	38	732603	3,953.00
MD4C NT + AK + EK	1 Manual	Yes	1.5	1.1	2.2	63	736703	7,813.00
Oil-Free VARIO® Adaptive Single Application Vacuum Systems								
PC3001 VARIO ^{PRO}	Adaptive	Yes	2	1.5	1.2	34	696703	8,588.00
PC3004 VARIO	Adaptive	Yes	1.5	1.1	2.7	77	737503	11,750.00

* All pumps 120V, 60Hz unless noted

Freeze Drying Vacuum Solutions

Lyophilization is a demanding vacuum application that requires a deeper vacuum than can be achieved with diaphragm technology alone. It is usually best-served by the innovative VACUUBRAND® RC6 Chemistry-HYBRID™ pump.

How much vacuum do I need?

Lyophilization applications typically require vacuum levels as deep as 10^{-3} mbar. Traditionally, this requirement has been provided by oil-sealed rotary vane pumps.

To help users combat the high costs and contamination of rotary vane pumps, VACUUBRAND developed the RC6 Chemistry-HYBRID™ pump. The RC6 combines a rotary vane pump for vacuum capacity with a chemistry-design diaphragm pump that reduces condensation and continuously distills solvents from the pump oil. This design reduces oil changes and maintenance costs by up to 90 percent**.

What about larger applications?

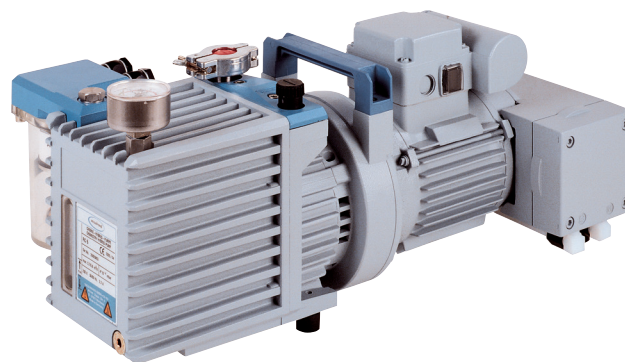
The RC6 Hybrid pump may be used with freeze dryers with condensers of six, twelve or eighteen liters. VACUUBRAND also offers a full line of rotary vane pumps with the power to easily meet the demands of larger applications and the innovative design and quality assurance of VACUUBRAND® pumps.

For applications larger than 18 liters, contact BrandTech® Scientific.

Rotary Vane options?

BrandTech® Scientific recommends that you should “never use an oil pump when an oil-free pump will do the job.” Sometimes, however, certain applications require deeper vacuum levels than oil-free pumps can provide.

When these situations arise, consider the RC6 Chemistry HYBRID™ pump or a VACUUBRAND® rotary vane vacuum pump such as the RZ2.5, RZ6, or RZ9. These pumps feature the same high performance, innovative design, and quality assurance as VACUUBRAND® oil-free vacuum pumps and systems. See page 74 for more information.



RC6 Chemistry-HYBRID™
Vacuum Pump 2×10^{-3} mbar, 4cfm

Model	Controller(s)	Solvent Recovery	Ultimate Vacuum		Free Air Capacity at 60Hz		Cat. No.*	2014 List Price
			mbar	Torr	cfm	lpm		
Chemistry-HYBRID™ Vacuum Pumps								
RC6	No	No	2×10^{-3}	1.5×10^{-3}	4.1	115	698563	\$7,375.00
Rotary Vane Vacuum Pumps								
RZ2.5	No	No	2×10^{-3}	1.5×10^{-3}	1.6	47	698123	2,495.00
RZ6	No	No	2×10^{-3}	1.5×10^{-3}	4.0	113	698133	3,427.00
RZ9	No	No	2×10^{-3}	1.5×10^{-3}	6.0	165	698143	4,395.00

* All pumps 120V, 60Hz unless noted

** The RC6 Chemistry-HYBRID™ pump, like other oil-sealed pumps, should always be operated with a cold trap.

Aluminum-FKM Diaphragm Vacuum Pumps

VACUUBRAND® Aluminum-FKM (e.g., Viton®) vacuum pumps are intended specifically for non-corrosive, non-evaporative applications. They are excellent for laboratory and process-plant applications including gas transfer, backing turbo pumps, and vacuum filtration. All wetted parts of these pumps are made of aluminum, FKM, and polyethylene. Aluminum-FKM pumps should not be used with organic solvents, corrosives, or other vapors inconsistent with the materials of construction.

- **Eliminates Oil Changes:** These pumps utilize diaphragm vacuum technology for totally dry operation. There is no oil to change or monitor!
- **Reduces Maintenance:** Diaphragms typically withstand up to 15,000 hours of use before replacement – that’s years in most applications, minimizing downtime and service costs. When it is finally time for service, their unique design eliminates tedious, trial-and-error stroke length recalibration.
- **Improves Productivity:** These pumps feature specially engineered pump heads for high flow rates at working vacuum. Higher flow rates mean reduced process times and higher throughput.
- **Ensures Reliable Use:** All VACUUBRAND® pumps and systems must pass rigorous product testing before leaving the factory. It’s your assurance of a reliable pump.
- **ME1:** Features PTFE diaphragm and valves for enhanced corrosion resistance (not for use with acidic vapors).



ME1 Vacuum Pump
100mbar, 0.5cfm



MD12 NT VARIO
Vacuum Pump

Quiet Operation

Aluminum-FKM pumps operate very quietly, at about the same volume as a conversation.

Excellent Durability

VACUUBRAND® Aluminum-FKM pumps have service intervals in excess of 15,000 hours (that’s years in most applications). Most service can be done in the lab in a matter of minutes.

FKM Double Diaphragm

FKM double planar diaphragm for high performance and increased reliability.

Broad Product Range

Vacuum as deep as 0.5mbar with flow rates as high as 307lpm!

Model	Ultimate Vacuum		Free Air Capacity at 60Hz		Cat. No.*	2014 List Price
	mbar	Torr	cfm	lpm		
Aluminum-FKM Diaphragm Vacuum Pumps for non-corrosive applications						
ME1	100	75	0.5	14	721003	\$859.00
ME2 NT	< 80	< 60	1.3	37	730003	1,392.00
ME4 NT	70	52	2.4	67	731003	2,162.00
ME8 NT	70	52	4.6	130	734003	3,881.00
ME16 NT	70	52	10.8	307	741003	Inquire
MZ2 NT	7	5	1.3	37	732003	2,162.00
MD1 100-120V/200-230V, 50-60HZ	1.5	1.1	0.82	23	696087	2,570.00
MD4 NT	1.5	1.1	2.2	63	736005	4,079.00
MD12 NT	2	1.5	7.8	222	743003	6,108.00
MV2 NT	5x10 ⁻¹	4x10 ⁻¹	1.4	40	738003	4,610.00
MV10 NT	5x10 ⁻¹	4x10 ⁻¹	6.8	193	744003	Inquire
Accessory						
Vacuum regulation valve with manometer for ME1					696842	167.00

* All pumps 120V, 60Hz unless noted

Vacuum Gauges & Controllers

VACUUBRAND® vacuum gauges and controllers enable you to monitor and control vacuum generation for most laboratory vacuum applications. Gauges are compatible with most laboratory vacuum pumps and house vacuum, and feature both analog and digital displays. They help to rid laboratories of toxic, harmful mercury by replacing McLeod gauges and other manometers.

• **Meets the Requirements of Most Vacuum**

Applications: VACUUBRAND® vacuum gauges cover the range from atmospheric pressure to 5×10^{-9} mbar/Torr/hPa. They are easy to read and feature a digital readout and analog indicator to simplify both data recording and trend-monitoring.

- **Rugged Operation:** Gauges and controllers are manufactured without fragile springs or glass tubes and feature corrosion-resistant transducers to ensure rugged, reliable operation.
- **Displays Results in Your Units:** Vacuum gauges and controllers provide results in millibar, Torr, or hectoPascal.
- **Provides Complete Process Control:** The CVC 3000 vacuum controller, in conjunction with a VACUU•BUS® solenoid valve, provides two-point vacuum control in the range from atmospheric pressure to 1 mbar/Torr/hPa (control range can be extended to 10^{-3} mbar with external Pirani vacuum sensor). It allows easy adjustment of vacuum setpoints as well as both automatic and manual hysteresis programming.
- **NEW! Integrated Vacuum Controller:** The CVC3000 *detect* pairs our sophisticated CVC3000 vacuum controller with a permanently mounted chemistry-design solenoid valve to provide a simple one-piece solution to single-application vacuum control. Works with any vacuum source, even central vacuum; an integrated check valve helps protect your application from vacuum line instability.



DVR2 Vacuum Gauge

Eliminate fragile glass and mercury and inaccurate, corrosion-prone dial gauges in your lab! Analog and digital display for easy monitoring of most lab applications. A transducer of corrosion-resistant ceramic for durability measures absolute pressures from atmosphere to 1 mbar/Torr/hPa with user-selectable units. Battery power with adjustable sleep timer for long battery life.

NEW! CVC3000 *detect*

The new CVC3000 *detect* combines the market leading CVC3000 vacuum controller as found on VACUUBRAND®'s PC3001 VARIO^{PRO}, and a solenoid valve, to provide advanced two-point control for any stand-alone diaphragm vacuum pump from VACUUBRAND® or competitive units. The new "*detect*" feature allows the CVC3000 to automatically



find the first boiling point with a rotary evaporator. The CVC3000 also allows the pre-programming of up to ten multi-step programs, bi-directional communication via RS232 serial port and too many other features to mention here. Available in two models – one with a benchtop stand; or one for mounting on lab frames or ring stands

NEW! CVC3000 + VSP3000 Pirani Control Packages for Fine Vacuum

These packages enable convenient two point vacuum control in the fine vacuum range down to 10^{-3} mbar. They consist of a CVC3000 vacuum controller, a VSP3000 external Pirani vacuum sensor, a VV-B 15C high performance chemistry in-line solenoid valve and all necessary small flange components. Two versions of this package are available: one with KF16 small flange connections suitable for the RZ2.5, RZ6 rotary vane pumps and our RC6 Chemistry-HYBRID™ pump; the other with KF25 small flanges suitable for our RZ9 rotary vane pumps. Either package can also be used with pumps from other manufacturers with the corresponding flange set. Control is achieved by use of an in-line solenoid valve, minimizing noise and oil-mist generation. The controller and components are completely self-configuring and automatically checked via VACUU•BUS® communication protocol.



Mercury-free,
Digital/Analog
Vacuum Instruments.



Vacuum Gauges & Controllers

NEW!

The Versatile DCP3000 Vacuum Gauge System

The DCP3000 utilizes VACUUBRAND's innovative VACUU•BUS® plug-and-play system to integrate a variety of different vacuum sensors to measure from atmosphere to 5×10^{-9} mbar in your choice of millibar, Torr, or hectoPascal. It is available equipped with your choice of a capacitive transducer, an exclusive corrosion-resistant Pirani transducer, or a combined Pirani/Penning transducer that automatically switches between measuring technologies. The DCP3000 can monitor up to a total of four capacitive/Pirani transducer sets with automatic switching between transducers, or up to four Pirani/Penning transducers. An external vent valve can also be added. Completely mercury-free, the DCP3000 also features a switching power supply, with US, UK, Australian and European plugs.



Measuring Range*:	DVR2 Vacuum Gauge	CVC3000 and DCP3000 + VSK3000 Capacitive Transducer	DCP3000 + VSP3000 Pirani Transducer	DCP3000 + MPT100 Pirani/Penning Transducer
mbar	1-1080	0.1-1080	1×10^{-3} - 1×10^3	5×10^{-9} - 1×10^3
Torr	1-812	0.1-810	7.5×10^{-4} - 7.5×10^2	3.7×10^{-9} - 7.5×10^2
hPa	1-1080	0.1-1080	1×10^{-3} - 1×10^3	5×10^{-9} - 1×10^3
Accuracy	$< \pm 1$ mbar (0.75Torr) ± 1 digit	$< \pm 1$ mbar/Torr/hPa / ± 1 digit (after adjustment, constant temp.)	$\pm 15\%$ of indicated value in the range 0.01-100mbar/Torr/hPa	1×10^{-7} - 1×10^{-2} mbar: $\pm 25\%$; 1×10^{-2} -100 mbar: $\pm 15\%$

Model	Cat. No.	2014 List Price
DVR2 Vacuum Gauge, battery operated (9V, Lithium)	682902	\$923.00
DCP 3000 + VSK 3000 Vacuum Gauge, 100-230V, 50-60Hz	683170	1,889.00
DCP 3000 + VSP 3000 Vacuum Gauge, 100-230V, 50-60Hz	683190	1,889.00
DCP 3000 + MPT 100 Vacuum Gauge, 100-230V, 50-60Hz	683175	3,569.00
CVC 3000 Vacuum Controller, 100-230V, 50-60Hz (requires VVB6C solenoid valve below)	683160	2,356.00
CVC 3000 <i>detect</i> Vacuum Controller, support rod version 100-230V, 50-60Hz (with integrated chemistry solenoid valve) NEW!	2614120	3,285.00
CVC 3000 <i>detect</i> , Vacuum Controller, benchtop version, 100-230V, 50-60HZ (with integrated chemistry solenoid valve) NEW!	2614860	3,285.00
VVB6C VACUU•BUS® solenoid valve	674291	987.00
VVB15C KF16 High Performance VACUU•BUS® solenoid valve	674110	1,068.00
VVB15C KF25 High Performance VACUU•BUS® solenoid valve	674115	1,098.00
CVC 3000 + VSP 3000 + VVB 15C KF16 (Pirani control Package)	635983	3,369.00
CVC 3000 + VSP 3000 + VVB 15C KF25 (Pirani control Package)	635982	3,969.00
VSK 3000 VACUU•BUS® gauge head	636657	619.00
VSP 3000 VACUU•BUS® Pirani gauge head	636163	614.00
VVKWB solenoid coolant valve	674220	420.00
VBMB solenoid vent valve	674217	363.00
Liquid Level Sensor for 500mL catchpot, VACUU•BUS®	699908	587.00
VACUU•BUS® extension cable	612552	72.00
VACUU•BUS® Y cable	636656	125.00
Vacuum regulation valve with manometer for ME1C	696843	336.00
Vacuum regulation valve with manometer for ME1	696842	167.00

* Do not exceed atmospheric pressure

BRANDplates[®] microplates

Modern research methods require high-quality disposables. BRANDplates[®], microplates from BRAND, can be used in all important fields of life science.

BRAND has applied its decades of experience in premium-quality molding of lab plastic consumables from pipette tips to volumetric plasticware to cuvettes to the challenges of microplate design. Plates are designed to minimize cross-contamination, ensure excellent recovery, and to offer many options in color, well-count, surface-treatment and well-shape.

For this comprehensive line, nine different surfaces have been developed under state of the art production conditions.

The product line covers a multitude of standard applications (e.g., homogenous assays, screenings) as well as applications in the fields of immunology and cell culture technique.

Non-treated surfaces

pureGrade™
pureGrade™ S

Immunology surfaces

immunoGrade™
hydroGrade™
lipoGrade™

Cell culture surfaces

cellGrade™
cellGrade™ plus
cellGrade™ premium
inertGrade™



A comprehensive, premium-quality line of plates for cell culture and immunoassay.



BRANDplates® microplates

Surfaces

BRANDplates® microplates are offered with nine different surfaces. In addition to the two non-treated variants, there are three immunological types, and four different surfaces for cell culture applications available.

The surface modifications of the microplates are generated via a physical-chemical process that creates stable surfaces. All BRANDplates® microplates can be stored at room temperature.

Non-treated surfaces

pureGrade™	non-treated, "medium binding," non-sterile
pureGrade™ S	non-treated, "medium binding," sterile

Immunoassay surfaces

immunoGrade™	ideal for immobilization of IgG, "high binding," non-sterile
hydroGrade™	hydrophilic, ideal for immobilization of hydrophilic molecules, non-sterile
lipoGrade™	hydrophobic, ideal for immobilization of hydrophobic molecules, non-sterile

Cell culture surfaces

cellGrade™	standard tissue culture surface for the cultivation of adherent cell lines, sterile
cellGrade™ plus	surface for the cultivation of fastidious adherent cells making serum-reduced cultivation possible, sterile
cellGrade™ premium	surface treatment with similar properties to poly-D-lysine, serum-reduced or serum-free cultivation is possible, sterile
inertGrade™	surface that inhibits adhesion of cells, e.g., and reduces protein adsorption for cultivation of suspension and stem cells, sterile

Microplate Samples

Given the broad range of plates available, we would like to provide maximum assistance in the selection of the optimum plate for your application.

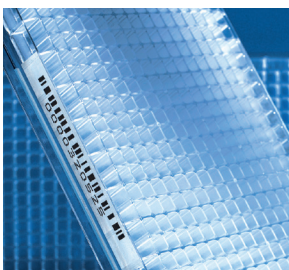
Once you have used the Selection Guide on our website www.brandtech.com/plateselection to narrow down the product range according to your criteria, you can use the technical information data to find the chemical resistance of the materials and the plate dimensions for setting of your instruments.

Even with this information, you may still not be sure which of the

BRANDplates® microplates would be the best for your specific application. For example, when you are establishing a new ELISA, and you may want to test which surface will immobilize the molecule best. Or maybe you are working with a new cell line and would like to determine on which surface the cells grow best. There is no substitute for direct experience. Feel free to request samples without cost or obligation! We would be glad to provide you information and recommend an appropriate plate for your assay.

Barcodes

BRAND can provide high-quality barcode labeling in small plate quantities. Visit www.brandtech.com for a barcode specification form.



ANSI-/SLAS-Standard

BRANDplates® microplates are manufactured according to the ANSI-/SLAS-standards 1 to 4 - 2004, to ensure compatibility for all processes, especially when automation is involved.

BRANDplates® microplates

Colors, wells and shapes

Non-treated surfaces

Immunoassay surfaces

Cell culture surfaces

- Standard, or transparent bottom
- Transparent, white or black
- Different bottom shapes: U-, V-, F-, C-bottom for 96-well format
- Free from endotoxins, DNase, DNA, RNase; non-cytotoxic

Non-treated surfaces

- 96-, 384-, and 1536-well formats
- Strip Plates available with and without grid
- Sterile and non-sterile
- Clearly distinguishable via color code: **gray** embossed alphanumeric coding for 96-well standard plates in white or black

Immunoassay surfaces

- 96- and 384-well formats
- Strip plates available with and without grids
- Modification via a physical-chemical process, good shelf life at room temperature
- Clearly distinguishable through the color code: **blue** embossed alphanumeric coding for 96-well standard plates

Cell culture surfaces

- 96-, 384-, and 1536-well formats
- Sterile according to Ph. Eur. and USP 29, SAL 10⁻⁶
- Clearly distinguishable through the color code: **orange** embossed alphanumeric coding for 96-well standard plates

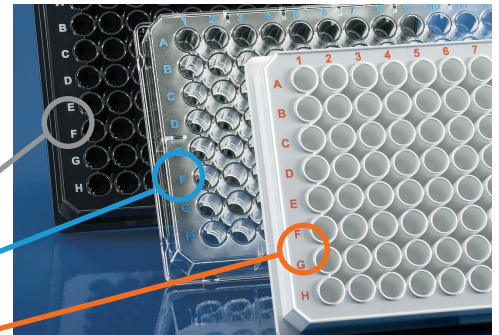
Color Codes—96-well plates

To enable an easy identification of the surface type and to facilitate the legibility of the alphanumeric coding BRANDplates® microplates in the 96-well standard format have a color-coded embossing.

Gray Coded Non-treated microplates for the most diversified applications

Blue Coded Microplates for immunoassays such as ELISA, RIA, FIA, etc

Orange Coded Microplates for cell culture applications



Online plate selection guide

Use BRAND's online plate-selection guide at www.brandtech.com/plateselection to select the right plate for your needs.

BRANDplates® - Selection Guide

With the new BRANDplates® Selection Guide you can find for each application the right plate quickly and effectively!

>> BRANDplates® Selection Guide - How to use >>>

Cavities	Material	Type	Color
<input checked="" type="checkbox"/> all <input type="checkbox"/> 96-well <input type="checkbox"/> 384-well <input type="checkbox"/> 1536-well	<input checked="" type="checkbox"/> all <input type="checkbox"/> PS	<input checked="" type="checkbox"/> all <input type="checkbox"/> Standard ¹⁾ <input type="checkbox"/> Transp. Bottom	<input checked="" type="checkbox"/> all <input type="checkbox"/> transparent <input type="checkbox"/> white <input type="checkbox"/> black
Surface	Bottom type	Sterility	
<input checked="" type="checkbox"/> all <input type="checkbox"/> Not treated plates <input type="checkbox"/> pureGrade™ <input type="checkbox"/> pureGrade™ S <input type="checkbox"/> Immune analytic plates <input type="checkbox"/> immunoGrade™ <input type="checkbox"/> hydroGrade™ <input type="checkbox"/> lipoGrade™ <input type="checkbox"/> Cell culture plates <input type="checkbox"/> inertGrade™ <input type="checkbox"/> cellGrade™ <input type="checkbox"/> cellGrade™ plus <input type="checkbox"/> cellGrade™ premium	<input checked="" type="checkbox"/> all <input type="checkbox"/> U <input type="checkbox"/> V <input type="checkbox"/> F <input type="checkbox"/> C	<input checked="" type="checkbox"/> all <input type="checkbox"/> sterile <input type="checkbox"/> not sterile	
114 Plates found			
Show plates		Reset selection	
Alternative applicational search			

¹⁾ Standard = massive, solid plate

[Here](#) you can get more information about BRAND microplates.

BRANDplates® microplates

Accessories

Lids

To protect samples, reaction batches or cell cultures from both contamination and evaporation, compatible lids are available for all BRANDplates® microplates. The lids are made of crystal-clear polystyrene. They are optimally matched to the corresponding BRANDplates® microplates, so that plates with lids can also be stacked. The cut-corner sets the orientation of the lid. For 96-well standard plates, lids with condensation rings are available.

ORDERING INFORMATION: Lids

Condensation Rings	Height	Sterile	Cat. No.	2014 List Price
Lids for 96-well standard plates: pack of 100 lids (5 lids per bag)				
Yes	8mm	No	782150	\$164.00
No	8mm	No	782151	164.00

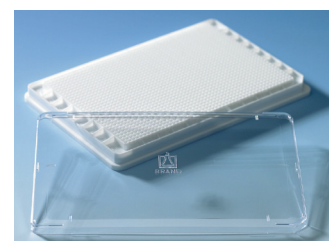
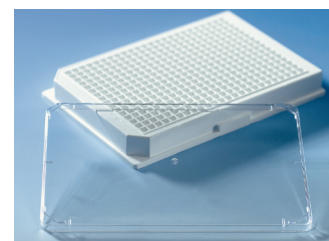
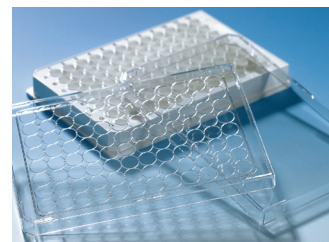
For BRANDplates® microplates Cat. No. ranges: 781600-08, 781660-68, 781720-29, 781780-89, 781840-49, 781900-09, 781960-68, 782022-28, 782082-88

Condensation Rings	Height	Sterile	Cat. No.	2014 List Price
Lids for 96-well plates with transparent bottom/Lids for all 384-well plates: pack of 50 lids (10 lids per bag)				
No	4.5mm	No	782152	\$107.00

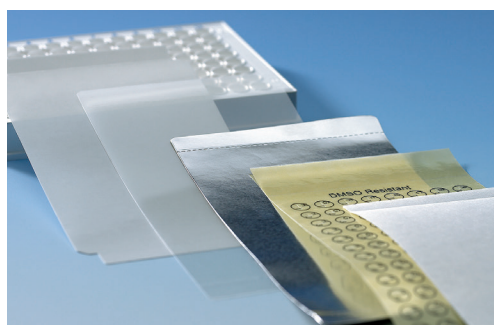
For BRANDplates® microplates Cat. No. ranges: 781610-28, 781670-88, 781731-42, 781800-02, 781850-67, 781910-27, 781970-87, 782030-47, 782090, 782107

Condensation Rings	Height	Sterile	Cat. No.	2014 List Price
Lids for all 1536-well plates: pack of 50 lids (10 lids per bag)				
No	5.5mm	No	782153	\$107.00

For BRANDplates® microplates Cat. No. ranges: 781640-42, 781700-02, 782000-02

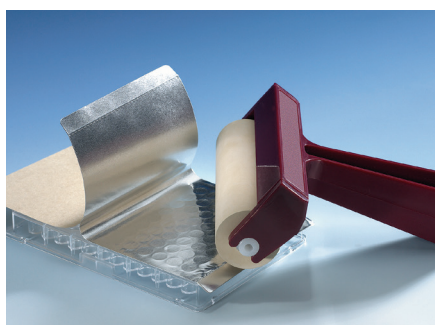


Lids for microplates



Sealing films, Self-adhesive

In case the microplates need not only to be covered, but also securely sealed, self-adhesive sealing films are available. These film sheets can be easily applied on the plates and removed without the use of expensive equipment. They are available in different versions and are especially well-suited for storage or cell- and tissue-culture.



Roller

The self-adhesive films can be securely and easily applied with a roller. The hard rubber roller ensures that the film is attached to the plate with a uniform pressure. The rugged handle with comfort-grip lessens fatigue.

ORDERING INFORMATION: Sealing films, Self-adhesive

Application	Description	Material	Pack of	Cat. No.	2014 List Price
ELISA, PCR	single film	polypropylene	100 sheets	781390	\$435.00
ELISA, Real-Time PCR	single film, highly transparent	Polyester	100 sheets	781391	293.00
Cold storage	roll with 100 sheets	aluminum	1 roll	781380	273.00
Cold storage	single film	aluminum	100 sheets	781381	218.00
Cell and tissue culture	single film, gas-permeable	rayon	100 sheets	701364	215.00
Cell and tissue culture	single film, gas-permeable, sterile	rayon	50 sheets	701365	143.00
Storage	single film, DMSO-resistant	polypropylene	100 sheets	701367	316.00
Automation	single film	PE/PP	50 sheets	701370	245.00
Storage, fluorescence measurements	single film	vinyl	50 sheets	701371	87.00
Luminescence measurements	single film	vinyl	50 sheets	701372	70.00
Roller for sealing films				701380	65.00

BRANDplates® microplates at a Glance

96-well Microplates

Type		Non-treated		Immunological surfaces			Cell culture surfaces			
Standard		pureGrade™	pureGrade™ S	immunoGrade™	hydroGrade™	lipoGrade™	cellGrade™	cellGrade™ plus	cellGrade™ premium	inertGrade™
Color	Bottom / Well volume									
transparent	U / 330µL	781600	781660	781720	781780	781840	781960	—	—	781900
transparent	V / 360µL	781601	781661	781721	—	781841	781961	—	—	—
transparent	F / 350µL	781602	781662	781722	781782	781842	781962	782022	782082	781902
transparent	C / 350µL	781603	781663	781723	781783	781843	781963	—	—	—
white	U / 330µL	781604	—	781724	781784	781844	—	—	—	781904
white	F / 350µL	781605	781665	—	—	—	781965	782025	782085	781905
white	C / 350µL	—	—	781726	781786	781846	—	—	—	781906
black	U / 330µL	781607	—	781727	781787	781847	—	—	—	781907
black	F / 350µL	781608	781668	—	—	—	781968	782028	782088	781908
black	C / 350µL	—	—	781729	781789	781849	—	—	—	781909
With transparent bottom		pureGrade™	pureGrade™ S	immunoGrade™	hydroGrade™	lipoGrade™	cellGrade™	cellGrade™ plus	cellGrade™ premium	inertGrade™
white	F / 330µL	781610	781670	—	—	781850	781970	782030	782090	781910
black	F / 330µL	781611	781671	781731	—	781851	781971	782031	782091	781911
Strip plates		pureGrade™	pureGrade™ S	immunoGrade™	hydroGrade™	lipoGrade™	cellGrade™	cellGrade™ plus	cellGrade™ premium	inertGrade™
transparent, without grid	F / 360µL	782300	—	782305	—	—	—	—	—	—
transparent, with grid	F / 350µL	782301	—	782306	—	—	—	—	—	—

384-well HTS Microplates

Type		Non-treated		Immunological surfaces			Cell culture surfaces			
Standard		pureGrade™	pureGrade™ S	immunoGrade™	hydroGrade™	lipoGrade™	cellGrade™	cellGrade™ plus	cellGrade™ premium	inertGrade™
Color	Bottom / Well volume									
transparent	F / 100µL	781620	781680	781740	781800	781860	781980	782040	782100	—
white	F / 100µL	781621	781681	781741	781801	781861	781981	—	—	—
black	F / 100µL	781622	781682	781742	781802	781862	781982	—	—	—
With transparent bottom		pureGrade™	pureGrade™ S	immunoGrade™	hydroGrade™	lipoGrade™	cellGrade™	cellGrade™ plus	cellGrade™ premium	inertGrade™
White	F / 120µL	781626	781686	—	—	781866	781986	782046	782106	—
Black	F / 120µL	781627	781687	—	—	781867	781987	782047	782107	—

1536-well UHTS Microplates

Type		Non-treated		Immunological surfaces			Cell culture surfaces			
Standard		pureGrade™	pureGrade™ S	immunoGrade™	hydroGrade™	lipoGrade™	cellGrade™	cellGrade™ plus	cellGrade™ premium	inertGrade™
Color	Bottom / Well volume									
transparent	F / 10µL	781640	781700	—	—	—	782000	—	—	—
white	F / 10µL	781641	781701	—	—	—	782001	—	—	—
black	F / 10µL	781642	781702	—	—	—	782002	—	—	—

Interactive Selection Guide with more information about BRANDplates® microplates available at www.brandtech.com.

For plate selection guide go to www.brandtech.com/plateselection

Non-treated BRANDplates® for General Applications

pureGrade™

Non-treated surface, “medium binding” non-sterile

- The standard plate for most applications.
- PS.
- Particularly applicable for homogeneous assays, screening, and for storage.
- Strip plates available.

ORDERING INFORMATION: pureGrade™

Color	Bottom	Well volume	Cat. No.	2014 List Price
96-well standard microplates: pack of 100 plates (20 stacks of 5 plates; 1 lid per stack)				
transparent	U-bottom	330µL	781600	\$131.00
transparent	V-bottom	360µL	781601	131.00
transparent	F-bottom	350µL	781602	131.00
transparent	C-bottom	350µL	781603	131.00
white	U-bottom	330µL	781604	230.00
white	F-bottom	350µL	781605	230.00
black	U-bottom	330µL	781607	230.00
black	F-bottom	350µL	781608	230.00
96-well transparent bottom microplates: pack of 100 plates (4 bags of 25 plates)				
white	F-bottom	330µL	781610	640.00
black	F-bottom	330µL	781611	640.00
Strip plates: 100 plates (4 bags of 25 plates)				
Transparent, without grid, strips of 8 wells, not divisible				
	F-bottom	360µL	782300	823.00
Transparent, with grid, strips of 8 wells, divisible				
	F-bottom	350µL	782301	878.00
384-well standard microplates: pack of 50 plates (5 bags of 10 plates)				
transparent	F-bottom	100µL	781620	98.00
white	F-bottom	100µL	781621	211.00
black	F-bottom	100µL	781622	211.00
384-well transparent bottom microplates: pack of 50 plates (2 bags of 25 plates)				
white	F-bottom	120µL	781626	507.00
black	F-bottom	120µL	781627	507.00
1536-well standard microplates: pack of 50 plates (5 bags of 10 plates)				
transparent	F-bottom	10µL	781640	992.00
white	F-bottom	10µL	781641	1,009.00
black	F-bottom	10µL	781642	1,009.00

pureGrade™ S

Non-treated surface, “medium binding” sterile

- Sterilized via β-radiation.
- PS.
- Especially suited for bacteriological assays, screening, and for storage.

ORDERING INFORMATION: pureGrade™ S

Color	Bottom	Well volume	Cat. No.	2014 List Price
96-well standard microplates: pack of 50 plates (individually wrapped, with lid)				
transparent	U-bottom	330µL	781660	\$113.00
transparent	V-bottom	360µL	781661	113.00
transparent	F-bottom	350µL	781662	113.00
transparent	C-bottom	350µL	781663	113.00
white	F-bottom	350µL	781665	251.00
black	F-bottom	350µL	781668	251.00
96-well transparent bottom microplates: pack of 50 plates (individually wrapped, with lid)				
white	F-bottom	330µL	781670	592.00
black	F-bottom	330µL	781671	592.00
384-well standard microplates: pack of 50 plates (individually wrapped, with lid)				
transparent	F-bottom	100µL	781680	173.00
white	F-bottom	100µL	781681	259.00
black	F-bottom	100µL	781682	259.00
384-well transparent bottom microplates: pack of 50 plates (individually wrapped, with lid)				
white	F-bottom	120µL	781686	781.00
black	F-bottom	120µL	781687	781.00
1536-well standard microplates: pack of 50 plates (individually wrapped, with lid)				
transparent	F-bottom	10µL	781700	1,191.00
white	F-bottom	10µL	781701	1,213.00
black	F-bottom	10µL	781702	1,213.00

Strip Plates 12 x F8 pureGrade™ & immunoGrade™

Offer greater flexibility. Use only as many wells as necessary. Available in two styles, without grid and with grid. **Without grid:** individual strip can be removed from the frame and reinserted, the strips are not divisible.

With grid: individual strips can be removed from the plate and reinserted, the strips can be divided into 8 individual vessels and inserted individually into the frame plate.

BRANDplates® microplates for Immunoassays

Suitable for ELISA, RIA, FIA and other immune testing

immunoGrade™

Optimized for the immobilization of IgG

- Optimized for the immobilization of IgG, offering highest binding capacity for molecules with mixed hydrophilic and hydrophobic regions.
- The surface of choice for the majority of standard ELISAs.
- Suitable for solid phase immunoassays.
- “high-binding.”
- PS, non-sterile.
- Strip plates available.

ORDERING INFORMATION: immunoGrade™

Color	Bottom	Well volume	Cat. No.	2014 List Price
96-well standard microplates: pack of 100 plates (20 stacks of 5 plates; 1 lid per stack)				
transparent	U-bottom	330µL	781720	\$218.00
transparent	V-bottom	360µL	781721	218.00
transparent	F-bottom	350µL	781722	218.00
transparent	C-bottom	350µL	781723	288.00
white	U-bottom	330µL	781724	342.00
white	C-bottom	350µL	781726	342.00
black	U-bottom	330µL	781727	342.00
black	C-bottom	350µL	781729	342.00
96-well transparent bottom microplates: pack of 100 plates (20 stacks of 5 plates; 1 lid per stack)				
black	F-bottom	330µL	781731	678.00
384-well standard microplates: pack of 50 plates (10 stacks of 5 plates; 1 lid per stack)				
Transparent	F-bottom	100µL	781740	209.00
white	F-bottom	100µL	781741	209.00
black	F-bottom	100µL	781742	209.00
Strip Plates 12 x F8: 100 plates (4 bags of 25 plates)				
transparent, without grid, strips of 8 wells, not divisible				
	No	360µL	782305	823.00
transparent, with grid, strips of 8 wells, divisible				
	Yes	350µL	782306	878.00

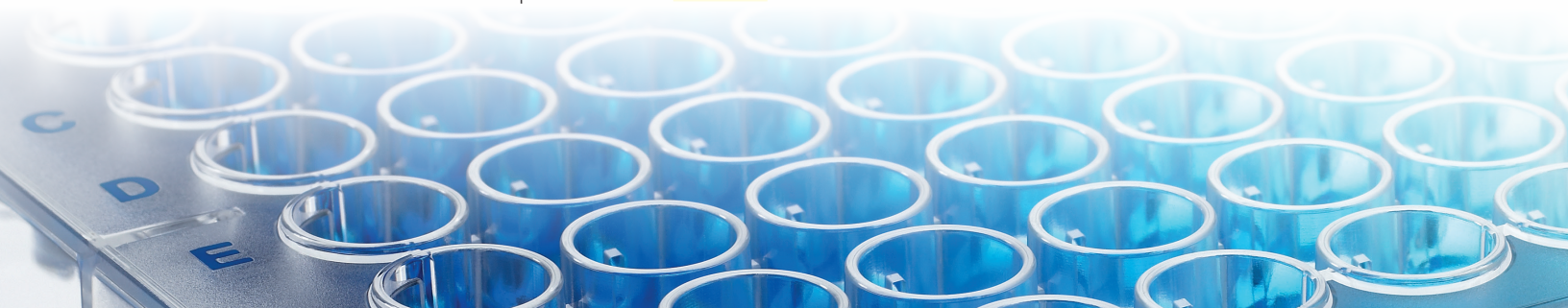
hydroGrade™

For the immobilization of hydrophilic molecules

- Strongly hydrophilic, with high affinity to hydrophilic molecules, such as glycoproteins and peptides, antibodies with predominantly hydrophilic regions, and nucleic acids.
- An alternative to the immunoGrade™ surface when performing solid phase assays.
- Alternative for homogeneous assays with hydrophobic molecules that remain in solution.
- PS, non-sterile.
- For solid phase with hydrophilic molecules and liquid phase with hydrophobic molecules, respectively.

ORDERING INFORMATION: hydroGrade™

Color	Bottom	Well volume	Cat. No.	2014 List Price
96-well standard microplates: pack of 100 plates (20 stacks of 5 plates; 1 lid per stack)				
transparent	U-bottom	330µL	781780	\$226.00
transparent	F-bottom	350µL	781782	226.00
transparent	C-bottom	350µL	781783	226.00
white	U-bottom	330µL	781784	429.00
white	C-bottom	350µL	781786	429.00
black	U-bottom	330µL	781787	429.00
black	C-bottom	350µL	781789	429.00
384-well standard microplates: pack of 50 plates (10 stacks of 5 plates; 1 lid per stack)				
transparent	F-bottom	100µL	781800	250.00
white	F-bottom	100µL	781801	326.00
black	F-bottom	100µL	781802	326.00



BRANDplates® microplates for Immunoassays

lipoGrade™

For the immobilization of hydrophobic molecules

- Strongly hydrophobic (lipophilic), for immobilization of biomolecules with predominantly hydrophobic regions.
- An alternative to the immunoGrade™ surface for the immobilization of molecules such as lipoproteins or peptides.
- Specially suited for liquid phase assays when the reaction component should stay in solution. The majority of hydrophilic biomolecules are not immobilized on this surface.
- PS, non-sterile.
- For solid phase with hydrophobic molecules and liquid phase with hydrophilic molecules, respectively.

ORDERING INFORMATION: lipoGrade™

Color	Bottom	Well volume	Cat. No.	2014 List Price
96-well standard microplates:				
pack of 100 plates (20 stacks of 5 plates; 1 lid per stack)				
transparent	U-bottom	330µL	781840	\$145.00
transparent	V-bottom	360µL	781841	145.00
transparent	F-bottom	350µL	781842	145.00
transparent	C-bottom	350µL	781843	145.00
white	U-bottom	330µL	781844	314.00
white	C-bottom	350µL	781846	314.00
black	U-bottom	330µL	781847	314.00
black	C-bottom	350µL	781849	314.00

96-well transparent bottom microplates:

pack of 100 plates (20 stacks of 5 plates; 1 lid per stack)

white	F-bottom	330µL	781850	678.00
black	F-bottom	330µL	781851	678.00

384-well standard microplates:

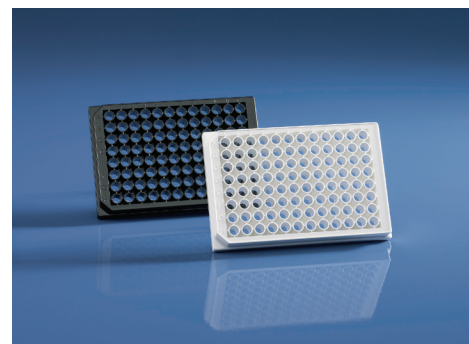
pack of 50 plates (10 stacks of 5 plates; 1 lid per stack)

transparent	F-bottom	100µL	781860	179.00
white	F-bottom	100µL	781861	266.00
black	F-bottom	100µL	781862	266.00

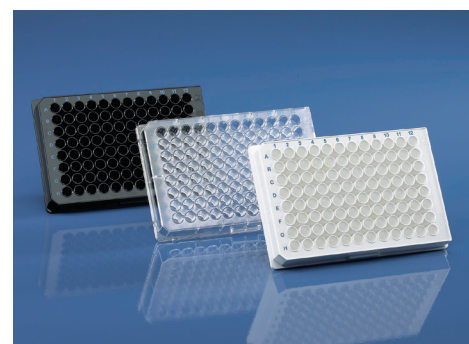
384-well transparent bottom microplates:

pack of 50 plates (10 stacks of 5 plates; 1 lid per stack)

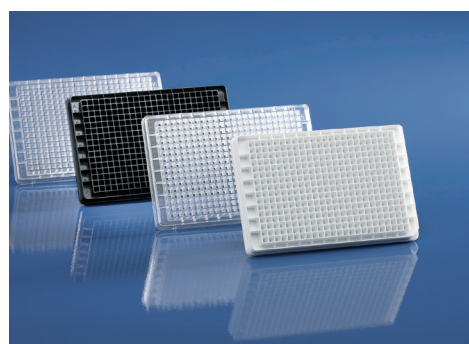
white	F-bottom	120µL	781866	547.00
black	F-bottom	120µL	781867	547.00



96-well transparent bottom microplates



96-well standard-volume microplates



384-well standard-volume microplates

BRANDplates[®] microplates for Cell Culture

cellGrade™

For the cultivation of adherent cell lines

- Standard-volume, sterile plates for the cultivation of adherent cell lines.
- Surface with different chemical groups, such as carboxyl and hydroxyl groups, that are freely accessible.
- Surface is hydrophilic compared with non-treated PS.
- Serum components are easily bound onto the freely accessible chemical groups, allowing an indirect adhesion of cells.
- PS, sterile.

ORDERING INFORMATION: cellGrade™

Color	Bottom	Well volume	Cat. No.	2014 List Price
96-well standard microplates: pack of 50 plates (individually wrapped, with lid)				
transparent	U-bottom	330µL	781960	\$135.00
transparent	V-bottom	360µL	781961	135.00
transparent	F-bottom	350µL	781962	135.00
transparent	C-bottom	350µL	781963	135.00
white	F-bottom	350µL	781965	155.00
black	F-bottom	350µL	781968	155.00
96-well transparent bottom microplates: pack of 50 plates (individually wrapped, with lid)				
white	F-bottom	330µL	781970	435.00
black	F-bottom	330µL	781971	435.00
384-well standard microplates: pack of 50 plates (individually wrapped, with lid)				
transparent	F-bottom	100µL	781980	170.00
white	F-bottom	100µL	781981	190.00
black	F-bottom	100µL	781982	190.00
384-well transparent bottom microplates: pack of 50 plates (individually wrapped, with lid)				
white	F-bottom	120µL	781986	640.00
black	F-bottom	120µL	781987	640.00
1536-well standard microplates: pack of 50 plates (individually wrapped, with lid)				
transparent	F-bottom	10µL	782000	975.00
white	F-bottom	10µL	782001	1,028.00
black	F-bottom	10µL	782002	1,028.00

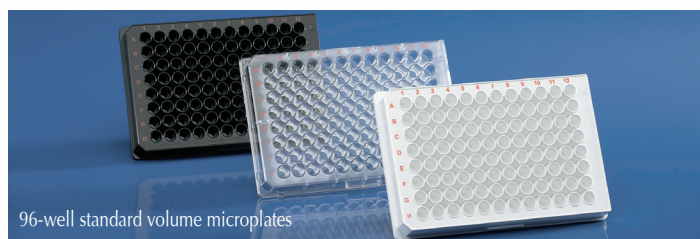
cellGrade™ plus

For reduced-serum media cultivation of cells

- For cultivation of fastidious cell lines.
- In addition to carboxyl and hydroxyl chemical groups, free amino groups are present on the surface.
- The surface has a protein-like composition, so cells can directly attach and spread out.
- Cells adhere faster leading to better rate of yield.
- Sensitive cell lines can be cultivated.
- Suited for serum-reduced cultivation of cells.
- PS, sterile.

ORDERING INFORMATION: cellGrade™ plus

Color	Bottom	Well volume	Cat. No.	2014 List Price
96-well standard microplates: pack of 50 plates (individually wrapped, with lid)				
transparent	F-bottom	350µL	782022	\$220.00
white	F-bottom	350µL	782025	447.00
black	F-bottom	350µL	782028	447.00
96-well transparent bottom microplates: pack of 50 plates (individually wrapped, with lid)				
white	F-bottom	330µL	782030	420.00
black	F-bottom	330µL	782031	420.00
384-well standard microplates: pack of 50 plates (individually wrapped, with lid)				
transparent	F-bottom	100µL	782040	365.00
384-well transparent bottom microplates: pack of 50 plates (individually wrapped, with lid)				
white	F-bottom	120µL	782046	619.00
black	F-bottom	120µL	782047	619.00



BRANDplates® microplates for Cell Culture

cellGrade™ premium

Poly-D-Lysine-equivalent surface

- Poly-D-Lysine-equivalent surface, with analogous results regarding growth performance and cell morphology.
- Optimal adhesion of cells to the surface reduces cell damage when washing frequently.
- Cultivation of cell lines with the highest demands on their environment.
- Surface suited for serum-free and serum-reduced cultivation of cells.
- Good shelf life at room temperature.
- Alternative to biologically coated surfaces.
- PS, sterile.

ORDERING INFORMATION: cellGrade™ premium

Color	Bottom	Well volume	Cat. No.	2014 List Price
96-well standard microplates: pack of 50 plates (individually wrapped, with lid)				
transparent	F-bottom	350µL	782082	\$423.00
white	F-bottom	350µL	782085	635.00
black	F-bottom	350µL	782088	635.00
96-well transparent bottom microplates: pack of 50 plates (individually wrapped, with lid)				
white	F-bottom	330µL	782090	779.00
black	F-bottom	330µL	782091	779.00
384-well standard microplates: pack of 50 plates (individually wrapped, with lid)				
transparent	F-bottom	100µL	782100	714.00
384-well transparent bottom microplates: pack of 50 plates (individually wrapped, with lid)				
white	F-bottom	120µL	782106	1,195.00
black	F-bottom	120µL	782107	1,234.00

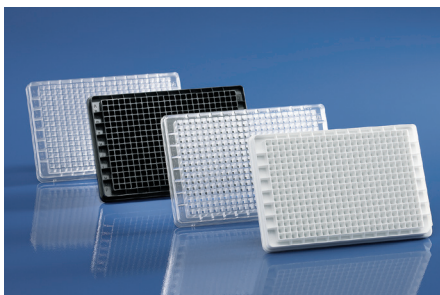
inertGrade™

For cultivation of suspension cell lines

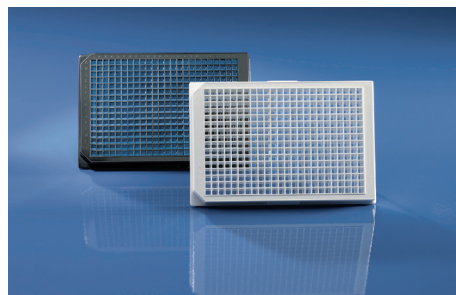
- Especially suited for cell cultures, when adhesion is not desired.
- Optimized surface characteristics reduce cell adhesion and protein absorption, minimizing enzyme and cellular activation.
- Inhibits early differentiation of stem cells.
- Sterilized with ethylene oxide.
- PS, sterile.

ORDERING INFORMATION: inertGrade™

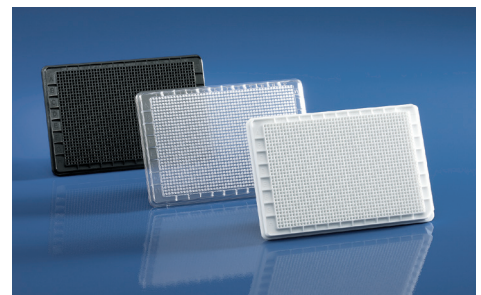
Color	Bottom	Well volume	Cat. No.	2014 List Price
96-well standard microplates: pack of 50 plates (individually wrapped, with lid)				
transparent	U-bottom	330µL	781900	\$599.00
transparent	F-bottom	350µL	781902	599.00
white	U-bottom	330µL	781904	679.00
white	F-bottom	350µL	781905	679.00
white	C-bottom	350µL	781906	679.00
black	U-bottom	330µL	781907	679.00
black	F-bottom	350µL	781908	679.00
black	C-bottom	350µL	781909	679.00
96-well transparent bottom microplates: pack of 50 plates (individually wrapped, with lid)				
white	F-bottom	330µL	781910	995.00
black	F-bottom	330µL	781911	995.00



384-well standard-volume microplates



384-well transparent bottom microplates



1536-well standard-volume microplates

NEW! BRANDplates® Insert System

For manual and automated cell and tissue culture work

BRANDplates® Insert System

The BRAND Insert System, co-developed with the Fraunhofer Society, includes choice of two specialized cell culture plates and two types of cell culture inserts for applications such as co-culture, migration studies, chemotaxis assays and 3D tissue culture preparation. Insert strips and plates are available individually or packed as a system. Key features to consider when selecting which components to utilize are plate selection and well size, insert type, and membrane pore size and material.

BRANDplates® Insert System Plate Selection

- **24-well Standard Plate**
 - Plate includes 24 individually fillable wells that can be fitted with strips of 4 inserts and/or individual inserts.
 - Used for basic applications such as co-culture, secretion studies, migration studies.
- **6-well Specialized Plate**
 - Plate has 4 wells connected as one large, elongated well. This well is fitted with a strip of 4 inserts so that all 4 of the inserts in the strip can be supplied with medium at the same time.
 - Used for *in vitro* preparation of tissue (3D tissue culture).
- cellGrade™ plus (sterile, hydrophilic with different chemical groups, such as carboxyl and hydroxyl groups, that are feely accessible) and pureGrade™ S surface (untreated, sterile).
- Manufactured according to the requirements in ANSI/SLAS Standards 1 and 4.
- All plates have guide ridges for perfect insert fit and specially designed feeding ports for easy media changes, suitable for robotics/automation.

BRANDplates Insert System Insert Selection

- Smooth-walled Inserts or Inserts with Inlet Opening System (patent pending).
 - Smooth-walled for standard applications such as secretion studies, co-culture, migration studies, chemotaxis assays, etc.
 - Inlet Opening System with special inlet channels, for automated *in vitro* preparation of human tissues. The Inlet Opening System enables rapid, consistent changing of media, from submersion culture to air-lift culture. The special inlet channels enable adjustment of the medium level without damage to the tissue model.
- Membrane material of PC or PET material for different optical requirements and cell visibility.
- cellGrade™ plus surface.
- Multiple membrane pore sizes available for different applications: 0.4µm, 1.0µm, 3.0µm, 8.0µm*.

*construction of full-thickness skin models by the Fraunhofer IGB (www.tissue-factory.com)



24-well standard plate



6-well specialized plate

BRANDplates® Insert System Microplates

Description	Surface	Cat. No.	2014 List Price
24-well standard plate pack of 10 plates (individually wrapped with lid)			
transparent	pureGrade™ S	782880	\$135.00
transparent	cellGrade™ plus	782890	145.00
6-well specialized plate pack of 10 plates (individually wrapped with lid)			
transparent	pureGrade™ S	782881	135.00
transparent	cellGrade™ plus	782891	145.00

BRANDplates® Insert Strips

Pore Size (µm)	PC membrane		PET membrane	
	Cat. No.	2014 List Price	Cat. No.	2014 List Price

Smooth-walled insert strips

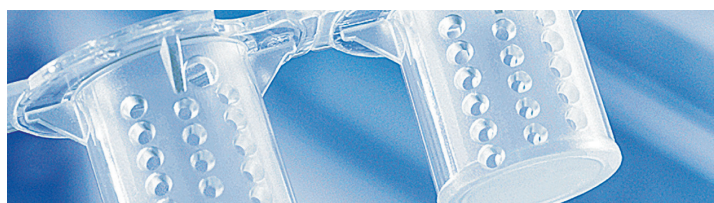
PS, cellGrade™ plus surface, sterile. 12 strips of 4 divisible inserts (individually wrapped)

0.4	782800	\$ 295.00	782810	\$295.00
1	782820	295.00	782830	295.00
3	782840	295.00	782850	295.00
8	782860	295.00	782870	295.00

Strips with Inlet Opening System

PS, cellGrade™ plus surface, sterile. 12 strips of 4 divisible inserts (individually wrapped)

Pore Size (µm)	PC membrane		PET membrane	
	Cat. No.	2014 List Price	Cat. No.	2014 List Price
0.4	782801	\$365.00	782811	\$365.00
1	782821	365.00	782831	365.00
3	782841	365.00	782851	365.00
8	782861	365.00	782871	365.00



BRANDplates® Insert System



BRANDplates® Insert System

Pore Size (µm)	PC membrane Cat. No.	2014 List Price	PET membrane Cat. No.	2014 List Price
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6-well plates filled with 6 insert strips

PS, cellGrade plus surface, sterile. Smooth-walled strips or strips with Inlet Opening System. Pack of 5 plates with lids (condensation rings) and 30 insert strips

System with Smooth-walled Insert Strips

0.4µm	782802	\$825.00	782812	\$ 825.00
1µm	782822	825.00	782832	825.00
3µm	782842	825.00	782352	825.00
8µm	782862	825.00	782872	825.00

Inlet Opening System

0.4µm	782803	975.00	782813	975.00
1µm	782823	975.00	782833	975.00
3µm	782843	975.00	782853	975.00
8µm	782863	975.00	782873	975.00

The proper quality grade for every application

The right quality grade should be used in each application. Consequently, BRAND offers a range of quality grades so that the optimal one is always available.

BIO-CERT®	sterile acc. ISO 11 137	free of DNA	free of RNase	free of endotoxins	free of ATP	free of cytotoxic substances acc. ISO 10 993
Pipette tips and filter tips standard		✓	✓	✓	✓	
Pipette tips and filter tips BIO-CERT®	✓	✓	✓	✓	✓	
PD-Tips BIO-CERT®	✓	✓	✓	✓	✓	
Microcentrifuge tubes sterile BIO-CERT®	✓	✓	✓	✓	✓	
Microcentrifuge tubes with lid closure		✓	✓	✓		
PCR products		✓	✓	✓		
Deep-well plates		✓	✓	✓		
BRANDplates® standard		✓	✓	✓		✓
BRANDplates® sterile	✓	✓	✓	✓		✓
UV-Cuvettes micro		✓	✓	✓		

BIO-CERT® products correspond to the highest quality grade.

They are sterile, free from DNA, RNases, endotoxins and ATP.

Sterility Sterility means being free of living organisms. BRAND products are sterilized with beta radiation according to ISO 11 137 and the AAMI Guidelines. The radiation dose is at least 12.1 kGy. The inertGrade™ microplates are an exception; these are sterilized with ethylene oxide due to their special surface characteristics.

An SAL (sterility assurance level) of 10^{-6} is guaranteed, meaning no more than one part in 1×10^6 can be contaminated! This level of sterility complies with the requirements of USP 29 and the Ph.Eur.

DNA and RNases DNA (deoxyribonucleic acid) is the carrier of genetic information. RNases (ribonucleases) are enzymes that can degrade ribonucleic acid (RNA) through hydrolysis. Products from BRAND are free from DNA ($< 4 \times 10^{-14}$ g/tip = 40 fg), to avoid false positive results, e.g., in PCR, and free from RNases ($< 8.6 \times 10^{-15}$ g/tip = 8.6 fg), to make it possible to work with RNA.

Endotoxins Endotoxins are an indicator of the presence of Gram negative bacteria and make up the largest group of pyrogens. These two are often falsely believed to be synonymous. The concentration of endotoxins in products from BRAND is determined by the kinetic-turbidimetric limulus amoebocyte lysate (LAL) test. The detection limit is 0.01 EU/ml. This corresponds to an endotoxin concentration of $< 1 \times 10^{-12}$ g/tip (1 pg/tip). Freedom from endotoxins is required in pharmaceutical manufacture and cell culture.

ATP ATP serves as a marker for detecting viable bacteria, yeasts, and human cells, etc. Products from BRAND are free of ATP (ATP concentration $< 1 \times 10^{-15}$ g/tip = 1 fg) and thus are especially suitable for luminescence measurements.

Polypropylene & Deep-Well Plates

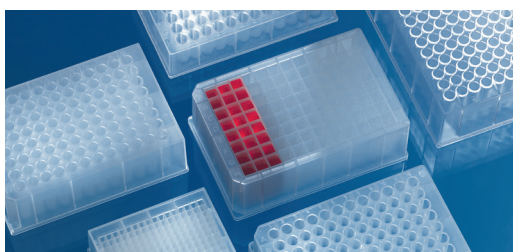
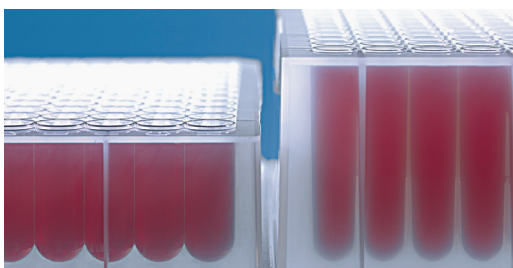
Deep-Well Plates

BRAND Deep-Well plates are excellent for sample storage, high throughput screening (HTS) assays requiring a motherplate, cell and tissue culture, and more. Choose polypropylene for chemical resistance to phenols, chloroform and DMSO, or polystyrene for clarity or surface properties. Plates are compatible with most robotic samplers and automated liquid handling systems.

- Polypropylene plates are autoclavable at 121°C (250°F) for 20 minutes, and withstand temperatures as low as -80°C (-112°F).
- Round bottom wells for optimal sample mixing and recovery.
- Wells are alphanumericly coded, with a corner cutaway for easy orientation and well identification.
- Compatible with multichannel pipettes and automated liquid handling systems from all leading manufacturers.
- Plates come in 96-well and 384-well varieties, and are stackable for easy storage.



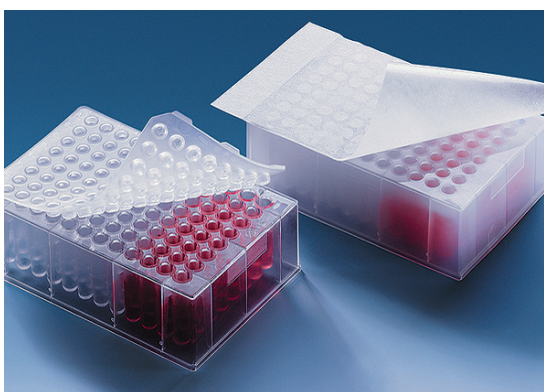
BRAND 1.2mL Low Profile plate reduces space requirements by approximately 30%



ORDERING INFORMATION:

Color	Well Volume	Qty./Pack	Cat. No.	2014 List Price
Deep-Well Plates				
96-well, polypropylene	0.3mL	100	701330	\$233.00
96-well, polypropylene	0.5mL	48	701346	356.00
96-well, polypropylene	1.1mL	24	701350	136.00
96-well, polystyrene	1.1mL	32	701352	171.00
96-well, polypropylene, Elevated Skirt	1.2mL	32	701342	181.00
96-well, polypropylene, Low Profile	1.2mL	50	701340	274.00
96-well, polypropylene	2.2mL	24	701354	196.00
384-well, polypropylene	0.3mL	48	701355	582.00
Mat Covers				
Mat for 1.1mL volume Deep-Well plates, mod. PE		24	701360	109.00
Mat for 1.2mL volume Deep-Well plates, TPE		50	701368	274.00
Mat for 2.2mL volume Deep-Well plates, EVA		24	701362	87.00
Mat for 0.5mL 96-well plates, PP		50	701358	352.00
Mat for 0.3mL 384-well plates, Silicone		50	701357	557.00

Sealing films available, see page 89



Deep-Well plate Cover Mats

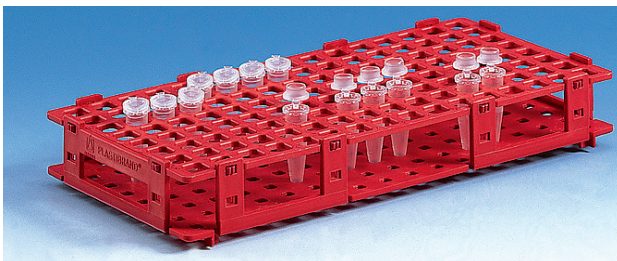
Cover mats provide an effective plug seal for each well (maximum well volume is reduced).



BRAND Microcentrifuge Tubes

BRAND microcentrifuge tubes fit most common rotors and may be spun up to 30,000 RCF (g) (10,000 x g for 0.5mL; 20,000 x g for 1.5mL; 30,000 x g for 1.5mL with lid closure). Manufactured from virgin polypropylene, these highly translucent tubes are free from flash, air bubbles, and streaks. Caps are flat with consistent thickness for trouble-free piercing.

- Tubes have uniform wall thickness for consistent, repeatable results.
- Caps form a tight, leak-free seal that is easy to open, even when wearing gloves.
- BIO-CERT® endotoxin-, RNase-, ATP-, and DNA-free microcentrifuge tubes are available for critical applications.
- Colored tubes simplify sample identification.
- Centrifuge Tube Mini Coolers hold twelve microtubes from 0.5mL to 2.0mL in size and, when pre-frozen, maintain the rated temperature for approximately an hour (45 minutes for -70°C model).



128-tube Rack



20-tube Rack

BRAND 1.5mL Microcentrifuge tubes in colors

Tube Vol mL	Color	OD x H mm	Qty./ Pack	Packaging	Cat. No.	2014 List price
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Non-sterile Microcentrifuge Tubes with Lids

0.5	Clear	8 x 32	1000	1 pack of 1000 tubes	780507	\$67.00
1.5	Clear	11 x 41	500	1 pack of 500 tubes	780500	13.80
1.5 w/lid closure	Clear	11 x 39	1000	1 pack of 1000 tubes	780540	88.00
1.5	Yellow	11 x 41	500	1 pack of 500 tubes	780521	13.80
1.5	Blue	11 x 41	500	1 pack of 500 tubes	780522	13.80
1.5	Green	11 x 41	500	1 pack of 500 tubes	780523	13.80
1.5	Orange	11 x 41	500	1 pack of 500 tubes	780524	13.80
1.5	Amber	11 x 41	500	1 pack of 500 tubes	780525	13.80
2.0	Clear	11 x 41	500	1 pack of 500 tubes	780550	53.00

NEW!

BIO-CERT® RNase-, DNase, DNA-free Microcentrifuge Tubes with Lids

1.5	Clear	11 x 41	450	30 15-tube blister packs	780400	124.00
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Non-sterile Microcentrifuge Tubes without Lid

1.5	Clear	11 x 39.5	2000	1 pack of 2000 tubes	780505	106.00
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Accessories

128-tube Rack			5	1 pack of 5 racks	4341052	99.00
84-tube Rack			5	1 pack of 5 racks	4341002	99.00
20-tube Rack			1	Each	780605	18.40
0.5mL Adapters for 20-tube Rack			20	1 pack of 20	780608	24.60
Centrifuge Tube Mini Cooler, 0°C			1	Each	114930	120.00
Centrifuge Tube Mini Cooler -20°C			1	Each	114935	120.00
Centrifuge Tube Mini Cooler, -70°C			1	Each	114940	120.00



Centrifuge Tube Mini Cooler, 0°C



0.5mL Microcentrifuge tubes



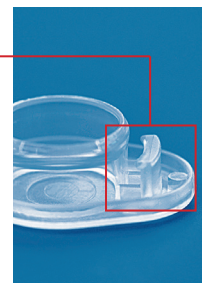
1.5mL Microcentrifuge tubes



2.0mL Microcentrifuge tubes



1.5mL Microcentrifuge tubes with lid closure

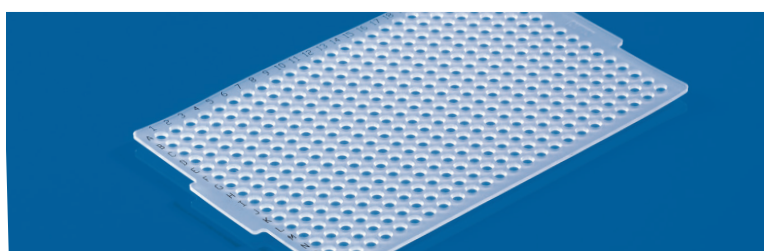
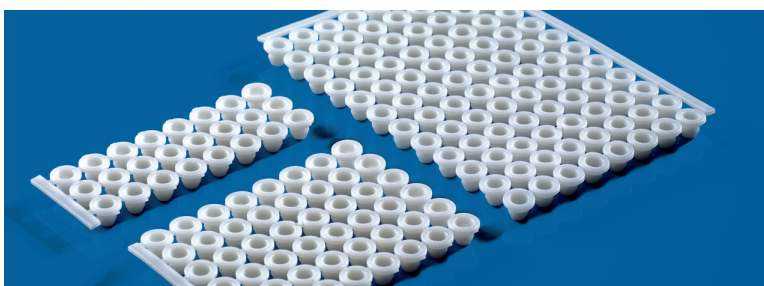


Lid closure for 1.5mL Microcentrifuge tubes

BRAND PCR Tubes, Strips and Plates

BRAND PCR tubes, strips and plates are manufactured from high-quality virgin resins for excellent, reproducible results in most PCR applications. This collection of individual tubes, tube strips, cap strips and multiwell plates are manufactured without lubricants or chemical additives that can contaminate reagents and samples.

- **NEW!** PCR strips, tubes, and plates from BRAND are compatible with most thermal cyclers including low profile instruments.
- BRAND PCR tubes and plates are autoclavable and RNase-, DNase-, and DNA-free.
- The thin, uniform walls of BRAND PCR tubes and plates ensure consistent, precise thermal transfer for excellent results.
- **NEW!** Cap tool for reliable, soft-touch sealing and removal of PCR caps
- Individual tubes have attached caps that form a tight seal to help prevent sample evaporation, yet are easy to open and close.
- Most tube strips include a tab for easy handling.
- Innovative TPE mats are autoclavable, flexible and, when used with BRAND PCR plates, dramatically reduce sample evaporation. Mat material can be easily pierced with a pipette tip.
- All sealing films are DNA-, RNase- and DNase-free.
- BRAND's PCR rack securely holds 96-well PCR plates, tube strips, and individual tubes for easy handling, and is alphanumerically marked for sample identification. The PCR box holds the rack for storage, and withstands temperatures from -80°C to +121°C.
- PCR Mini Cooler helps protect samples from warming. Insulating gel maintains 4°C temperature for approximately 3 hours, and changes color from violet to pink when temperature reaches 7°C. Suitable for 0.2mL tubes, strips and plates. Transparent lid included.



PCR Sealing Mats

PCR sealing mats have been designed to fit BRAND PCR plates exactly and reduce evaporation losses by up to 75% compared to conventional systems. They are highly flexible, tight sealing, autoclavable and piercable with pipette tips.

White PCR Plastics

BRAND white PCR products are designed specifically to optimize results when performing quantitative Real Time PCR (qPCR). White PCR strips and plates offer significantly better results in the analysis of fluorescence signals and consequently with the quantification of replicated DNA.

- DNase-, DNA- and RNase-free
- Smooth surfaces to optimize reflection of the fluorescence signal
- Suitable for use in common thermal cyclers
- Extra-thin wall dimensions to provide the optimal thermal transfer and short cycle times
- Manufactured under the most modern clean room conditions
- Uniformly colored with titanium dioxide (TiO₂)



PCR Box/Rack



PCR Mini Cooler

ORDERING INFORMATION

Description	Qty./Pack	Cat. No.	2014 List Price
Accessories			
NEW! Cap Tool	1	781419	\$52.00
PCR Box/Rack	5	781362	77.00
PCR Mini Cooler	2	781260	128.00
PCR Mats and Sealing Films			
TPE-mat for BRAND 96-well PCR plates, for 781350, 781400	5	781405	51.00
TPE 24-well mat for 781411	10	781402	9.00
TPE 48-well mat for 781415	10	781403	3.00
Silicone 384-well mat for 781345, 781347, 781348	10	781408	93.00
Sealing films available (see page 89)			

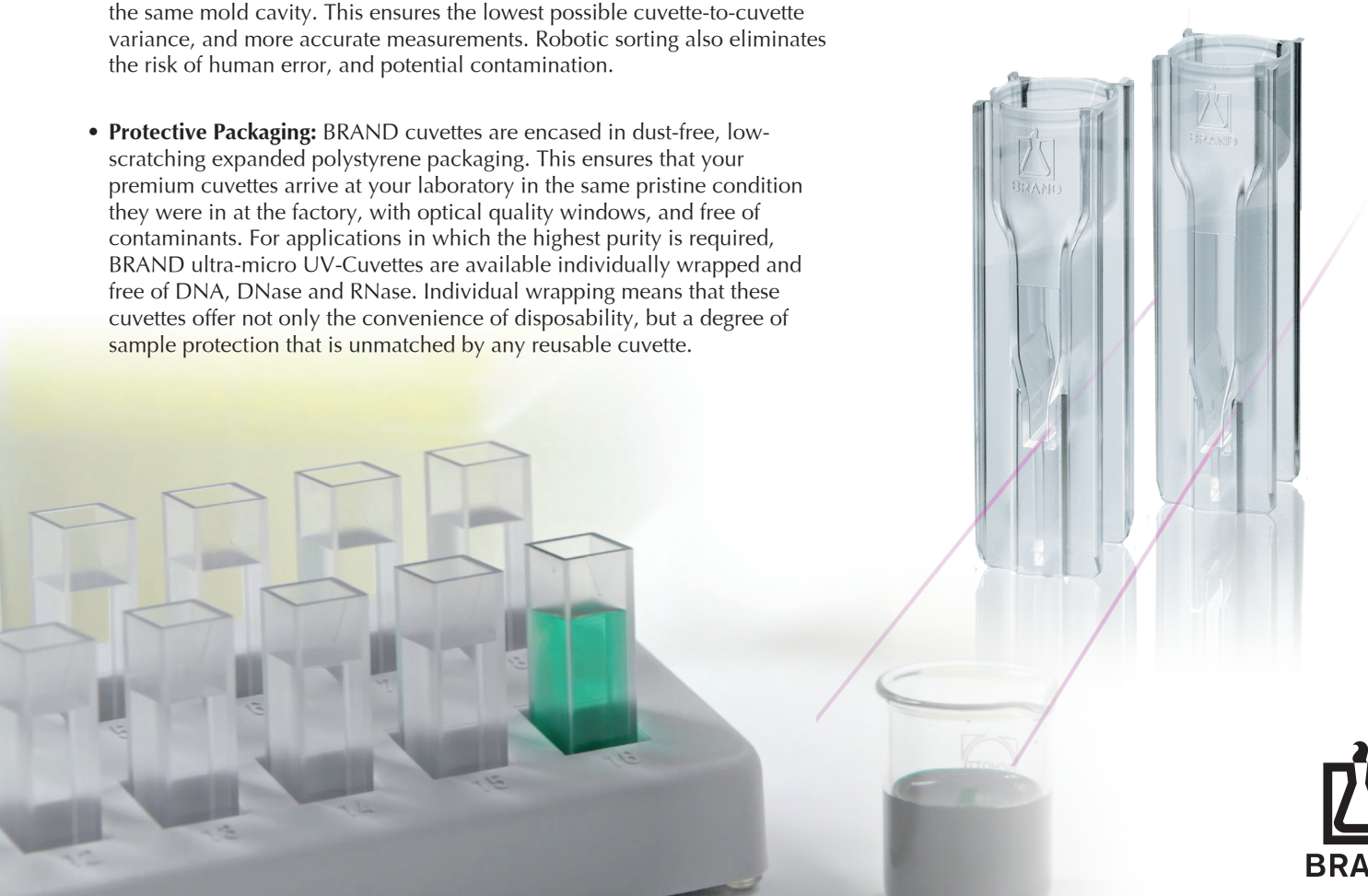
BRAND Plastic Cuvettes

Why BRAND Disposable Cuvettes?

BRAND is world-renowned as the producer of premium disposable cuvettes. Each and every BRAND cuvette benefits from their over twenty five years of experience manufacturing cuvettes to the most exacting standards for reproducible results.

- **Virgin Resins:** BRAND cuvettes are manufactured from the highest quality virgin resins for highest optical quality. Choose polystyrene for determinations above 340nm, and where cost is a concern. Choose polymethyl methacrylate (PMMA or “acrylic”) when performing assays above 300nm. For assays with wavelengths as short as 230nm, or that require enhanced chemical compatibility, choose BRAND UV-Cuvettes, made of a proprietary resin.
- **Mold-Cavity Matching:** All plastic cuvettes are manufactured in multi-cavity molds, producing multiple cuvettes with each molding operation. Even with BRAND’s experience and attention to manufacturing detail, nothing can prevent slight differences among the cavities that can lead to variation in extinction coefficients. Rather than randomly aggregate cuvettes from all cavities, BRAND’s automated production process sorts the cuvettes by mold cavity; each package only contains cuvettes from the same mold cavity. This ensures the lowest possible cuvette-to-cuvette variance, and more accurate measurements. Robotic sorting also eliminates the risk of human error, and potential contamination.
- **Protective Packaging:** BRAND cuvettes are encased in dust-free, low-scratching expanded polystyrene packaging. This ensures that your premium cuvettes arrive at your laboratory in the same pristine condition they were in at the factory, with optical quality windows, and free of contaminants. For applications in which the highest purity is required, BRAND ultra-micro UV-Cuvettes are available individually wrapped and free of DNA, DNase and RNase. Individual wrapping means that these cuvettes offer not only the convenience of disposability, but a degree of sample protection that is unmatched by any reusable cuvette.

The BRAND Logo,
Your Assurance of
a Quality Cuvette.

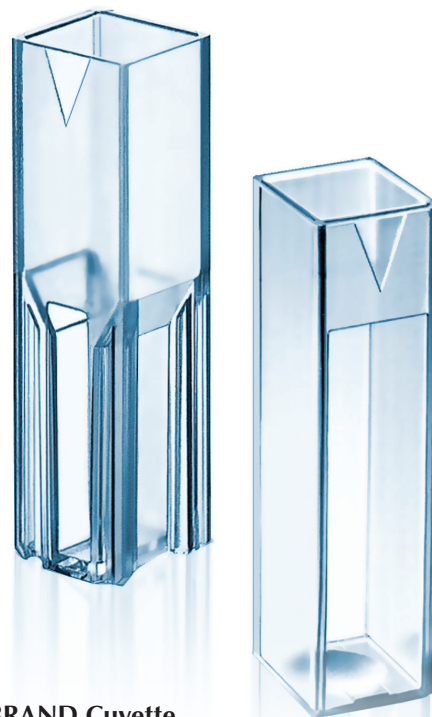


PS and PMMA Cuvettes

Technical Data

BRAND plastic cuvettes are an excellent choice for most spectrophotometry applications in the visible and near-UV range. When manufactured from PS and PMMA, they provide accurate, reliable results even at wavelengths as low as 300nm. These disposable cuvettes are available in macro and semi-micro sizes to accommodate most sample volumes. BRAND plastic cuvettes are compatible with most spectrophotometers and photometers using a standard 10mm path length.

- **Easy to Use:** BRAND plastic disposable cuvettes include an arrow mark to indicate direction of transmission and reduce variation.
- **Options for Most Needs:** PS and PMMA cuvettes are available in both macro and semi-micro sizes to adapt to the needs of most laboratory applications. Semi-micro cuvettes require only 1.5mL of sample volume to provide reliable, accurate results.
- **Perform Consistently:** Cuvettes are manufactured from high-quality materials, and are grouped by manufacturing mold cavity number to ensure the lowest variation in extinction coefficient.
- **Manufactured by BRAND:** One of the world's largest producers of cuvettes, BRAND's over twenty-five years of quality cuvette manufacturing experience is your assurance of reliability.

**Specifications – BRAND Cuvette**

Filling volume	Semi-micro	Macro
Minimum	1.5mL	2.5mL
Maximum	3.0mL	4.5mL
Window Dimensions	4.5 x 23mm	10 x 35mm
Light Path	10mm	10mm

ORDERING INFORMATION

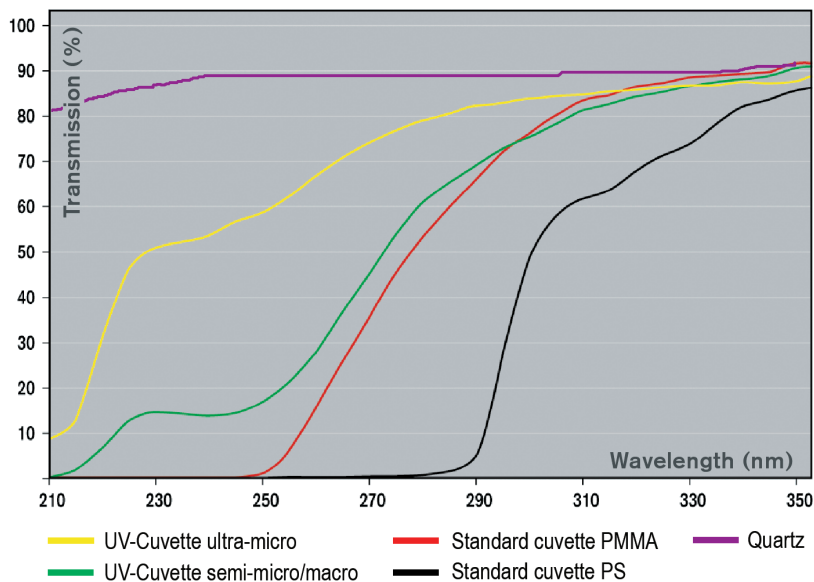
Description	Cat. No.	2014 List Price
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BRAND Polystyrene (PS) Cuvettes

Macro, pack of 500	759070D	\$80.00
Macro, pack of 100	759071D	18.40
Semi-micro, pack of 500	759075D	87.00
Semi-micro, pack of 100	759076D	19.40

BRAND Methacrylate (PMMA) Cuvettes

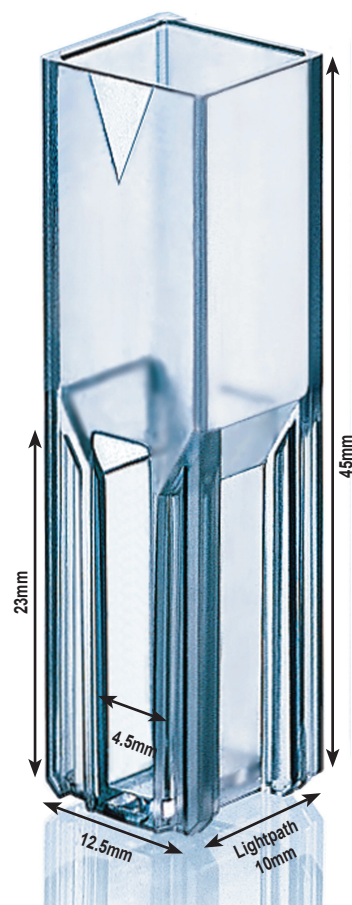
Macro, pack of 500	759080D	113.00
Macro, pack of 100	759081D	25.60
Semi-micro, pack of 500	759085D	98.00
Semi-micro, pack of 100	759086D	21.40
Polypropylene Cuvette Rack, 16 numbered positions	759500	24.60

Transmission curves of different cuvettes

BRAND UV-Cuvettes

UV-transparent, disposable cuvettes from BRAND replace expensive, fragile quartz cuvettes and are excellent for DNA, RNA, and protein analyses between 230-900nm. See Transmission curves on page 103. Made from a proprietary polycyclical olefin, they are resistant to many aggressive solvents and eliminate the tedious maintenance, cleaning, and contamination risk of quartz cuvettes. Additionally, they fit most commercial spectrophotometers and photometers without requiring the use of special adapters.

- **Eliminate the Hassles of Quartz Cuvettes:** Eliminate the washing, cross-contamination, breakage and expense associated with fragile quartz cuvettes.
- **Allow Smaller Sample Sizes:** In addition to macro and semi-micro sizes that require 2.5mL and 1.5mL of sample volume, respectively, BRAND UV-Cuvettes are available in ultra-micro sizes that require only 70 μ L of sample volume.
- **Ultra-micro Cuvettes are Available Individually-Wrapped:** Independently-certified DNA-, DNase-, RNase-free for an extra degree of sample protection.
- **Resist Most Chemicals:** Cuvettes may be used with most polar organic solvents, as well as a broad range of acids and bases. They have much greater chemical resistance than PS or PMMA cuvettes and are compatible with chemicals such as acetone, butanone, DMF, and concentrated hydrochloric acid.
- **Perform Consistently:** Cuvettes are manufactured from scratch-resistant materials, and are grouped by manufacturing mold cavity number to ensure the lowest variation in extinction coefficient.
- **Manufactured by BRAND:** BRAND is one of the world's largest cuvette manufacturers. Their 25 years experience producing quality cuvettes is your assurance of reliability.



BRAND semi-micro disposable cuvette

UV-transparent, Chemical-resistant, and Disposable. Save Time and Money.



UV-Cuvettes

ORDERING INFORMATION

Description	Cat. No.	2014 List Price
BRAND UV-Cuvette UV-transparent disposable cuvettes (specifications below)		
Macro, pack of 100	759170	\$84.00
Semi-micro, pack of 500	759165	377.00
Semi-micro, pack of 100	759150	84.00
BRAND UV-Cuvette ultra-micro (15mm window height), pack of 500	759230	377.00
BRAND UV-Cuvette ultra-micro (15mm window height), pack of 100	759220	84.00
Individually-wrapped BRAND UV-Cuvette ultra-micro (15mm window height), pack of 100	759235	123.00
BRAND UV-Cuvette ultra-micro (8.5mm window height), pack of 500	759210	377.00
BRAND UV-Cuvette ultra-micro (8.5mm window height), pack of 100	759200	84.00
Individually-wrapped BRAND UV-Cuvette ultra-micro (8.5mm window height), pack of 100	759215	123.00
Cuvette Caps and Accessories		
Cuvette Caps, round, for ultra-micro cuvettes, bag of 100, Blue	759240	27.40
Cuvette Caps, round, for ultra-micro cuvettes, bag of 100, Yellow	759241	27.40
Cuvette Caps, round, for ultra-micro cuvettes, bag of 100, Green	759242	27.40
Cuvette Caps, round, for ultra-micro cuvettes, bag of 100, Orange	759243	27.40
Polypropylene Cuvette Rack, 16 numbered positions	759500	24.60



BRAND ultra-micro UV-Cuvettes. 15mm (left) and 8.5mm (right) window heights



Round polyethylene caps provide plug-seal for reliable sample storage. Available in 4 colors!



Polypropylene cuvette rack with 16 numbered positions. Autoclavable to 121°C (250°F)

Two window heights to fit most spectrophotometers

Ultra-micro cuvettes must be selected with a window height (z-dimension) that matches the beam height of your spectrophotometer.

Not sure of the beam height of your instrument?
Check our website for help with cuvette selection
www.brandtech.com/beam_heights.asp

Specifications – BRAND Cuvette

Filling volume	Ultra-micro	Semi-micro	Macro
Minimum	70µL	1.5mL	2.5mL
Maximum	550µL (15mm window)	3.0mL	4.5mL
	850µL (8.5mm window)	—	—
Window Dimensions	2mm x 3.5mm (minimum)	4.5mm x	10mm x 35mm
		23mm	
Light Path	10mm	10mm	10mm
Range of application	230-900nm	230-900nm	230-900nm

www.brandtech.com/cuvette_comp.asp for additional cuvette compatibility information.

Examples of chemical resistance of UV-Cuvettes

Substance	UV-Cuvette
Acetic acid 100%	+
Acetone	+
Ammonia	+
Benzaldehyde	+
Butanol	+
Chloroform	-
Dioxane	+
DMF	+
Ethyl acetate	+
Hexane	-
Hydrochloric acid 36%	+
Hydrofluoric acid 10%	+
Isopropanol	+
Nitric acid 65%	+
Sodium hydroxide	+

Stainless Steel Support Jacks

Stainless steel support jacks from BrandTech® Scientific are rugged supports that are excellent for a wide variety of critical laboratory applications. Constructed entirely from stainless steel with POM rollers and PF31 phenolic knob, these support jacks are exceptionally stable and well-suited for corrosive environments such as fume hoods, water baths, marine and industrial labs, and more.

- **Supports a Wide Variety of Items:** Stainless steel support jacks are available in a range of sizes and load capacities up to 132 pounds (lbs) for most lab applications.
- **Improved Lift Mechanism:** Provides increased stability and torsional rigidity.
- **Helps Reduce Contamination:** Support jacks feature smooth surfaces that are easy to clean and sanitize. All support jacks are fully autoclavable at 121°C for sterile applications.
- **Reaches New Heights:** These stainless steel support jacks are now also available in Maxi-Lift models. Maxi-Lift stainless steel support jacks have a maximum height that is approximately 30% higher than traditional support jacks for special applications.
- **Offers a Wide Variety of Options:** BrandTech® Scientific offers support jacks manufactured with anodized aluminum and powder-coated aluminum decks (on stainless steel lift mechanisms) for less critical applications.
- **Two-year warranty on all support jacks**



Maxi-Lift Stainless Steel Support Jacks

Rugged Laboratory Supports for Critical Environments.



Stainless Steel Support Jacks

Ratcheting Handle

A ratcheting handle is provided to simplify use of larger support jacks.

This handle simply slides onto the handwheel of 30 x 30cm and 40 x 40cm support jacks to greatly reduce the effort required for raising and lowering the instrument.



Remote Control

Wireless remote for Electronic Lift 240. Allows easy control, even when lift is in a fume hood.



ORDERING INFORMATION

Description Plate, L x W, cm	Minimum Height, cm	Maximum Height, cm	Maximum Static Load, kg	Catalog No.	2014 List Price
Stainless Steel Support Jacks					
10 x 10	5.5	12.0	10	B11115	\$240.00
16 x 13	6.0	27.5	30	B11120	256.00
20 x 20	6.0	27.5	30	B11130	317.00
24 x 24	6.0	27.5	30	B11140	337.00
30 x 30	9.0	47.0	60	B11180	1,640.00
40 x 40	9.0	47.0	60	B11190	1,844.00
Maxi-Lift Stainless Steel Support Jacks					
16 x 13	7.5	40.0	30	B11122	317.00
20 x 20	7.5	40.0	30	B11132	386.00
Electronic Lift					
24 x 24 Lift 240	12	30.0	25*	B11220	2,998.00
Anodized Aluminum Deck Support Jacks					
10 x 10	5.5	12.0	10	B11016	185.00
16 x 13	6.0	27.5	30	B11021	207.00
20 x 20	6.0	27.5	30	B11031	230.00
24 x 24	6.0	27.5	30	B11041	278.00
30 x 30	9.0	47.0	60	B11081	1,194.00
40 x 40	9.0	47.0	60	B11091	1,409.00
Powder-coated Aluminum Deck Support Jacks					
10 x 10	5.5	12.0	10	B11015	169.00
16 x 13	6.0	27.5	30	B11020	191.00
20 x 20	6.0	27.5	30	B11030	230.00
24 x 24	6.0	27.5	30	B11040	253.00
30 x 30	9.0	47.0	60	B11080	1,046.00
40 x 40	9.0	47.0	60	B11090	1,290.00

*Dynamic load

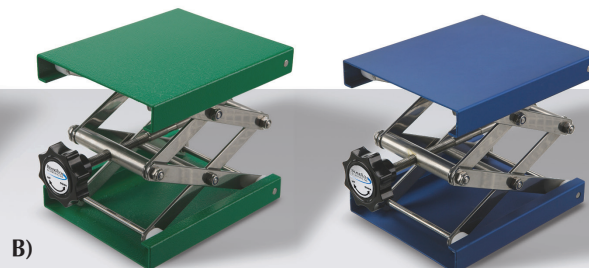
Also Available

A) LIFT 240 Electronic adjustable support jack, with remote control, stainless steel construction and PTFE bellows to protect electronic components.

B) Support jacks with epoxy powder-coated aluminum and anodized aluminum decks, with stainless steel lift mechanisms.



A)



B)

Test Tube Racks

Stainless Steel Test Tube Racks

Racks are constructed entirely of rugged, corrosion-resistant 304 stainless steel. Highly polished surfaces reduce porosity and reinforce the corrosion-resistant properties.



ORDERING INFORMATION

Maximum Tube Diameter, mm	Maximum # of Tubes	Format	Length mm	Width mm	Height mm	Cat. No.	2014 List Price
Test Tube Racks (each)							
17	12	2 x 6	145	52	90	B8210	\$55.00
17	24	2 x 12	278	52	90	B8212	60.00
17	48	4 x 12	287	97	90	B8214	105.00
20	12	2 x 6	164	60	90	B8220	72.00
20	24	2 x 12	310	60	90	B8222	91.00



Test Tube Racks

ORDERING INFORMATION

Maximum Tube Diameter, mm	Maximum # of Tubes	Format	Length mm	Width mm	Height mm	Cat. No.	2014 List Price
Test Tube Racks, Z-style (each)							
13	50	10 x 5	50	165	85	B8290	\$48.00
17	50	10 x 5	50	220	110	B8291	48.00
13	25	5 x 5	50	85	85	B8292	36.00
17	25	5 x 5	50	110	110	B8293	36.00



Test Tube Racks, Z-style

Polypropylene Test Tube Racks

Sturdy polypropylene racks with alphanumeric positions for easy sample identification. Racks are stackable, non-conductive and will not float in water baths. They are suitable for use in temperatures from -20°C to 90°C. Racks are supplied in packs of five. They are supplied in three pieces for easy and permanent assembly.

ORDERING INFORMATION

Maximum Tube Diameter, mm	Format	Length mm	Width mm	Height mm	White Cat. No.	Blue Cat. No.	Red Cat. No.	Yellow Cat. No.	2014 List Price
Test Tube Racks, PP (pack of 5)									
13	6 x 14	265	126	75	4340000	4340001	4340002	4340003	\$77.00
16	5 x 11	265	126	75	4340060	4340061	4340062	4340063	77.00
18	5 x 11	265	126	75	4340010	4340011	4340012	4340013	77.00
20	4 x 10	265	126	75	4340020	4340021	4340022	4340023	77.00
25	4 x 8	265	126	88	4340030	4340031	4340032	4340033	77.00
30	3 x 7	265	126	88	4340040	4340041	4340042	4340043	77.00



Test Tube Racks, PP

Sample Cups for Clinical Analyzers

BRAND sample cups are made from virgin polystyrene and are designed to fit many common analyzers. Caps and lids are made of polyethylene for a snug fit. Cups and caps meet CE-IVD Directive 98/79 (except 722060).



[a] Sample Cups for Technicon® Analyzers



[b] Push-on Caps to fit cup #115015



[c] Sample Cups for Coulter Counter® with Lids



[d] Sample Cups with Snap Caps

ORDERING INFORMATION

	Capacity mL	Upper Diameter mm	Lower Diameter mm	Height mm	Qty./Pack	Cat. No.	2014 List Price
Sample Cups for Technicon® Analyzers [a]	1.5	15	12.2	22.7	12000	115015	\$475.00
	2	15.5	12.5	23.5	10000	115016	422.00
	4	17	13.3	38	6000	115017	360.00
Push-on caps to fit cup #115015 [b]					1000	115020	51.00
Sample Cups for Coulter Counter® with Lids [c]	20	32	n/a	56	1000	722055	156.00
Sample Cups with Snap Caps [d]	12	22	22	38	1000	722060	241.00

Mucasol® Universal Detergent

Liquid, alkaline high-performance concentrate for immersion and ultrasonic baths. Universal cleaner for laboratory equipment and instruments made of glass, porcelain, plastic, rubber and metal. Items are cleaned in ~10-30 minutes, without mechanical help. Mucasol® replaces chromosulfuric acid, is free from chlorine and caustic alkalis, is non-toxic, non-aggressive and biodegradable. Prolonged exposure of zinc and non-anodized aluminium surfaces should be avoided.

Ingredients

- > 30% phosphates
- < 5% anionic surfactants, amphoteric surfactants, complexing agents, corrosion inhibitors, auxiliary agents

Concentration for use

- Ultrasonic bath 0.2 - 2% (1.4 - 14mL/L)
- Immersion bath 0.7 - 3% (5 - 22mL/L)

Chemical and physical specifications

- Light green, clear liquid
- Density: approximately 1.4g/mL
- pH value (0.7%): approximately 11.5
- pH value (3%): approximately 11.7



ORDERING INFORMATION

Description	Cat. No.	2014 List Price
Mucasol® Universal Detergent, 2L bottle, each	44003B	\$148.00
Mucasol® Universal Detergent, 2L bottle, pack of 6	44003	762.00



PFA Trace Analysis Labware

Properties

VITLAB® trace analysis labware from BrandTech® Scientific is manufactured from PFA (a perfluoroalkoxy copolymer), which is highly resistant to heat and chemical contamination and has surface properties that greatly simplify cleaning. Use this labware for excellent results in ICP-MS, production and storage of trace analysis standards, isotope separations, sample digestions and more.

With the increasing need in trace analysis labs for ultra-low concentration determinations in the ng/g (ppb) and pg/g (ppt) range, the use of PFA labware has become more and more important. Other materials, when not specially treated, may be subject to interaction between the vessel and the sample, standards or reagents it contains. This may cause incorrect results with modern trace analysis instrumentation.

All BrandTech® VITLAB® PFA trace analysis labware features visible, accurate, and permanent graduations for precise measuring. PFA Labware is suitable for sterilization using heat, gas, and chemical methods for handling sensitive biological solutions. BrandTech® also offers corrosion-resistant PFA (Technical Grade) with small amounts of pre-consumer high-quality recycled PFA, for customers who need only the chemical resistance of PFA. See page 113.

Performing Trace Analysis?

See the new BRAND Dispensette® TA bottle-top dispenser for Trace Analysis on page 37.

Excellent Temperature Stability: BrandTech®'s VITLAB® PFA trace analysis labware maintains its stability in temperatures from -200°C to 250°C (-328°F to 482°F).

No Leachable Metals: PFA is manufactured without metals such as calcium, aluminum, iron, magnesium, nickel, copper, manganese or zinc. These metals can leach into samples from other containers, and contaminate samples.

Simplified Cleaning: Conventional labware for trace analysis requires time-consuming and expensive cleaning. The hydrophobic and anti-adhesive properties of the exceptionally smooth-surfaced PFA labware simplify the cleaning process, making it ideal for trace analysis.

Superior Chemical Resistance: PFA is inert with most reagents, including the nitric and hydrochloric acid routinely used in cleaning trace analysis labware. This stability significantly reduces the risk of cross-contamination.

Excellent Long-Term Stability: PFA containers often extend the stability of low (ppb) concentration standards. Such stability reduces the time and cost of renewing trace analysis standard solutions.

Highly Translucent: Translucency is important for making accurate measurements using volumetric labware.

Please see page 126 for description of various plastics.

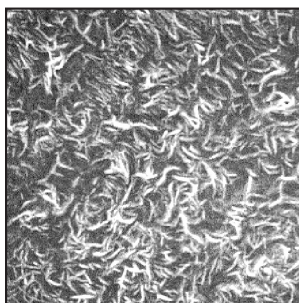
VITLAB 

VITLAB® PFA Labware: Pure, Cleanable, Rugged.

Scanning electron microscopy illustrates the advantages of PFA in trace analysis. (Magnification: 8000X)

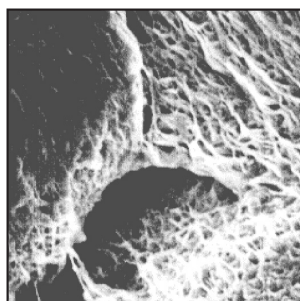
Bottle – HDPE

Scanning electron microscopy of this bottle wall shows the roughness of HDPE. The increased surface area of HDPE can lead to carryover of reagent molecules.



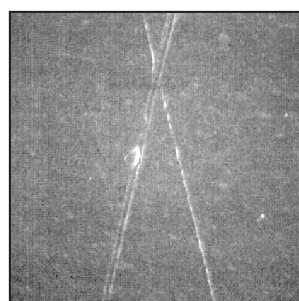
Beaker – PTFE

Similar to HDPE, electron micrographs of this beaker reveal a typically rough surface that can interact with reagent molecules and complicate cleaning.



Evaporating dish – PFA

Even at 8000x magnification, the surfaces of this PFA evaporating dish are very smooth. It is this smoothness, combined with PFA's hydrophobic, anti-adhesive and inert properties, that simplify cleaning.



PFA Trace Analysis Labware



Low-Form Griffin Beakers, PFA

- Molded graduations are easy to read and resistant to wear from repeated use.
- Nesting design conserves bench and storage space.
- Autoclavable, easy to clean, withstand temperatures from -200°C to 250°C.
- Meets the requirements of ISO 7056.

ORDERING INFORMATION

Volume mL	Grad mm	Height mm	Diameter mm	Qty./Pack	Cat. No.	2014 List Price
25	5	50	32	1	V110205	\$34.00
50	10	59	39	1	V110305	43.00
100	20	72	50	1	V110405	61.00
250	50	96	67	1	V110605	100.00
500	100	122	88	1	V110905	152.00
1000	100	141	109	1	V111005	273.00



Volumetric Flasks with Screw Caps, PFA

- Flasks feature individually calibrated ring-markings.
- Durable markings are easy to read. Limit cleaning temperature to 60°C (140°F) to preserve ring mark.
- High-transparency simplifies meniscus verification.
- PFA screw caps help protect against outside contamination and leakage.
- Meets Class A tolerances per DIN EN ISO 1042.
- Easy to clean. Autoclavable at 121°C (250°F) without affecting tolerances.

ORDERING INFORMATION

Volume mL	Tolerance mL	Height mm	Thread GL	Qty./Pack	Cat. No.	2014 List Price
10	0.04	90	18	1	V107097	\$231.00
25	0.04	115	18	1	V107197	232.00
50	0.06	150	18	1	V107297	237.00
100	0.10	180	18	1	V107397	293.00
250	0.15	235	25	1	V107497	368.00
500	0.25	270	25	1	V107597	424.00



Evaporating Dishes, PFA with Snap on Lid, PE

- Evaporating dishes are autoclavable, easy to clean, and withstand temperatures from -200°C to 250°C. Lid is not autoclavable.

ORDERING INFORMATION

Volume mL	Height mm	Diameter mm	Qty./Pack	Cat. No.	2014 List Price
25	25	50	1	V103297	\$77.00
50	54	50	1	V103397	103.00

PFA Trace Analysis Labware



Wide Mouth Reagent Bottles with Screw Caps, PFA

- Leach-resistant bottles for long-term storage of solvents and standards.
- PFA screw caps have a molded sealing ring for a positive seal.
- Autoclavable, easy to clean, withstand temperatures from -200°C to 250°C.

ORDERING INFORMATION

Volume mL	Height mm	Diameter mm	Thread	Qty./Pack	Cat. No.	2014 List Price
250	150	61	S40	1	V109497	\$196.00
500	179	76	S40	1	V109597	271.00
1000	217	96	S40	1	V109697	376.00
2000	245	130	S40	1	V109797	775.00



Narrow Mouth Reagent Bottles with Screw Caps, PFA

- Leach-resistant bottles for long-term storage of solvents and standards.
- PFA screw caps have a molded sealing ring for a positive seal.
- Autoclavable, easy to clean, withstand temperatures from -200°C to 250°C.

ORDERING INFORMATION

Volume mL	Height mm	Diameter mm	Thread	Qty./Pack	Cat. No.	2014 List Price
50	86	37	S28	1	V109297	\$113.00
100	120	45	S28	1	V109397	161.00
250	160	61	S28	1	V108297	187.00
500	190	76	S28	1	V108397	256.00
1000	240	96	S28	1	V108497	353.00



Round Bottom Flasks, PFA

- For rotary evaporators and distillation of high-purity chemicals.
- With 29/32 ground socket.
- Translucent surfaces simplify solvent monitoring.
- Autoclavable, easy to clean, withstand temperatures from -200°C to 250°C.
- Maximum temperature under vacuum is 50°C (122°F).

ORDERING INFORMATION

Volume mL	Height mm	Neck mm	Diameter	Qty./Pack	Cat. No.	2014 List Price
100	117	29/32	65	1	V107797	\$153.00
250	147	29/32	88	1	V107897	180.00
500	177	29/32	107	1	V107997	246.00

PFA Trace Analysis Labware



Sample Containers with Screw Cap, PFA

- For sample collection, transport and storage.
- Supplied with a PFA screw cap.
- Autoclavable, easy to clean, withstand temperatures from -200°C to 250°C.

ORDERING INFORMATION

Volume mL	Height mm	Diameter mm	Thread GL	Qty./Pack	Cat. No.	2014 List Price
30	54	38	40	1	V130297	\$73.00
60	90	38	40	1	V130397	88.00
90	62	54	56	1	V130497	68.00
180	112	54	56	1	V130597	123.00



Narrow Neck Reagent Bottles with Screw Cap, PFA, Technical Grade

- For sample collection, transport and storage.
- Supplied with a ETFE screw cap.
- Autoclavable, easy to clean, withstand temperatures from -200°C to 250°C.
- Offers the full chemical resistance of PFA, but may not be suited for trace analysis applications.

ORDERING INFORMATION

Volume mL	Thread GL	Height mm	Diameter mm	Qty./Pack	Cat. No.	2014 List Price
50	18	90	37	1	V108092	\$63.00
100	18	114	45	1	V108192	84.00
250	25	157	61	1	V108292	138.00
500	25	189	76	1	V108392	198.00
1000	32	233	96	1	V108492	272.00

Volumetric Labware and Containers

ORDERING INFORMATION

Volume, mL	Tolerance +/-mL	Grad mm	Height mm	Diameter mm	Qty./ Pack	Cat. No.	2014 List Price
Class A Graduated Cylinders, PMP, Certified							
10	0.10	0.20	145	15	2	V64614	\$23.00
25	0.25	0.50	169	21	2	V64714	24.00
50	0.50	1.00	200	27	2	V64814	25.00
100	0.50	1.00	250	33	2	V64914	34.00
250	1.00	2.00	315	44	2	V65014	53.00
500	2.50	5.00	360	58	1	V65114	43.00
1000	5.00	10.00	440	69	1	V65214	62.00
2000	10.00	20.00	482	97	1	V65414	100.00

- Glass-clear tall-form cylinders calibrated "to contain" Class A per DIN 12681 and ISO 6706.
- Molded graduations with red screened overprint for legibility.
- Imprinted lot and year; supplied certificate includes mean test value and lot.
- Autoclaving at 121°C will not cause permanent exceeding of tolerance limits.

Class A Graduated Cylinders, PMP, Certified

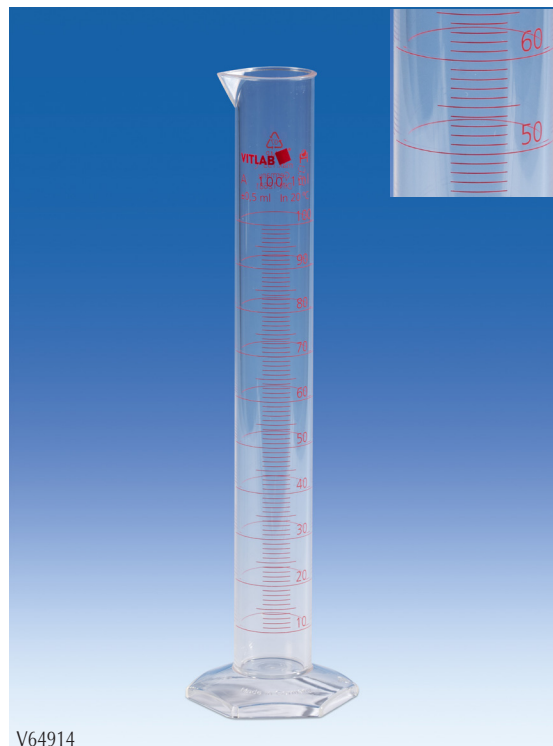
10	0.10	0.20	145	15	2	V64604	18.00
25	0.25	0.50	169	21	2	V64704	18.00
50	0.50	1.00	200	27	2	V64804	19.00
100	0.50	1.00	250	33	2	V64904	26.00
250	1.00	2.00	315	44	2	V65004	40.00
500	2.50	5.00	360	58	1	V65104	41.00
1000	5.00	10.00	440	69	1	V65204	60.00
2000	10.00	20.00	482	97	1	V65304	98.00

- Glass-clear tall-form cylinders calibrated "to contain" Class A per DIN 12681 and ISO 6706.
- Molded graduations with ring marks at major increments.
- Imprinted lot and year; supplied certificate includes mean test value and lot.
- Autoclaving at 121°C will not cause permanent exceeding of tolerance limits.

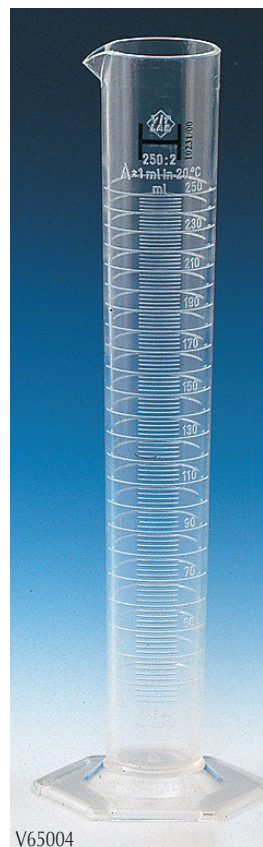
Class B Graduated Cylinders, PP

10	0.20	0.20	145	15	12	V646081	55.00
25	0.50	0.50	170	22	12	V647081	65.00
50	1.00	1.00	200	27	12	V648081	79.00
100	1.00	1.00	250	33	12	V649081	96.00
250	2.00	2.00	315	44	6	V650081	72.00
500	5.00	5.00	360	58	6	V651081	99.00
1000	10.00	10.00	440	69	6	V652081	136.00
2000	20.00	20.00	482	97	3	V653081	122.00

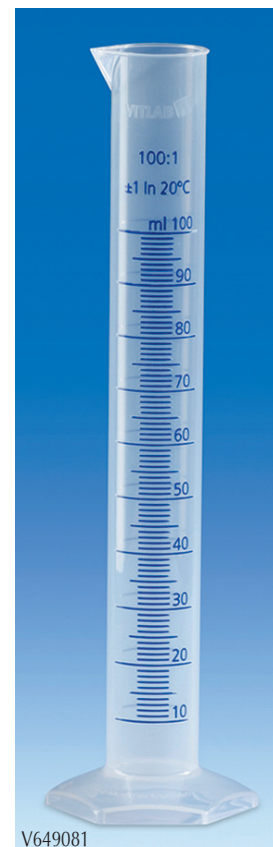
- Highly translucent tall-form cylinders calibrated "to contain" Class B per DIN 12681 and ISO 6706.
- Molded graduations, with blue screened overprint for legibility.
- Hexagonal base resists rolling.
- Temperatures of 60°C must not be exceeded (including cleaning) to maintain accuracy and preserve overprint.



V64914



V65004



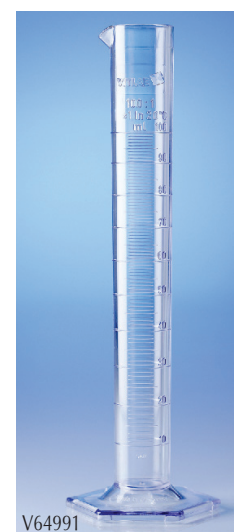
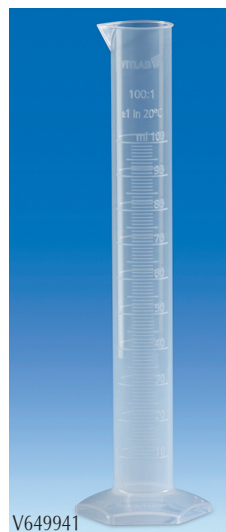
V649081

VITLAB® Volumetric Labware and Containers

ORDERING INFORMATION

Volume mL	Tolerance +/-mL	Grad mL	Height mm	Diameter mm	Qty./Pack	Cat. No.	2014 List Price
Class B Graduated Cylinders, PP							
10	0.20	0.20	145	15	12	V646941	\$43.00
25	0.50	0.50	170	22	12	V647941	54.00
50	1.00	1.00	200	27	12	V648941	60.00
100	1.00	1.00	250	33	12	V649941	75.00
250	2.00	2.00	315	44	6	V650941	51.00
500	5.00	5.00	360	58	6	V651941	68.00
1000	10.00	10.00	440	69	6	V652941	95.00
2000	20.00	20.00	482	97	3	V653941	90.00

- Highly translucent tall-form cylinders calibrated "to contain" Class B per DIN 12681 and ISO 6706.
- Molded graduations, with ring marks at major increments.
- Hexagonal base resists rolling.
- Temperatures of 60°C must not be exceeded (including cleaning) to maintain accuracy and preserve overprint.



Class B Graduated Cylinders, SAN

10	0.20	0.20	140	16	12	V64691	55.00
25	0.50	0.50	169	21	12	V64791	64.00
50	1.00	1.00	199	28	12	V64891	79.00
100	1.00	1.00	260	34	12	V64991	105.00
250	2.00	2.00	315	47	6	V65091	78.00
500	5.00	5.00	350	61	6	V65191	106.00
1000	10.00	10.00	415	76	6	V65291	137.00
2000	20.00	20.00	482	97	3	V65391	128.00

- Ring-molded graduations at major increments simplify measurement.
- Class B per DIN 12681 and ISO 6706.
- Hexagonal base resists rolling.



Short-form Graduated Cylinders, SAN

25	0.5	0.5	122	22	12	V64091	68.00
50	1.0	1.00	142	27	12	V64191	88.00
100	2.0	2.00	163	37	12	V64291	99.00
250	5.0	5.00	192	51	6	V64391	73.00
500	10.0	10.00	218	67	6	V64491	103.00
1000	20.0	20.00	285	78	6	V64591	128.00

- Short-form design increases stability to help prevent spills.
- Circular base.
- Cylinders are clear with molded graduations for easy measurement.



Short-form Graduated Cylinders, PP

25	0.5	0.50	122	22	12	V640941	46.00
50	1.0	1.00	142	27	12	V641941	64.00
100	2.0	2.00	163	37	12	V642941	74.00
250	5.0	5.00	192	51	6	V643941	54.00
500	10.0	10.00	218	67	6	V644941	77.00
1000	20.0	20.00	285	78	6	V645941	102.00

- Short-form design increases stability to reduce spills.
- Circular base.



Please see page 126 for description of various plastics.

VITLAB® Volumetric Labware and Containers

ORDERING INFORMATION

Volume mL	Tolerance +/-mL	Height mm	Thread GL	Qty./Pack	Cat. No.	2014 List Price
Class A Light-Shielding Volumetric Flasks, PMP, with Screw Cap, PP, Certified						
10	0.04	90	18	2	V670040	\$ 53.00
25	0.04	115	18	2	V671040	75.00
50	0.06	150	18	2	V672040	84.00
100	0.10	180	18	2	V673040	90.00
250	0.15	235	25	2	V674040	109.00
500	0.25	270	25	2	V675040	142.00
1000	0.40	310	32	1	V676040	87.00

- Superior light protection to amber glass at most wavelengths.*
- Meets Class A tolerances per DIN EN ISO 1042.
- Supplied with imprinted lot number, batch certificate.

Volume mL	Tolerance +/-mL	Height mm	Stopper NS	Qty./Pack	Cat. No.	2014 List Price
Class A Light-Shielding Volumetric Flasks, PMP, with NS Stopper, PP, Certified						
10	0.04	90	10/19	2	V670950	\$53.00
25	0.04	115	10/19	2	V671950	75.00
50	0.06	150	12/21	2	V672950	84.00
100	0.10	180	14/23	2	V673950	90.00
250	0.15	235	19/26	2	V674950	109.00
500	0.25	270	19/26	2	V675950	142.00
1000	0.40	310	24/29	1	V676950	87.00

- Superior light protection to amber glass at most wavelength.*
- Meets Class A tolerances per DIN EN ISO 1042.
- Supplied with imprinted lot number, batch certificate.

Class A Volumetric flasks, PMP, with NS Stopper, PP, Certified

10	0.04	90	10/19	6	V67704	98.00
25	0.04	115	10/19	6	V67104	98.00
50	0.06	150	12/21	6	V67204	124.00
100	0.10	180	14/23	6	V67304	141.00
250	0.15	235	19/26	5	V67404	149.00
500	0.25	270	19/26	4	V67504	123.00
1000	0.40	310	24/29	3	V67604	110.00

- Individually adjusted ring-marked flasks are Class A per DIN EN ISO 1042.
- Imprinted with lot number; certificate included.
- Autoclaving at 121°C will not cause permanent exceeding of tolerance limits.
- Temperatures of 60°C must not be exceeded during cleaning to preserve marks and inscriptions.

Class B Volumetric Flasks, PMP, with NS Stopper, PP

10	0.08	90	10/19	6	V67795	75.00
25	0.08	115	10/19	6	V67195	83.00
50	0.12	150	12/21	6	V67295	103.00
100	0.20	180	14/23	6	V67395	117.00
250	0.30	235	19/26	5	V67495	125.00
500	0.50	270	19/26	4	V67595	105.00
1000	0.80	310	24/29	3	V67695	92.00

- Individually adjusted ring-marked flasks are Class B per DIN EN ISO 1042.
- Autoclaving at 121°C will not cause permanent exceeding of tolerance limits.
- Temperatures of 60°C must not be exceeded during cleaning to preserve marks and inscriptions.



V673040



V673950

* More information at www.brandtech.com.



V67304



V67395

VITLAB® Volumetric Labware and Containers



ORDERING INFORMATION

Volume mL	Tolerance +/-mL	Height mm	Stopper NS	Qty./Pack	Cat. No.	2014 List Price
Class B Volumetric Flasks, PP, with NS Stopper, PP						
10	0.08	90	10/19	6	V677941	\$71.40
25	0.08	115	10/19	6	V671941	71.00
50	0.12	150	12/21	6	V672941	71.00
100	0.20	180	14/23	6	V673941	79.00
250	0.30	235	19/26	5	V674941	73.00
500	0.50	270	19/26	4	V675941	68.00
1000	0.80	310	24/29	3	V676941	65.00

- Individually adjusted ring-marked flasks are Class B per DIN EN ISO 1042.*

Volume mL	Tolerance +/-mL	Height mm	Thread GL	Qty./Pack	Cat. No.	2014 List Price
Class B Volumetric Flasks, PMP, with Screw Caps, PP						
10	0.08	90	18	6	V677895	\$82.00
25	0.08	115	18	6	V671895	82.00
50	0.12	150	18	6	V672895	104.00
100	0.20	180	18	6	V673895	117.00
250	0.30	235	25	5	V674895	111.00
500	0.50	270	25	4	V675895	106.00
1000	0.80	310	32	3	V676895	92.00

- Individually adjusted ring-marked flasks are Class B per DIN EN ISO 1042.*
- Autoclaving at 121°C will not cause permanent exceeding of tolerance limits.



Class B Volumetric Flasks, PP, with Screw Caps, PP

10	0.08	90	18	6	V677891	72.00
25	0.08	115	18	6	V671891	73.00
50	0.12	150	18	6	V672891	84.00
100	0.20	180	18	6	V673891	89.00
250	0.30	235	25	5	V674891	98.00
500	0.50	270	25	4	V675891	87.00
1000	0.80	310	32	3	V676891	75.00

- Individually adjusted ring-marked flasks are Class B per DIN EN ISO 1042.*

Volume mL	Increment mL	Thread GL	Stopper NS	Qty./Pack	Cat. No.	2014 List Price
Erlenmeyer Flasks, PP, with Screw Caps, PP						
50	10	40	34/35	6	V666941	\$41.00
100	20	40	34/35	6	V667941	47.00
250	50	52	45/40	6	V668941	62.60
500	100	52	45/40	6	V669941	74.00
1000	200	52	45/40	4	V670941	71.00

- Wide neck flasks made from highly translucent polypropylene.
- Flask neck also accommodates NS stoppers (not included).



* Temperatures of 60°C must not be exceeded (including cleaning) to preserve marks and inscriptions.

Please see page 126 for description of various plastics.

VITLAB®

VITLAB® Volumetric Labware and Containers

ORDERING INFORMATION

Volume mL	Grad mL	Height mm	Diameter mm	Qty./Pack	Cat. No.	2014 List Price
Griffin Beakers, PP						
10	2	35	25	12	V605081	\$22.40
25	5	50	34	12	V606081	22.40
50	10	60	42	12	V607081	23.40
100	20	70	50	12	V608081	28.00
150	20	80	60	12	V609081	38.00
250	50	95	70	6	V610081	20.40
400	100	111.5	79	6	V611081	27.00
500	100	117.5	85	6	V618081	29.60
600	100	126.5	91	6	V612081	30.00
800	100	136	98	6	V613081	37.00
1000	100	147	106	6	V614081	41.00
2000	200	187	132	6	V615081	82.00
3000	200	212	151.5	4	V616081	99.00
5000	500	247	180	4	V617081	126.00

- Molded graduations with blue screened overprint for legibility.
- Meets the requirements of ISO 7056.



Griffin Beakers, PP

25	5	50	34	12	V606941	22.00
50	10	60	42	12	V607941	23.00
100	20	70	50	12	V608941	27.00
150	20	80	60	12	V609941	37.00
250	50	95	70	6	V610941	19.00
400	100	111.5	79	6	V611941	26.00
500	100	117.5	85	6	V618941	28.00
600	100	126.5	91	6	V612941	29.00
1000	100	147	106	6	V614941	40.00
2000	200	187	132	6	V615941	81.00
3000	200	212	151.5	4	V616941	98.00
5000	500	247	180	4	V617941	125.00

- Molded graduations for durability.
- Meets the requirements of ISO 7056.



Griffin Beakers, PMP

10	2	35	25	12	V60503	31.00
25	5	50	34	12	V60603	31.00
50	10	60	42	12	V60703	39.00
100	20	70	50	12	V60803	48.00
150	20	80	60	12	V60903	63.00
250	50	95	70	6	V61003	33.00
400	100	111.5	79	6	V61103	48.00
500	100	117.5	85	6	V61803	51.00
600	100	126.5	91	6	V61203	55.00
800	100	136	98	6	V61303	77.00
1000	100	147	106	6	V61403	80.00
2000	200	187	132	6	V61503	138.00
3000	200	212	151	4	V61603	150.00
5000	500	247	180	4	V61703	201.00

- Molded graduations with red screened overprint for legibility.



VITLAB® Volumetric Labware and Containers



ORDERING INFORMATION

Volume mL	Grad mL	Height mm	Diameter mm	Qty./Pack	Cat. No.	2014 List Price
Griffin Beakers, PMP						
25	5	50	34	12	V60695	\$30.00
50	10	60	42	12	V60795	38.00
100	20	70	50	12	V60895	47.00
150	20	80	60	12	V60995	62.00
250	50	95	70	6	V61095	32.00
400	100	111.5	79	6	V61195	47.00
500	100	117.5	85	6	V61895	50.00
600	100	126.5	91	6	V61295	54.00
1000	100	147	106	6	V61495	79.00
2000	200	187	132	6	V61595	137.00
3000	200	212	151.5	4	V61695	149.00
5000	500	247	180	4	V61795	200.00

- Molded graduations for durability
- Meets the requirements of ISO 7056



Griffin Beakers, ETFE

25	5	50	32	1	V110204	16.00
50	10	59	39	1	V110304	18.40
100	20	72	50	1	V110404	26.00
250	50	96	67	1	V110604	49.00
400	50	109	77	1	V110704	59.00
500	100	122	88	1	V110904	66.60
600	100	125	91	1	V110804	82.00
1000	100	143	105	1	V111004	128.00

- Beakers are translucent with black graduations for legibility.

Please see page 126 for description of various plastics.



VITLAB® Volumetric Labware and Containers

ORDERING INFORMATION

Volume mL	Grad mL	Height mm	Diameter mm	Qty./Pack	Cat. No.	2014 List Price
Graduated Pitchers, PP						
50	2	70	40	24	V446941	\$45.00
100	2	80	50	24	V447941	60.00
250	5	120	70	12	V440941	52.00
500	10	133	91	12	V441941	55.00
1000	10	170	116	6	V442941	41.00
2000	20	215	150	6	V443941	62.00
3000	50	242	170	6	V444941	82.00
5000	100	270	210	6	V445941	170.00

- Translucent with molded graduations.



Graduated Pitchers, PP

50	2	70	40	24	V446081	60.00
100	2	80	50	24	V447081	68.00
250	5	120	70	12	V440081	59.00
500	10	133	91	12	V441081	66.00
1000	10	170	116	6	V442081	45.00
2000	20	215	150	6	V443081	80.00
3000	50	242	170	6	V444081	107.00
5000	100	270	210	6	V445081	171.00

- Translucent with blue screened molded graduations.



Graduated Pitchers, SAN

250	5	120	70	12	V44091	59.00
500	10	133	91	12	V44191	78.00
1000	10	170	116	6	V44291	57.00
2000	20	215	150	6	V44391	104.00
3000	50	242	170	6	V44491	131.00

- A safer, more durable alternative to glass pitchers.
- Transparent with molded graduations.



Nesting Graduated Pitchers, PP

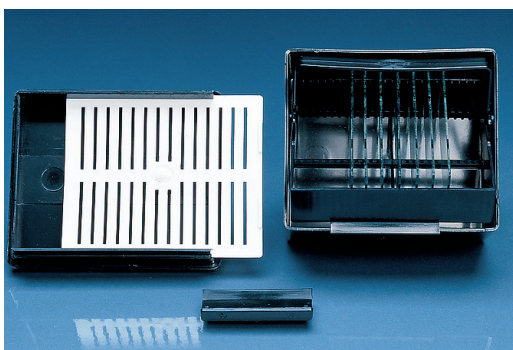
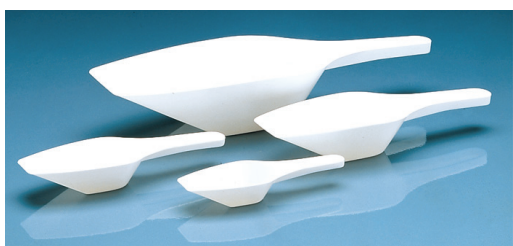
250	5	115	75	12	V480941	52.00
500	10	140	100	12	V481941	55.00
1000	10	167	125	12	V482941	87.00
2000	20	212	148	12	V483941	162.00
3000	50	242	170	12	V484941	219.00

- Nesting design conserves bench space and simplifies storage.
- Graduations are printed with screening for easy, accurate measurements.



Please see page 126 for description of various plastics.

VITLAB® General Laboratory Products



ORDERING INFORMATION

Length, mm	Qty./Pack	Cat. No.	2014 List Price
Forceps, PMP with pointed ends			
115	10	V67895	\$27.00
145	10	V67995	32.00

Forceps, POM with rounded ends

115	5	V68099	12.60
145	5	V68199	15.20
180	5	V68299	28.60
250	5	V68399	45.00

Volume mL	Length mm	Qty./Pack	Cat. No.	2014 List Price
Measuring Scoops, PP volume marked on handle				
2	60	12	V39194	\$6.20
5	82	12	V39294	7.60
10	100	12	V39394	10.00
25	135	12	V39494	10.40
50	160	12	V39594	20.00
100	200	12	V39694	26.00
250	260	6	V39794	33.00
500	315	6	V39894	46.00
1000	385	6	V39994	57.00



Measuring Scoops, HDPE

15	115	12	V40093	11.00
25	135	12	V40193	16.20
65	185	12	V40293	21.00
110	215	12	V40393	30.00
150	250	12	V40493	35.00
350	310	6	V40593	34.00
750	350	6	V40693	56.00
1250	400	6	V40793	78.00



Description	Size mm	Height mm	Qty./Pack	Cat. No.	2014 List Price
Slide Staining Kit, POM					
Universal Slide Staining Kit	100 x 87	51	5	V99099	\$175.00
Staining Jar	100 x 87	51	5	V99199	126.00
Staining Rack	91 x 79	38	10	V99299	100.00

- Universal Kit V99099 includes one staining jar and staining rack.

Please see page 126 for description of various plastics.

VITLAB®

VITLAB® General Laboratory Products

ORDERING INFORMATION

Diameter mm	Approx vol. mL	Length mm	Stem Diameter mm	Qty.	Cat. No.	2014 List Price
Funnels, PP						
30	5	45	1.5	24	V40894	\$20.00
30	6	47	4	24	V41094	20.00
40	14	65	4	24	V41194	23.60
50	32	85	7	24	V41294	30.00
75	88	110	6	12	V41394	19.00
100	222	155	8	12	V41494	36.00
120	342	180	11	12	V41594	45.00
150	817	220	15	12	V41694	60.00

- With volume markings.



Large Funnels, PP or HDPE

200 (PP)	1300	200	22	6	V41794	69.00
250 (PP)	3200	260	30	6	V41894	120.00
350 (PP)	12500	440	35	1	V41994	42.00
400 (HDPE)	12500	365	42	1	V42294	107.00
430 (HDPE)	17500	420	37	1	V42393	142.00

- HDPE Large Funnels V42294 and V42393 are not marked Food Safe, and have handles



Powder Funnels, PP

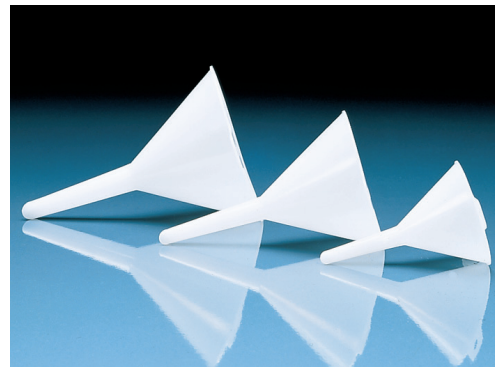
65	68	15	10	V70794	25.60
80	75	21	10	V70894	37.00
100	94	22	10	V70994	39.00
120	110	26	10	V71094	48.00
150	138	28	5	V71194	31.00



Volume	Height mm	Diameter mm	Qty.	Cat. No.	2014 List Price
Sample Vials, PP, with snap caps, LDPE					
5	25	20	25	V68594	\$46.00
12	37	22	25	V68794	54.00
18	57	22	25	V68894	59.00
50	97	30	10	V69194	30.60
160	110	50	10	V69294	35.80



Volume mL	Height mm	Diameter mm	Thread GL	Qty./pack	Cat. No.	2014 List Price
Sample Vials, PP, with screw caps, PP						
60	90	38	40	10	V130394	\$106.00
90	62	54	56	10	V130494	132.00
180	112	54	56	10	V130594	155.00



Sample Vials, with snap caps

Sample Vials with screw caps

VITLAB® General Laboratory Products

**ORDERING INFORMATION**

Volume mL	Thread GL	Diameter mm	Height mm	Qty./Pack	Cat. No.	2014 List Price
Dropping Bottles, LDPE with dropper screw cap						
50	18	37	117	24	V94587	\$65.00
100	18	43	142	24	V94687	73.00
250	25	58	183	12	V94987	54.00
500	25	74	228	12	V95087	71.00
1000	32	92	269	12	V95187	96.00



Volume mL	Stopper NS	Height mm	Diameter mm	Qty./Pack	Cat. No.	2014 List Price
Reagent Bottles, PP, with NS Stoppers, PP						
1000	29/32	213	108	10	V100694	\$92.00
5000	45/40	325	178	1	V100894	31.00

- NS stoppers help prevent leakage.
- Bottle V100894 includes handle.



Volume mL	Thread GL	Height mm	Diameter mm	Qty./Pack	Cat. No.	2014 List Price
Reagent Bottles, PP, with Screw Caps, PP						
100	18	100	52	20	V100389	\$61.00
250	25	132	70	20	V100489	81.00
500	25	165	87	10	V100589	58.00
1000	32	202	108	10	V100689	77.00
2000	32	245	131	6	V100789	96.00
5000	45	315	178	1	V100889	28.00
10000	63	394	222	1	V100989	41.00

- Bottle V100889 includes handle.
- Bottle V100989 includes 2 handles.



Volume mL	Thread GL	Height mm	Diameter mm	Qty./Pack	Cat. No.	2014 List Price
Wide Mouth Reagent Bottles, PP, with Screw Caps, PP						
100	32	96	55	20	V101589	81.00
250	45	132	73	20	V101689	103.00
500	45	172	87	10	V101789	66.00
1000	63	204	108	10	V101889	119.00
2000	63	243	131	6	V101989	90.00

- Screw caps help protect against outside contamination and leakage.



Please see page 126 for description of various plastics.

VITLAB® General Laboratory Products

ORDERING INFORMATION

Volume mL	Thread GL	Height mm	Diameter mm	Qty./Pack	Cat. No.	2014 List Price
Bottles, LDPE, with Screw Caps, PP						
50	18	73	37	24	V94589	\$62.00
100	18	95	43	24	V94689	66.00
250	25	135	58	12	V94989	46.00
500	25	180	74	12	V95089	66.00

- Screw caps help protect against outside contamination and leakage.



Wide Mouth Bottles LDPE, with Screw Caps, PP

250	45	146	58	12	V93789	53.00
500	45	166	76	12	V93989	73.00
1000	63	226	91	12	V94189	104.00

- Screw caps help protect against outside contamination and leakage.



Volume mL	Thread GL	Height mm	Size mm	Qty./Pack	Cat. No.	2014 List Price
Square Bottles, HDPE, with Screw Caps, PP						
100	25	76	43 x 43	24	V91789	\$74.00
250	28	80	80 x 80	24	V91989	99.00
500	32	106	90 x 90	12	V92089	66.00
1000	32	187	80 x 80	12	V92189	90.00

- Screw caps help protect against outside contamination and leakage.

Wide Mouth Square Bottles, HDPE, with Screw Caps, PP

100	32	78	46 x 46	24	V92489	98.00
250	50	83	80 x 80	24	V92689	111.60
500	65	120	90 x 90	12	V92789	83.00
1000	65	168	90 x 90	12	V92889	104.00

- Screw caps help protect against outside contamination and leakage.



Please see page 126 for description of various plastics.



VITLAB® General Laboratory Products



Bucket, PP



Bucket, HDPE



ORDERING INFORMATION

Volume L	Height mm	Diameter mm	Qty./ Pack	Cat. No.	2014 List Price
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Buckets, PP, with Handles, Pouring Lips, and Graduations.

12	330	310	1	V96694	\$47.00
15	370	310	1	V96794	53.00



Buckets, HDPE, with Handles

Buckets

5	240	250	1	V96093	23.40
10	300	290	1	V96393	28.00

Lids, PP

for 5L Bucket	-	-	1	V96293	6.20
for 10L Bucket	-	-	1	V96593	7.20

Imhoff Sedimentation Cones, SAN

1000			1	388000	25.00
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- Transparent.
- Graduated to 1000mL.
- Screw closure allows drainage.
- Stand not included.

VITLAB® Custom Imprinting

VITLAB® has specialized capabilities in high-precision printing on plastic products with superior chemical and break resistance. Many VITLAB® products can be imprinted with logos or custom graduations for OEM or promotional use in relatively small quantities. Custom imprinted VITLAB® products are ideal for handling granulates, powders or liquids commonly used in agriculture, laboratories, chemical, food and beverage industries. From multi-color logos to specialized measuring scales VITLAB® can imprint plastic labware to meet your individual requirements and specifications. Custom imprinted labware by VITLAB® is of the highest quality and offers a unique and functional means of presenting your company brand. Beakers, pitchers and scoops can also be made in colored plastic.

Additionally, many products are available individually-wrapped sterile, for those concerned about the efficiency or effectiveness of cleaning protocols. Contact BrandTech® Scientific for more information.



Plastics Reference

	Suitable for Microwaves	Suitable for Autoclaving	Transparency	Max. Operating Temp (°C)	Brittleness Temp (°C)	Density (g/cm ³)
ETFE	Yes	Yes	Translucent	150	-100	1.70
HDPE	Yes	No	Translucent	105	-50	0.95
LDPE	Yes	No	Translucent	80	-50	0.92
PC	Yes	Yes*	Transparent	125	-130	1.20
PFA	Yes	Yes	Translucent	260	-200	2.17
PMP	Yes	Yes	Transparent	150	0	0.83
POM	No	Yes*	Opaque	130	-40	1.42
PP	Yes	Yes	Translucent	125	0	0.90
SAN	No	No	Transparent	70	-40	1.03

* Frequent autoclaving may reduce mechanical stability. "Autoclaving" refers to steam sterilization at 121°C (250°F) at 15 PSIG for 20 minutes

+ Excellent chemical resistance	o Good to limited resistance	- Poor chemical resistance
Continuous exposure to the substance does not cause damage within 30 days. The plastic may remain resistant for years.	Continuous exposure to the substance causes minor damages, some of which is reversible, within 7-30 days (e.g., swelling, softening, decrease of mechanical strength, discoloration).	Not suitable for continuous medium exposure to the substance. Immediate damage may occur (loss of mechanical strength, deformation, discoloration, cracking, dissolution).

Chemical resistance of plastics to classes of substances at 20°C

	SAN	PC	POM	PMP	LDPE	HDPE	PP	ETFE	PFA
Alcohols, aliphatic	+	+	+	+	+	+	+	+	+
Ether	-	-	+	-	o	o	o	+	+
Aldehydes	-	o	o	o	o	+	+	+	+
Ester	-	-	-	o	o	o	o	+	+
Hydrocarbons, aliphatic	-	o	+	o	o	+	+	+	+
Hydrocarbons, aromatic	-	-	+	-	o	+	o	+	+
Hydrocarbons, halogenated	-	-	+	-	o	o	o	+	+
Ketones	-	-	+	o	o	o	o	o	+
Alkalis	+	-	+	+	+	+	+	+	+
Acids, strong or concentrated	-	-	-	+	+	+	+	+	+
Acids, weak or diluted	o	o	-	+	+	+	+	+	+
Oxidizing acids, oxidizing agents	-	-	-	-	-	-	-	+	+

Abbreviations of the described plastics to DIN 7728

SAN	Styrene Acrylonitrile Copolymer	PP	Polypropylene
PMMA	Polymethylmethacrylate	PMP	Polymethylpentene
PC	Polycarbonate	ETFE	Ethylene Tetrafluoroethylene-copolymer
POM	Polyoxymethylene	FEP	Perfluoroethylene-propylene copolymer
LDPE	Low Density Polyethylene	PFA	Perfluoroalkoxy copolymer
HDPE	High Density Polyethylene		

The recommendations listed here are based on technical literature and information provided by the manufacturers of raw materials. They were prepared carefully and are intended to inform and advise. However, they cannot replace suitability testing performed by the user under actual working conditions.



Food-safe products according to EC Directive No. 10/2011

Trademarks

Trademark	Owner	Trademark	Owner
accu-jet®	BRAND GMBH + CO KG	SafetyPrime™	BRAND GMBH + CO KG
AutoRep™	Rainin Instrument, LLC	sartorius®	SARTORIUS AG
BIO-CERT®	BRAND GMBH + CO KG	seripettor®	BRAND GMBH + CO KG
BIOHIT®	Sartorius Biohit Liquid Handling Oy	Synchro™	VACUUBRAND GMBH + CO KG
BOCHEM®	Bochem Instrumente GmbH	Tip-Stack™	BRAND GMBH + CO KG
BRAND®	BRAND GMBH + CO KG	Titrette®	BRAND GMBH + CO KG
BRANDplates®	BRAND GMBH + CO KG	Transferpette®	BRAND GMBH + CO KG
BrandTech®	BrandTech Scientific, Inc.	Transferpettor™	BRAND GMBH + CO KG
cellGrade™	BRAND GMBH + CO KG	Tween®	ICI Americas, Inc.
Combitips advanced®	Eppendorf AG	Tyro12™	VACUUBRAND GMBH + CO KG
Daigger®	A. Daigger and Company, Inc.	VACUUBRAND®	VACUUBRAND GMBH + CO KG
Dispensette®	BRAND GMBH + CO KG	VACUU•BUS®	VACUUBRAND GMBH + CO KG
DistriTips®	Gilson, Inc.	VACUU•CONTROL™	VACUUBRAND GMBH + CO KG
Easy Calibration™	BRAND GMBH + CO KG	VACUU•LAN®	VACUUBRAND GMBH + CO KG
EASYCAL™	BRAND GMBH + CO KG	VARIO®	VACUUBRAND GMBH + CO KG
Encode™	Rainin Instruments, LLC	VITLAB®	VITLAB GmbH
Eppendorf®	Eppendorf AG	VITON®	DuPont Performance Elastomers, LLC
Finnpipette®	Thermo Fisher Scientific, Inc.	VWR®	VWR International, Inc.
Fisherbrand®	Thermo Fisher Scientific, Inc.	Windows®	Microsoft Corporation
Gilson®	Gilson, Inc.	Windows® NT	Microsoft Corporation
HandyStep®	BRAND GMBH + CO KG		
hydroGrade™	BRAND GMBH + CO KG		
immunoGrade™	BRAND GMBH + CO KG		
LightCycler®	Roche Diagnostics GmbH		
lipoGrade™	BRAND GMBH + CO KG		
LTS™	Rainin Instruments, LLC		
macro™	BRAND GmbH + CO KG		
Microsoft®	Microsoft Corporation		
Mucadol®	Merz Pharma GmbH & Co. KGaA		
nano-cap™	BRAND GMBH + CO KG		
PD-Tip™	BRAND GMBH + CO KG		
Peltronic™	VACUUBRAND GMBH + CO KG		
pureGrade™	BRAND GMBH + CO KG		
QuikSip™	BRAND GMBH + CO KG		
Rainin®	Rainin Instrument, LLC		
RC6 Chemistry-HYBRID™	VACUUBRAND GMBH + CO KG		
Repeater®	Eppendorf AG		

Other product names, corporate names or titles used within this catalog may be trademarks or registered trademarks of other companies, and are mentioned only in an explanatory manner and for identification purposes to the benefit of their respective owners, and without intent to infringe.

Quality and Certifications

ISO 9001

The ISO 9001 and 9002 certifications earned by BRAND, BOCHEM®, VACUUBRAND and VITLAB®, are your guarantee that the high performance standards designed into our products are consistently met in production and quality control. This certification ensures our customers and business partners that they are receiving products designed and manufactured to the highest international quality standards.

ISO 14001

Active protection of the environment is an integral part of our partners' manufacturing philosophies. BRAND, and VITLAB® participate in the voluntary European Community environmental management program, and have been certified according to the internationally recognized ISO 14001 standard for the environmental sensitivity of their corporate operations.

DAkKS Calibration Laboratories

This accreditation documents instrument traceability to national and international standards. VACUUBRAND was accredited in 1997 as a calibration laboratory for vacuum gauges in the pressure range of 1300mbar to 10⁻³mbar. In 1998, a calibration laboratory at BRAND was officially accredited for volumetric instruments such as piston-operated pipettes and burettes, and for volumetric instruments made of glass and plastics. Both companies are thus certified to calibrate the instruments that you depend on to control your operations. This technical achievement by both companies is your assurance that your instruments are the most reliable you can buy.

DAkKS is the successor to the DKD (Deutscher Kalibrierdienst) for German calibration laboratories. It is a member of the European Cooperation for Accreditation (EA). A multilateral

agreement assures obligatory recognition of the DAkKS-Calibration Certificate in a variety of countries. DAkKS, as part of the European Cooperation for Accreditation (EA), has signed the international convention for reciprocal recognition, the "Mutual Recognition Agreement (MRA) of the International Laboratory Accreditation Corporation (ILAC). Under this convention, the subscribing bodies agree to reciprocal recognition and to promote acceptance of calibration certificates and test reports from the laboratories accredited by the signatories. The complete text of this convention, as well as a wealth of other information on this topic, can be read at www.ilac.org.

