You can always get what you want

Sample Handling

Eppendorf quality

Only the best

- **Eppendorf Tubes**
- **Eppendorf Plates**
- **Mixers**
- **Temperature control and mixing**

Distributed By:

LABORATORY SUPPLY
DISTRIBUTORS

109 Janet Street, Vineland, New Jersey 08360
Phone: 800-220-5732 / 856-825-0523
Fax 856-327-5168
Email: info@LsdCorp.com Web: www.LsdCorp.com

Eppendorf sample preparation consumables guide

		Eppendorf Tubes[1] ● Flex-Tube® for ergonomic lid opening; Safe-Lock lid prevents accidental lid opening during incubation ● Precise lid sealing for minimal evaporation rates during long-term storage ● g-Safe™: Exceptional centrifugation stability of up to 30,000 x *g* prevents tube breakage			
		Flex-Tube 1.5 mL	**Safe-Lock 0.5 mL**	**Safe-Lock 1.5 mL**	**Safe-Lock 2.0 mL**
	Max. Volume	1,500	500	1,500	2,000
	Bottom shape	conical	conical	conical	round
Standard quality ● Manufactured under clean room conditions ● For basic applications such as enzymatic digestion, plasmid DNA isolation, sample and reagent storage	**Catalog No.**	022364111	022363611	022363204	022363352
	Quantity	500	500	500	500
	List USD	$31.00	$49.50	$45.00	$48.80
Standard Sterile ● For cell culture applications and microbiological experiments, virus work and phage library storage	**Catalog No.**	N/A	N/A	N/A	N/A
	Quantity				
	List USD				
PCR clean ● Batch-certified free from DNA, DNase, RNase, and PCR inhibitors ● Ideal for all RNA applications, isolation and analysis of genomic DNA and preparation of samples for PCR or real-time PCR samples	**Catalog No.**	022364120	022363719	022363212	022363344
	Quantity	500	500	500	500
	List USD	$41.00	$68.00	$62.70	$64.50
Biopur ● Batch certified free from DNA, RNase, ATP, endotoxins. Individually wrapped and sterile. ● The highest purity grade. Ideal for pharmaceutical, medical and forensic applications as well as for work with endotoxin-sensitive cell cultures.	**Catalog No.**	N/A	022600001	022600028	022600044
	Quantity		50	100	100
	List USD		$31.00	$45.00	$51.50
DNA LoBind (PCR clean) ● LoBind material minimizes adsorption of DNA/RNA to the vessel surface for maximum sample recovery ● Ideal for low concentrated DNA and RNA samples used for microarray and next-generation sequencing	**Catalog No.**	N/A	022431005	022431021	022431048
	Quantity		250	250	250
	List USD		$32.50	$32.50	$32.50
Protein LoBind (PCR clean) ● LoBind material minimizes adsorption of proteins and peptides to the vessel surface for maximum sample recovery ● Ideal for preparation and storage of low concentrated protein, peptide, antibody or virus samples	**Catalog No.**	N/A	022431064	022431081	022431102
	Quantity		100	100	100
	List USD		$21.50	$21.50	$21.50

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

Eppendorf sample preparation consumables guide

	Microplates (MTP)[1]					Deepwell Plates™ (DWP)[1]			
	• Unmatched transparency for better sample visibility • OptiTrack®: 30% faster well identification and less pipetting errors • RecoverMax® well-design: Optimized well geometry for maximum sample recovery and excellent mixing performance. The smooth contours also reduce capillary effects in well corners (“wicking”), thus minimizing the risk of cross-contamination.					• OptiTrack labeling: 30% faster well identification and less pipetting errors • RecoverMax well-design: Optimized well geometry for maximum sample recovery and excellent mixing performance. The smooth contours also reduce capillary effects in well corners (“wicking”), thus minimizing the risk of cross-contamination.			
	MTP 96/F	**MTP 96/U**	**MTP 96/V**	**MTP 384/F**	**MTP 384/V**	**DWP 96/2000**	**DWP 96/1000**	**DWP 96/500**	**DWP 384/200**
	400	360	350	150	140	2,400	1,200	700	240
	flat	round	conical	flat	conical	conical[2]	conical[2]	conical[2]	conical[2]
	N/A	N/A	N/A	N/A	N/A	951033405 20 $124.00	951032603 20 $104.00	951031801 40 $262.00	951031003 40 $288.00
	951040021 80 $191.00	951040081 80 $191.00	951040227 80 $191.00	951040383 80 $322.00	951040464 80 $322.00	951033502 20 $140.00	951032701 20 $114.00	951031909 40 $293.00	951031101 40 $319.00
	951040005 80 $167.00	951040048 80 $167.00	951040188 80 $167.00	951040341 80 $280.00	951040421 80 $280.00	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	951040546 80 $335.00	N/A	951032808 20 $124.00	951032000 40 $319.00	951031208 40 $350.00
	N/A	N/A	N/A	N/A	951040589 80 $536.00	0030504305 20 $243.00	951032905 20 $200.00	951032107 40 $524.00	951031305 40 $570.00

The best consumables for your samples

customized products ›p. 260

Eppendorf® is a leading manufacturer of high quality consumables for research laboratories. Since inventing the 1.5 mL microcentrifuge tube in 1963 we constantly keep your needs in mind to develop products that benefit you and your work processes. Some characteristic examples are:

– Optimized product design for reliable sealing to minimize sample evaporation
– Outstanding stability to protect your samples during centrifugation
– LoBind consumables to minimize sample loss
– Unique Safe-Lock tubes minimize accidental lid opening to protect from hazardous materials and prevent sample loss
– Minimized lid locking forces for ergonomic opening and closing of tube lids
– OptiTrack® frame in MTP and deepwell plates for super easy well identification and less pipetting errors

With fully automated production and continuous quality monitoring of molding tools and production areas we assure minimal production tolerances to guarantee you batch-to-batch and tube-to-tube consistency.

Clean-room manufacturing from selected raw materials and advanced product handling ensures you the highest product purity and no foreign contaminants. As a further commitment to product purity, each batch of PCR-clean and Biopur® quality products is tested and certified by an independent laboratory to guarantee traceability and purity. This is quality you can rely on!

	Eppendorf Quality	Eppendorf Sterile	Eppendorf PCR clean	Eppendorf Biopur
Continuous quality control for the following quality criteria:				
Function, tightness, precision	●	●	●	●
Defined flow dynamics	●	●	●	●
Minimal water retention	●	●	●	●
High chemical resistance	●	●	●	●
High thermal stability	●	●	●	●
Precisely molded	●	●	●	●
Batch testing[1] (certified) for the following purity criteria:				
Free from human DNA			●	●
Free from bacteria DNA (*E. coli*)				●
DNase-free			●	
RNase-free			●	●
Free from PCR inhibitors			●	
ATP-free				●
Pyrogen-free (endotoxin-free)				●
Sterile (Ph.Eur./USP)		●		●

[1] Batch-specific certificates can be downloaded from www.eppendorfna.com/certificates

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

Flex-Tube®

Flex-Tube lid guarantees tight lid closure but easy, stress-free opening and closing.

Product features

- Flex-Tube lid is easy to open and close for ergonomic operation
- Polypropylene provides high resistance to chemicals, mechanical stress and temperature extremes
- Manufactured without the use of slip agents, plasticizers and biocides—substances that have been shown to leach from plastic consumables into the sample and negatively affect bio-assay results
- Precise lid sealing for minimal evaporation rates during long-term storage
- g-Safe™: Exceptional centrifugation stability of up to 30,000 x *g* prevents tube breakage. This prevents sample loss and provides the extra safety when working with hazardous samples
- Frosted lid and surface on the side for easy labeling
- Graduations provide an easy volume reference
- Guaranteed functionality between –86 °C to 100 °C
- Autoclavable when open (121 °C, 20 min)
- Available in batch-certified Eppendorf® PCR clean quality for guaranteed purity

Description

The easy-open, easy-close design of our Flex-Tube provides convenient and reliable sample preparation, centrifugation and storage.

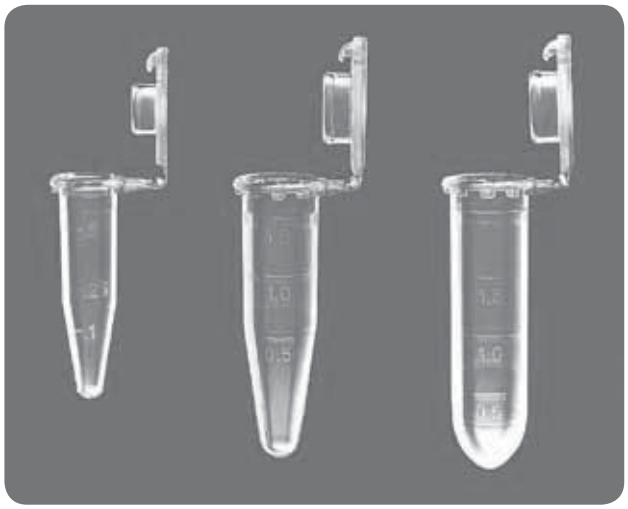
Ordering information

Flex-Tube, 1.5 mL	**Catalog No.**	**List USD**
Eppendorf® Standard Quality, 500 pcs.		
Clear	022364111	$31.00
Blue	022363531	41.00
Green	022363557	41.00
Red	022363573	41.00
Yellow	022363590	41.00
Amber (light protection)	022363514	41.00
Eppendorf PCR clean purity*, 500 pcs.		
Clear certified PCR clean	022364120	41.00

* PCR clean: Batch-certified free from DNA, DNase, RNase, and PCR inhibitors

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

Safe-Lock tubes



Safe-Lock tubes with hinged lid to prevent accidental lid opening

Product features

- Hinged Safe-Lock lid prevents accidental lid opening and allows contamination-free lid opening
- Polypropylene provides high resistance to chemicals, mechanical stress and temperature extremes
- Manufactured without the use of slip agents, plasticizers and biocides—substances that have been shown to leach from plastic consumables into the sample and negatively affect bio-assay results
- Precise lid sealing for lowest evaporation rates during long-term storage
- g-Safe™: Exceptional centrifugation stability of up to 30,000 x *g* (70,000 x *g* in form-fitting rotor) prevents tube breakage. This prevents sample loss and provides the extra safety when working with hazardous samples.
- Large frosted lid and surface on the side for easy labeling
- Graduations provide an easy volume reference
- Guaranteed functionality between –86 °C to 100 °C
- Autoclavable when open (121 °C, 20 min)
- Available in batch-certified Eppendorf® PCR clean and Biopur® quality for guaranteed purity
- Available in Protein LoBind and DNA/RNA LoBind quality (see page 116)

Description

Eppendorf Safe-Lock tubes combine all the experience from over 45 years of constant improvement and development. The original Safe-Lock tube gives your sample outstanding stability during centrifugation, perfect sealing and evaporation protection. Trust in the original Eppendorf Safe-Lock tube because your samples deserve the best treatment!

Now even safer!

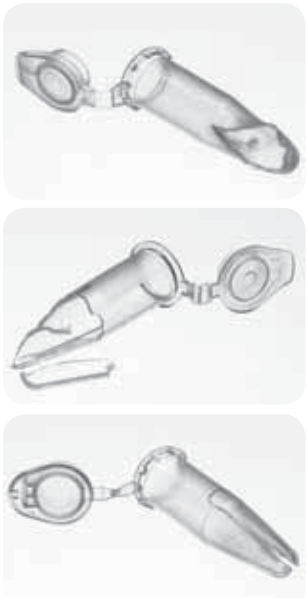
Tests at 30,000 x *g* show that Tubes of inferior quality can burst or form bubbles during centrifugation resulting in sample loss. Eppendorf Tubes withstand forces up to 30,000 x *g* for reliable centrifugation. This prevents sample loss and provides the extra safety when working with hazardous samples.

Find the right Eppendorf Tube for your centrifuge applications:

	Standard quality and PCR clean	Biopur
Safe-Lock 0.5 mL	30,000 x *g*	22,000 x *g*
Safe-Lock 1.5 mL	30,000 x *g*	22,000 x *g*
Safe-Lock 2.0 mL	25,000 x *g*	22,000 x *g*

The tubes can be centrifuged in a 45° fixed-angle rotor at 40 °C for 90 min. with aqueous saline solution up to the above-indicated *g*-numbers (rfc). The centrifugation stability depends on the temperature. Liquids that have a higher density or that attack the stability of the plastic (organic solvents, acids), can reduce the mechanical loading capacity of the tubes.

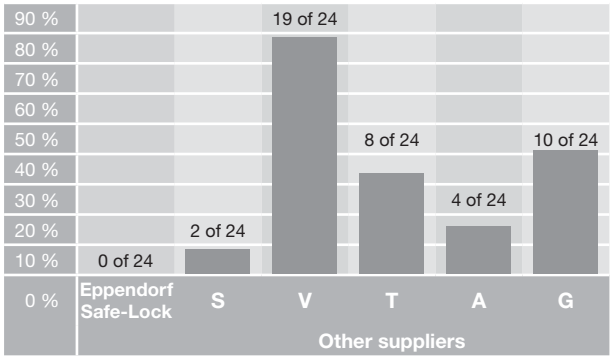
Tubes of inferior quality can burst or form bubbles during centrifugation.



800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

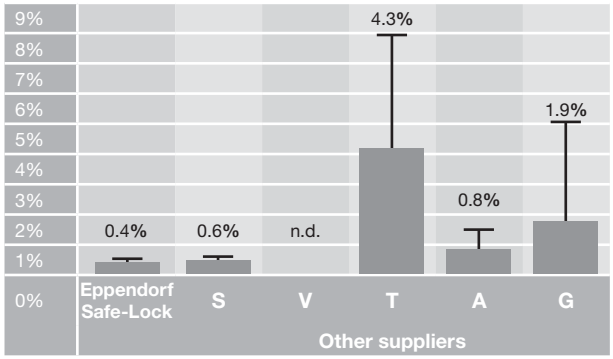
Safe-Lock tubes

Eppendorf's Safe-Lock lid prevents accidental lid opening. The hinged lid on Eppendorf® Safe-Lock tubes provides outstanding protection against accidental opening of tube lids ensuring absolute sample protection. This feature is especially important when working with precious samples or hazardous materials (e.g., radioactive probes, virus samples), or buffers containing detergents such as SDS.



Lid sealing: Number of opened lids. Shown is the percentage of tubes that opened during a 30 min incubation at 100 °C in a water bath. Tubes filled with 1 mL aqueous solution. None of the Eppendorf Tube lids opened during the 30 min incubation at 100 °C.

Precise lid sealing guarantees lowest evaporation rates. Intelligent tube design and Eppendorf's vast experience in precision molding guarantee a perfect fit of the tube lids to minimize sample evaporation. Whether you incubate your samples at high temperature or you use an Eppendorf tube for long-term storage, Eppendorf Safe-Lock tubes will protect your samples.



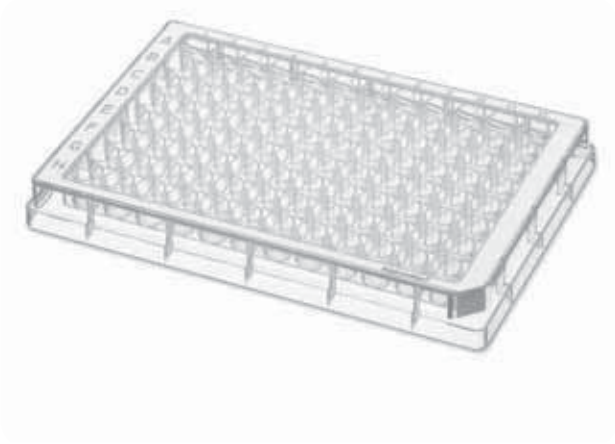
Evaporation in %. Evaporation tightness was tested by measuring the weight loss of tubes filled with 1 mL ethanol solution after a 1 h incubation at 70 °C. Shown are the mean values and standard deviation (n=24). Tubes from supplier V could not be measured as several tube lids popped open during the incubation step.

Ordering information

Safe-Lock tubes size	0.5 mL		1.5 mL		2.0 mL	
	Catalog No.	**List USD**	**Catalog No.**	**List USD**	**Catalog No.**	**List USD**
Eppendorf Standard Quality, 500 pcs.						
Clear	022363611	$49.50	022363204	$45.00	022363352	$48.80
Blue	022363646	60.50	022363247	56.00	022363395	59.00
Green	022363654	60.50	022363263	56.00	022363417	59.00
Red	022363662	60.50	022363280	56.00	022363433	59.00
Yellow	022363671	60.50	022363301	56.00	022363450	59.00
Amber (light protection)	022363638	60.50	022363221	56.00	022363379	59.00
Assorted colors[1]	022363697	60.50	022363328	56.00	022363476	59.00
Eppendorf PCR clean purity[2], 500 pcs.						
Clear	022363719	68.00	022363212	62.70	022363344	64.50
Eppendorf Biopur® purity[3]	**Packaging size,** 50 pcs.		**Packaging size,** 100 pcs.		**Packaging size,** 100 pcs.	
Clear (individually packaged)	022600001	31.00	022600028	45.00	022600044	51.50

[1] 100 each: Clear, blue, green, red and yellow. [2] PCR clean: Batch-certified free from DNA, DNase, RNase, and PCR inhibitors. [3] Biopur: Batch-certified sterile and free from DNA, RNase, ATP and pyrogens/endotoxins

Microplates 96 and 384



Description

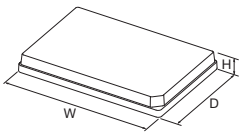
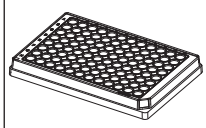
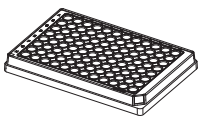
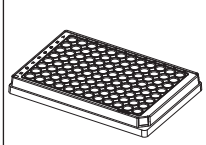
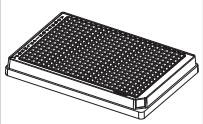
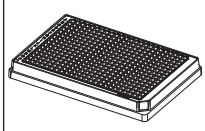
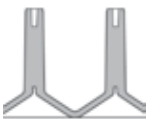
The new Eppendorf® Microplates bring a unique clarity into your laboratory! Never before has it been so easy to pipette, check, and re-extract samples in a polypropylene microplate. The easy to read OptiTrack® alphanumeric labeling on each plate makes identifying individual wells incredibly easy, accelerates the filling and significantly reduces the risk of error. The high level of transparency, unique among polypropylene microplates, ensures that you always find your samples at a glance.

The clear Eppendorf Polypropylene Microplates are ideal for storing substances or for applications requiring high resistance to solvents, such as DMSO. For applications where maximum sample recovery is particularly important, the Microplates 384 are available in Protein and DNA LoBind quality

Product features

- Unmatched transparency for better sample visibility
- OptiTrack labeling: 30% faster well identification and less pipetting errors due to colored border with high-contrast alphanumeric labeling
- RecoverMax® well-design: Optimized well geometry for maximum sample recovery and excellent mixing performance. The smooth contours also reduce capillary effects in well corners (“wicking”), minimizing the risk of cross-contamination.
- Minimal residual volume and high well-to-well homogeneity
- Raised well rims and even surface for reliable sealing
- No well nesting for easy stacking
- Perfect for automation due to rigid design, dimensional accuracy and compliance to SBS specifications
- g-Safe™: Exceptional centrifugation stability of up to 6,000 x *g* (5,000 x *g* for sterile plates)
- Polypropylene provides high resistance to chemicals, mechanical stress and temperature extremes
- Manufactured without the use of slip agents, plasticizers and biocides—substances that have been shown to leach from plastic consumables into the sample and negatively affect bio-assay results
- Guaranteed functionality between –86 °C to 100 °C
- Autoclavable (121 °C, 20 min)
- Available in Protein LoBind and DNA/RNA LoBind quality (see page 116)
- Black and white MTP plates available for fluorescence and luminescence assays (see page 120)
- Barcode options available. For more details go to www.eppendorfna.com/barcode

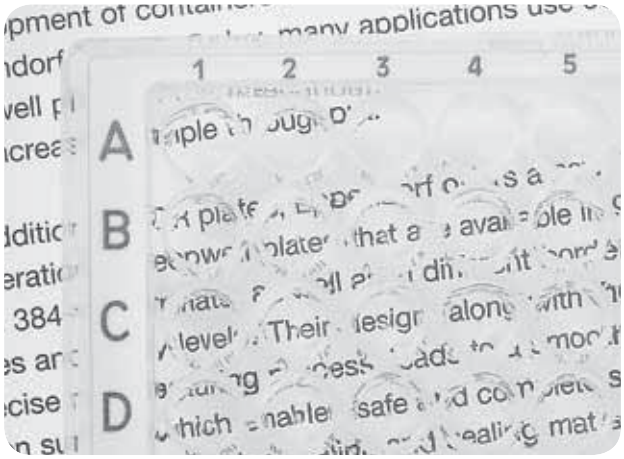
Technical specifications Microplates

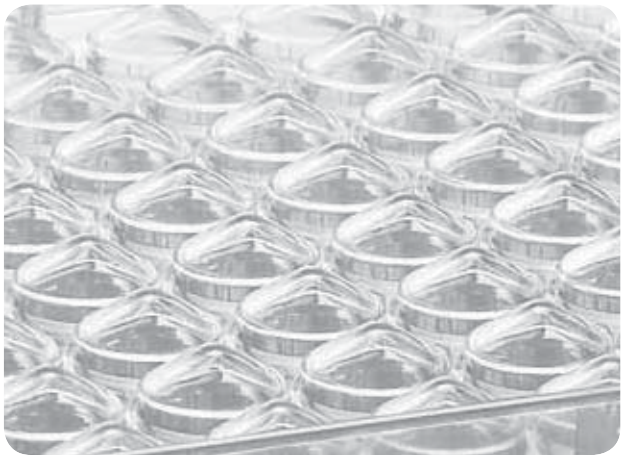
					
Description	**Microplate 96/F**	**Microplate 96/U**	**Microplate 96/V**	**Microplate 384/F**	**Microplate 384/V**
Number of wells	96	96	96	384	384
Total well volume	400 µL	360 µL	350 µL	150 µL	140 µL
Work volume	50–350 µL	20–320 µL	20–300 µL	10–120 µL	5–120 µL
Shape of well	round	round	round	rounded edge	rounded edge
Shape of well-bottom	Flat (F)	Round (U)	Conical (V) 	Flat (F)	Conical (V)
Dimensions (W x D x H)*	5.03 x 3.37 x 0.57 in/127.8 x 85.5 x 14.4 mm				

* All Eppendorf plates fulfil the standards ANSI/SBS 1-2004 up to ANSI/SBS 4-2004.

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

Microplates 96 and 384





Unique OptiTrack® labeling and exceptional transparency for unmatched ergonomic operation.
High-contrast alphanumeric labeling makes well identification 30% faster and significantly reduces pipetting errors. Try our plates under the sterile workbench, when wearing goggles or during everyday lab routine—you will enjoy the OptiTrack difference.

Ultra clear wells guarantee easy sample identification. The high optical clarity is ideal for colorimetric assays (VIS light range) of samples and solvents that can usually not be analyzed in polystyrene plates.

RecoverMax design guarantees maximum sample recovery.
Optimized well geometry and rounded corners prevent sample loss and minimize the residual volume. In square-well plates the smooth contours also reduce capillary effects in well corners ("wicking") thus minimizing the risk of cross-contamination. (Application Note 145)

Eppendorf® plate

Competitor plate

Eppendorf microplates are available with 3 different bottom shapes:

- **F-bottom (flat)—** excellent for optical measurements and microscopic examination
- **U-bottom (round)—** typically used for applications where efficient mixing or washing is required. Also used for examination of pellets.
- **V-bottom (conical)—** ideal when working with small sample volumes and when maximum liquid recovery is needed. Also recommended for precipitation of low concentrated samples by centrifugation.

Ordering information

Plate type	Shape of well bottom[1]	Packaging size	OptiTrack frame color	certified PCR clean		Sterile	
				Catalog No.	List USD	Catalog No.	List USD
MTP 96	F	Case of 80 (5 bags of 16)	White	951040005	$167.00	951040021	$191.00
	U			951040048	167.00	951040081	191.00
	V			951040188	167.00	951040227	191.00
MTP 384	F	Case of 80 (5 bags of 16)	White	951040341	280.00	951040383	322.00
	V			951040421	280.00	951040464	322.00

[1] F (flat)—for optical measurements and microscopic examination
U (round)—Ideal if your assays involve mixing or washing steps
V (conical)—For low sample volumes and maximum sample recovery

PCR clean: Batch-certified free from DNA, DNase, RNase, and PCR inhibitors.

Deepwell Plates™ 96 and 384

Description

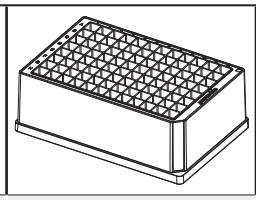
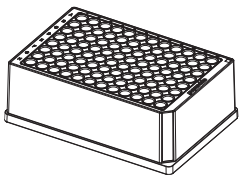
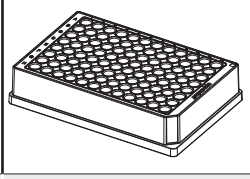
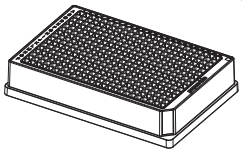
The new Eppendorf® Deepwell Plates will change the way you look at plates forever.

Eppendorf Deepwell Plates 96 and 384 are top-performance plates designed for all manual and automated applications—from sample storage at –86 °C to DNA denaturation at 100°C. Made from virgin polypropylene (PP), these plates offer innovative features that run deep: More reliability. More efficiency. More stability. Our unique OptiTrack® labeling has also brought more enjoyment to work. With its easy to recognize design. Plates are available with white, yellow, green or blue borders with laser-inscribed, high-contrast alphanumeric labeling to easily identify wells. With all their innovative features, they set new standards in the lab.

Product features

- OptiTrack labeling: 30% faster well identification and less pipetting errors due to colored border with high-contrast alphanumeric labeling
- RecoverMax® conical well-design: Optimized well geometry for maximum sample recovery and excellent mixing performance. The smooth contours also reduce capillary effects in well corners (“wicking”), minimizing the risk of cross-contamination.
- Minimal residual volume and high well-to-well homogeneity
- Raised well rims and even surface for reliable sealing
- No well nesting for easy stacking
- Perfect for automation due to rigid design, dimensional accuracy and compliance to SBS* specifications
- g-Safe™: Exceptional centrifugation stability of up to 6,000 x *g* (5,000 x *g* for sterile plates) for high-speed plate centrifugation and faster protocols—reducing sample processing time for better sample quality
- Polypropylene provides high resistance to chemicals, mechanical stress and temperature extremes
- Manufactured without the use of slip agents, plasticizers and biocides—substances that have been shown to leach from plastic consumables into the sample and negatively affect bio-assay results
- Guaranteed functionality between –86 °C to 100 °C
- Autoclavable (121 °C, 20 min)
- Available in Protein LoBind and DNA/RNA LoBind quality (see page 116)
- Barcode options available. For more details go to www.eppendorfna.com/barcode

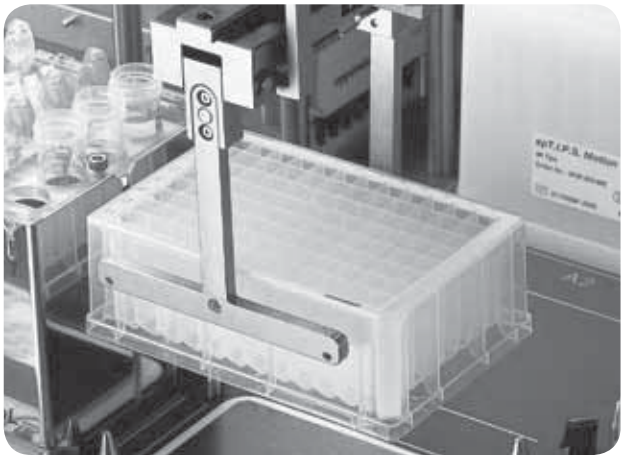
Technical specifications

				
Description	**Deepwell 96/2,000 µL**	**Deepwell 96/1,000 µL**	**Deepwell 96/500 µL**	**Deepwell 384/200 µL**
Number of wells	96	96	96	384
Total well volume	2,400 µL	1,200 µL	700 µL	240 µL
Work volume	50–2,000 µL	30–1,000 µL	30–550 µL	20–225 µL
Shape of well	Square well with rounded edges	Round	Round	Square well with rounded edges
Shape of well bottom	RecoverMax conical	RecoverMax conical	RecoverMax conical	RecoverMax conical
Dimensions (W x D x H)*	5.03 x 3.37 x 1.74 in 127.8 x 85.5 x 44.1 mm	5.03 x 3.37 x 1.74 in 127.8 x 85.5 x 44.1 mm	5.03 x 3.37 x 1.07 in 127.8 x 85.5 x 27.1 mm	5.03 x 3.37 x 0.99 in 127.8 x 85.5 x 25.1 mm

* All Eppendorf plates fulfil the standards ANSI/SBS 1-2004 up to ANSI/SBS 4-2004.

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

Deepwell Plates™ 96 and 384



Unique OptiTrack® labeling makes manual pipetting 30% faster and less error prone.
Colored frames with laser-inscribed (UV- and chemical-resistant) high-contrast alphanumeric labeling for easy well identification. Try our plates under the sterile workbench, when wearing goggles or during everyday lab routine—you will enjoy the OptiTrack difference.

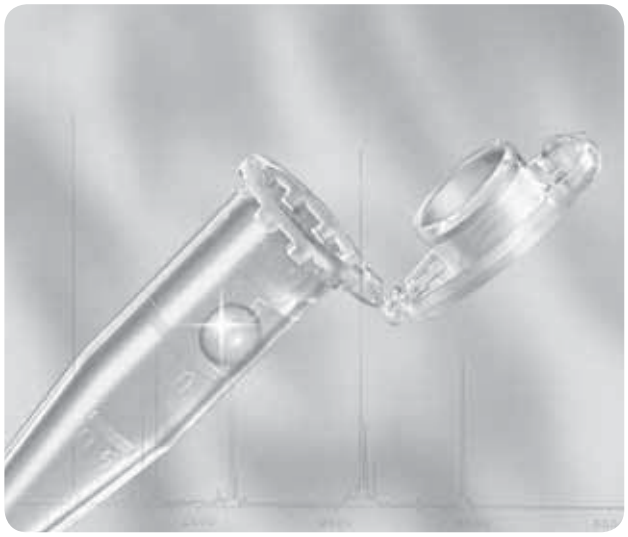
Perfect for automated applications.
Compliance to SBS specifications, high dimensional accuracy and rigidity ensure compatibility with all standard pipetting robots and automated sample processing systems:

- High well-to-well reproducibility
- Minimal residual/dead volumes
- OptiTrack matrix facilitates correct plate positioning
- No well-nesting for easy stacking
- Barcode options available

Ordering information

Plate type	Packaging size	OptiTrack frame color	Catalog No.	List USD	Catalog No.	List USD
DWP 96/2000	Case of 20 (5 bags of 4)	White	951033405	$124.00	951033502	$140.00
		Yellow	951033421	124.00	951033529	140.00
		Green	951033464	124.00	951033561	140.00
		Blue	951033481	124.00	951033588	140.00
	Case of 80 (10 bags of 8)	White	951033600	432.00	951033707	493.00
DWP 96/1000	Case of 20 (5 bags of 4)	White	951032603	104.00	951032701	114.00
		Yellow	951032620	104.00	951032727	114.00
		Green	951032662	104.00	951032760	114.00
		Blue	951032689	104.00	951032786	114.00
	Case of 80 (10 bags of 8)	White	951033006	355.00	951033103	395.00
DWP 96/500	Case of 40 (5 bags of 8)	White	951031801	262.00	951031909	293.00
		Yellow	951031828	262.00	951031925	293.00
		Green	951031861	262.00	951031968	293.00
		Blue	951031887	262.00	951031984	293.00
	Case of 120 (10 bags of 12)	White	951032204	709.00	951032301	780.00
DWP 384/200	Case of 40 (5 bags of 8)	White	951031003	288.00	951031101	319.00
	Case of 120 (10 bags of 12)	White	951031402	765.00	951031500	852.00

Protein LoBind tubes and plates



Description
When biological samples are stored or incubated in standard reaction vessels more than 90% sample material can be lost within 24 hours due to adsorption to the plastic surface. Eppendorf® LoBind tubes and plates maximize sample recovery by significantly reducing sample-to-surface binding—without the use of any type of coating! A combination of specially developed technology and ultrapure selected polypropylene ensures best recovery rates of your valuable samples.

Eppendorf Protein LoBind tubes are specifically designed for use in proteomics or other fields of protein research (antibodies, cell biology, peptide drugs etc.), where protein concentration tend to be very small and sample recovery is vital for assay results. Significantly more protein can be recovered for downstream analyses and enzymes remain active as they are not denatured by any tube-surface interactions.

Product features

- Protein LoBind tubes are ideal for preparation or storage of protein, peptide, antibody or virus samples
- LoBind material guarantees maximum sample recovery for improved assay results
- Free of surface coating (e.g. siliconization) to eliminate the risk of sample interference
- Certified free of DNA, DNase, RNase and PCR inhibitors (PCR clean)
- Available in tube, microplate and deepwell plate formats for easy up-scaling

Tubes feature:
- Hinged Safe-Lock lid prevents accidental lid opening during incubation
- Precise lid sealing for lowest evaporation rates during long-term storage
- Rated up to 18,000 x *g* centrifugation speed for molecular biology applications
- Additional features identical to Safe-Lock tubes (page 110)

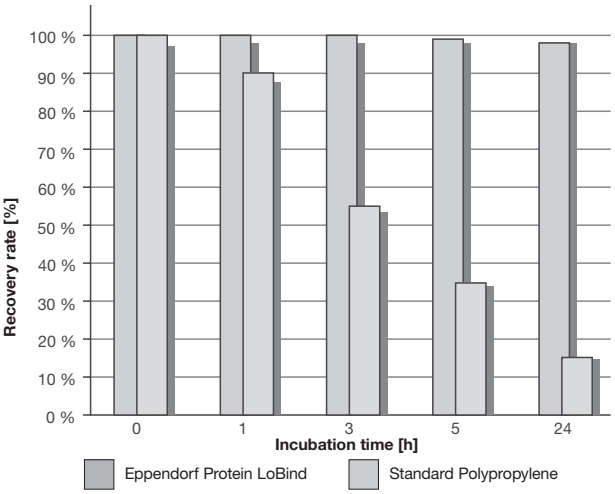
Plates feature:
- OptiTrack® labeling: 30% faster well identification and less pipetting errors due to colored border with high-contrast alphanumeric labeling
- RecoverMax® conical well-design: Optimized well geometry for maximum sample recovery and excellent mixing performance. The smooth contours also reduce capillary effects in well corners (“wicking”), minimizing the risk of cross-contamination.
- Raised well rims and even surface for reliable sealing
- Additional features identical to MTP and DWP features (pages 112–115)

Eppendorf DWP 384/200 Protein LoBind
High-contrast OptiTrack labeling make well identification easier to reduce pipetting errors. LoBind plates are also clearly labeled for easy identification.

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

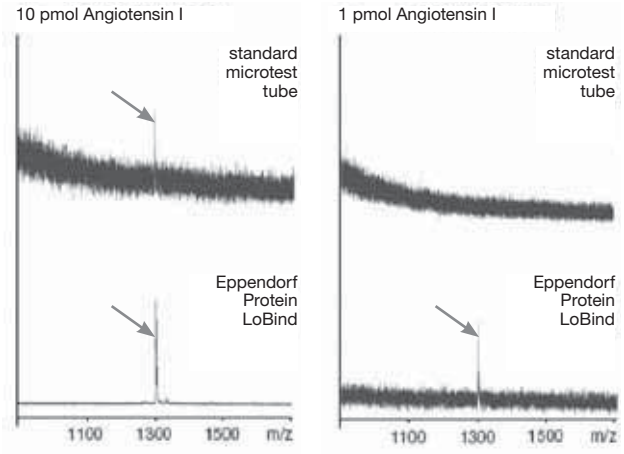
Protein LoBind tubes and plates

Typical protein recovery rates in Eppendorf Protein LoBind consumables



Protein recovery (fluorescein-labeled BSA) in Eppendorf Protein LoBind Deepwell Plates and plates made of standard material. The Eppendorf Protein LoBind material guarantees up to 97 % sample recovery independent on incubation time. In contrast, protein sticks to standard material resulting in nearly 50 % or 90 % sample loss after 3 h or 24 h, respectively.

MALDI-TOF mass spectrometry performed with peptides stored in Protein LoBind and standard tubes



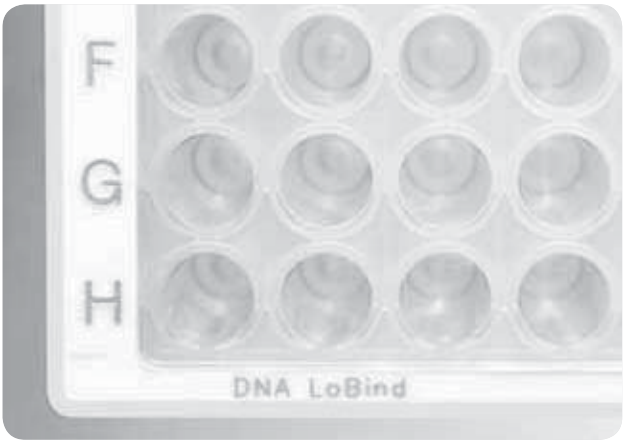
The use of Eppendorf Protein LoBind Tubes yield a significantly higher signal during MALDI-TOF analysis of the peptide angiotensin I when compared to the use of standard tubes. At 1 pmol, analysis becomes impossible with standard microtest tubes. The arrows identify the signals in each experiment. (Source: Dr. S. Seeber and Dr. Humeny, Institute of Biochemistry, University of Erlangen-Nürnberg, Germany)

Ordering information

Material	Tube/plate type	Packaging size	OptiTrack® frame color	Catalog No.	List USD
Protein LoBind consumables					
	Safe-Lock Tube 0.5 mL	Case of 100 (2 bags of 50)	N/A	022431064	$ 21.50
	Safe-Lock Tube 1.5 mL	Case of 100 (2 bags of 50)	N/A	022431081	21.50
	Safe-Lock Tube 2.0 mL	Case of 100 (2 bags of 50)	N/A	022431102	21.50
	MTP 384 (V-bottom)	Case of 80 (5 bags of 16)	White	951040589	536.00
		Case of 240 (12 bags of 20)	White	951040611	1,206.00
	DWP 96/2000	Case of 20 (5 bags of 4)	White	0030504305	243.00
	DWP 96/1000	Case of 20 (5 bags of 4)	White	951032905	200.00
		Case of 80 (10 bags of 8)	White	951033308	709.00
	DWP 96/500	Case of 40 (5 bags of 8)	White	951032107	524.00
		Case of 120 (10 bags of 12)	White	951032506	1,410.00
	DWP 384/200	Case of 40 (5 bags of 8)	White	951031305	570.00
		Case of 120 (10 bags of 12)	White	951031704	1,529.00

PCR clean: Batch-certified free from DNA, DNase, RNase, and PCR inhibitors.

DNA LoBind tubes and plates



Product features

- DNA LoBind for DNA or RNA applications in forensic analysis, microarrays, next generation sequencing
- LoBind material guarantees maximum sample recovery for improved assay results
- Certified free of DNA, DNase, RNase and PCR inhibitors (PCR clean)
- Available in tube, microplate and deepwell plate formats for easy up-scaling

Tubes feature:

- Hinged Safe-Lock lid prevents accidental lid opening during incubation
- Precise lid sealing for lowest evaporation rates during long-term storage
- Rated up to 30,000 x *g* (25,000 x *g* for 2.0 mL tube) centrifugation speed for molecular biology applications
- Additional features identical to Safe-Lock tubes (page 110)

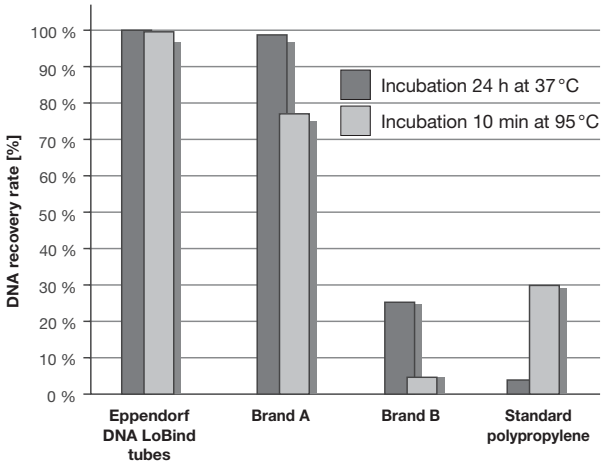
Plates feature:

- OptiTrack® labeling: 30% faster well identification and less pipetting errors due to colored border with high-contrast alphanumeric labeling
- RecoverMax® conical well-design: Optimized well geometry for maximum sample recovery and excellent mixing performance. The smooth contours also reduce capillary effects in well corners ("wicking"), minimizing the risk of cross-contamination.
- Raised well rims and even surface for reliable sealing
- Additional features identical to MTP and DWP features (pages 112–115)

Description

DNA LoBind tubes improve recovery of nucleic acids by reducing their adsorption to the tube wall. A combination of special manufacturing technologies and selected polypropylene batches ensures nearly 100% recovery of DNA/RNA molecules—without surface coating to eliminate the risk of sample contamination. DNA LoBind tubes are batch-tested and certified by an independent laboratory to be free from DNA, DNase, RNase and PCR Inhibitors. Small packaging in bags of 50 tubes further reduces the risk of contamination.

Eppendorf® DNA LoBind tubes are ideal for sample preparation or long-term storage of nucleic acids in forensic, microarrays, next generation sequencing applications.

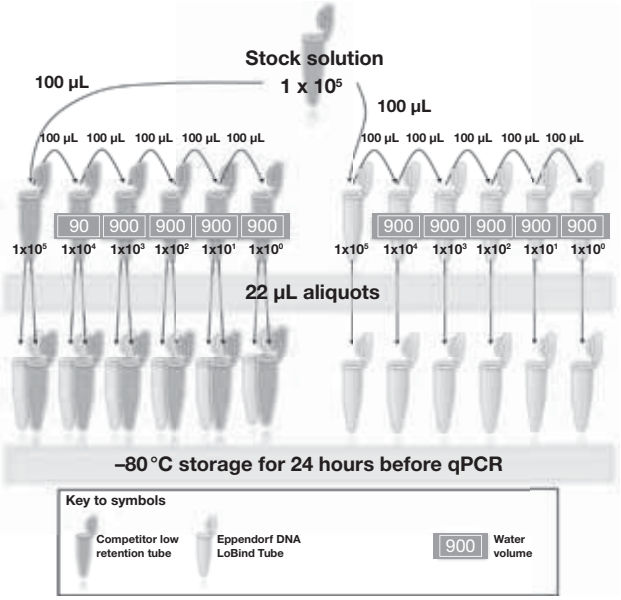


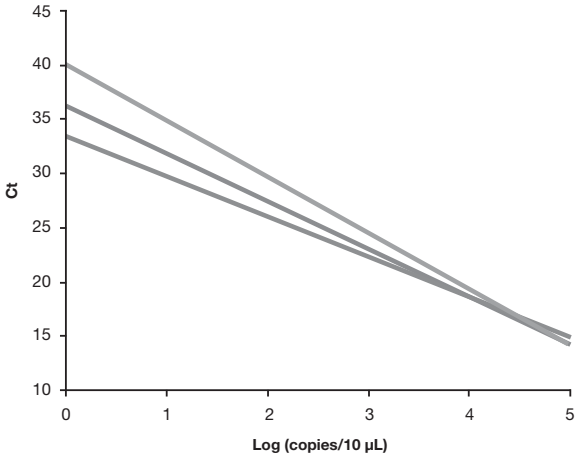
DNA recovery rate after different incubation conditions

DNA recovery rate (0.2 ng/µL DNA fragement (130 bp, 32P labeled) in 2.5 M NaCl/TE buffer) in Eppendorf DNA LoBind tubes compared to tubes from different suppliers. The Eppendorf DNA LoBind material guarantees up to 99% sample recovery independent of incubation temperature or time.

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

DNA LoBind tubes and plates





Low bind tubes used for	Panel 1	Panel 2	Panel 3
Serial dilution performed in	Competitor	Competitor	Eppendorf DNA LoBind
–80 °C sample storage in	Competitor	Eppendorf DNA LoBind	Eppendorf DNA LoBind
Slope	–5.20	–4.40	–3.70
Efficiency	56%	69%	86%
r^2	–0.9939	–0.9931	–0.9993

Adsorption of DNA to tube surfaces effects accuracy of real-time PCR results.
DNA templates (DNA standard panels) prepared in Eppendorf DNA LoBind tubes show an amplification efficiency of 86% compared to 56% for samples prepared and stored in competitor low retention tubes. The much higher DNA recovery from Eppendorf® DNA LoBind tubes leads to improved standard curves and subsequently more an accurate interpretation of DNA quantity in samples assayed. Left image: Flowchart of DNA standard panels preparation. Genomic DNA stock solution was serial 10-fold diluted in either competitor's low retention or Eppendorf DNA LoBind tubes. 22 µL aliquots of each dilution were stored for 24 hours at –80 °C in either competitor's low retention or Eppendorf DNA LoBind tubes before real-time PCR assay. Right image: Standard curves obtained for each panel. Ct versus log10 of expected DNA concentration was plotted and slopes were obtained after linear regression. PCR efficiencies are derived from slope values. (See Application Note 226 for more details).

Ordering information

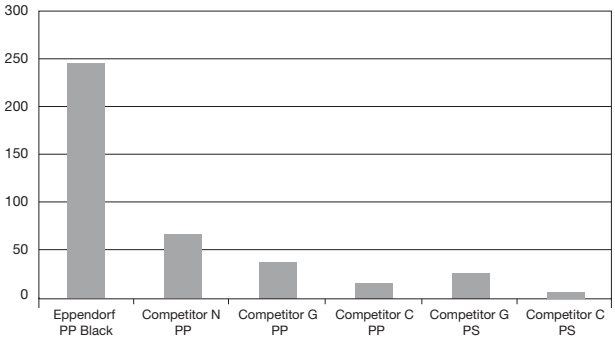
Material	Tube/plate type	Packaging size	OptiTrack® frame color	Catalog No.	List USD
DNA LoBind consumables					
	Safe-Lock Tube 0.5 mL	Case of 250 (5 bags of 50)	N/A	022431005	$ 32.50
	Safe-Lock Tube 1.5 mL	Case of 250 (5 bags of 50)	N/A	022431021	32.50
	Safe-Lock Tube 2.0 mL	Case of 250 (5 bags of 50)	N/A	022431048	32.50
	MTP 384 (V-bottom)	Case of 80 (5 bags of 16)	White	951040546	335.00
		Case of 240 (12 bags of 20)	White	951040562	754.00
	DWP 96/1000	Case of 20 (5 bags of 4)	White	951032808	124.00
		Case of 80 (10 bags of 8)	White	951033201	432.00
	DWP 96/500	Case of 40 (5 bags of 8)	White	951032000	319.00
		Case of 120 (10 bags of 12)	White	951032409	852.00
	DWP 384/200	Case of 40 (5 bags of 8)	White	951031208	350.00
		Case of 120 (10 bags of 12)	White	951031607	944.00

PCR clean: Batch-certified free from DNA, DNase, RNase, and PCR inhibitors.

Assay microplates

Product features

- Opaque design prevents well-to-well crosstalk
- OptiTrack® labeling: 30% faster well identification and less pipetting errors due to colored border with high-contrast alphanumeric labeling
- RecoverMax® well-design: Optimized well geometry for maximum sample recovery and excellent mixing performance
- Minimal residual volume and high well-to-well homogeneity
- Raised well rims and even surface for reliable sealing
- No well nesting for easy stacking
- Perfect for automation due to rigid design, highest dimensional accuracy and compliance to SBS specifications
- g-Safe™: Centrifugation stability of up to 6,000 x *g*
- Polypropylene provides high resistance to chemicals, mechanical stress and temperature extremes
- Plates are optimized for minimal auto-fluorescence and auto-luminescence
- Guaranteed functionality between –86 °C to 100 °C
- Autoclavable (121 °C, 20 min)
- Barcode options available



Superior signal-to-noise ratio with Eppendorf black assay plates (fluorescence assay)

Comparison of the signal-to-noise ratio in a DNA quantification using the fluorescent dye PicoGreen®. Black Eppendorf® Microplates and black microplates of other manufacturers were used.
PP = polypropylene, PS = polystyrene (Application note 203).

Description

Eppendorf assay plates are designed for use with top-reading luminometers and fluorometers. The black Eppendorf Microplates are ideal for fluorescence detection. They offer an excellent signal-to-noise ratio, resulting in an extremely low detection limit—for clear signals even with low concentration samples! The white Eppendorf Microplates are optimized for highest sensitivity in the detection of luminescence or weak fluorescence signals by maximizing reflectance.

Ordering information

Plate color	Plate type	Shape of well bottom[1]	Packaging size	OptiTrack frame color	certified PCR clean Catalog No.	List USD
White plates						
	MTP 96	U	Case of 80 (5 bags of 16)	Gray	951040145	$191.00
		V			951040308	191.00
	MTP 384	V			951040503	322.00
Black plates						
	MTP 96	U	Case of 80 (5 bags of 16)	White	951040102	191.00
		V			951040260	191.00
	MTP 384	V			951040481	322.00

[1] U (round)—Ideal if your assays involve mixing or wahing steps
V (conical)—For low sample volumes and maximum sample recovery
PCR clean: Batch-certified free from DNA, DNase, RNase, and PCR inhibitors.

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

Plate sealing options

Product features

- Eppendorf plates are designed to be heat-sealed up to 5 times
- PCR Film and Foil with heat-activated glue. Lower adhesive strength at room temperature for easy positioning and increased strength at PCR-characteristic temperatures to maximize evaporation protection
- Masterclear™: optically clear film for all optical assays in the UV and VIS light range. Specially selected adhesive does not interfere with assay results

Description

Eppendorf offers high-performance sealing options for almost every application—for incubation and storage, for colorimetric ELISA as well as fluorescence and luminescence assays, for sample processing and cell culture as well as PCR and qPCR amplification.

Heat sealing vs. adhesive seals vs. mats:

- Heat sealing melts the seals onto the plastic of the plate providing a permanent seal and thus better evaporation protection than adhesive seals. Heat sealing is usually used for long-term storage, storage of small sample volumes or when plates have to be shipped.
- Mats and adhesive seals can be manually applied without the need for additional equipment. Since they don't require heating there is less risk for sample damage. In contrast to mats that protrude into the wells, adhesive seals don't reduce the well volume and are suitable for optical assays.
- Mats are considered re-useable since they can be cleaned and autoclaved for sterile applications.

Aluminum foil vs. transparent films:

- Aluminum foil provides slightly better evaporation protection than plastic films—especially during long-term storage. It is also easily pierceable with single or multichannel pipettors and robotic tips for sample recovery. Aluminum provides protection for light sensitive samples
- Transparent films allow you to see the samples based on the type of film and the adhesive is suitable for fluorescence, luminescence and colorimetric assays. Since films are usually non-pierceable they provide a better protection from accidental piercing.

Ordering information

Description	Purity	Catalog No.	List USD
Heat sealing			
Eppendorf Heat Sealing Film, pack of 100	PCR clean*	0030127838	$ 188.00
Eppendorf Heat Sealing Foil, pack of 100	PCR clean*	0030127854	123.00
Heat Sealer, incl. base plate for 96-well plates, 120 V (see page 216 for details)		951023078	1,973.00
Base plate 384-well plates, for Heat Sealer (see page 216 for more details)		951023086	413.00
Adhesive seals			
Eppendorf Storage Film, self-adhesive, case of 100 (2 bags of 50)	PCR clean*	0030127870	127.00
Eppendorf Storage Foil, self-adhesive, pack of 100	PCR clean*	0030127889	117.00
Eppendorf PCR Film, self-adhesive, pack of 100	PCR clean*	0030127811	182.00
Eppendorf PCR Foil, self-adhesive, pack of 100	PCR clean*	0030127820	167.00
Eppendorf Masterclear Film for optical assays, self-adhesive, pack of 100	PCR clean*	951022115	238.00
Sealing mats			
Eppendorf Sealing Mat, for DWP 96/2000, case of 50 (5 bags of 10)	Standard	951030147	206.00
Eppendorf Sealing Mat, for DWP 96/1000, 96/500 and MTP 96, case of 50 (5 bags of 10)	Standard	951030121	206.00
Lids			
Eppendorf Plate Lid, for MTP and DWP plates, case of 80 (5 bags of 16)	PCR clean*	0030131517	115.00
Eppendorf Plate Lid, for MTP and DWP plates, case of 80 (5 bags of 16)	Standard	0030131525	135.00

*PCR clean: Batch-certified free from DNA, DNase, RNase, and PCR inhibitors

Wide mouth bottles 400 mL and 500 mL

Description

The Eppendorf® 400 mL and 500 mL wide-mouth bottles are polypropylene bottles designed for preparing, transporting, storing and centrifuging solid and liquid samples and reagents.

Product features

- Bottle and screw cap are made from polypropylene to provide high resistance to chemicals, mechanical stress and temperature extremes
- Wide-mouth design for easy filling
- Tube opening with extended lip for easy pouring
- Precise lid sealing to minimize spilling and guarantee low evaporation rates during storage
- Centrifugation stability of up to 3,250 x *g*
- Guaranteed functionality between –86 °C to 100 °C
- Autoclavable when open (121 °C, 20 min)

- 400 mL round bottle with flat bottom. Dimensions 81 x 133 mm
- 400 mL bottle can be used in 4 x 500 mL rotor (A-4-81) of Centrifuges 5810 and 5810 R with rubber cushion (022638657). For high speed centrifugation, extended run times or at higher temperature stabilizing sleeves are included in the delivery
- Maximum filling volume: 450 mL

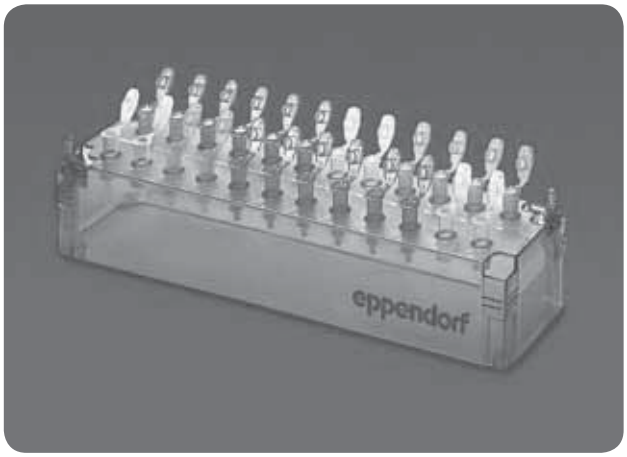
- 500 mL squared bottle with flat bottom. Dimensions (W x D x H) = 81 x 81 x 134 mm
- For use in 4 x 500 mL rotor (A-4-81) of Centrifuges 5810 and 5810 R (no adapter necessary)
- Maximum filling volume: 550 mL

Ordering information

Description	Catalog No.	List USD
400 mL wide-mouth bottle, incl. stabilizing sleeves for centrifugation, set of 2	022638653	$260.00
500 mL wide-mouth bottle, set of 2	022638657	260.00

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

Racks for Eppendorf Tubes



Product features

- 24-place capacity
- Unique connectors allow easy connecting of multiple racks in front-to-back and side-to-side configurations and allows for easy stacking
- UV-resistant and autoclavable (121 °C, 20 min)

Ordering information

Description	Catalog No.	List USD
Tube Racks, 24-place capacity		
For 0.5 mL tubes	022364243	$25.50
For 1.5/2.0 mL tubes	022364227	25.50

Storage box for Eppendorf Tubes

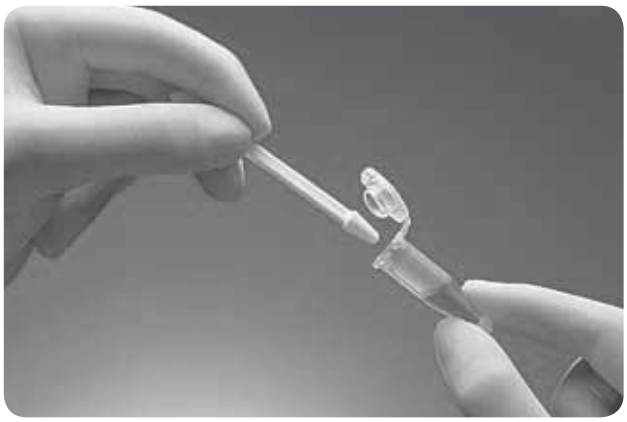
Product feature

- White cardboard box with water resistant coating is ideal for sample storage at 4 °C, –20 °C or –86 °C
- Divider 10 x 10 (100-place) for Safe-Lock Tubes 0.5 mL
- Divider 9 x 9 (81-place) for Flex-Tubes® 1.5 mL
- Divider 8 x 8 (64-place) for Safe-Lock Tubes 1.5 mL and 2.0 mL

Ordering information

Description	Catalog No.	List USD
Storage box, cardbord, 2" tall	B50-SQ	$4.50
Divider 10 x 10, for storage box	D100	3.50
Divider 9 x 9, for storage box	D81	3.50
Divider 8 x 8, for storage box	D64	3.50

Micropestle for Eppendorf Tubes



Product feature

- Autoclavable micropestle for resuspending pellets from 1.5 mL to 2.0 mL tubes

Ordering information

Description	Catalog No.	List USD
Micropestle, set of 10	022365622	$81.00

Eppendorf® sample preparation instrument guide

Sample preparation instruments	Description	Applications
IsoTherm cooling system Information page 126	Cooling	Cooling of samples in 0.5 mL and 1.5/2 mL tubes to 0 °C or –21 °C during reaction set-up or transport
PCR-Cooler Information page 127	Cooling	Cooling of PCR tubes and 96-well plates to 0 °C during PCR reaction set-up to minimize unspecific amplification
MixMate® Information page 128	Mixing	Efficient high-speed mixing of samples in plates (up to 96- and 384-well formats) and tubes 0.5 to 2 mL. Integrated vortex function with minimal hand-arm vibration.
Thermomixer® Information page 130	Heating Mixing	Heating and mixing of samples in 1.5 mL tubes
Thermomixer R Information page 132	Heating Cooling Mixing	Heating, cooling and mixing of samples in tubes from 0.2 to 50 mL, plates and glass slides
ThermoStat plus Information page 134	Heating Cooling	Heating and cooling of samples in tubes from 0.2 to 50 mL, plates, glass slides and little flasks
Vacufuge® concentrator Information page 136	Sample concentration	Vacuum concentration of samples in tubes from 0.2 to 50 mL and MTP and PCR plates

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

IsoTherm-System®

IsoSafe with IsoRack and –21 °C IsoPack

–21 °C IsoPack

Product features

- Ideal for cooling, transporting and storing deep-frozen samples
- Dry incubation technology eliminates contamination risk associated with classical icebath incubation
- Holds 24 micro tubes (e.g., 0.5 mL or 1.5/2.0 mL)
- Two versions of IsoPack (cold pack) available:
  – **White** maintains 0 °C for up to 6 hours
  – **Blue** maintains –21 °C for up to 3 hours
- No more melting ice baths (reduces risk of contamination)
- All system components can be used separately
- Racks are stackable, autoclavable and floatable; can be centrifuged in an MTP rotor (page 181)

2 IsoRacks

IsoRack with 0 °C IsoPack

Description

The IsoTherm-System*, which consists of an IsoRack (work rack), IsoSafe (insulating box) and two IsoPacks (cold packs), specializes in cooling samples effectively and consistently at –21 °C or 0 °C over many hours. The IsoTherm-System can be used to prevent enzymes from becoming inactive as well as for PCR sample preparation, sample transport and slow thawing of frozen samples.

* U.S. Pat. 6,616,897

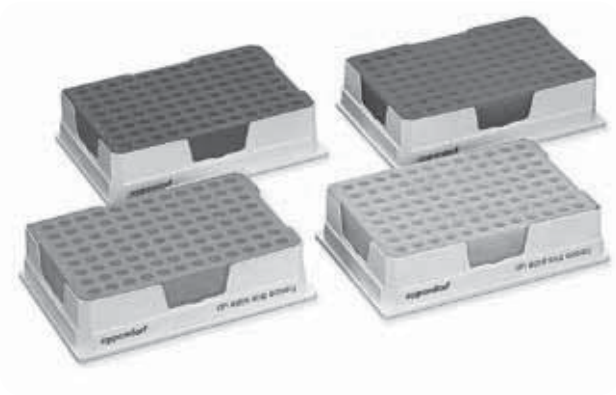
Ordering information

Description	Catalog No.	List USD
IsoTherm-System starter set, includes IsoSafe, IsoRack, 0 °C IsoPack and –21 °C IsoPack		
For 0.5 mL tubes	022510002	$150.00
For 1.5/2.0 mL tubes	022510053	150.00
IsoPack and IsoRack set, includes 1 each IsoPack and IsoRack		
For 0.5 mL tubes, 0 °C	022510282	47.00
For 0.5 mL tubes, –21 °C	022510291	47.00
For 1.5/2.0 mL tubes, 0 °C	022510240	47.00
For 1.5/2.0 mL tubes, –21 °C	022510258	47.00
IsoRack, set of 5 racks		
For 0.5 mL tubes	022510100	120.00
For 1.5 mL/2.0 mL tubes	022510169	120.00

IsoRacks with proper support adapters can be centrifuged up to 2,700 x *g*; see page 177.

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

PCR-Cooler



Product features

- Ideal for PCR reaction setup
- Accommodates 96-well PCR plates, PCR strips and 0.2 mL and 0.5 mL PCR tubes
- Dry incubation technology eliminates contamination risk associated with classical icebath incubation
- Keeps an entire 96-well PCR plate cold for more than an hour at 0 °C*
- Features temperature indication: Color of the PCR cooler changes when temperature exceeds 7 °C (violet or dark blue when ice cold, pink or light blue when above 7 °C)
- Special contour design prohibits freezing of samples

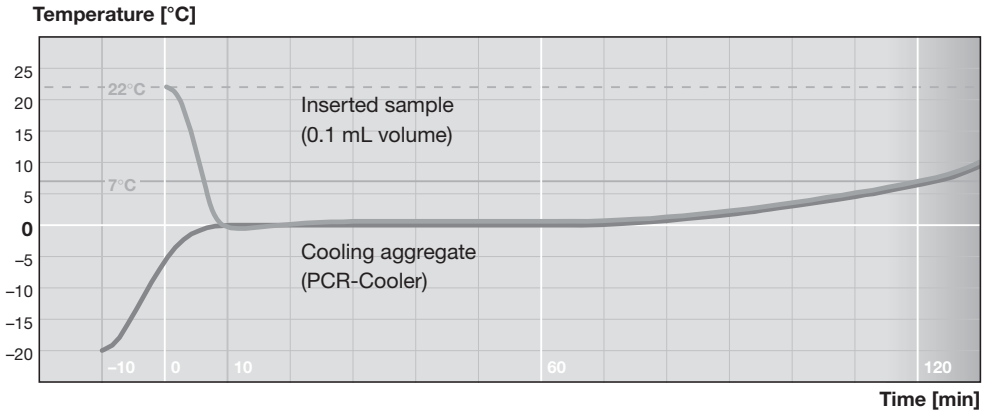
* With two-hour precooling at –20 °C.

Description

Eppendorf® PCR-Cooler is ideal for setting up PCR reactions in 0.2 mL and 0.5 mL PCR tubes as well as 96-well PCR plates. For ease-of-use we included a temperature indicator that changes the color of the PCR-Cooler from violet to pink or dark blue to light blue when its temperature exceeds 7 °C.

Ordering information

Description	Catalog No.	List USD
PCR-Cooler		
Starter Set (1 pink, 1 blue)	022510509	$130.00
Pink	022510541	68.00
Blue	022510525	68.00



Cooling curve of PCR-Cooler.
Temperature behavior of a precooled PCR-Cooler and a sample inserted at room temperature (the background color indicates the color change).

MixMate®

Product features

- High-speed mixer (3,000 rpm) for fast and efficient mixing of small volumes in all types of plates and tubes up to 2 mL
- Includes a patented vortex function that causes minimal hand-arm-vibration for ergonomic operation
- Unique [2D]Mix-Control technology (planar mixing orbit without vertical movement) creates high mixing power and guarantees a controlled liquid vortex which prevents splashing and spilling
- Whisper quiet operation to benefit the work environment
- Very stable—remains stationary even at maximum mixing speed
- Extremely small footprint to fit on crowded lab benches
- Unique plate holder provides easy operation and secure fit for all plate formats (MTP, DWP and PCR plates)
- Patented imbalance sensor prevents plates from detaching
- Tube holders enable mixing of semi- and unskirted PCR plates as well as micro test tubes from 0.2 to 2 mL
- 5 program keys with pre-optimized mixing parameters for ease-of-use with standard applications in 96- and 384-well plates and micro test tubes
- Digital display for reproducible parameter selection
- Keypad design for easy cleaning
- 2-year warranty

epGreen® Packaged in 100% recyclable material; for more information on epGreen products, see pages 376 and 377.

Technical specifications

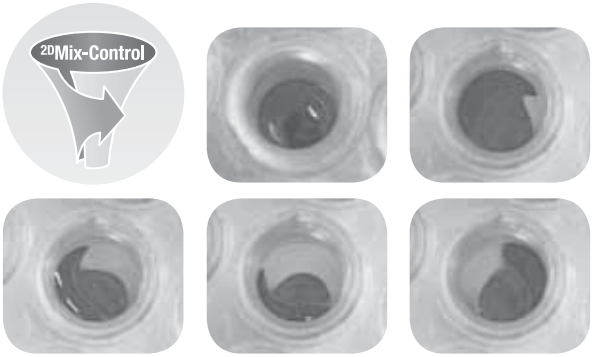
Description	MixMate
Maximum capacity	1 x DWP / 24 x 2.0 mL
Available tube holders	3
Mixing speed	300–3000 rpm (Touch vortex = 3,500 rpm)
Mixing orbit	3 mm (1.5 mm radius)
Temperature control	N/A
Programs	5 (pre-defined)
Timer	15 s to 99:5 h, with continuous mode
Noise level	< 50 dB(A)
Power supply	120 V, 50–60 Hz 230 V, 50–60 Hz
Power requirement	max. 40 W
Dimensions (W x D x H)	6.7 x 9.1 x 5.1 in/ 17 x 23 x 13 cm
Weight	9.25 lb/4.2 kg

Description

Meet our compact and amazingly versatile mixer, specially designed for mixing small volumes in numerous plate and tube formats. MixMate's fast and precisely controlled mixing movements ([2D]Mix-Control) enable efficient and homogenous mixing of samples in all vessel formats—allowing MixMate to be used for virtually any application. It accommodates micro test tubes, PCR plates, deepwell plates and MTPs. MixMate also features a touch vortex function with an innovative additional 2 second run timer to allow vortexing your next sample without restarting.

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

MixMate®



MixMate's unique 2DMix-Control technology mixes liquid in a very controlled orbital flow. The lack of chaotic splashing enables mixing without wetting the lid. Time-lapse photography of controlled mixing with MixMate: One well of a skirted Eppendorf® twin.tec PCR Plate 96 filled with 75 µL water with dye Ponceau 4R is shown without mixing and at 1,650 rpm mixing speed.

MixMate includes a patented vortex function that causes minimal hand-arm-vibration for ergonomic operation. Tests performed by an independent laboratory have shown that MixMate's vortex function transfers significantly less strain to the hand-arm region than a standard vortexer device. The vortex function also features a 2 second override for even more ergonomic operation—you don't need to press down the tube the entire time to activate the vortex.

	Plate type	96-well plates	384-well plates
Mixing of different buffers			
Buffer with detergent	PCR	15 s 1,800 rpm	45 s 2,800 rpm
Buffer without detergent	PCR	30 s 2,100 rpm	30 s 3,000 rpm
Buffer with high salt concentration	DWP	5 s 1,400 rpm	1 min 2,000 rpm
Buffer with DMSO	MTP	5 s 1,100 rpm	5 s 2,200 rpm
Mixing of viscous solutions			
Genomic-DNA	PCR	30 s 2,000 rpm	45 s 3,000 rpm
Gycerol solution (80%)	PCR	1 min 2,000 rpm	not tested
Resuspension of pellets			
Bacteria cell pellets	DWP	30 s 2,000 rpm	3 min 2,000 rpm

MixMate provides enough mixing power to handle the most challenging mixing tasks. Most samples are efficiently mixed within less than a minute independent of vessel geometry or sample properties. For more information see Eppendorf Application Notes 130 and 159.

- Samples are effectively mixed within 1 minute of mixing
- Samples are completely mixed after 1-5 minutes of mixing

Ordering information

Description	Catalog No.	List USD
MixMate		
with 3 tube holders (PCR 96, 0.5 mL and 1.5/2 mL), 120 V	022674200	$2,030.00
with 3 tube holders (PCR 96, 0.5 mL and 1.5/2 mL), 230 V	022674226	2,030.00
1-year Extended Warranty	901510652	235.00
Accessories		
Tube holder 24 x 0.5 mL	022674021	43.50
Tube holder 24 x 1.5/2 mL tubes	022674048	43.50
Tube holder PCR 96, for semi- and unskirted 96-well PCR plates, PCR strips and 0.2 mL tubes	022674005	43.50

Tests according to EN ISO 5349-1:2001 "Mechanical vibration – measurement and assessment of human exposure to hand-transmitted vibration – Part 1" have been performed by an independent laboratory.

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

Thermomixer®

Product features

- Thermomixer with fixed block for 24 x 1.5 mL tubes
- Dry incubation technology eliminates contamination risk associated with classical waterbath incubation
- Insulated thermoblock for ergonomic operation—you won't burn your fingers
- Optimized borehole design for precise fitting of the test tubes guarantees maximum temperature accuracy
- Whisper quiet operation to benefit the work environment
- Small footprint to fit on crowded lab benches
- ShortMix function for quick mixes
- Digital display for reproducible parameter selection
- Keypad design for easy cleaning
- Package includes an IsoTherm rack and a 0 °C cooling pack for 24 x 1.5/2 mL tubes (see page 126 for more info)
- 2-year warranty

epGreen® Packaged in 100% recyclable material; for more information on epGreen products, see pages 376 and 377.

Technical specifications

Description	Thermomixer
Maximum capacity	24 x 1.5 mL
Available thermoblocks	1
Mixing speed	300–1400 rpm
Mixing orbit	3 mm (1.5 mm radius)
Temperature setting range	1 °C–99 °C (1 °C increments)
Temperature control range	4 °C above RT–99 °C
Temperature accuracy	±1 °C between 20 °C and 45 °C ±2 °C below 20 °C and above 45 °C
Heating speed	5 °C/min
Cooling speed	N/A
Programs	N/A
Timer	N/A
Noise level	< 50 dB(A)
Power supply	120 V/50–60 Hz 230 V/50–60 Hz
Power requirement	max. 90 W
Dimensions (W x D x H)	6.5 x 9.4 x 5.7 in/ 16.5 x 24 x 14.5 cm
Weight	5.3 lb/2.4 kg

Description

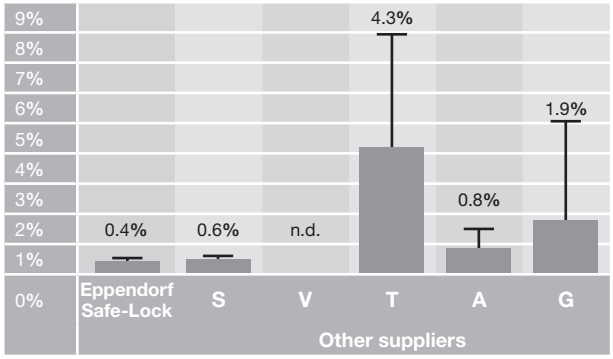
Small and ideally designed: Thermomixer is the perfect compact unit for incubation and mixing of 24 x 1.5 mL microcentrifuge tubes. Its impressive features include an extremely small footprint, a straightforward design and high stability—even at maximum mixing frequency.

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

Thermomixer®

Eppendorf® Thermomixer comes with a 24-place IsoRack for 1.5/2 mL tubes and a 0 °C cool pack. This system is ideal to cool down samples during reaction set-up or transportation. The IsoRack fits nicely onto the Thermomixer block allowing for easy loading and unloading of up to 24 samples.

Eppendorf Safe-Lock Tubes guarantee lowest evaporation rates during incubation. Intelligent tube design and Eppendorf's vast experience in precision molding guarantee a perfect fit of the tube lids to minimize sample evaporation. Whether you incubate your samples at high temperature or you use an Eppendorf tube for long-term storage, Eppendorf Safe-Lock tubes will protect your samples.



Evaporation in %. Evaporation tightness was tested by measuring the weight loss of tubes filled with 1 mL ethanol solution after a 1 h incubation at 70 °C. Shown are the mean values and standard deviation (n=24). Tubes from supplier V could not be measured as several tube lids popped open during the incubation step.

Ordering information

Description	Catalog No.	List USD
Thermomixer for 24 x 1.5 mL tubes		
with IsoTherm rack and 0 °C cool pack, 120 V	022670000	$2,590.00
with IsoTherm rack and 0 °C cool pack, 230 V	022670051	2,590.00
1-year Extended Warranty	901510542	300.00
Accessories		
IsoTherm rack and 0 °C cool pack for 24 x 1.5/2 mL tubes	022510240	47.00
IsoTherm rack and –21 °C cool pack for 24 x 1.5/2 mL tubes	022510258	47.00

Thermomixer® R

Product features

- Thermomixer R offers 10 interchangeable thermoblocks to cover tubes from 0.2 mL to 50 mL as well as plates and glass slides
- Wide temperature range and high temperature accuracy due to active heating and cooling capability
- Dry incubation technology eliminates contamination risk associated with classical waterbath incubation
- Insulated thermoblocks for ergonomic operation—you won't burn your fingers
- Optimized borehole design for precise fitting of the test tubes guarantees maximum temperature accuracy
- Whisper quiet operation to benefit the work environment
- Small footprint to fit on crowded lab benches
- Possibility to save an incubation program consisting of 2 incubation/mixing steps
- ShortMix function for quick mixes
- Interval mixing capability
- Selectable "time" and "temp" controls: programmed runs can start immediately or when preset temperature is reached
- Automatic thermoblock recognition properly sets speed and temperature ranges for each block
- Digital display for reproducible parameter selection
- Keypad design for easy cleaning
- RS-232 interface for remote control or integration into automated systems
- 2-year warranty

epGreen® Packaged in 100% recyclable material; for more information on epGreen products, see pages 376 and 377.

Technical specifications

Description	Thermomixer R
Maximum capacity	24 x 1.5/2 mL, 8 x 50 mL, 1 x DWP
Available thermoblocks	10
Mixing speed	300–1500 rpm
Mixing orbit	3 mm (1.5 mm radius)
Temperature setting range	1 °C–99 °C (1 °C increments)
Temperature control range	13 °C below RT–99 °C
Temperature accuracy	±0.5 °C between 20 °C and 45 °C ±2 °C below 20 °C and above 45 °C
Heating speed	5 °C/min
Cooling speed	2–3 °C/min at RT–99 °C 0.5–1 °C/min below RT
Programs	1 (with 2 incubation steps)
Timer	1 min to 99:59 h, with continuous mode
Noise level	< 50 dB(A)
Power supply	120 V/50–60 Hz 230 V/50–60 Hz
Power requirement	max. 90 W
Dimensions (W x D x H)	8.7 x 9.8 x 4.9 in/ 22 x 25 x 12.5 cm
Weight	7.0 lb/3.2 kg

Description

The Thermomixer R conveniently offers simultaneous mixing and temperature control. It meets even the highest demands for user-friendliness and flexibility: its counter-cooling ability provides efficient cooling; thereby greatly expanding both its temperature control functions and range of applications.

Ten different thermoblocks are available, all of which can be simply and quickly interchanged, to adapt the unit to daily and/or changing requirements in the laboratory. All blocks are fully insulated for safety when exchanging and completely surround sample tubes for even heating from the bottom of the tube all the way up to the top. Two freely selectable program sequences with incubating, mixing and rest phases, as well as subsequent cooling to 13 °C below room temperature, make everyday lab routines much easier.

Thermomixer® R accessories

Ordering information

Description			Catalog No.	List USD
Thermomixer R				
without thermoblock, 120 V			022670107	$3,350.00
without thermoblock, 230 V			022670158	3,350.00
1-year Extended Warranty			901510548	400.00
Thermoblocks and accessories	**Max. temp**	**Max. speed**		
Thermoblock 24 x 0.5 mL tubes, with IsoTherm rack and 0 °C cool pack	99 °C	1,500	022670506	670.00
IsoTherm rack and 0°C cool pack for 24 x 0.5 mL tubes			022510282	47.00
IsoTherm rack and -21°C cool pack for 24 x 0.5 mL tubes			022510291	47.00
Thermoblock 24 x 1.5 mL tubes, with IsoTherm rack and 0 °C cool pack	99 °C	1,400	022670522	670.00
Thermoblock 24 x 2.0 mL tubes, with IsoTherm rack and 0 °C cool pack	99 °C	1,400	022670549	670.00
IsoTherm rack and 0°C cool pack for 24 x 1.5/2 mL tubes			022510240	47.00
IsoTherm rack and -21°C cool pack for 24 x 1.5/2 mL tubes			022510258	47.00
Thermoblock 24 x 5 mL Falcon® tubes (diameter 11–11.9 mm, height 30–76 mm)	99 °C	1,400	022670581	670.00
Thermoblock 24 x cryotubes (diameter 12.5 mm, all base shapes)	99 °C	1,400	022670557	670.00
Thermoblock 8 x 15 mL conical tubes	99 °C	750	022670531	670.00
Thermoblock 4 x 50 mL conical tubes	99 °C	750	022670514	670.00
Thermoblock MTP and Deepwell plate, with lid for improved temperature accuracy	99 °C	1,400*	022670565	880.00
Adapter for 96-well PCR plates and 0.2 mL tubes, for use in Thermoblock MTP	99 °C	1,400	022670573	290.00
Thermoblock 4 x slides (slide dimension 76 x 26 x 1.2 mm), for hybridization experiments, includes reservoir pads for humidity control	99 °C	1,400	022670590	980.00
Thermoblock 4 x slides DC, for Eppendorf® DualChip microarray slides	70 °C	1,400	022670786	980.00

*With a load of ≥ 200 grams the maximum speed is 800 rpm.

ThermoStat plus

Product features

- ThermoStat plus offers 11 interchangeable thermoblocks to cover tubes from 0.2 mL to 50 mL as well as plates and glass slides
- Precise temperature control from –5 °C to 99 °C due to active heating and cooling capability
- Dry incubation technology eliminates contamination risk associated with classical waterbath incubation
- Insulated thermoblocks for ergonomic operation— you won't burn your fingers
- Optimized borehole design for precise fitting of the test tubes guarantees maximum temperature accuracy
- Whisper quiet operation to benefit the work environment
- Small footprint to fit on crowded lab benches
- Individual programming of up to 4 separate temperature and time phases and temperature ramps
- Digital display for reproducible parameter selection
- Keypad design for easy cleaning
- RS-232 interface for remote control or integration into automated systems
- 2-year warranty

epGreen® Packaged in 100% recyclable material; for more information on epGreen products, see pages 376 and 377.

Technical specifications

Description	ThermoStat plus
Maximum capacity	24 x 1.5/2 mL, 8 x 50 mL, 1 x DWP
Available thermoblocks	11
Mixing speed	N/A
Temperature setting range	1 °C–99 °C (1 °C increments)
Temperature control range	30 °C below RT–99 °C
Temperature accuracy	±1.0 °C at 0 °C ±0.5 °C at 37 °C ±1.0 °C at 90 °C
Heating speed	5 °C/min
Cooling speed	6 °C/min above 25 °C 1.5 °C/min below 25 °C
Programs	4
Timer	1 min to 99:59 h, with continuous mode
Noise level	< 50 dB(A)
Power supply	120 V/50–60 Hz 230 V/50–60 Hz
Power requirement	max. 75 W
Dimensions (W x D x H)	8.7 x 9.8 x 4.9 in/ 22 x 25 x 12.5 cm
Weight	11 lb/5 kg

Description

Convenient and accurate temperature control for all commonly used lab tubes is the concept behind our ThermoStat plus. The result is a compact benchtop thermostat with Peltier technology. Its most notable feature is its ability to maintain different temperature levels: it can heat up samples to 99 °C and also cool them down to as low as –5 °C.

Interchangeable thermoblocks ensure effective heat transfer and the flexibility to adapt the ThermoStat plus to your particular application. Operation is incredibly easy: simply select the temperature and press "Start" to initiate the timer. Both the temperature and run time can be programmed for special applications.

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

ThermoStat plus accessories

Ordering information

Description		Catalog No.	List USD
ThermoStat plus			
without thermoblock, 120–240 V		022670204	$2,485.00
1-year Extended Warranty		901510654	300.00
Thermoblocks and accessories	**Max. temp**		
Thermoblock 24 x 0.5 mL tubes, with IsoTherm rack and 0 °C cool pack	99 °C	022670506	670.00
IsoTherm rack and 0 °C cool pack for 24 x 0.5 mL tubes		022510282	47.00
IsoTherm rack and –21°C cool pack for 24 x 0.5 mL tubes		022510291	47.00
Thermoblock 24 x 1.5 mL tubes, with IsoTherm rack and 0 °C cool pack	99 °C	022670522	670.00
Thermoblock 24 x 2.0 mL tubes, with IsoTherm rack and 0 °C cool pack	99 °C	022670549	670.00
IsoTherm rack and 0°C cool pack for 24 x 1.5/2 mL tubes		022510240	47.00
IsoTherm rack and –21°C cool pack for 24 x 1.5/2 mL tubes		022510258	47.00
Thermoblock 24 x 5 mL Falcon® tubes (diameter 11–11.9 mm, height 30–76 mm)	99 °C	022670581	670.00
Thermoblock 24 x cryotubes (diameter 12.5 mm, all base shapes)	99 °C	022670557	670.00
Thermoblock 8 x 15 mL conical tubes	99 °C	022670531	670.00
Thermoblock 4 x 50 mL conical tubes	99 °C	022670514	670.00
Thermoblock MTP and Deepwell plate, with lid for improved temperature accuracy	99 °C	022670565	880.00
Adapter for 96-well PCR plates and 0.2 mL tubes, for use in Thermoblock MTP	99 °C	022670573	290.00
Thermoblock 4 x slides (slide dimension 76 x 26 x 1.2 mm), for hybridization experiments, includes reservoir pads for humidity control	99 °C	022670590	980.00
Thermoblock 4 x slides DC, for Eppendorf® DualChip microarray slides	70 °C	022670786	980.00
Thermoblock CombiBox, for various sizes of tubes and flasks (interior dimensions (W x D x H): 13.5 x 9 x 6 cm)	99 °C	022670603	880.00

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

Vacufuge® plus centrifugal vacuum concentrator

Product features

- Complete automatic centrifugal concentrator for drying multiple samples without cross contamination
- Accommodates tubes from 0.2 mL to 25 mL as well as MTP and PCR plates
- Narrow 32 cm width saves valuable bench space
- Motorless drive and sealed chamber for trouble-free operation
- Extremely quiet <50 db(A) operation—even with the pump on—to benefit the work environment
- Choice of three application modes (aqueous, alcohol or high vapor pressure) optimized to your sample solvent—reduces processing time up to 20%
- Choice of four heating levels (30 °C, 45 °C, 60 °C and ambient) allows safe and efficient concentration of a variety of samples
- Possibility to deactivate the centrifugation spin to operate the Vacufuge as desiccating chamber

Description

The Vacufuge plus quickly and efficiently concentrates DNA/RNA, nucleotides, proteins and other samples. Available in two system configurations:

- As a complete system with an integrated solvent-resistant PTFE vacuum pump
- As an upgradeable basic concentrator for connecting to an existing vacuum; power to external vacuum pumps can be automatically controlled using the AC receptacle in the rear of the concentrator

Technical specifications

Description	Vacufuge plus with pump	Vacufuge plus without pump
Speed	1,400 rpm (approx. 250 x *g*) (not adjustable)	
Vacuum pressure	20 hPa (20 mbar)	–
Number of rotors	14	
Brake on/off	Yes	
Centrifugation on/off	Yes	
Timer	1 min to 9:59 h with continuous mode	
Noise level	< 50 dB(A)	
Temperature control	30 °C, 45 °C, 60 °C and ambient	
Power supply	120 V/50–60 Hz	
Power requirement	max. 350 W	max. 150 W
Dimensions (W x D x H)	12.6 x 21 x 11.7 in/ 33 x 57.9 x 29 cm	12.6 x 14.5 x 9 in/ 33 x 37.2 x 23.1 cm
Weight without rotor	68.2 lb/31.5 kg	37.4 lb/16.5 kg

Ordering information

Description	Catalog No.	List USD
Vacufuge plus with integrated diaphragm pump (Complete system)		
without rotor, 120 V	022822993	$ 8,230.00
with 48 x 1.5/2 mL rotor, 120 V	022820109	8,980.00
with vacuum junction for connecting external devices to the pump, without rotor, 120 V	022820168	10,300.00
1-year Extended Warranty	901510672	1,080.00
Vacufuge plus without pump (Basic device)		
with 48 x 1.5/2 mL rotor, 120 V	022820001	4,660.00
1-year Extended Warranty	901510648	560.00
Accessories		
Kit for upgrading basic concentrator to the complete system[1]	022820206	7,000.00
External Power Cable[2]	022830110	105.00
External Vacuum Control Cable and Solenoid[3] 120 V version 230 V version	 022830112 022830104	 335.00 273.00
Rotor spacer, for stacking 1.5/2 mL (F-45-72-8) and 0.5 mL (F-45-48-11) rotors	022822101	53.00

[1] Incl. diaphragm pump with inner PTFE coating, emission condenser and two rails for connecting concentrator and pump.
[2] Attaches directly from the Basic concentrator to power an external vacuum pump (<400 Watts). Concentrator automatically powers on/off pump as needed for vacuum.
[3] Allows the Basic concentrator to control and turn on/off the incoming vacuum line. Powered solenoid attaches in-line with the vacuum line. For use with vacuum pumps >400 Watts.

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com

Rotors for Vacufuge® plus

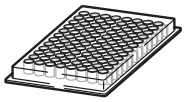
Rotor F-45-70-11

Rotor F-45-24-12

Rotor F-45-8-17

Swing-bucket rotor A-2-VC

Ordering information

Tube/Plate type	Rotor	Max. tube dimensions in mm (Ø x L)	Max. tube capacity in mL	Catalog No.	List USD
	A-2-VC	128 x 86 x 27	2 x MTP or skirted PCR plates 2 x Deepwell plates (DWP) (max. height = 27 mm)	022822241	$1,160.00
	Work tray, for use with semi-/unskirted PCR plates, PCR strips and 0.2 mL PCR tubes, set of 10			951010031	44.00
	CombiSlide® adapter, for use of glass slide, set of 2 (see page 177 for more details)			022638963	242.00
	F-45-72-8[2]	8 x 31	72 x 0.5 mL	022822080[2]	710.00
	F-45-70-11	11 x 41 11 x 47	70 x 1.5 mL 70 x 2.0 mL	022822047	710.00
	F-45-48-11[2]	11 x 41 11 x 47	48 x 1.5 mL 48 x 2.0 mL	022822004[2]	710.00
	F-45-24-12	12 x 67–100[1,3]	24 x 6.0/8.0 mL	022822144	710.00
	F-50-8-16	16 x 105–120[1]	8 x 15/20 mL	022822233	710.00
	F-50-8-18	18 x 105–128[1]	8 x 15/20 mL	022822179	710.00
	F-45-8-17	17 x 116–123[1]	8 x 15 mL Falcon® tubes	022822225	710.00
	F-40-36-12	12 x 32	36 x 1.5 mL	022822209	710.00
	F-45-36-15	15 x 45–48[1]	36 x 2–4 mL	022822128	710.00
	F-45-16-20	20 x 42–55[1]	16 x 6.5/10 mL	022822136	710.00
	F-40-18-19	19 x 66	18 x 10 mL	022822161	710.00
	F-45-12-31	31 x 55	12 x 20 mL	022822217	710.00
	F-35-8-24	24 x 86–105[1]	8 x 25 mL	022822187	710.00

[1] Min./max. tube length.
[2] Rotor is stackable for double capacity.
[3] Tube length =75 mm: max capacity 24 tubes
Tube length >75 mm: max capacity 12 tubes

800-220-5732 Email info@LsdCorp.com www.LsdCorp.com