

# It's your sample – Eppendorf consumables!



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# **Original Eppendorf Tubes**

For more than 40 years, the "Eppendorf tip" has proven itself in day-to-day use in the lab - around the world! The increasing sophistication of analytical techniques over the years mean that today's Eppendorf Tubes must be of higher quality than before.

## **Top-quality material**

All Eppendorf Tubes are made of polypropylene (PP) which meets international purity criteria - for example, the specifications of the BGVV (German regulation for food stuff) for the use of plastics for food handling [1] and the requirements of the FDA. The dyes used for our consumables are free of organic substances and substances containing heavy metals. Quality control ensures that the tubes are checked several times a day for such things as vapor tightness. lidopening force, force required to pierce the lid, wall strength and centrifugal stability.

## Customized purity standards

In correlation with the advanced development of analytical methods. requirements for the purity of consumables has also increased.

For instance, PCR would require a different level of plastic purity than cell culture. Eppendorf Tubes are manufactured in three different quality classes to provide a customized solution for any application: Eppendorf Quality. PCR clean and Biopur®. These products, bearing the seal of Eppendorf quality, meet all the requirements for reliable and easy-to-use consumables. In addition, the products in the PCR clean class are also all free from human DNA. DNase, RNase and PCR inhibitors. Eppendorf Biopur® products are guaranteed sterile, pyrogen-free, RNasefree. DNA-free and ATP-free.

As well as these high Eppendorf quality standards, we also certify compliance with the European Directive on IvD (98/79/EC) for the products listed below. By meeting this standard. Eppendorf offers medical laboratories, in

particular, a high degree of reliability for product safety, that guarantees maximum quality. purity and reproducibility for analyses.

lvD
Continuous quality
control
Especially suitable
for diagnostic
laboratories
Pipette tips
Tubes
Combitips plus

# Purity standards

	Eppendorf Quality	Eppendorf PCR clean	Eppendorf Biopur®
	Continuous	Testing of production	Batch testing
	quality control	batches (certified)	(certified)
	Function,	Free of human DNA,	Sterile, free of
	liquid-tightness,	DNase, RNase and	pyrogens, RNase,
	precision	PCR inhibitors	DNA and ATP
	epTIPS Standard	epTIPS Reloads	epTIPS Racks
	epTIPS Reloads	epTIPS Filter (PCR	epTIPS Singles
	epTIPS Box	clean and sterile)	Tubes
	epTIPS Set	0.2/0.5 ml PCR tubes	Combitips <sup>®</sup> plus
	Tubes	PCR plates	
	Combitips <sup>®</sup> plus	Capping aids	
		Reaction tubes	
		certified	
Purity standard		PCR	ADDATE OF ADD
Requirements		crean	
Defined flow properties <sup>1)</sup>	•	•	•
Low wettability	•	•	•
High chemical resistance	•	•	•
High thermal stability		•	•
Precise mold	•	•	•
ATP-free			● <sup>2</sup>
DNA-free (Ph.Eur./USP)		• 1	2
DNase-free		1	•
Individually blister packed			<b>3</b>
Free of human DNA		•	•
Free of PCR inhibitors		• 1	•
Pyrogen-free			2
RNase-free		• 1	2
Sterile			2
	1 Certified; certificate included with product	<sup>2</sup> Certified; batch-specific certificate available at www.eppendorf.com	<sup>a</sup> Tips also available in boxes/racks

# Technical specifications

# Safe-Lock Eppendorf Tubes

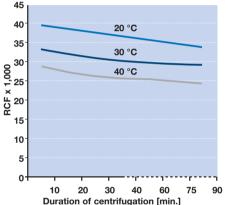
## All Eppendorf standard reaction tubes meet the following quality standards:

- Easy one-handed, multiple opening and closing
- High centrifugal stability across a broad temperature range (see nomogram)\*
- Low wettability
- High chemical resistance [2]\*
- Autoclavable when open (121 °C, 20 min.)
- Compatible with micropestle (see p. 13)
- \*See Appendix for further information.



**Dr. Diana Ludolfs, Bernhardt Nocht Institute Hamburg:** The seal on Safe-Lock Eppendorf tubes is extremely tight thanks to the special lid-locking mechanism.

## Nomogram for standard reaction tube 3810X; 1.5 ml

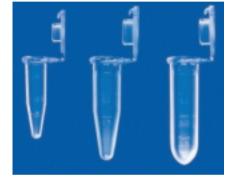


Test conditions:

3810X tubes filled with diluted NaCl solution (concentration 1.2 mg/ml) were rotated in an Eppendorf Centrifuge 5417 R (fixed-angle rotor FA 45-24-11, centrifugable at up to 25,000 x g). To simulate higher rpms and/or greater forces on the tubes, K<sub>2</sub>CO<sub>3</sub> and CsCl solutions of various concentrations were used (between 1.4 and 1.9). The 2.0 ml Safe-Lock tubes display a similar response to centrifugation.

## Product features

- A small hook on the hinged lid clips around the rim of the test tube and prevents the tube from opening accidentally (e.g. during heating)
- Frosted writing surface
- A needle placed through the thin membrane in the middle of the lid allows aerosol-free removal of biohazardous substances.
- Graduation scale
- Safe-Lock Eppendorf Tubes are also available in Biopur<sup>®</sup>, PCR clean and LoBind quality.



Article	Order no.	Order no.	Order no.
Safe-Lock			
Eppendorf	per 500 pcs.	per 1,000 pcs.	per 1,000 pcs.
Tubes	0.5 ml	1.5 ml	2.0 ml
colorless	0030 121.023	0030 120.086	0030 120.094
Assortment of yellow, red,			
blue, green, colorless	0030 121.708	0030 121.694	0030 121.686
Yellow	0030 121.112	0030 120.159	0030 120.205
Red	0030 121.120	0030 120.167	0030 120.213
Blue	0030 121.139	0030 120.175	0030 120.221
Green	0030 121.147	0030 120.183	0030 120.230
Amber (light protection)	0030 121.155	0030 120.191	0030 120.248

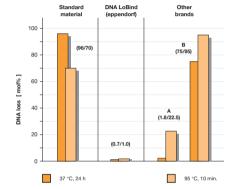
# Protein LoBind Tubes

certified

# DNA/RNA LoBind Tubes

## Product features

- Maximum recovery of DNA/RNA, less than 1% loss at low concentrations under critical conditions (high salt, short DNA fragments (< 150 bp))</li>
- Free of surface coating, e.g. silicone
- Free of DNA, DNase, RNase and PCR inhibitors
- Special polypropylene type, manufactured under optimized processing conditions
- High degree of transparency



Results: DNA concentration 0.2 ng/µl

## Test conditions:

DNA (130 bp) was labeled with  $^{\rm s2}P$  on the 5' end and dissolved in 2.5 M NaCl/TE buffer, pH 7.5. The solution (0.2 ng/µl) was incubated in tubes at 37 °C for 24 h or at 95 °C for 10 min. Following removal of the solutions, the radioactivity of the empty tubes was measured and recorded.

# •

PCR clean

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For further information, www.myliquidtreasures.com

## Ordering information

Article	Order no.
Safe-Lock, DNA/RNA LoBind Tubes, PCR clean	
0.5 ml Safe-Lock, 100 pieces	0030 108.035
1.5 ml Safe-Lock, 100 pieces	0030 108.051
2.0 ml Safe-Lock, 100 pieces	0030 108.078

## **Product features**

- Minimum protein loss (less than 3% BSA, 1 µg/ml)
- Free of surface coating, e.g. silicone
- Free of DNA, DNase, RNase and PCR inhibitors (PCR clean)
- Special type of polypropylene manufactured under optimized processing conditions
- High degree of transparency



Results: Protein concentration 1 µg/ml Standard Other Protein LoBind brands material (eppendorf) 20 С (17/14)18 (15/12) 16 14 12 10 (5/3) 6 (2.0/1.2) (1.3/0.6) After 1 time rinsing Without rinsing

## Test conditions:

With <sup>131</sup>I-labeled BSA, Tris/HCI, pH 7.5, was dissolved in a solution of 0.1% NaCI and incubated at 20 °C for 24 h in the examined tubes. The solutions were then removed and the tubes filled with the above solution without BSA. The radioactivity of the tubes and the solution were then measured. The tubes were rinsed and the radioactivity of the empty tubes measured and recorded.

Article	Order no.
Safe-Lock, Protein LoBind Tubes, PCR clean	
0.5 ml, 250 pieces	0030 108.094
1.5 ml, 250 pieces	0030 108.116
2.0 ml, 250 pieces	0030 108.132

# Biopur<sup>®</sup> tubes

# PCR clean tubes

ertifien

PCR

clean

## Product features

- Sterile
- Free of pyrogen, RNase, DNA and ATP
- Monitored and certified by an external lab
- Individually blistered consumable product for effective protection against follow-up contamination





Individual batch/lot certificates can be downloaded at www.eppendorf.de

# Ms. Joh-Oh Kim, University of Munich Hospital, Grosshadern:

Thanks to the excellent lockable lids, Eppendorf Tubes are reliable and versatile.

## Ordering information

Article	Order no.
Biopur <sup>®</sup> Safe-Lock tubes	
0.5 ml, individually sealed, 50 pieces	0030 121.570
1.5 ml, individually sealed, 100 pieces	0030 121.589
2.0 ml, individually sealed, 100 pieces	0030 121.597

## Product features

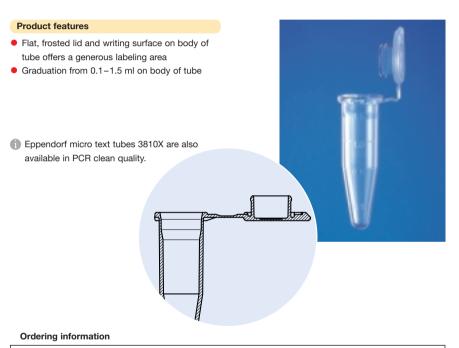
- Free of human DNA and PCR inhibitors
- Free of DNase and RNase
- Certificate available upon request
- For further information, see www.eppendorf.com/pcrclean



Article	Order no.	Order no.	Order no.
	500 pieces	1,000 pieces	1,000 pieces
	0.5 ml	1.5 ml	2.0 ml
Safe-Lock micro test tubes			
PCR clean			
Colorless	0030 123.301	0030 123.328	0030 123.344
Micro test tubes 3810X			
PCR clean			
Colorless		0030 125.215	



# Standard tube 3810X



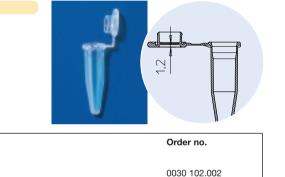
Article	Order no.
Micro test tube 3810X	
1.5 ml, 1,000 pieces	
Colorless	0030 125.150
Blue	0030 125.177
Yellow	0030 125.207
Green	0030 125.185
Red	0030 125.193

# Standard tube 3810 Micropestle

## Standard micro test tube 3810

## Product features

- Ideal for robots, lid is easy to penetrate
- Lower section in lid, small lid area



Tube 3810 1,000 pieces

Article

Ordering information

## Micropestle

## **Product features**

- For resuspending pellets in 1.5 to 2.0 ml test tubes
- Autoclavable (121 °C, 20 min.)



Article	Order no.
Micropestle, for resuspending pellets in 1.5–2.0 ml test tubes,	
Sets of 10	0030 120.973

# Eppendorf Lid<sub>Bac</sub>

## **Product features**

- Tailor-made preparation of culture samples now possible in ml-scale
- No change in procedure but much easier to handle (cultivation and extraction in the same tube)
- Suitable for freeze-drying and general drying (incubation in vacuum)
- No sterilization of glass equipment
- Ideal, space-saving combinations with Eppendorf Thermomixer comfort as incubator



For applications and further information, see www.eppendorf.com/lidbac

# Original Eppendorf tips

## A pipette is only as good as its tip

Only when using perfectly manufactured pipette tips can the precision of modern pipettes be fully exploited. With this generation of original Eppendorf pipette tips, you can make even better use of this potential. The epTIPS – **T**otally Integrated **P**ipetting **S**ystem – have been perfectly matched to Eppendorf pipettes. This results in consistently reduced tip attachment and ejection forces, while ensuring complete sealing. Of course, epTIPS offer benefits when used with pipettes from other manufacturers.

## A production philosophy without compromise

In the serial production of epTIPS, strict tolerances set at the boundary of measurable limits is our ideal quality

standard. Since we operate our own production facilities, we can maintain the same high standards in the selection and processing of plastic materials. Ideal wetting properties, high transparency and specially certified purity levels are the visible expression of this production philosophy. The perfect matching of every tip specifically to every Eppendorf pipette guarantees the maximum precision and reliability you can expect from Eppendorf. Eppendorf pipette tips in combination with Eppendorf pipettes satisfy all the requirements of DIN 12 650-2 as well as the imminent standard EN ISO 8655-2.

For further information, see www.eptips.com

## **Technical specifications**

## Eppendorf purity standards

A constantly growing range of applications demands different purity levels with consistently high quality of all products used. Our product range of consumables features three different purity levels: **Eppendorf Quality, Eppendorf Biopur** and, specially designed for the high purity requirements of molecular biology labs, **PCR clean**.



For an overview of Eppendorf purity standards, see page 5.

For a complete list of chemical stability properties, see www.eppendorf.com (Support, Applications) under Application No. 5 "Chemical Stability No. 1".

## Ordering information

Article	Order no.
Eppendorf <sup>®</sup> Lid <sub>Bac</sub> , contains 100	
Safe-Lock 2.0 ml tubes and 100 membrane lids	0030 099.702

OD<sub>acc</sub>

1.800

1.600

1,400

1.200

# epTIPS Standard



## **Product features**

- epTIPS Standard are original Eppendorf high-quality pipette tips at an attractive price
- Packed in resealable bags
- Available in all tip sizes from 10 µl to 10 ml
- 200 µl, 300 µl and 1,000 µl tips are color-coded yellow or blue



# epTIPS Reloads, Box, Set



## **Product features**

- The practical refill system, with trays sorted according to tip size, is packaged either dual-sided or in a 5 stack form
- Contamination-free transfer of trays to the working box
- System optimized for use with multichannel pipettes
- Tips can be used directly from the refill package
- Drastic reduction in waste compared to disposable racks
- All components 100% recyclable
- epTIPS Reloads are available in two purity levels: Eppendorf Quality and PCR clean

PhysioCare

concept

eppendorf





## **Ordering information**

See next page.

Article		Order no.
epTIPS Standard		
<b>0.1–10 μl,</b> 34 mm	2 bags of 500 tips = 1,000 tips	0030 000.811
<b>0.1–20 μl,</b> 40 mm	2 bags of 500 tips = 1,000 tips	0030 000.838
<b>0.5–20 μl L,</b> 46 mm	2 bags of 500 tips = 1,000 tips	0030 000.854
<b>2–200 μl,</b> 53 mm	2 bags of 500 tips = 1,000 tips	0030 000.870
<b>20–300 μl,</b> 55 mm	2 bags of 500 tips = 1,000 tips	0030 000.897
<b>50–1,000 μl,</b> 71 mm	2 bags of 500 tips = 1,000 tips	0030 000.919
<b>50–1,250 μl,</b> 76 mm	2 bags of 500 tips = 1,000 tips	0030 000.935
<b>500–2,500 μl,</b> 115 mm	5 bags of 100 tips = 500 tips	0030 000.951
<b>100–5,000 μl,</b> 120 mm	5 bags of 100 tips = 500 tips	0030 000.978
<b>1–10 ml,</b> 165 mm	2 bags of 100 tips = 200 tips	0030 000.765
<b>1–10 ml L,</b> 243 mm	2 bags of 100 tips = 200 tips	0030 000.781

# epTIPS Reloads, Box, Set

## Ordering information

Article		Order no.
<b>0.1–10 μl,</b> 34 mm	10 trays of 96 tips = 960 tips Reloads, PCR clean, 10 trays of 96 tips = 960 tips Box, 1 reusable box incl. 96 tips Set, 1 reusable box incl. 5 trays of 96 tips	0030 073.363 0030 073.746 0030 073.002 0030 073.207
<b>0.1–20 μl,</b> 40 mm	10 trays of 96 tips = 960 tips Reloads, PCR clean, 10 trays of 96 tips = 960 tips Box, 1 reusable box incl. 96 tips Set, 1 reusable box incl. 5 trays of 96 tips	0030 073.380 0030 073.762 0030 073.029 0030 073.223
<b>0.5–20 μΙ L,</b> 46 mm	10 trays of 96 tips = 960 tips Reloads, PCR clean, 10 trays of 96 tips = 960 tips Box, 1 reusable box incl. 96 tips Set, 1 reusable box incl. 5 trays of 96 tips	0030 073.401 0030 073.789 0030 073.045 0030 073.240
<b>2–200 μl,</b> 53 mm	10 trays of 96 tips = 960 tips Reloads, PCR clean, 10 trays of 96 tips = 960 tips Box, 1 reusable box incl. 96 tips Set, 1 reusable box incl. 5 trays of 96 tips	0030 073.428 0030 073.800 0030 073.061 0030 073.266
<b>20–300 μl,</b> 55 mm	10 trays of 96 tips = 960 tips Reloads, PCR clean, 10 trays of 96 tips = 960 tips Box, 1 reusable box incl. 96 tips Set, 1 reusable box incl. 5 trays of 96 tips	0030 073.444 0030 073.827 0030 073.088 0030 073.282
<b>50–1,000 μl,</b> 71 mm	10 trays of 96 tips = 960 tips Reloads, PCR clean, 10 trays of 96 tips = 960 tips Box, 1 reusable box incl. 96 tips Set, 1 reusable box incl. 5 trays of 96 tips	0030 073.460 0030 073.843 0030 073.100 0030 073.304
<b>50–1,250 μl,</b> 76 mm	10 trays of 96 tips = 960 tips Reloads, PCR clean, 10 trays of 96 tips = 960 tips Box, 1 reusable box incl. 96 tips Set, 1 reusable box incl. 5 trays of 96 tips	0030 073.487 0030 073.860 0030 073.126 0030 073.320
<b>500–2,500 μl,</b> 115 mm	10 trays of 48 tips = 480 tips Reloads, PCR clean, 10 trays of 48 tips = 480 tips Box, 1 reusable box incl. 48 tips Set, 1 reusable box incl. 5 trays of 48 tips	0030 073.509 0030 073.886 0030 073.142 0030 073.347
<b>100–5,000 μl,</b> 120 mm	Box, 1 reusable box incl. 24 tips	0030 073.169

# epTIPS Racks



## **Product features**

- Eppendorf Biopur pipette tips provide maximum biological purity, i.e. guaranteed sterile, pyrogenfree, RNase-free, DNA-free and ATP-free (see page 5), thus satisfying the most stringent demands in medicine, the pharmaceutical and food industries, molecular biology and cell technology
- Continuous control of each batch by an independent laboratory
- Batch-specific certificates available on the internet at www.eppendorf.com
- Packed in racks of 96, 48 or 24 tips



Article		Order no.
epTIPS Racks, Eppend	lorf Biopur	
<b>0.1–20 μl,</b> 40 mm	40 mm 5 racks of 96 tips = 480 tips	0030 075.005
<b>2–200 μl,</b> 53 mm	53 mm 5 racks of 96 tips = 480 tips	0030 075.021
<b>20–300 μl,</b> 55 mm	55 mm 5 racks of 96 tips = 480 tips	0030 075.048
<b>50–1,000 μl,</b> 71 mm	71 mm 5 racks of 96 tips = 480 tips	0030 075.064
<b>50–1,250 μl,</b> 76 mm	76 mm 5 racks of 96 tips = 480 tips	0030 075.080
<b>500–2,500 μl,</b> 115 mm	115 mm 5 racks of 48 tips = 240 tips	0030 075.102
<b>1–10 ml,</b> 165 mm	5 racks of 24 tips = 120 tips	0030 075.145

# epTIPS Singles



## **Product features**

- Eppendorf Biopur pipette tips, individually wrapped in blister packs
- Batch number and expiration date on each blister pack
- Continuous control of each batch by an independent laboratory
- Batch-specific certificates available on the internet at www.eppendorf.com



## Ordering information

Article		Order no.
epTIPS Singles, Epp	endorf Biopur	
<b>0.1–20 μl,</b> 40 mm	100 tips, individually packaged	0030 010.019
<b>2–200 μl,</b> 53 mm	100 tips, individually packaged	0030 010.035
<b>50–1,000 μl,</b> 71 mm	100 tips, individually packaged	0030 010.051

Grosshadern:

Ms. Anja Trapp, University of Munich Hospital,

Eppendorf pipette tips require less force for

attachment and ejection forces.

# epTIPS Filter



## **Product features**

- Pipette tips with integrated filter made of hydrophobic polyethylene without "self-sealing" additives
- All filter tips are sterile (to USP, DAB, Ph. Eur. standards) and PCR clean (free of human DNA, DNase, RNase and PCR inhibitors)
- Production batch-specific certificates available upon request
- Packed in racks of 96 tips
- If filter becomes wet as a result of incorrect pipetting, it does not swell up and the sample can easily be recovered
- Tor further information, see *www.eppendorf.com/pcrclean*



Article		Order no.
epTIPS Filter, PCR cle	ean and sterile	
0.1–10 µl S, 34 mm	10 racks of 96 tips = 960 tips	0030 077.008
0.1–10 µl M, 40 mm	10 racks of 96 tips = 960 tips	0030 077.024
0.5–10 µl L, 46 mm	10 racks of 96 tips = 960 tips	0030 077.040
<b>2–20 μl,</b> 53 mm	10 racks of 96 tips = 960 tips	0030 077.148
<b>2–100 μl,</b> 53 mm	10 racks of 96 tips = 960 tips	0030 077.067
<b>20–300 μl,</b> 55 mm	10 racks of 96 tips = 960 tips	0030 077.083
<b>50–1,000 μl,</b> 76 mm	10 racks of 96 tips = 960 tips	0030 077.105
1–10 ml L, 243 mm	100 tips, individually packaged	0030 077.164



# PerfectPure tips

**Eppendorf's PerfectPure tips** are pipette tips with a flow-through matrix fixed inside the tip outlets. The matrix can function in a wide variety of ways. For instance, a PerfectPure tip can be filled with chromatographic material, and antibodies or other affined reagents and even enzymes can be linked to the matrix. The range of applications is virtually endless: PerfectPure tips are an innovative, high-quality tool for any areas where microliter quantities of valuable samples are purified, concentrated or processed. As with all of its products, Eppendorf has focused especially on the quality, high sensitivity, specificities and excellent reproducibility of experimental results in the development and manufacturing of PerfectPure tips. As the first product in this new product range, Eppendorf introduces the PerfectPure C-18 tip for preparing peptide samples for mass spectrometry.

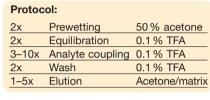


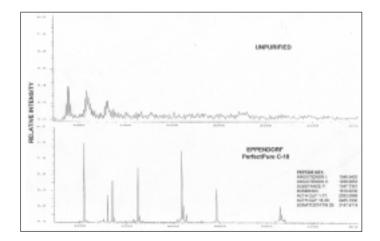
# PerfectPure C-18 tips

## Product features

- Desalts, purifies and concentrates peptide samples for mass spectrometry analyses
- 10 µl pipette tips, functionalized with a flow-through C-18 matrix
- Superior sensitivity supported by optimized products and protocols
  Very good reproducibility thanks to innovative

manufacturing technology (patent pending)





Article	Order no.
PerfectPure C-18 tip, 8 tips	0030 008.421
PerfectPure C-18 tip, 96 tips	0030 008.405
PerfectPure C-18 tip, 960 tips	0030 008.413

# Deepwell plates 96, 1.2 ml and 2.2 ml

## **Product features**

- Ideal plate for:
- Cell culture
- Reaction volumes of up to 1.2 ml or 2.2 mlStorage of samples and transport
- Round well base facilitates recovery of samples
- Compatible with automated systems
- Sealable with self-adhesive seal, heat-sealing or with autoclavable Deepwell mat 96
- Autoclavable (121 °C, 20 min.)



Eppendorf plates articles are made of clean-production polypropylene under clean-room conditions (Class K 100,000) and have been tested to ensure the absence of contaminants. These products meet SBS recommendations to facilitate automated handling.

## Ordering information

Article	Order no.
Deepwell plate 96, 1.2 ml, 50 pieces	0030 127.544
Deepwell mat 96, 1.2 ml, 50 pieces	0030 127.552
Deepwell plate 96, 2.2 ml, 50 pieces	0030 127.560
Deepwell mat 96, 2.2 ml, 50 pieces	0030 127.579

# Tube rack (multifunctional) Tube holder 3821

## Tube rack (multifunctional)

## Product features

- For 24 0.5 ml or 1.5 2.0 ml reaction tubes
- Robust coupling mechanism between the individual racks
- Non-slip stand, stackable
- Autoclavable, UV-resistant, labeling surfaces
- Suitable for use in water baths



## Ordering information

Article	Order no.
Tube rack, for 0.5 ml tubes	0030 123.107
Tube rack, for 1.5–2.0 ml tubes	0030 123.115

## Tube holder 3821

## **Product features**

- For 20 reaction tubes 1.5-2.0 ml
- Numbered bores
- Attractive price



Article	Order no.
Holder 3821, for Eppendorf tubes 3821	3821 000.008

# Quality standards

# twin.tec PCR plates

All Eppendorf PCR plastic products satisfy the purity and quality standard of PCR clean. They are certified free of human DNA, DNase, RNase and PCR inhibitors\*. Tubes and wells of PCR plates are made of clean-production polypropylene. Polypropylene gives the wells an inert, non-wetting surface that prevents DNA, RNA and enzymes from binding and improves recovery even when working with the most minute volumes. This provides a much higher product yield than with polycarbonate equipment and reduces the risk of biological contamination.

\*Certificates or testing procedures and further information available upon request.



## **Product features**

- Excellent rigidity, minimal bending of skirts
- Reduced well-to-well tolerance
- Extremely thin walls for optimum heat transfer
- Diagonalized corner and alphanumeric orientation system





See the twin.tec brochure for complete information.

Article	Ordering No.
twin.tec PCR plate 96, skirted (wells colorless) Colorless, 25 pieces	0030 128.648
Yellow, 25 pieces Green, 25 pieces Blue, 25 pieces	0030 128.656 0030 128.664 0030 128.672
Red, 25 pieces <b>twin.tec PCR plate 96, skirted (wells black)</b> Yellow, 25 pieces (not pictured)	0030 128.680
twin.tec PCR plate 96, semi-skirted (wells colorless) Colorless, 25 pieces Yellow, 25 pieces Green, 25 pieces Blue, 25 pieces Red, 25 pieces	0030 128.575 0030 128.583 0030 128.591 0030 128.605 0030 128.613
twin.tec PCR plate 384, (wells colorless) Colorless, 25 pieces Yellow, 25 pieces Green, 25 pieces Blue, 25 pieces Red, 25 pieces	0030 128.508 0030 128.516 0030 128.524 0030 128.532 0030 128.540

# 0.2 ml and 0.5 ml PCR tubes

Contamination shield

prevents contact with

the inner lid surface

Writing surface

## **Product features**

- Special space-saving lid design
- For maximum capacity in the universal blocks of Eppendorf Mastercyclers
- For all standard thermocyclers with 0.5 ml block format
- High transparency, even at bottom of tube
- Tight sealing
- Easy to open without contamination
- For use with all standard thermocyclers with 0.2 ml block format

Space-saving lid geometry enables arrangement in the 96-well micro test plate format



0.5 ml



0.2 ml

approx.

90 °C

Defined lid position

due to special hinge

## Ordering information

Article	Order no.
0.5 ml PCR tubes, thin-walled with hinged lid, colorless, 500 pieces	0030 124.502
0.2 ml PCR tubes, colorless, 1,000 pieces	0030 124.332
5-tube strip for 0.2 ml PCR tubes, colorless, pack of 125 (= 625 tubes)	0030 124.340
8-tube strip for 0.2 ml PCR tubes, colorless, pack of 120 (= 960 tubes)	0030 124.359

# Work trays and frames PCR rack

## Work trays and frames

## **Product features**

- 2-part rack for 0.2 ml PCR tubes, consisting of work tray and frame
- Convenient: All tubes can be directly transferred into a 96-well cycler with the removable work tray
- Autoclavable (121 °C, 20 min.)



## Ordering information

Article	Order no.
Work trays for 96 0.2 ml PCR tubes, set of 10	0030 124.235
Frame for work tray, set of 5 (together with tray = rack)	0030 124.243

## PCR rack

## **Product features**

- Stand platform for handling and storing tubes and plates
- For 0.2 ml, 0.3 ml, 0.5 ml tubes and 96 PCR plates
- Stackable
- Storage down to –90 °C
- Autoclavable (121 °C, 20 min.)



## Ordering information

Article	Order no.
PCR rack, 10 pieces	0030 127.455

28

# Heat-sealing materials

## Product features

• Hermetic sealing of PCR plates, ideal for low reaction volumes



			CONTRACTOR OF CONTRACT
Name	Heat-sealing film	Peel-it-lite	Pierce-it-lite
Properties	Optically clear polyester/ polypropylene laminate Extremely stable sealing option – cannot be removed or pierced	Laminated aluminum foil Easily removable	Laminated aluminum foil Easily pierced – even with multi-channel pipettes No glue residue on the pipette tips
Seal integrity	80 °C-140 °C	-200 °C – 120 °C	-80 °C-120 °C
Sealing time with Eppendorf Heat Sealer	1-2 sec.	2-4 sec.	2-3 sec.
Weldable materials	Polypropylene	Polypropylene Polytehylene	Polypropylene
Special applications	Colorimetric applications Fluorescence applications incl. real-time PCR Storage of hazardous samples	Storage at extremely low temperatures (-200 °C) Foil can be removed at -80 °C Plate is resealable (after removal of the foil through heat-sealing with new foil)	PCR with water bath cyclers Storage and transport of samples

## Ordering information

Article	Order no.
Heat-sealing film, 10 x 10 pcs.	0030 127.650
Peel-it-lite, 100 pcs.	0030 127.668
Pierce-it-lite, 100 pcs.	0030 127.676
Foil stripper	0030 127.641

# PCR film and PCR foil (self-adhesive)

## Product features

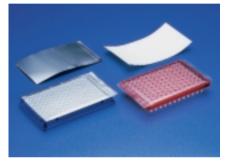
- Effective adhesive sealing prevents evaporation loss during reaction and storage
- Removal of film from the plate with no residue PCR film

## PCR film

• Sample can be visually monitored through the transparent film

## PCR foil

- Easily pierced
- No sticking of the pipette tip (ideal for automated systems)





Article	Order no.
PCR film, (self-adhesive) 100 pcs.	0030 127.480
PCR foil, (self-adhesive) 100 pcs.	0030 127.471

# Sealing mat 96

# Cap strips

## **Product features**

- Alternative sealing method for 96-well plates
- Multiple use
- Autoclavable (121 °C, 20 min.)







Ms. Tatjana Nonenmacher, University of Regensburg Hospital: The Eppendorf twin.tec plates are ideally suited for our robots. The plates are available in various colors, making it very easy to differentiate between various reactions.

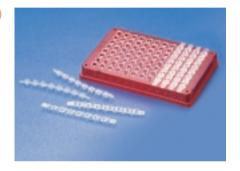
**Order no.** 0030 127.463

Ordering information

Article	
Sealing mat 96, 5 pcs.	

## **Product features**

- Easy and rapid sealing of Eppendorf twin.tec plates and other standard PCR plates, ideal interface with capping aids
- Easy to remove using extension at end of strip
- Autoclavable (121 °C, 20 min.)





Article	Order no.
Cap strip, (strips of 8), 25 x 12 pcs.	0030 127.498

# *In situ* frames

# PCR cooler

## **Product features**

- Gas-tight reaction chamber for:
- in situ PCR
- in situ hybridization
- Microarraying
- Withstands up to 97 °C
- Fits standard microscope slides
- Frame and coverslip can be removed without leaving a residue

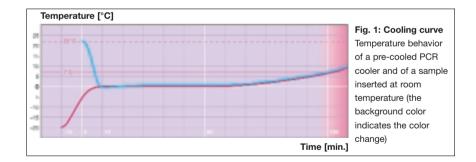




## **Product features**

- Reliable cooling of sensitive samples to 0 °C
- PCR cooler changes colour when temperature exceeds 7 °C
- Samples prevented from freezing
- Easy to use, space-saving and free of contamination because no need for water
- Universal 96-well format for 0.2 ml and 0.5 ml PCR tubes: Strip, plate and individual tubes
- Available in two colors





## Ordering information

Article	Dimensions (mm)	Order no.
<i>In situ</i> frame, 25 µl, 100 pcs.	17 x 17	0030 127.501
In situ frame, 65 µl, 100 pcs.	24 x 24	0030 127.510
<i>In situ</i> frame, 125 µl, 100 pcs.	25 x 36	0030 127.528
<i>In situ</i> frame, 300 µl, 100 pcs.	27 x 68	0030 127.536

Article	Order no.
PCR cooler, 0.2 ml starter set (1 x pink, 1 x blue)	3881 000.015
PCR cooler, 0.2 ml pink	3881 000.023
PCR cooler, 0.2 ml blue	3881 000.031

# Combitips

# UVette\* (disposable cuvette for UV/VIS)

## Product features

- Ideal system component for all Multipettes and EDOS
- Large selection of volumes with 9 Combitip plus sizes
- 20 different dispensing volumes per Combitip plus size
- Reliable results guaranteed by positive displacement
- Fine tip of Combitip plus guarantees exact dispensing without additional pipette tip
- Available as standard and Eppendorf Biopur<sup>®</sup> product

## Ordering information

Article	Order no.	Order no.
Eppendorf Combitips <sup>®</sup> plus	standard	Biopur
	100 pcs.	individually wrapped, 100 pcs.
0.1 ml	0030 069.200	0030 069.404
0.2 ml	0030 069.218	
0.5 ml	0030 069.226	
1.0 ml	0030 069.234	
2.5 ml	0030 069.242	
5.0 ml	0030 069.250	
10 ml	0030 069.269	
25 ml	0030 069.293	
50 ml	0030 069.277	0030 069.471
25 ml adapter standard (1 piece), marine blue	0030 069.528	
50 ml adapter standard (1 piece), anthracite	0030 069.161	
25 ml adapter Eppendorf Biopur (set of 7)		0030 069.498
50 ml adapter Eppendorf Biopur (set of 7)		0030 069.480
Variety pack Combitips® plus, standard, 5 pieces of		1.600
each size plus one 50 ml and one 25 ml adapter	0030 069.285	and a
Combilong, (2 pcs.) aspirating aid for removing liquids from volume	tric	EPPENDON
flasks and tall bottles for Combitip plus sizes 5, 25, 50 ml	0030 059.506	BIOPON
Combitip <sup>®</sup> rack, box with sliding lid for storing up to		ma
100 Combitips plus 0.1 ml to 10 ml	0030 069.897	

Eppendorf Biopur® Combitips plus, individually blister-packed, are guaranteed sterile and free of pyrogen, RNase, DNA and ATP.



## Product features

- Suitable for measuring small volumes of 50 µl or more
- Individually blister-packed for contamination-free work
- Free of DNA/RNase and protein
- Two optical path lengths: 2 mm and 10 mm
- UV and VIS-transparent from 220-1,600 nm
- Volume markings for 500 and 1,000 µl
- Fully transparent plastic with outstanding surface properties
- Optimal filling guaranteed by tapered cuvette base
- Low-lying optical window prevents scratches
- Firm-footed design
- Marking possible on frosted grip
- Ideal for use in the BioPhotometer or in standard commercial spectrophotometers with adapter

\*US Patent 6249345

## Ordering information



Article	Order no.
UVette®, 80 original Eppendorf disposable cuvettes, individually sealed,	
for direct use in the BioPhotometer without an adapter	0030 106.300
Adapter1, for photometers/spectrophotometers with	
light center height 8.5 mm	4099 001.009
10 mm	4099 002.005
15 mm	4099 003.001
GeneQuant I/II	4099 004.008
Starter set, 80 UVettes + 1 universal adapter for	
light center height 15 mm (including GeneQuant), convertible to 8.5 mm	4099 100.007
Cuvette stand	4308 078.006

1Additional adapters for light center heights > 8.5 mm available upon request.

# Centrifugal stability of Eppendorf Tubes

Eppendorf tube type	Temperature [°C]	max. RCF [x g]	Time [min.]
Safe-Lock 0.5 ml		27000	20
	40	25000	90
	00	38000	20
	20	33000	90
Safe-Lock 1.5 ml	40	27000	20
	40	25000	90
	20	38000	20
	20	33000	90
Safe-Lock 2.0 ml	40	27000	20
	40	25000	90
	20	38000	20
	20	33000	90
3810X	40	27000	20
	40	25000	90
	20	38000	20
	20	33000	90
3810	40	27000	20
		25000	90
	20	38000	20
	20	33000	90

## Test conditions:

3810X tubes filled with diluted NaCl solution (concentration 1.2 mg/ml) were rotated in an Eppendorf Centrifuge 5417 R (fixed-angle rotor FA 45-24-11, centrifugable at up to 25,000 x g). To simulate higher rpms and/or greater forces on the tubes, K<sub>2</sub>CO<sub>3</sub> and CsCl solutions of various concentrations were used (between 1.4 and 1.9). The 2.0 ml Safe-Lock tubes display a similar response to centrifugation.

Please note that high-density liquids (e.g. chloroform) reduce the max. time or max. RCF at which the tubes can be centrifuged. Organic solvents and acids may reduce the stability of the plastic. For more details, please refer to the accompanying material stability overview.

The degree of mechanical load to which Biopur tubes can be subjected during centrifugation is reduced. If in doubt, please contact Eppendorf.

Tip for ultracentrifugation: It is possible to centrifuge up to 70,000 x g when form-fitting suspension racks are used and the tubes (except PCR tubes) are filled to their nominal volume.

Technical information subject to change.

# Material stability of Eppendorf plastic products

- **1** = stable; life of several months
- 2 = conditionally stable; life of a few weeks

**3** = unstable; life of a few hours and/or rapid disintegration
 **0** = not tested

+20 °C       +40 °C       +60 °C         A       Acetaldehyde, aqueous solution       40       1       1       1         Acetaldehyde, aqueous solution       25–60       1       1       1         Acetone (dimethyl ketone)       100       1       1       2         Acrylonitrile       1       0       0         Adipic acid, aqueous solution       saturated       1       1       1         Allyl alcohol (2-propene-1-ol)       96       1       1       1         Aluminum chloride, aqueous solution       saturated       1       1       1         Ammoniac, aqueous solution       saturated       1       1       1         Ammonium chloride, aqueous solution       saturated       1       1       1         Ammonium chloride, aqueous solution       saturated       1       1       1         Ammonium hydroxide, aqueous solution       saturated       1       1       1         Amyl alcohol (1-Pentanol)       100       1       1       1         Aniline       100       1       1       1       1         Aniline, aqueous solution       saturated       2       2       2         Aqua regia (HNO 3, con	Chemical	Concentration %		PP		
Acetaldehyde, aqueous solution       40       1       1       1         Acetic acid, aqueous solution       25–60       1       1       1         Acetone (dimethyl ketone)       100       1       1       2         Acrylonitrile       1       0       0         Adipic acid, aqueous solution       saturated       1       1       1         Allyl alcohol (2-propene-1-ol)       96       1       1       1         Aluminum chloride, aqueous solution       saturated       1       1       1         Ammoniac, aqueous solution       saturated       1       1       1         Ammonium chloride, aqueous solution       saturated       1       1       1         Ammonium chloride, aqueous solution       saturated       1       1       1         Ammonium chloride, aqueous solution       saturated       1       1       1         Amyl acetate       100       2       0       3         Amyl alcohol (1-Pentanol)       100       1       1       1         Aniline       100       1       1       1         Aqua regia (HNO 3, conc. HCl)       2       0       3         Benzene       100       2 <th></th> <th></th> <th>+20 °C</th> <th>+40 °C</th> <th>+60 °C</th> <th></th>			+20 °C	+40 °C	+60 °C	
Acetic acid, aqueous solution       25–60       1       1       1         Acetone (dimethyl ketone)       100       1       1       2         Acrylonitrile       1       0       0         Adipic acid, aqueous solution       saturated       1       1       1         Allyl alcohol (2-propene-1-ol)       96       1       1       1         Aluminum chloride, aqueous solution       saturated       1       1       1         Ammoniac, aqueous solution       saturated       1       1       1         Ammonium chloride, aqueous solution       saturated       1       1       1         Ammonium chloride, aqueous solution       saturated       1       1       1         Ammonium hydroxide, aqueous solution       saturated       1       1       1         Ammonium hydroxide, aqueous solution       30       0       0       2       0       3         Amyl alcohol (1-Pentanol)       100       1       1       1       1         Anyl alcohol (1-Pentanol)       100       1       1       1         Aniline       100       1       1       1         Aqua regia (HNO 3, conc. HCl)       2       0       3     <	Α					
Acetone (dimethyl ketone)       100       1       1       2         Acrylonitrile       1       0       0         Adipic acid, aqueous solution       saturated       1       1         Allyl alcohol (2-propene-1-ol)       96       1       1         Aluminum chloride, aqueous solution       saturated       1       1       1         Ammoniac, aqueous solution       saturated       1       1       1         Ammoniac, aqueous solution       saturated       1       1       1         Ammonium chloride, aqueous solution       saturated       1       1       1         Ammonium hydroxide, aqueous solution       saturated       1       1       1         Ammonium hydroxide, aqueous solution       30       0       0       2         Amyl alcohol (1-Pentanol)       100       1       1       1         Amyl chloride (1-Chloropentane)       100       3       0       0         Aniline       100       1       1       1       1         Aniline, aqueous solution       saturated       2       2       2         Aqua regia (HNO 3, conc. HCl)       2       0       3       0         Benzene       100 <td>Acetaldehyde, aqueous solution</td> <td>40</td> <td>1</td> <td>1</td> <td>1</td> <td></td>	Acetaldehyde, aqueous solution	40	1	1	1	
Acrylonitrile       1       0       0         Adipic acid, aqueous solution       saturated       1       1       1         Allyl alcohol (2-propene-1-ol)       96       1       1       1         Aluminum chloride, aqueous solution       saturated       1       1       1         Ammoniac, aqueous solution       saturated       1       1       1         Ammoniac, aqueous solution       saturated       1       1       1         Ammonium chloride, aqueous solution       saturated       1       1       1         Ammonium hydroxide, aqueous solution       30       0       0       2         Amyl acetate       100       1       1       1         Amyl chloride (1-Chloropentane)       100       1       1       1         Aniline, aqueous solution       saturated       2       2       2         Aqua regia (HNO 3, conc. HCl)       2       0       3       0         Benzene       100       2       0       3         Benzene       100       2       3       3         Benzol       100       2       3       3         Benzol       100       2       3       3 <td>Acetic acid, aqueous solution</td> <td>25–60</td> <td>1</td> <td>1</td> <td>1</td> <td></td>	Acetic acid, aqueous solution	25–60	1	1	1	
Adipic acid, aqueous solution       saturated       1       1       1         Allyl alcohol (2-propene-1-ol)       96       1       1       1         Aluminum chloride, aqueous solution       saturated       1       1       1         Ammoniac, aqueous solution       saturated       1       1       1         Ammoniac, aqueous solution       saturated       1       1       1         Ammonium chloride, aqueous solution       saturated       1       1       1         Ammonium hydroxide, aqueous solution       30       0       0       2         Amyl acetate       100       1       1       1         Amyl alcohol (1-Pentanol)       100       1       1       1         Amyl chloride (1-Chloropentane)       100       1       1       1         Aniline       100       1       1       1       1         Aniline, aqueous solution       saturated       2       2       2         Aqua regia (HNO 3, conc. HCl)       2       0       3       0         Benzene       100       2       0       3       0         Benzol       100       2       3       3       3 <t< td=""><td>Acetone (dimethyl ketone)</td><td>100</td><td>1</td><td>1</td><td>2</td><td></td></t<>	Acetone (dimethyl ketone)	100	1	1	2	
Allyl alcohol (2-propene-1-ol)       96       1       1       1         Aluminum chloride, aqueous solution       saturated       1       1       2         Ammoniac, aqueous solution       saturated       1       1       1         Ammoniac, aqueous solution       saturated       1       1       1         Ammonium chloride, aqueous solution       saturated       1       1       1         Ammonium hydroxide, aqueous solution       30       0       0       2         Amyl acetate       100       1       1       1         Amyl alcohol (1-Pentanol)       100       1       1       1         Amyl alcohol (1-Chloropentane)       100       3       0       0         Aniline       100       1       1       1       1         Aniline, aqueous solution       saturated       2       2       2         Aqua regia (HNO 3, conc. HCl)       2       0       3       0         B       E       E       E       1       0       0         Benzene       100       2       0       3       3       0         Benzol       100       2       0       3       3       3 </td <td>Acrylonitrile</td> <td></td> <td>1</td> <td>0</td> <td>0</td> <td></td>	Acrylonitrile		1	0	0	
Aluminum chloride, aqueous solution       saturated       1       1       2         Ammoniac, aqueous solution       saturated       1       1       1         Ammoniac, aqueous solution       saturated       1       1       1         Ammonium chloride, aqueous solution       saturated       1       1       1         Ammonium hydroxide, aqueous solution       30       0       0       2         Amyl acetate       100       2       0       3         Amyl alcohol (1-Pentanol)       100       1       1       1         Amyl chloride (1-Chloropentane)       100       3       0       0         Aniline       100       1       1       1       1         Aniline, aqueous solution       saturated       2       2       2         Aqua regia (HNO 3, conc. HCl)       2       0       3       0         B       E       E       E       E       1       0         Benzene       100       2       0       3       3         Benzol       100       2       3       3       3         Benzol       100       2       3       3       3       3	Adipic acid, aqueous solution	saturated	1	1	1	
Aminic acid       100       1       1       2         Ammoniac, aqueous solution       saturated       1       1       1         Ammonium chloride, aqueous solution       saturated       1       1       1         Ammonium hydroxide, aqueous solution       30       0       0       2         Amyl acetate       100       2       0       3         Amyl alcohol (1-Pentanol)       100       1       1       1         Amyl chloride (1-Chloropentane)       100       3       0       0         Aniline       100       1       1       1       1         Aniline, aqueous solution       saturated       2       2       2         Aqua regia (HNO 3, conc. HCl)       2       0       3       0         B       E       E       E       E       E         Benzene       100       2       0       3       3         Benzol       100       2       3       3       3         Benzol       100       2       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3 <td>Allyl alcohol (2-propene-1-ol)</td> <td>96</td> <td>1</td> <td>1</td> <td>1</td> <td></td>	Allyl alcohol (2-propene-1-ol)	96	1	1	1	
Ammoniac, aqueous solution       saturated       1       1       1         Ammonium chloride, aqueous solution       saturated       1       1       1         Ammonium hydroxide, aqueous solution       30       0       0       2         Amyl acetate       100       2       0       3         Amyl alcohol (1-Pentanol)       100       1       1       1         Amyl chloride (1-Chloropentane)       100       3       0       0         Aniline       100       1       1       1       1         Aniline, aqueous solution       saturated       2       2       2         Aqua regia (HNO 3, conc. HCl)       2       0       3       0         Benzaldehyde, aqueous solution       saturated       1       0       0         Benzene       100       2       0       3         Benzol       100       2       3       3         Benzol       100       2       3       3         Benzol       2       0       3       3         Benzol       100       2       3       3         Benzol       100       2       3       3         Benzol	Aluminum chloride, aqueous solution	saturated	1	1	1	
Ammonium chloride, aqueous solution       saturated       1       1       1         Ammonium hydroxide, aqueous solution       30       0       0       2         Amyl acetate       100       2       0       3         Amyl alcohol (1-Pentanol)       100       1       1       1         Amyl chloride (1-Chloropentane)       100       3       0       0         Aniline       100       1       1       1         Aniline, aqueous solution       saturated       2       2       2         Aqua regia (HNO 3, conc. HCl)       2       0       3       0         B       E       E       E       E       E       E         Benzaldehyde, aqueous solution       saturated       1       0       0         Benzene       100       2       0       3         Benzol       100       2       0       3         Benzol       100       2       0       3         Benzol       2       0       0       3         Benzol       100       2       0       3         Benzol       100       1       0       2         Benzol	Aminic acid	100	1	1	2	
Ammonium hydroxide, aqueous solution       30       0       0       2         Amyl acetate       100       2       0       3         Amyl alcohol (1-Pentanol)       100       1       1       1         Amyl chloride (1-Chloropentane)       100       3       0       0         Aniline       100       1       1       1       1         Aniline, aqueous solution       saturated       2       2       2         Aqua regia (HNO 3, conc. HCl)       2       0       3       0         B       E       E       E       E       E         Benzaldehyde, aqueous solution       saturated       1       0       0         Benzene       100       2       0       3         Benzol       100       2       0       3         Benzol       100       2       0       3         Benzol       100       2       0       3	Ammoniac, aqueous solution	saturated	1	1	1	
Amyl acetate       100       2       0       3         Amyl alcohol (1-Pentanol)       100       1       1       1         Amyl chloride (1-Chloropentane)       100       3       0       0         Aniline       100       1       1       1         Aniline, aqueous solution       saturated       2       2       2         Aqua regia (HNO 3, conc. HCl)       2       0       3         B	Ammonium chloride, aqueous solution	saturated	1	1	1	
Amyl alcohol (1-Pentanol)       100       1       1         Amyl chloride (1-Chloropentane)       100       3       0         Aniline       100       1       1         Aniline, aqueous solution       saturated       2       2         Aqua regia (HNO 3, conc. HCl)       2       0       3         B       Benzaldehyde, aqueous solution       saturated       1       0         Benzaldehyde, aqueous solution       saturated       1       0       0         Benzol       100       2       0       3	Ammonium hydroxide, aqueous solution	30	0	0	2	
Amyl chloride (1-Chloropentane)       100       3       0       0         Aniline       100       1       1       1         Aniline, aqueous solution       saturated       2       2       2         Aqua regia (HNO 3, conc. HCl)       2       0       3       0         B       Image: Saturated       1       0       0         Benzaldehyde, aqueous solution       saturated       1       0       0         Benzene       100       2       0       3         Benzol       100       2       0       3         Benzol       100       2       0       3         Benzol chloride       2       0       0         Benzolyl alcohol       100       1       0       2	Amyl acetate	100	2	0	3	
Aniline100111Aniline, aqueous solutionsaturated222Aqua regia (HNO 3, conc. HCl)203BBenzaldehyde, aqueous solutionsaturated100Benzene100203Benzol100203Benzol100203Benzol10010	Amyl alcohol (1-Pentanol)	100	1	1	1	
Aniline, aqueous solutionsaturated222Aqua regia (HNO 3, conc. HCl)203BEEEBenzaldehyde, aqueous solutionsaturated10Benzene100203Benzol100203Benzol100203Benzol100203Benzol chloride200Benzyl alcohol10010	Amyl chloride (1-Chloropentane)	100	3	0	0	
Aqua regia (HNO 3, conc. HCl)203B6Benzaldehyde, aqueous solutionsaturated100Benzene100203Benzol100203Benzol/ chloride200Benzyl alcohol10010	Aniline	100	1	1	1	
BImage: state of the state of th	Aniline, aqueous solution	saturated	2	2	2	
Benzaldehyde, aqueous solutionsaturated10Benzene10020Benzol10020Benzol/ chloride20Benzyl alcohol10010	Aqua regia (HNO 3, conc. HCl)		2	0	3	
Benzaldehyde, aqueous solutionsaturated10Benzene10020Benzol10020Benzol/ chloride20Benzyl alcohol10010						
Benzene         100         2         0         3           Benzol         100         2         0         3           Benzoyl chloride         2         0         0           Benzyl alcohol         100         1         0         2	В					
Benzol         100         2         0         3           Benzoyl chloride         2         0         0           Benzyl alcohol         100         1         0         2	Benzaldehyde, aqueous solution	saturated	1	0	0	
Benzoyl chloride200Benzyl alcohol100102	Benzene	100	2	0	3	
Benzyl alcohol 100 1 0 2	Benzol	100	2	0	3	
	Benzoyl chloride		2	0	0	
Boric acid, aqueous solution   saturated   1   1	Benzyl alcohol	100	1	0	2	
	Boric acid, aqueous solution	saturated	1	1	1	

All information provided represents a recommendation without guarantee.

## Appendix

Chemical	Concentration %		PP			
		+20 °C	+40 °C	+60 °C		
В						
Bromic acid		1	0	0		
Bromine, liquid	100	3	3	3		
Bromobenzene		3	3	3		
1,3-butadiene	100	2	0	3		
Butanoic acid	100	1	0	0		
Butanoic acid, aqueous solution	20	1	0	0		
Butylacetate	100	2	0	3		
с						
Calcium chloride, aqueous solution	saturated	1	1	1		
Calcium hydroxide, aqueous solution	any	1	1	1		
Calcium hypochloride, 12.5% active chlorine		1	1	1		
Carbon disulphide	100	1	0	з		
Carbon tetrachloride (tetra-chloromethane)	100	3	3	З		
Chlorobenzene	100	1	0	0		
Chloroform (trichloromethane)	100	2	0	3		
Chromic acid, aqueous solution	50	2	2	2		
Chromic/sulfuric acid		3	3	З		
Citric acid	any	1	1	1		
Copper sulfate, aqueous solution	saturated	1	1	1		
Cresol, aqueous solution	up to 90	1	0	0		
Cyclohexane	100	1	1	1		
Cyclohexanol	100	1	0	2		
Cyclohexanone	100	1	0	2		
D						
Decahydronaphthalene	100	2	2	2		
Dibutyl phthalate	100	1	0	2		
Dichlorobenzene		2	2	0		
Diesel fuel		1	0	2		
Diethylene glycol		1	1	1		
Diethylether		2	0	0		
Diisopropylether	100	2	0	з		
Dimethylformamide	100	1	1	1		
Di-N-butyl ether		2	0	з		
Dioxane	100	2	2	2		

All information provided represents a recommendation without guarantee.

Chemical	Concentration %		PP	
		+20 °C	+40 °C	+60 °C
E				
Ethanol, aqueous solution	any	1	1	1
Ethanol	100	1	1	1
Ethyl acetate	100	1	2	2
Ethyl benzene	100	2	0	0
Ethylene chloride (1,2-dichloroethane)	100	2	0	3
Ethylene oxide (1,2-epoxy ethane)	100	1-2	0	0
F				
Formaldehyde (methanal), aqueous solution	40	1	1	1
G				
Glycerine	100	1	1	1
Glycol	100	1	1	1
Glycol, aqueous solution	any	1	1	1
н				
Heating oil	100	1	0	2
Heptane	100	2	2	2
Hexane	100	1	0	2
Hydrochloric acid, aqueous solution	over 30	1	1	1
Hydrogen peroxide, aqueous solution	up to 30	1	0	2
Hydrogen peroxide, aqueous solution	90	1	0	0
Hydrofluoric acid	up to 40	1	1	1
Hydroquinone (1,4-dihydroxybenzene)	any	1	1	1
I				
lodine-iodine-potassium solution	50	1	1	1
Isopropanol, aqueous solution	any	1	1	1
Isopropanol	100	1	1	1
L				
Lactic acid (2-hydroxapropane acid),				
aqueous solution	up to 90	1	1	1
Linseed oil	100	1	1	1

All information provided represents a recommendation without guarantee.

## Appendix

Appendix
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+20 °C         +40 °C         +60 °C           M         1         1         1         1           Metruny         100         1         1         1         1           Methanol         100         1         1         1         1           Methylacetate         100         1         1         1         1           Methylacetate         100         2         3         3           Mineral oil         100         1         0         2           Monochloroacetic acid, aqueous solution         85         1         1         1           Monochloroacetic acid         100         1         0         2         3           Nitric acid, aqueous solution         100         1         0         2         1           Nitric acid, aqueous solution         65         3         3         3         1           O         1         0         2         2         2         2           Qxalic acid, aqueous solution         any         1         1         1         1           P         Paraffin oil         100         1         0         2         0         2           Pe	Chemical	Concentration %		PP	
Mercury       100       1       1       1         Methanol       100       1       1       1         Methyl acetate       100       1       1       1         Methylane chloride (dichloromethane)       100       2       3       3         Mineral oil       100       1       0       2         Monochloroacetic acid, aqueous solution       85       1       1       1         Monochloroacetic acid       100       1       0       2         Nitric acid, aqueous solution       up to 30       1       0       2         Nitric acid, aqueous solution       65       3       3       3         Nitrobenzene       100       1       0       2         O       0       1       0       2       2         Valic acid, aqueous solution       any       1       1       1         P       Paraffin oil       100       1       0       2         Petroleum       100       1       0       2       2         Petroleum ether       100       1       1       1         Phosphoric acid, aqueous solution       90       1       1       1			+20 °C	+40 °C	+60 °C
Methanol       100       1       1       1         Methylacetate       100       2       3         Mineral oil       100       1       1         Monochloroacetic acid, aqueous solution       85       1       1         Monochloroacetic acid       100       1       1         Monochloroacetic acid       100       1       1         N       Kitric acid, aqueous solution       up to 30       1       0         Nitric acid, aqueous solution       65       3       3         Nitrobenzene       100       1       1       1         O       Colicic acid (cis 9-octadecenoic acid)       100       1       0       2         Valitric acid, aqueous solution       any       1       1       1         P       Paraffin oil       100       1       0       2         Petroleum ether       100       1       0       2       0         Petroleum       20       1       1       1       1         Phosphoric acid, aqueous solution       80       1       1       1         Phosphoric acid, aqueous solution       saturated       1       1       1         Phosphor	м				
Methyl acetate100111Methylene chloride (dichloromethane)100233Mineral oil100102Monochloroacetic acid, aqueous solution85111NNitric acid, aqueous solution100102Nitric acid, aqueous solutionup to 30102Nitric acid, aqueous solution65333Nitric acid, aqueous solution65333Nitric acid (aqueous solution65333Nitro acid (aqueous solution100102O0eic acid (cis 9-octadecenoic acid)100102Valic acid, aqueous solution20112PPetroleum100102Petroleum ether100102Petroleum100102Petroleum100111Phosphoric acid, aqueous solution8011Phosphoric acid, aqueous solution8011Phosphoric acid, aqueous solution5510Potassium permanganate, aqueous solutionsaturated11Pyridine100111Solicone oil100111Solium acetate, aqueous solutionany11Solium acetate, aqueous solution3111Solium coreate, a	Mercury	100	1	1	1
Name         Image         Image <thi< td=""><td>Methanol</td><td>100</td><td>1</td><td>1</td><td>1</td></thi<>	Methanol	100	1	1	1
Mineral oil       100       1       0       2         Monochloroacetic acid, aqueous solution       85       1       1       1         Monochloroacetic acid       100       1       1       1         N       Intric acid, aqueous solution       45       3       3       3         Nitric acid, aqueous solution       65       3       3       3         Nitric acid, aqueous solution       65       3       3       3         O       Iolo       1       1       1       1         O       Iola caid (cis 9-octadecenoic acid)       100       1       0       2         Varia caid, aqueous solution       any       1       1       2         P       Paraffin oil       100       1       0       2         Petroleum ether       100       1       0       2         Petroleum       2       0       0         Petroleum       90       1       1       1         Phosphoric acid, aqueous solution       saturated       1       1       1         Phosphoric acid, aqueous solution       saturated       1       1       1         Photaseium chloride, aqueous solution       <	Methyl acetate	100	1	1	1
Monochloroacetic acid, aqueous solution851111N Nitric acid, aqueous solutionup to 30102Nitric acid, aqueous solution65333Nitro benzene100111O Oleic acid (cis 9-octadecenoic acid)100102Oatic acid, aqueous solutionany112P Paraffin oil100102Petroleum ether100102Petroleum20111Petroleum20111Petroleum00102Petroleum100102Petroleum100111Phosphoric acid, aqueous solution8011Phosphoric acid, aqueous solution90111Phosphoric acid, aqueous solution55102Potassium chloride, aqueous solutionsaturated111Pyridine1001111Pyridine1001111Shiver nitrate, aqueous solutionsaturated111Solution ceide, aqueous solutionany111Solution ceide, aqueous solution501111Sultur acide, aqueous solution501111Solutin nepotenke, aqueous solution501<	Methylene chloride (dichloromethane)	100	2	3	3
Monochloroacetic acid100111NNitric acid, aqueous solutionup to 30102Nitric acid, aqueous solution65333Nitrobenzene100102O0leic acid (cis 9-octadecenoic acid)100102Ozalic acid, aqueous solutionany112PPPPPParaffin oil100102Pechloric acid, aqueous solution20111Petroleum ether100102Petroleum00111Phosphoric acid, aqueous solution90111Phosphoric acid, aqueous solution80111Phosphoric acid, aqueous solution95102Potassium chloride, aqueous solutionsaturated111Phosphoric acid, aqueous solutionsaturated111Potassium chloride, aqueous solutionsaturated111Pyridine10011111Silicen oil10011111Silicen oil10011111Sodium nitrate, aqueous solution3ny1111Suifuri acid, aqueous solution3ny1111Sodium nitrate, aqueous solution3ny111	Mineral oil	100	1	0	2
Nup to 30102Nitric acid, aqueous solution65333Nitric acid, aqueous solution65333Nitric acid, aqueous solution100111O10222Oleic acid (cis 9-octadecenoic acid)100102Oxalic acid, aqueous solutionany112PP7712Pechloric acid, aqueous solution20111Petroleum ether100102Petroleum ether100102Petroleum100102Petroleum90111Phosphoric acid, aqueous solution95102Potassium chloride, aqueous solutionsaturated111Pyridine1002222SSSS111Silver nitrate, aqueous solutionany111Solum nitrate, aqueous solutionany111Solution catate, aqueous solution3ny111Solution catate, aqueous solution50111Solutin acetate, aqueous solution50111	Monochloroacetic acid, aqueous solution	85	1	1	1
Nitric acid, aqueous solution up to 30 1 0 2 Nitric acid, aqueous solution 65 3 3 3 Nitrobenzene 100 1 1 1 1 O Oleic acid (cis 9-octadecenoic acid) 100 1 0 2 Oxalic acid, aqueous solution any 1 2 2 Performation 100 1 0 2 Pechloric acid, aqueous solution 20 1 1 1 1 Petroleum ether 100 1 0 2 Petroleum 100 1 0 2 Petroleum 100 1 0 2 Phenol, aqueous solution 90 1 1 1 Phosphoric acid, aqueous solution 95 1 0 2 Potassium chloride, aqueous solution saturated 1 1 1 Phosphoric acid, aqueous solution 95 1 0 2 Potassium permanganate, aqueous solution any 1 1 1 Potassium permanganate, aqueous solution 100 1 1 1 Sodium neetate, aqueous solution 100 1 1 1 Sodium neetate, aqueous solution 50 1 1 1 1 Sodium hypochloride, aqueous solution 30 1 1 1 Sodium hypochloride, aqueous solution 30 1 1 1 Sodium hypochloride, aqueous solution 30 1 Sodium hypochloride hypochloride hypochloride hypochloride hypochloride hypochloride hypoc	Monochloroacetic acid	100	1	1	1
Nitric acid, aqueous solution65333Nitrobenzene1001111OI100102Okalic acid (cis 9-octadecenoic acid)100102Oxalic acid, aqueous solutionany112PParaffin oil100102Pechloric acid, aqueous solution20111Petroleum ether100102Petroleum100102Petroleum90111Phosphoric acid, aqueous solution80111Phosphoric acid, aqueous solution95102Potassium chloride, aqueous solutionsaturated111Potassium permanganate, aqueous solutionsaturated111Pyrdine1001111Silicone oil1001111Sodium acetate, aqueous solutionany111Sodium pypochloride, aqueous solution501111	N				
Nitrobenzene100111OI0102Oleic acid (cis 9-octadecenoic acid)100102Oxalic acid, aqueous solutionany112PParaffin oil100102Pechloric acid, aqueous solution20111Petroleum ether100102Petroleum200Petroleum100102Petroleum90111Phosphoric acid, aqueous solution80111Phosphoric acid, aqueous solution95102Potassium chloride, aqueous solutionsaturated111Potassium permanganate, aqueous solutionsaturated111Pyridine1001111Silicone oil1001111Sodium acetate, aqueous solutionany111Sodium hypochloride, aqueous solution50111	Nitric acid, aqueous solution	up to 30	1	0	2
OImage: Descent of the second sec	Nitric acid, aqueous solution	65	3	3	3
Oleic acid (cis 9-octadecenoic acid)       100       1       0       2         Oxalic acid, aqueous solution       any       1       1       2         P	Nitrobenzene	100	1	1	1
Oxalic acid, aqueous solutionany112PI102Paraffin oil100102Pechloric acid, aqueous solution20111Petroleum ether100102Petroleum200Petroleum90111Phosphoric acid, aqueous solution90111Phosphoric acid, aqueous solution80111Phosphoric acid, aqueous solution95102Potassium chloride, aqueous solutionsaturated111Potassium permanganate, aqueous solutionsaturated111Pyridine1001111SSSSSSSSSilicone oil1001111Sodium acetate, aqueous solutionany111Sodium acetate, aqueous solution50111	0				
PImage: second stress of the second stress of	Oleic acid (cis 9-octadecenoic acid)	100	1	0	2
Paraffin oil       100       1       0       2         Pechloric acid, aqueous solution       20       1       1       1         Petroleum ether       100       1       0       2         Petroleum       2       0       0         Petroleum       100       1       0       2         Petroleum       90       1       1       1         Phosphoric acid, aqueous solution       80       1       1       1         Phosphoric acid, aqueous solution       95       1       0       2         Potassium chloride, aqueous solution       saturated       1       1       1         Potassium permanganate, aqueous solution       saturated       1       1       1         Pyridine       100       2       2       2       2         S	Oxalic acid, aqueous solution	any	1	1	2
Pechloric acid, aqueous solution20111Petroleum ether100102Petroleum200Petroleum100102Phenol, aqueous solution90111Phosphoric acid, aqueous solution80111Phosphoric acid, aqueous solution95102Potassium chloride, aqueous solutionsaturated111Potassium permanganate, aqueous solutionsaturated111Pyridine1002222SSSSSS11Solicone oil1001111Solium acetate, aqueous solutionany111Sodium hypochloride, aqueous solution50111	Ρ				
Petroleum ether100102Petroleum200Petroleum100102Phenol, aqueous solution90111Phosphoric acid, aqueous solution80111Phosphoric acid, aqueous solution95102Potassium chloride, aqueous solutionsaturated111Potassium permanganate, aqueous solutionsaturated111Pyridine100222SSilicone oil100111Solium acetate, aqueous solutionany111Sodium acetate, aqueous solution501111	Paraffin oil	100	1	0	2
Petroleum200Petroleum100102Phenol, aqueous solution90111Phosphoric acid, aqueous solution80111Phosphoric acid, aqueous solution95102Potassium chloride, aqueous solutionsaturated111Potassium permanganate, aqueous solutionsaturated111Pyridine1002222SSilicone oil100111Silver nitrate, aqueous solutionany111Sodium acetate, aqueous solutionin111Sodium hypochloride, aqueous solution50111	Pechloric acid, aqueous solution	20	1	1	1
Petroleum100102Phenol, aqueous solution90111Phosphoric acid, aqueous solution80111Phosphoric acid, aqueous solution95102Potassium chloride, aqueous solutionsaturated111Potassium permanganate, aqueous solutionsaturated111Pyridine1002222SSSS111Silicone oil1001111Sodium acetate, aqueous solutionany111Sodium hypochloride, aqueous solution50111	Petroleum ether	100	1	0	2
Phenol, aqueous solution90111Phosphoric acid, aqueous solution80111Phosphoric acid, aqueous solution95102Potassium chloride, aqueous solutionsaturated111Potassium permanganate, aqueous solutionsaturated111Pyridine100222SSSSilicone oil100111Solium acetate, aqueous solutionany111Sodium acetate, aqueous solution4111Sodium hypochloride, aqueous solution50111	Petroleum		2	0	0
Phosphoric acid, aqueous solution80111Phosphoric acid, aqueous solution95102Potassium chloride, aqueous solutionsaturated111Potassium permanganate, aqueous solutionsaturated111Pyridine100222S111Silicone oil1001111Silver nitrate, aqueous solutionany111Sodium acetate, aqueous solution1111Sodium hypochloride, aqueous solution50111	Petroleum	100	1	0	2
Phosphoric acid, aqueous solution95102Potassium chloride, aqueous solutionsaturated111Potassium permanganate, aqueous solutionsaturated111Pyridine100222S55555Silicone oil100111Solium acetate, aqueous solutionany111Sodium hypochloride, aqueous solutiondiluted111Sulfuric acid, aqueous solution50111	Phenol, aqueous solution	90	1	1	1
Potassium chloride, aqueous solutionsaturated11Potassium permanganate, aqueous solutionsaturated111Pyridine100222SSSSSSilicone oil100111Silver nitrate, aqueous solutionany111Sodium acetate, aqueous solution1111Sodium hypochloride, aqueous solutiondiluted111-2Sulfuric acid, aqueous solution50111	Phosphoric acid, aqueous solution	80	1	1	1
Potassium permanganate, aqueous solutionsaturated111Pyridine100222SImage: Silicone oil100111Silicone oil100111Silver nitrate, aqueous solutionany111Sodium acetate, aqueous solution111Sodium hypochloride, aqueous solutiondiluted11Sulfuric acid, aqueous solution5011	Phosphoric acid, aqueous solution	95	1	0	2
Pyridine100222SImage: Silicone oil100111Silicone oil1001111Silver nitrate, aqueous solutionany111Sodium acetate, aqueous solution1111Sodium hypochloride, aqueous solutiondiluted111-2Sulfuric acid, aqueous solution50111	Potassium chloride, aqueous solution	saturated	1	1	1
SImage: second seco	Potassium permanganate, aqueous solution	saturated	1	1	1
Silicone oil10011Silver nitrate, aqueous solutionany11Sodium acetate, aqueous solution111Sodium hypochloride, aqueous solutiondiluted11Sulfuric acid, aqueous solution5011	Pyridine	100	2	2	2
Silver nitrate, aqueous solutionany11Sodium acetate, aqueous solution11Sodium hypochloride, aqueous solutiondiluted11Sulfuric acid, aqueous solution5011	S				
Sodium acetate, aqueous solution111Sodium hypochloride, aqueous solutiondiluted111-2Sulfuric acid, aqueous solution50111	Silicone oil	100	1	1	1
Sodium hypochloride, aqueous solutiondiluted111-2Sulfuric acid, aqueous solution50111	Silver nitrate, aqueous solution	any	1	1	1
Sulfuric acid, aqueous solution 50 1 1 1	Sodium acetate, aqueous solution		1	1	1
	Sodium hypochloride, aqueous solution	diluted	1	1	1–2
Sulfuric acid, aqueous solution 96 2 0 3	Sulfuric acid, aqueous solution	50	1	1	1
	Sulfuric acid, aqueous solution	96	2	0	3

All information provided represents a recommendation without guarantee.

Chemical	Concentration %		PP			
		+20 °C	+40 °C	+60 °C		
т						
Tartaric acid (butanedioïc acid, 2,3 - dil	nydroxy),					
aqueous solution	saturated	1	1	1		
1,1,2,2-tetrachloro-ethane	100	2	0	3		
Tetra-hydrofuran	100	2	0	3		
U/V						
Urea, aqueous solution	saturated	1	1	1		
Vaseline		1	0	1–2		
x/z						
Xylene	100	3	3	3		
Zinc chloride, aqueous solution	diluted					
Zinc chloride, aqueous solution	saturated	1	1	1		
Zinc sulfate, aqueous solution	diluted	1	1	1		
Zinc sulfate, aqueous solution	saturated	1	1	1		

All information provided represents a recommendation without guarantee. Source: [2]

The Eppendorf twin.tec PCR plates are a combination of two materials, polycarbonate (in the frame) and polypropylene (in the wells), which enables the plates to be used in molecular biology applications based on their very good chemical stability against typical PCR reagents and chemicals, e.g. DMSO (10%, for RT), isopropanol and glycerin. For a complete list on chemical stability, see www.eppendorf.com (Support, Applications) in Application No. 5 "Chemical Stability No. 1".

## References

[2] Eppendorf Application No. 56; 03/03: "The best material for original Eppis!"

 <sup>[1]</sup> GolnForm Umweltrecht; Bedarfsgegenständeverordnung (i.e. "German Consumer Goods Ordinance"); Version of 20 June 2002.





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