



SECTION C

# *PCR Products*

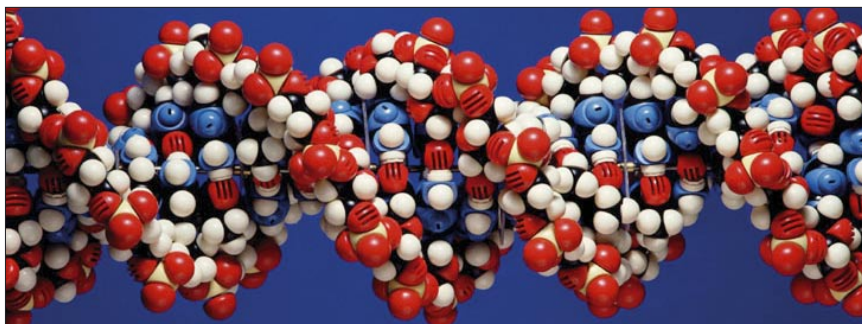


## StarPCR

Plates, reaction tubes and tube strips, sealing foils and sealing mats, micro-centrifuge FugeOne®, PCR sample storage, PCR cabinets, TipOne® pipette tips with filters.



## Editorial



### Polymerase Chain Reaction

PCR (Polymerase Chain Reaction) is one of the key technologies within the field of molecular biology.

Developed by Kary B. Mullis (Nobel prize winner in chemistry in 1993), PCR today is essential in scientific and diagnostic research and analysis. Simple and quick amplification of genetic material enabled by the use of PCR go hand in hand with enhanced requirements with respect to the plastic materials used for method execution.

Within a short time STARLAB has become a recognized name as a manufacturer and supplier of high quality

plastic consumables for a wide range of applications in liquid handling. In this brochure we would like to introduce you to our complete range of PCR products for the first time.

Along with STARLAB's plastic consumables, you will also find numerous other interesting products, such as racks for PCR sample storage or PCR clean benches with integrated laminar-flow for contamination-free PCR sample preparation.

Always a step ahead,  
Your STARLAB-Team

### STARLAB Quality

Trust is good – certification is better!



As an ISO 9001 certified company, working procedures and processes at STARLAB are checked and audited regularly. Additionally, the quality of our products is continuously monitored.

PCR-certified: when using PCR consumables, the absence of DNA, DNase and

RNase is essential for reliable amplifications. All PCR consumables from STARLAB are free of detectable DNase, RNase and DNA. Additionally, sterile products are guaranteed free of detectable levels of Pyrogens.



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PCR is a patented procedure of Roche Diagnostics.

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## StarPCR

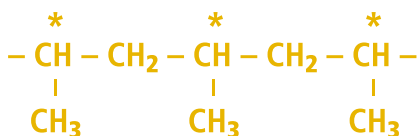


Try before you buy! We will be happy to supply you with free samples of our consumables upon request.



## Facts worth Knowing

### The Starting Material for PCR Consumables – Polypropylene



Polypropylene, abbreviated PP, is a thermoplastic material belonging to the polyolefin group. The majority of the starting materials for the production of PCR consumables today consist of PP because of its favorable characteristics with respect to temperature consistency and chemical resistance. Furthermore, PP is very light-weight due to its low density. For the production of PCR consumables STARLAB uses only highly purified PP granulate, eliminating the risk of contamination by undesired components, such as traces of metal, right from the start of the manufacturing process.

### STARLAB Production

As an ISO 9001 certified company, we know how important quality is. Our production processes are subject to constant quality control; quality-relevant parameters are introduced at the beginning of the development stage of our PCR products. State-of-the-art injection molding machines, regularly checked in short maintenance intervals, produce uniform high-quality PCR consumables.

### Well Wall Thickness and Heat Transfer

Especially PCR protocols with different temperature gradients require fast and uniform heat transfers between the cycler thermoblock and the PCR sample. Ultra-thin and uniformly manufactured StarPCR tubes or plates guarantee optimal heat transfer.

### Protection against Contamination

The cap geometry and the sealing zones of StarPCR tubes are specially designed with the aim of preventing contamination. STARLAB's meticulous attention to the smallest details often makes the difference in successful PCR experiments.

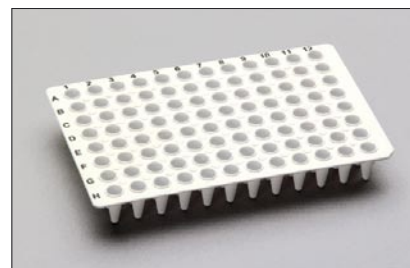


Optional "shielded" tubes additionally reduce the risk of contamination by hand contact with a small safety shield integrated in the tube's cap.

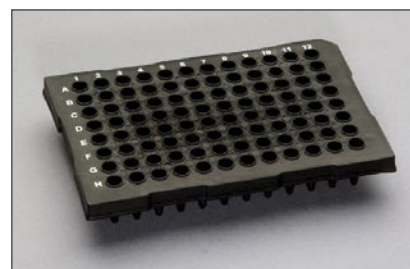
PCR plates are also designed with the aim of preventing contamination. A possible carry-over from well to well during amplification (cross-contamination) can be eliminated by using plates with "elevated wells", the top ends of which are located above the general surface of the plate.

### Overview Real-Time PCR

In real-time PCR the formation of PCR products within the individual cycles is determined quantitatively in real time. Optical detection systems measure the light emitted from fluorescence dyes excited by laser or LED light sources. The emitted light signals increase with the accumulation of the PCR products. Homogeneous well surfaces and/or well transparency lead to undesired scattering of the emitted light, which in turn leads to an enhanced standard deviation of the measuring result.



Opaque white or black PCR plates show low auto-fluorescence with chemiluminescence (white) or fluorescence (black) detectors. Additionally, white plates increase signal yield.





# PCR Plates and Sealing Options

## StarPCR

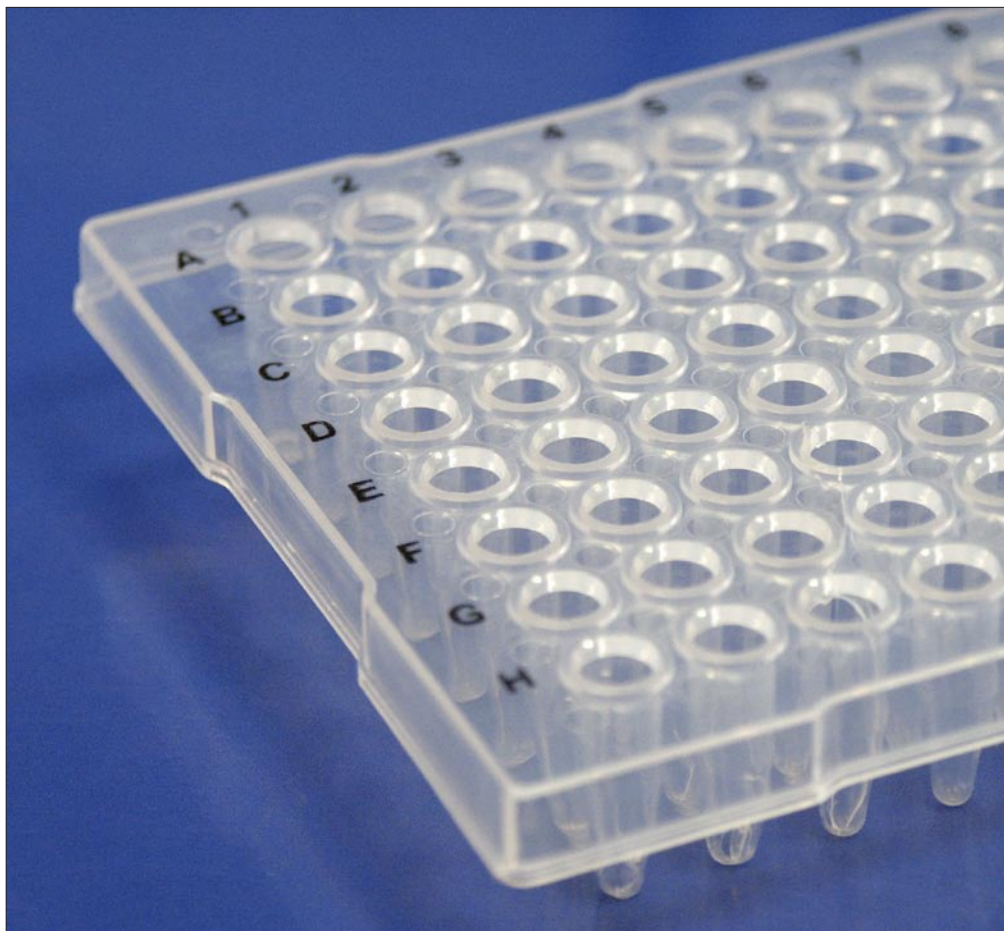
### Reliable Amplification!

Whether you need plates with 24, 48, 96 or 384 wells, StarPCR offers a comprehensive range of high-quality polypropylene plates for standard and real-time applications. The precision-manufactured uniform plates with extremely thin-walled wells guarantee optimal heat transfer and the easy-to-read alphanumeric index simplifies sample allocation.

For simplified plate orientation one or two corners are cut off, depending on the individual plate design. Special plates with elevated wells prevent sample carry-over from well to well (cross-contamination). Differently configured plate edges (non-skirted or skirted plates) offer individual plate stabilities for transport or automated applications.

Low-profile plate formats with well volumes of approximately 200 µl show significantly reduced well dead-volumes compared to standard profiles.

All plates are guaranteed free of detectable RNase, DNase and DNA. Sterile plates are available upon request.



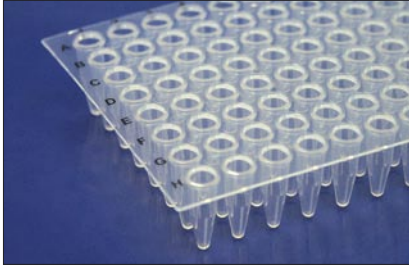
### Summary of Characteristics

- /// Precision-manufactured uniform plates with low tolerances
- /// Thin-walled wells guarantee optimal heat transfer
- /// Autoclavable (121 °C, 20 min.)
- /// Available in a wide range of different well and plate geometries
- /// Compatible with established thermal cyclers
- /// Conveniently packaged in resealable bags
- /// All plates are certified "PCR-Clean"

Also available in opaque versions in black (fluorescence) or white (chemiluminescence).

## Ordering Information

### Non-Skirted PCR Plates

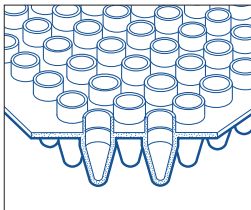
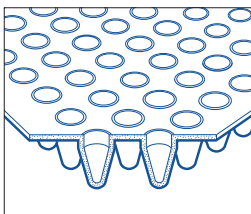


#### Non-Skirted PCR Plates

Non-skirted PCR plates do not have a skirt surrounding at their edges and can be universally used with established thermal cyclers. High plate flexibility guarantees optimal fit in the thermo-block. Cutting for use in smaller for-

mat is possible. An additional low rim around each well reduces the danger of cross-contamination.

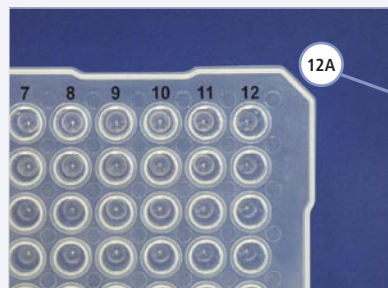
In the design version with elevated wells the edge of the well is approximately 5 mm above the plate's surface.



Non-skirted PCR plates			
Cat. No.	Description	Color	Pack Size
<b>Standard height</b>			
B1402-0625	0.2 ml 24-well PCR plate, non-skirted	Natural	10 plates
B1402-0648	0.2 ml 48-well PCR plate, non-skirted	Natural	10 plates
E1403-1200	0.2 ml 96-well PCR plate, non-skirted (12H)	Natural	10 plates
B1402-0595	0.2 ml 96-well extra flexible PCR plate, non-skirted (12H)	Natural	10 plates
<b>Low-profile</b>			
E1403-0200	0.2 ml 96-well low-profile PCR plate, non-skirted (12H)	Natural	20 plates
Opaque black and white as well as transparent colored plates are available on special request			

Non-skirted PCR plates with elevated wells			
Cat. No.	Description	Color	Pack Size
<b>Standard height</b>			
E1403-4200	0.2 ml 24-well PCR plate, non-skirted, elevated wells (~ 5 mm)	Natural	40 plates
E1403-3200	0.2 ml 48-well PCR plate, non-skirted, elevated wells (~ 5 mm)	Natural	20 plates
E1403-2200	0.2 ml 96-well PCR plate, non-skirted, elevated wells (~ 5 mm), (12H)	Natural	10 plates
Opaque black and white as well as transparent colored plates are available on special request			

See page C-9 to C-11 for suitable sealing options

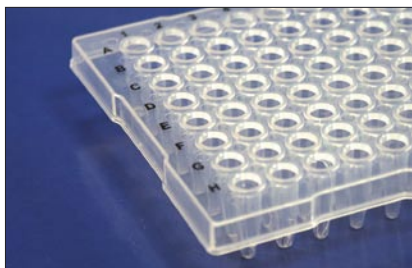


#### Cut off corners for better plate orientation

The exact position of the "corner-cut", the cut off plate corner is found at the end of the respective article description, e.g. in the case of the shown figure, position (12A).

## Ordering Information

### Semi-Skirted PCR Plates

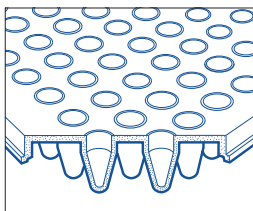


#### Semi-Skirted PCR Plates

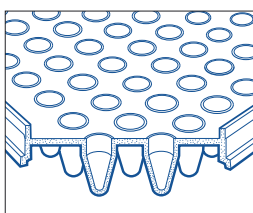
Semi-skirted plates possess an approximately 7 mm high half skirt which surrounds the complete edge of the plate. The skirting enhances the stability of the plate and improves the suitability for automated applications. Furthermore, labeling of the plate's edge is possible with barcode labels. When using plates with elevated wells, the risk of contamination by cross-contamination is addi-

tionally reduced. STARLAB offers four different semi-skirted plate designs:

- ▄ Standard plates
- ▄ Low-profile plates
- ▄ Standard plates with raised rim
- ▄ Standard plates with raised rim and elevated wells



Semi-skirted PCR plates			
Cat. No.	Description	Color	Pack Size
<b>Standard height</b>			
I1402-9700	0.2 ml 96-well PCR plate, semi-skirted (12A)	Natural	10 plates
I1402-9708	0.2 ml 96-well PCR plate, semi-skirted (12A)	Black	10 plates
I1402-9709	0.2 ml 96-well PCR plate, semi-skirted (12A)	White	10 plates
<b>Low-profile</b>			
E1403-6200	0.2 ml 96-well low-profile PCR plate, semi-skirted (12A)	Natural	10 plates
E1403-6208	0.2 ml 96-well low-profile PCR plate, semi-skirted (12A)	Black	10 plates
E1403-6209	0.2 ml 96-well low-profile PCR plate, semi-skirted (12A)	White	10 plates
Transparent colored plates are available on special request			



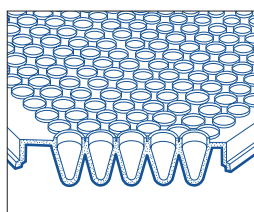
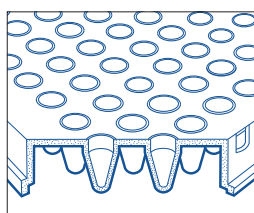
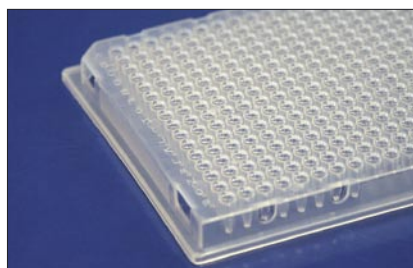
Semi-skirted PCR plates with raised rim			
Cat. No.	Description	Color	Pack Size
<b>Standard wells</b>			
B1402-9400	0.2 ml 96-well PCR plate, semi-skirted, raised rim, – ABI/Perkin Elmer Style – (12A)	Natural	10 plates
<b>Raised rim wells</b>			
B1402-9300	0.2 ml 96-well PCR plate, semi-skirted, raised rim (~ 3 mm), – Corning Style – (1A)	Natural	10 plates
Transparent colored plates are available on special request			

See page C-9 to C-11 for suitable sealing options

**FREE SAMPLE**  
**TRY**  
before you  
**BUY**  
available on request

# Ordering Information

## Skirted PCR Plates



### Skirted PCR Plates

Skirted PCR plates possess an approximately 15 mm high full skirt which surrounds the edges of the plate. This type of skirting leads to extremely high plate stability, which is of significant advantage, especially in automated high-

throughput applications. This plate design offers the largest surface for labelling plates edges (i.e. bar codes).

Available in low-profile plate format and alternatively with 384 wells.

Skirted PCR plates			
Cat. No.	Description	Color	Pack Size
Low-profile, 96-well			
E1403-5200	0.2 ml 96-well low-profile PCR plate, skirted (12A)	Natural	10 plates
E1403-5208	0.2 ml 96-well low-profile PCR plate, skirted (12A)	Black	10 plates
E1403-5209	0.2 ml 96-well low-profile PCR plate, skirted (12A)	White	10 plates
Transparent colored plates are available on special request			

Skirted PCR plates			
Cat. No.	Description	Color	Pack Size
384-well			
B2323-3840	40 µl 384-well PCR plate, skirted (24A)	Natural	10 plates
B2323-3848	40 µl 384-well PCR plate, skirted (24A)	Black	10 plates
B2323-3849	40 µl 384-well PCR plate, skirted (24A)	White	10 plates

See page C-9 to C-11 for suitable sealing options



### StarTags Labels

Pull off and stick on! StarTags self-adhesive labels for PCR tubes and plates are autoclavable, heat-resistant up to approx. 100 °C and suitable for deep-freeze storage down to -85 °C. Available on a roll, these labels are easily marked and leave no glue residues after removal.

For more information go to [www.starlabgroup.com](http://www.starlabgroup.com)



## STARLAB Sealing Options

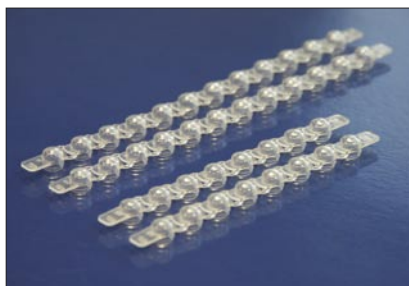


### Three Sealing Options

Choosing an individual sealing material or an individual sealing technique depends on numerous different criteria. Which temperature must the material withstand? Must it be optically transparent for real-time PCR (i.e. demonstrate low auto-fluorescence). Is it chemically stable?

Depending on the individual PCR application, STARLAB offers three discrete sealing options

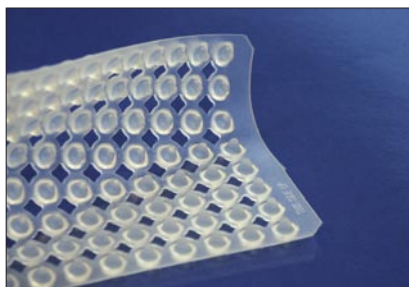
### 8- and 12-Cap Strips



StarPCR cap strips are produced from highly purified PP. Optically transparent "Xtra Clear" flat-cap strips for real-time PCR as well as strips with domed caps are available.

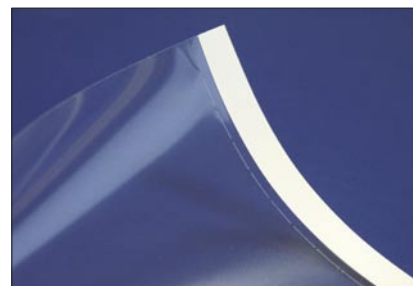
Easy handling! Newly developed cap strips named "Perfect Seal" are more easily attached to plates or tube strips without affecting the necessary tightness.

### Silicon Sealing Mats

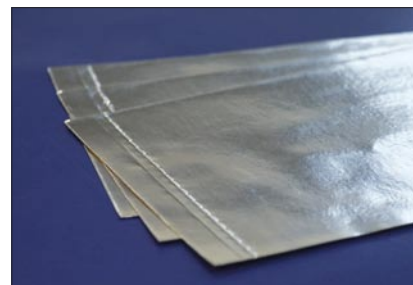


Particularly suitable for sealing plates with defined heating-lid contact pressure, silicon mats are very flexible, autoclavable and reusable. The mats can also be cut to meet individual fitting needs.

### Sealing Foils & Films "StarSeal"



StarSeal is available in transparent polyolefin film or for light sensitive samples, in the non-transparent form consisting of very thin aluminium foil. Pressure-sensitive ultra-transparent "Xtra Clear" film is ideal for real-time applications. The silicon-based adhesive component leaves no residues which might cause optical interference.



For heat-sealing applications an aluminium foil coated with a special resin-lacquer is available. The resin-lacquer binds firmly to the elevated edges of the wells at higher temperatures without the use of interfering adhesive components.

# Specifications and Ordering Information

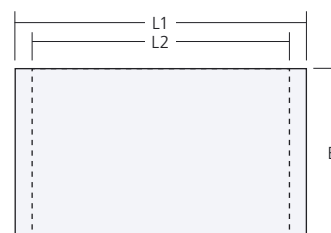
## PCR Sealing Options



**“Sealing Brayer”** – this mini-brayer equipped with a soft rubber roll seals PCR and microtiter plates reliably and evenly with self-adhesive foils.

Cat. No. E9127-2940

The table “Specifications for StarSeal PCR Sealing Foils & Films” depicted below will help you select the sealing option best suited for your application.



Specifications StarSeal PCR Sealing Foils and Films				
	Aluminium, Self-Adhesive Seal	Aluminium, Easy-Pierce Heat-Seal	Polyolefin, Self-Adhesive Seal	Polyolefin, Xtra Clear Self-Adhesive Seal
Cat. No.	E2796-9792	E2796-3090	E2796-9793	E2796-9795
Pack Size	100	25	100	100
Color	Silver	Silver	Natural/Transparent	Natural/Transparent
Dimensions in mm				
L1 (Total length)	136.5	125	136.5	141.3
L2 (Usable length)	120.7	-	120.7	120.7
B (Width) (+/- 1.6 mm)	79.4	80	79.4	79.4
Optically clear			X	X
Suitable for Real-Time PCR, XtraClear				X
Easy to pierce with needle or metal probe	X	X		
Easy to pierce with pipette tip	X	X		
Low tack-to-touch adhesive				X
Low auto-fluorescence			X	X
Resistant to DMSO	X	X	X	X
Minimum temperature use	-70 °C	-80 °C	-70 °C	-70 °C
Maximum temperature use	110 °C	120 °C	110 °C	110 °C

Ordering Information Sealing Options			
Cat. No.	Description	Color	Pack Size
<b>Strip caps</b> (sealing of 24- and 48-well plates with 8-strip caps only)			
I1400-0800	8-strip caps, domed	Natural	125 strips
I1400-0810 <b>NEW</b>	8-strip caps, domed, Perfect Seal	Natural	125 strips
I1400-0900	8-strip caps, flat, Xtra Clear	Natural	125 strips
I1400-1200	12-strip caps, domed	Natural	80 strips
I1400-1300 <b>NEW</b>	12-strip caps, domed, Perfect Seal	Natural	80 strips
See page C-16 and C-17 for colored strip caps			
<b>StarSeal sealing foils and films</b>			
E2796-9792	StarSeal Aluminium foil	Silver	100 foils
E2796-3090	StarSeal Aluminium foil for Heat-Sealing applications, “Easy-Pierce”	Silver	25 foils
E2796-9793	StarSeal Polyolefin film	Natural/Transparent	100 foils
E2796-9795	StarSeal Polyolefin film, Xtra Clear	Natural/Transparent	100 foils
<b>Sealing mats</b>			
E1403-0000	Silicon sealing mat for 96-well plates	Natural	5 mats

## PCR Plates and Sealing Options

### Compatibility

PCR Plates and Sealing Options Compatibility											
	PCR Plate	Strip Caps					Sealing Foils & Films				Sealing Mats
											
		I1400-0800 I1400-0808	I1400-0900	I1400-0810 I1400-0818	I1400-1200 I1400-1208	I1400-1300 I1400-1308	E2796-9792	E2796-3090	E2796-9793	E2796-9795	E1403-0000
Non-Skirted	B1402-0595	X	X	X	X	X	X	X	X	X	X
	B1402-0625	X	X	X			X	X	X	X	
	B1402-0648	X	X	X			X	X	X	X	
	E1403-0200	X	X	X	X	X	X	X	X	X	X
	E1403-1200	X	X	X	X	X	X	X	X	X	X
	E1403-2200	X	X	X	X	X	X		X	X	X
	E1403-3200	X	X	X			X		X	X	
	E1403-4200	X	X	X			X		X	X	
Semi-Skirted	B1402-9300	X	X	X	X	X	X		X	X	X
	B1402-9400	X	X	X	X	X	X		X	X	X
	E1403-6200	X	X	X	X	X	X	X	X	X	X
	E1403-6208	X	X	X	X	X	X	X	X	X	X
	E1403-6209	X	X	X	X	X	X	X	X	X	X
	I1402-9700	X	X	X	X	X	X	X	X	X	X
	I1402-9708	X	X	X	X	X	X	X	X	X	X
	I1402-9709	X	X	X	X	X	X	X	X	X	X
Skirted	B2323-3840						X	X	X	X	
	B2323-3848						X	X	X	X	
	B2323-3849						X	X	X	X	
	E1403-5200	X	X	X	X	X	X	X	X	X	X
	E1403-5208	X	X	X	X	X	X	X	X	X	X
	E1403-5209	X	X	X	X	X	X	X	X	X	X



Organise and identify your samples more easily by color coding with **STARLAB ID tape**. There's plenty to choose from with two different widths, and all in eight different colors.

An optional custom-made acrylic dispenser holds both lengths of tape and is available in two ready-filled options on its own.

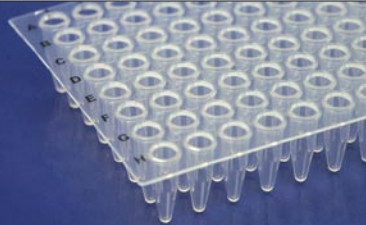
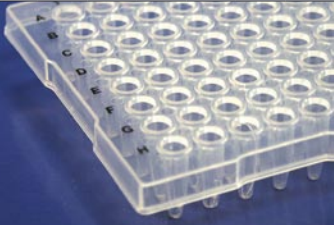
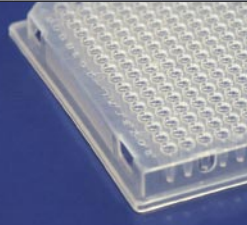
For more information contact your local STARLAB subsidiary.



The **Capping Tool** seals PCR plates with cap strips easily and quickly.

Cat. No. I1442-5360

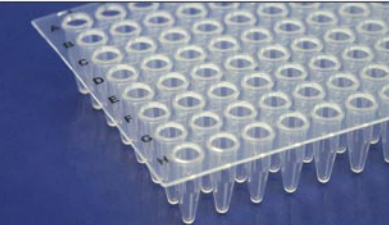
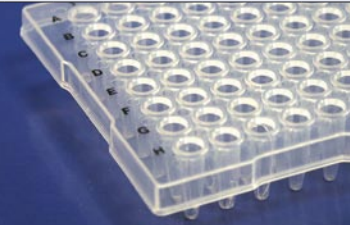
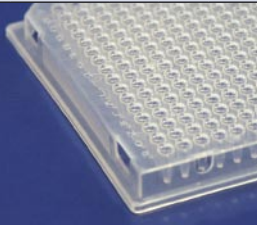
# PCR Plates/Cycler Compatibility

PCR Plates/Cycler Compatibility																								
Manufacturer/Model		Non-Skirted PCR Plates								Semi-Skirted PCR Plates								Skirted PCR Plates						
																								
		B1402-0595	B1402-0625	B1402-0648	E1403-0200	E1403-1200	E1403-2200	E1403-3200	E1403-4200	B1402-9300	B1402-9400	E1403-6200	E1403-6208	E1403-6209	I1402-9700	I1402-9708	I1402-9709	B2323-3840	B2323-3848	B2323-3849	E1403-5200	E1403-5208	E1403-5209	
Model																								
Applied Biosystems	Dual 384																	X	X	X				
	GeneAmp 2700/2720	X	X	X		X	X	X	X	X	X													
	GeneAmp 5700	X	X	X		X	X	X	X	X	X				X	X	X							
	GeneAmp 9600	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	
	GeneAmp 9700	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Prism 3100	X	X	X		X					X				X	X	X							
	Prism 3700	X	X	X		X					X				X	X	X							
	Prism 7000	X	X	X		X	X	X	X	X	X				X	X	X							
	Prism 7700	X	X	X		X	X	X	X	X	X				X	X	X							
Prism 7900HT	X	X	X		X	X	X	X	X	X				X	X	X								
Amersham	MegaBace 500																				X	X	X	
	MegaBace 1000						X	X	X												X	X	X	
Biomera	Uno	X	X	X		X	X	X	X	X	X				X	X	X							
	Uno II	X	X	X		X	X	X	X	X	X				X	X	X	X	X	X				
	T Personal			X				X																
	T1 Thermocycler	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	T3 Thermocycler		X	X				X	X															
	Gradient	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	
	TRobot 384																	X	X	X				
Bio-Rad	Gene Cycler	X	X	X		X	X	X	X	X	X				X	X	X							
	iCycler	X	X	X		X	X	X	X	X	X				X	X	X	X	X	X				
Corbett	PalmCycler 96	X	X	X	X	X	X	X	X			X	X	X	X	X	X				X	X	X	
	PalmCycler 384																	X	X	X				
Eppendorf	Mastercycler	X	X	X		X	X	X	X	X	X				X	X	X							
	Mastercycler Gradient	X	X	X		X	X	X	X	X	X				X	X	X							
	Mastercycler ep	X	X	X		X	X	X	X	X	X				X	X	X							
	Mastercycler ep 384																	X	X	X				

Trademarks or registered trademarks of PCR-cyclers shown are acknowledged as the property of their respective owners.



# PCR Plates/Cycler Compatibility

PCR Plates/Cycler Compatibility																							
Manufacturer/Model		Non-Skirted PCR Plates							Semi-Skirted PCR Plates							Skirted PCR Plates							
																							
		B1402-0595	B1402-0625	B1402-0648	E1403-0200	E1403-1200	E1403-2200	E1403-3200	E1403-4200	B1402-9300	B1402-9400	E1403-6200	E1403-6208	E1403-6209	I1402-9700	I1402-9708	I1402-9709	B2323-3840	B2323-3848	B2323-3849	E1403-5200	E1403-5208	E1403-5209
	Model																						
Ericom	Power Block I	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
	Single Block	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
	Twin Block	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
	Deltacycler I & II	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
Thermo (Hybaid)	Omnigene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Omni-E	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	
	Multiblock System																X	X	X				
	PCR Express	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	PCR Sprint	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	
	PxE & Px2																X	X	X				
	Touchdown	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MJ Research	Chromo4	X	X	X		X																	
	PTC 100	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	
	PTC 200	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	PTC 225	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Dyad & Dayd Disciple	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	
MWG	Primus 96	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	
	Primus 384																X	X	X				
Stratagene	Mx4000 & Mx3000P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
	Robocycler 96	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	
	Robocycler Gradient	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	
TakaRa	TP 240	X	X	X		X	X	X	X	X	X	X	X	X	X	X							
	TP 3000	X	X	X		X	X	X	X	X	X	X	X	X	X	X							
Techne	Touchgene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Cyclogene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	
	Genius	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Genius Quad	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

The individual cycler/plate-combinations are intended as a guide only, with no guarantee. Low-profile and 384-well plates are compatible with its designated thermal blocks only.

# PCR Reaction Tubes and Tube Strips

## Small and Sophisticated!

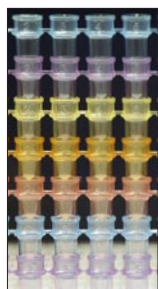
StarPCR reaction tubes are made from highly purified polypropylene. The low and uniform wall thickness guarantees fast and efficient heat transfer during amplification. The cone-shaped and rounded tube bottom simplifies sample removal.

All PCR tubes and tube strips are available with domed caps as well as with flat, easily markable and pierceable caps. Optically transparent "Xtra Clear" tube strips with flat caps are ideal for real-time PCR applications.

## StarPCR

All cap designs guarantee a tight fit on the tube and eliminate the risk of sample evaporation during the cycles. Reaction tubes available with integrated "safety shields" offer protection against contamination, such as by unintentional finger contact with the tube's cap.

StarPCR tube strips are available in bulk with separate attached cap strips or with individually attached caps. All reaction tubes are guaranteed free of detectable RNase, DNase and DNA and are available in colors.



## StarPCR Cap Designs



### Domed

Snap-in-place cap offers reliable sealing



### Flat

Pierceable, option "Xtra Clear" (tube strips), for real-time PCR



### Also with safety shield

The integrated safety shield protects the inside of the cap against contamination by unintentional finger contact



## Summary of Characteristics

- /// Precision-manufactured uniform reaction tubes with low tolerance
- /// Thin-walled wells guarantee optimal heat transfer
- /// Flat cap option "Xtra Clear" for tube strips
- /// Autoclavable (121 °C, 20 min.)
- /// Compatible with established thermal cyclers
- /// Available in a large range of different cap designs
- /// Conveniently packaged in re-sealable bags
- /// All plates are certified "PCR-Clean"



# Ordering Information

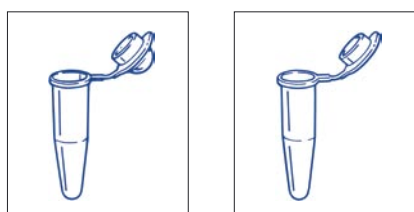
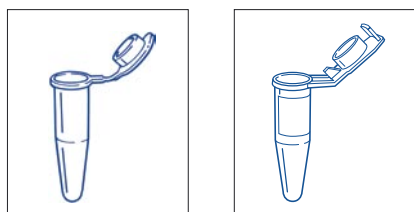
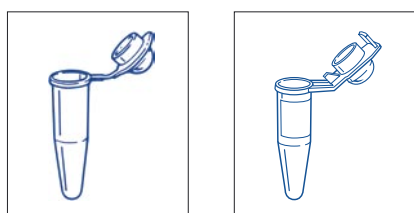
## StarPCR Tubes



### StarPCR Tubes

Available in tube sizes of 0.2 ml and 0.5 ml as well as with domed or flat caps. An optional cap design with integrated safety shield offers additional protection against contamination, e.g. by unintentional finger contact with the tube's cap.

StarPCR tubes are guaranteed free of detectable RNase, DNase and DNA and are available in natural or mixed colors (blue, green, yellow, red and violet, depending on the tube design).



0.2 ml PCR tubes			
Cat. No.	Description	Color	Pack Size
Domed cap			
I1402-4300	0.2 ml PCR tube, domed cap	Natural	1000
I1402-4308	0.2 ml PCR tube, domed cap	Mixed	5 x 200
Domed, shielded cap			
B1402-6300	0.2 ml PCR tube, domed, shielded cap	Natural*	1000
Flat cap			
I1402-8100	0.2 ml PCR tube, flat cap, Xtra Clear	Natural	1000
I1402-8108	0.2 ml PCR tube, flat cap, Xtra Clear	Mixed	5 x 200
Flat, shielded cap			
B1402-5500	0.2 ml PCR tube, shielded flat cap, Xtra Clear	Natural*	1000
Mixed packs contain 200 each of: blue, green, yellow, red, violet			

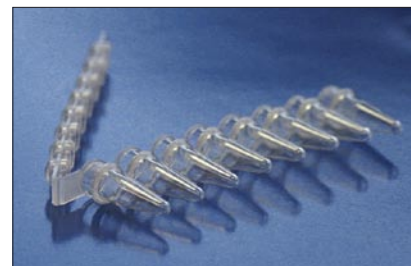
\* Different colors on special request

0.5 ml PCR tubes			
Cat. No.	Description	Color	Pack Size
Domed cap			
I1405-8200	0.5 ml PCR tube, domed cap	Natural	1000
I1405-8208	0.5 ml PCR tube, domed cap	Mixed	5 x 200
Flat cap			
I1405-8100	0.5 ml PCR tube, flat cap	Natural	1000
I1405-8108	0.5 ml PCR tube, flat cap	Mixed	5 x 200
Mixed packs contain 200 each of: blue, green, yellow, red, violet			

**FREE SAMPLE**  
**TRY**  
before you  
**BUY**  
available on request

## Ordering Information

### StarPCR Tube Strips



#### StarPCR Tube Strips

Thin-walled 0.2 ml StarPCR tube strips with 8 or 12 tubes, with the cap designs

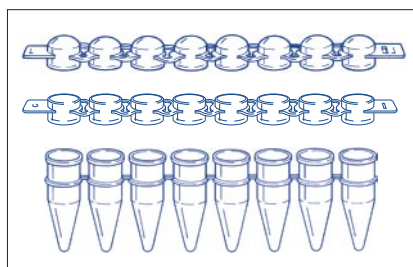
- /// Separate cap strip
- /// Attached cap strip
- /// Individually attached cap

Strips with individually attached caps additionally possess a safety shield to

prevent contamination. All strips and caps can be cut to any desired length. In addition to cap strips with domed caps, "Xtra Clear" flat-cap strips were specially developed for real-time PCR applications.

New cap strips by the name of "Perfect Seal" are more easily applied to plates or tube strips without impairing the required tightness.

StarPCR tube strips and caps are guaranteed free of detectable RNase, DNase and DNA and are available in natural or mixed colors (blue, green, yellow, red and violet, depending on the design).



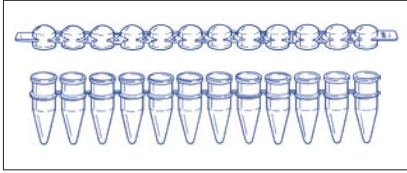
0.2 ml 8-strip PCR tubes and caps			
Cat. No.	Description	Color	Pack Size
<b>8-strip tubes</b>			
I1402-3500	0.2 ml 8-strip PCR tubes	Natural	125 strips
I1402-3508	0.2 ml 8-strip PCR tubes	Mixed	5 x 25 strips
<b>8-strip caps</b>			
I1400-0800	8-strip caps, domed	Natural	125 strips
I1400-0808	8-strip caps, domed	Mixed	5 x 25 strips
I1400-0810 <b>NEW</b>	8-strip caps, domed, Perfect Seal	Natural	125 strips
I1400-0818 <b>NEW</b>	8-strip caps, domed, Perfect Seal	Mixed	5 x 25 strips
I1400-0900	8-strip caps, flat cap, Xtra Clear	Natural	125 strips
Mixed packs contain 25 each of: blue, green, yellow, red, violet			



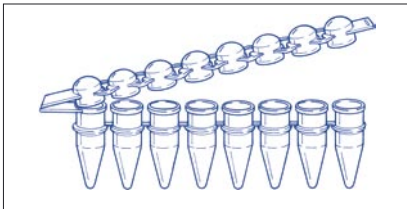


## Ordering Information

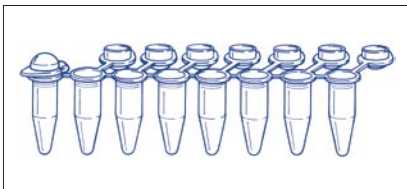
### StarPCR Tube Strips



0.2 ml 12-strip PCR tubes and caps			
Cat. No.	Description	Color	Pack Size
<b>12-strip tubes</b>			
I1402-1200	0.2 ml 12-strip PCR tubes	Natural	80 strips
I1402-1208	0.2 ml 12-strip PCR tubes	Mixed	5 x 16 strips
<b>12-strip caps</b>			
I1400-1200	12-strip caps, domed	Natural	80 strips
I1400-1208	12-strip caps, domed	Mixed	5 x 16 strips
I1400-1300 <b>NEW</b>	12-strip caps, domed, Perfect Seal	Natural	80 strips
I1400-1308 <b>NEW</b>	12-strip caps, domed, Perfect Seal	Mixed	5 x 16 strips
Mixed packs contain 16 each of: blue, green, yellow, red, violet			



0.2 ml 8-strip PCR tubes with attached strip caps			
Cat. No.	Description	Color	Pack Size
<b>8-strip tubes</b>			
I1402-2800	0.2 ml 8-strip PCR tubes with attached domed strip caps	Natural	125 strips
I1402-2808 <b>NEW</b>	0.2 ml 8-strip PCR tubes with attached domed strip caps	Mixed	5 x 25 strips
Mixed packs contain 25 each of: blue, green, yellow, red, violet			



0.2 ml 8-strip PCR tubes with individually attached caps			
Cat. No.	Description	Color	Pack Size
<b>Non shielded</b>			
I1402-2900	0.2 ml 8-strip PCR tubes with individually attached domed caps	Natural	120 strips
I1402-2908 <b>NEW</b>	0.2 ml 8-strip PCR tubes with individually attached domed caps	Mixed	5 x 24 strips
A1402-3700 <b>NEW</b>	0.2 ml 8-strip PCR tubes with individually attached flat caps, Xtra Clear	Natural	120 strips
A1402-3800 <b>NEW</b>	0.2 ml 8-strip PCR tubes with individually attached flat caps, Xtra Clear, low-profile	Natural	120 strips
<b>Shielded</b>			
S1602-2900	0.2 ml 8-strip PCR tubes with individually attached shielded domed caps	Natural	120 strips
B1402-3700	0.2 ml 8-strip PCR tubes with individually attached shielded flat caps	Natural	125 strips
Mixed packs contain 24 each of: blue, green, yellow, red, violet			

Different colors on special request



# Microcentrifuge

## FugeOne

### Your Friend and Helper!

Cost-efficient and reliable pre-centrifugation of PCR tubes is no problem with the FugeOne microcentrifuge.

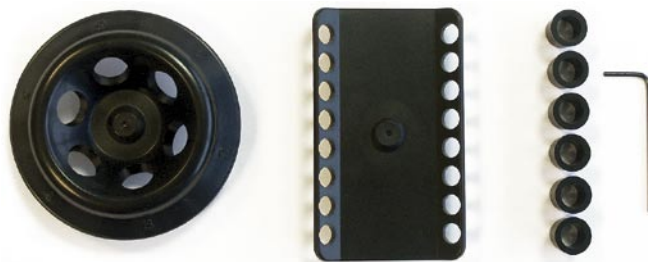
Handy and easily transportable, FugeOne can be used anywhere in the laboratory. With revolutions of up to 6,200 rpm and a centrifugal force of 2,000 x g, FugeOne not only displays excellent separating qualities, but is also exceptionally quiet.

- ✦ Low weight
- ✦ Space saving
- ✦ Easy rotor change
- ✦ Safety-lid guarantees automatic unit switch-off when opened
- ✦ Equipped as standard with 2 rotors, each for 6 x 0.5 ml or 1.5/2.0 ml tubes as well as for 2 PCR tube strips with 8 x 0.2 ml each



Technical Specifications	
Speed	Max. 6,200 rpm
Force (g)	2,000 x g (6 x 1.5/2.0 ml tubes)
Maximum Volume	2 PCR strips (8 x 0.2 ml tubes)
Dimensions (WxDxH)	140 x 125 x 115 mm
Power	100 ~ 240 V, 260 mA, 50/60 Hz
CE conform	

Ordering information FugeOne Microcentrifuge		
Cat. No.	Description	Pack Size
N2631-0006	FugeOne microcentrifuge „two in one“, CE conform	1



The FugeOne is supplied with: One power cord, two rotors (one for use with 6 x 1.5/2.0 ml tubes and one for use with 2 strips of 8 x 0.2 ml PCR tubes), six adapters (to convert 1.5/2.0 ml tube rotor to use with 0.5 ml tubes), and a wrench for changing the rotors

## PCR Sample Racks



### Well Arranged!

STARLAB rack systems were designed for safe and simple sample storage. The systems are available in various colors and with different sample accommodation capacities. They can be used universally with PCR tubes and/or plates down to temperatures of  $-90^{\circ}\text{C}$ . The transparent lid provides reliable protection against sample contamination.

### PCR Workstations

Practical combination system for effective storage of PCR tubes, tube strips and plates as well as 0.5 and 1.5/2.0 ml microcentrifuge tubes.

The alphanumeric index molded in the rack enables easy sample identification. The two differently dimensioned rack options A and B are easily connected to form a "combi-rack". It is suitable for temperatures from  $-90^{\circ}\text{C}$  to  $121^{\circ}\text{C}$  and autoclavable.

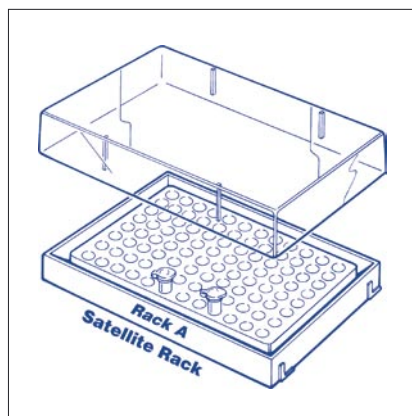
### Research Gloves

STARLAB's ultra-soft disposable research glove "Freeform" is a nitrile glove so comfortable to wear that it feels like a latex glove. And all this with no allergic reactions! Simply ask for a free sample by contacting [info@starlab.de](mailto:info@starlab.de)



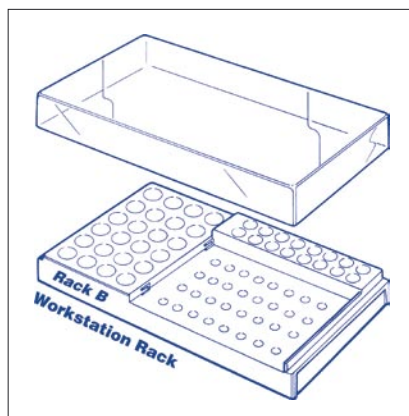
## Ordering Information

### PCR Sample Racks



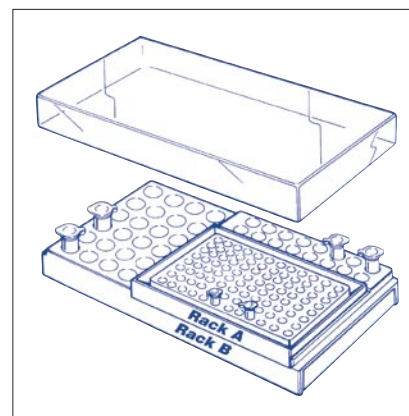
#### Rack A

- Capacity of 96 x 0.2 ml PCR tubes or tube strips and 96-well PCR plates
- Outside dimension with lid (WxDxH): 128 x 87 x 33 mm



#### Rack B

- Capacity of 32 x 0.2 ml PCR tubes, 16 x 0.5 ml tubes (PCR or MCT) and up to 24 x 1.5/2.0 ml microcentrifuge tubes
- Outside dimension with lid (WxDxH): 215 x 120 x 50 mm



#### Rack A and B combined

- Rack A is inserted without lid in the designated zone in Rack B

PCR Workstation			
Cat. No.	Description	Color	Pack Size
<b>Rack A</b>			
E2396-164#	Rack A with lid	Neon*	1
E2396-9649	Rack A with lid	Neon Mixed**	5
<b>Rack B</b>			
E2396-165#	Rack B with lid	Neon*	1
E2396-9659	Rack B with lid	Neon Mixed**	5
<b>Rack A and B</b>			
E2396-969#	Rack A and B with lid	Neon*	1 x Rack A and B
E2396-9669	Rack A and B with lid	Neon Mixed**	5 x Racks A and B
* To order the color required replace # as last digit of Cat. No. with: 1 for blue, 2 for green, 3 for orange, 4 for pink, 6 for yellow ** Mixed pack contains one each of: blue, green, orange, pink, yellow			



## Ordering Information

### PCR Sample Racks



#### StarPCR Work Rack

Polypropylene work rack is for 96-well PCR plates, 0.2 ml PCR tubes or tube strips. The positive snap-in mechanism of the transparent lid guarantees safe and contamination protected closure. The rack's well designed feet ensure a stable position. Stackable with or without lids, suitable for temperatures from  $-90^{\circ}\text{C}$  to  $121^{\circ}\text{C}$ .

StarPCR work rack			
Cat. No.	Description	Color	Pack Size
E2396-5240	StarPCR work rack with lid	Mixed	5
Contains one each of: blue, green, red, yellow, violet. Dimensions with lid (WxDxH): 138 x 98 x 39 mm			



#### StarStore 50 Junior

Small polypropylene box for storage of 50 x 0.5 ml PCR tubes. The frosted surface is easy to mark and the alpha-numeric index prevents sample mix-up. It is supplied with lid, suitable for temperatures from  $-90^{\circ}\text{C}$  to  $121^{\circ}\text{C}$  and autoclavable.

StarStore 50 Junior			
Cat. No.	Description	Color	Pack Size
E2305-6009	StarStore 50 Junior, storage box for 50 x 0.5 ml tubes	Natural	5
Dimensions with lid (WxDxH): 122 x 64 x 37 mm			

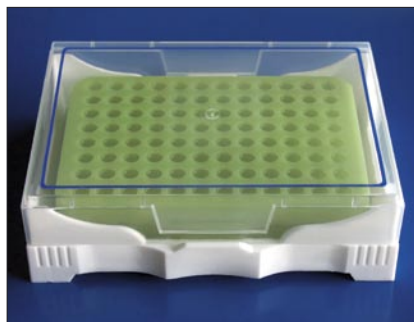
#### LabPal Label Printer

Fast and efficient! The portable LabPal label printer prints easily readable labels for your PCR tubes or plates in a matter of seconds. The labels resist even extreme laboratory environments such as sample storage in liquid nitrogen or during autoclaving.

For more information contact your local STARLAB subsidiary.



## PCR Sample Cooling Racks



### StarChill

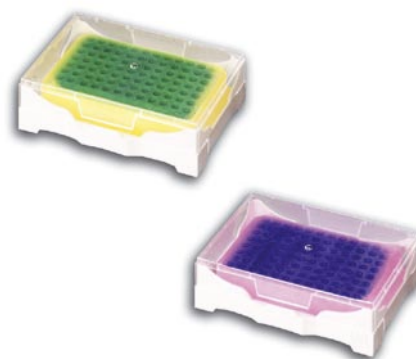
Polypropylene construction with a special non-toxic gel filling and transparent lid for fast cooling or continuous cooling below 4 °C for up to 4 hours for 0.2 ml PCR plates, 96 x 0.2 ml PCR tubes or tube strips.



As a special feature, the plastic material contains an indicator dye, the color of which changes when warmed up to approx. 7 °C. This enables the user to visually identify the condition of the cooling system. Before use, StarChill must be stored at –20 °C for about 8 hours. The footprint dimensions of the StarChill SBS version correspond to the standards of the Society for Biomolecular Screening. The very robust rack was specially developed for cooling samples in automated PCR systems. StarChill SBS is supplied without a lid and only differs from the standard model by displaying a reduced cooling capacity of 2.5 hours.

Both StarChill racks are available in two color versions:

- Color change from green (< 4 °C) to yellow (> 4 °C)
- Color change from blue-violet (< 4 °C) to pink (> 4 °C)



StarChill			
Cat. No.	Description	Color change	Pack Size
<b>StarChill Standard</b>			
E2396-2004	StarChill, PCR chiller rack with lid	purple/pink	2
E2396-2006	StarChill, PCR chiller rack with lid	green/yellow	2
Dimensions with lid (WxDxH): 141 x 99 x 44 mm			
<b>StarChill SBS</b>			
E2396-5654 <b>NEW</b>	StarChill SBS, PCR chiller rack	purple/pink	2
E2396-5656 <b>NEW</b>	StarChill SBS, PCR chiller rack	green/yellow	2
SBS Footprint			

### Labtop Cooler



With a sample capacity of 25 x 0.5 ml and/or 36 x 1.5 ml single tubes, the low-cost Labtop Cooler with its special gel filling will keep 0.5 ml PCR tubes below 4 °C for one hour.

The transparent lid protects the samples against contamination. Before use, the Labtop Cooler must be stored at –20 °C for at least 2 hours.



Labtop cooler			
Cat. No.	Description	Color	Pack Size
A2312-6001 <b>NEW</b>	Labtop Cooler with lid	light blue	1

## PCR Cabinets

### AirClean Cabinets – AC600 Series

The newest generation of PCR cyclers are more technically advanced showing better and better PCR product components. Requirements for sample preparation, preceding all other working steps, have increased significantly. Together with certified PCR plastic consumables and the ambient conditions for samples, PCR preparations must be guaranteed free of extraneous DNA and RNA.

For this reason STARLAB exclusively distributes the high-quality range of clean benches made by the renowned manufacturer "AirClean" – always the first choice, when optimal PCR ambient conditions are required.

Besides the "Dead Air" technology, where the working environment is decontaminated using highly effective UV-radiation at 254 nm, the "Laminar-

Flow" technology offers additional protection against ambient contamination by utilizing highly effective air filtration with HEPA-filters (High Efficiency Particulate Air Filter).

In contrast to UV-decontamination, laminar-flow offers reliable protection against ambient contamination at all times when working at the cabinet.

# AirClean® Systems

"THE FUME CONTROL EXPERTS"



## PCR Cabinets

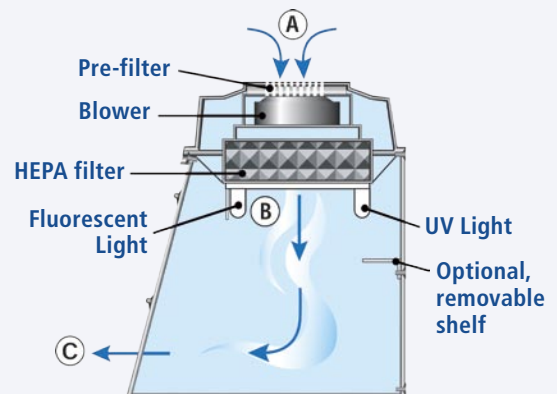


Both types of cabinets are available in two sizes and incorporate the following features:

- ✦ UVTest™ microprocessor
- ✦ Polycarbonate and polypropylene design to reflect UV energy
- ✦ Folding sash for full and easy access
- ✦ Fluorescent light
- ✦ UV light
- ✦ Safety interlock switch that automatically cuts off the UV light when the sash is opened
- ✦ Uni-body plastic design ensures no UV energy escapes during sterilization

### How the "Laminar Flow" works:

- ✦ Room air enters at **A**
- ✦ The air is forced through the HEPA filter to create a laminar flow
- ✦ Clean, laminar flow air enters at **B**, and exits at **C**
- ✦ UV light sterilizes pipettes, pipette tips, tubes and flasks





# Specifications and Ordering Information

## PCR Cabinets

Specifications AirClean PCR Cabinets				
	Dead Air Cabinets		Laminar Flow Cabinets	
Cat. No.	N2540-8400	N2540-8500	N2530-8200	N2530-8300
External dimensions (WxDxH)	32" x 24" x 30" (813 x 610 x 762 mm)	48" x 26" x 32" (1219 x 660 x 813 mm)	32" x 24" x 30" (813 x 610 x 762 mm)	48" x 26" x 32" (1219 x 660 x 813 mm)
Ship weight (approx.)	45.4 kg	68 kg	56.7 kg	81.7 kg
Noise level	not applicable	not applicable	<49 dba	<53 dba
Voltage/Power	110 V or 220 V / 20 Watts	110 V or 220 V / 40 Watts	110 V or 220 V / 200 Watts	110 V or 220 V / 400 Watts
UV light	15 W, 254 nm	2 x 15 W, 254 nm	15 W, 254 nm	2 x 15 W, 254 nm
UV light timer	0 - 60 mins (digital)	0 - 60 mins (digital)	0 - 60 mins (digital)	0 - 60 mins (digital)
Air velocity	not applicable	not applicable	digital	digital
Safety Interlock (UV)	x	x	x	x

Ordering Information AirClean PCR Cabinets		
Cat. No.	Description	Pack Size
Dead Air Cabinets		
N2540-8400	32" Dead Air PCR cabinet with UV light	Each
N2540-8500	48" Dead Air PCR cabinet with UV light	Each
Laminar Flow Cabinets & Parts		
N2530-8200	32" Laminar Flow PCR cabinet with UV light	Each
N2530-8300	48" Laminar Flow PCR cabinet with UV light	Each
N3942-7500	Replacement pre-filters for N2530-8200	10
N3952-7518	Replacement pre-filters for N2530-8300	10
N3942-7000	Replacement HEPA filter for N2530-8200	Each
N3952-7018	Replacement HEPA filter for N2530-8300 (2 required)	Each
Parts & Accessories for both models		
N2530-1500	UV bulbs	4
N2520-3201	Optional shelf for 32" models (incl. pipette holder)	Each
N2520-4801	Optional shelf for 48" models (incl. pipette holder)	Each
N2520-3200	Trolley/stand for 32" models	Each
N2520-4800	Trolley/stand for 48" models	Each
Note: Shelves must be ordered at the same time as the AirClean unit because holes must be drilled for the brackets that hold the shelf. Once in place, the shelf can be removed from/returned to the brackets as required		



### UVTect™ Microprocessor

- Turns the system on and off
- Time and date display
- UV bulb monitor to monitor the effectiveness of the bulb and alert you when bulb life is getting low
- Digital UV timer
- Lab event timer
- Constant HEPA filter monitoring to alert you when the filter needs changing (Option Laminar Flow)
- Variable speed blower control allows manual adjustment to the airflow to accommodate even the most fragile of samples (Option Laminar Flow)

# TipOne Pipette Tips with Filter

## Reliable Protection

TipOne filter tips are manufactured from highly purified polypropylene under clean room conditions.

The filter material used by STARLAB consists of pure polyethylene with an exactly defined pore structure and size. The advantage is that no interfering additives, (identified as PCR inhibitors) enter the sample. Additionally, all TipOne filter tips are supplied sterile in practical boxes and are free of detectable RNase, DNase, DNA and Pyrogens. Empty boxes can be easily re-used with TipOne refill systems which avoids plastic waste.

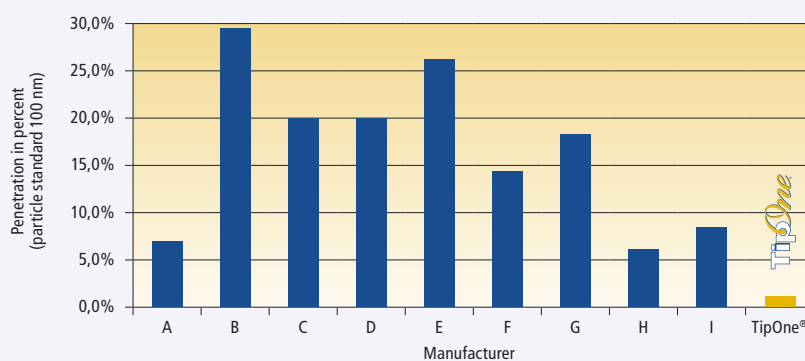
TipOne



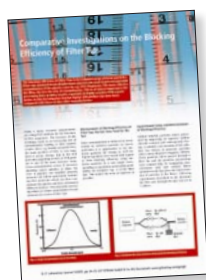
## Convincing

In an independent test laboratory, the particle retention ability of TipOne filter tips was examined and compared to filter tips from other leading suppliers. The result was unequivocal: more than 99 % of all particles entering the filter from aerosols were held back by the TipOne filter tips, better than any other pipette tip!

### Aerosol penetration of TipOne filter tips in comparison to filter tips from other manufacturers



The comparison tests were conducted by an independent test institute with filter tips from other leading manufacturers



## TipOne Filter Tips

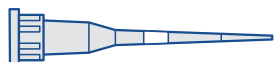


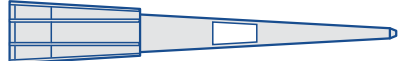
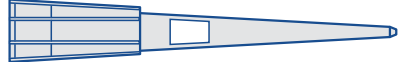




More information on our filter tips can be found in the publication "Comparative Investigations on the Blocking Efficiency of Filter Tips" in G.I.T. Laborjournal. Simply request by contacting: [info@starlab.de](mailto:info@starlab.de)

## Ordering Information

### TipOne Pipette Tips with Filter

TipOne

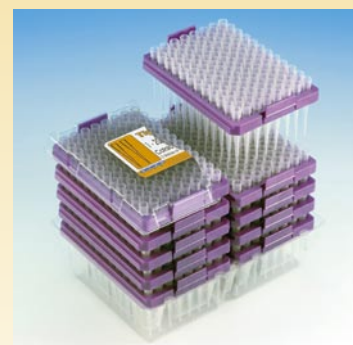


Filter pipette tips	Sterile racks
All filter tips are natural in color	10 x 96-tip racks
 0,1-10 µl Graduated, Filter Tip	S1121-3810
 0,1-10 µl XL, Filter Tip	S1120-3810
 0,5-10 µl Filter Tip (Eppendorf Type)	S1121-4810
 1-20 µl Bevelled, Filter Tip	S1120-1810
 1-50 µl Bevelled, Filter Tip	S1120-2810
 1-100 µl Bevelled, Filter Tip	S1120-1840
 1-200 µl Graduated, Filter Tip	S1120-8810
 100-1000 µl Filter Tip	S1126-7810
 100-1000 µl XL, Graduated, Filter Tip	S1122-1830

All tips shown actual size

### TipOne Refilling Systems

This system is ideal for re-using empty filter tip boxes. This avoids waste and protects the environment.



TipOne refill units are simply transferred to the box. A special snap-in mechanism locks the unit securely in the box. For more information go to [www.starlabgroup.com](http://www.starlabgroup.com)

### Try before you buy

TipOne pipette tips were specially developed for applications with commonly used pipettes, with guaranteed high precision and accuracy.

Free sample tips for testing are available upon request.

**FREE SAMPLE**  
**TRY**  
before you  
**BUY**  
available on request



TipOne pipette tips are guaranteed free of detectable RNase, DNase, DNA and Pyrogens.

**STARLAB GmbH**

Ewige Weide 7  
D-22926 Ahrensburg  
Germany

T: +49 (0)4102 6044 0  
F: +49 (0)4102 6044 20  
info@starlab.de  
www.starlab.de

**STARLAB-FRANCE**

48 rue de Morillons  
75015 Paris  
France

T: +33 (0)1 45 3062 83  
F: +33 (0)1 45 3062 95  
info@starlab-france.com  
www.starlab-france.com

**STARLAB (UK), Ltd**

4 Tanners Drive  
Milton Keynes MK 14 5NA  
United Kingdom

T: +44 (0)1908 283800  
F: +44 (0)1908 283802  
info@starlab.co.uk  
www.starlab.co.uk

**STARLAB Srl.**

Via Corelli 36/5  
20134 Milano  
Italy

T: +39 02 7020 1040  
F: +39 02 7020 1033  
info@starlabitalia.it  
www.starlabitalia.it

**STARLAB Scientific  
India Private Limited**

1A, Kalpatharu Complex  
44, C. P. Ramaswamy Road  
Alwarpet, Chennai - 600018  
India

T: +91(0)44 24662 279  
F: +91(0)44 24662 576  
info@starlab.co.in  
www.starlab.co.in

[www.starlabgroup.com](http://www.starlabgroup.com)

