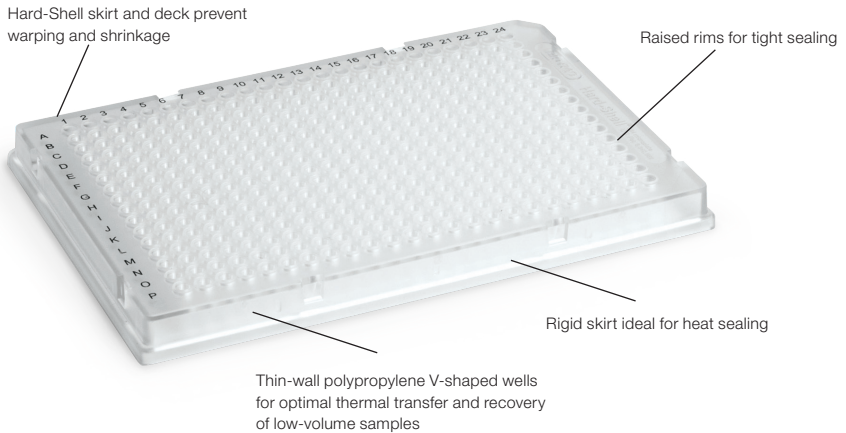


# Hard-Shell® 384-Well Standard PCR Plates

Hard-Shell PCR plates represent an innovative concept in PCR plate design. The skirt and deck are molded from a rigid thermostable polymer, preventing robotic handling problems due to plate warping. This hard shell prevents the distortion and shrinkage that may occur when regular single-component polypropylene PCR plates are exposed to the high temperatures of thermal cycling or heat sealing. The thin-wall wells are molded of virgin polypropylene selected for low DNA binding. The raised rims around each well allow tight sealing using a variety of procedures, including pressure-, adhesive-, and heat-sealing methods.



### Hard-Shell 384-Well Standard PCR Plates

16- x 24-well array, package of 50 plates

HSP-3805	White well, clear shell
HSP-3905	White well, clear shell, bar-coded on 2 sides (Row P and Column 24)
HSP-3865	White well, black shell
HSP-3801	Clear well, clear shell
HSP-3901	Clear well, clear shell, bar-coded on 2 sides (Row P and Column 24)
HSP-3811	Clear well, red shell
HSP-3821	Clear well, yellow shell
HSP-3831	Clear well, blue shell
HSP-3841	Clear well, green shell
HSP-3851	Clear well, white shell
HSP-3866	Black well, black shell

### Seals and Accessories

181-4000	<b>PX1™ PCR Plate Sealer</b> , semiautomated heat sealing instrument
181-4030	<b>Optically Clear Heat Seal</b> , for use with PX1 PCR plate sealer, 100 seals
MSA-5001	<b>Microseal® 'A' Film</b> , 50 seals
MSB-1001	<b>Microseal 'B' Adhesive Seals</b> , optically clear, 100 seals
MSC-1001	<b>Microseal 'C' Optical Seals</b> , 100 adhesive seals
MSF-1001	<b>Microseal 'F' Foil</b> , 100 adhesive seals
MSR-0001	<b>Sealing Roller</b> , for adhesive film seals
CHO-1401	<b>Chill-out™ Liquid Wax</b> , red, 100 ml
CHO-1411	<b>Chill-out Liquid Wax</b> , clear, optical grade, 100 ml

Please request bulletin 5496 for more information about Hard-Shell PCR plates, including dimension details, and bulletin 6090 for more information about seals and accessories.

## Hard-Shell PCR Plate Compatibility Chart

### 384-Well Standard PCR Plates



Catalog number	HSP-3xxx
Maximum well volume	50 $\mu$ l
ANSI/SBS standard dimensions	Yes
Autoclave specification	121°C, 20 min
Centrifuge specification	Up to 2,250 x g in a swing-out rotor
Application temperature	-80 to 121°C
Storage	Room temperature; avoid sun and UV light
Cleanroom production	Free of DNase, RNase, and human DNA
<b>Thermal Cycler Compatibility*</b>	
Bio-Rad® C1000™, C1000 Touch™, S1000™	•
Bio-Rad® DNA Engine®, DNA Engine Tetrad®, and Tetrad 2, DNA Engine Dyad®, Dyad Disciple™	•
Applied Biosystems cyclers (9700, Veriti, etc.)	•
Eppendorf Mastercycler series	•
<b>Real-Time PCR Detection System Compatibility*</b>	
Bio-Rad® CFX384™, CFX384 Touch™	•
Applied Biosystems systems (7900HT, ViiA 7)	•
<b>Other Instrument Compatibility*</b>	
Applied Biosystems capillary DNA sequencers (3700, 3730, etc.)	•
Idaho Technology LightScanner	•

\* 384-well instruments.

**Note:** The Hard-Shell 384-well 480 PCR plates have been specifically designed for the Roche LightCycler 480. Please request bulletin 5496 for more information about these plates.

Eppendorf and Mastercycler are trademarks of Eppendorf AG. LightCycler is a trademark of Roche Diagnostics GmbH. LightScanner is a trademark of Idaho Technology Inc. Veriti is a trademark of Applied Biosystems Corporation. ViiA is a trademark of Life Technologies Corporation.

Hard-Shell plates are covered by one or more of the following U.S. patents or their foreign counterparts owned by Eppendorf AG: U.S. Patent Numbers 7,347,977; 6,340,589; and 6,528,302.

Notice regarding Bio-Rad thermal cyclers and real-time systems:

Purchase of this instrument conveys a limited non-transferable immunity from suit for the purchaser's own internal research and development and for use in human in vitro diagnostics and all other applied fields under U.S. Patent Number 5,475,610 (Claims 1, 44, 158, 160–163, and 167 only), or corresponding claims in its non-U.S. counterpart, owned by Applied Biosystems Corporation. No right is conveyed expressly, by implication, or by estoppel under any other patent claim, such as claims to apparatus, reagents, kits, or methods such as 5' nuclease methods. Further information on purchasing licenses may be obtained by contacting the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404, USA.

Bio-Rad's real-time thermal cyclers are licensed real-time thermal cyclers under Applied Biosystems' U.S. Patent Number 6,814,934 B1 for use in research, human in vitro diagnostics, and all other fields except veterinary diagnostics.

Bio-Rad's thermal cyclers and real-time thermal cyclers are covered by one or more of the following U.S. patents or their foreign counterparts owned by Eppendorf AG: U.S. Patent Numbers 6,767,512 and 7,074,367.



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