

MultiScreen[®]₃₈₄-PCR Plate User Guide

S384 PCR 10 (10/pk) ■ S384 PCR 50 (50/pk)

Introduction

MultiScreen₃₈₄-PCR plates are designed to purify as many as 384 PCR samples in about 25 minutes using a single vacuum filtration step. PCR reactions are simply loaded into the MultiScreen₃₈₄-PCR Plate and vacuum is applied until the wells are completely empty. PCR products remain on the filter, while primers, dNTPs and salts pass into the filtrate. The purified PCR products are then resuspended from the proprietary membrane surface using an automated liquid handler. The highly purified PCR products are suitable for DNA sequencing and microarray preparation.

Usage Guidelines

- The use of PCR reaction buffers that contain high concentrations of surfactants (i.e., greater than the critical micelle concentration) or protein stabilizers (e.g., gelatin) is not recommended for this application. Surfactants including Tween[®]-20, Triton[®] X-100 and Nonidet[®] P-40 are not efficiently removed by the MultiScreen₃₈₄-PCR plates and may result in carry-over into subsequent reactions.
- The use of a partial plate is not recommended.
- Filtration time will vary depending on the amount of DNA and/or the volume of the PCR reaction. The greater the amount of DNA, the longer the filtration times necessary.
- For optimal recovery of PCR products, do not exceed the recommended vacuum pressure.
- The PCR product is sufficiently pure for DNA sequencing after a single vacuum filtration. If a particular application demands even higher purity, a wash step may be added.

How to Use the MultiScreen₃₈₄-PCR Plate

1. Adjust the volume of the PCR reactions to 100 µL with TE Buffer.
NOTE: Dilution is critical for optimal recovery of PCR products.
2. Transfer PCR reactions to the MultiScreen₃₈₄-PCR plate.
3. Place the MultiScreen₃₈₄-PCR plate on the vacuum manifold (Millipore Cat. No. SAVM 384 01) and apply vacuum at 20" Hg for 10 to 15 minutes, or until the wells are completely empty.
NOTE: Complete filtration of PCR products is required for sample purity. The filters appear shiny even after they are dry, and should remain under vacuum for a minute after the last well has filtered to dryness.
4. Remove MultiScreen₃₈₄-PCR plate from the manifold and, if desired, use an absorbent material to blot any remaining droplets from the bottom of the plate prior to resuspending the purified PCR products.
NOTE: A wash step may be added, using 25–100 µL of water or buffer, followed by vacuum filtration at 20" Hg. A washing step will be more effective if wash buffer is mixed several times within each well prior to vacuum filtration. A moderate decrease in overall recovery of purified PCR products may be observed when a wash step is employed.
5. Dissolve the samples in a suitable aqueous buffer (e.g., Milli-Q[®] grade water or TE) by vigorously mixing, using either a pipetting workstation or a plate mixer.
NOTE: Maximal recovery of purified PCR products requires efficient dissolution of the concentrated nucleic acid from the membrane surface. For example, the Beckman Multimek[™]-96 workstation can be used to dissolve the samples in 20 µL by adjusting the tip height to just above the membrane surface and mixing 15 µL for 50 cycles at 50% pipetting speed. Other pipetting workstations may also be used to efficiently resuspend purified products from the MultiScreen₃₈₄-PCR plate. Alternatively, the purified samples can be dissolved by shaking for 10 minutes on, for example, a Lab-Line[®] Titer Plate Shaker (Model 4625) set at 1100 rpm.
6. Retrieve the purified PCR products from each well by pipetting.

Storage

Prolonged storage of either dry or resuspended PCR products in the MultiScreen₃₈₄-PCR plate is not recommended. If storage is required, we recommend transferring the resuspended samples to a solid-bottom plate, sealing the plate to prevent evaporation, and storing at 4 °C.

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Specifications

Maximum well volume:	130 µL
Working well volume:	100 µL
PCR product capacity (maximum evaluated):	2.5 µg
Distance from bottom of the plate to membrane surface:	3 mm
Materials of construction	
Plastic housing:	Clear polystyrene
Membrane:	Proprietary

Product Ordering Information

This section lists the catalogue numbers for the MultiScreen₃₈₄-PCR plate. See the Technical Assistance section for information about contacting Millipore. You can also buy Millipore products on-line at www.millipore.com/purecommerce.

Product	Catalog Number	Qty/Pk
MultiScreen ₃₈₄ -PCR plate	S384 PCR 10	10
MultiScreen ₃₈₄ -PCR plate	S384 PCR 50	50
Vacuum Manifold	SAVM 384 01	1
Also Available		
MultiScreen ₃₈₄ -SEQ plate	S384 SEQ 10	10
MultiScreen ₃₈₄ -SEQ plate	S384 SEQ 50	50

Technical Assistance

For more information, contact the Millipore office nearest you. In the U.S., call **1-800-MILLIPORE** (1-800-645-5476). Outside the U.S., see your Millipore catalogue for the phone number of the office nearest you or go to our web site at www.millipore.com/offices for up-to-date worldwide contact information. You can also visit the tech service page on our web site at www.millipore.com/techservice.

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The PCR process is covered by U.S. Patents 4,683,195 and 4,683,202 and foreign equivalents owned by Hoffmann-La Roche Inc.

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