

MultiScreenTM₃₈₄-PCR Filter Plate

- Automation-friendly 384-well plate for high-throughput purification of PCR* products



Use MultiScreen₃₈₄-PCR for one-step cleanup prior to sequencing or microarray preparation.

High Throughput PCR Purification

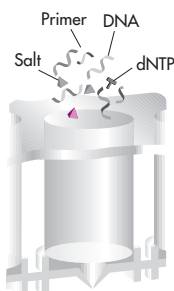
MultiScreen₃₈₄-PCR filter plates use size selective membranes to separate PCR products from contaminants. Designed with the needs of the high throughput laboratory in mind, MultiScreen₃₈₄-PCR meets SBS standards and is ideally suited to “walk away” automation.

Quick and Easy Protocol

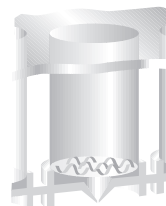
MultiScreen₃₈₄-PCR minimizes the procedural complexity involved in traditional precipitation or bind and elute methods. Use of the MultiScreen₃₈₄-PCR filter plate eliminates centrifugation, time consuming incubations, ethanol-drying steps and manifold disassembly routines. Resuspension in your choice of buffer or water adds flexibility and facilitates integration with downstream steps.

The protocol is simple. Filter until wells are empty and then resuspend PCR products free of dNTP's, salt, and 90% free of primers in your choice of buffer.

Simply Filter, Reconstitute, and Recover



1. Introduce samples into wells (up to 100 μ l).



2. Filter using MultiScreen₃₈₄ vacuum manifold for 10 to 20 minutes or until wells are empty. DNA is retained on the surface of the membrane while smaller contaminants are filtered to waste.



3. Add resuspension buffer to each well (typically 10 to 100 μ l) and recover purified DNA from the membrane surface by mixing or shaking. Retrieve purified samples by aspiration.

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*PCR is covered by US patents issued to Hoffman-LaRoche, Inc.

Design and Protocol Saves Time and Money

The 20 minute protocol does not require special reagents that can contribute to increased cost, process time and automation complexity.

Moreover, there is no risk of exonuclease degradation of the PCR products and microarray preparation is facilitated by the removal of nucleotides and salt.

Features:

- Automation friendly
- No practical capacity limits
- Resuspension at a desired concentration and in an aqueous buffer of choice allows for greater flexibility when preparing samples for downstream applications
- 10 – 100 μ l working volume better for processing smaller samples

Performance

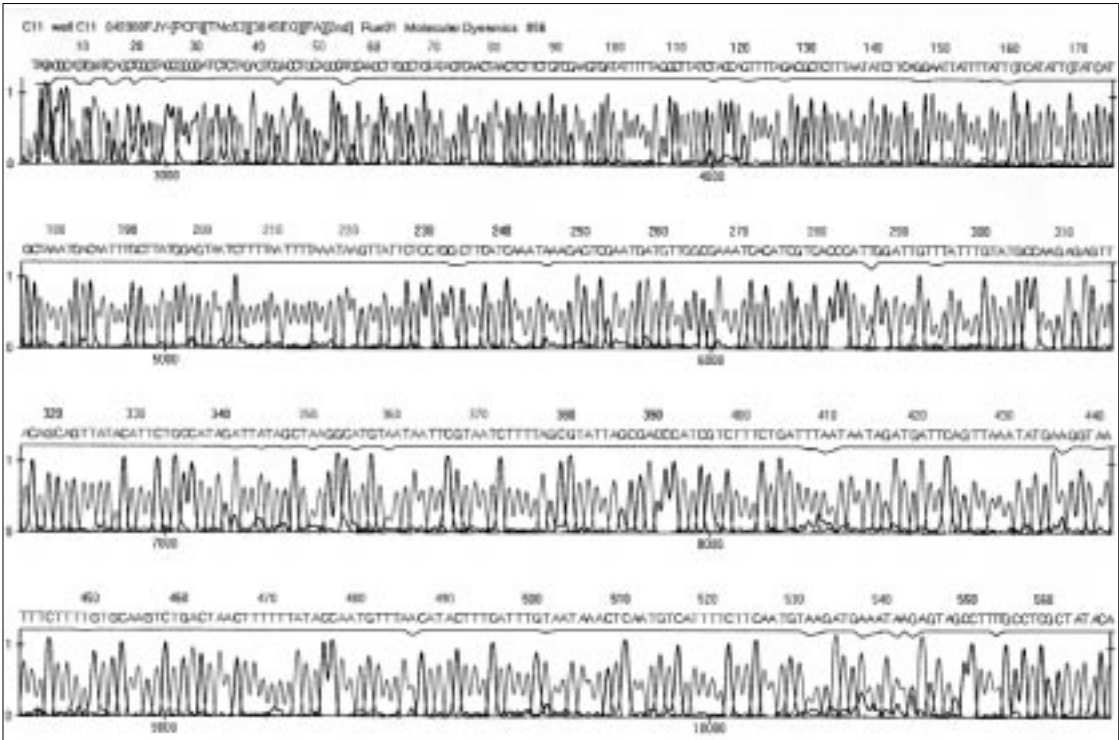


Figure 1. Representative electropherogram from a 1159 bp PCR product purified using the MultiScreen₃₈₄-PCR filter plate.

Specifications

Maximum Well Volume: 130 μ L

Working Well Volume: 100 μ L

Non-recoverable volume: < 2 μ L

Distance from bottom of plate to membrane surface: 3 mm

Materials of construction

Plastic Housing: Clear Polystyrene

Membrane: Proprietary

Automation Platform

Recommendations

MultiScreen₃₈₄-PCR filter plates perform best with 96 or 384 tip liquid handlers (e.g., Beckman's Multimek) capable of pipetting $\geq 25 \mu$ L/second or with plate shakers with 0.12 inch orbit @ 1100 rpm. Other liquid handlers or shakers operating at slower speeds are equally effective, but resuspension times are longer.

Contact Millipore Technical Services or consult with one of the Millipore Application Scientists for help with your automation needs (1-800-MILLIPORE).

PCR Product Recovery

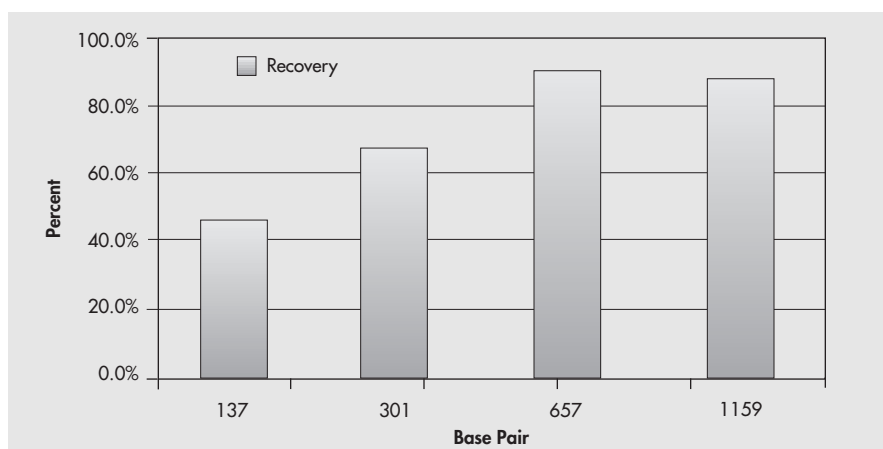


Figure 2. MultiScreen₃₈₄-PCR filter plate's average recovery determined using a fluorescence-based assay (n=96). Good recoveries are observed for PCR products >300 bp with salts, dNTPs and >90% of primers being removed in a single step.

Multiple Resuspension Options

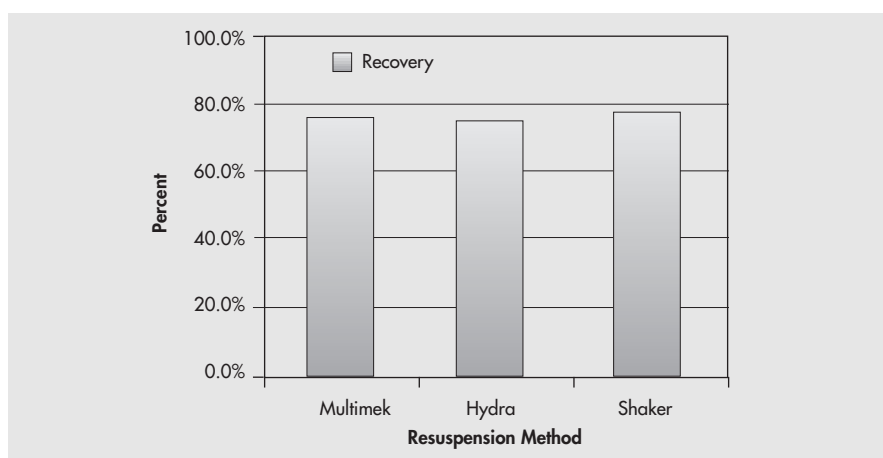
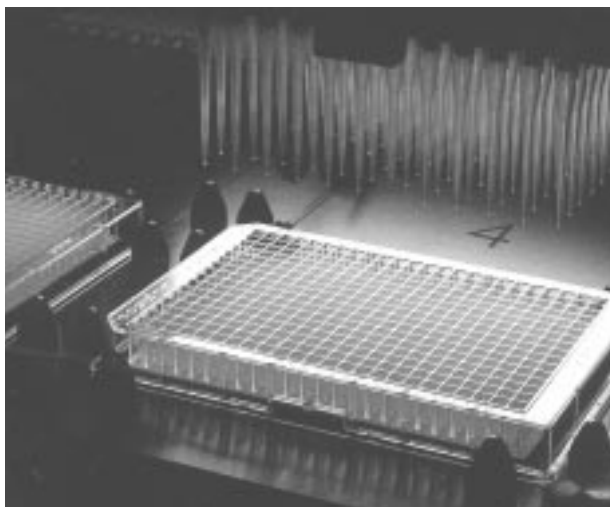


Figure 3. 20 μ L PCR products were purified on the MultiScreen₃₈₄-PCR plate, resuspended in 20 μ L TE buffer as indicated and percent recovery was determined by gel electrophoresis, ethidium bromide staining and densitometry. Good recoveries are observed with liquid handlers using disposable or fixed tips. Shaking too was shown to be effective and is noteworthy for laboratories who are not equipped with 96 pipette liquid handling systems.

Chemical Compatibility

Chemical		Chemical	
EDTA	E	Ethanol 100%	Q
Formamide 70%	X	Ethanol 70%	E
Formamide 20%	E	Ethanol 20%	E
DMSO 100%	X	Sodium Citrate	E
DMSO 50%	X	2-Pyrrolidinone 20%	Q
DMSO 20%	Q		

E= Excellent Q=Questionable X=Not Recommended



Ordering Information

Description	Pack Size	Catalogue No.
MultiScreen ₃₈₄ -PCR filter plate	10	S384 PCR 10
MultiScreen ₃₈₄ -PCR filter plate	50	S384 PCR 50
MultiScreen ₃₈₄ Manifold	1	SAVM 384 01

To Place an Order or Receive Technical Assistance

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MultiScreen₃₈₄-PCR plate is patent pending.

Multimek is a trademark of Beckman Instruments, Inc.

PCR is covered by patents issued to Hoffman-LaRoche, Inc.

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