

User Guide

MultiScreen[®]_{HTS} PCR₉₆ Filter Plate User Guide

MSNU03010 (10/pk) MSNU03050 (50/pk)

Introduction

MultiScreen[®]_{HTS} PCR₉₆ filter plates are disposable, single-use 96-well filter plates developed for the purification of 150 to 300 µL of PCR reactions per well. MultiScreen[®]_{HTS} PCR₉₆ plates are designed for vacuum filtration only and are for use with the MultiScreen[®]_{HTS} Vacuum Manifold. The MultiScreen[®]_{HTS} PCR₉₆ plate is highly automatable, with all sample manipulations occurring above the surface of the membrane. No washing steps or filtrate collection are required.

How to Choose the Correct Plate

For optimal recovery, use the following table to determine the correct plate for your application.

MultiScreen [®] _{HTS} Filter Plate	Number of sample wells	Reaction Volume	Recovery of 137 bp PCR fragment	Recovery of 301 bp PCR fragment	Recovery of 657 bp PCR fragment	Recovery of 1159 bp PCR fragment	Typical Primer Removal* (20 bases)	Recommended Applications
PCR _{µ96}	96	20–150 µL	+	++	++	++	99.8%	Sequencing Genotyping Microarray
PCR ₉₆	96	150–300 µL	--	+	++	++	98.7%	Microarray
PCR ₃₈₄	384	20–100 µL	+	++	++	++	99.5%	Sequencing Genotyping Microarray

-- = Not recommended + = Good recovery ++ = Best recovery

*Results will vary depending on starting concentration, load, and buffers used. Data were obtained using the following concentrations: 137 bp: 10 ng/µL, 301 bp: 30 ng/µL, 657 bp: 55 ng/µL, 1159 bp: 71 ng/µL

Usage Guidelines

- For research use only. Not for use in diagnostic procedures.
- Single use only
- For PCR product purification requiring retentate only. Not for use in filtrate collection.
- 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 MultiScreen[®]_{HTS} PCR₉₆ plates and this may result in carry-over into subsequent reactions.
- Filtration time varies depending on the volume added to the wells and the strength of the vacuum source. It is important that all wells are completely emptied of liquid before redissolving purified PCR products.
- Do not apply vacuum with the lid on the plate.
- Not for use in centrifugal mode.
- The MultiScreen[®]_{HTS} PCR₉₆ plate consists of a polystyrene plate sealed to a polyethylene underdrain, forming 96 independent (individually-sealed) wells.
- Refer to the MultiScreen[®]_{HTS} Vacuum Manifold User Guide for details on filtration with PCR₉₆ filter plates.

Sample Storage

Prolonged storage of either dry or resuspended PCR products in the MultiScreen[®]_{HTS} PCR₉₆ plate is not recommended. If storage is required, transfer the resuspended samples to a solid-bottom plate, seal the plate to prevent evaporation, and store at 4 °C.

How to Use the MultiScreen[®]_{HTS} PCR₉₆ Plate

1. Load PCR reactions into the MultiScreen[®]_{HTS} PCR₉₆ plate (typically 100 µL, up to 300 µL of PCR sample per well). You do not need to use all 96 wells.
2. Place the MultiScreen[®]_{HTS} PCR₉₆ plate on top of the MultiScreen[®]_{HTS} Vacuum Manifold.
3. Apply vacuum pressure of 847 millibar (25 inches Hg) for 10 minutes or until wells have emptied (5 to 12 minutes). Starting volumes larger than 100 µL and vacuum pressures below 847 millibar will require longer filtration times.
4. Continue to apply vacuum for an additional 30 seconds after the wells appear empty to ensure that all liquid has filtered through. The filters appear shiny even after they are dry.

NOTE: The PCR product should be of sufficient purity for DNA sequencing at this time. If the purity is not sufficient for a particular application, wash with 50 to 300 µL of Milli-Q[®] grade water to obtain higher purity. Then proceed to step 5.

How to Use the MultiScreen[®]_{HTS} PCR₉₆ Plate, continued

5. Reconstitute the samples as follows:

When using a liquid handler: Leave the plate on the manifold (with vacuum off) and add water or buffer (50–100 µL) to each well. Mix sample by pipetting up and down vigorously. For example, add 100 µL of buffer and adjust the tip height so that it is 1–2 mm above the membrane surface. Then pipet 90 µL up and down for 25 cycles at 50% speed setting.

NOTE: Do not use a manual multichannel pipette to resuspend the samples. It will give poor results.

When using a plate mixer: After vacuum filtration is complete, remove the plate from the manifold, blot the bottom with paper towels, and add water or buffer (50–100 µL) to each well with a liquid pipettor. Mix sample vigorously on a plate mixer for 5 minutes.

6. Retrieve purified PCR product from each well by pipetting.

Specifications

Maximum operating sample capacity:	300 µL
Hold-up volume membrane and support:	4 µL
Maximum vacuum pressure:	847 millibar (25 inches Hg)

Active membrane area of well: 0.2 cm²

Dimensions of assembled plate:

Plate length	123.4 mm
Plate width	82.7 mm
Plate depth	14.6 mm without cover 16.5 mm with cover

Materials of construction:

Plate	Polystyrene
Underdrain Support	Polyethylene
Membrane	Proprietary

Product Ordering Information

This section lists catalogue numbers for MultiScreen[®] PCR plates and accessories. See the Technical Assistance section for contact information. You can purchase these products on-line at www.millipore.com/products.

Product	Qty/Pk	Catalog Number
MultiScreen [®] _{HTS} PCR ₉₆ Plate	10	MSNU03010
MultiScreen [®] _{HTS} PCR ₉₆ Plate	50	MSNU03050
MultiScreen [®] _{HTS} PCR _{µ96} Plate	10	LSKMPCR10
MultiScreen [®] _{HTS} PCR _{µ96} Plate	50	LSKMPCR50
MultiScreen [®] _{HTS} PCR ₃₈₄ Plate	10	S384PCR10
MultiScreen [®] _{HTS} PCR ₃₈₄ Plate	50	S384PCR50

Accessories

MultiScreen [®] _{HTS} Vacuum manifold	MSVMHTS00
Chemical Duty Vacuum/Pressure Pump, 115 Volts, 60 Hz	WP6111560
Chemical Duty Vacuum/Pressure Pump, 220 Volts, 50 Hz	WP6122050
Chemical Duty Vacuum/Pressure Pump, 100 Volts, 50/60 Hz	WP6110060
Vacuum Flask, 1 L	XX1004705
Millex [®] -FA ₅₀ Filter	SLFA05010

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Standard Warranty

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