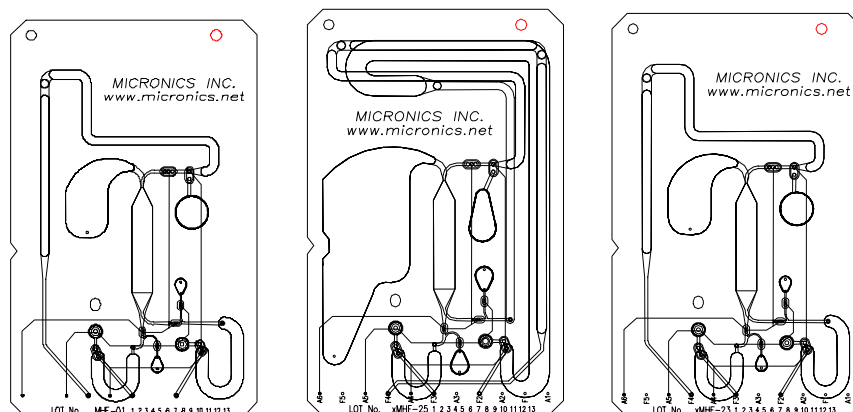




ActiveH™ Cards – for Sample Preparation or Extraction

(For *Research Use Only* in conjunction with Micronics' microFlow™ System)



Description: Micronics' proprietary microfluidic ActiveH™ card is a pump-driven, single use, disposable card designed for sample processing (preparation or extraction) for analytical chemistry, rare reagent isolation and recovery or low cost separation. The ActiveH™ card encompasses the patented, laminar flow diffusion-based H-Filter® technology, and may be applied as a front-end sample processor in medical diagnostics, biopharmaceutical and other analytic applications. The card has two inlet reservoirs (sample and receiver), a product collection reservoir and a waste reservoir.

ActiveH™ General Card Specifications:

- Card Size: 83.3 mm x 52.0 mm x 2.64 mm
- ActiveH™ Channel: Length – 22.2 mm; Width - 4.45 mm for first 18.2 mm then narrowing to final width of 0.373 mm; Depth - 0.33 mm
- Reservoir capacities: Sample - 100 µl; Receiver Fluid = 150 µl; Product – 70 µl; Waste – 320 µl
- Microfluidic flow control valves: 10

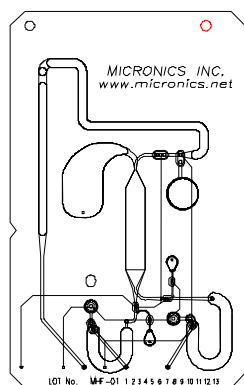
Product Applications include:

- Extraction of smaller molecules (MW < 1000) from a mixture containing large and small molecules (MW >50,000)
- Sample cleanup when user wants to reduce concentration of a small molecule (MW < 1000) in a mixture of large and small molecules (MW >50,000)
- Extraction of small and medium sized molecules (MW <70,000) from anticoagulated whole blood

There are three ActiveH™ card formats that are compatible with the Micronics' µHydro™ Manifold and used in conjunction with the microFlow™ System. The µHydro™ Manifold facilitates the automated extraction using the specified ActiveH™ card formats.

ActiveH™ Card Formats

(For Research Use Only in conjunction with microFlow™ System)

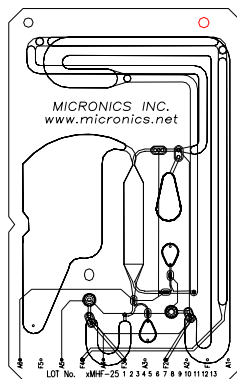


MHF-01

ActiveH™ Cat. No. – MHF-01
For the extraction of smaller molecules (MW < 1000) from a mixture containing large and small molecules (MW > 50,000).

■ Reservoir capacities:
Sample – 100 µl
Receiver Fluid – 150 µl
Product – 70 µl
Waste – 320 µl

Application Note:
This card has been shown to extract approximately 31% of small molecules while reducing the large molecule concentration to 2.6 %.

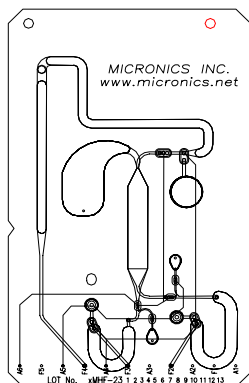


MHF-23

ActiveH™ Cat. No. – MHF-23
For the extraction of small and medium-sized molecules (MW < 70,000) from anti-coagulated whole blood.

■ Reservoir capacities:
Sample – 84 µl
Receiver Fluid – 960 µl
Product – 105 µl
Waste – 1195 µl

Application Note:
This card has been shown to extract approximately 30% of small molecules from whole blood while reducing protein concentration to 5.0 % and particulate contamination to < 0.5%.



MHF-25

ActiveH™ Cat. No. – MHF-25
For extraction of larger molecules (MW > 50,000) from a mixture containing small (MW < 1,000) and large molecules (MW > 50,000).

■ Reservoir capacities:
Sample – 100 µl
Receiver Fluid – 150 µl
Product – 70 µl
Waste – 320 µl

Application Note:
This card has been shown to extract approximately 42% of large molecules while reducing the small molecule concentration to 15 %.

Protected by one or more of the following US patents: US 5,932,100 and 5,971,158. Additional US & Foreign patents applications are pending.

See Micronics' H-Filter® Interactive Separation Calculator for recommended sample/receiver ratios to obtain desired extraction concentration for target molecules. Micronics' H-Filter® Interactive Separation Calculator may be viewed at http://www.micronics.net/technologies/h_filter.php.

For additional information on lab card custom design services and orders, or to place an order, please contact:

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