

## Investigator41 Steamer

Autoclavable, Gamma Irradiated  
Hollow Fiber Cartridges  
Easy and Reliable



**Investigator Steamer** hollow fiber membrane products incorporate our latest glycerin free low extractables, heat resistant modified polyethersulfone (m-PES) membrane technology. All **Steamer** products are gamma irradiated and ready to use without any tedious pre-rinse. The **Steamer** HF cartridges are the product of choice for perfusion applications. They can be repetitively autoclaved in an ATF perfusion unit or as a stand alone HF cartridge and of course also in a tubing assembly. Please contact us for the correct **Steamer** product for ATF 2-10 models at [experttalk@WaterSep.net](mailto:experttalk@WaterSep.net). The **Investigator Steamer** is also available as a single use assembly for crossflow perfusion applications.

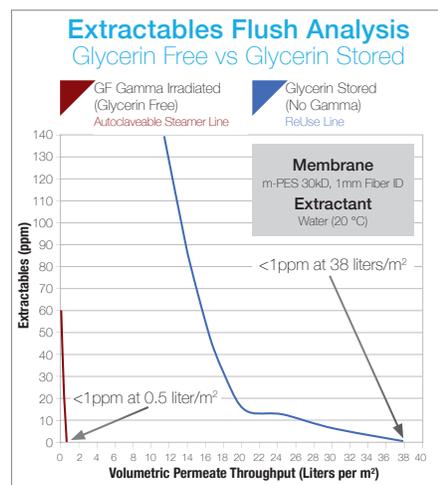
The extractables level for the **Investigator Steamer** is approximately 80x less than a glycerin conditioned membrane, see [Extractables Flush Analysis](#). After a quick buffer conditioning the HF cartridge is ready to be used or autoclaved. For autoclaving directions, please see the Steamer Validation Guide at [www.WaterSep.net](http://www.WaterSep.net).

The **Investigator41 Steamer** crossflow hollow fiber membrane cartridges are positioned between the pilot scale **Researcher Steamer** and the production scale **mini-BioProducer Steamer** cartridges. With a surface area of 50 cm<sup>2</sup>, the **Investigator41 Steamer** can accommodate batch volumes that range from 3L to 25L with a typical permeate flow rate of 15-30 L/hr for ultrafiltration applications and 10-20 L/hr for microfiltration applications.

The **Investigator41 Steamer** hollow fiber cartridge products are in most applications superior to conventional techniques, like centrifugation, depth filters, cassette cross flow systems or dialysis bags.

The **Investigator41 Steamer** cartridges offer true ready to use crossflow filtration that is:

- Gamma irradiated - ready to use - no rinse.
- Humectant free - 80% less extractables, see [Extractables Flush Analysis](#).
- Free of time-consuming cleaning validation.
- At a reduced risk of cross contamination.
- Consistent, membrane performance batch to batch.
- Self-contained and requires no assembly, no expensive hardware and no membrane installation.
- Significantly less expensive than traditional cassette formats.
- Offered in the same path length as all other WaterSep 41" hollow fiber cartridges for exact and predictable scale up and scale down.
- Every HF cartridge is integrity tested and has an individual lot number for easy traceability.



### TYPICAL APPLICATIONS

- **Cell perfusion** with an ATF system or conventional pump operated perfusion. (Bioreactor and **Steamer** hollow fiber assemblies can be autoclaved simultaneously.)
- Small **aseptic/sterile UF-MF applications** where autoclaving is required.
- Rapid clarification of small volumes of **cell culture, fermentation solutions and virus/vaccine suspensions**.
- Concentration and diafiltration of **monoclonal antibodies, enzymes, blood components and other proteins**.

# Investigator41 Steamer

## ORDERING INFORMATION

Place orders online at [www.watersep.net](http://www.watersep.net), or email purchase orders to [orders@watersep.net](mailto:orders@watersep.net), sales order confirmation to follow.

### Investigator41 Steamer HF Cartridge

0.5 mm ID\*

AU XXX 05INV41 S3, 3/pkg

AU XXX 05INV41 S6, 6/pkg

\*Not made in 0.65  $\mu\text{m}$

1.0 mm ID

AU XXX 10INV41 S3, 3/pkg

AU XXX 10INV41S6, 6/pkg

2.0 mm ID\*

AU XXX 20INV41 S3, 3/pkg

AU XXX 20INV41 S6, 6/pkg

\*Available in 10K, 50K, 300K - 750K and 0.1  $\mu\text{m}$  - 0.45  $\mu\text{m}$

Replace XXX with:

003 for 3K	100 for 100K	910 for 0.1 $\mu\text{m}$
005 for 5K	300 for 300K	920 for 0.2 $\mu\text{m}$
010 for 10K	500 for 500K	945 for 0.45 $\mu\text{m}$
030 for 30K	750 for 750K	965 for 0.65 $\mu\text{m}$
050 for 50K		

## SPECIFICATIONS

Cartridge Dimensions

1.32" (3.34 cm) x 41.50" (105.40 cm)

Membrane Surface Area

5.38 ft<sup>2</sup> (0.5 m<sup>2</sup>)

Molecular Weight Cut-off

3K, 5K, 10K, 30K, 50K, 100K, 300K, 500K, 750K

Membrane Pore Size

0.1  $\mu\text{m}$ , 0.2  $\mu\text{m}$  and 0.45  $\mu\text{m}$ , 0.65  $\mu\text{m}$

Fiber ID

0.5 mm, 1.0 mm, 2.0 mm

## MATERIALS OF CONSTRUCTION

The cartridge as assembled is USP Class VI compliant.

Membrane:

Modified Polyethersulfone (m-PES)

Housing:

White Polysulfone

Encapsulant:

Epoxy

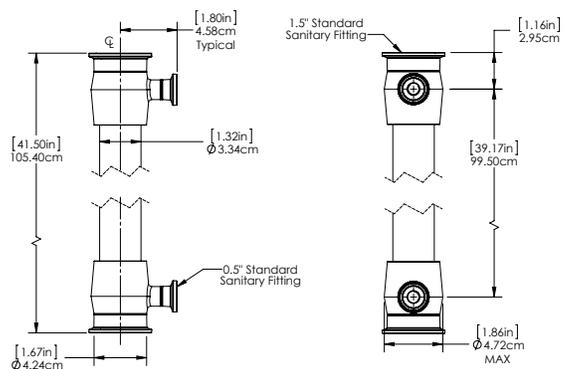
## CONNECTIONS

Feed/Retentate

1.5" TC Standard Sanitary Fitting

Permeate

0.5" TC Standard Sanitary Fitting



Technical Support: [experttalk@watersep.net](mailto:experttalk@watersep.net)  
or call 508.970.0089 x 204.