

## Researcher™ 12 Green

### Single Use Gamma Irradiated Hollow Fiber Cartridges. Easy and Reliable



The **Researcher™ Green** crossflow hollow fiber membrane cartridges are designed for laboratory scale and pilot scale production. It is also the perfect tool for process development. With a surface area of 444 cm<sup>2</sup>, the **Researcher™ 12 Green** can accommodate batch volumes that range from 400 mL to 2,000 mL with an average permeate flow rate of 1.3-2.7 L/hr for ultrafiltration applications and 0.89-1.8 L/hr for microfiltration applications.

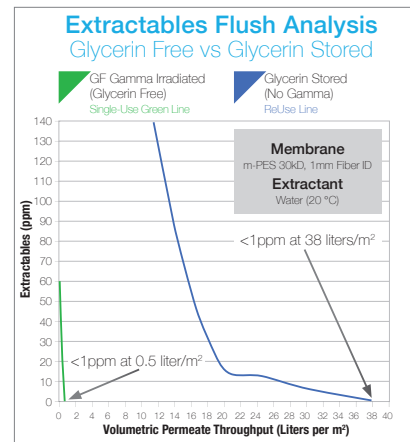
The **Researcher™ Green** cartridges are gamma irradiated and ready to use, and utilize WaterSep's antifouling, low binding, modified polyethersulfone membrane (m-PES) which provides a process flux and product recovery that typically exceeds other crossflow devices.

The **Researcher™ 12 Green** hollow fiber cartridges are offered with the same path length as other high performance WaterSep HF cartridges, which makes scale up/scale down easy and predictable.

**Researcher™ Green** cartridges are also offered as part of fully integrated open architecture single use crossflow assemblies available with pressure sensors, flow meters, pumpheads, aseptic connectors or bags.

The **Researcher™ 12 Green** cartridges offer a true single use crossflow system that provides:

- Significant cost savings over traditional cassette formats.
- Gamma irradiated - ready to use - no pre-rinse required.
- No humectants - 80x less extractables, see [Extractables Flush Analysis](#).
- No need for time-consuming cleaning validation.
- Reduced risk of cross contamination.
- Consistent membrane performance batch to batch.
- Self-contained – no assembly – no expensive hardware – no membrane installation.
- Every HF cartridge is integrity tested and has an individual lot number for easy traceability.



### TYPICAL APPLICATIONS

- Clarification of **mammalian/CHO** cell cultures and maximizing **protein recovery**.
- **Cell-harvest**. (Excellent results have been achieved with both *E. Coli* whole cells and *E. Coli* lysates, as well as other microbial process streams.)
- Concentration and purification of **vaccines**.
- Concentration and diafiltration of **gene therapy** products.
- Concentration/diafiltration of **monoclonal antibodies, recombinant proteins, biological macromolecules and peptides**.

## Researcher™ 12 Green

### 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.

#### Researcher™ 12 Green HF Cartridge

0.5 mm Fiber ID

SU XXX 05RES12 S3, 3/pkg

SU XXX 05RES12 S6, 6/pkg

1.0 mm Fiber ID

SU XXX 10RES12 S3, 3/pkg

SU XXX 10RES12 S6, 6/pkg

2.0 mm Fiber ID\*

SU XXX 20RES12 S3, 3/pkg

SU XXX 20RES12 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	050 for 50K	750 for 750K
005 for 5K	100 for 100K	910 for 0.1 $\mu\text{m}$
010 for 10K	300 for 300K	920 for 0.2 $\mu\text{m}$
030 for 30K	500 for 500K	945 for 0.45 $\mu\text{m}$

### SPECIFICATIONS

Cartridge Dimensions

0.75" (1.91 cm) x 12.28" (31.20 cm)

Membrane Surface Area

0.48 ft<sup>2</sup> (444 cm<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  $\mu\text{m}$

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

Medical Grade Epoxy

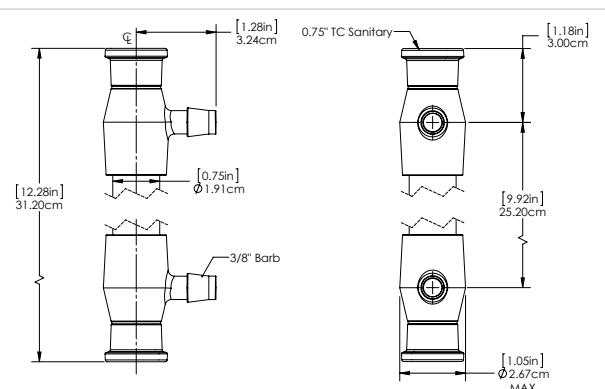
### CONNECTIONS

Feed/Retentate

0.75" TC Sanitary Fitting

Permeate

3/8" Hose Barb



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