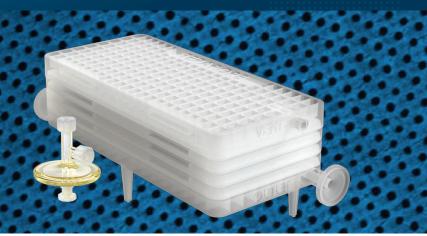




Precise Nanofiltration Solutions for Critical Separation Applications

IsoBlock® VF

Robust performance across the novel antibody constructs of today and tomorrow.





Consistent Capacity

IsoBlock® filters have demonstrated consistent and predictable molecule throughput and flow decay across a range of operating pressure, pH, conductivity, buffer species, and antibody type.



Robust Virus Retention

IsoBlock® filters have robust bacteriophage clearance across a range of operating pressure, process pauses, levels of flow decay, and buffer conditions giving manufacturing teams a wide process window for their VF unit operation.



Gamma Irradiated

IsoBlock® filters are shipped gamma irradiated for simple and easy integration into single use assemblies.



Supply Chain Security

All critical components of IsoBlock® filters, including the polymer used to fabricate the patented membrane, are manufactured in house, giving unparalleled supply-chain security.

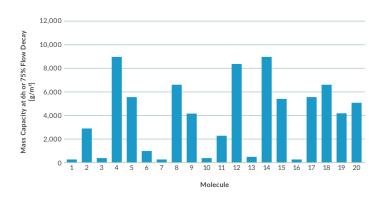




IsoBlock® VF Performance Summary

High Protein Throughput on a Majority of Difficult-to-Process Feedstreams

- Monoclonal antibodies (IgG1 & IgG4), bispecific antibodies, Fc-fusion proteins
- Many termed as 'difficult-to-process' molecules or have gone through multiple freeze/thaw cycles
- Protein concentrations from 3.6 to 14.7 g/L and pH 5 to 8
- Conductivity from 3 to 37 mS/cm in Acetate, Tris, Histidine, Arginine, Phosphate, and other buffers



MVM LRV ≥ 6 at High Flow Decay and High Throughput

Feedstream	Throughput L/m ²	Flow Decay %	Pooled LRV
High Fouling	515	78	6.4
	547	76	6.1
	565	75	6.1
Moderate Fouling	1501	25	> 6.3
	1503	25	6.0
	1505	25	> 6.3

- All filters experienced a 1 hour process pause at the process endpoint followed by a 25 L/m² recovery flush
- > values represent no MVM detected in filtrate
- ullet LRVs were determined using a $TCID_{50}$ Infectivity Assay