

MEMBRANE CHROMATOGRAPHY CASSETTES FOR BIND & ELUTE APPLICATIONS OF VIRUSES AND LARGE PROTEINS

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For flow-through polishing applications, membrane adsorbers have become a well-established technology. However, there is an increasing demand for bind and elute purifications for larger targets as adeno- and lentiviruses, virus like particles (VLP) and influenza. The reason is the higher binding capacity of macroporous membranes compared to conventional resins having much smaller pores and excluding them by size. But capture applications with such devices suffered from the current size limitation of 5 liters. Here we describe a modular cassette system which has been tested for scale-up and flow performance in comparison with void volume optimized capsules. The goals were to create a system up to 20 L membrane volume which can be optionally expanded to ~100 liter and, be able adapt exactly to the size needed (modular), using the same 4 and 8 mm bed height as the capsules and membranes for single- or intra batch re-use.