

Scalability of YMC BioPro Q IEX

One of the main advantages of YMC BioPro IEX resins is its full scalability. This property provides an identical chromatographic behaviour across all particle sizes. Therefore it is highly valued for process upscaling: While the resolution will naturally decline with increasing particle size, retention times and elution order remain stable. This is beneficial, as separation and fractionation can be optimized on the analytical and pilot scale. Then, the process can be reliably transferred to the production scale. This enables highly flexible implementation of BioPro IEX resins, resulting in a perfectly tailored solution.

An illustrated example is depicted below for two proteins: Transferrin and trypsin inhibitor. This shows that the separation of the main peaks remains stable across the 4 different particle sizes. If the best resolution is needed, 10 μm particles are the optimum choice. As it can be seen, smaller particles enable to sufficiently separate trace impurities.

During a capturing process the 75 μm material demonstrates adequate separation. The two main peaks are well separated and resolved.

