

Excellent Alkaline CIP Stability of MacroSep IEX Q

Ensuring Long-Term Performance in IEX Chromatography

Cleaning-in-place (CIP) is essential for the economic and efficient operation of packed chromatography columns. Effective cleaning procedures extend column lifetime, reduce overall process costs, and enhance downstream process safety and productivity. During the purification of viral vectors and large nucleic acids

such as pDNA, nonspecific adsorption can lead to a loss in chromatographic performance. At the same time, microbial growth poses an additional risk, making regular CIP procedures essential to restore column performance and ensure sterility.

Sodium Hydroxide (NaOH) - The Industry Standard for CIP

Sodium hydroxide (NaOH) is widely recognised as the gold standard for CIP in ion exchange chromatography (IEX). It effectively removes contaminants, prevents frit clogging, and eliminates microbial contamination – all without the need to unpack the column. To optimise

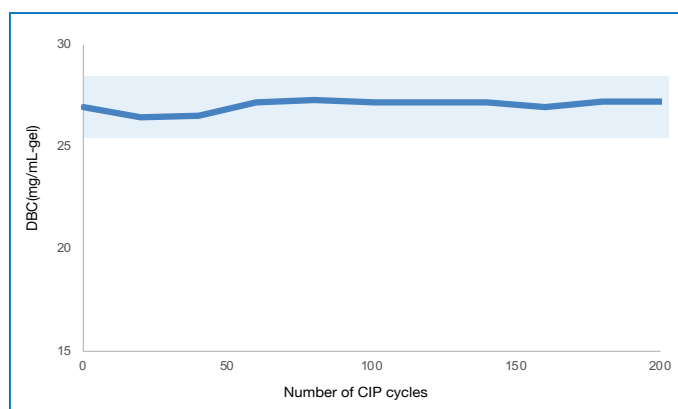
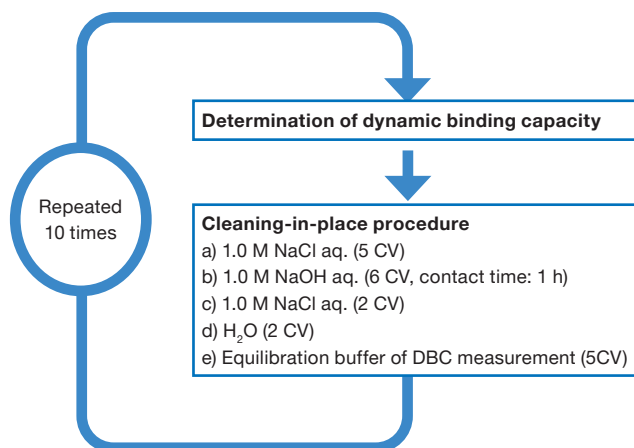
process efficiency and reduce operational costs, chromatography resins must demonstrate high chemical stability under alkaline CIP conditions. MacroSep IEX Q from YMC meets these requirements and has been extensively tested for CIP stability.



Proven CIP Stability - Even After 200 Cycles

The CIP stability of MacroSep IEX Q was evaluated using 1 M NaOH in repeated cleaning cycles. The results clearly demonstrate that the resin is completely compatible with 1 M NaOH CIP protocols. Its high

dynamic binding capacity is retained – even after 200 CIP cycles. This results in an extended column lifetime for cost-efficient purification.



Conclusion: Increased Column Lifetime and Process Efficiency

For efficient and economical IEX purification, effective CIP is essential. 1 M NaOH has been established as the industry standard, offering both impurity removal and column sanitisation. The chemical stability of the chromatography resin is a key factor in process efficiency and cost reduction.

MacroSep IEX Q excels in alkaline CIP stability, ensuring:

- Long-term high performance of the column
- Reduced downtime due to consistent cleaning efficiency
- Increased lifetime, even for challenging feed solutions

Optimise your IEX process with MacroSep IEX Q!