Excellent alkaline CIP stability of YMC IEX resins

Cleaning-in-place (CIP) is essential for the economic use of packed chromatography columns. Efficient cleaning procedures increase the lifetime of the separation process and thereby contribute to the overall cost effectiveness. Furthermore, powerful CIP procedures strongly increase the safety and productivity of every downstream process.

Sodium hydroxide (NaOH) solutions are well established for the removal of precipitated proteins, hydrophobic proteins, nucleic acids, endotoxins and viruses and have become the first choice for cleaning and sanitising of chromatography resins. In order to optimise process development time and costs, there is an increasing demand for efficient cleaning procedures and compatible chromatography resins.

IEX resins from YMC are fully compatible to typical CIP procedures. As an example, CIP studies have been performed using NaOH solutions with BioPro IEX S75/Q75 as well as with BioPro IEX SmartSep S30/Q30.
All YMC IEX resins maintain their performance values even after 100 CIP cycles.

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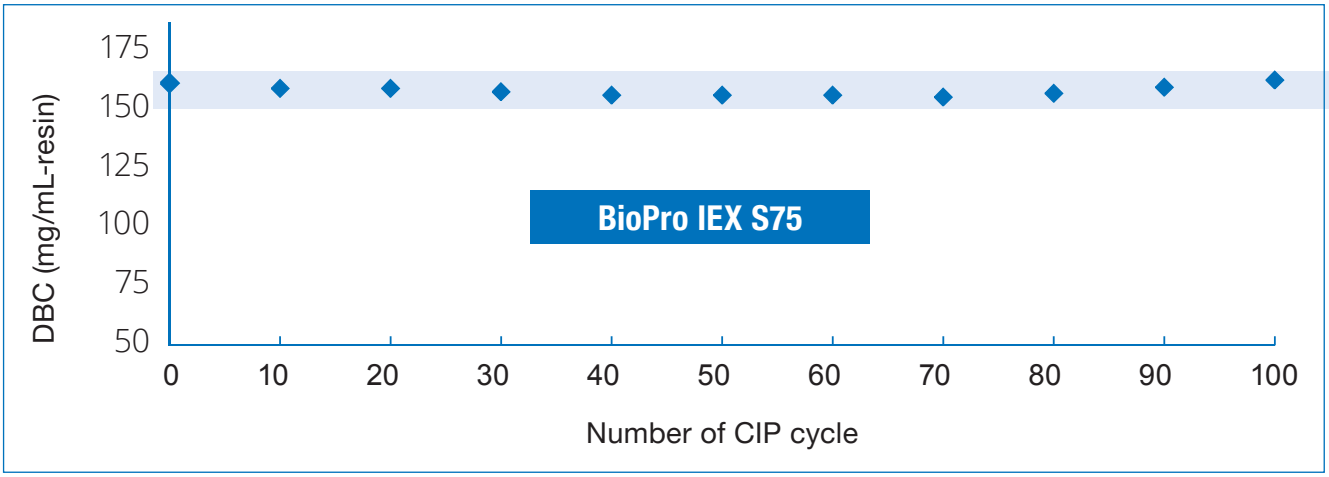
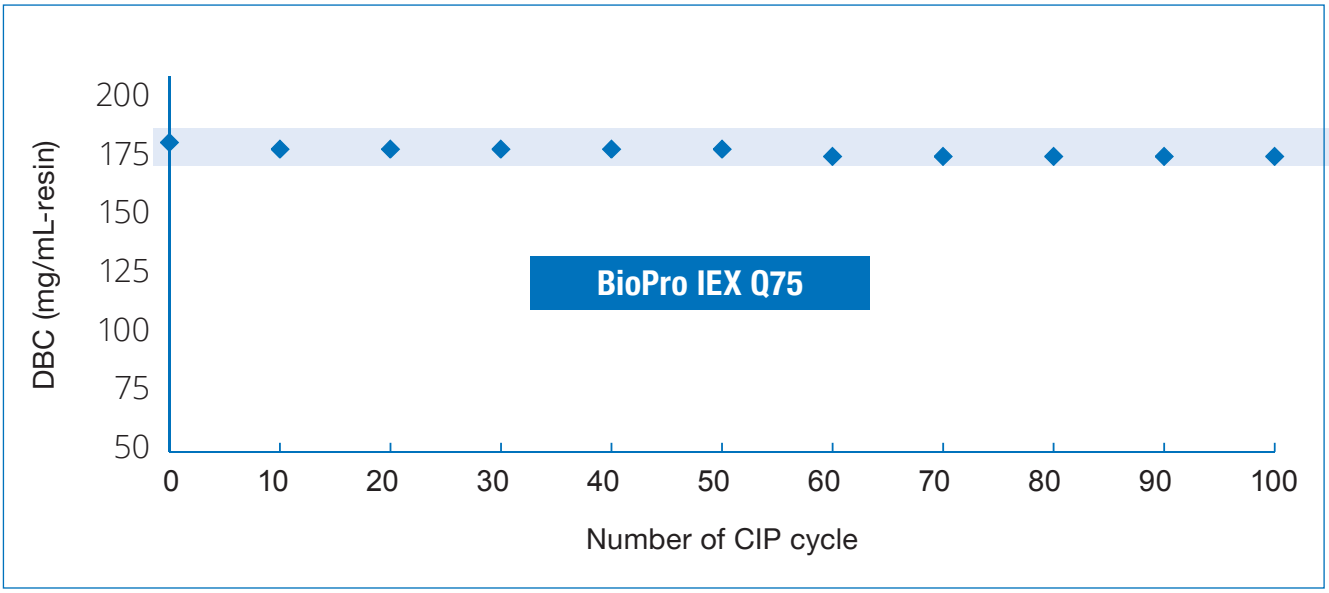
Stability of **BioPro IEX S75/Q75** under alkaline Cleaning-In-Place (CIP) conditions

Results



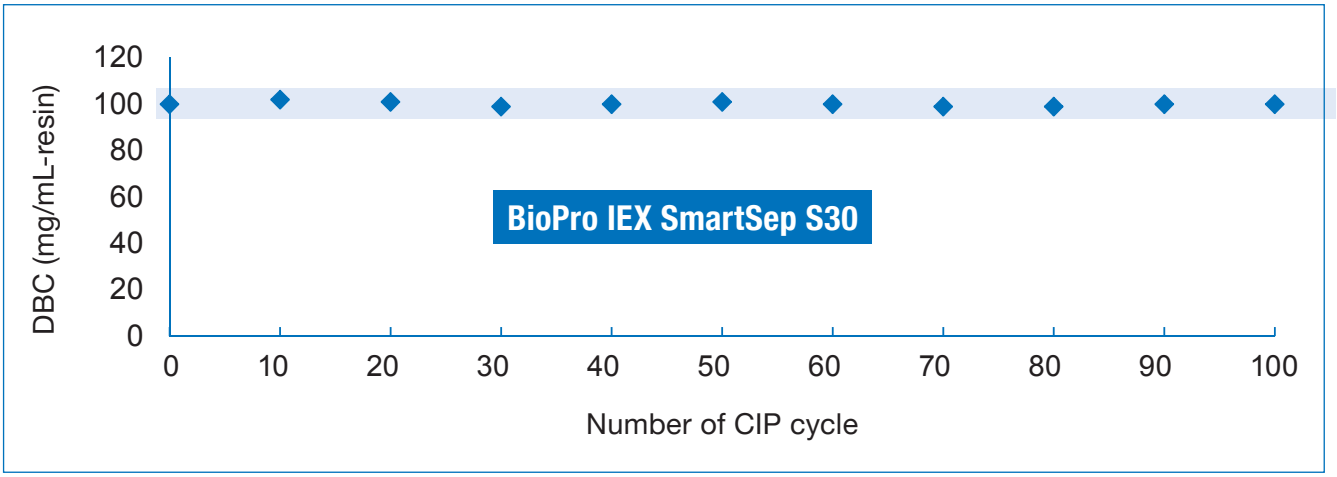


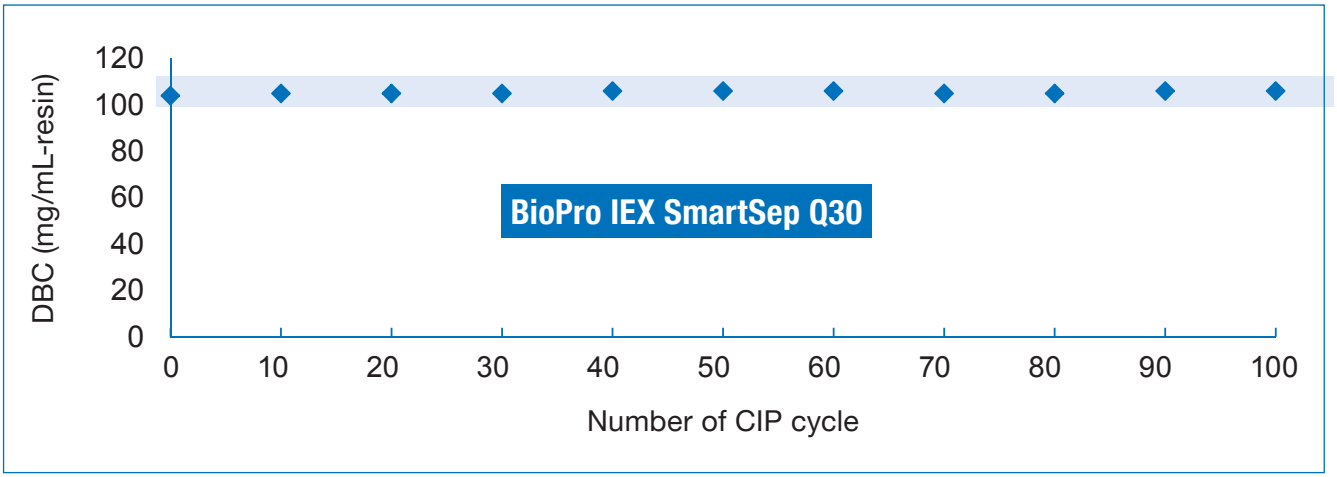
BioPro IEX S75 and Q75 maintain their binding capacity even after 100 CIP cycles.

BioPro IEX resins show excellent alkaline CIP stability.

Stability of **BioPro IEX SmartSep S30/Q30** under alkaline Cleaning-In-Place (CIP) conditions

Results





BioPro IEX SmartSep S30 and Q30 maintain their binding capacity even after 100 CIP cycles.

BioPro IEX SmartSep resins show excellent alkaline CIP stability.

Ask for a sample!

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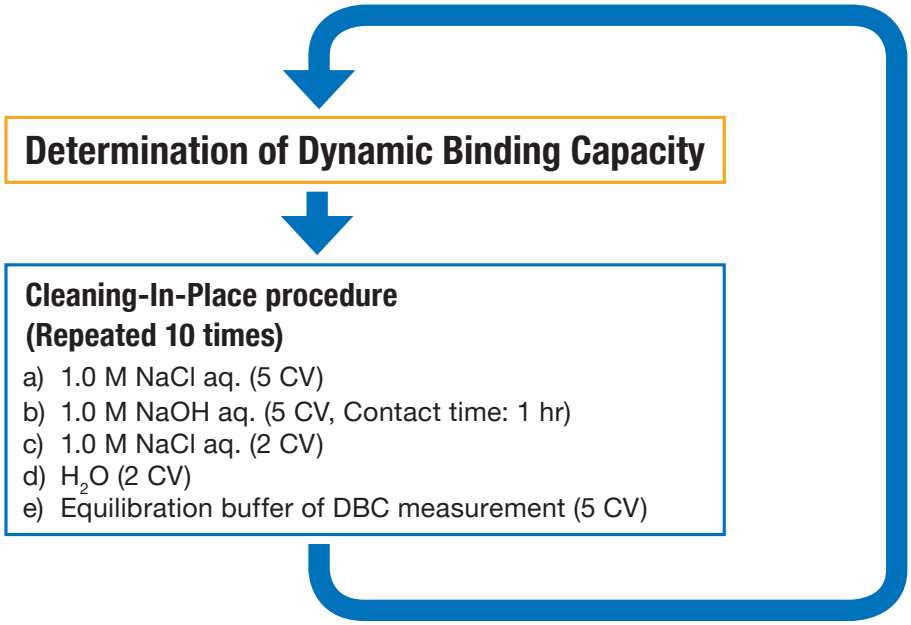
Conditions of evaluation

Test resins

- BioPro IEX S75
- BioPro IEX Q75
- BioPro IEX SmartSep S30
- BioPro IEX SmartSep Q30



DBC (IgG) (BioPro IEX SmartSep S30, BioPro IEX S75)

Column:	50 × 5.0 mm ID
Equilibration buffer:	20 mM citric acid-NaOH (pH 5.3)
Elution buffer:	Equilibration buffer cont. 0.5 M NaCl
Flow rate:	200 cm/h (0.66 mL/min)
Temperature:	25 °C
Detection:	UV at 280 nm
Sample:	1.5 mg/mL human polyclonal IgG in equilibration buffer

DBC (BSA) (BioPro IEX SmartSep Q30, BioPro IEX Q75)

Column:	50 × 5.0 mm ID
Equilibration buffer:	20 mM Tris-HCl (pH 8.6)
Elution buffer:	Equilibration buffer cont. 0.5 M NaCl
Flow rate:	200 cm/h (0.66 mL/min)
Temperature:	25 °C
Detection:	UV at 280 nm
Sample:	1.5 mg/mL BSA in equilibration buffer

CIP cycle

Column:	50 × 5.0 mm ID
Flow rates:	200 cm/h (1.0 M NaCl, H_2O, Buffer) 30 cm/h (1.0 M NaOH)
Temperature:	25 °C

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