

**AMBERCHROM™ CG50 Chromatography Resin****Description**

AMBERCHROM™ CG50 Chromatography Resin is a crosslinked methacrylic type of weakly acidic cation exchange resin, supplied as white insoluble beads.

The resin has a high concentration of carboxylic groups which serve as the ion exchange site of the resin.

Supplied in the hydrogen form, AMBERCHROM™ CG50 can be converted readily to the sodium salt with a solution of sodium hydroxide. In the sodium form, the resin undergoes reactions typical of the salt with a weak acid and strong base.

Applications

Isolation and concentration of antibiotics, basic amino acids, enzymes & peptides

Typical Properties**Physical Properties**

Copolymer	Crosslinked aromatic polymer
Matrix	Macroporous
Type	Weak acid cation
Functional Group	Carboxylic acid
Physical Form	White opaque beads

Chemical Properties

Ionic Form as Shipped	H ⁺
Total Exchange Capacity	≥ 3.9 eq/L
Water Retention Capacity	≥ 46–55%

Particle Size ^s

Particle Diameter	0.400–0.600 mm
Uniformity Coefficient	< 2
< 350 µm	20% max
> 1180 µm	5.0% max

^s For additional particle size information, please refer to the [Particle Size Distribution Cross Reference Chart](#) (Form No. 177-01775).

Suggested Operating Conditions

Minimum Bed Depth	600mm	
Flowrate	3 – 30 BV/h*	
Regenerant	HCl	H ₂ SO ₄
Concentration	2 – 5%	0.5 – 0.7%
Level	105% of the ionic load	105% of the ionic load
Minimum contact time	≥ 30 minutes	≥ 30 minutes

Hydraulic Characteristics

Figure 4 shows the bed expansion of AMBERCHROM™ C50 weak acid cation resin as a function of backwash flow rate and water temperature. Figure 5 shows the pressure drop for AMBERCHROM™ CG50 resin as a function of service flow rate and water temperature. Pressure drop data are valid at the start of the service run with clear water and a correctly classified bed.

Figure 4. Bed Expansion

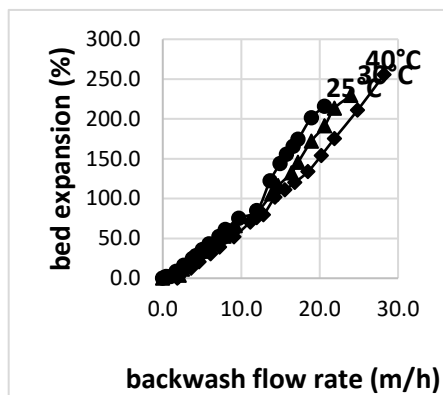
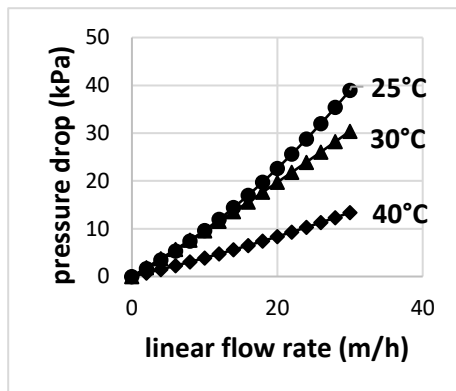


Figure 5. Pressure Drop



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Please be aware of the following:

- **WARNING:** Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

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