Product Information

Carbohydrate Ca^{2+}

The Carbohydrate Ca^{2+} phase is based on polystyrene-divinyl benzene copolymer (PS-DVB) and is specifically designed for the separation of sugar alcohols, mono- and disaccharides. PS-DVB resins are highly selective, efficient and stable in a pH range from 0 to 14. In most cases pure water can be used as mobile phase. If the sample contains metal ions, a 50 mg/L Ca_2EDTA solution can be used as eluent. Organic solvents are not required. For the separation of saccharides or sugar alcohols, an operating temperature of 80-85 °C is recommended.

Product Specifications:
Column-specific information can be found on the certificate enclosed with every column.

Pressure limits:	0 - 100 bar
pH-Range:	pH 0 – 14*
Temperature limits:	5 – 90 °C
Suitable mobile phases:	de-ionized H_2O
Mobile phase at delivery:	H_2O

*At low pH values, the bound Ca^{2+} ions can be extracted from the phase, but the column can be regenerated with $Ca(NO_3)_2$ solution as described below.

Care of Carbohydrate Ca^{2+} – Columns:
To preserve the homogeneity of the column packing, avoid hard mechanic shocks and drastic temperature changes (column heater). Temperature changes should be implemented carefully. Change flow rates slowly. For daily use a continuous flow overnight with 0.1 - 0.2 mL/min is recommended. A guard column can hold back most impurities from the sample and the HPLC system (e. g., pump abrasion). Organic solvents may harm the polymer.

Regeneration of Carbohydrate Ca^{2+} – Columns:
To remove adsorbed components from the column, flush the column contrary to the indicated flow direction with 100 mM $Ca(NO_3)_2$ solution, pH 6.3, at a flow of 0.1 - 0.2 mL/min and a temperature of 85 °C for 4 - 16 hours. Organic contaminants can be removed by flushing the column with a solution of 5 % acetonitrile and 95 % water at a flow of 0.1 - 0.2 mL/min and a temperature of 25 °C for 4 hours.
There is no cleaning procedure for bacterial growth. Storage of the columns in a refrigerator is possible, but freezing has to be avoided.

CS - Chromatographie Service GmbH, Am Parir 27, 52379 Langerwehe/Germany
Phone: +49 2423 / 40493-0 · E-Mail: info@cs-chromatographie.de