Product Information

January 2025

Organic Acid

The Organic Acid – HPLC packing material based on polystyrene-divinylbenzene (PS-DVB) copolymer was specifically designed for the separation of organic acids. The PS-DVB resins are highly selective, efficient and stable at a pH range from 0 - 14. For the separation of organic acids on this columns (for example in fruit juices or wine) no organic modifiers in the mobile phase are necessary. Diluted acids like 50 mM sulfuric acid are used as solvents at room temperature. Higher column temperatures (45-80°C) are applied for the separation of carbohydrates in addition to organic acids. Detection usually is done using a refractive index detector or UV detection at 220 nm.

Product Specification:
Refer to the enclosed HPLC Column Performance Report for specific information and test results for your column.

Pressure Ratings:	0 - 110 bar
pH-Stability:	pH 0 – 14
Temperature Limits:	5 – 90 °C
Maximum Flow:	1 mL/min (at 25 °C), 1.5 mL/min (at 90 °C)
Applicable Eluents:	dil. H_2SO_4, H_3PO_4 (+ other diluted acids except HCl)
Shipping Solvent:	Water

Care of Organic Acid Resin Columns:
To preserve the homogeneity of the column packing, avoid intense mechanical stress (e.g. shocks and hits) and drastic temperature changes (column heater). Temperature and flow rate changes should be performed carefully. By usage of the adequate guard column impurities from the sample or the HPLC system (e.g. pump wear) can be kept away from the column. For daily use we recommend operating the complete chromatographic system over night with continuous slow flow rates (0.1 –0.2 ml/min). Optimal flow rates for columns with 4 mm ID are from 0.3 to 0.6 mL/min; for columns with 8 mm ID from 0.6 to 1.2 mL/min. Organic solvents may harm the polymer.

Regeneration of Organic Acid Resin Columns:
For cleaning the resin from adsorbed components first flush the column contrary to the indicated flow direction at room temperature with 100 mM sulfuric acid and a flow of 0.1 – 0.2 mL/min for at least 4 h. Subsequently additionally flush the column for 1 h in the indicated the flow direction. To remove organic contamination flush the column in reverse flow at 0.1 ml/min with 5/95 acetonitrile/water at room temperature for 4 hours.
There is no regeneration procedure for the removal of bacterial growth available.
After cleaning the resin can be regenerated by flushing the column for 4 to 5 hours with 25 mM sulfuric acid at 45°C and 0.2 mL/min.
After regeneration the column can be conditioned for the respective analysis by first flushing the column with pure water and with the respective mobile phase.

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