Product Information

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General Guideline for the Use of Normal Phase HPLC-Columns

Silica is the ideal support material for HPLC columns. It offers excellent mechanical and physicochemical surface properties. Especially in normal phase chromatography a vast variety of organic solvents can be used to optimize the separation. However, the following points are important to know when working with normal phase HPLC columns.

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

Pressure Ratings:	0 – 5.000 psi
pH-Stability:	2 – 7.5
Temperature Limits:	5 – 60 °C
Shipping Solvent:	see column report

Using Silica Based Columns - Column Life:
The column life depends on the cleanliness of sample and mobile phase. Extend column life by pre- filtering the mobile phase and using degassed solvents.
Use guard columns to help prevent particulates and highly adsorptive compounds from reaching the column.
Samples that are not clean can lead to a decrease in column performance. A partially clogged inlet frit may result in unusually high operating pressure. Clear a clogged frit by reversing the column flow for 10 – 20 mL or changing the inlet frit system (details see the backside of your column performance report).

Mobile Phases:
For normal phase chromatography water is usually not used as solvent and should be avoided mostly. Therefore all used organic solvents should be dry (free of water residues). Commonly used mobile phases are e.g. hexane, heptane, isopropanol acetonitrile etc.
When changing from one mobile phase to another, determine if the mobile phases are miscible. Re- equilibrate the column by pumping 20 or more column volumes of mobile phase through the column. Equilibration is complete when the base line is stable and peak location is reproducible. In general equilibriation of a normal phase column might take longer than a reversed phase column.

Storage:
For short term storage flush your column with mobile phase.
For overnight storage keep the mobile phase flowing at 0.1-0.2 mL/min.
Long term storage should be done in an aprotic solvent (e.g. isooctane) without traces of water.

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