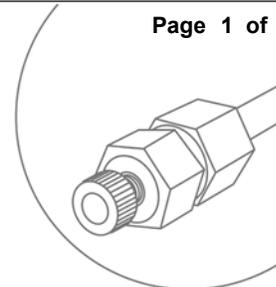


Mfr. Name: Phenomenex
Technique: HPLC
Care ID: 2
Care Group: RP Silica 1
Information Source: Phenomenex
pH Range: pH 2.0 - pH 8.0
Guard Column: Use the Phenomenex SecurityGuard Cartridge System
Update: 1/7/2005



Applies To

Phenomenex reversed phase silica columns:
C8, C18, ODS-1, ODS-2, ODS-3
Also Buckysep RP and all Curosil phases (except PFP)

Introduction

Each column manufactured by Phenomenex is individually prepared and tested. Every column is supplied with a Test Chromatogram and Specification Sheet, which indicates testing conditions, operating parameters, and column identity details. The Column Details, including specifications and performance test results should be entered into an appropriate information management system for easy tracking and reference should a problem arise.

Inspection

Upon Receipt of the Column:
Verify the column you received is the one you ordered
Check the column for physical damage caused by shipping
Test the column IMMEDIATELY to verify performance.
Record the result of your test in your Column Information Management system

Installation

Flush your HPLC pump and line with the filtered and degassed mobile phase advised in column test procedure. Ensure no air bubbles are trapped in the system. Set the flow rate to 0.1 mL/min and connect to the column inlet, ensuring that flow is in the direction indicated by the arrow on the column. Tighten the end fitting going into the column and increase flow to 1 mL/min (applies to 4.6mm ID columns only) for 5 minutes. Stop flow and wipe outlet end of column to remove any particulates prior to connecting to the flow cell. Connect column outlet to flow cell and pass approximately 10 column volumes through the system at 1 mL/min (applies to 4.6mm ID columns only) while observing the back pressure. A steady back pressure indicates constant flow - while fluctuations may indicate air in the system. Wide fluctuations may shock and damage the column. When a steady pressure has been attained within the prescribed limits, the column is ready for use. New columns should be tested with the manufacturers recommended test mix, and previously used columns should be tested with the same or a suitable test mix for the analysis. Remember to re-equilibrate the system when changing solvents. Never change from one solvent to another which is immiscible, without going through an intermediate solvent which is miscible with both. This will damage the column. Never change to (or from) a buffer/salt solution where the buffer/salt is not soluble in the second solvent. Again this will damage the column. Never attempt to remove the column end fittings. This will void the warranty.

Flow Rate

Adjust to maintain within pressure limits

Pressure

<3500 psi (<240 bar) normally; >5000 psi (>345 bar) will damage column

Temperature

< 60°C

Avoid

pH <2.0 will hydrolyze the bonded phase, strip functional groups.
pH >8.0 will dissolve the silica.
Immiscible solvents and buffers; trace impurities.
Sudden pressure change.

Mobile Phase

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Phenomenex products are available worldwide. For the distributor in your country, contact Phenomenex USA, International Department by telephone, fax or e-mail: international@phenomenex.com.

Use only highest purity chemicals and reagents.
Trace impurities can dramatically degrade column life.
Degas and filter all mobile phases prior to use.
Check for miscibility/solubility when changing solvents and buffers.
Ensure sample (and matrix) are completely soluble/miscible with mobile phase.
Immiscible solvents or salt precipitation can permanently damage the column.

Sample Prep

Check for sample solubility in mobile phase.
Use mobile phase as diluent where possible.
Trace impurities can dramatically degrade column life.
Filter all samples using a 0.45µ or 0.2µ porosity filter prior to injection.

Column Conditioning

Be sure the system is first thermally and electronically stable, especially the electronic (background) noise from the detector. Condition the column at the operating flow rate until a stable baseline is observed.

Column Cleaning

Quick flush with methanol or acetonitrile;
Use THF or Methylene chloride for oily samples
Rinse with 10 Column Volumes of:
95% Water/5% Acetonitrile (For buffer removal)
THF
95% Acetonitrile/5% Water
Mobile Phase

For instances of high back pressure it is permissible to 'reverse-flush' Phenomenex columns. This practice should not be used on other manufacturers' columns, which may not be to similar standards.

Regeneration

Rinse with 10 column volumes of: 95% water/5% acetonitrile (for buffer removal); THF; 95% water/5% acetonitrile; mobile phase.

Storage

Column storage conditions affect column lifetime.
Never store column in buffer, ion-pairing reagents, or other salts.
Flush column containing buffer or salt with >30ml of buffer-free solvent firstly.
Flush buffer free column with Methanol or Acetonitrile.
Store in Methanol; >50% MeOH in Water; or >50% Acetonitrile in Water.

Mechanical Shock

Handle columns with care. Do not drop or create physical shock. Do not start pump at high flow rates- instead ramp up gradually over a few minutes. Set your pump pressure limit to protect the column in event of blockage. This can create voids which will detrimentally affect the column's performance.

Testing Column

Reversed Phase Test Mix (1) Order No.: AL0-3034
Benzamide; Benzophenone; Benzene; Biphenyl

75% Acetonitrile / 25% Water, 1mL/min, UV@254nm
1µL injected for 3µm & 5µm materials
1.5µL injected for 10µm materials and ALL Ultracarb materials

Warranty

Phenomenex HPLC columns are warranted to meet the stated performance and quality and to be free of defects in material and workmanship. If you are unsatisfied for any reason, please give your Phenomenex Technical Representative a call. We'll do our best to solve the problem to your satisfaction. Should it become necessary to return the column, a Return Authorization Number must be obtained from Phenomenex first.

