

HPLC COLUMN INSTRUCTIONS FOR USE

COLUMN INSTALLATION

Remove the plugs from the column and connect the column with the flow arrow aligned in the direction of the eluent flow (towards the detector). Use 10-32 CPI type male fittings to connect Hamilton HPLC columns

COLUMN OPERATION

- Operating limits and shipping solvent are listed on the front of this page (HPLC Column Performance Report).
- Column Equilibration usually requires 10 column volumes of mobile phase. A good indication of column equilibration is a stable baseline and reproducible sample retention.

COLUMN VALIDATION

Evaluate column efficiency and retention using the test conditions shown on the front of this page. Periodically repeat the test to monitor column performance. Please note that slight variations in retention and performance will be observed on different HPLC systems and with different batches of mobile phase.

COLUMN MAINTENANCE

Routine Care

- Mobile Phase Filtration - Use only HPLC grade chemicals and deionized water to prepare mobile phases. Then filter through a 0.2um membrane before use. Prepare new mobile phase every few days to prevent microbial growth.
- Sample Preparation - Filter samples through a 0.2um membrane as this will prolong column life.
- Solvent Miscibility - When changing mobile phases always check to ensure the new mobile phase is miscible with that in the column and will not cause a precipitate to form. If they are not miscible use an intermediate solvent and flush for at least 20 column volumes.
- Back Pressure - Column back pressure should not exceed 400 psi. Be sure to heat the column before turning on the HPLC pump, otherwise the column bed will be crushed.

COLUMN MAINTENANCE (CONT.)

- Flow Restrictions - Voiding/crushing of the column bed and loss of performance will occur if care is not exercised during use. For start-up, shutdown and operation at ambient temperature do not exceed 0.2mL/min.
- Recommended Maximum Flow Rates
HC-75 columns - 305 x 7.8mm, 1.0mL/min max. at 80-90°C.
HC-75 columns - 250 x 4.1mm, 0.5mL/min max. at 30-90°C.
HC-40 columns - 305 x 7.8mm, 0.6mL/min max. at 80-90°C.

Prolonging Column Life

- Column Regeneration - The recommended column regeneration eluent is listed on the HPLC Column Performance Report.
- Column Storage - Short term storage (1-3 days) does not require a special mobile phase. Longer storage (beyond 3 days) should be done using a mobile phase that will inhibit microbial growth. The storage mobile phase listed on the HPLC Column Performance Report can be used.

TROUBLESHOOTING COLUMN PROBLEMS

Technical support is available for Hamilton HPLC products via Tel: 775-858-3000, 800-648-5950, Fax: 775-856-7259 or e-mail: hplc@hamiltoncompany.com

WARRANTY

Hamilton Company unconditionally guarantees its products to be free of defects in materials and workmanship. Any product which fails due to such defects will be repaired or replaced at our discretion without cost, provided the device is returned with an explanation. It is the responsibility of the purchaser to determine the suitability of the application and material compatibility of the products based on the published specifications of the products.