

HPLC COLUMN INSTRUCTIONS FOR USE

COLUMN INSTALLATION

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

COLUMN OPERATION

- Operating limits and shipping solvent are listed on the 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. Some columns (PRP-X100) that use weak organic acid eluents require 100-200 column volumes for equilibration.

COLUMN VALIDATION

Evaluate column efficiency and retention using the Chromatographic Test Conditions and Test Sample indicated on the HPLC Column Performance Report. 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

- Guard Columns - The use of a Hamilton guard column is recommended to prevent contaminants from reaching the analytical column.
- Mobile Phase Filtration - Use only HPLC grade chemicals and deionized water to prepare mobile phases. Then filter through a 0.2µm membrane before use. Prepare new mobile phase every few days to prevent microbial growth.
- Sample Preparation - Filtering samples through a 0.2µm membrane prior to injection will prolong column life.

COLUMN MAINTENANCE (cont.)

- 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 6,000 psi.

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 Tele: 775-858-3000, 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 application and material compatibility of the products based on the published specifications of the products.