SLURRY PACKING PROCEDURES FOR MICHEL-MILLER HPLPLC* GLASS COLUMNS

***High Performance Low Pressure Liquid Chromatography. Designed and tested by Karl H. Michel and Robert F. Miller at the Lilly Research Laboratories, Indianapolis, IN (U.S. Patent #4,131,547, Publications Forthcoming)**

CAUTION!
READ INSTRUCTION BEFORE BEGINNING
ALWAYS OPERATE WITH PROPER SAFETY SHIELD AND ACCURATE PRESSURE GAUGE

General Information:

A. When assembling Column and End Fitting, be sure the seat in the Column and the front sealing end of the End Fitting are clean and free from lint, etc., otherwise you'll experience problems in making a leak tight seal. Turn End Fitting into glass thread until it stops and you see a thin white line. DO NOT overtighten. Secure locknut.

B. Analytical as well as preparative columns can be packed by the same procedure.

C. Silica gels and silica gel reversed phase packings (e.g., Quantum LP-1, particle size 10-20 microns; LiChro prep RP-8 and RP-18, particle size 25-40 microns) are recommended. However, other silica gels (e.g., Shandons ODS Hypersil, particle size 5 microns) as well as other types of resins have been packed successfully by these procedures.

D. Generally, a pressure of less than 200 psi and flow rates between 5-40 mL/minute are required for these slurry packing techniques; this is dependent on column volume and size. PLEASE NOTE: Packing pressure should exceed pressure used during actual separation run by 30-50 psi; this will assure no further compression of the absorbent during runs. Columns packed in Lilly Research Laboratories by these procedures with reversed phase silica gel have been in operation for several years without loss of efficiency.

E. Sudden decrease in pressure may cause cracks or channels to form in the packing material, which would greatly reduce column efficiency. Therefore, it is important to always let the pressure drop slowly to zero whenever the pump is turned off.

F. Approximate volume of columns (unpacked): 5795-04, 12 mL; 5795-10, 110 mL; 5795-16, 300 mL; 5795-24, 635 mL; and 5796-34, 34 mL.

COMMENT:

The time required to pack a glass column will vary from minutes to several hours depending on the column size and experience of the scientist. Researchers involved with this procedure in our laboratories have been able to pack columns showing excellent performance.

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