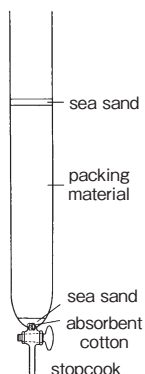


## TECHNICAL NOTE

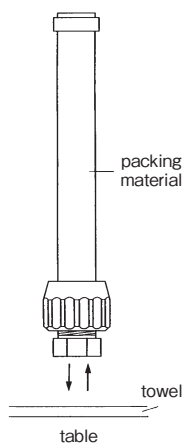
### 9. Packing instruction

#### Slurry packing



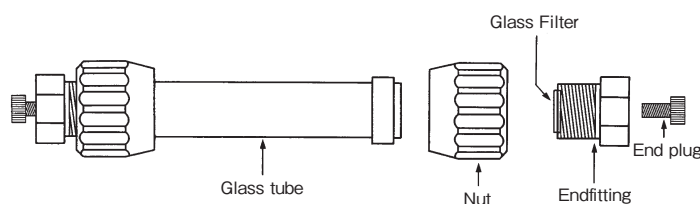
1. Use a standard open glass column, close the stopcock, pack a small amount of absorbent cotton in the bottom of the column and add solvent to approximately 1/3 of the column length.
2. Add a thin layer (5 mm) of sea sand to the surface of the absorbent cotton.
3. Prepare a slurry solution of the packing material (30% w/v) with solvent right before packing. (Make sure to prepare enough slurry solution to form a column bed sufficient to separate the compounds of interest.)
4. Simultaneously open the stopcock and add the slurry solution to the column to form the column bed.
5. After packing the column, wash the newly packed column bed with 5-10 column volumes of solvent. Allow the bed to stabilize overnight in solvent.
6. Add a thin layer (5 mm) of sea sand to the top of the bed in order to prevent disturbance of the top of the column bed during sample or solvent addition.

#### Dry packing



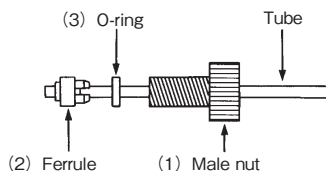
1. Wash the column in methanol and mount the end fitting on the bottom of the dried glass column as shown in the diagram to the left.
2. Add dry packing material while gently tapping the column frequently up and down to insure even distribution.
3. Continue to add packing material while tapping until the last 5 cm of the column length.
4. For the last 5 cm, add 1 cm of dry material at a time while tapping continuously.
5. After having filled the column, wet the surface of the bed with solvent to form a flat surface.
6. Remove all material adhering to the glass rim. Mount and tighten the end fitting.
7. Pump 5-10 column volumes of solvent through the column to remove all air and to stabilize the bed.

#### The structure of columns



#### Max. Pressure

Column I.D. (mm)	Pressure (MPa)
8	5.0
20	3.0
30	2.0
50	2.0



#### Connecting method

Insert (1), (2), (3) into a 1/16 inches long Teflon tube and then tighten the ferrule properly.

#### Column size and proper flow rate for medium pressure column chromatography

Column I.D. (mm)	Column length (mm)	Flow rate (ml/min)
8 - 10	150 - 500	1 - 2
20	150 - 500	4 - 10
30	150 - 500	10 - 25
50	150 - 500	25 - 60

Note : To avoid high pressure at high flow rate, use tubing with an I.D. of 0.5 mm or more. If the flow rate becomes very high, keep the pressure under 2.0 MPa.