

Non-GMP Packed Column

80 mm i.d. x 100 mm bed height

Column handling on delivery

Open the outer box from the top. Carefully take out the inner column box and the side with the product label should face upwards. Open from the top of the product box, remove the protection material (e.g., foam pads). Carefully hold the top side of the bag to take the column out. Be careful not to damage the tubing connections on the top.

Place the bagged column into a cold room on delivery.

General information of the column construction

Column body (i.e., the tube): made of acrylic polymer. **Warning: max. 20% alcohol is allowed. Any alcohols greater than 20% v/v will damage the acrylic column tube.**

End plunger: The main body, the flow distributor and the triclamp connector are made of polypropylene. The O-ring is of nitrile rubber. The supporting mesh is made of polyamide of 15 micrometre. They are inert to most aqueous buffers.

Holding frame: M8 nylon

Operating pressure: recommended rating is up to 3 bar (or 0.3 MPa, or 42 psi).

Operating temperature: 4°C to 30°C.

Connection: Both ends of the column are fitted with tri-clamps.

Inlet and outlet arrangement: The inlet of the column is located at the top of the column. It is connected with a soft extension tubing (1/4" ID) to prevent the column from getting dry. The outlet of the column is located at the bottom side of the column. It is sealed with an end cap.

Column Storage

The resin inside the column is stored in 20% denatured ethanol + 0.2 M NaCl.

After labelling, the column is placed inside a polyolefin bag.

Instruction of Use

The column should be stored in a cold room after it is delivered. Handle the column with care to avoid any damage, as the column connections are vulnerable to strong forces.

CAUTION: Be extremely careful during the tightening and loosening of the outlet triclamp. Hold the triclamp firmly under balanced force when unscrewing or screwing, as the triclamp connection to the column could be broken under a non-balanced force.

1. Place the column upwards to a suitable surface in a vertical position.
2. Prepare the pump system with suitable tubing that has been connected to a 1/2" tri-clamp adaptor for both the inlet and the outlet.
3. Hold the flexible sealing tubing (opaque to clear colour) at the top of the column upwards. Gently tap its lower side and the upper side. This allows air bubbles in the inlet tubing of the column (if any) to escape to the top of the tubing.
4. Connection to the inlet: Run the pump at very low flowrate during the connection period to avoid trapping air.
5. Keep running the pump at very low flowrate. Bend the outlet tubing (located at the bottom side of the column) upwards. Carefully remove the end cap and make connection to the outlet to avoid air getting into the bottom mesh of the column.
6. Run through the equilibration buffer until the resin is fully equilibrated.
7. Now the column is ready for use.
8. When the flow is stopped, the outlet tubing should be closed by a clamp first before the inlet tubing is changed to different feeding liquid.

Storage After Use

For the short-term storage, disconnect the outlet side of the column and seal it with a triclamp end cap. Then disconnect the inlet of the column and seal it with a triclamp end cap. Make sure the end caps are sanitised before use.

For the long-term storage, follow the instructions below.

1. Flush the column with the storage liquid. If an organic solvent such as 20% ethanol is used, introduce it in a reduced flowrate such as 10 ml/min for at least 3 CV, i.e., 600 ml.
2. Disconnect the outlet of the column. Seal using a Triclamp end cap.
3. Disconnect the inlet of the column from the control instrument.
4. Connect one end of the sealing tubing to the inlet tubing of the control instrument. Hold the sealing tubing upwards. Run the pump slowly to fill the sealing tubing with the storage liquid. Then connect it to the inlet of the column. Avoid trapping air bubbles.
5. Disconnect the sealing tubing from the control instrument. Seal it using an end cap.
6. Place the column in a cold room.