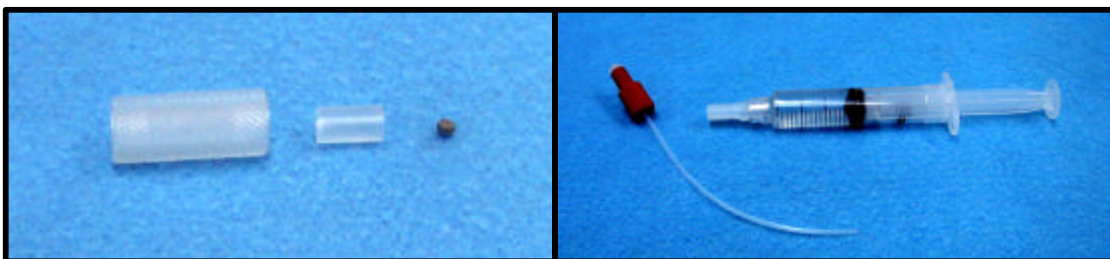




## Packing a Mini-column

The Global FIA Mini-column comes in two sizes, a 1 cm long column with an internal volume of 85  $\mu$ l, and a 2cm long column with an internal volume of 170  $\mu$ l. Column assemblies (Figure Left below) comprise

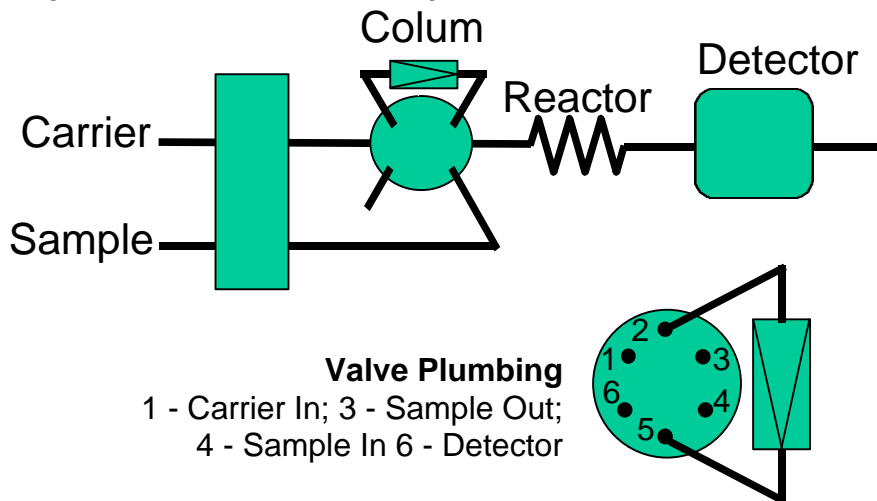
- A column holder with  $\frac{1}{4}$ "-28 female threads,
  - A column with the small end fitted with a 0.064" OD frit, and
  - A larger 0.126" OD frit to seal the other end of the column once it has been packed.
- Frits are available in porous titanium or porous polypropylene with a pore size of 20  $\mu$ m.



Packing a Mini-column is facilitated by the use of a Mini-column packing kit available from Global FIA, Inc (Part # MC-PACK). The packing kit (Figure Right Above) comprises two components,

- A disposable syringe with  $\frac{1}{4}$ "-28 male luer fitting, and
- A length of 1/6" OD tubing with a  $\frac{1}{4}$ "-28 fitting which will be used as the waste line from the column.

The column is tapered to help focus the analyte and minimize band broadening. The sample should be loaded onto the narrow end and then eluted from the other end. The following diagram shows a manifold arrangement to do this.



Use the following procedure to pack the column:

1. Screw the waste line into the Mini-column holder
2. Slide the Mini-column into the holder from the other end, making sure that the end with the small frit is orientated towards the waste line.
3. Make a slurry of your packing material in a small vial. For hydrophobic packings use methanol as the solvent, and for hydrophilic packings use water. Stir up the slurry and quickly draw up a few ml into the syringe.
4. Screw the luer fitting into the other end of the column holder. Gently shake up the content of the syringe to ensure that it is in suspension. Dispense the contents of the syringe into the column. The small frit at the bottom of the column will retain the packing material and allow the solvent to pass to waste.
5. Carefully unscrew the syringe and gently remove the column. Visually inspect the column and make sure that the packing has filled the column. If the column is not full, wash out the packing and repeat the above steps this time ensuring that there is more of your packing in the syringe.
6. Place the large frit on a clean hard surface and firmly press the column against the frit to seat it in the recess in the back of the column made to accept it. Put the column back in the holder and install it in your flow manifold. Condition it with an appropriate solvent prior to use.

