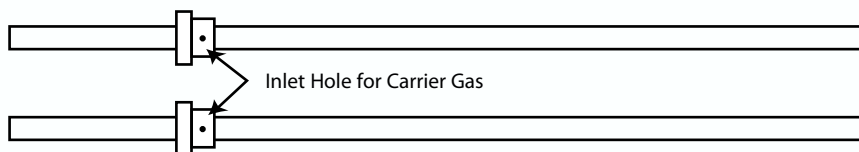


PACKING OF CHIS ABSORPTION TUBES



The concentrated Headspace Injection System, CHIS, allows either trace organics in gases or trace organics in water to be concentrated then desorbed onto a capillary column for analysis.

As different sorbents are required in various applications, the operators may wish to pack their own concentrator tubes. The successful application of headspace concentration depends mainly on the uniformity of the packing from tube to tube. For this reason the amount of packing going into each tube should be carefully regulated.

Packing of the 3mm ID tubes is considerably easier to manage than 0.8mm ID. In the latter, it is tedious to try to use the glass wool to hold the packing in place and we have found that a piece of 0.6mm stainless steel wire, curved to provide an "interference fit," makes an excellent packing retainer. These are easy to fit, but can be time consuming trying to remove them for repacking.

PACKING OF 3mm ID TUBES

1. Remove all the old packing and packing retainers.
- NB In tubes packed at SGE, there is a small coiled spring retaining the glass wool in the open end of the tube. This may be easily removed with a small wire hook.
2. Wash the tubes successively with methylene chloride, acetone, detergent/hot water solution, acetone and finally blow dry with clean compressed gas.
3. Insert a small plug of silanized glass wool, of sufficient depth to prevent packing getting into the small carrier gas inlet hole in the collar of the closed end of the tube.
4. Determine the amount of packing required to fill the tubes on hand and dry this in an oven at 100°C for one hour, making sure that it is free flowing with no lumps or agglomerates.

Tenax is an excellent general purpose sorbent. Other materials more specific to a particular analysis may be used.

5. Connect a small funnel to the CHIS tube and fill with the prepared packing to within 15mm of the open end. Tap the tube gently to consolidate the packing or use an electric vibrator.

6. Retain the packing with a plug of silanized glass wool.

NB Weigh the tubes before and after to ensure that the amount of packing in each is consistent.

The concentrator tube is now ready for use.

PACKING OF 0.8mm ID TUBES

1. Remove all the old packing and wash the tube with methylene chloride, acetone, detergent and hot water followed by acetone. Blow dry with clean nitrogen.

2. Take a length of 0.6mm stainless steel wire and wrap this around a cylinder about 100mm in diameter. This will produce sufficient curvature to hold the wire in the tube, in an interference fit.

3. Remove the wire and cut it into lengths approximately 10mm long.

4. Insert a piece of the wire into the tube through the open end and push it down as

far as it will go with a piece of stainless steel rod.

5. Attach the closed end of the tube to a piece of rubber tubing connected to a source of vacuum.

6. Using the tube as a "vacuum cleaner," aspirate a pre-measured weight of adsorbent into the tube.

7. Retain the adsorbent with another piece of the wire prepared as in 2 and 3.

ALTERNATIVELY

Proceed with steps 1 to 4.

5. Using a small funnel, transfer the packing material into the tube using a vibrator or tapping to consolidate the packing.

6. Fill to within 15mm of the top and retain the packing with another piece of the wire prepared as in 2 and 3.

The concentrator tube is now ready for use.

NB Some adsorbents require conditioning to remove low Molecular Weight materials before use. Always run a "lank" determination, using the tubes to check for spurious peaks.

ORDERING INFORMATION - CHIS Absorption Tubes

Part No.	Code	Description/GC make and model
0932230	CHITA-0.8	0.8mm ID empty absorption tubes for CHISA type
0932232	CHITA-3.0	3.0mm ID empty absorption tubes for CHISA type

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