

Moisture Trap (Unconditioned)

Agilent Gas Chromatographs

Part No. 5060–9077

General Information

This trap, packed with Molecular Sieve 5A, should be used mainly for removing the trace amount of water that is present in nearly all carrier gases. Trace amounts of water can be very detrimental to most liquid phases operated at high temperatures. Many contaminants, other than water, will also be removed by Molecular Sieve 5A. If the carrier gas contains contaminant molecules which are "too big" to be adsorbed by Molecular Sieve 5A (e.g., branched chain hydrocarbons, sulfur hexafluoride, and other halogenated compounds), other suitable adsorbents such as Molecular Sieve 13X or activated charcoal can be used. Repacking the trap is easily accomplished due to its diameter and the fact that the sealing fitting is a self-contained unit, i.e., the stainless steel frit is sealed in the fitting.

Fitted with 1/8-inch OD Swagelok fittings, the trap is installed directly between the gas line regulator and the gas inlet on the back of the instrument. Since the trap body is constructed of stainless steel, it can be conditioned and/or regenerated at high temperatures without removing the packing. Its unique S-shape also makes it compact to fit in most GC ovens for conditioning/regeneration.



Agilent Technologies

Once in operation, the gas flow pressure drop across the trap is minimal, e.g., nitrogen at 150 mL/min flow rate through 33 grams of Molecular Sieve 5A (45/60 mesh) drops approximately 2 psig.

Conditioning

To condition the trap (Figure 1), remove caps (A) on both ends. Attach one end of the trap to gas supply with suitable tubing. If the trap has been used, attach gas supply to downstream end to reverse flow direction through the trap.

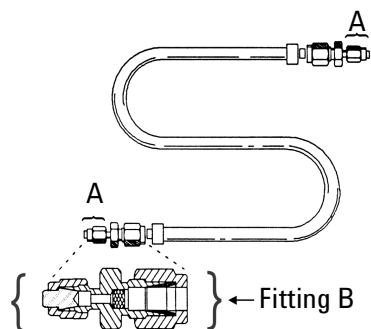


Figure 1. Conditioning the Trap

Using dry helium or nitrogen, set the flow rate at 60 mL/min, the oven temperature at 350°C, and condition the trap overnight.

Since the injection port fitting in some gas chromatograph ovens is recessed, disconnect the trap and pull it around to the front of the GC. Insert the trap, with the copper tubing still connected to the gas supply, into the oven and close the door securely. Using dry helium or nitrogen, set the flow rate at 60 mL/min, the oven temperature at 350°C, and condition the trap overnight.

WARNING

Remove columns from GC oven prior to conditioning traps!

If hydrogen is used as purge gas, the exhaust gas should be vented outside the GC oven in a suitable manner.

Reduce the flow to 10 to 30 mL/min and cool the oven. When the oven is cool, disconnect the trap and immediately install it in the desired flow line or seal the trap with the proper tubing plug and cap.

Installation

Connect trap in-line between gas source supply and gas inlet on instrument, with suitable tubing and/or adapter fittings.

Regeneration

Trap regeneration should be done on a periodic basis, i.e., after using one to four cylinders of gas depending on the grade or purity of the gas. The same method and parameters are used for the initial conditioning.

Adsorbents other than Molecular Sieve 5A and 13X may require other conditioning/regeneration parameters.

After approximately 10 to 12 trap regenerations, replace the packing.

Repacking

Disconnect the trap from the gas line and the instrument, remove fitting (B) from the trap, and empty the contents by slowly rotating the trap. Fill the trap with any desired adsorbent (about 33 grams) one-third at a time, and slowly rotate and tap the trap to settle the adsorbent. When the trap is completely full, reinstall fitting (B) onto the trap body.

Leak check this fitting before conditioning the trap and reinstalling it onto the instrument.

For warranty statement and important user information, refer to the latest Agilent consumables and accessories catalog.

Table 1. Ordering Information

Item	Part Number
Moisture Trap (packed with Molecular Sieve 5A, 45/60 mesh)	5060-9077
Conditioned Moisture Trap (packed with preconditioned Molecular Sieve 5A, 45/60 mesh)	5060-9084
Activated Charcoal Trap	5060-9096
Molecular Sieve 5A (100 grams, 45/60 mesh)	5080-6759
Activated Charcoal (100 grams, 30/60 mesh)	5080-6751
Fitting A: Cap 1/8-in. 6/pkg	5180-4124

Copyright© 2001
Agilent Technologies, Inc.
2850 Centerville Road
Wilmington, DE 19808-1610
Printed in USA FEB 2001



5955-9044