ALTMANN ANALYTIK

GC Column Installation Guide

Preliminary Check of the System

1 Inspect the injector septum and liner. If necessary replace the septum and/or clean the injector liner. Verify gas traps (for oxygen and humidity) and replace if necessary. Always use gas purity traps on the carrier gas lines to extend the column's lifetime and to minimize the background noise.

Prepare Column for Installation

2 Your column is sealed under inert gas after the Quality Assurance Test. Cut 1-2cm from both ends, install a nut and an appropriately sized ferrule on each end of the column. Cut an additional 1-2cm from each end of the column to remove ferrule fragments.

Connect Column and Confirm Flow

3 Connect the column to the inlet of your GC at the instrument manufacturer's recommended insertion distance. Turn on the carrier gas. Confirm flow by immersing the column outlet in a vial containing solvent (i.e. Methanol or Hexane). Connect then the column to the detector (at the instrument manufacturer's recommended insertion distance). For some detectors (e.g., ECD, MS) a conditioning of the column before being connected to the detector is recommended. Consult also your instrument manual.

Column Conditioning

4 Once the system has been checked for proper installation and absence of leaks, it is ready for conditioning. Our columns are already pre-conditioned during our quality control procedures. We recommend anyway a short conditioning cycle as follow: heating the column with a 5-10°C/min ramp to its isothermal upper temperature limit (*) or a temperature 10-20°C above the highest operating temperature of your specific analytical method and keeping for 20-30 minutes or until a flat baseline is established. Do not exceed the upper limit temperature (*) or column damage will results.

Grob Test (or Dedicated Test Mixtures)

5 Every single GC column is tested with the original Grob Test mixture (or with a dedicated mixture for custom columns) to assure the quality of the product. Inject the Grob Test mixture (or the dedicated mixture) that is included in the column's box to verify proper installation and performances of the system. Follow the chromatographic conditions reported on the column Quality Assurance Test sheet.

Column Storage and Cleaning

6 If chemical damage to the stationary phase does occur, try to remove 1-2m of the column (injector side); this could restore the column's performances. Our CROSSBOND phases are solvent proof and washables. Contact us to have more info about washing procedures for your phase or any other suggestion. For the column long term storage (when it is not installed on your GC), flame-seal or cap ends with septa immediately after you remove the column from your GC. Keep then the column in its box.
We recommends to use a Retention Gap (Precolumn) in case you have to analyze "dirty" and/or non-volatile samples. This will help to extend the column's lifetime. Retention Gaps are easily connected to the column using a Press-Fit connector or it can be built-in inside the column itself thanks to the BUILT-IN-GAP technology.

*: on the GC column's label, the temperature limits of your column are reported. Here is their meaning explained:

Example 1 - Temperature Range: 60 - 250°C; 60°C lower temperature limit, 250°C upper stationary phase temperature limit.
Example 2 - Max Temperature: 330 - 350°C; 330°C upper isothermal mode temperature limit, 350°C upper programmed mode temperature limit (you can keep this temperature for a few minutes during every analysis cycle).

You can purchase all above mentioned accessories here:

Altmann Analytik Gmbh & Co. KG, Rupert-Mayer-Str.46, 81379 Munich, Germany
T. +49 89 7167731-00, info@analytics-shop.com, www.analytics-shop.com