

HPLC Suction filter with mobile phase cleaning function

GLC Suction Filter 2



Features

- Removes contaminants from the mobile phase and prevents airborne contaminants from entering mobile phase.
- Does not affect gradient delay* to install this product in front of the pump (see Fig. 2.).
- Available for LCMS due to low bleed.

(*The delay from the time a gradient begins to be produced in the pump to when it reaches the column inlet)

The GLC Suction Filter 2 is packed with activated carbon which acts as a chemical trap and removes contaminants present in the mobile phase. This product is easy to install and user-replaceable.

Note: Connect 3.0 mm outer diameter suction tube when you use this product.

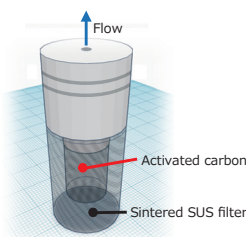


Fig. 1. Structure of the GLC Suction Filter 2

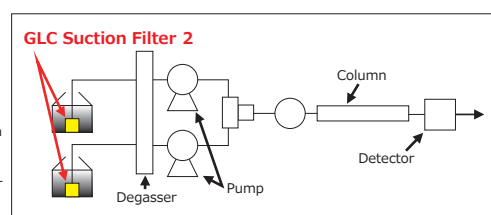


Fig. 2. Attachment position

Removal of contaminants in mobile phase (LC/UV)

◆ e.g. Removal of contaminants caused due to the storage of the mobile phase

Ghost peaks are contaminant peaks that appear even when no sample is injected. One of the causes for ghost peaks is contamination in mobile phase due to improper storage or from external sources. We prepared contaminated ultrapure water that was stored in a plastic container (polyethylene) at room temperature for two weeks. Ghost peaks were observed when using the contaminated water as mobile phase. After installing the GLC Suction Filter 2, the previously observed ghost peaks were eliminated.

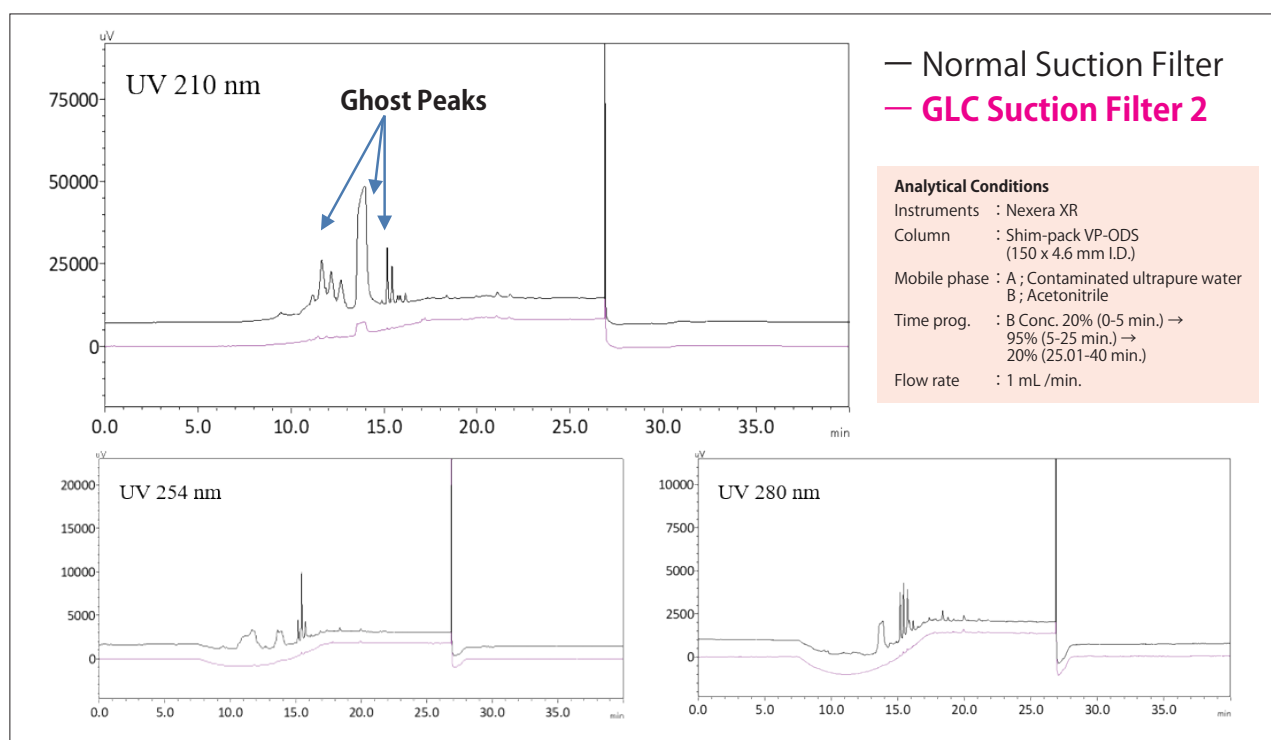


Fig. 3. UV chromatograms of stored ultrapure water in a plastic container

Removal of contaminants in mobile phase (LC/MS)

◆ e.g. Removal of contaminants from organic mobile phase

To simulate contaminated mobile phase, we prepared acetonitrile containing 1 ppm of caffeine and ran the following test. The GLC Suction Filter 2 successfully removed the caffeine-derived MS spectra (Fig. 4.).

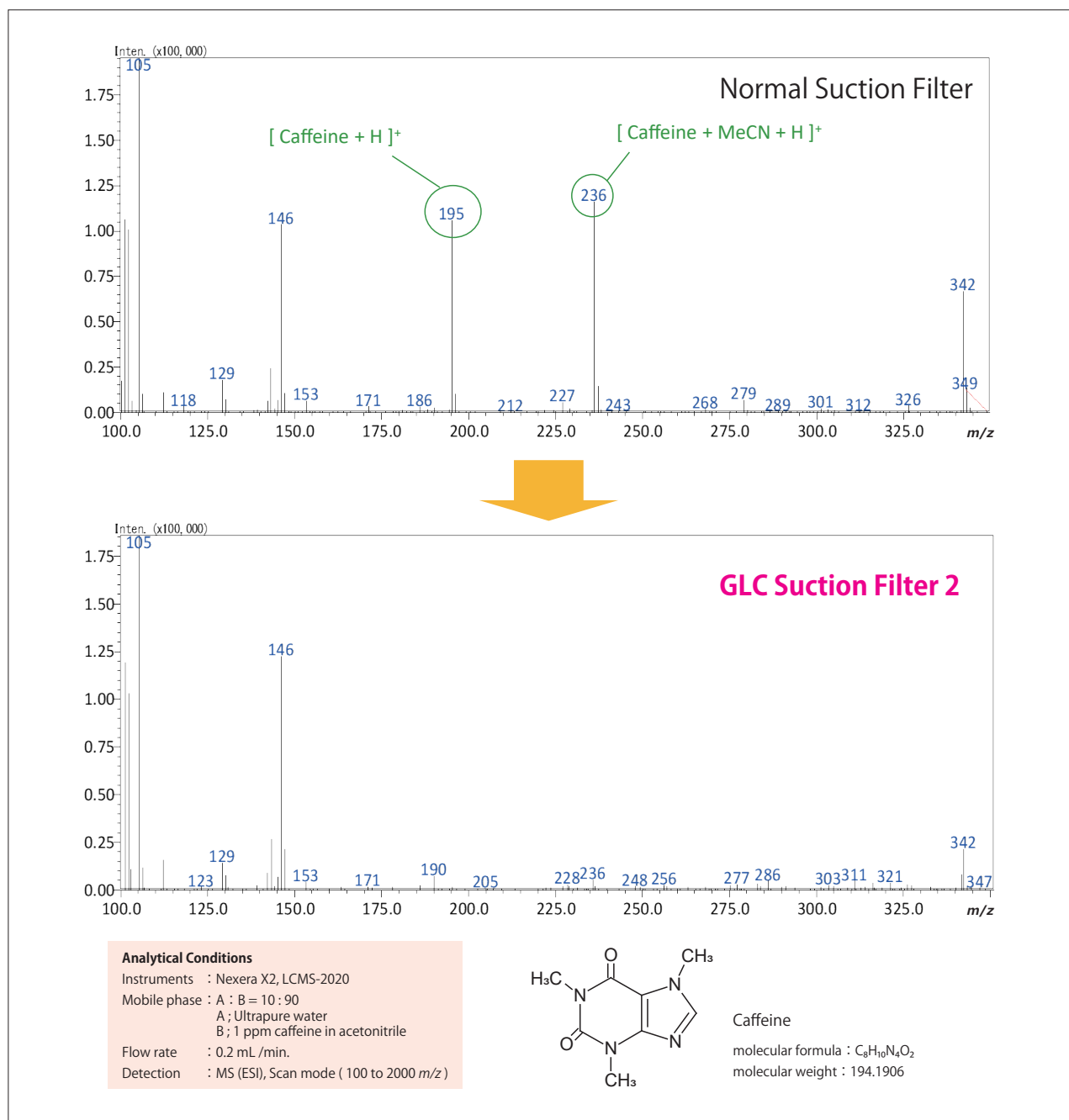


Fig. 4. Caffeine contamination spectra

Product information

Name	P/N	Spec	Qty.
GLC Suction Filter 2	370-02010-01	Connecting tube : 3.0 mm outer diameter suction tube Internal volume : 0.7 mL	1

Please read the manual carefully and condition this product before use.

*The suction tube is not included.

*When using ion-pair reagents in the mobile phase, the ion-pair reagents may be adsorbed to this product and may affect the retention time and peak shape.

*Bleeding from this product may be seen.

*This product does not remove all contaminants.

*When the activated carbon reaches breakthrough, "ghost peaks" derived from mobile phase contaminants may be detected. In this case, replace the product.

*The recommended replacement period is after passing 60L of mobile phase or 1 year after use.

Shimadzu GLC Ltd.

Please contact your local SHIMADZU representative for more information.