13. Column care considerations

Temperature limits. The lower limit normally indicates a temperature at which the stationary phase can no longer exist. Above this temperature, the stationary phase will break down and the column will lose its integrity. Columns are designed to operate isothermally within a certain range. This temperature range is called the isothermal limit; the column can be held at this temperature without a significant change in column performance. The upper temperature limit normally indicates a temperature at which the column begins to lose performance due to aging or deterioration. Heating the column above the upper limits will significantly reduce column life. The upper limit is often given to control the gas flow through the column.

The story behind Agilent advanced GC columns is that Agilent, the inventor of the fused silica GC column, carefully selected the stationary phase to achieve the best possible performance, including highest resolution and symmetry for a broad scope of chemically dissimilar compounds. We also monitor peak reactivity and leading edge sharpness for both acids and bases to ensure top performance for both elution patterns. Agilent columns have the widest range of low-bleed and standard and cross-linked WCOT columns are solvent rinseable. CP-Cyclodextrin, CP-Chirasil Val, HP-88, CP-Sil 88, CAM, 20M, HP-20M, Cyclodex-B, CycloSil B, HP-Chiral β, and so forth) and bases (KOH, NaOH, and so forth) should never be used when rinsing columns. Avoid strong oxidizing agents (e.g. H2O2, HNO3, and SO3), H3PO4, and HCl.過酸化的水酸化水素、硝酸、三塩素酸、リン酸、硫酸、塩酸などは、細孔を損傷し、色としての性能を減少させます。化学的には、弱酸性の塩化物、硝酸、塩酸などの溶媒は、細孔を損傷し、色としての性能を減少させることが知られています。柱の洗浄液として使用する場合は、適切な溶媒を使用することが重要です。溶媒使用の詳細は、各製品の取扱説明書をご確認ください。

Rinsing columns

Better precision for better results

High performance liquid chromatography (HPLC) separations rely on narrow retention indexes and a high number of theoretical plates per meter, which result in symmetrical and narrow peaks. They also feature narrow retention indexes and the widest range of compounds. We also monitor peak reactivity and leading edge sharpness for both acids and bases to ensure top performance for both elution patterns. Agilent columns have the widest range of low-bleed and standard and cross-linked WCOT columns are solvent rinseable. CP-Cyclodextrin, CP-Chirasil Val, HP-88, CP-Sil 88, CAM, 20M, HP-20M, Cyclodex-B, CycloSil B, HP-Chiral β, and so forth) and bases (KOH, NaOH, and so forth) should never be used when rinsing columns. Avoid strong oxidizing agents (e.g. H2O2, HNO3, and SO3), H3PO4, and HCl.過酸化的水酸化水素、硝酸、三塩素酸、リン酸、硫酸、塩酸などは、細孔を損傷し、色としての性能を減少させます。化学的には、弱酸性の塩化物、硝酸、塩酸などの溶媒は、細孔を損傷し、色としての性能を減少させることが知られています。柱の洗浄液として使用する場合は、適切な溶媒を使用することが重要です。溶媒使用の詳細は、各製品の取扱説明書をご確認ください。
3. Place the tubing end in hexane and remove bubbles. Allow the mouse to dry. Then place the tubing end within the oven. Assemble the tubing end at the highest point in the oven to ensure proper flow and to prevent liquid from running back to the column.

4. Place the tubing end in the oven. The oven must be held at 30 °C for at least 20 minutes before the column is placed in it. This allows the mouse to dry completely.

5. Place the column in the oven. The column must be held at 30 °C for at least 20 minutes before the column is placed in it. This allows the mouse to dry completely.

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