

## Column care and use - Eurospher II Chiral AM and OM columns

Each KNAUER column is individually packed and tested to ensure a reliable performance. The enclosed test certificate includes the performance data, serial number and batch number of the column material.



**Note:** Chiral phases are very susceptible to a range of common solvent. Eluents such as acetone, chloroform, DMF, DMSO, MEK, toluene, dioxane, ethyl acetate, methylene chloride, pyridine, ketone, ether, dimethylacetamide and high concentrations of IPA should be avoided. It is highly recommended to flush the system thoroughly before installation of chiral columns.

Eurospher II chiral columns are designed to be used in NP or RP applications. It is not recommended to change the separation mode of the columns.

### Column installation

Columns should be handled with care, as every drop or shock can damage the column or the column bed. Remove safety plugs before installation and use compatible solvents. The flow direction is indicated on the column flag. Flush the system and a new column at low flow, before gradually increasing the flow rate to the desired value.

### pH stability

Chiral columns are only stable between pH 2-7. All other pH values will damage the column bed.

### Mechanical stability

KNAUER chiral columns are stable up to a pressure 300 bar. Please note that preparative columns are available for chiral phases with a reduced pressure limit of 150 bar with flanged columns.

### Mobile phases (eluents)

Suitable solvents for normal phase columns are hexane, heptane, IPA and ethanol in different mixtures. Possible modifiers could be TFA or N, N-diethylamine.

Reversed phase columns can be operated with water/acetonitrile or water/methanol in different mixtures.

RP-columns can be used with a variety of buffer salts, soluble in the recommended solvents. Prepared buffer should always be filtered through a 0.45 µm filter to avoid any blockage of the column.

### Proper storage of silica based HPLC columns

Columns should be stored in appropriate mobile phases indicated in the section above. Best storage mixture for NP-columns is heptan/IPA (85:15, v:v). Isopropanol content should generally be below 50%.

Best storage conditions of RP-columns are MeOH/Water, ACN/ Water, whereas water content should always be below 50%.

Before storage all buffer solutions should be thoroughly flushed out of the column with the above mentioned solvents. The openings of the column need to be closed with blind nuts to avoid any evaporation.

### Regeneration of the columns

Following the extensive use of a column may lead to a change in the separation reproducibility. In order to ensure consistent performance, a regeneration method should be used to eliminate any change in chiral recognition.

Regeneration for Chiral OM/AM	Regeneration for Chiral OM-R/AM-R	Regeneration for Chiral NR/NR-R
1-3 hours, 100% ethanol (40°C)	1-3 hours, 100% acetonitril or methanol (40°C)	30 min, DMF
		600 min, ethanol (at 0.05 ml/min)



**Note:** After the regeneration procedure, re-equilibrate the column with the mobile phase before starting the analysis.

Please note that any failure to follow these precautions may void the column warranty. Technical data can be subject of change without notice.

If there are any further questions do not hesitate to contact our technical customer support:

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