INSTRUCTION MANUAL
CHIRAL-AGP™

INSTALLATION
The column is filled with **15%** 2-propanol in dist. water. Wash the column with dist. water. Start at low flow-rate and increase to 0.5 ml/min and maintain this flow during 2 min. Incrcease the flow-rate to 0.8-0.9 ml/min and continue the washing for 10 min. Equilibrate the colmn with the mobile phase to be used.
Recommended flow rate with a 4.0 mm I.D. column is 0.8-0.9 ml/min .
We recommend the use of a CHIRAL-AGP™guard column in order to protect the analytical column from impurities with high affinity and particulate impurities. Exchange the guard column regularly, otherwise the column performance will be affected. This is of special importance in bioanalysis.

STORAGE
The column can be stored at room temperature. When in use, the column can be left over night in the chromatographic system. However, be careful when buffers without organic modifiers, or buffers containing low concentrations of acetonitrile, are used, since in such mobile phases bacteria grows fast. Such mobiles phases must be freshly prepared. During weekends and other shorter periods it is recommended to fill the column with 10% 2-propanol in distilled water. When the column is stored for longer periods of time it is recommended to fill it with 15% 2-propanol in distilled water and place it in the refrigerator. Before use repeat the installation procedure.

MOBILE PHASE COMPOSITION

BUFFER
Different kinds of buffers can be used to obtain the best separation. For example: sodium- or potassium phosphate buffers, ammonium- or sodium acetate buffers, formate or citrate buffers. We recommend the concentration range 0.01 - 0.1 M. Normally 10-20 mM.

pH
The column can be used in the pH-range 4-7. Use of the column at pH > 7.0 or < 4 for longer periods, may decrease the column lifetime, due to silica decomposition.

ORGANIC MODIFIER
We recommend the use of the following organic modifiers: 1-propanol, 2-propanol, methanol, ethanol and acetonitrile. 1-and 2-propanol and acetonitrile are the most frequently used modifiers. The separation factor can be strongly affected by the type and the concentration of the uncharged modifier. For example, 1-propanol, 2-propanol and acetonitrile can give large differences in enantioselectivity. See the method development part. Cationic and anionic modifiers have also been used to regulate retention and enantioselectivity. However, some of these modifiers may be difficult to remove totally, due to very high affinity to the matrix. Thus, the properties of the column may be affected. We recommend the use of separate columnsfor uncharged, anionic and cationic modifiers.

Room temperature (20-25 degrees C°) is recommended, however, the column can be used both above and below room temperature. When the column is used at higher temperatures, the column lifetime might be reduced, as for all silicabased columns.

SAMPLES
The recommended sample concentration is less than 0.10 mg/ml with an injection volume of 10-20 µl. If possible, dissolve the sarnple in the mobile phase. If the sample is insoluble in the mobile phase, add a higher concentradon of the organic modifier. However, be aware that too high organic modifier concentration might precipitate the buffer salts. Avoid to dissolve the sample in pure solvents. Do not inject unclear sample solutions or samples containing undissolved compounds. In bioanalytical work use an isolation procedure that produces clear sample solutions, free from emulsions of fatty compounds. Exchange the guard column regularly.

CLEANING OF THE COLUMN
If the column has been contaminated with very hydrophobic material, wash the column backwards (no detector connected) over night with 25% 2-propanol in dist. water at a flow-rate of 0.2 ml/min.

METHOD DEVELOPMENT
Attached you will find a method development scheme which means that it is very simple to develop a new method. When starting method development you only have to characterize your sample according to the groups in the scheme. If, for example, the sample is a hydrophobic amine, use the scheme for hydrophobic amines and start the method development work with the mobile phase recommended there. Depending on the results you obtain, follow the instructions in the scheme. You can also visit our chiral website, **www.chromtech.co.uk** ,where you will find hundreds of applications including all conditions, chromatograms and structures of the separated compounds. You will also find almost two hundred literature references. The information on the website can be used to get ideas on how to resolve compounds with widely different structures.

CHIRAL-AGP™ products:

AGP100.4	CHIRAL-AGP™ 100x4.0 mm
AGP150.4	CHIRAL-AGP™ 150x4.0 mm
AGP50.4	CHIRAL-AGP™ 50x4.0 mm
AGP100.3	CHIRAL-AGP™ 100x3.0 mm
AGP150.3	CHIRAL-AGP™ 150x3.0 mm
AGP50.3	CHIRAL-AGP™ 50x3.0 mm
AGP100.2	CHIRAL-AGP™ 100x2.0 mm
AGP150.2	CHIRAL-AGP™ 150x2.0 mm
AGP50.2	CHIRAL-AGP™ 50x2.0 mm
AGP100.10	CHIRAL-AGP™ 100x10.0 mm
AGP150.10	CHIRAL-AGP™ 150x10.0 mm
AGP10.42	CHIRAL-AGP™ 10x4.0 mm guard(2 pcs)
AGP10.32	CHIRAL-AGP™ 10x3.0 mm guard(2 pcs)
AGP10.22	CHIRAL-AGP™ 10x2.0 mm guard(2 pcs)
CH10.3	Guard column holder
CON2	Guard column coupler
CON4	Micro guard column coupler

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