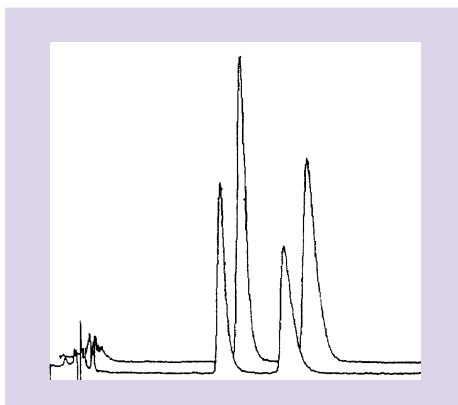


## Increase sensitivity with 3 mm ID columns

In purity determination, in bioanalytical work and in all types of analysis where the sample concentration is very low and close to the limit of detection, it is very important to find ways to optimize the sensitivity. One simple way is to exchange a standard 4 mm column with a 3 mm column of the same length. 3 and 4 mm ID columns can be used in the same HPLC setup.

60-70% higher peaks are usually obtained. The increase in peak height depends to some extent on the HPLC equipment used (dead volume, detector cell geometry etc.)

Below is an example where mepivacaine has been chromatographed on CHIRAL-AGP columns.



**Columns:** CHIRAL-AGP 100x3.0 mm (upper chromatogram)  
CHIRAL-AGP 100x4.0 mm (lower chromatogram)

**Mobile phase:** 6% 2-propanol in 10 mM sod.ph.b. pH 7.0

**Sample conc.:** 0.02 mg/ml

**Inj.vol.:** 10 µl

**Detection:** UV 225 nm

**Flow rate:** 0.51 ml/min (3 mm ID), 0.90 ml/min (4 mm ID)

**CHIRAL-AGP, CHIRAL-CBH and CHIRAL-HSA** columns are available with ID of 2, 3, 4 and 10 mm and in lengths of 50, 100 and 150 mm.

**Need more literature? Please order from support@chromtech.co.uk**

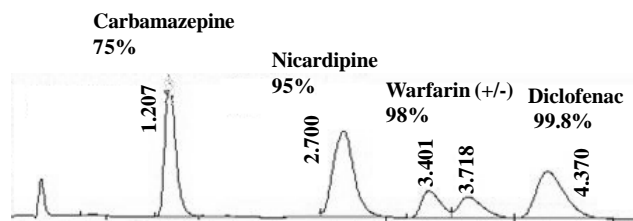
## New semipreparative guard columns

New semipreparative guard columns are now available. The dimension is 10x10 mm. A new holder is also available. Article numbers are listed below:

Art.no.	Description
AGP10.10	CHIRAL-AGP semiprep guard 10x10 mm
CBH10.10	CHIRAL-CBH semiprep guard 10x10 mm
HSA10.10	CHIRAL-HSA semiprep guard 10x10 mm
CH10.10	semiprep guard column holder

## Columns for protein binding studies

Columns with immobilized  $\alpha$ 1-acid glycoprotein (AGP), human serum albumin (HSA) or other albumins as rat (RSA), dog (DSA), mouse (MSA), etc., are excellent tools for the determination of the degree of drug/protein binding. The technique is easy to use and has become very popular. The possibility to automate, using an ordinary HPLC with autosampler, gives extremely high throughput. Retention data ( $k'$ ) is used to calculate the percentage of protein binding. When using these columns for drug protein binding studies it is recommended to include a set of standard drugs to correlate the chromatographic data against published protein binding data. Both isocratic and gradient elution can be used. Below is a chromatogram from a gradient elution on an HSA 50x3.0 mm column (from K.Valko, GlaxoSmithKline).



Please note the difference in retention time between a drug with 98% proteinbinding (warfarin) and a drug with 99.8% proteinbinding (diclofenac). The column is a very sensitive tool.

For more information on these columns please send an email to support@chromtech.co.uk