Column mix

The **CHIRAL-AGP** and the **CHIRAL-CBH** columns both give very high enantioselectivity for many compounds.

On **CHIRAL-AGP** enantiomers of an extremely broad range of compounds can be resolved:
- amines (primary, secondary, tertiary and quarternary ammonium compounds
- acids (strong and weak)
- nonprotolytes (esters, sulphoxides, amides alcohols etc.)

On **CHIRAL-CBH** basic compoundsof different types can be separated. This column is extremely useful for the separation of aminoalcohols.

Even though the selectivity for enantiomers is very high it can sometimes be more difficult to separate other compounds which are related to each other in other ways, for example differing in an alkyl group or a hydroxyl group. This is the case, for example, when performing bioanalytical studies, where metabolites can interfere. In this Bulletin is an example of a drug (propranolol) and a metabolite (4-OH-propranolol). Both compounds exist in two enantiomers, giving 4 compounds to resolve.
Fig. 1 shows the result on **CHIRAL-AGP**

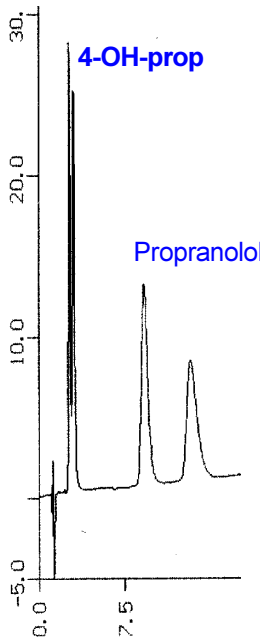

Fig.1

CHIRAL-AGP
100x4.0 mm
Mobile phase:
0.5% 2-propanol in 20 mM amm. acetate buffer pH 4.1

The hydroxylated metabolite is eluted before propranolol and is not baseline resolved.

Fig.2 shows the result on **CHIRAL-CBH**

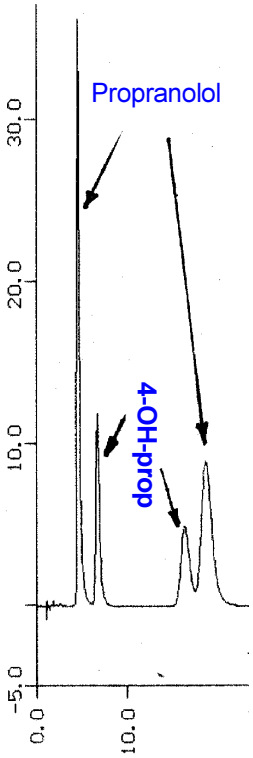

Fig.2

CHIRAL-CBH
100x4.0 mm
Mobile phase:
5% 2-propanol 10 mM sod.ac. buffer pH 5.0

The hydroxylated metabolite is eluted between the two propranolol enantiomers. Two of the peaks interfere.

Combination of **CHIRAL-AGP** and **CHIRAL-CBH**

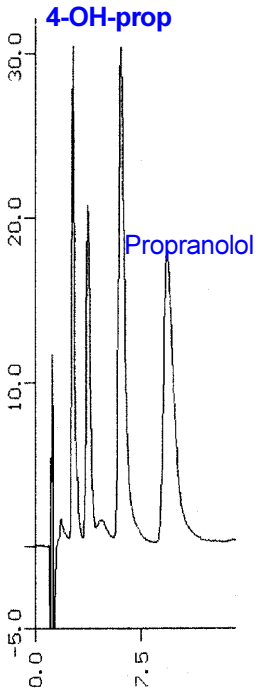

Fig.3

CHIRAL-AGP 50x4.0 mm
CHIRAL-CBH 50x4.0 mm
Mobile phase:
0.5% 2-propanol in 20 mM amm. acetate buffer pH 4.1

The elution order is the same as on the **CHIRAL-AGP** column however, the hydroxylated metabolite is now baseline resolved.

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