Gemifloxacin mesylate (brand name: Factive, LB20304a) waiting for the U.S. FDA's approval is a new fluoroquinolone compound with potent *in vitro* and *in vivo* antibacterial profile. The enantiomers of gemifloxacin are resolved on a Crownpak CR chiral column. All of fluoroquinolones including gemifloxacin used in this study are well enantioseparated on Crownpak CR(+) column. These results are the first reported for the direct separation of the enantiomers of quinolones on chiral crown ether coated Crownpak CR column. The behavior of chromatographic parameters by the change of mobile phase additives for the resolution of gemifloxacin is investigated. Also, the effect of structural change of gemifloxacin on chiral recognition is described.

[PD4-3] [04/19/2001 (Thr) 13:30 - 14:40 / Hall 4]

Potentiometric Studies of Ternary Complexes of Acidic Drug-Metal(II)-Dipyridylamine

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Sensitive and fast responding potentiometric sensors for determining the acidic drugs anion is described.
The sensing membrane of the electrode consists of acidic drug-metal(II)-dipyridylamine ternary complex as an ion-exchanger and *o*-nitropheny octyl ether as a plasticizer.
The electrode exhibits a fast, stable and linear response for $1\times10^{-2}\sim5\times10^{-5}$ mol/L ibuprofen with an anionic slope of 54.0±0.3 mV/decade in pH 4~6 of acetate buffer solutions.
Potentiometric selectivity measurements revealed negligible interferences from many aromatic and aliphatic carboxlic acid salts.
The electrode displays useful analytical characteristics for the direct determination of ibuprofen in various pharmaceutical preparations. Results with an average recovery of 98±0.7% of the nominal value were obtained.

[PD4-4] [04/19/2001 (Thr) 13:30 - 14:40 / Hall 4]

Determination of terbutaline enantiomers in human urine by capillary electrophoresis

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A new method for the determination of terbutaline enantiomers in human urine by capillary elctrophoresis has been developed. Separation conditions have been optimised with the respect to different parameters including pH, applied buffer and chiral selectors such as β-cyclodextrin, carboxymethyl-β-cyclodextrin, hydropropyl-β-cyclodextrin. Optimum resolution was achieved using 50mM phosphate buffer, pH 2.5, containing 15mM of hydroxypropyl-β-cyclodextrin as a chiral selector. This method was applied for the quantitative determination of terbutaline enantiomers in human urine. Acceptable quantitative results in precision, sensitivity and linearity were obtained from the real human urine. The reproducibility of the method has been shown to be sufficient for drug monitoring or pharmacokinetic studies.

[PD4-5] [04/19/2001 (Thr) 13:30 - 14:40 / Hall 4]