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A poly(vinylchloride) membrane ion-selective electrode for determining the acidic drugs is described. The sensing membrane of the electrode consists of acidic drug-metal(II)-dipyridylketone oxime as an ion-exchanger site in a PVC matrix plasticized with nitrophenyl ether group. In a borate buffer solutions of pH 8.9, the electrode exhibits a fast, stable and linear response for $2 \times 10^{-5} \sim 10^{-2}$ mol dm⁻³ acidic drug with an anionic slope of near 55 mV decade⁻¹. Potentiometric selectivity measurements revealed negligible interferences from several different anions. The electrode displays useful analytical characteristics for the direct determination of acidic drugs such as fenemates, ibuprofen, naproxen and diclofenac in pure form and in pharmaceutical preparations.

[PD4-10] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

Novel chiral derivatizing agent, (+)-2,4-dimethyl-1,3-benzodioxole-2-acetic acid

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A carboxylic acid with a 1,3-benzodioxole skeleton, (+)-2,4-dimethyl-1,3-benzodioxole-2-acetic acid ((+)-DMBA) was prepared. The potential as a chiral derivatizing agent was evaluated in terms of the HPLC analysis of (±)-methylbenzylamine. With more than 50 times molar excess of (+)-DMBA chiral derivatization reaction was completed within one hour at 70°C. Diastereomeric derivatives of (±)-methylbenzyl amine were well resolved on the silica column using n-hexane-ethyl acetate as a mobile phase.

[PD4-11] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

Chiral derivatization of (±)-methyl benzylamine with (+)-2-t-butyl-2-methyl-1,3-benzodioxole-4-carboxylic acid as a chiral derivatizing agent

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The applicability of (+)-2-t-butyl-2-methyl-1,3-benzodioxole-4-carboxylic acid ((+)-TBMB) as a chiral derivatizing agent for the enantioseparation of a compound containing an amino group such as (±)-methyl benzylamine and some β-blockers was investigated. Diastereomeric derivatives were prepared and confirmed by NMR and Mass. Diastereomeric derivatives were analyzed by normal phase high-performance liquid chromatography. Condition of derivatization (temperature, reagent excess and reaction time) were optimized and compared to each other.

[PD4-12] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

Chiral Analysis of Baclofen by Capillary Electrophoresis using Highly Sulfated γ-Cyclodextrins as Chiral Selectors