[PD4-17] [10/18/2002 (Fri) 13:30 - 16:30 / Hall C]

Enantiomeric Profiling Analysis of NSAIDs by Capillary Electrophoresis Using TM β-Cyclodextrin as the Chiral Selector

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Because of the differences in pharmacological properties between enantiomers of chiral acidic non-steroidal antiinflammatory drugs (NSAIDs) in human body, accurate determinations of their optical purities have been in great need. An efficient capillary electrophoretic (CE) profiling method was developed for the enantioseparation of NSAIDs. Capillary electrophoretic conditions were optimized using TMβ-cyclodextrin as the chiral selectors under MES buffer. The effects of chiral selector concentration, and pH of run buffer on the resolution and migration behavior of each enantiomeric pair will be discussed.

[PD4-18] [10/18/2002 (Fri) 13:30 - 16:30 / Hall C]

Qualification of various polymorphs by near-infrared(NIR) spectrophotometer.

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Near-infrared(NIR) reflectance spectroscopy was employed to qualify various ploymorphs. We collected 8 potential polymorphs forms of Medicine T for this study. Near-infared spectra of the powder samples contained in glass vials were obtained over the wavelength region of 1100-1750nm. There were the peak around 1560nm in the 6 spectra among 8 spectra. Principal component analysis(PCA) has been performed to examine the qualitative difference of 8 polymorphs PC space. Before performing PCA, all the sample spectra were preprocessed using a second derivatization algorithm to reduce baseline variations and enhance the spectral features. NIR spectral data for the 8 polymorphs were divided moderately into two groups using PCA. The separated patterns of the spectral data had similar trend with differential scanning calorimetry(DSC) These studies have indicated that NIR spectroscopy could be utilized to identify polymorphs based on the molecular structure using PCA.

[PD4-19] [10/18/2002 (Fri) 13:30 - 16:30 / Hall C]

Development of a high-performance liquid chromatographic method for the determintion of levosulpiride in plasma

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Levosulpiride is the levo-enantiomer from of racemic sulpride, abenzamide derivative selectively inhibition doparninergic D2 receptos at the trigger zone both in the central nervous system and in the gastrointestinal tract. We report a rapid and sensitive HPLC method using reverse phase C18 column with fluorescence detection for separation and quantitation of levosulpiride in plasma. Tiapride was used as an internal standard. After adding an internal standard, levosulpiride in 800 μl of plasma was extracted under basic conditions with ethyl acetate and methylene chloride. Then, the organic extract was evoporated to dry and the residue was reconstituded in 160 μl of mobile phase. This extraction method exhibited higher recovery (> 90 %) and shorter processing time (1 h). The mobile phase was prepared by mixing 20 mM phosphate buffer (pH 3.5) and methanol at the ratio of 84: 16 (v/v, %). The signal was monitored by fluorescence detector with maximum excitation at 300 nm and maximum emission at 365 nm at the flow rate of 0.6 ml/min. The limit of quantitation of levosulpiride was 5 ng/ml with a