Chromatographic chiral resolution of several racemic drugs containing primary amino moiety on a chiral stationary phase

Lee WonJae°, Baek ChaeSun, Jin JingYu

College of Pharmacy, Chosun University, Kwangju 501-709

A chiral stationary phase (CSP) prepared by bonding (18-crown-6)-2,3,11,12-tetracarboxylic acid (18-C-6-TA) to aminopropyl silica gel by HPLC was used in resolving several racemic drugs containing primary amino moiety. Most compounds used in this study were resolved on the CSP using 80% methanol in water (V/V) containing 10mM sulfuric acid as a mobile phase. These results on the CSP were compared to those on the similar CSP derived from 18-C-6-TA of the same chiral selector by different connecting method.

[PD4-11] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Quantification of intact ambroxol tablet using near-infrared spectroscopy

Kim DoHyung°, Lim HunRang, Woo YoungAh, Kim HyoJin, Kang ShinJung, Choi HyunChul, Choi HanGon

College of Pharmacy, Dongduk Women's University; Korea Food & Drug Administration; College of Pharmacy, Yeungnam University

NIR reflectance spectroscopy, using a fiber-optic probe was used to determine rapidly and non-destructively the content of ambroxol in intact ambroxol 30 mg (nominal content 12.5% m/m ambroxol) tablets by collecting NIR spectra in range 1100 ~ 1750 nm and using PLSR calibration method. The tablets (10.3 ~ 15.9% m/m ambroxol, i.e., 82 ~ 127% of the nominal label content) were used 7 calibration set and 5 validation set. Unique spectral features of the active constituent (ambroxol) were identified i! n the NIR spectra of the tablet ingredients. The developed NIR method gave results comparable to the values from preparation of tablets, SEC and SEP being 0.49% and 0.49% m/m respectively. The method showed good accuracy and repeatability but bad intermediate precision. NIR spectroscopic determination in intact tablets allowed the potential use of the method on-line for real time monitoring of a running production process.

[PD4-12] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Determination of dextromethorphan and its metabolite dextrorphan in human urine by High-performance liquid chromatography

Son HaengJa°, Park MeeJung, Choi SangKil, Lim MiAe, Chung HeeSun

Dept of Forensic science, National Institute of Scientific Investigation

A simple and accurate reverse-phase high performance liquid chromatography (HPLC) coupled with photodiode array was developed for the determination of dextromethorphan(DM) and its metabolite dextrorphan(DX) in human urine. Chromatographic separation was accomplished on a cyano analytical column at 220 nm using a mobile phase containing 25 mM triethylammonium phosphate buffer(pH 3.0) in a 0-70% ACN gradient and triazolam(TZ) was used as internal standard (I.S.). There was a linear relationship between peak area ratios of analytes to I.S, and concentration of analytes over the concentration range 10-200 ㎍/㎖ for DM and DX with r value of 0.9962 and 0.9958 respectively. The urinary recovery was 92.69~96.79 % (R.S.D. 2.28~4.03 %) for DM and 81.01~84.19 (R.S.D. 2.30~3.08 %) for DX. The limits of detection(LOD) were