

coefficient of variation of less than 20 %. Good linearity was observed in the concentration range of 5 to 150 ng/ml. The results suggest that this method could be used successfully to study levosulpiride pharmacokinetics in adult humans.

[PD4-20] [10/18/2002 (Fri) 13:30 - 16:30 / Hall C]

Potentiometric Characteristics of Metal(II)-Triethylene tetramine-Acidic Drug Membrane Electrodes

Ahn MoonKyu^o, Lee EonKyung, Lee SoonYoung, Oh WonJung, Jung YoungSim, Seok JiWon Lee JaeYun, Hur MoonHye

College of pharmacy, Kyungsung Univ.:Pusan regional Food & Drug Administration

Potentiometric sensors are important and viable devices for use in pharmaceutical analysis. Liquid polymeric membrane electrodes for many basic drugs and a few acidic drug were reported. The acidic drug-metal(II)-triethylene tetramine ion pair complexes were prepared and used in poly(vinyl chloride) membrane electrodes to analyze anionic drugs such as mefenamic acid and ibuprofen. Metal ion used were Fe²⁺, Co²⁺, Ni²⁺ and Cu²⁺. Plasticizer used was *o*-nitrophenyl octyl ether. The electrodes exhibited a fast stable and linear response for 10⁻⁵ - 10⁻³ mol/L mefenamic acid and ibuprofen with a response slope of almost 50 - 60 mV/dec. in borate buffer solution of pH 8.9. Potentiometric selectivity measurements revealed negligible interferences from aromatic and aliphatic carboxylic acid salts.

[PD4-21] [10/18/2002 (Fri) 13:30 - 16:30 / Hall C]

Determination of triflusal in human plasma by high performance liquid chromatography with automated column switching system

Park Jeong-Sook^o, Park Kyung-Mi, Kim Chong-Kook

College of Pharmacy, Seoul National University

To study the pharmacokinetics of triflusal, more reliable and sensitive analytical method of triflusal in plasma sample was developed. Analytical method of triflusal in human plasma was developed using semi-microbore HPLC equipped with automated column switching system. *p*-Toluic acid, which is structural analogue of triflusal, was used as an internal standard and 2 M HCl was employed as a stabilizer. The load phase and mobile phase were prepared using acetonitrile and 20 mM KH₂PO₄ with the volume ratios of 10:90 (pH 2.5) and 43:57 (pH 2.3), respectively. The signals were monitored by UV detector at 275 nm with flow-rate of load phase, 0.5 ml/min, and mobile phase, 0.1 ml/min, respectively. The retention time of triflusal and *p*-toluic acid was about 20.2 min and 16.4 min, respectively. The detection limit of triflusal in human plasma was 10 ng/ml and the limit of quantitative analysis was 50 ng/ml. The accuracy of the assay was from 97.76% to 116.51% while the intra-day and inter-day coefficient of variation of the same concentration range was less than 15%. This analytical method demonstrated excellent sensitivity, reproducibility, specificity, and speed using the plasma sample. This method could be successfully applied to evaluate the bioavailability of triflusal in human subjects without time-consuming sample clean-up after oral administration of low dose.

[PD4-22] [10/18/2002 (Fri) 13:30 - 16:30 / Hall C]

Simultaneous quantitation of enalapril and enalaprilat in human plasma by high-throughput solid phase extraction and liquid chromatography/tandem mass spectrometry

Son Junghyun^o, Lee Jaeick, Kim Dong-Hyun

Bioanalysis and Biotransformation Research Center, Korea Institute of Science and Technology, PO Box 131, Chungryang, Seoul, South Korea

Enalapril (ENP) maleate is effective drug for the treatment of renovascular hypertension and heart failure. ENP acts as inhibitor of the enzyme angiotensin-convertase (ACE-inhibitor) and metabolized to enalaprilat (ENPT), which is the active metabolite that is really responsible for the therapeutic action. In the present study, a sensitive and