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A high-performance liquid chromatographic method for the simultaneous quantitative analysis of DMDM hydantoin, sorbic acid, phenoxy ethanol in cosmetics was studied by using a X-terra C18 column and 0.75mM KH₂PO₄ in 0.85% sulfuric acid and methanol mixture(7:3) at 214nm. Calibration curves were found to be linear in the 20–100µg/mL range (DMDM hydantoin), 50–250 µg/mL range (sorbic acid) and 10–50µg/mL range (phenoxy ethanol). The result of recovery test were 96.6% ~ 104.2%. This HPLC method can be applied quality control of cosmetics.

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

DETERMINATION OF SIMVASTATIN IN HUMAN PLASMA BY COLUMN SWITCHING HPLC WITH UV DETECTION

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Purpose. The purpose of this study was to develop and validate sensitive and specific analytical method for determination of simvastatin in human plasma by the column-switching high-performance liquid chromatography (HPLC) system with UV detection.

Methods. Simvastatin and internal standard were extracted into diethyl ether from plasma. The organic phase containing simvastatin and IS was evaporated to dryness and the residue dissolved in mobile phase of 20 mM phosphate buffer (pH 5.6): acetonitrile (55:45) and injected into the pre-column. The analytes fractionated from pre-column by valve switching step were focused in the top of intermediated column and then separated to the analytical column with a mobile phase of 20 mM phosphate buffer (pH 5.6): acetonitrile (35:65) using the UV detection wavelength of 238nm.

Results. Simvastatin and IS are baseline separated with retention times of 25.5 and 28.3 minutes without disturbance of endogeneous material in plasma. The limit of quantification is 0.5 ng/ml. The method has been validated for a linear range of 0.5–20 ng/ml (R₂ = 0.999). Also, inter- and intra-day precisions of this method were less than 15%. The averaged extraction recovery was 81.9 % over the concentration. The assay has been successful in measuring plasma concentrations of simvastatin in volunteers receiving dose of simvastatin (800mg).

Conclusions. The results showed that column switching HPLC method with UV detector could be used for the quantitation of simvastatin in plasma. And this method appears suitable for the pharmacokinetic and pharmacodynamic investigation study of simvastatin.

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Analysis of opiate alkaloids in seized chinese analgesics, 'bokbanggamchopyeon'

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Recently, 'bokbanggamchopyeon', chinese analgesic which is carried in korea by travelers becomes a problem when they pass customs because it contains opiate alkaloids morphine and