

**Chromatographic Analysis of Cilostazol in Human Plasma
with On-Line Column Switching**

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Cilostazol, a quinolinone derivative that inhibits phosphodiesterase, is used for the treatment of intermittent claudication resulting from peripheral arterial disease. In order to perform pharmacological and pharmacokinetic studies of cilostazol, specific, sensitive and reproducible analysis methods are demanded. Therefore, in the present study, an analytical method of cilostazol in human plasma was developed using semi-microbore HPLC equipped with automated column switching system. After direct injection of human plasma, deproteinization and fraction of analyte occurred on a Capcell Pak MF Ph-1 column (20 × 4 mm I.D.). The cilostazol fraction was transferred from the MF Ph-1 column to an intermediate C₁₈ column (35 × 2 mm I.D.) using 10% acetonitrile in water. The main separation was performed on a semi-microbore C₁₈ column (250 × 1.5 mm I.D.) using 40% acetonitrile in water. The limit of quantification was 25 ng/ ml. The accuracy of the assay was from 96.04% to 115.54% while the intra- and inter-day coefficient of variation of the same concentration range was less than 15%. In the concentration range of 25-2000 ng/ml, and linear regression analysis revealed correlation coefficients > 0.999. Also, we applied the developed method to analyze cilostazol in human plasma.