

# DETERMINATION OF PARACETAMOL, ASCORBIC ACID AND PHENYLEPHRINE IN PHARMACEUTICAL PREPARATIONS BY MICELLAR ELECTROKINETIC CHROMATOGRAPHY

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A new method of micellar elektrokinetic chromatography (MEKC) with UV detection at 190 nm and 265 nm for the determination of paracetamol (PA), ascorbic acid (AA) and phenylephrine (FE) in pharmaceutical preparations was devised and optimised. The analysis was carried out in a fused-silica capillary (internal diameter 50  $\mu\text{m}$ , total length 31,2 cm and effective length 21 cm), with voltage 20 kV, temperature 20 ° C and sample injection for 5 seconds under the pressure of 34,5 mbar. Optimum background electrolyte (BGE) was 5 mM sodium tetraborate and 5 mM potassium dihydrogen phosphate containing 150 mM sodium dodecyl sulphate (SDS) as a surfactant and 10 % (v/v) of methanol. pH\* 8,2 was found to be optimal. Methylparaben (MP) was used as internal standard. The peaks of the drugs were satisfactorily separated from the peak of internal standard as well as from the EOF. The separation took less than 9 minutes and the overall analysis time involving appropriate rinsing of the capillary was less than 15 minutes. The calibration curves were linear in the range 0.375-9.0 mg/ml (PA), 0.3-7.2 mg/ml (AA) and 0.05-1.2 mg/ml (FE) . The correlation coefficients were from 0.9986 to 0.9998. The method is applicable for qualitative as well as quantitative assay of paracetamol, ascorbic acid and phenylephrine in pharmaceuticals of Coldrex® family, hot drink (RSD = 1.08 % - 2.94 %).