

Separation of four isomeric tropane alkaloids from *Schizanthus grahamii* by non-aqueous capillary electrophoresis

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The potential of non-aqueous capillary electrophoresis was investigated for the separation of four isomeric tropane alkaloids, namely 3^o-seneciolyoxy-7^o-hydroxytropane, 3^o-hydroxy-7^o-seneciolyoxytropane, 3^o-hydroxy-7^o-angeloyloxytropane and 3^o-hydroxy-7^o-tigloyloxytropane extracted from *Schizanthus grahamii*. The composition of the organic solvent and the nature of the electrolyte were of considerable importance with respect to selectivity. Different organic solvents (i.e. methanol, ethanol, acetonitrile, tetrahydrofuran) and mixtures thereof were investigated. Moreover, different electrolytes such as formate, acetate and trifluoroacetate were tested. After optimisation, an electrolyte consisting of 1 M trifluoroacetic acid and 25 mM ammonium trifluoroacetate in methanol:ethanol (40:60, v:v) was selected. It provided an efficient separation of the four positional isomers as well as a good repeatability of migration time (RSD < 0.2%). The method was successfully used with electrospray MS