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Optimization of Mobile Phase for Simultaneous Determination of Sweeteners, Preservatives and Dyes by UFLC

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Abstract : The mobile phase of phosphate buffer and methanol are one of the most commonly used motion phases in routine analysis. The composition and pH of the mobile phase of one of the compounds can not be used as an option for separation of the compound. Suitable mobile phase, both solvent type, composition and pH of the mobile phase are the factors that determine success in separation of the compound. The study was conducted to determine the composition and pH of the mobile phase in the development of a mixed separation method from food additives containing sodium saccharin, sodium cyclamate, sodium benzoate, potassium sorbate, tartrazine and sunset yellow. Research using high performance liquid chromatography, reversed phase with instrument: UFLC 1290 DAD (Agilent), C18 column 100 mm x 4.6 mm x 3.5 μm (Agilent). The results showed that pH and optimum mobile phase composition were 4.5 and 75: 25 (v / v). Parameter of optimization includes the capacity factor, plate number, resolution, selectivity and tailing factor meet the requirements of analysis.

Key words : UFLC, pH, Composition, Food Additives.

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