

## HPLC separation of bioactive components of anti-inflammatory syrup on stationary phases with embedded polar groups

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*For better separation of water-soluble biologically-active compounds by RP-HPLC in mobile phases with high content of water, new C18-type stationary phases with embedded polar groups (EPG-C18) were studied and the results were compared with those obtained on conventional C18 phases. Typical active ingredients of anti-inflammatory syrup, such as: paracetamol, phenylpropanolamine, caffeine and chlorpheniramine maleate were selected for investigation because of difficulties of their separation and also wide range of the polarity. It is demonstrated that complete HPLC separation of the components of the syrup cannot be achieved on any from studied C18 phases in 0.025M NaH<sub>2</sub>PO<sub>4</sub> (H<sub>2</sub>O/CH<sub>3</sub>CN=9/1) mobile phase with pH interval 2.5-7.0. Contrary complete separation of the components can be easily achieved on EPG-C18 column. Because of essential changing of the retention time of the components with pH it has been assumed that separation of the compounds on EPG-C18 column includes both dispersion and dipole-dipole interactions of the embedded groups with polar group of the analyts.*

**Keywords:** paracetamol, caffeine, phenylpropanolamine, chlorpheniramine, HPLC

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