

SFC and SFC-MS in drug analysis: Dream or reality?

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Supercritical fluid chromatography (SFC) is now fully competitive with current LC approaches thanks to the recent introduction of modern platforms and columns packed with sub-2- μm fully porous or sub-3 μm superficially porous particles, known as ultra-high performance supercritical fluid chromatography (UHPSFC). The applicability of the latter has been demonstrated through the analysis of various mixtures of compounds, including basic, acidic, neutral, hydrophilic and lipophilic molecules present in different matrices. Therefore, some authors called this technique: Unified Chromatography.

Successful coupling of UHPSFC with MS has also been described, but its use for the analysis of biological materials has been scarcely reported, while extended selectivity and sensitivity can be provided by MS detection and lower matrix effects are expected.

This lecture will report some applications of SFC and SFC-MS and also discuss the pros and cons of this technique in drug analysis.