

9.2.7.7 Supercritical-Fluid Extraction

Supercritical-fluid extraction (SFE)

Extraction of a material using a supercritical fluid. The extracted material is usually recovered by reducing the temperature or pressure of the extraction fluid and allowing the volatile components of the mobile phase to evaporate. Instrumentally supercritical-fluid extraction can use many of the components of a supercritical-fluid chromatographic system. It can be used either as an on-line sample introduction method for a chromatographic separation or as an off-line sample preparation method.

Coupled supercritical-fluid extraction-supercritical-fluid chromatography (SFE-SFC)

System in which a sample is extracted with a supercritical-fluid which then places the extracted material in the inlet port of a supercritical-fluid-chromatographic system. The extract is then chromatographed directly using a supercritical fluid.

Coupled supercritical-fluid extraction-gas chromatography (SFE-GC) and Coupled supercritical-fluid chromatography-liquid chromatography (SFE-LC)

System in which a sample is extracted using a supercritical fluid which is then depressurised to deposit the extracted material in the inlet port or column of a gas or liquid chromatographic system, respectively. The extract is then chromatographed directly.