Application of Supercritical Fluid Technique in Food and Pharmaceuticals

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Abstract

The use of bioactive compounds in different commercial sectors such as pharmaceutical, food and chemical industries signifies the need of the most appropriate and standard method to extract these active components from plant materials. From environmental and commercial points of view, the most appropriate technique has been searched for extracting bioactive compounds from plant matrices. As a green technology, supercritical fluid extraction (SFE) using carbon dioxide (CO_2) is widely used to extract bioactive compounds from different plant matrices. Several studies have been performed to extract bioactive compounds using supercritical CO_2 and this technology has clearly offered potential advantages over conventional extraction methods. However, the efficiency of SFE technology fully relies on the processing parameters, chemistry of interest compounds, nature of the plant matrices and expertise of handling. This presentation covers SFE technology with particular reference to bioactive compounds extraction using SC-CO_2.