Dr. Mozaniel S. de Oliveira,

Federal University of Pará, ITEC, Federal University of Pará, C. P. 479, 66075-110 Belém, PA, Brazil.

TITLE: GREEN SOLVENTS, THE USE OF SUPERCRITICAL CO2 TO OBTAIN HIGH ADDED VALUE SECONDARY METABOLITES.

Abstract

Extraction with supercritical fluid is the combination of a set of unit operations, this extraction technique may represent an alternative to conventional methods, since it does not use organic solvents during the separation process, in the literature it is known as green extraction, and Depending on the parameters used during the extraction we may have a selectivity in the separation of high added value bioactive compounds, natural substances may represent a viable alternative in the search for new medicines and have various industrial applications such as in the food, cosmetic and pharmaceutical industries. Extraction with supercritical CO_2 allows different classes of low polarity compounds to be obtained as fatty acids present in fixed oils and terpenoids present in essential oils, however, for the extraction of higher polarity compounds the use of co-solvent such as ethanol or water can assist at best solvation power, thus allowing a better extraction of substances such as phenolic compounds, among them the anthocyanins that have high market value and various biological activities. In this sense will be addressed the main aspects in supercritical fluids and their process parameters in obtaining secondary metabolites of high added value.