

Typical Characteristics and Compositions of Solvent System in Application of Maceration Technology to Isolate Antioxidative Activated Extract of Natural Products

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Abstract : Increasing interest of society in use and creation of herbal medicines has encouraged scientists/researchers to establish an ideal method to produce the best quality and quantity of pharmaceutical extracts. To have highest the antioxidative extracts, the method used must be at optimum conditions. Hence, the best method is not only able to provide highest quantity and quality of the isolated pharmaceutical extracts but also it has to be easy to do, simple, fast, and cheap. The characterization of solvents in maceration technique, in present study, involved various variables influencing quantity and quality of the pharmaceutical extracts, such as solvent's optimum acidity-alkalinity (pH), temperature, concentration, and contact time. The shifting polarity of the solvent by combinations of water with ethanol (70:30) and (50:50) were also performed to completely record the best solvent system in application of maceration technology. Among those three solvents threated within *Myrmecodia pendens*, as a model of natural product, the results showed that water solvent system with conditions of alkalinity pH, optimum temperature, concentration, and contact time, is the best system to perform the maceration in order to have the highest isolated antioxidative activated extracts. The optimum conditions of the water solvent are at the alkalinity pH 9 up, 30 mg/mL of concentration, 40 min of contact time, 100 °C of temperature, and no ethanol used to replace parts of the water solvent. The present study strongly recommended the best conditions of solvent system to isolate the pharmaceutical extracts of natural products in application of the maceration technology.

Keywords : extracts, herbal medicine, natural product, maceration technique

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