

Title:

The Importance of solvent flow rate on the extraction of Andrographolide

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Abstract:

Andrographis paniculata NEES has been extensively used in traditional medicine and helps against fever, dysentery, diarrhoea, inflammation, and sore throat. Andrographolide, the main component of this plant was extracted from the leaves with supercritical carbon dioxide extractor at 40 °C and 100 bar. The effect of supercritical solvent flow rate (ranging from 0.5 to 4 mL/min) on the extract yield and selectivity was studied. The extract yield increased with solvent flow rate. However further increase of solvent flow rate decreased the total yield. This may due to intraparticle diffusion resistance effect in the extraction process. The optimum solvent flow rate was 2mL/min.

Keywords:

andrographolide; CO₂ extractor, flow rate; supercritical fluid extraction; yield