

ABSTRACTS FOR POSTER PRESENTATION

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Influence Of Processing Parameters On The Yield And 6-Gingerol Content Of Zingiber Officinale Extract

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Abstract

Ginger (*Zingiber officinale*) belongs to the *Zingiberaceae* family. It's rhizomes and the obtained extracts contain polyphenol compound (6-gingerol and its derivatives), which have a high antioxidant and antimicrobial activities. The aim of this study is to optimize the processing parameters for the extraction of ginger essential oil using hydrodistillation method. Optimization of processing parameters, namely the effect of extraction time, solid to solvent ratio and drying temperature for the extraction of ginger essential oil and 6-gingerol content. The essential oil produced through hydrodistillation extraction method were analyzed for 6-gingerol content by using High Performance Liquid Chromatography (HPLC). As a result, the optimum condition were extraction time of 90 minutes, a solid-to-solvent ratio of 1:20 and a sample drying temperature of 50 °C. This optimum condition was finalized based on its maximum yield and 6-gingerol content from ginger extraction which were 7.02 % (w/w) and 35.3404 mg/L, respectively. It can be concluded that the hydrodistillation method is an effective method in the essential oil production industry.

Keywords: *Zingiber Officinale*, hydrodistillation, 6-gingerol, essential oil, processing parameter.