

Aplikasi Teknologi Ekstraksi Fluida Superkritis (*Supercritical Fluid Extraction*) untuk menghasilkan Minyak Sawit Merah Kaya Beta Karoten

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ABSTRAK

The properties of β -carotene that is unstable from heat and light make it necessary to conduct the research in supercritical fluid extraction for produce palm oil with high β -carotene. The aim of this research was to study the application of supercritical fluid extraction in supercritical fluid extraction to produce palm oil with high content of β -carotene. Fresh palm fruit was extracted by supercritical carbon dioxide at 3500, 4000, 4500 psi and 35, 40, 45 °C during 4 hours. The pressure of 4500 psi at 40 °C has successfully extracted the oil in the largest ratio of yield-consumption of CO₂ the pressure of 4500 psi at 40 °C was given by treatment during 4 to 7 hours extraction. The interval time at 5 hours has successfully extracted the oil in the largest yield with effectiveness 69.26% and carotenoid increment until 458.94 ppm. In this condition, the β -carotene content was 464.097 ppm. It means that 91.52% β -carotene can be extracted from mesocarp.

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