

Extraction of Rice Using Supercritical CO₂

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Compared to the polished rice, brown rice is full of fat, protein, vitamin B₁, and vitamin B₂ because there's no loss of nourishment by refinement. Brown rice, however, is not good in taste, and seriously difficult to be made stinned rice. The crucial reason is that oil exist mainly on the surface of the rice, this creates hydrophobic surface so it disturb water to permeate into oil layer. Therefore, it is difficult to spread in a public. If rice oil on the surface is extracted, hydrophobic surface becomes hydrophilic surface and it makes easier to spread water into brown rice kernel. The purpose of this work is the elimination of rice oil on the surface by extraction using supercritical CO₂ solvent. Experiments at various temperature, pressure, and flow rate were conducted and comparative analysis about water adsorption rate of original brown rice sample and extracted brown rice sample was performed.