

Enhanced physical stability of rice bran oil-in-water emulsion by heat and alkaline treated proteins from rice bran and soybean / Rodjana Noptana, Ekasit Onsaard

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Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20489082&lokasi=lokal>

Abstrak

ABSTRAK

The aim of this work was to improve physical stability of rice bran oil-in-water emulsion by heat and alkaline treated proteins from rice bran and soybean. Rice bran protein (RBP) was extracted from defatted rice bran by alkaline extraction and isoelectric precipitation. RBP and soy protein (SP) were modified by heat and alkaline treatment (pH 9 at 60 C for 60 min). The ability of modified rice bran protein (MRBP) and modified soy bean protein (MSP) to stabilize rice bran-oil-in-water emulsion was investigated. Results showed that the MRBP and MSP to form and stabilize oil-in-water emulsions were better than those of RBP and SP. Emulsions with small particle sizes diameter and creaming stability could be produced at pH 6.5 for 0.4-1.0 % wt MRBP and 0.6-1.0 % wt MSP. Improved physical stability of rice bran oil-in-water emulsion by heat and alkaline treated will enhance the utilization RBP and SP as food ingredient in the food industry.