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Optimization of solid-liquid extraction of -oryzanol from rice bran oil soapstock using soxhlet extraction method / Kanitta Wangdee, Ekasit Onsaard

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Abstrak

ABSTRAK
Rice bran oil soapstock (RBOS) is a by-product from the chemical refining process of rice bran oil production. It contains a large amount of -oryzanol. The main objective of this study was to investigate the amount of -oryzanol obtained by solvent extraction using soxhlet apparatus. RBOS was saponified and was then dehydrated and extracted with ethyl acetate. The optimum conditions were determined using response surface methodology (RSM) with a Box-Behnken experimental design (BBD). BBD was used to investigate the effects of three independent variables, namely solid to solvent ratio (w/v), extraction temperature (C), and extraction time (h). The results showed that the most suitable conditions for the extraction of RBOS that can provide the highest yield of -oryzanol (9.04% dry basis) were 1:12 solid to solvent ratio, 70.1C extraction temperature and 7.26 h extraction time.