



COMPARISON OF SUPERCRITICAL FLUID AND SOLVENT EXTRACTION METHODS IN EXTRACTING BIOACTIVE COMPOUNDS AND MINOR COMPONENTS OF RICE BRAN OIL

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ABSTRACT

(Comparing supercritical fluid and Soxhlet extraction systems (SFE and SE) for concentrating bioactive components of rice bran oil was studied. SFE was utilized to fractionate high oryzanol (HO) and low oryzanol (LO) RBOs. The tocopherols, tocotrienols, oryzanols and ferulic acid were measured utilizing HPLC, while, phytosterols and fatty acids were quantified utilizing GC. The results demonstrated there was a significant difference ($p < 0.05$) in unsaponifiable of HO compared with LO and Soxhlet oils. In neutral lipids and phospholipids classes, there were no significant differences ($p < 0.05$) between the three oils. On the other hand, in glycolipids class, there was a noteworthy distinction in oil concentrated utilizing Soxhlet compared with SFE technique. There were distinctive concentrations of tocopherols, tocotrienols, and oryzanols separated by the two methods. Oryzanol in RBO demonstrated a significant difference ($p < 0.05$) between diverse fractions of RBOs. Consequently, extraction by SFE impacted the sum, composition, and antioxidant of lipid in RBOs.)
