

By-Products from rice bran oil processing as rich source of Functional Ingredients

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Abstract

Rice bran oil (RBO) has become a popular oil globally due to its outstanding nutrient and bioactive components. RBO processing are generally divided into solvents and cold-press extraction systems and we found that the rice bran oil processes not only provide high qualities oil products but also give high value by-products. Both RBO process systems leave various types of waste containing various bioactive substances of varying potency in health promotion include γ – aminobutyric acid, γ-oryzanol, phytosterol, tocopherol, tocotrienol, policosanols, tricin, lecithin, and choline. Based on 640,000 tons of defatted rice bran discarded from 14 companies of RBO production in Thailand, total amount of bioactive compounds (γ-aminobutyric acid, γ-oryzanol, phytosterol, tocopherol, tocotrienol, policosanols) remained in defatted rice bran, which is only one type of many types of by-products left from RBO processes, is estimated around 3,200 tons per year. Consequently, these waste products play crucial role in the functional ingredient manufactures. Use of new technology with reasonable cost for extracting and purifying these bioactive components is the opportunities for the market of functional food, dietary supplements, pharmaceutical manufactures.

Biography

Dr. Monthana Weerawatanakorn has completed his PhD in Food Science by Rutgers, the State University of New Jersey, USA. She has worked as assistant professor of Agro-industry at Naresuan University Phitsanulok, Thailand. She has worked with rice bran oil and sugar companies.

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