

## Antioxidant Activity of Hydrophilic Extract Prepared from Defatted Rice Bran var. *Menthikwangi*

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### ABSTRACT

This research was aimed to measure antioxidant property of hydrophilic component extracted from defatted rice bran (DRB) of Menthikwangi local variety. The initial stage of the research was production of DRB by selected method of defatting and stabilization of rice bran. Defatting was carried out by maceration with material and solvent ratio of 1:4 (w/v), varied in washing methods of without-washing (WW) and washing with two kinds of material and solvent ratio of 1:2 w/v ( $WS_{1:2}$ ) and 1:4 w/v ( $WS_{1:4}$ ) to produce DRB with lowest fat content. Then, the selected methods used to produce DRB using various stabilization methods, which were without-stabilization (WS), microwave (MW) and oven (OV). The effectiveness of DRB's stabilization measured after 144 hours (35°C) storage and extracted to get hydrophilic content extraction. Antioxidant activity of DRB hydrophilic extract was analyzed using radical DPPH (2,2-diphenyl-1-picrylhydrazyl) scavenging method. The results showed that  $WS_{1:4}$  has been selected as defatting method, while the effectiveness of stabilization both microwave (MW) and without stabilization (WS) method was not different. The highest antioxidant activity of 43.30% RSA (radical scavenging activity) was obtained from DRB hydrophilic extract without stabilization (WS).

**Keywords:** antioxidant, defatted rice bran (DRB), defatting, hydrophilic extract, stabilization

### INTRODUCTION

Rice bran was a major by-product obtained from the polishing process that produces white rice. After extraction of the edible oil, defatted rice bran was used to reduce the final cost in animal feeds or was discarded as