

**EFFECT OF WHEAT BRAN OF REDUCED PHYTIC ACID  
CONTENT WITH HYDROTHERMAL TREATMENTS  
ON THE QUALITY OF COOKIES**

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Wheat bran is known to be a useful fiber source that has the effect on reducing the risk of coronary heart diseases and some types of cancer, especially colon cancer, because of its high content of phenolic and antioxidants. It has regulatory effects on the serum cholesterol, glucose and lipid metabolism and also preventive effects on digestive system diseases. However, wheat bran contains high amount of phytic acid which forms insoluble complexes with some of the essential minerals, such as Fe, Zn, Cu, Mg, and leads to important nutrition issues by interacting with proteins and some enzymes, and these restrict the benefit of bran. The aim of this study was to hydrolyze phytic acid in wheat bran and to obtain a valuable fiber source that can be used in biscuit formula. As a result of hydrothermal treatments phytic acid ratio of bran was reduced by up to 94.3%. The effects of increased levels of dephytinized bran addition (0%, 7%, 14%, 21%) on the physical, textural and sensory properties of cookie were investigated. It was seen that spread ratio and width decreased but thickness of samples increased with increase in the bran level. Depending on the addition level of bran 'L' and 'b' values of samples decreased, but 'a' value increased. Hardness value of the samples decreased with the increase in the bran level. As a result of sensory evaluation, it was observed that as the bran ratio increased color has darkened, rough crust was formed and overall acceptability value decreased.

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