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B-GLUCAN (BETA-GLUCAN) CONTENT OF SOME COMMERCIAL CEREAL VARIETIES

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β-Glucan defined as an non-digestible, non-starch polysaccharide of D-glucose monomers linked by β-glycosidic bonds is one of the most important dietary fiber recognized by the European Food Safety Authority (EFSA) to be able to reduce a disease risk. They occur most commonly as cellulose in plants, the bran of cereal grains, the cell wall of baker's yeast, certain fungi, mushrooms and bacteria. Grain β-glucans found mostly in oats and barley consists of β-(1→4) and β-(1→3) glycosidic bonds. β-(1,3) (1,4)-glucan is also classified as a water-soluble dietary fiber. Consumption of β-glucan in terms of human health is reported to reduce the risk of cardiovascular diseases, lower cholesterol and obesity; to regulate the glucose level and to provide positive effects on the skin. Cereal β-glucan is commonly used in food and beverage products as soluble fiber. It can be used in the food industry to change the texture and appearance of foods and low-calorie foods as a thickening agent and as fat substitutes. Because it is important to know the amount of β-glucan in commercial cereal products; in this study some commercial cereal products were analysed for their β-glucan contents by using enzymatic-spectrophotometric method. β-glucan content of oatmeals were varied from 0.59 g/100 g to 3.97 g/100 g (db) in oatmeal samples which were higher than oat bran mix. β-glucan content of wheat products had rates of 0.97, 0.84, 0.50 and 0.08 g/100 g (db) in order of wheat germ, wheat flour with bran, whole wheat flour and wheat flour respectively. β-glucan content of wheat and rice flakes was similar to that of whole wheat flour.

Keywords: β-glucan, cereal, commercial products

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