

ENZYME RESISTANT STARCH

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Starch is the most important polysaccharide and source of carbohydrates for human diet. In general, digestible starch is fractionated by α -amylase, glucoamylase and sucrose as hydrolysed. Moreover, starch can be absorbed by the small intestine in order to obtain the free glucose. However, whole starch isn't digested and absorbed in the small intestine. Enzyme resistant starch (ERS) is defined as the sum of starch that couldn't absorb in the small intestine of healthy individuals and starch degradation products. ERS is divided into 4 groups in terms of physical and chemical properties including ERS1, ERS2, ERS3 and ERS4. While ERS1 and ERS2 are digestible in accordance with the processing of foods, ERS3 is resist to digestion and so it is attracting the attention of researchers. The use of ERS advantages is; its naturalness, sweet and white colour, affects the minimum extent to product texture and normal particle size. ERS has physicochemical properties such as pasting, viscosity increase, gel formation and water-binding capacity and is possible to use in the most of the foods. ERS feature to inaccessible properties with high-fibre foods when added to the foods. Also ERS is a functional food ingredient because of reduce of food calorie and can be used in manufactured products for people with celiac disease due to the laxative effect. In this study the bioavailability of the starch and a new interest in the use of ERS-forming concept as a source of dietary fibre, health effects and use in the food industry have been discussed.

Keywords: Enzyme resistant starch, hydrolyse, polysaccharide, carbohydrates, dietary fibre

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