IN VITRO RESEARCHING THE DIGESTIBILITY OF CARBOHYDRATES OF NON-PROTEIN BREAD

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Consumer properties of product except the organoleptic and physico-chemical quality indexes, defined by its nutritional value and physiological effect on the human body. Carbohydrates are main components of the new non-protein bread. And it was interesting to investigate their digestibility. The research were conducted in the conditions of in vitro. This method approximately reproduce the conditions of carbohydrate digestion in humans. For research was used the preparation “Pancreatin” with enzymatic activity of lipase 8000 MO FIP, amylase 5600 MO FIP, protease 370 MO FIP.

Different types of starches are different by degree of digestibility and therefore it realizes any carbohydrate load on the human body. Researches of digestibility the carbohydrates of non-protein bread, which was made on the base of corn starch, was conducted in comparison with the digestibility the carbohydrates of bread, which was made on the base of wheat flour. It was founded that carbohydrates of non-protein bread are digested more slowly than carbohydrates of bread on the base of wheat flour. The amount of reducing sugars, which was accumulated as a result of non-protein bread hydrolysis are almost two times less than the amount of reducing sugars, which was accumulated as a result of wheat bread hydrolysis. This is positive factor in non-protein diet because the carbohydrate load on the body was reduced. And for the producing of non-protein bread it’s expedient to use exactly corn starch but not wheat starch.

Keywords: non-protein bread, carbohydrates, digestibility, in vitro.