

BOOK OF ABSTRACTS



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THE INFLUENCE OF WATER TEMPERATURE ON THE SOAKING OF BUCKWHEAT

Gluten enteropathy is a serious disease associated with indigestion. The absence or lack of the enzyme that hydrolyzes *gluten* can cause this disease. The treatment of this disease requires a strict diet: all food products with gluten should be excluded from the nutrition for life.

It is considered that gluten-free products should have no more than 20 mg of *gluten* per 1 kg of finished product, which include products from rice, buckwheat, corn and sorghum.

The aim of this study was to explore the influence of water temperature on (he process of soaking of buckwheat.

Buckwheat is a promising raw material for the production of malt and for the production of food products with lower gluten content. At the *begmmag* of the study different varieties of buckwheat were analyzed and physicochemical indicators were determined as well.

Today in Ukraine the most common varieties of buckwheat are: Krupynka, Viktoriia, *Glorm*_t Kyivska, Ukrainka. Further studies were carried out only with one variety of buckwheat — Krupynka, grains of which were from different crop's years: the content of starch was 64 ... 67%, the content of protein almost not changed — 11.2 ... 11.5%, germination capacity — 93... 95%.

The research of process was conducted in the laboratory, temperature of water was 14, 16, 18° C, the air-water method with different duration of water and air breaks was used: 4 ... 4 hours, 4 — 6 hours and 6 ... 4 hours (respectively: soaking and air break), buckwheat was soaked for 48... 62 hours.

During the soaking the humidity of buckwheat was determined every 8 hours with the help of Chizhov's method.

The results are showed that the optimum temperature for soaking is 16° C and the optimum mode ofsoakingis4 ... 6 (4 hours under water and 6 hours of air break).

KEY WORDS: gluten, buckwheat, soaking, humidity, temperature