

**INTERNATIONAL
CONFERENCE FOR STUDENTS
“STUDENT IN BUCOVINA”
December, 18th, 2020**

**STUDENT IN BUCOVINA
ABSTRACTS**

Organized by:
*Faculty of Food Engineering,
Stefan cel Mare University of Suceava, Romania*

ISSN 2068 – 7648

INFLUENCE OF BUCKWHEAT MALT ON BEER PROPERTIES

Student: Anastasiia PARKHOMENKO,
Coordinating Professor: Associate prof. Ph. D. Roman MUKOID
*Faculty of Biotechnology of Fermentation and Winemaking
Products, National University of Food Technologies, Ukraine*

Abstract:

The prospects of using buckwheat malt for the production of low-gluten beer are shown.

Gluten is absent in such cereals as buckwheat and rice, and in other cereals the amount of gluten is: corn 80 ppm, barley 151 ppm, wheat 162 ppm. Therefore, for the preparation of low-gluten beer buckwheat malt and barley malt are recommended.

The sample with the replacement of 5% barley malt on buckwheat malt has the highest content of reducing substances, namely 91.0 g per 100 g of extract and amine nitrogen 167.1 mg per 100 g of extract, the content of ethyl alcohol in the finished beer 3.5% by weight at mass fraction of the actual extract of 4.83% by mass.

As the amount of buckwheat malt increases, the amount of reducing substances and amine nitrogen decreases due to the insufficient amount of hydrolytic enzymes in barley malt, under the action of which the above substances are formed. Thus, in the sample with the replacement of 5% barley malt by buckwheat malt, the content of reducing substances was 92 g per 100 g of extract, and the content of amine nitrogen was 168 mg per 100 g of extract. Whereas in the sample with a substitution of 15% barley malt, these figures are 82 g per 100 g of extract and 91 g per 100 g of extract, respectively.

The best crop for the production of low-gluten beer is buckwheat malt in a ratio of 95:5.

Key words: *barley, beer, buckwheat, gluten, malt, wort.*