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Effect Of Ozonation On Malting Potential Of Indian Wheat Varieties

ABSTRACT:

The present research was conducted to study the effect of ozonation on the malting behavior of six Indian wheat varieties. The wheat grains were subjected to **ultrasonication** for 2, 4, 6 and 8 minutes before steeping and then the grains were germinated for 24hrs. Malting was performed by drying the grains at 50°C overnight and then the flour was prepared for further analysis. The treated flours and the non-treated flours were analyzed for physico-chemical properties (protein, ash, color), functional properties (water and oil absorption capacity, solvent retention capacity), pasting properties, dynamic rheology, total phenolic and flavonoid content, amino acid analysis and total sugar content. **Ozonation treatment** enhanced germination and decreased the germination time. An increase in protein content of wheat with germination was observed which was attributed to synthesis of new protein. An increase in total phenolic content and total flavonoid content was observed. Also, the antioxidant capacity of the grain was improved. The amino acids profile of the wheat varieties was enhanced after germination. The treatment also increased the sugar content of the grains. This study showed that ozonation induction treatment significantly increased germination rate and helps in improving the quality of the malted wheat flour.

Biography

Tamanna Awasthi, is a PhD student of the department of food science and technology, **Guru Nanak Dev University, India**. She is working under the guidance of eminent professor, Dr. Narpinder Singh. Her area of specialization is cereal grains and their chemistry. She has published two research articles. She has completed her graduation from **Panjab University, India** and her masters from **Guru Nanak Dev University, India**.

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