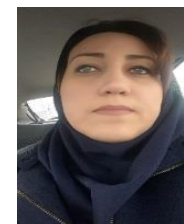


Survey on production of protein and fiber enriched flat bread by using of lentil flour

Solmaz Saremnezhad¹, Rozhina Tamannaefifar² and Rojin Tafaghodi³

Islamic Azad University, Iran



Abstract

The aim of this study was investigating the effect of partial substitution of wheat flour by lentil as a good source of protein and fiber, on dough rheology and physicochemical properties of flat bread (Sangak). In this regard, wheat flour was replaced by lentil flour in 5, 15 and 25% (w/w) and the doughs rheology and quality attributes of breads were determined. According to the results, dough development time, stability, resistance to extension, and extensibility were decreased due to presence of lentil flour in farino and extensography tests. Protein, ash and fiber contents of samples increased significantly ($p < 0.05$) compared to control bread. Texture analysis of breads immediately after baking, 24 and 48h later indicated on harder texture of bread with 25% lentil flour. Breads with 15 and 5% lentil didn't have any significant differences during three days of storage ($p > 0.05$). Color evaluation showed increasing of b^* by increasing the percent of wheat flour replacement which wasn't significant in 15 and 25% lentil breads ($p > 0.05$). In sensorial analysis, most of the panelists selected 15% lentil containing bread as their first preference for consumption. Regarding to the results, bread with 15% lentil was chosen as the best sample and its amino acid profile was compared with control bread. Lysine, as an essential amino acid had 11.767% higher concentration in 15% lentil bread than that of control sample. In conclusion, replacing 15% of wheat by lentil flour can be suggested for production of a nutritious flat bread with superior nutritional properties.

at the Azad University of Tehran. She received her Ph.D. in Food Science and Technology from the University of Tarbiat Modares. She is working as a researcher and teacher at the University. Her research areas are Nutraceuticals, functional foods with an emphasis on cereal-based products and Modern technologies to improve the functionality of food ingredients.

Speaker Publications:

1. "Calcium fortification of prebiotic icecream"
2. "The influence of bath and probe sonication on the physicochemical and microstructural properties of wheat starch"
3. "Gamma-aminobutyric acid, phenolics and antioxidant capacity of germinated indica paddy rice as affected by low-pressure plasma treatment"
4. "Properties of a new edible film made of faba bean protein isolate"
5. "The effect of ultrasound treatment on some properties of methylcellulose films"

[3rd International Conference on Food Safety and Health;](#)
Webinar- June 09-10, 2020.

Abstract Citation:

Solmaz Saremnezhad, Survey on production of protein and fiber enriched flat bread by using of lentil flour, Food Safety Meet 2020, 3rd International Conference on Food Safety and Health; Webinar- June 09-10, 2020
<https://foodsafety.nutritionalconference.com/2020>



Biography:

Dr. Solmaz Saremnezhad is an Assistant Professor of Food Technology at the Department of Food Science and Technology