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Determination of Quality Characteristics of Cracked Wheat (Dövme) Obtained From Different Wheat Verieties

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Abstract

Cracked wheat is a traditional cereal product obtained from wheat grains that have been soaked and hulled. It holds a significant place in Anatolian cuisine and is particularly used in dishes such as keşkek, soups, pilafs, and salads. Due to its content of B vitamins, iron, and protein, it is considered a nutritious food source. This study aims to determine the quality characteristics of cracked wheat produced from different wheat varieties. Initially, the study focuses on identifying the quality parameters of cracked wheat. Additionally, another objective is to determine the wheat varieties most suitable for cracked wheat production. In the literature, there are numerous studies on raw material quality for various wheat-based products. However, there is a lack of detailed research on the quality characteristics of cracked wheat, which is widely used in Turkey, and on the raw material properties suitable for its production. Therefore, this study aims to contribute to the literature by providing research findings on cracked wheat production. In the study, different wheat varieties named Zivago, Bayraktar-2000, and Cumhuriyet-75 were used. These wheat varieties were processed into cracked wheat using traditional methods in a local mill. Various analyses were conducted on both the raw wheat and the obtained cracked wheat. The analyses performed on the wheat included moisture, ash, protein, total fat, hectoliter weight, thousand kernel weight, hardness, and color measurements. Meanwhile, the analyses conducted on the cracked wheat included color, hardness, cooking time, dry matter loss during cooking, starch release into water, bulk density, and sensory evaluations. Processing the wheat into cracked wheat resulted in a moisture increase of 1-4% across all varieties. For cracked wheat obtained from hard wheat, an increase in L* and b* values and a decrease in a* value were observed. Conversely, cracked wheat obtained from soft wheat exhibited a decrease in L*, a*, and b* values. According to cooking time analysis results, cracked wheat from hard wheat varieties cooked faster than those from soft wheat varieties. The dry matter loss in cracked wheat derived from hard wheat was found to be higher than that from soft wheat. The dry matter loss during cooking followed the order Bayraktar-2000 > Cumhuriyet-75 > Zivago. Finally, sensory evaluation results indicated that the Zivago variety received the highest scores in the taste parameter, Bayraktar-2000 was rated highest in external appearance, and Zivago again received the highest scores in overall acceptance. The cracked wheat sample from the Cumhuriyet-75 variety received the lowest scores in sensory tests.

Key Words: *Wheat, Cracked wheat (dovme), Hard wheat, Soft wheat, Cracked wheat (dovme) quality*

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