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Determination of the nutritional composition of instant jackfruit bulbs

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Background: Jackfruit (*Artocarpus heterophyllus*) is a tropical Asian tree which is called the miracle for the vegan sensation. To fulfill the gap between the utilization and the wastage of jackfruit, a range of processed jackfruit products were prepared in a convenient way for consumers.

Objective: To identify the nutritional composition concerning moisture, fat, and ash of the jackfruit bulbs after freezing and dehydration treatments, and to improve the sensory qualities by incorporating hot water extract of *Trachyspermum ammi* leaves.

Method: Raw jackfruit bulbs were cut into 4.5 cm±0.5 cm length and 0.5 cm±0.3 cm width pieces and was pre-cooked and cooled immediately to prevent overcooking. Then the preparation was frozen for 12 hours in the freezer and thawed for 15 minutes. Finally, the preparation was dried in a dehydrator for 12 hours at 60 °C. Sensory analysis was conducted with four treatments using five point hedonic scale.

Results: The controls, frozen without adding *Trachyspermum ammi* extract, *Trachyspermum ammi* extract added non-frozen and *Trachyspermum ammi* extract added frozen treatments obtained the appearance values as 2.45, 2.95, 2.35, 2.24, texture values as 2.34, 2.81, 2.45, 2.40, odor values as 2.53, 2.44, 2.56, 2.47, taste value as 2.56, 2.55, 2.50, 2.39, and overall acceptance as 2.56, 2.74, 2.35, 2.34 respectively. According to the results the best treatment was the frozen without adding the *Trachyspermum ammi* extract treatment. The moisture and ash content of the best sensory treatment was determined according to the AOAC procedures and values were obtained as 8.08±0.28 %, 0.88±0.01% respectively. The fat content was 0.31±0.03%.

Conclusion: According to the results of the study, frozen without adding the *Trachyspermum ammi* extract treatment was the best treatment with regard to the sensory qualities and minimum changes in fat and ash content.