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Determination of the Mineral Composition of Turkish Tahini Halva

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Introduction

Halva is a famous traditional dessert that is widely consumed in the Balkans, Middle East and Northern Africa. Depending on the ingredients used during processing there are a number of halva types, such as tahini halva, peanut halva, met halva, koz halva, etc., but the main type is tahini halva. The term 'halva' is mainly used for a product prepared with sesame seed paste (called tahini) and sugar syrup mixed with some other ingredients such as flour, semolina, nuts and / or cocoa powder. The main ingredients of tahini halva are tahini, sugar, hydrogenated vegetable oil, citric acid and soapwort extract. In the present study, the mineral composition of industrially produced tahini halva samples was investigated.

Materials and Methods

Materials: Tahini halva samples from 5 different producers were collected from supermarkets in Canakkale, Turkey..

Mineral analysis: The halva samples were first wet-digested with HNO₃ / HCl (2:1) within a microwave oven. Then, the mineral contents of the digested samples were determined via an inductively coupled plasma - optical emission spectrometer (ICP-OES). The results were presented as mean ± standard deviation.

Results

Table 1. Mineral composition of tahini halva*

Minerals	1	2	3	4	5
Ca (mg/100 g halva)	154.07±0.40	194.30±1.66	97.03±0.67	210.40±1.30	285.40±4.71
P (mg/100 g halva)	568.20±11.33	700.27±5.84	589.70±4.84	604.50±5.01	667.23±1.76
K (mg/100 g halva)	253.03±3.67	281.70±4.23	236.37±3.52	289.07±4.76	274.20±4.50
Na (mg/100 g halva)	118.27±1.14	280.40±1.21	431.87±4.47	207.23±5.52	165.10±3.96
Mg (mg/100 g halva)	254.00±4.50	315.70±3.21	270.50±2.35	282.93±3.72	315.67±9.83
Cu (mg/100 g halva)	1.30±0.02	1.48±0.02	1.39±0.02	1.28±0.03	1.58±0.03
Fe (mg/100 g halva)	5.49±0.05	7.23±0.03	5.48±0.01	5.37±0.03	5.73±0.07
Zn (mg/100 g halva)	4.01±0.01	4.45±0.05	4.37±0.05	4.21±0.01	5.48±0.06
Co (mg/100 g halva)	0.05±0.02	0.08±0.03	0.06±0.02	0.07±0.03	0.04±0.04
Cd (µg/100 g halva)	Nd	Nd	Nd	Nd	Nd
Ni (µg/100 g halva)	Nd	Nd	Nd	Nd	Nd
Mn (µg/100 g halva)	1.78±0.01	1.66±0.01	1.72±0.01	1.68±0.02	2.08±0.02
Cr (µg/100 g halva)	0.03±0.02	0.01±0.01	Nd	Nd	Nd

*The values are given as mean ± standard deviation (n=3).



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