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Carrot (Daucus carota L.) is a vegetable species of Apiaceae family grown primarily because of thickened root rich in nutrients, mostly orange coloured.

Diet rich in processed food acidify a human body that, in optimal conditions, should be of a **neutral pH**. Many nutritionists recommend carrot juice as a valuable dietary supplement because it is rich in alkaline elements that alkalize human **blood** and maintain it at **pH 7-8**, which helps the human health.

Carrot is rich in sugars, compared to other vegetable species, but does not contribute to blood sugar increase in humans because of its low glycemic index. The glycemic index (GI) is a scale for determining the rate of elevation of human blood glucose levels after consuming a particular food. The scale is ranked from 0 to 100. Gl of fresh carrots is 30.

MATERIAL AND METHODS

THE AIM

The aim of this research was to determine and evaluate the pH and sugar content of carrot juice from different sales channels (supermarkets, markets, organic stores).



cd

7,77

Carrot (Dacus carota L.) Samples in triplicate in the city of Zagreb were collected Sampling date 5th Dec 2017 Sampling sites: **5 different supermarkets (SM) 5 different markets (M) 5 different organic stores (OS)** Carrot juice was extracted pH was determined by pH-meter Sugar content was determined by refractometer (% Brix) Statistical data analyses: SAS 8.2 System



pH and sugar content (% Brix) in carrot juice according to different authors

Carrot juice pH

Carrot juice sugar content (%Brix)

7,0

6,5

6,0

5,5

5,0

7,5

7,01 bc

6,79



	Carrot juice	
	рН	% Brix
Reiter et al., 2003	5.6	
Klirca et al., 2006	6.0	
Kirca et al., 2007	6.0	
Brunton et al., 2014	6.13	
Adiamo et al., 2017	6.37-6.42	
da Silva et al., 2007	6.01-6.14	8.45-9.61
Demir et al., 2007	6.12	8.20
Rayman et al., 2011	6.29	8.75
Nadulski et al., 2015	6.49-6.53	8.24-8.30
Sharma, 2016		8.24-8.30
Holley et al., 2000		7.0-10.5

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Average carrot juice sugar content (%Brix) by sales channels





Average carrot juice pH by sales channels



Carrot juice pH varied from 6.17 to 7.02

Average pH:

supermarket 6.69; market 6.65; organic shop 6.55 high pH was determined has beneficial effect to human body by alkalizing the blood

Carrot juice sugar content (% Brix) varied significantly from 6.47 to 10.13 Average sugar content: supermarket 7.43 % Brix; market 7.95 % Brix; organic shop 8.54 % Brix

(statisticaly the highest)