



# ORANGES AS FRUIT AND AS JUICE

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## Objectives

Vegetables and fruit should form the basis of everyday diet. In some countries one of five recommended daily portions of vegetables and fruit can be a glass (200 ml) of juice. The aim of the study was to analyse the composition of orange juice from concentrate and compare it with the content of selected nutrients in oranges.

## Methodology

The study material were orange juices from concentrate, commercially available in Poland. The study was carried out in 2010-2018 at the Institute of Agriculture and Food Biotechnology and the Research Institute of Horticulture. The content of the following nutrients was investigated: vitamin C, folate,  $\beta$ -carotene, sodium, potassium, calcium, magnesium, glucose, fructose, sucrose, dietary fiber as well as energy content.

## Results

Tab. 1. The energy value and content of selected nutrients in orange (in edible parts) and in orange juice from concentrate

Energy or nutrient	ORANGE	ORANGE JUICE
	Per serving 200 g	Per serving 200 ml (1 glass)
Energy	396 kJ	372 kJ
	94 kcal	84 kcal
Sugars	17,4 g	17,6 g
Glucose	4,6 g	4,90 g
Fructose	5,0 g	5,84 g
Saccharose	7,8 g	6,90 g
Fibre	3,8 g	0,8 g
Vitamin C	90 mg	70 mg
Folate	60 $\mu$ g	46 $\mu$ g
Potassium	366 mg	372 mg

Source:

Institute of Agricultural and Food Biotechnology, Research Institute of Horticulture in Skierniewice , Polish Association of Juice Producers (KUPS) 2010-2017  
Kunachowicz H et al. Food Composition Tables 2017



Jarosz M. et al. Polish Healthy Nutrition and Physical Activity Pyramid for children and adolescents (Piramida Zdrowego Żywienia i Aktywności Fizycznej Dzieci i Młodzieży), 2016

## Conclusion

The study showed that orange juice from concentrate is a source of important nutrients: vitamin C, folate and potassium. Their content in orange juice from concentrate is similar to that in fresh oranges. Dietary fiber amount was much higher in orange fruit than in juice.