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The effect of fruit sorbet with the addition of Jerusalem artichoke (*Helianthus tuberosus L.*) fructans on the total calcium blood level in growing rats

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Insulin and oligofructose belong to a class of carbohydrates known as fructans. The main sources of these compounds that are used in the food industry are chicory and Jerusalem artichoke (*Helianthus tuberosus L.*). Insulin and oligofructose are considered as functional food ingredients since they affect many processes in the organisms (Kaur and Gupta, 2002).

The aim of the study was to verify the hypothesis that fruit sorbet enriched in fructans, in the form of plant-derived raw material (pulp from Jerusalem artichoke tubers), at calcium hypoalimination, has a positive effect on Ca level in blood of growing rats. Female Wistar rats were used in the 12-week study. The animals consumed the modified AIN⁹³ G diet, containing or not sorbet produced with Jerusalem artichoke (calculated to provide 8% of fructans in rat diet). After the end of the experiment, rats were euthanized and serum was collected. Total Ca level was determined using BS 120 analyzer.

Our results showed that the concentration of Ca in rat serum was higher in a group of animals consuming diet containing sorbets enriched with Jerusalem artichoke, in the comparison with the control group, however the changes were not statistically significant.

Consumers today demand the products that are beneficial for health, so further studies concerning on fructans enriched sorbets are needed.

Biography

Ewa Cieslik has completed her PhD in Food Chemistry science from Humboldt University in Berlin. She is a head of Department of Nutrition Technology and Consumption, University of Agriculture in Krakow. She has published more than 400 papers in scientific journals.

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