

The Influence of Milky-Wax Ripeness Walnuts Extracts on Formation and Properties of Clots

Olga Orlova* and **Svetlana Buzhlakova**

ITMO University, Institute of Refrigeration and Biotechnologies, Russia

The aim of this work was to study the influence of chemical composition of extracts from the fruits of milky-wax ripeness walnuts on the formation of lactic acid clots and on the duration of their storage. Experimental studies were carried out in the international research centre “Biotechnology of Third Millennium” Institute of Refrigeration and Biotechnology, ITMO University. Modern methods of research using laboratory equipment of companies Shimadzu, Buchi, Zeiss, Kohler and other were used.

Possibility of using of liquid and encapsulated extracts of milky-wax ripeness walnuts in the production of fermented milk drinks was investigated.

In this work, we have identified types, the optimal amount of starter culture and the influence of the extracts on growth of microbial flora of drinks.

The type, optimal dose and stage of introduction of milky-wax ripeness walnuts extract to raw materials were also defined. Changes in physicochemical properties and chemical composition of extracts were studied.

The positive effect of milky-wax ripeness walnuts extract on formation and properties of fermented milk clots was established.

Due to naphthaquinone-juglone, which is a part of walnuts extract, fermented milk drinks had a sustainable microbiological condition throughout the period of storage.

Thus, using of additives based on milky-wax ripeness walnuts enrich products with substances necessary for the daily prevention of organism from disease and environmental hazards. Developed products can be successfully used to supply of different population groups (children, the elderly, athletes, people working in extreme conditions), as well as in the health-promoting purposes.

Biography:

Olga Orlova is a head of the Committee on Innovation and Technology Implementation, a member of international research centre “Biotechnologies of the Third Millennium”, Associate Professor of the Applied Biotechnology Department at the ITMO University, Russia. She is also Skolkovo Foundation expert, Food Net adviser in Saint-Petersburg, Leader of the St. Petersburg Project “Nutrition for the Future. She was born on January 31, 1966. Olga Orlova graduated the Institute in 1989. She received her PhD in 2009 from St. Petersburg State University of Refrigeration and Food Engineering. She was the chief technologist at a dairy plant for 12 years. She is married and has 2 children. Scientific interests: food biotechnology, foods for particular nutritional uses, shelf life prolongation.