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THEORETICAL FOUNDATIONS OF MODERN SCIENCE AND PRACTICE

06 APRIL 07 XI SCIENTIFIC AND PRACTICAL CONFERENCE

MELBOURNE, AUSTRALIA

ISBN 978-1-64871-910-3

Library of Congress Cataloging-in-Publication Data

UDC 01.1
The XI th International scientific and practical conference « THEORETICAL FOUNDATIONS OF MODERN SCIENCE AND PRACTICE» (06-07 April 2020) Melbourne, Australia.2020. 518 p.

ISBN 978-1-64871-910-3

Published on Bookwire by Bowker
https://www.bookwire.com/

Collection of scientific articles published is the scientific and practical publication, which contains scientific articles of students, graduate students, Candidates and Doctors of Sciences, research workers and practitioners from Europe, Ukraine, Russia and from neighbouring coutries and beyond. The articles contain the study, reflecting the processes and changes in the structure of modern science. The collection of scientific articles is for students, postgraduate students, doctoral candidates, teachers, researchers, practitioners and people interested in the trends of modern science development.

The recommended citation f*or this publication is:*
Ayziatulova D., Ayziatulova E. Shelestova., Controlled ovulation stimulation during art cycles among women with a high risk of the ovarian hyperstimulation syndrome with the help of gonadotropin releasing hormone antagonists and considering progesterone level// Theoretical foundations of modern science and practice. Abstracts of XI International Scientific and Practical Conference. Melbourne, Australia 2020. Pp.15-18.
URL: http://isg-konf.com .

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PROSPECTS OF USE OF CONCENTRATED JUICE AS FOOD NATURAL COLORING

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In the food industry, coloring are used in the production of numerous products in order to give them a more attractive appearance. Usually coloring are used in the production of confectionery, non-alcoholic and low alcohol drinks, liqueurs, cheese desserts, yoghurts, oils, margarines, macaroni, etc. There is no domestic production of food dyes in Ukraine. [1] Purchases of mainly synthetic dyes are carried out to provide food industry enterprises. An alternative to synthetic food colors is the natural ones that come from natural raw materials: vegetables, fruits, berries.

A special place among the natural coloring is anthocyanins. Anthocyanins are known to be a valuable compound for the body. When treated with fruits and vegetables, anthocyanins maintain a normal state of blood pressure and blood vessels, forming complexes with radioactive elements, anthocyanins promote their rapid excretion. In addition, these pigments are able to improve vision, these are very potent antioxidants that are more effective than vitamins C and E [2, 3].

The purpose of the study was to investigate the use of concentrated berry juices as natural coloring.

For research, used elderberries, blackberries, blueberries, chokeberries. Research methods are standard, generally accepted.

In Ukraine you can use a variety of coloring of vegetable origin, including anthocyanins, betanin, carotene.

Anthocyanin pigments are water-soluble vacuoles of plant vacuoles, which can be red, purple or blue in color and depending on their acidity. First and foremost in the food industry is used E 163, obtained by extraction from the skin of red and dark grapes, elderberries, black currants, stock roses, blackberries, blueberries, cherries. Anthocyanins are known to be a valuable compound for the body. When treated with fruits and vegetables, anthocyanins maintain a normal state of blood pressure and blood vessels, forming complexes with radioactive elements, anthocyanins promote their rapid excretion. In addition, these pigments are able to improve vision. These are very potent antioxidants that are more effective than vitamins C and E.

Elderberries, blueberries, blackberries and chokeberry were used as the source of anthocyanins. In the laboratory, the juices from these berries were obtained and then concentrated on a rotary evaporator to a solids content of 68-70%.

Physico-chemical parameters of the obtained juices are shown in table 1.

Index	Blueberry		Blackberry		Chokeberry		Elderberry	
	juice	concentrate	juice	concentrate	juice	concentrate	juice	concentrate
Dry substance, %	8-10	68-70	5-7	68-70	9-11	68-70	10-13	68-70
Anthocyanins, mg/100g	175	600	340	1640	215	900	300	1500
Ascorbic acid, mg/100g	8,8	35	20	70	27,5	87	26	84

As can be seen from the table, concentrated juices are not only high in anthocyanins, but also ascorbic acid.

The obtained products were used in the production of confectionery, bakery, pasta, dairy products and food concentrates. The organoleptic and physico-chemical parameters were determined in the finished products and compared with their analogues. The samples obtained differed favorably in appearance and nutritional value.

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