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# ВОДА В ХАРЧОВІЙ ПРОМИСЛОВОСТІ

бірник тез доповідей

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конференції молодих учених,  
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**VII Всеукраїнська науково-практична конференція молодих учених, аспірантів і студентів «Вода в харчовій промисловості»:** Збірник тез доповідей VII Всеукраїнської науково-практичної конференції молодих учених, аспірантів і студентів. Одеса: ОНАХТ, 2016. – 220 с.

У збірнику матеріалів конференції наведені матеріали наукових досліджень у сфері використання води на підприємствах харчової галузі, оцінки її якості та можливого впливу на організм людини.

Матеріали призначені для наукових, інженерно-технічних робітників, аспірантів, студентів, спеціалістів цехів та заводів, які працюють в харчовій промисловості та водних господарствах.

Матеріали, занесені до збірника, друкуються за авторськими оригіналами.

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*За достовірність інформації відповідає автор публікації.*

Під загальною редакцією Заслуженого діяча науки і техніки України,  
д-ра техн. наук, професора Єгорова Б.В.

environmental requirements, that the process wouldn't disrupt natural balance. The people of our planet should monitor the state of water and protect it, not to pollute by products of their activities, it will be appropriate to enter the rational use of water in industry and agriculture. Only own efforts, we can do something useful!

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## **BOTTLED WATER - CURRENT PROBLEMS OF REGULATION, PRODUCTION AND QUALITY**

**Cherkashina A.S., Trainee teacher Untila M.P.**

**Kharkiv Institute of Trade and Economics  
of Kyiv National University of Trade and Economics**

Without food a person can live for 30-40 days, without water - only 5-6. Speaking of bottled mineral water, it should be recalled that the drinking water began in droves bottled only in recent years due to the widespread deterioration of tap water because of the pollution of water supply.

The current market in Ukraine is very rich in different types of bottled water, presented as a medicinal - table and medicinal waters, as well as table or drinking water from underground and ground sources. A variety of water and a large list of manufacturers create a situation in which the consumer became easily confused. Especially because of attractive external view it hides often poor production.

Production and quality indicators of bottled drinking water in developed countries of the world (at least - in the member countries of the World Trade Organization, WTO) must conform to certain criteria that set out in the documents of the Codex Alimentarius Commission.

These conditions are consistent with the production and quality parameters of bottled water, which is almost 20 years produced in Ukraine, large enterprises - manufacturers of these products (due to the absence of domestic regulatory framework)

Small businesses produced bottled water, according to technical conditions, which demands to such water has almost always amounted to GOST 2874-82, and the production was regulated by sanitary-hygiene requirements for food production (as recommended by the Codex Alimentarius Commission).

10 - 15 manufactures appear every season in every major regional center not only with a doubtful equipping level, but also with a complete absence of control that can provide fabrication laboratory, which has its bacteriological department.

It is known that only the control at all stages of the process gives a 100% guarantee the quality of the finished product.

Water is a known source of transfer of various infectious diseases. Therefore it is necessary to think about the permission to the production of bottled water without the existence of a certified laboratory. Because GOST "Acceptance rules and methods of control" clearly regulates the procedure for monitoring that is necessary to conduct the manufacturer's laboratory.

Although now requirements for bottled waters are toughened. There are new technologies, the level of culture of water consumption is growing and consumers' demands for quality. That is why the world's leading manufacturers aim at improving processes and controls, as well as the creation of new development.

The undisputed leader of the latest developments is the oxygen - waters, or water that is saturated with oxygen. This class of water - "Tonus - oxygen" for the first time was released at the "Kuyalnik". The method of production and manufacturing process is patented, but it should be noted that the release of such waters as «oxygen -waters» is related to a number of not only technical solutions, but also a special approach to the preparation of production. That is, this production provides increase requirements at all stages. But it is only available to high-level manufactures that have control over the entire process chain. This explains the small number of manufacturers abroad, and especially in Ukraine, in spite of the demand for oxygen-saturated water.

At the same time, to maintain high microbiological parameters and prevent the possibility of secondary microbial contamination of water at its bottling, storage and transport is considered to be appropriate in all cases to carry out ultraviolet irradiation before bottling. Since it found that undissolved particles in water of suspended solids may be carriers of the infection.

The spilled mineral water has two important factors that affect the growth of bacteria. Firstly, during pouring more or less water is enriched with oxygen and, secondly, the temperature during storage in the bottle is higher than in the source.

An alternative to chlorine water purifying is a radiation sterilization and ozonation technology, widely used abroad. Along with significant efficacy and a number of other advantages, ozone and radiation sterilization are capable of forming free radicals and hydrogen peroxides and organic compounds, causing oxidation and destruction of cells and tissues. Radionuclides industrial pollution as a result of sterilization, followed by the formation of peroxides and free radical compounds. Detoxification irradiated water and aqueous solutions is necessary for the prevention of cancer and preserve the gene pool of the country.

In the microbiological monitoring of drinking mineral water a significant place must be given to the definition of micro-organisms that can degrade the organoleptic properties of water. In Ukraine, for water treatment it is used chlorine and its compounds, however, the consequence of this treatment is the formation of an excess of organochlorine compounds, toxic to humans.

Development of drinking water treatment technology is a difficult and responsible task that requires attention and assistance of the government. It is necessary to use only safe and proven laboratory bottled water. Mineral water can not only bring benefits to the body, but the harm.

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Наукове видання

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Видавництво та друк: ФОП Грінь Д. С.  
73033, м. Херсон, а/с 15  
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