BOOK OF ABSTRACTS

CEFood Congress

8th Central European Congress on Food

Food Science for Well-being

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НАЦІОНАЛЬНА АСОЦІАЦІЯ ВИРОБНИКІВ ДИТЯЧОГО ХАРЧУВАННЯ, МОЛОЧНОКОНСЕРВНОЇ ТА СОКОВОЇ ПРОДУКЦІЇ "УКРКОНСЕРВМОЛОКО"

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Section 2. ENERGY SYSTEMS FOR FOOD CHAIN

Subsection 2A
Energy Efficiency

Subsection 2B
Machine Building for Food Chain

Subsection 2C
Intelligent Control Systems

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ENERGY USE OF METHANE FERMENTATION IN ENTERPRISES FOR THE PRODUCTION OF CITRIC ACID

The article is devoted to investigation of the process of treatment and utilization of concentrate waste water factory for, citric acid with using of methane fermentation. It is studied peculiarity the process of sewage treatment and generation of gas with different cultivation parameters. It is investigated possibility to use of dewatered sludge for the process of treatment. It is worked out regimes of continuous cultivation.

Stocks of most enterprises is concentrated, the traditional approach to cleaning them can not solve all complex problems. The most justified in economic and environmental terms is the use of anaerobic treatment method — methane fermentation, as a preliminary stage.

Utilization exposed wastewater category citric acid plant with pollution by COD 3800 mg O_2 / dm3. The depth of the concentrated waste water purification factories producing citric acid reaches 90, 4%. Number biogas produced from sewage volume for plants for the production of citric acid is 6.7 — 8.9 l / l.

Biogas output has an inverse dependence on the speed of dilution. The final effluent carried aerobic methods. The overall reduction of pollutants in the anaerobic-aerobic waste water treatment technology companies for the production of citric acid is 98.8%.

Methanogenesis most appropriate, environmentally and economically beneficial process that allows you to not only solve the problem of concentrated waste water purification without their prior dilution, but also greatly enhance its efficiency and transfer to the category-generating energy by using biogas and biomass enriched with vitamins sludge.

KEY WORDS: *waste water, methane fermentation, biogas, dewatered sludge.*