



---

## **STRATEGIES FOR THE AEROBIC BIOLOGICAL TREATMENT OF THE DAIRY WASTEWATERS IN CONTROLLED CONDITIONS**

**Mihaela Palela<sup>1\*</sup>, George Ifrim<sup>2</sup>, Marian Barbu<sup>2</sup>, Gabriela Bahrim<sup>1</sup>, Sergiu Caraman<sup>2</sup>**

<sup>1</sup>"Dunarea de Jos" University, Faculty of Food Science Department, 111 Domneasca Street, Galați, Romania, cod 800201,  
<sup>2</sup>"Dunarea de Jos" University, Faculty of Electrical and Electronics Engineering, 111 Domneasca Street, 800201 Galati

---

### **Abstract**

The aim of this study was to evaluate the capacity of certain bacterial and fungal strains - isolated from the dairy industry wastewater - to biodegrade the organic compounds such as casein, lactose and lactic acid similarly to those which determine the organic pollution. The strains able to rapidly biodegrade organic compounds were identified and screened for the inoculum preparation which is afterward tested for the aerobic biological treatment of the simulated dairy-processing wastewater. The experiments were conducted in a 1L bioreactor, produced by Applikon Company.

**Key words:** aerobic biological treatment, organic compounds biodegradation, simulated dairy wastewater

---

---

\* Author to whom all correspondence should be addressed: e-mail: Mihaela.Palela@ugal.ro