

## USABLE PRODUCTS FROM SEWAGE AND SOLID WASTE

MARIA ŁEBKOWSKA\*, MONIKA ZAŁĘSKA-RADZIWIŁŁ

**Abstract:** Sewage and solid waste can be a valuable source of materials used directly or indirectly in manufacturing of usable products. These processes are associated with elimination of pollutants from liquid and solid wastes.

The best-known methods of waste management are production of biogas and composting. This paper focuses on the possibility of obtaining biomass as a source of protein feed (whose value, in terms of the composition of aminoacids and microelements, is comparable with conventional feed, e.g. soymeal, bonemeal or fishmeal). Sewage components for bacterial, fungal, algal and vascular plants' culture are characterized as a source of protein feed. Methods of industrial scale production of enzymes, mainly proteases and lipases that have broad applications in various industries, are discussed. Development perspectives of inexpensive methods of usable products from waste production are showed.

Interdisciplinary nature of presented issues, which requires cooperation of specialists in biology, chemistry and technology, is emphasized.