

Anaerobic composting of organic waste, in glass composters, under different conditions

Anisa DHROSO, Ilirjan MALOLLARI, Hasime MANAJ, Dhurata PREMTI, Xhersika SALIKO

University of Tirana, Faculty of Natural Sciences, Department of Industrial Chemistry, 1001 Tirana, Albania,
(e-mail: adhroso12@yahoo.com)

Abstract

Today we see interest in composting process, from economic, agricultural and environmental point of view. Composting is a method of the biochemical degradation of organic material. Composition process of compost affects its production and quality of soil, and also prevents and controls the erosion. The aim of this study was to determine physical and chemical properties of organic waste mixture during the composting process. Composting experiments were carried out in glass composters, which were placed in incubators under anaerobic condition, for both mesophilic (37°C) and thermophilic (50°C) conditions, respectively. The organic residues which have been analyzed are: straw, leaves, cow manure, and humus. Various physical and chemical parameters were analyzed in order to evaluate the composting material before and after the process: organic matter, ash, organic carbon, total nitrogen, phosphate, potassium, pH, electric conductivity. The physical and chemical parameters of compost were analyzed at an interval of seven days.

Key words: organic waste, composting, anaerobic processes, mesophilic, thermophilic

sa2015_a0125