Abstract

This study describes in detail the composting process of mixtures of biogenic waste, in order to give a solution to the disposal of green waste from parks and gardens generated in the Municipality of La Molina, Universidad Seminario Evangélico de Lima -USEL and market waste EMMSA, for which three compost piles were assembled, pile 1 consisting of a 2:3 ratio (green waste and market waste), pile 2 consisting of a 1:1 ratio (green waste and market waste) and pile 3 consisting of a 3:2 ratio (green waste and market waste), and composted for a period of 155 days, with the aim of determining the carbon nitrogen ratio (C/N) in the different mixtures of biogenic waste and identifying the optimal ratio and the influence of this parameter on the quality of each type of compost. To this end, temperature, weight, volume, pH, and C/N ratio were monitored. Compost samples were then taken and analyzed for reactivity. After processing the biogenic waste for 155 days, compost was obtained. This was confirmed, in the case of all three piles, by respiratory activity (AT4), which was less than 2.3 mgO2/kg. An average C/N ratio of 12 was achieved, which are indicators that demonstrate the completion of composting. Keywords: Green waste, compost process, biological mechanical treatments, AT4, Lepidium sativum, municipality