



- Title:** Behaviour of Main Microbiological Parameters And of Enteric Microorganisms During the Composting of Municipal Solid Wastes and Sewage Sludge in A Semi-Industrial Composting Plant
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- Abstract:** This study was focused on the microbiological aspects of composting and on the behaviour of main prevalent microbial communities (non-pathogenic and selected pathogenic bacteria) during the composting process of municipal solid wastes and sewage sludge in a semi-industrial composting plant. Results showed that the dehydrogenase activity and Biomass C / Biomass N ratio showed a noticeable increase in the two windrows W1 (100% of municipal solid wastes) and W2 (60% of municipal solid wastes and 40% of dried sewage sludge) during the thermophilic phase ( $\geq 45^{\circ}\text{C}$  for 100 days) and marked a high microbial activity during this period of the composting process. During the thermophilic phase, the removal of faecal indicator bacteria is in order of  $2 \text{ Ulog}_{10}$ , and a total absence of *Staphylococcus aureus* and *Salmonella* was observed. The re-emergence of faecal indicator bacteria at the end of the composting progress (cooling step) could constitute a major problem for the agricultural use of compost.