# OPTIMISATION OF THE COMPOSTING PROCESS OF SLUDGE FROM WASTEWATER TREATMENT PLANTS

**CONTACT DETAILS:**

Research Results Transfer Office-OTRI
University of Alicante
Tel.: +34 96 590 99 59
Email: areaempresas@ua.es
http://innoua.ua.es

## ABSTRACT

The water resources and sustainable development group has extensive experience in the reuse of sludge from urban waste water for the amendment or subscriber soil , as currently a process of composting is required whose product has no detrimental effects on health and / or the environment. As a major innovation , monitoring highlights a whole series of parameters that are being studied with the working documents of the European Community, such as the limit value of the concentration of linear alkyl benzene sulfonate ( LAS) , pathogens, respirometric measurements ,

## TECHNOLOGY ADVANTAGES AND INNOVATIVE ASPECTS

The most innovative aspects of the purposed optimisation process is the followup of various parameters that are still under consideration with the working documents by the European Community, such as the limit concentration value of some organic compounds in the sludge for its agricultural application, one of this organic compounds is the LAS (linear alkylbenzene sulphonate) ("Working document; on sludge 3rd Draft, European Communit, 2000); also pathogen as the viability of nematode eggs (" Evaluation of sludge treatments for pathogen reduction", European Community, 2001), and the incorporation of quick techniques to determine the stability of the compost like the respirometric determination (Working document; Biological treatment of Biowaste 2nd Draft, European Community, 2001).

The experience of the research team in the analysis of LAS in different environmental arrays is very wide, and the compost is one of the fields where the research has been focalised during the last years.

In spite of there isn't yet a European normative that controls the characteristics and the permitted uses and applications of the bio solid, every day it's more necessary the knowledge of the characteristics of this waste and the adaptation to the every time more exigent tendencies of the European Council. The optimisation of the composting process and the monitoring of the control parameters of the process that we purpose follows the trend of the new requirements.

## MARKET APPLICATIONS

The present technique could be applied to:

- The monitoring and control of intensive composting processes already functioning.
- The start up functioning of intensive composting processes.
- The verification of the quality of the compost obtained in relation to the prevailing Spanish normative.
- The verification of the European recommendations on the compost quality in relation to the elimination of pathogens (viability of nematode eggs) and LAS.

## COLLABORATION SOUGHT

The institute would be interested in:

- Realize the development to customers who would like starting the intensive composting process of water-treatment plant sludge.
- The monitoring of the composting process on urban water-treatment plants already functioning that would like to optimise the process.
- The control and follow-up of xenobiotics (LAS) and pathogens in composting processes and composting products.