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The lombrifiltration: a Systemic Approach to the Treatment of Liquid Wastes in Solid Phase

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The lombrifiltration is a new process for the treatment of liquid wastes : it consists of an organique filter empty of three different layers.

In the first we can find the earthworms and compost, in the second the sawdust and finally in the lower layer there are gravels with a drain.

Our poster is the first public announcement of the results that we have achieved in a pre-industrial pilot in France (Combaillaux).

To interpret and determine the results we have proposed a systemic pattern, using this as reference you will help to decide how we can move on the industrial phase. The methods we can use for the analyse of the waters in & out of the process are the Kjeldhal process, the distillation, the Nessler's method, the brucine's method, the sulphanimide's method ; classical methodes to determine suspended solids and severals formes of phosphates.

A resistimetric method, for the moisture's mesure, an electric method to make earthworms go out of the filter for following the changes on the population, and a gas analyser, complete our methodology for this experimentation.

The results of the lombrifiltration's process are satisfiable :

- 94% SS
- 80% CDO
- 82% total-N
- 70% total-P

The benefits of lombrifiltration are no sludge-storing, low cost construction & servicing, low power consumption, low space requirements, no or low odour harassment, no chemicals used and the important efficiency of the eutrophisant chemicals elements in organic matter.