

Biological treatment to COD and color reduction of wastewaters

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Description

The treatment here developed consists in a simple and economical process, which allows, with the use of a novel bacterial strain *Bacillus aryabhatai* DC100, the removal of colored-compounds from wastewaters, as well as to reduce the COD (Chemical Oxygen Demand).

With this methodology, efficient percentages of decolorization were attained with triphenylmethane and indigo model dyes. In addition, once applied to real effluents, the



percentage of removal achieved allowed them to be directly spilled on the corresponding sewer systems.

Innovative aspects and advantages

- Effective treatment over a wide range of compounds and mixtures.
- Possibility of treating wastewaters with high pH and salinity.
- Strain able to remove high amounts of dyes.
- Inexpensive procedure.
- Ecofriendly treatment.
- Possibility of discharging treated effluents directly into sewer systems.

Commercial applications and potential users

This treatment is likely to be applied in industries that perform a dyeing process such as the textile, paper, cosmetic, pharmaceutical and food industries and generated strongly colored, saline and alkaline effluents. In addition, also could be used by companies specialized in waste management.

Patent status

This method has been protected by Spanish patent application.

Type of collaboration

License agreement or joint collaboration in order to exploit the invention.