De La Salle University – Dasmariñas

ISOLATION AND IDENTIFICATION OF MICROORGANISMS CAPABLE OF UTILIZING FORMALDEHYDE AND ETHANOL FOR POTENTIAL WASTEWATER TREATMENT

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RYAN JED A. CONTRERAS
GENEVIEVE NORMANLENE C. YU

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ABSTRACT

Microorganisms capable of utilizing formaldehyde and ethanol were isolated and identified. Formaldehyde and ethanol contaminated soils were used as the source of formaldehyde and ethanol-utilizing microorganisms. Isolated microorganisms were subjected to screening test. Quantitative analysis of ethanol was done by gas chromatography and qualitative test of ethanol was done by potassium dichromate test. Further identification of isolated microorganisms was done based on morphology, colony and biochemical characteristics. Formaldehyde isolated microorganisms were isolated however in the screening test they were not able to utilize formaldehyde. Two ethanol-utilizing microorganisms were identified; they are known to belong to the genus *Kingella* and *Enterobacter*. The isolated microorganisms were capable of utilizing ethanol however statistics showed that there was no significant evidence that the microorganisms degraded ethanol. Further incubation of formaldehyde-contaminated soils was needed for recovery of microorganisms.

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