

Amund, O.O., Ilori, M. O. and Odetundun, F.R. (1997)

Degradation of commercial Detergent products by microbial populations of the Lagos Lagoon.

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ABSTRACT

The biodegradability potentials of three detergent products with the trade names Omo, Teepol and sodium dodecyl sulfate (SDS) by the native bacteria of the Lagos lagoon was carried out using the lagoon die-away method. Physicochemical parameters of the water samples showed that the lagoon in Apapa was more polluted than at the University of Lagos. In 12 days, approximately 30, 60 and 97% Omo, Teepol and SDS respectively were degraded. SDS with an alkyl sulfate moiety as surface supported the highest growth of the detergent-utilizing organisms, indicating that the components of Omo and Teepol are more resistant to microbial attack. The detergent-utilizing bacteria identified were mainly Gram-negative and of the following genera: *Vibrio*, *Klebsiella*, *Flavobacterium*, *Pseudomonas*, *Escherichia*, *Enterobacter*, *Proteus*, *Shigella* and *Citrobacter*. *Vibrio* was the most frequently encountered organism while *Proteus* was the rarest. Results of this investigation had shown that detergents made in Nigeria may still contain components that are recalcitrant to biodegradation.