

BIO-DETERGENT FROM *BRASSICA JUNCEA* (MUSTARD) SEED OIL AND STUDY OF ITS QUALITY PARAMETERS & ENVIRONMENTAL INDEXES

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ABSTRACT

Bio-detergent was prepared using *Mustard Oil*. Its detergent properties were studied and compared with those of different brands of commercially available detergents. Several parameters such as surface tension, pH, solubility, foamability, wettability, emulsification, cleaning action and hemolytic activity on RBCs were determined. The synthesized detergent is found to be eco-friendly, has low bio-toxicity and shows good surfactants properties like low surface tension, high wettability, high foaming ability with rapid collapse and high solubility. The detergent is found to be more biodegradable when compared to a commercial detergent. And also, a study of cytotoxic activity on RBCs reveals that mustard oil detergent is less toxic as compared to commercially available detergent thereby showing the potential of mustard oil for the production of high quality bio-detergent.

KEYWORDS: Bio-Detergents; *Brassica Juncea* (Mustard) Seed Oil; Cytotoxic Activity; Eco-Friendly