

Jnana Sangama, Belgaum – 590018



CHARACTERIZATION OF WASTE WATER GENERATED FROM DECCICATED COCONUT INDUSTRIES – “A case study”.

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Submitted by: NAKUL N (1GA08CV014)
PRAMOD M (1GA08CV017)
R SURESH KUMAR (1GA08CV019)

**SAI DARSHAN T R (Associate.prof),
DEPARTMENT OF CIVIL ENGINEERING,
GAT, BANGALORE.**

**Dr. HOYSALA N CHANAKYA,
PRINCIPAL RESEARCH SCIENTIST,
HIMANSHU,
CST DEPARTMENT, IISc, BANGALORE.**

Bangalore – 560098



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ABSTRACT

At present the dessicated coconut industries are discharging waste water which is untreated and is ultimately disposed off into the surrounding soil which ultimately pollutes surface and ground water. At present there is no viable technology for the treatment of waste water obtained from DC industries. The wash water obtained from cleaning and cutting process predominantly consists of oil, oil sludge, coconut pulp. This waste water is subjected to cooling , mixing and settling of solids. It has been found that good amount settling of solids and floating of oil was noticed when the temperature is maintained at 17- 18 degree celcius, mixing was carried out at 1440 rpm for a duration of 6-9 min and the resulting effluent was allowed to settle in the settling tank. Jar test were carried out for a duration of two hrs, settling velocities of solids and floating liquid was recorded at every 3 min interval and the corresponding rate of sedimentation of solids and floating mass was found to be 12-15 cm/hr and 0-1 cm/hr respectively. Further the oil was skimmed off and oven dried to extract major portion of oil and also the residual oil present in the solids was extracted by using hexane. The remaining oil free solids were separated and dried, the final product may be used efficiently in food processing industry. Based on the above experimental work sedimentation tank was designed with appropriate inlet and outlet arrangements for separating sludge and oil. This method of treatment of wash water greatly enhances the recovery of by products and also owner is benefitted and it is eco- friendly.