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ASSESSMENT OF DAIRY WASTE TREATMENT BASED ON SLUDGE VOLUME INDEX TECHNIQUE

Leena A.V

Research Scholar, CED, Karpagam University, Coimbatore, India.

Dr. N. Balasundaram

Professor, CED, Karpagam University, Coimbatore, India.

Dr. C. Meiaraj

Assistant Professor, CED, Government College of Technology, Coimbatore, India.

ABSTRACT

Unscientific and Improperly treated sewage and industrial waste disposals causes environmental pollution. New technologies for modernity and change in life style of humans attribute new industries for their easiness and comfortability on one side which results in highly complicated and dangerous waste generation on the other side. Present study deals with the industrial waste treatment. Dairy industry is one among the highly objectionable waste producing sectors which increases the pollution rate of the total environment. Dairy industry consumes 2.5 to 4 litres of water per litre of milk process which comes out as waste water. Various studies revealed that dairy waste water is diluted milk and it contains BOD, COD, TSS, Oil & Grease and sometimes pH. So, treatment of dairy waste need special attention and adequate care is to be given before its final discharge to water bodies or to land. This work is an assessment of the performance of few dairies based on Sludge Volume Index whichhas been discussed and further scope of research area has been identified.

Key words: Dairy, Efficiency, Effluent Treatment Plant, Settleablity, Sludge Volume Index.

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1. INTRODUCTION

Dairy industries are engaged in the manufacturing of various types of milk products such as milk, butter, cheese, yogurt, condensed milk, flavoured milk, milk powder, ice cream, etc. A sequence of operations is involved in dairy industry. Receiving and storing of raw materials, processing of raw materials into finished products, packaging and storing of finished products and a group of other supplementary operations are some of the operations performed in the dairy industries. Homogenization, standardization, clarification, separation, and pasteurization are the common initial operations in most dairy plants. Clarification and separation, generally, are accomplished by specially designed large centrifuges. Drying, condensing, etc. are also used in dairy industries for the production of various products. The raw material