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Solubilization of Activated Sludge with Waste Materials from Refineries

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The use of chemicals and waste materials from petroleum refineries for the solubilization of activated sludge was investigated. "Refinery spent caustic" and sodium sulfate had similar solubilization activities to sodium hydroxide. Solubilization of activated sludge reached 30-34% after 10-30 min at 25°C, and was relatively rapid compared to that of activated sludge from sewage waste. Solubilization reached 45-50% after 10-30 min at 60°C. The flora of microorganisms in the sludge from a petroleum refinery, which mainly consists of bacteria in contrast to the various microorganisms in sewage sludge, could possibly be responsible for this rapid solubilization.

Keywords: [Activated sludge process](#), [Excess sludge](#), [Waste material](#), [Solubilization](#), [Alkaline treatment](#), [Refinery spent caustic](#)



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