

Effect of ice crystal size in suspension crystallization of TNT wastewater

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Suspension crystallization experiments has been carried out on industrial wastewater containing 2,4,6-TNT and other nitro-compounds as pollutants. The growth rates of ice crystals were estimated from the plots of oversize cumulative distribution at different supercoolings and impurity contents of the melt. From the microscopic photos of the product crystals, it was found that high supercooling degrees obtained under 1.0k/min cooling rate produces particles with rounder particles and wider CSD than low supercooling degree. The purity of product ice after filtration was determined as function of growth rates and organic content of the feed melts. The purity of product water was found through COD and GC analysis.