

## Optimization for Solvent Extraction to Recovery of Acetic acid from Cattail Derived Pulping Wastes Liquor

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In a Kraft pulping process pulping process, lignin and part of hemicellulose is dissolved and burned in the recovery boiler, again making steam and electricity. In fact, most of the organic compounds dissolved in the cooking process end up in the cattail waste liquor. Cattail waste liquor contains water, organic residue from pulping and inorganic cooking chemical. A single partitioning of a compound between an organic solvent and water may not be sufficient for isolating it in acceptably pure form and good yield. Various multiple extraction techniques may therefore be required. In this study, the recovery of acetic acid from aqueous solution by using alkane containing 37 % (w/w) concentrations of trioctylphosphine oxide (TOPO) and trialkylphosphine oxide (TAPO) and compared the extraction yield of the two extractants. Also, the extraction yield has been evaluated with three different level of aqueous feed (original solution, 5 fold and 10 fold concentrated aqueous feed). The reaction factors are temperature (25~65°C), time (24~48min) and pH (1~3). This result showed that TAPO had the highest acetic acid extraction yield. And It appears that the stabilities of the acid.