

## ABSTRACT

This study is a continuation of the work done by Prasher, B. D. [1967] on solvent extraction of fluosilicic acid, using a n-octyl and n-decyl tertiary amine mixture (Alamine-336) as a first step.

The recovery of the fluorine as ammonium fluoride, and as calcium fluoride precipitate, from the organic solvent by using ammonium hydroxide as a stripping agent has been studied in the second step.

The results show that:

1. The time-concentration studies indicate that the parameter time is not important.
2. In general, as the phase ratio of stripping agent is increased, the percentage of stripped fluorine from the organic solvent is increased.
3. The phase ratio of stripping agent to organic phase (4/5) will attain 99% recovery.
4. The percentage of fluorine recovered as calcium fluoride increased as the phase ratio of stripping agent increased.

A STUDY OF THE EXTRACTION OF FLUOSILICIC ACID  
BY LIQUID ION EXCHANGE

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A Thesis  
Presented to  
the Faculty of the Graduate School  
Tennessee Technological University

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In Partial Fulfillment  
of the Requirements for the Degree  
MASTER OF SCIENCE  
Chemical Engineering

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by  
Ta-Ming Lin  
February 1968

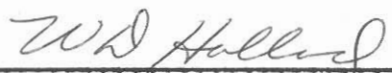
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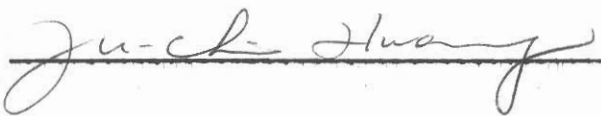
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