

**University of Macau**

**Abstract**

**CHEMICAL ASPECTS OF COAGULATION IN WATER  
TREATMENT**

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**This thesis is to report a controlled experiment of enhanced coagulation for an individual organic acid in laboratory. Measured results of TOC are presented, illustrating variations of the effectiveness of removal with certain chemical and operational parameters (pH, hydrolyzed aluminum ions, coagulation aid and organic acid) and examining their relationships. The main purpose of this study is to help to improve the enhanced coagulation by pH control and addition of coagulant aid. Looking into the fate of the organic acid, providing a high-efficiency environment for reactions, least amount of coagulant can provide greatest removal of natural organic matter.**