NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF APPLIED SCIENCES

DEPARTMENT OF APPLIED CHEMISTRY

THE USE OF ALUMINIUM HYDROXIDE IN SUGAR ANALYSIS AS AN ALTERNATIVE COAGULANT FOR BASIC LEAD ACETATE

By BHEKUTHANDO NYATHI

N950341X

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF REQUIREMENTS FOR:

BACHELOR OF SCIENCES HONOURS

APRIL 1999

ABSTRACT

Most sugar solutions need to be clarified before measuring the sucrose content by polarisation methods. Basic lead acetate has been the widely used clarifying agent. Due to its toxicity, alternate non-toxic clarifying agents are now being tried. Aluminium hydroxide is tried in this research. Results obtained from this research show that aluminium hydroxide can be used for clarifying sugar solutions from raw sugar and high purity samples like residual syrups from centrifugals. Low purity samples like third crop syrups could not be clarified with aluminum hydroxide due to their high impurity content. Instead, a mixture of lead acetate and aluminium hydroxide is used.