



**THE EFFECT OF 2-AMINO-2-METHYL-L-PROPANOL
ON STABILIZATION AND PROPERTIES OF LATEX
AND LATEX MIXES USED IN LATEX DIPPING
OPERATIONS**

BY

W. P. R. LIYANAGE

This thesis was submitted to the Department of Chemical & Process Engineering at University of Moratuwa as a partial fulfillment of the requirement for the Degree of Master of Science in Polymer Technology.

DEPARTMENT OF CHEMICAL AND PROCESS ENGINEERING
FACULTY OF ENGINEERING
UNIVERSITY OF MORATUWA
SRI LANKA

2010

94506



Abstract

Ammonia preservation is widely used as the standard method of preservation for Natural Rubber (NR) latex. Because ammonia is volatile its concentration in latex is difficult to control. This study presents an alternative method of preservation of natural rubber latex using a less volatile material.

Centrifuged NR latex from Kalutara district was used for this investigation and 2-amino-2-methyl propanol (AMP) was added to centrifuged latex instead of ammonia. Controlled samples were prepared with ammonia as the standard preservative and in addition, ammonia and AMP mixed samples also was prepared for investigating the combined effect.

Prepared latex samples were continuously monitored for characterization against the controlled samples using standard test methods like MST, VFA number, pH, Viscosity, Alkalinity, etc. Compounded latex samples were prepared once in a week from these preserved samples and dipped gloves were made to investigate the processability of these latices and determine the physical properties like tensile strength, abrasion resistance, etc. of the glove films to compare the properties with the controlled samples. Results suggest that AMP can be used effectively as a preservative for NR latex. Although 0.2% AMP and AMPINH₃ mixes gave satisfactory results 0.7 % AMP preserved sample gave the best results.