# National University Of Science and Technology

*Faculty of Applied Sciences*
*Department of Applied Chemistry*



*Project Title:* Formulation of Erythromycin Stearate Tablets

*A Dissertation submitted in partial fulfilment of the Bachelor's Degree in Applied Sciences (Honours)*

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## ABSTRACT

A formulation of Erythromycin stearate tablets, 250mg/tablet, that meets the compedial specifications of the British Pharmacopoeia Volume II 1998(BP II 98) was developed and evaluated for its stability in a period of twenty four (24) months by accelerated stability testing.

Erythromycin is an antibiotic used in the pharmaceutical industry. The developed formulation consists of the active, microcrystalline cellulose, crosslinked polyvinylpyrrolidone, sodium lauryl sulphate, magnesium stearate and colloidal silica in the ratio (73.64: 9.66: 1.8: 2.3: 9: 3.6) respectively. The tabletting method used is direct compression using ryrocap punches. The drug is susceptible to low pH and the tablets were enteric coated to avoid inactivation by the acidic environment of the stomach. The enteric coat formulated consists of span 80 and castor oil as plasticizers, polyethylene glycol 6000 as a hardening agent, cellulose acetate phthalate as film former and ethanol and acetone as solvents.

The stability of the formulation in 24 months was tested for by accelerated stability testing. The tablets were stored at a temperature of 37°C $\pm$ 2°C and 75 $\pm$ 5% relative humidity in an accelerated stability chamber for twelve weeks. Assay, dissolution disintegration, friability, hardness, loss on drying and identification tests were carried out at intervals of three(3) weeks and the results obtained showed consistency and were concordant with compedial specifications.