

**INVESTIGATION OF SOME BIOACTIVE  
PHYTOCHEMICAL CONSTITUENTS  
PRESENT IN THE LEAVES OF *Ageratum  
conyzoides* L. (KHWAY-THAY-PAN) AND *Aegle  
marmelos* Correa (OKSHIT) USED IN THE  
TREATMENT OF BRONCHIAL ASTHMA**

**PhD (DISSERTATION)**

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## ABSTRACT

In Myanmar Traditional Medicine, there are many plants origin used to treat Bronchial Asthma. Only two plants, *Ageratum conyzoides* L. (Khway-thay-pan) and *Aegle marmelos* Correa. (Okshit) leaves were selected for this study. The direct relaxant effect of the 70% EtOH extract and water extract of these plants were studied *in vitro* model of tracheal chain preparation using guinea-pig. The extracts inhibited the contraction of guinea pig trachealis muscle induced by histamine stimulation. The aqueous and 70% ethanolic extract of khway-thay-pan leaves showed 59.6% and 72.9% relaxation response respectively whereas those of Okshit leaves were observed 50.4% and 45.6% relaxation response respectively. Some phytoconstituent were also isolated from the leaves of these two plants. From PE extract of *Ageratum conyzoides* leaves, stigmasterol (0.028%) was isolated by column chromatographic separation using silica gel. Besides, myristic acid (0.018%), palmitic acid (0.019%), 9-hydroxy nonan-2-one (0.013%) and Kaempferol (0.0382%) were obtained from EtOAc extract of defatted leaves of *Ageratum conyzoides*. In addition, 0.020% of  $\beta$ -sitosterol and 0.024% of N-2-[4-(3'-methyl butoxy) phenyl] ethyl cinnamide were isolated from PE extract and EtOAc extract of *Aegle marmelos* Correa leaves by using column chromatographic separation on silica gel, respectively. The isolated compounds were identified by chemical tests and by modern spectroscopic methods: UV, FT-IR, NMR and MS spectroscopy. Isolated stigmasterol, kaempferol and N-2-[4-(3'-methyl butoxy) phenyl] ethyl cinnamide were found to show 56.5%, 49.3% and 60.6% relaxation response, respectively *in vitro* of histamine induced tracheal chain isolated from guinea pig.