BIOACTIVITY STUDIES AND CHEMICAL ANALYSIS OF THE MEDICINAL HERB *Centella asiatica* (PEGAGA) LEAVES

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TABLE OF CONTENTS

ABSTRACT

BIOACTIVITY STUDIES AND CHEMICAL ANALYSIS OF THE MEDICINAL HERB *Centella asiatica* (PEGAGA) LEAVES

Bioactivity and chemical analysis of *Centella asiatica* leaves have been studied. Extraction process of *C. asiatica* take placed by using three different polarity of solvents which are hexane, ethyl acetate, and ethanol using cold extraction method. The highest percentage yield is ethanol crude extract which is 2.214 %. The thin layer chromatography (TLC) profile of *C. asitatica* leaves extracts has been identified with the best ratio of solvent system for hexane crude extract was (2:8) of hexane:chloroform. While for ethyl acetate crude extract was (7:3) of hexane:acetone. For ethanol crude extract was (1:9) of hexane:chloroform. The most obvious separation and noticeable colour spots was shown in hexane crude extract. The phytochemical screening studies revealed that there are many secondary metabolites presence in *C. asiatica* such as alkaloid, flavonoid, phenol, terpenoid, glycoside, tannin, steroid, and sterol. In addition, only ethyl acetate and ethanol extracts showed antioxidant activity by using TLC bioautography technique. Antibacterial activity was tested by using disc diffusion method towards *Bacillus subtilis*, *Staphylococcus aureus*, *Escherichia coli*, and *Salmonella typhi*. The highest zone inhibition diameter was recorded in ethanol crude extract against *Salmonella typhi* with the zone of inhibition 13.5 mm.