

**CYTOTOXICITY ASSAY OF SAPONIN CONTAINING EXTRACT FROM
SOURSOP LEAF AGAINST BREAST CANCER CELL**

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

CYTOTOXICITY ASSAY OF SAPONIN CONTAINING EXTRACT FROM SOURSOP LEAF AGAINST BREAST CANCER CELL

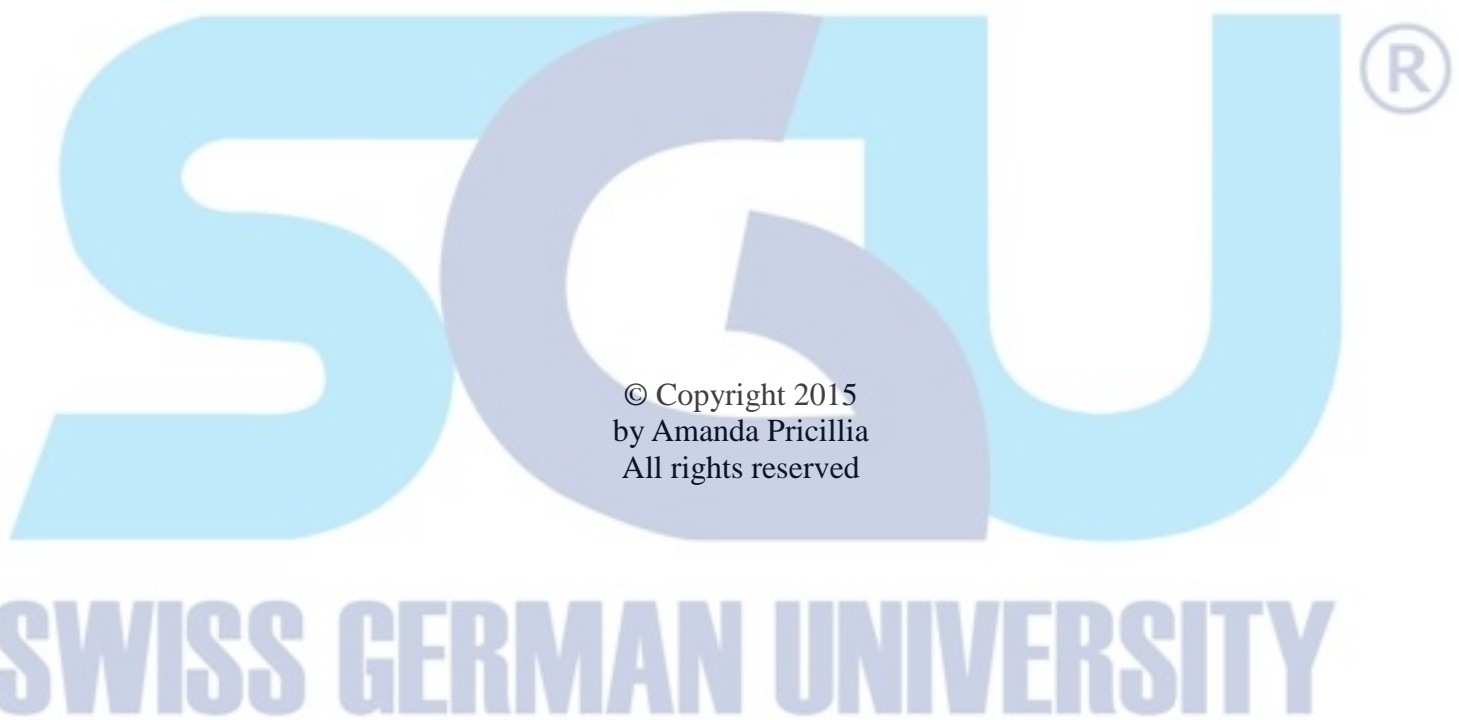
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This research was done to observe the activity of saponin contained in soursop leaf against breast cancer cell. The experiment has been done to determine the amount of saponin compound and its percentage of purity in soursop leaves extract. The extraction process was done by reflux extraction using 75% ethanol for 4 hours, followed by liquid extraction. The extraction was done in 2 different temperatures, namely 70°C and 90°C. Through the experiment it is found that temperature has no significant effect in the yield of saponin, however it has a huge contribute in influencing the percentage of purity. Percentage purity of extract which was extracted using the temperature of 90°C is 38.785% with an average percentage yield 2.01%, which is equivalent to 0.1005 grams of total saponin content from 5 grams powdered soursop leaves. LC-MS analysis detected the presence of saponin at the retention time 1.96, with a name of Holothurinoside A, a non-sulfated saponin with a molecular formula $C_{60}H_{96}O_{29}$ and molecular weight of 1280. In Brine Shrimp Lethality Test, the LC_{50} value of 10.16 ppm was obtained, and from the MTT assay, the extract containing saponin has an IC_{50} value of 60.103, which indicate that the extract is highly active and has a potent bioactivity.

Keywords: Annona muricata, saponin, Lethal concentration, Cytotoxic assay.



DEDICATION

I dedicate this thesis work to my family, friends, and all of people who support me during the thesis work and for all of cancer patients who are struggling to fight cancer.



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