

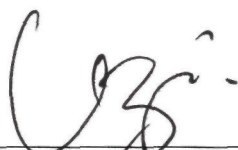
**ADVANCED PHYTOCHEMICAL SCREENING OF
Solanum torvum (FRUITS, LEAVES AND
STEMS)**

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**Final Year Project Report Submitted in
Partial Fulfilment of the Requirements for the
Degree of Bachelor of Science (Hons.) Chemistry
in the Faculty of Applied Sciences
Universiti Teknologi MARA**

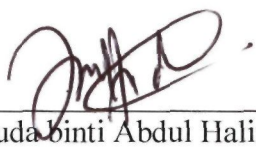
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This Final Year Project Report entitled “**Advanced Phytochemical Screening of *Solanum torvum* (Fruits, Leaves and Stems)**” was submitted by Nurfarahin binti Mahmud, in partial fulfilment of the requirements for the Degree of Bachelor Science (Hons.) Chemistry, in the Faculty of Applied Sciences, and was approved by

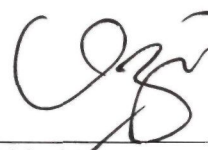


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ABSTRACT

ADVANCED PHYTOCHEMICAL SCREENING OF *Solanum torvum* (FRUITS, LEAVES AND STEMS)

Three parts of *S. torvum* plant were obtained which are fruits, leaves and stems. Extraction process of *S.torvum* takes place by using ethanol solvent and cold extraction method. The preliminary phytochemical analysis of the crude extracts of the *S.torvum* plant indicated the presence of major phytochemical compounds, including alkaloid, flavonoid, glycoside, phenol, saponin, steroid, tannin and terpenoid which are responsible for the observed antioxidant activity, antimicrobial activity, anti-inflammatory activity and anticancer activity. The observed results support some traditional medicinal plants as promising sources of potential antioxidants and medicinal compounds. Gas Chromatography–Mass Spectrometry (GC-MS) of the ethanolic extract of the *S.torvum* is presented in Mass spectra by using helium as carrier gas. The fragmentation patterns of the mass spectra were compared with those of the known compounds stored in the National Institute of Standards and Technology (NIST) research library. In the GC-MS analysis, about seven active components were detected which are hexadecanoic acid or ethyl ester, butanoic acid, urea, *N*-methyl-*N*-nitroso, 1-tetradecanamine or *N,N*-dimethyl, glycidyl palmitate, *n*- hexadecanoic acid and octadecanoic acid. The identification of phytochemical compounds is based on peak area, molecular weight and formula.