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Abstract

Phytochemical Screening and Antioxidant activity of *Trichosanthes cucumerina , Momordica charantia var muricata and Luffa acutangula*.†

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Abstract: Background- *TC, LA & MCM plants* (Family: Cucurbitaceae) are widely used in traditional medicine and are important sources of vegetables in the world. Many of these are known to have important medicinal properties & have been recommended in traditional medicine for various ailments. **Objectives**- This study aimed to evaluate the phytochemical constituents of test plants (TA, LA & MCM) of 95% ethanolic whole plant extracts as well as to study the antioxidant activity by DPPH assay. **Materials and Methods-** The plants were powdered mechanically extracted in the soxhlet apparatus followed by phytochemical screening of the extracts. Various classes of phytochemicals (viz., alkaloids, phenols, steroids, glycosides & saponins) were screened using standard methods (Harborne JB *et al* 1984, Harborne AJ *et al* 1998). The antioxidant activity was determined using DPPH assay (Koleva II *et al* 2002). **Results-** The phytochemical screening revealed the presence of **Glycosides** in *TC*, **Saponins** in *MCM & LA*, **Alkaloids** in *TC & MC* plants. However, **Phenols** & **Steroids** were found in all three plant species (*TC, LA & MCM)*. The DPPH assay to test the antioxidant activity involved measurement of IC_{50} & percentage inhibition with respect to AA. Results showed that the DPPH free radicals were scavenged by all the extracts in a concentration dependent manner. **Conclusions-** These dietary cucurbits showed appreciable antioxidant activity and are good sources of natural antioxidants. Future pharmaceutical uses can be deduced from these findings.

Keywords: Phytochemical; cucurbits; soxhlet method, free radical scavenging activity; antioxidants; oxidative stress.

Abbreviations: TC: *Trichosanthes cucumerina*, **LA:** *Luffa acutangula*, **MCM:** *Momordica charantia- muricata* **DPPH**: 2 , 2-Diphenyl-1-picrylhydrazyl **AA:** Ascorbic Acid

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