

***In-vitro* evaluation of antioxidant property of different parts of *Momordica balsamina* using ferric reduction antioxidant assay**

Amirthavarshini A¹, Abisha S¹, Nushrath K LF¹, Sivasinthujah S^{1*}, Srikanan R²

¹*Department of Pharmacy, Faculty of Allied Health Sciences, University of Jaffna,*

²*Department of Chemistry, Faculty of Science, University of Jaffna*

**ssinthujah@univ.jfn.ac.lk*

Introduction: Antioxidants are substances that can inhibit or delay unwanted reactions of oxidation through one or more mechanisms. Antioxidant phytochemicals found in medicinal plants could play an important role in the prevention and treatment of chronic diseases caused by oxidative stress. This study focused on evaluating the antioxidant properties of different parts of *Momordica balsamina* as its parts are traditionally used for treating diabetes in the northern province.

Objective: To evaluate the antioxidant activity of methanolic extracts of different parts of *Momordica balsamina*.

Methodology: Leaves, unripe fruits and ripened fruits of *M. Balsamina* were collected and allowed to dry in the shade and powdered. Powdered materials were extracted using maceration process with methanol. The mixtures were filtered, and solvents were evaporated using a rotary evaporator under reduced pressure. Methanolic extracts from different parts of *M. balsamina* were evaluated in triplicates for their antioxidant properties through ferric reduction antioxidant assay using ascorbic acid as a positive control. The antioxidant activity of plant parts was presented as ascorbic acid equivalents.

Results: The methanolic extract of ripened fruits, dried leaf and dried unripen fruits showed ascorbic acid equivalents of 56.6 µg/ 50 µg of dried sample, 23.1 µg/ 50 µg of dried sample and 25.7 µg/ 50 µg of dried sample respectively. Methanolic extract of unripe fruit showed the highest anti-oxidant potential among the three extracts.

Conclusion: Methanolic extracts of leaf, unripe fruit and ripened fruit of *M. balsamina* were found to have reduction potential and antioxidant capacity. Further studies are needed to screen the specific bioactive compounds which are responsible for their antioxidant activity.

Keywords: *Momordica balsamina*, Antioxidant, Ferric reduction