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Studies on phytochemical analysis, proximate analysis and antioxidant activity of *Cucumis melo* seed extract

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The present study was performed to investigate the phytochemical screening, proximate composition, total phenol, total flavonoid content and DPPH assay of seed extracts of *Cucumis melo*. Phytochemical screening of various extracts such as aqueous, ethanol, chloroform, acetone and petroleum ether of seed extracts, revealed the presence of tannins, saponins, phenols, flavonoids, cardiac glycosides, terpenoids, alkaloids and steroids. Butylated Hydroxy Toluene (BHT), Gallic acid (GA) and Quercetin (Q) were taken as standard in case of antioxidant activity, phenol and flavonoid content respectively. Total phenol and flavonoid contents were quantitatively estimated. Total phenolic content was estimated by Folin-Ciocalteu method and flavonoid content measured by Aluminum chloride method. Proximate analysis such as total protein, carbohydrate, ash, crude fibre and moisture contents were carried out following standard methods. The seed extracts were evaluated for antioxidant activities by DPPH (1,1-diphenyl-2-picrylhydrazyl) radical scavenging activity. Among five different solvents used, maximum antioxidant activity was found in aqueous extract (73.2%) followed by others. The total phenol and flavonoid content in seed extract were found to be 23.32 mg gallic acid equivalents (GAE)/g and 63.1 mg Quercetin Equivalent (QE)/g, respectively. The aqueous extracts from dry powdered seed of *Cucumis melo* had superior level of antioxidant activity. The powerful antioxidant effect is attributed to the greater amount of phenols and flavonoids compound in the ethanolic peel extracts of *Cucumis melo*.

Biography

B Janarthanam has completed his PhD degree in Botany from University of Madras. He has also worked as Chief Scientist & Project Principal Investigator in OMNI GREEN Organic Bio Park Private Limited as Project Co-PI & Research Associate in PG & Research Department of Botany, Pachaiyappa's College and as Project Co-PI & Junior Research Fellow in Shri AMM Murugappa Chettiar Research Centre. He has more 10 years of research experience in various fields of Secondary Metabolite production, Enzyme assays, Antioxidant activity and plant tissue culture techniques. He has served as Project Principal Investigator & Co-Principal Investigator in projects sponsored by Department of Science and Technology, New Delhi, National Medicinal Plant Board, New Delhi and M/s Shrivathsa Herbs & Species Pvt. Ltd. He has 18 international scientific publications in reputed journals and has participated and presented his research findings in more than 25 international and national conferences. He has also given oral presentations as Invited Speaker in the "Asia Pacific Conference of Plant Tissue Culture and Agribiotechnology" (APaCPA-2007) held in Malaysia and in the "International conference on Natural Products and Biomedical Technology", ICNPBT 2011 at Annamalai University.

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