

Table- 2 % Inhibition of roots of *Glycyrrhiza glabra* at different concentration

Conc. of Samples	Abs.-1	Abs.-2	Mean (Absorbance-sample)	DPPH radical scavenging activity (%)
Blank	0.064	0.064	0.064	0.00
0.05mg/ml	0.037	0.039	0.038	40.625
0.10mg/ml	0.034	0.032	0.033	48.438
0.15mg/ml	0.029	0.029	0.029	54.687
0.20mg/ml	0.023	0.022	0.0225	64.843
0.25mg/ml	0.020	0.020	0.020	68.75
0.30mg/ml	0.018	0.016	0.017	73.437

Conclusion

The DPPH antioxidant assay provides information on reactivity of the test compounds with a stable free radical. DPPH gives a strong absorption band at 517nm in visible region. The degree of reduction in absorbance measurement is indicative of the radical scavenging potential of the extract. The roots of *Glycyrrhiza glabra* showed the presence of various phytochemicals as tannins, flavonoids, glyceroids, terpenoids, etc. to which the medicinal properties of the plant are attributed. From the present study, it has been concluded that the *Glycyrrhiza glabra* is the good source of phytochemicals and anti-oxidants. Further screening is needed to identify the bioactive compounds responsible for antioxidant activities and its use in treatment of various diseases.

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Karela (*Momordica charantia* L) plant with Leaves, Flowers, Fruits and Seeds shown on the cover page.

Botanical Name: *Momordica charantia* L

Hindi Name: Karela

Sanskrit Name: Sushavi

English Name: Bitter Mellon or Bitter Gourd

Tamil Name: Pavakkachedi

Assamese Name: Karal



Plant description

M. Charantia (bitter melon or bitter gourd) is a flowering vine in the family Cucurbitaceae. It is a tropical plant that is widely cultivated in Asia, India, East Africa, and South America for its intensely bitter fruits that are commonly used in cooking and as a natural remedy for treating diabetes. It is a climbing perennial that usually grows up to 5 m, and bears elongated fruits with a knobby surface. It is a useful medicinal and vegetable plant for human health and one of the most promising plants for diabetes. The plant, which is green when it is young and yellowish-orange when it is ripe, fruits around September or October.

Medicinal properties

Bitter melon is a powerful nutrient-dense plant composed of a complex array of beneficial compounds. These include bioactive chemicals, vitamins, minerals and antioxidants which all contribute to its remarkable versatility in treating a wide range of illnesses. The fruits contain high amounts of vitamin C, vitamin A, vitamin E, vitamins B₁, B₂ and B₃, as well as vitamin B₉ (folate). The caloric values for leaf, fruit and seed were 213.26, 241.66 and 176.61 Kcal/100 g

respectively. The fruit is also rich in minerals including potassium, calcium, zinc, magnesium, phosphorus and iron, and is a good source of dietary fiber (bitter melon “monograph”, 2008). Medicinal value of bitter melon has been attributed to its high antioxidant properties due in part to phenols, flavonoids, isoflavones, terpenes, anthroquinones, and glucosinolates, all of which confer a bitter taste. The antidiabetic effects are triterpene, proteid, steroid, alkaloid, inorganic, lipid, and phenolic compounds

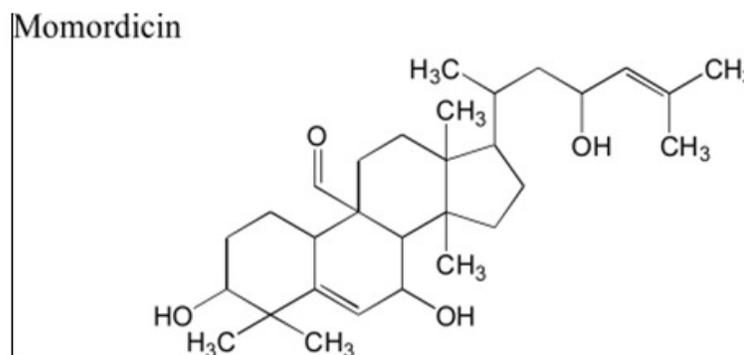
Phytochemistry

Bitter melon is used both as a medicine and as a vegetable. Fruit has medicinal properties such as antidiabetic, anticancer, anti-inflammation, antiviral, and cholesterol lowering effects. It contains many phenolic compounds that may have the potential as antioxidant and antimutagen. The fruit, stems, leaves and roots of bitter melon have all been used in traditional medicine to help treat ailments such as hyperlipidemia, digestive disorders, microbial infections and menstrual problems. Bitter melon has been shown to possess powerful antiviral properties that can stimulate the immune system and activate the body’s natural killer cells to help fight off viruses such as white

spot syndrome virus and human immunodeficiency virus.

Studies have also shown that bitter melon has anti-carcinogenic properties and can be used as a cytotoxic agent against many types of cancer. Studies have also shown that bitter melon modulates signal transduction pathways for inhibition of breast cancer cell growth and can be used as a dietary supplement for prevention of breast cancer.

The main constituents of bitter melon which are responsible for Several glycosides have been isolated from the *M. charantia* stem and fruit and are grouped under the genera of cucurbitane-type triterpenoids. In particular, four triterpenoids have AMP-activated protein kinase activity which is a plausible hypoglycaemic mechanism of *M. charantia*.



Active constituent of Karela (*Momordicin*)

Forth Coming Events

- **Dates:** 13 Jan 2015 to 18 Jan 2015.
Location: Vancouver, BC, Canada
Abstract: The PI3K-Akt-mTOR signaling pathway is one of the primary mechanisms for controlling cell growth, survival, and motility in response to intracellular signaling and extracellular cues. This meeting brings together scientists and clinicians from academia and industry to discuss the opportunities and liabilities of targeting the PI3K and related pathways in disease.
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Related subject(s): Biology; Oncology
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Venue: Hitex Exhibition Centre, Hyderabad, Telangana, India.
 The event will be attended by more than 8000 business delegates and eminent speakers. The delegates will include CEOs & top executives of the pharmaceutical industry, officers from regulatory departments, pharmacists from trade & profession, research & development personnel, pharmaceutical consultants, hospital administration, top officials from centre & state agencies, academicians and teachers from medical & pharmacy colleges. The expo would showcase latest technological developments in pharmaceuticals, drug & formulations; display of latest pharmaceutical machinery, plants, laboratory equipment, analytical instrument & cleanroom equipments; direct access to highly targeted senior pharma executives, buyers, procurement managers & contract manufacturers; and meeting with business development managers who are looking for new supplies, building strategic partnerships or entering into new ventures.
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