

# Study of Phytochemical Constituents from Moringa Leaves

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**Abstract:** Moringaoleifera commonly known as Drumstick tree is known to have valuable phytochemical constituents thus is a valuable medicinal plant of traditional medicinal system. The results obtained confirms the presence of flavonoids, glycosides, saponins, phenolic compounds, tannins, proteins and amino acids.

**Keywords:** Maceration, Phytochemicals, Solve.

**Introduction** - It is native tree abundantly found in sub-Himalayan regions of northern India(1). Moringaoleifera belongs to family Moringaceae family. It is found usually in drought prone areas, making it valuable and have been used to combat malnutrition. This plant is well known for its nutritional worth as well as for its medicinal references. Phytochemicals available in this is reported to have hypotensive, anticancer and antibacterial activity including the benefits for the treatment or prevention of infection or disease that may be from dietary administration of its extracts, poultice, oils, salves, decoctions etc.(2,3,4).

## Materials and Methods

**Sample:** The leaves of Moringaoleifera is collected first from nearby area of Jhabua district Madhya Pradesh (Govt. Polytechnic College Jhabua). This plant and leaf is authenticated by Dr S.Ray P.M.B. Gujarati Science College Indore. Collected leaves were washed in running tap water afterwards rinsed twice with distilled water brought dried under shade for two weeks at 30°C in hot air oven. These all were grounded into grinder then passed through filter of mesh size 0.2mm(5,6).

**Extraction Method:** 100 gm of prepared leaves powder was dissolved in 250 ml of ethanol using maceration for 48 hours. After this the residue were dried and procedure was repeated with other solvents like water, cyclohexane and petroleum ether. All were filtered with Whatmann filter paper No.1 and excess solvent were removed by evaporation. These obtained extract preparation were concentrated under reduced pressure using rotatory evaporator and kept at low temperature for further screening using standard tests for flavonoids, alkaloids, terpenoids, tannin, saponin, sugar, coumarin, phlobatannins, glycosides, sterols, steroid and protein.

**Table No. 1**

S.	Solvent Phytochemical	Water	Cyclohexane	P.E.
1.	Flavonoids	+	-	-
2.	Alkaloid	-	+	+
3.	Terpenoids	-	+	+
4.	Tannin	+	-	-
5.	Saponin	+	-	-
6.	Sugar	+	-	-
7.	Coumarin	-	+	+
8.	Phlobatannins	+	-	-
9.	Glycosides	+	-	-
10.	Sterols	-	+	+
11.	Steroids	-	+	+
12.	Protein	+	-	-

**Result and Discussion:** The finding of phytochemical screening of Moringaoleifera are given as above in **Table-No.1**. This screening confirms the presence of phytochemicals like flavonoids, alkaloids, terpenoids, tannins, saponins, sugar, coumarin, phlobatannins, glycosides, sterols, steroids and protein in moringaoleifera leaves. These findings also support the basic of solubility as like dissolves like.

Due to polarity flavonoids, tannin, saponin, sugar, phlobatannins, glycosides and protein are soluble in polar solvent like water while alkaloids, terpenoids, coumarin, sterols, steroids are soluble in nonpolar solvents like cyclohexane and petroleum ether.

**Conclusion:** Moringaoleifera leaves are rich in terms of nutritional aspects as found many phytochemicals are present in its extract.

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