ABSTRACT
Background: Atibala' means 'Ati' means very and 'Bala' means powerful, referring to the properties of this plant as very powerful Abutilon indicum (Linn.) is three meter in height. Traditionally, Root and bark are used as aphrodisiac, anti-diabetic, neuron tonic, and diuretic. It is proved that this plant contains rich amount of carbohydrates, proteins and amino acids, saponins, flavonoids, glycosides, phytosterols and phenolic compounds.
Objective: The objective of the present study was to determine the total carbohydrate content in Atibala (Abutilon indicum)
Materials & Methods: The total Carbohydrate content was estimated spectrophotometric ally by Phenol Sulphuric acid method.
Results: The results showed that root of Atibala (Abutilon indicum) are rich source of Carbohydrates. The root extract of Atibala showed highest Carbohydrate content (34.95%).
Conclusion: Atibala shown that the carbohydrate content is 34.95% for performing bodily function carbohydrate is essential sources for living organism, low carbohydrates intake results to muscle breakdown. This was the rapid spectrophotometric method by Phenol sulphuric acid.
Keywords: Atibala (Abutilon indicum), Carbohydrates, Phenol sulphuric Acid Method.
Study and Article History: Sample Received at 06/07/2022 study conducted in ACRL, Revised on 22/07/2022 & published in Avishkara Vol 1, Issue 3, Aug 2022.

INTRODUCTION:
Atibala, scientifically called Abutilon Indicum (Linn), belongs to the Malvaceae family. It is known as Country mallow in English, Kanghi in Hindi, and Atibala in Sanskrit. It’s a perennial shrub that grows up to

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WWW.Avishkara.in
DOI:
https://doi.org/10.56804/Avishkara.2022.1302
3 meters tall. The plant can be found in India, Sri Lanka, America’s tropical regions, and Malaysia. It grows as a weed in sub-Himalayan areas, up to 1200 meters in elevation, and in hotter portions of India.

Atibala is a medicinal plant used in our Traditional System of Medicine to address various health problems. Plant content Mucilaginous compounds, asparagines, saponins, flavonoids, and alkaloids are found throughout the plant, Atibala contains various essential oils like α-pinene, caryophyllene, caryophyllene oxide, endesmol, farnesol, borenol, geraniol, geranyl acetate, elemene, and α-cineole. Atibala acts as a demulcent, aphrodisiac, laxative, diuretic, and sedative. It has been used to treat inflammation, piles, gonorrhoea and boost immunity. Aphrodisiac, anti-diabetic, antipyretic, anthelmintic, nerve tonic, and diuretic are properties of the root and bark. It may be useful in treating haematuria and leprosy. The juice from its leaves has been used to make an ointment to help heal ulcers quickly. Its extract is also used to treat bronchitis, diarrhoea, gonorrhoea, and bladder inflammation and reduce fever. Atibala can also be used to clean wounds as well as to treat vaginal infections and as an enema.

The present study was carried out to determine total carbohydrate content by using the phenol sulphuric acid method. It measures the total carbohydrate present in the sample. Atibala is mentioned as having Madhura Rasa (Taste), Laghu - Snigdha - PichchhilaGuna (Property), ShitaVirya (Potency), Madhura Vipaka (Metabolic property) and Vatapittahara Karma (Action) etc. and attributed Balya, Kantivardhaka, Grahi, Ojovardhaka, Brinhana, Krimighna, Dahahara, Vatahara, Rasayana, Mutrajanana, Snehana, Mridurechana, Vajikara, Kasahara and Vedanahara properties hence study aimed to determine the total Carbohydrates in the Atibala.

### MATERIALS & METHODS:

**Collection and Identification of plant material:** The roots of plant material were collected from Shree Jagadguru Gavisiddheshwara Ayurveda Medical College Pharmacy, Koppal, Karnataka and authenticated by taxonomist The plant material was washed using distilled water and dried under the shadow. It was grated to form a fine powder. The powder was stored in a airtight container until further use.

**Extract preparation:** The 100mg powdered sample was weighed and taken in a test tube, to this added 5ml of 2.5N HCl and boil on water bath for 3hrs to hydrolyse. Cooled to room temperature. To this added sufficient quantity of solid sodium carbonate(Na$_2$CO$_3$) till effervescence ceases. It indicates complete neutralization and then filtered and used further.

**Estimation of Total Carbohydrate:** 100mg of glucose was taken in the test tube. To this added 5ml 2.5N HCl and boil on a water bath for 3hrs to hydrolyse. Cooled to room temperature. To this added a sufficient quantity of solid sodium carbonate (Na$_2$CO$_3$) till effervescence ceases. It indicates complete neutralization and then filtered. Pipette out 0.2, 0.4, 0.6, 0.8, 1ml of working standards in the series of test tube. Then pipette out 0.2 ml of the sample solution. Makeup to 1ml with water. Set blank with all reagents without sample.1ml of 5% phenol solution was added to each tube. To this 5ml 96% H$_2$SO$_4$ was added and shake well. After 10min shake the content in the tubes and place in a water bath at 25-30°C for 20min in hot acidic medium glucose was dehydrated to hydroxymethyl furfural. This forms a green colored product with phenol. This colour intensity was measured at 490 nm. Finally, total amount of carbohydrate was calculated by using following formula.
Table 1: Absorbance at 490 nm with different concentration of working standard of glucose solution.

**CALCULATION:**

The percentage of total carbohydrate content present in Abutilon indicum determined as follows:

Absorbance corresponds to 0.2 ml of test sample = x mg of glucose

100 ml of sample solution contain = x/0.2 *100 mg glucose = % of total carbohydrate present.

Absorbance of sample was found to be 0.3730

Therefore = (0.0699/0.2) 100 = 34.95% total carbohydrate content present.

**RESULTS AND DISCUSSION:**

The results for total Carbohydrate content in the Atibala species are presented in the Table 1. And it is expressed in terms of percentage. The Atibala root showed 34.95% of carbohydrates. The carbohydrate content was revealed in the roots of Atibala.
CONCLUSION:

The total carbohydrate content in Atibala was 34.95%, the Atibala shows good quantity of carbohydrates. The present study revealed the Carbohydrate contents in the root of Abutilon indium which is medicinally important plants and we can utilize as the source of carbohydrates.

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