

Industrial Chemistry 2020-Title: Preliminary studies on the physicochemical properties of the root of *Aristolochia albida* plant - Yahaya. Mobmi - Federal Polytechnic

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Abstract

The root of *Aristolochia albida* plant is believed to have good medicinal values. Other cultures believed that it has some mystical powers. The root of *Aristolochia albida* were obtained, dried and pulverized. It was used for the physicochemical analysis of the components present. The hexane, aqueous and methanolic extracts were phytochemically screened to determine the secondary metabolites present. Also, the root sample was used for proximate and spectrophotometric analysis. The results showed that both the aqueous and methanol extracts of the root of *Aristolochia albida* plant contain phytochemicals like alkanol, tannin, flavonoid, cardiac glycoside and Terpenoids whereas the extract of n-hexane contain alkanol, tannin, flavonoid, cardiac glycoside, saponin and Terpenoids. Also, the proximate analysis of the extracts showed that the root of *Aristolochia albida* had ash content of 11.83(mg/100g), Carbohydrates of 45.37(mg/100g), Crude protein of 19.36 (mg/100g), Fat of 10.21(mg/100g), Crude fibre of 9.38(mg/100g) and Moisture content of 3.75(mg/100g). The mineral contents of the plant showed that K was 24.93(mg/100g), Na was 33.54 (mg/100g), Ca was 33.38(mg/100g), Mg was 39.53 (mg/100g) and Zn 47.83(mg/100g). More studies should be carried out to determine its mystical powers and the component responsible for that.

There are around 500 species in the family *Aristolochia* and most of these species are conveyed in the tropical district, with certain exemptions range as north as Canada, Scandinavia, and Northern Japan. They may develop as climbing plants, as short crawling spires and a couple are bush like (Hutchinson, 1973, Watson and Dallwitz, 1992, Gonzalez, 1999). *Aristolochia* species are herbaceous perennials, undershrubs or bushes, regularly scandent, scrambling, twining, once in a while lianas, for the most part with prostrate or tuberous rhizomes or rootstocks, and substitute, pinnate, polymorphic or lobed leaves bearing fundamental oils. Types of *Aristolochia* were broadly disseminated in tropical, subtropical and calm areas of the world.

In the period somewhere in the range of 2004 and 2011 more than eighteen types of *Aristolochia* have been examined for

synthetic constituents around the globe, and different constituents have been portrayed. The optional metabolites from *Aristolochia* species cover 16 significant gatherings arranged by their synthetic structures, including aristolochic acids and esters, aristolactams, aporphines, protoberberines, isoquinolines, benzyloquinolines, amides, flavonoids, lignans, biphenyl ethers, coumarins, tetralones, terpenoids, benzenoids, steroids, and others. The aristolochic acids were host of phenanthrene inferred metabolites in which the aristolactams additionally had the comparative skeleton. The recognized terpenoids can additionally be partitioned into three subgroups: mono-, sesqui-, and diterpenoids.

Aristolochia albida is a lasting climbing plant, as a rule with herbaceous stems however some of the time getting more woody, particularly close to the base, and persisting

The unsavory smelling stems, which twine around different plants for help, are normally under 3 meters in length yet can be up to 10 meters. The root and leaves are gathered from wild plants for neighborhood restorative use. The root is sold in neighborhood markets

The unpleasant tasting root is utilized as a tonic and stomachic, and furthermore as a treatment for Guinea worms

The ground rootstock is a fixing in a solution for colds

The root, blended in with lime-juice, is given in instances of snake-chomp, scorpion-stings, etc.

To dispose of guinea-worm, the leaf might be applied all alone, or a poultice made out of the powdered root with the seeds of cress (*Lepidium sativum*), garlic (*Allium sativum*) and local natron. An implantation of a similar blend is flushed simultaneously

An implantation of the dried leaves, at times with dried root added, is utilized as an anthelmintic

The leaf is applied to certain (undefined) difficult skin-illnesses, and squashed and blended in with castor-oil is applied topically on pimples. The plant (part not determined) is utilized as a medication for treating intestinal sickness

In nearby medication the foundation of this species is most likely now and then mistook for that of *Cissampelos* (*Menispermaceae*), and furthermore seems, by all accounts, to

be tradable with *A. bracteolate*.

sBiography

Yahaya Mobmi Musa is about to complete his PhD studies as an Industrial Chemist from Abubakar Tafawa Balewa University, P. M.B. Bauchi, Nigeria. He is currently a Principal Lecturer with the General Studies Department, Federal Polytechnic, P. M. B 0231, Bauchi, Nigeria. He had worked in

Sunseed Nigeria PLC, Zaria, Nigeria as a Refinery supervisor (which is a Vegetable oil production company). He had attended several Conferences and has written several scholarly and reputable journal papers. He has served in several committees like the Research and Publication committees. He had initiated several researches that involved plant, Production or Industrial Chemistry.