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FORMULATION AND DEVELOPMENT OF GREEN HERB MIX

A. S. UTHAYARAGHAVI,

B. Department of food science and nutrition, Dr.NGP Arts and Science college, Coimbatore, India.

ABSTRACT:

Betel leaf (BL) plays an important role since ancient culture. Its use in India dates back to 400 BC. Importance of BL has been described in ancient books of Ayurveda. the quantitative determinati the calibration, validation and analysed data sets. These errors amounted Explored for their unique medicinal properties, the leaves of Piper betel , an evergreen perennial vine, are a reservoir of phenolics with antimutagenic, antitumor and antioxidant activities. Abutilon indicum is known as "Atibala" in Sanskrit. Literally "Ati" means very and "Bala" means powerful, referring to the properties of this plant as very powerful. Abutilon indicum is a hairy herb or under shrub distributed throughout the tropica. In traditional systems of medicine, various plant parts such as roots, leaves, flowers, bark, seeds, and stems have been used as antioxidant, demulcent, laxative, diuretic, analgesic, anti-inflammatory and antiulcer agents. The leaves are reported to be used by traditional practitioners in cases of inflammatory joint disorders as folklore remedy. The Abutilon genus of the Malvaceae family comprises of about 150 annual or perennial herbs, shrubs or even small trees widely distributed in the tropical and subtropical countries of America, Africa, Asia and Australial. It needs only heat and sun and grows even in dry and poor soils. It is quite common in India on road sides and waste places, growing usually after the rains and flowering during winter. In Poland, it is also cultivated for its ornamental value.

(Key word : Banana leaf, Betil leaf, Abutilon indicum).

INTRODUCTION

In India, Betel leaf (BL) plays an important role since ancient culture. Its use in India dates back to 400 BC. As per ancient books of Ayurveda, Charaka, Sushruta Samhitas, and Kashyapa Bhojanakalpa, the practice of chewing BL after meals became common between 75 AD and 300 AD. Toward the 13th century, European traveler Marco Polo recorded betel chewing among kings and nobles in India.

Importance of BL has been described in ancient books of Ayurveda. Use of BL was known for centuries for its curative properties. In Chinese folk medicine betel leaves are used for the treatment of various disorders and claimed to have detoxification, antioxidation, and antimutation properties. There are number of research experiments on BL, where the leaf extract, fractions, and purified compounds are found to play a role in oral hygiene, and to have various properties including anti-diabetic, c a r d i o v a s c u l a r, a n t i . i n f l a m m a t o r y immunomodulatory, anti-ulcer, hepato protective, anti-infective Patents were also awarded for some of the biological activities like anti inflammatory, anti-cancer, and immunomodulatory associated with the leaf extracts and purified compounds.

Piper betel L. belongs to family Piperaceae commonly known as Paan. The leaves are pungent, bitter, sweetish, acrid in nature. It has got large number of biomolecules which show diverse pharmacological activity a long wi t h c a r m i n a t i v e , s t o m a c h i c , antihelminthic, tonic, aphrodisiac, laxative activities. The leaves are used for treating cough, foul smelling in mouth, ozoena, bronchitis, clears throat, vulnery and styptic. In the present experiment four different extracts (water, methanol, ethyl acetate and petroleum ether) of Piper betel leaves were tested against four different pathogenic bacteria namely Streptococcus pyogenes, Staphylococcus aureus, Proteus vulgaris and Escherichia coli. Further few known and unknown metabolites were isolated from these extracts. Structural elucidations of new metabolites were done by different analytical techniques like NMR. Mass and IR spectroscopy. Later on anti-oxidative and anti-haemolytic activities were determined. Anti oxidative studies were done by BARS and DPPH method. Anti-haemolytic activity was determined using erythrocytes model and the extent of lipid peroxidation of the same was also determined.

M. balbisiana is a species of banana, which is popular in Thailand. All parts of the banana plant can be used: the fruit and inflorescences can be used as food; and the roots and trunks can be used as herbal medicines. The trunk can be used to make fiber to weave ropes. Banana leaves also have a wide range of applications because they are large, flexible, and waterproof. So, they are used for cooking, wrapping and serving food. They are also used for decorative and symbolic purposes in Buddhist ceremonies.

Abutilon indicum (Linn.) activity of crude hexane, ethyl acetate, petroleum ether, acetone and methanol extracts of five medicinal plants, Abutilon indicum, Aegle marmelos, Euphorbia thymifolia, Jatropha gossypifolia and Solanum torvum were assayed for their toxicity against the early fourth-instar larvae of Culex quinquefasciatus. The larval mortality was observed after 24 h exposure. All extracts showed moderate larvicidal effects; however, the highest larval mortality was found in petroleum ether extract of A. indicum. In the present study, bioassay-guided fractionation of A. indicum led to the separation and identification of a β -sitosterol as a potential new mosquito larvicidal compound with LC50 value of 11.49, 3.58 and 26.67 ppm against Aedes aegypti L, respectively. IH NMR, 13C NMR and mass spectral data confirmed the identification of the active compound. B. sitosterol has been recognized as the active ingredient of many medicinal plant extracts. All the crude extracts when screened for their larvicidal

activities indicated toxicity against the larvae of *C. quinquefasciatus*. This article reports the isolation and identification of the β -sitosterol as well as bioassay data for the crude extracts. There are no reports of β -sitosterol in the genus *A. indicum*, and their larvicidal activities are being evaluated for the first time. Results of this study show that the petroleum ether extract of *A. indicum* may be considered as a potent source and β -sitosterol as a new natural mosquito larvicidal agent.

Out of the 150 different species of *Abutilon* which are reported, only a few of these find medicinal importance out of which the prominent ones are:

- I. *Abutilon indicum*.
- II. *Abutilon theophrashti*.
- III. *Abutilon grandiflorum*
- IV. *Abutilon muticum*
- V. *Abutilon pannosum*
- VI. *Abutilon megapotamicum*.

READY TO MIX

In recent years, there has been an increased demand for processed convenient foods, particularly for the Armed Forces. Such foods should provide energy and other nutrients in the required proportions to promote health. This study evaluated the effect of storage on the resistant starch (RS) content of selected ready-to-Mix (RTM).

HISTORY OF BANANA LEAF POWDER

Banana flowers are highly susceptible to enzymatic browning. Different pretreatments are generally used to reduce enzymatic browning and also helpful to reduce the bitterness of banana flowers.

HEALTH BENEFITS OF BANANA LEAF POWDER

Most of the Indians as well as others, who are interested in Indian culture, are aware that there is a practice of eating on banana leaves in the southern part of the country

NUTRITIONAL PROPERTIES OF BANANA LEAF POWDER

1. **Healing Allantoin:** Banana leaf has allantoin that acts as an astringent. This helps in processing wounds and injuries faster than other healing compounds.
2. **High Antioxidant:** Degenerative diseases such as Alzheimer's, dementia and cancer can be prevented through high antioxidants found in banana leaf.
3. **Skin glow:** Inflammatory agents of banana leaf are great for skin and any skin irritation in ayurvedic treatments banana leaf is used to wrap medicine on skin for faster improvement.
4. **Reduces Cellulite:** Mashed banana leaves can help cut cellulite on the human body.
5. **Cit Down Calories:** To reduce weight, garlic and banana leaves tea mixture taken as a top nourishment drink that burns belly fat.

- Boosting Immunity
- Reducing Fever
- Curing sore throat
- Limiting free radicals
- Improving healthy skin

HISTORY OF BETIL LEAF

The leaves of *Piper betel* (locally known as Paan) have long been in use in the Indian local system of medicine for its antioxidant and antimicrobial properties. In the present work, the antimicrobial activity of ethanol extract of *Piper betel* leaves was evaluated against human pathogenic bacteria (both gram-positive and gram-negative).

NUTRITIONAL PROPERTIES OF BETIL LEAF

Betle leaves are the most valued part of the plant, in the past were routinely used as a chewing agent to restrict offensive breath and they contain tannins, chavicol, phenyl, propane, sesquiterpene, cyneole, alkaloid, sugar and some essential oil and found various medicinal value, digestive, appetizer, aromatic, expectorant, stimulant, antibacterial, euphoria-inducing, antiprotozoan, carminative, anti-fungal and aphrodisiac etc. The leaves are also supposed to harden the gum, conserve the teeth and to prevent

indigestion, bronchitis, constipation, congestion. This review for the first time provides information on therapeutically effects and also addresses the various mechanism.

HEALTH BENEFITS OF BETEL LEAF POWDER :

1. Anti-diabetic Agent.
2. Lowers High Cholesterol Levels
3. Anti-cancer Agent
4. Anti-microbial Agent
5. Helps in Wound Healing
6. Anti-asthmatic Agent
7. Helps Overcome Depression
8. Improves oral health
9. Gastro Protective Activity
10. Anti-Malarial agent

HISTORY OF ABUTILON INDICUM (Thuthi) POWDER :

Abutilon indicum (Indian abutilon. Indian mallow) is a small shrub in the family Malvaceae, native to tropical and subtropical regions. This plant is a valuable medicinal and ornamental plant, its roots and leaves being used for curing fevers. It has been widely introduced outside of its native range, and is considered invasive on certain tropical islands. In traditional medicine, A. indicum various parts of the plant are used as a demulcent, aphrodisiac, laxative, diuretic, sedative, astringent, expectorant, tonic, anti-convulsant, anti-inflammatory, anthelmintic, and analgesic and to treat leprosy, ulcers, headaches, gonorrhoea, and bladder infection. The whole plant is uprooted, dried and is powdered. In ancient days, maidens were made to consume a spoonful of this powder with a spoonful of honey, once in a day, for 6 months until the day of marriage, for a safe and quick pregnancy. **HEALTH BENEFITS OF ABUTILON INDICUM POWDER :** The entire plant used medicinally as a bitter tonic, diuretic, inflammation, rheumatism jaundice and ulcer. In the indigenous system of medicine, it is reported that the decoction of the leaves are used to relieve haemorrhoidal pain, as a lotion for nose, analgesic, antipyretic, appetizer and the ulceration of mouth. In literature, it has been reported as an antibacterial, antiviral and antimalarial. It showed analgesic activity for the ethanolic leaf extract on laboratory animals. It is also used by the Hmong people of northern Thailand in religious ceremonies to communicate with ancestral spirits. Abutilon indicum is a common Indian shrub, belonging to the family Malvaceae; Also known as Mallow in English, Abutilon indicum is used as a medicinal plant. It has been extensively used as a traditional medicine as a laxative, emollient analgesic, anti-diabetic, anti-inflammatory and blood tonic agent and also in the treatment of leprosy, urinary disease, jaundice, piles, relieving thirst, cleaning wounds and ulcers, vaginal infections, diarrhoea, rheumatism, mumps, pulmonary tuberculosis, bronchitis, allergy, blood dysentery, some nervous and some ear problems. **METHODOLOGY : SELECTION OF RAW MATERIALS** All the raw materials are procured from the local store of Coimbatore, TamilNadu and stored at room temperature good quality of banana leaf, fresh betel leaf, Abutilon Indicum leaf (Thuthi) Banana leaf , Betel leaf and Abutilon indicum were s Hot air drier and powdered. **PROCESSING:** The product was formulated in three variation V1, V2, and V3 by altering ingredients such as Banana leaf powder, Betel leaf powder, Abutilon indicum (Thuthi) Dehydration of leaves:- Dehydration of leaves was Hot air drying the dehydration process is removal of moisture content from the leaves and it increases the shelf life of the product.

FORMULATION OF LEAVES POWDER

INGREDIENTS:-

- 1) Banana leaf powder
- 2) Betel leaf powder
- 3) Abutilon indicum powder
- 4) Banana leaf ,betel leaf, Abutilon indicum (Thuthi)
- 5) Washing
- 6) Hot air drying (180°C)
- 7) Make a powder
- 8) Sieve well
- 9) Bottling
- 10) Labelling
- 11) Storage



STANDARDISATION OF GREEN HERB MIX

S.NO	INGREDIENTS	V1	V2	V3
1	BETEL LEAF POWDER	50	40	30
2	BANANA LEAF POWDER	30	40	50
3	ABUTILON INDICUM (THUTHI)	20	20	20

SENSORY EVALUATION

When the quality of a food product is assessed by means of human sensory organs the evaluation is said to be sensory or subjective on organoleptic every time food is eaten a judgement is made. In sensory quality is a combination of different senses of perception comming into play in choosing and eating a food appearance, flavour and mouth full decide.



PRODUCT FORMULATED BY INCORPORATING THE STANDARDIZED HERB MIX

The standardized green herb mix was incorporated into many Recipes.

1.Paneer



2. Ice cream



3.Biscuits



4.Butter



5.Chocolate



CONCLUSION

The present study entitled. Formulation of green herb mix were carried out with the following

- * To develop Green Herb Mix.
- *To evaluate the organoleptic properties of the developed product.
- *To determine the nutrient composition of the Green Herb Mix.
- *To standardize the Green Herh Mix.
- *To Analyse the packaging and storage of the product.