



Formulation and Evaluation of Face Wash from Azadirachta Indica .

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Abstract :

Neem { Azadirachta indica } is commonly called as 'Indian Lilac' or 'Margosa', belongs from the family Meliaceae, subfamily Meloideae. It possess the maximum useful non-wood products like, leaves, bark, flowers, fruits, seed, gum, oil and neem cake etc., other than any other tree species. These non-wood products known to the antiallergenic, antidermatic, antifeedent, antifungal, antiinflammatory, antipyorrhoeic, insecticidal, larvicidal, nematocidal, spermicidal and other biological activities. The stems, roots, leaf, fruits of the tree are made into capsules, tablets, lotions, creams, soaps, and shampoos, and are used to treat a varieties of conditions. Various chemical test for phytochemical studies are discussed. It has an history about its medicinal properties. Each and every part of tree is used in the Indian systems of medicines. It is important today for its variety of medicinal uses. Neem is used for various types of diseases like dermatitis eczema, acne, bacterial and fungal infections and other skin disorders. It is also now used in the manufacture of modern day medicinal, cosmetics, toiletries and pharmaceuticals etc. Various parts of the tree have shown the biological and pharmacological activities.

Introduction :

The neem tree (Azadirachta indica) is a tropical evergreen tree. Azadirachta indica is a Latinized name of Neem. It is used in Ayurvedic medicine form more than 4000 years for its medicinal properties. Neem is also called as 'Arista' in Sanskrit it means Perfect . Most of the plant parts like Seeds, Fruits, Leaves, Bark and Roots contained compounds with Antiseptic, Antiviral, Anti-inflammatory and Antifungal uses. The Sanskrit name 'NIMBA' it comes from the term 'NIMBATI SWASTHYAMDADATI' it means 'to Give Good Health'. In India it is commonly called 'Indian lilac' or 'Margosa'. Neem belongs to the family 'Meliaceae'. The Persian name of neem is 'Azad- Darakth- E- Hind' it means 'Free tree of India'. Neem tree is the most researched tree in world. It has been used in the fields of pest management, environment protection and medicine. Neem is a natural source of Insecticides and Pesticides. A Neem tree is normally starts fruiting after the 3 to 5 years. After the 10 years it becomes fully productive. From the 10 year it can be produce up to 50 Kg of fruits annually. The plant is reported to live up to the minimum 2 centuries. Neem tree

requires little water and Sunlight. Neem tree is grows naturally in the areas of where the rainfall is in the range of 450 to 1200 mm. It can be grow well in the temperature in range of 0°C to 49°C.

The range of pH for the growth of Neem tree it is between 4 to 10. Neem tree grows in the almost all types of the soil. Neem has a long history of use in both of Indian medicine traditional and Ayurveda. Each and every part of the neem tree has been used in the Indian Ayurvedic Medicine as well as Unani Systems of Medicines. There are different types of the extracts of different parts of the Neem tree, like anti-bacterial, anti-fungal, anti-viral. The Neem tree is supposed for reduce the chemical pollutants in the atmosphere.

Human beings are depended on the nature for their simple requirements like, medicines, shelters, clothing, flavors etc. In the large world's population, medicinal plants plays an a important role in the healthcare system. Where the herbal medicine has a history of long term use. The world health organization(WHO) estimates the 80% of the population living in the developing countries used as a traditional medicine for their primary health care. Neem tree is a multipurpose medicinal tree. Various parts of the tree such as flowers, leaves, seeds, and bark has been used as to the treat the various types of disease like headache, respiratory disorders, diabetes, malaria, dengue, chicken pox, dermal complications etc.

Morphology of Neem (*Azadirachta indica*) :

- Kingdom - Plantae
- Family - Meliaceae
- Subfamily - Melioideae
- Division - Magnoliophyta
- Class - Dipsacales
- Order - Rutales
- Sub-order - Rutinae





Neem Tree Description :

Neem tree is a very common tree found in India. There are all parts are bitter in the taste. Neem tree is grows by itself. The height of a Neem tree is 40 to 50 feet or more. Its trunk is small and straight having 6 to 9 feet diameter. Its small braches 9 to 15 inches long. There are 9 to 13 pairs of leaves. Neem tree leaves are thin. The flowers are in a yellow colour, small in size and round. The fruits of Neem tree is bitter and sometimes sweet in taste.

Locality Of Neem :

Neem tree has been grows as a wild tree in various countries like India, Bangladesh, Pakistan, Sri Lanka, Malaysia, Thailand, Indonesia etc. Currently Neem trees are seen growing successfully in 72 countries. Neem trees grows wild in sub-Himalayan tract and in forests areas. The tree is also found in various tropical regions. The highest plantation of nearly by 50,000 trees is at Arafat plains on the way of Mecca in the Saudi Arabia country for provide the shade to Haj pilgrims. The Neem tree occurs in India.

Common Names of Neem :

The Neem tree know by the different names in different language, areas and traditions.

Like, In India :

Hindi: Neem, Nimb

Sanskrit: Arishta, Ravipriya, Vranashodhakari, Nimba,
Prabhadra, Arkapadapa, Chhardana, Kitaka, Malaka, Shita,
Subhadra, Yavaneshta

English: Neem, Indian lilac

Urdu: Nim, Neem

Sindi: Nimmi

Gujarati: Daugava, Kohumba, Limbado

Kannada: Turakabevu, Huccabevu, Cikkabevu

Kokani: rooku

Malayalam: Vepa, Veppu, Rajaveppu

Punjabi: Bukhain, Drekh, Mahanim

Tamil: Vembu, Veppan, Arulundi

Telgu: Vemu, Yapa

In other Countries :

Spanish: Margosa, Nim

French: Azidarac, Azadira

Portuguese: Margosa

German: Niembaum

Sri Lanka: Kohomba

Farsi: Azad Darakht E Hindi (free tree of India)

Singapore: Kohumba, Nimba

Cnarese: Bevina, Bevu, Ollebevu

Pharmacological actions and studies :

A number of studies on Neem tree parts in recently years shows pharmacological effects or actions.

Some important pharmacological actions are as follows :

- Anti-bacterial :

The ethanolic extract of stem bark of Neem tree shows antibacterial activity against the Bacillus megaterium bacteria.

- Anti-fungal:

The bark of Neem tree shows antifungal activity against the *Aspergillus niger*.

- An-titumor :

Neem seed oil, bark, and leaves contain with the limonoids it will be useful for reduce the tumor and cancer. Aqueous extracts of Neem leaf and Neem oil shows the antiviral activity against HIV and Polio Viruses.

- Anti-inflammatory :

The aqueous extract of Neem tree leaves shows antiinflammatory activity. Aqueous and petroleum ether extracts of Neem leaves reduced the inflammation caused by *S. typhimurium* petroleum ether. Neem leaf extract was found for high effective than aqueous extract due to presence of steroids observed in petroleum ether extract.

- Anti-malarial :

The methanolic extract of Neem bark of gedunin shows antimalarial activity against the malaria.

- Anti-microbial :

The organic extracts from neem like, ether, chloroform, ethanol etc, were shows for its antimicrobial activity against the microbes. The chloroform shows strong antimicrobial activity.

- Anti-ulcer :

The aqueous solution of Neem tree leaves shows actions on antiulcer activity.

- Anti-viral :

The aqueous extract of Neem seeds shows antiviral activity against the viruses. Neem seeds are used for various types of viral infestations or viruses.

- Skin Diseases :

Neem tree has shows the activity against fungi, parasites, and viruses. It is most helpful for treating a various types of skin problems and diseases like psoriasis, eczema and other persistent conditions. By the Neem oil psoriasis is treated.

Method of preparation Face wash :

Neem Tree Leaves, Distilled Water, Turmeric Powder, Rose Water, Beaker, Stirring Rod Grinder Machine

- Take 50 gm of Neem tree leaves in beaker,
- Add 20 gm turmeric powder,
- Add 30 ml rose water and 70 ml distilled water and mix it,
- Then add the mixture in grinder machine and mixed it,
- Take the paste into the beaker,

- Add 30 ml of distilled water and Mix it with stirring rod.

Formulation and Evaluation :

Face Wash Type : Cream

Ingredient Type : Organic

Applied For : Oil Control, Skin Bright

Skin Type : Oily Skin, All Skin Types

Uses of Neem (Azadirachta indica):

It is now being used in the manufacture of modern day in medicinal, cosmetics, toiletries and pharmaceuticals. Neem tree has important today for its variety of medicinal uses. Neem is used in various disorders like acne, bacterial, fungal infections and other skin disorders.



The Neem Products. A. Twigs B. Leaves C. Fruits D. Seed (without endocarp) E. Seeds without endocarp.

Neem tree parts and their uses :

Seeds : cake and yield oil

Neem oil : Antiviral, Bactericidal, Fungicides, Insecticides, Insect repellents, Veterinary medicines etc. in medicinal uses.

Technical : Cosmetics, Hair oils, Lubricants, Propellants, Shampoos, Soaps, Tooth pastes etc.

Neem cake : Animal feed, Soil fertilizer, Soil moisturizer, Soil neutralizer, Soil protectant etc.

Leaves : Antidermatic, Antifungal, Anticlotting agent, Antitumour, Antiseptic, Antiviral, Cosmetics, Fertilizers, Insecticides, Insect repellents etc.

Twigs : Oral deodorant, Toothache reliever, Tooth cleaners etc.

Bark : Antiallergenic, Antidermatic, Antifungal, Antitumor, Deodorant etc.

Wood : Agricultural implements, Carts, Boats, Building articles, Furniture, Tools etc.

Flowers : Analgesic, Curries, Nectaries, Soaps, Stimulant.

Others : Food from fruits, Fuel wood, Glue, Honey, biogas.

Medicinal uses :

Indians are aware of medicinal properties of neem.

Neem has been extensively used in Ayurveda, Unani and Homeopathic medicine. Many disorders like inflammation, infections, fever, skin diseases, dental disorders treated with different parts of neem tree such as leaves, flowers, seeds, fruits, roots and bark. Neem leaf exhibits a wide range of pharmacological activities like anti-inflammatory, antiulcer, antimalarial, antifungal, antibacterial, antiviral, antioxidant, antimutagenic, anticarcinogenic and immunomodulatory. Ayurvedic literature lists various medicinal uses of neem. It describes neem bark to be cool, bitter, astringent, acrid and refrigerant and useful in tiredness, cough, fever, loss of appetite, worm infestation. The bark is reported to heal wounds and vitiate conditions of kapha, vomiting, skin diseases, excessive thirst and diabetes.

Neem leaves are reported to be beneficial for eye disorders and insect poisons and to treat vatic disorder. It is reported to be antileprotic. Neem fruits are bitter, purgative, antihemorrhoid and antihelminthic. Neem is called 'Sarvaroga nivarini' meaning 'the curer of all ailments'. Dried margosa leaves are burnt to repel mosquitoes. In India several viral diseases are treated with neem. Neem leaf paste has been used to treat small pox, chicken pox and warts. Neem twigs are used as tooth brushes in rural India and Africa. Dental gel containing neem leaf extract reduces the oral plaque index and bacterial count. Neem is used to treat malarial fever in ayurvedic medicine system.

Neem oil treated mosquito nets and mosquito repellent tablets are now available in the North-east India. Tablet suspension of the bark and leaf of neem showed moderate effect against malarial pathogen. Currently, studies on effect of administration of neem solutions on cancer, diabetes, heart disease and AIDS are being carried out. Injection of neem leaf preparation to tumor in reduced tumour growth. Good antioxidant activity was observed with neem leaf aqueous extract, flower and stem bark. Neem leaf extracts are antimutagenic. Aqueous extract of neem root, leaves reduced blood sugar level in rats.

Neem leaf and seed extracts exhibited antidermatophytic activity against dermatophytes *Trichophyton rubrum*, *Mentagrophytes*, *Trichophyton violaceum*, *Microsporum nanum* and *Epidermophyton floccosum* under in vitro conditions. Crude aqueous solvent extracts of neem tried against 25 strains of pathogenic bacteria wherein crude extract produced better results. The contraceptive property of neem oil has been reported. Neem leaf extract as spermatotoxic effect. The leaf extracts of neem showed 100% immobilization and mortality of human spermatozoa at a 4 mg dose within 20 seconds.

Industrial Uses :

At 2002, in the World neem conference Neem tree has promoting as a "Industrial Plant". Neem Oil is used in various industries like pharmaceuticals, cosmetics, disinfectants, rubber, bio-pesticide and textile industries. In industries many commercial preparations are currently available. In India Neem is highly used by many Ayurvedic drug industries. Neem oil and their powder neem used in various cosmetic preparations like, nail polish, nail oils, shampoos, conditioners etc. A new shampoo which is based on seed extract of neem was highly effective, more than other product. Neem cake a by product of neem oil industry is used for fertilizer and natural pesticide in farm. In soap production Neem oil is common used. Medicated Neem soaps are gaining more popularity. Prepared from Neem toothpaste is used in India, European countries. Neem is a source used for dental care products.

Neem seeds are supplied to the industries. India stands first in neem production. There are 5,40,000 tons of seeds are produced annually. 1,07,000 tons of Neem oil and 4,25,000 tons of Neem cake. Providing more amount of raw material for pesticide industry. In India this time to take right steps against the promoting Neem both for the benefit of farmers and industries.

Veterinary Uses :

In India Neem tree is used from centuries to provide health for recovery. It also has been mostly used as animal feed. In the Mahabharata there are five pandava brothers. In pandava Nakul and Sahadeva used to treat horses and elephants with neem oil and leaves preparations. Neem is used successfully to treat in the cases of stomach diseases like ulcers, intestinal etc. All parts of Neem like gum, bark, leaves, fruits, seeds are used for treat animals. Neem leaves has been used for antiviral agents against vaccinia, variola, fowl pox and newcastle disease viruses. Bark is effective against the diseases. Seed and kernel oil used as a antiseptic, antifungal and antibacterial agents. Insects like horn flies, blow flies and biting flies are controlled traditionally by using the mostly Neem leaves, Neem oil. Neem seed cake are used as a animal feed.

Neem leaves contained with the proteins, minerals. Buffaloes, goat, sheep, camel are fed with the Neem leaves. In the Neem oil long chain of fatty acids is used for poultry feed. The processed cake has wormicidal activity, it used as an excellent poultry feed.

Neem Conferences :

There are Many conferences have been conducted at the national and international level in World.

- 1) First International Neem Conference : Rottach-Egern, Germany, 1980.
- 2) Second International Neem Conference : Rauischholzhausen, Germany, 1983.
- 3) Third International Neem Conference : Nairobi, Kenya, 1986.
- 4) First World Neem Conference : Bangalore, India, 1993.
- 5) Second World Neem Conference : Queensland, Australia, 1996.
- 6) Third World Neem Conference : Vancouver, Canada, 1999.
- 7) Fourth World Neem Conference : Mumbai, India, 2002.

8) Fifth World Neem Conference : Coimbatore India, 2007.

Result and Conclusion :

Neem and its ingredients have therapeutics implication and have been traditionally used worldwide specially in India. In these project we have highlighted many of the interesting biological activities of *Azadirachta indica* like Antibacterial, Antiviral, Anti-inflammatory, antipyretics ,analgesic, Antioxidant, Skin diseases, antitumor, anti malarial, neuro protective, hepato protective, anti diabetic, anti ulcer activitiesand also this article gives information about mechanisam of action and medicinal uses of *Azadirachta indica* in human life.Though some herbal products of neem have been prepared but still there is lot of scope for the better utilization of this wonder plant.

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