



Exploring the Healing Properties of Cuttlefish Bone in Traditional Unani Medicine

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ABSTRACT

Cuttlefish bone (Kafe Dariya), a marine-derived substance, has held a outstanding region in Unani remedy for hundreds of years. Traditionally used to treat a extensive variety of conditions—which include pores and skin issues, digestive issues, respiration illnesses, and gynaecological troubles—its healing value is largely attributed to its wealthy mineral content material, mainly calcium carbonate, alongside hint factors like magnesium and phosphorus. This assessment objectives to discover the classical packages of Kafe Dariya, alongside its pharmacological homes, chemical composition, and relevance in contemporary clinical studies. Particular emphasis is positioned on its dermatological advantages, which include anti-inflammatory, antimicrobial, astringent, and wound-recuperation activities, which align with its conventional use in treating ulcers, burns, and pores and skin eruptions. Additionally, current studies advocate its capability in bone regeneration, dental care, and as a natural source for biocompatible materials. By bridging traditional Unani information with present day biomedical insights, this paper highlights the growing need for in-intensity pharmacological evaluations and properly-designed medical studies to validate its efficacy, make certain its safety, and probably combine it into contemporary therapeutic practices.

Keywords: Kafe Dariya, Samandar phane, Skin diseases, Sepia officinalis, herbal treatments

1. Introduction:

Kafe Dariya is a unique and not unusual drug of sea starting place used in the Unani device of medication. The Unani system of drugs is an historic recuperation gadget that specializes in herbal remedies. Most of the drugs used inside the Unani device of drug treatments are from plant beginning; except this, animal and mineral starting place pills are also used. Kafe Dariya is an animal-origin drug but as the content of this drug contains minerals and is used effectively by atibba, i.e., Unani physicians, to alleviate many pores and skin problems by way of balancing the body's herbal elements^{11, 17}. Unani medicinal drug has an extended records of treating pores and skin sicknesses using herbs and other natural components derived from animals and earth^{8, 12}. This article elaborates on how Kafe Dariya may additionally help with distinctive skin conditions.

Material and Methods:

This evaluate have a look at seemed into dependable Unani classical literature primarily based on their significance and comprehensiveness, such as Ibn e Bitar, Usmani, Najmul Ghani, Nadkarni^{8, 11, 17, 21, 26}, and these days posted papers on the impact of Kafe Dariya. In this observe, we attempted to assemble statistics from research published that had been accessible through reliable databases about the medicinal cost of Kafe Dariya which might be green in the treatment of pores and skin sicknesses.

Kafe Dariya (Cuttlefish Bone):

While Kafe Dariya is celebrated for its therapeutic capability in traditional systems of medication, inclusive of Unani, it's miles essential to consider that clinical validation of these claims continues to be wished. The integration of traditional understanding with contemporary research may want to beautify understanding and alertness in cutting-edge remedy. It is an first-rate supply of calcium, containing as much as ninety% calcium carbonate, in addition to aragonite, chitin, and other bio-inorganic factors including magnesium, strontium, iron, and hint amounts of copper and zinc. All these elements are clearly combined in the bone shape in their premier amounts^{7,8,9}.

Source and Collection:

Kafe Dariya is the internal shell of the cuttlefish, a mollusc observed in coastal waters, specially within the Mediterranean, Atlantic, and Indian Ocean. The bone is gathered from the shore while the cuttlefish dies and its body decomposes, leaving the shell behind^{3,27}.

Physical Description:

The bone is white, oval, and biconvex, with a calcareous outer layer and a yellowish chitinous internal layer. It is brittle, effortlessly overwhelmed, and has a barely salty taste^{17,27}.

Temperament (Mizaj) in Unani Medicine:

Different sources describe Kafe Dariya as having a Hot and Dry temperament:

- third degree^{13,11,18}
- 2nd degree⁸
- 1st diploma (Hot-Wet)¹⁵

Habitat and Behaviour of Cuttlefish:

Cuttlefish are active swimmers at night and rest on the ocean floor at some point of the day. They are carnivorous, feeding on small fish and crustaceans^{3,19}.

Physical Description of Kafe Dariya (Cuttlefish Bone):

- Size: 10 to twenty-five cm long and 4 to 8 cm huge.
- Shape: Oval or lens-shaped with a slightly curved structure.
- Layers:
 - o Outer layer – Hard, white, and calcareous (chalky).
 - o Inner layer – Soft, yellowish, and effortlessly crushable^{17,27}.

Collection of Kafe Dariya:

After cuttlefish die, their bodies decompose, releasing the internal shell (bone). These bones are accumulated from the seaside, particularly at some point of the monsoon season whilst cuttlefish naturally go with the flow ashore^{3,27}.

Special Features:

- Ink Sac: Cuttlefish possess an ink gland that releases black ink referred to as 'Sepia Ink,' which has a few medicinal applications³.

Safety and Precautions:

Although Kafe Dariya is typically taken into consideration safe, it's far vital to:

- Ensure proper purification earlier than use.
- Follow encouraged dosages to avoid ability side outcomes like hypercalcemia or gastric discomfort²⁷.

Scientific Classification:

- Phylum: Mollusca
- Class: Cephalopoda
- Subclass: Dibranchia
- Order: Sepiida
- Genus: Sepia^{10,9}.

Vernacular Names:

- Common name: Os Sepia, sea biscuit, cuttlefish shell (bone)
- English: Cuttlefish bone, sea froth
- Latin: Sepia officinalis
- Arabic: Zabdul bahr, queetman
- Urdu: Samundarjhag
- Hindi: Samandar phane

- Persian: Kafedariya
- Unani: Farenoon
- Roman: Qatumas, plasiyus^{3,1}.

Chemical Composition:

Its chemical composition is based on the subsequent components:

Inorganic Components^{16,17}:

1. Calcium carbonate (CaCO₃): eighty-90%, more often than not within the form of aragonite^{22,23}.
2. Calcium phosphate (Ca₃(PO₄)₂): 5-10%, found in both lamellar and dorsal structures, contributing to the structural integrity^{22,23}.
3. Magnesium carbonate (MgCO₃): 2-5%
4. Silica (SiO₂): 1-2%

Organic Components:

Approx. 89.61% ash, 4.78% protein, 5.26% carbohydrates, and 0.35% lipids²⁴.

1. Chitin: 5-10%
2. Proteins: 2-5%
3. Lipids: 1-2%

Other Components:

1. Water: 5-10%
2. Mineral Content:
 - Macro Minerals: Includes sizeable ranges of calcium (40.18%), magnesium, potassium, and phosphorus²⁴.
 - Micro Minerals: Contains hint amounts of manganese, iron, zinc, and sodium²⁴.

The actual chemical composition of cuttlefish bone can also range depending on factors just like the cuttlefish's weight loss plan, age, and environmental situations.

Use of Kafe Dariya in Various Skin Conditions:

Psoriasis (Dau-S-Sadaf): Psoriasis, or Dau-S-Sadaf, is a totally common place skin conditions with worldwide prevalence. Dau-S-Sadaf is a current time period used for psoriasis, which isn't stated in antique classics of Unani medicine. When we go through the corpus of Unani literature, Taqasshur-e-Jild is a term used for a pores and skin conditions that suits with psoriasis. Now Unani specialists have adopted the time period Dau-S-Sadaf for its clinical relevance. It is handled with healing interventions centered at the purification of blood and the employment of herbal topical formulations. Empirical studies have tested massive enhancement in the situations of sufferers who've passed through treatment thru Unani methodologies, consisting of Kafe Dariya²⁰.

Eczema (Nar Farsi): This inflammatory dermatological situation is controlled thru loads of Unani healing interventions, incorporating natural programs alongside blood-letting techniques, which includes cupping⁶.

Acne (Basoor-e-Labniya): Practitioners inside the Unani culture appoint particular herbal formulations to modify zits, underscoring the critical significance of maintaining equilibrium a number of the frame's humors⁴.

Pityriasis Versicolor (Bahaq): Research has indicated that a polyherbal formulation, which may embody Kafe Dariya, exhibited significant effectiveness within the treatment of this fungal pores and skin infection⁶.

Urticaria (Shara): Urticaria, or hives, reasons itchy, crimson patches that occur transiently on the skin because of allergies. Unani medication sees it as a response to an excessive amount of warmth within the frame. Kafe Dariya may work like a herbal antihistamine, decreasing itching and allergic reactions⁴.

Fungal Infections (Quba): Fungal infections purpose itchy, scaly, or crimson patches at the skin. Unani medicine says this takes place because of extra moisture and heat within the body. Kafe Dariya may also help kill the fungus and restore healthful skin¹.

Dark Spots & Uneven Skin Tone (Kalaf, Barash): Hyperpigmentation and melasma reason darkish patches at the pores and skin. In Unani medication, these arise because of imbalances in frame fluids. Kafe Dariya may additionally help lessen darkish spots, pores and skin blemishes, and improve skin tone^{11,18}.

Vitiligo (Bars): Vitiligo is a disease of white patches on the skin because of a lack of pores and skin pigment. Unani medicine hyperlinks it to imbalances in body humor balgham (phlegm). Kafe Dariya might also help to do away with this derangement and restore pigmentation²⁶.

Treatment Methodologies:

Herbal Formulations: Kafe Dariya constitutes a aspect of a broader spectrum of herbal remedies that mainly goal dermatological situations thru the utilization of herbal ingredients diagnosed for their healing efficacy⁴.

Therapeutic Techniques: Methodologies together with cupping and leeching are foundational to Unani therapeutic practices, thereby augmenting the effectiveness of herbal treatments through the advertising of blood move and detoxification^{11,17}.

Traditional Uses:

While Kafe Dariya demonstrates capacity in the treatment of diverse skin sicknesses, it's far vital to well known that modern scientific practices regularly undertake alternative methodologies, which may not continuously coincide with conventional tactics. This divergence accentuates the need for similarly scholarly investigation to confirm the efficacy of Unani treatments within the realm of contemporary dermatology.

Kafe Dariya, in Unani remedy, is historically applied for its diverse healing benefits. This herbal remedy is recognized for its function in treating various illnesses, especially the ones related to digestive and respiration health. The following sections define its traditional makes use of and claimed benefits:^{16,18,19,20}

- **Digestive Health:** Kafe Dariya is regularly employed to relieve indigestion and flatulence, promoting typical gastrointestinal nicely-being.
- **Respiratory Conditions:** It is likewise used to cope with respiratory diseases, presenting alleviation from symptoms associated with conditions like bronchial asthma and bronchitis.
- **Gynaecological Disorders:** The herb is stated for its effectiveness in handling gynaecological issues inclusive of amenorrhoea and dysmenorrhoea.
- **Bone & Joint Disorders:** Used in fractures (Kasr-e-Azam) to decorate bone healing and strengthens bones & tooth because of its high calcium content material.
- **Dental & Oral Health:** Toothpowders (Manjan) & pastes for gum health and hollow space prevention.

Claimed Therapeutic Benefits:

Kafe Dariya is historically diagnosed for its various therapeutic residences in Unani remedy. It is thought to showcase anti inflammatory (Muhallil) results, which assist reduce irritation and are beneficial in coping with various inflammatory conditions. Additionally, it demonstrates antimicrobial pastime, helping within the prevention and control of infections. Kafe Dariya additionally supports cardiovascular fitness, doubtlessly decreasing the chance of coronary heart-associated illnesses. Its analgesic (Musakkin-e-Alam) houses provide powerful pain remedy, even as its function in wound recovery (Madammil-e-Qurooh) promotes the restoration of wounds. Furthermore, it functions as an emmenagogue (Mudir-e-Haiz) by using stimulating menstrual waft and serves as an anthelmintic (Qatil-e-Kirm wa Shikam), acting towards intestinal worms and selling digestive health^{16, 18, 19, 20}.

Applications:

- **Biomaterials:** Cuttlefish bone is utilized in growing biphasic calcium phosphate scaffolds, that are beneficial for bone regeneration due to their porous shape and bioactivity^{22, 25}.
- **Oral Care:** Cuttlebone powder is incorporated into oral hygiene products due to its abrasive properties and excessive calcium content⁹.

Side Effects:

- Ensure purification.
- Overdose may additionally motive hypercalcemia or GI upset²⁷.

Future Research:

Although widely used in conventional medicinal drug, in addition clinical research is exploring its capacity in:

- Bone health due to its calcium content.
- Wound restoration and scar reduction.
- Anti-getting older and dermatological applications^{24, 25}.

Discussion and Conclusion:

Kafe Dariya, or cuttlefish bone, is an effective natural treatment in Unani medication, valued for its rich mineral content and wide-ranging healing benefits. Packed with calcium carbonate and trace factors like magnesium, strontium, and zinc, it efficaciously treats various skin situations, kidney stones, menstrual problems, and digestive problems. Its anti-inflammatory, wound-healing, ache-relieving, and diuretic houses make it a versatile drug. In skincare, its exfoliating and skin-renewing characteristics display promise for present day formulations, at the same time as its capability to guard kidneys and soothe acidity and nausea highlights its various capacity. Used for centuries in traditional remedy, Kafe Dariya in reality desires more scientific studies to affirm its mechanisms, choicest dosages, and safety. Blending this ancient remedy with cutting-edge pharmaceutical and cosmeceutical improvements ought to make it extra handy and effective, bridging time honoured awareness with modern science. A topical utility containing Kafe Dariya became found powerful in controlling zits in a study²⁸.

Declaration of Competing Interest: The creator proclaims no conflicts of Interest.

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