



ZIRCON (RED OXIDE OF LEAD): A VALUABLE GEMSTONE FROM JAWAHARAT-I-TIS' A HAVING MEDICINAL POTENTIAL IN PERSPECTIVE OF UNANI MEDICINE

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ABSTRACT

This comprehensive study is about a gemstone named as "Zircon". The study involves Zircon's vernacular names, identification, origin, acquisition, actions, properties, and its mineralogy etc. Zircon is a luminous stone derived from the Arabic words "Zar" and "Gūn" means Golden-coloured. It is a lustrous stone which is obtained from burnt lead. Historically Zircon has been esteemed among ancient gemstones. Besides its ornamental uses, it is used in capsule form, tablet form, as ointment, and in Sitz bath with fat and extract of *Plantago major* in Unani system of medicine as antifatulent, cardiac tonic, and is used in Phlegmatic diseases, Wound healing, Skin disorders etc. So this study has been compiled to describe its medicinal uses in perspective of Unani system of medicine in detail.

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Introduction:

Zircon is a luminous stone derived from the Arabic words "zar" and "Gūn," means golden-coloured. Its English name, Zircon, is derived from the German word "Zirkon." It comes in various colours, ranging from light to deep hues. The red variety is known as *Aymar al-Rasis*. Pure *Gomed* another type is called as "*hyacinth*" or "*Gianth*", the brownish type as "*Zargūn*", which has further various colours like vermilion, deep red, and orange. The orange coloured is known as "*Jacinth of France*." Additionally, there is a white

variety similar to white topaz. The yellow type of it resembles the yellow fat of cow's stomach that is why it is called as *Gomed* or *Gomedak*^[1]. The burnt residue of lead is called *Usranj* and method of making it involves burning lead until it turns red and then adding some salt. Sometimes, *Usranj* is made by burning *Asfida* (*Safeda Kashghari*) as well. The process involves finely grinding *Asfidaj*, placing it in a deep vessel and igniting it, stire it with a wooden stick until it turns as red as *Hartāl*. Remove it from the fire and use it. In this way, *Usranj* is also known as

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“*Hinduhās*” (Dioscorides). According to “*Rāzī*”, when *Asfidaj* is burnt to an extent that its nature changes, it becomes *Usranj*.^[2]

It is a *Saylqan*. The preparation process of which involves several steps. Initially, *Asfadaj* (*Safeda Kashghari*) is burned in a vessel, salt is then sprinkled over the burning substance, and the mixture is extinguished in vinegar. This results in the formation of a tablet. The portion of the material that remains intact is subjected to additional heating and is extinguished in vinegar once more, leading to the formation of another tablet^[3]

Mutaradifat (Vernacular Name):

Andalusia:	<i>Usranj</i> ^[2]
Arabic:	<i>La'l Durr, Ahmar al-Rasas, Asriqun, Zarju'n Usranj</i> ^[2]
English:	Read lead and Zircon ^[1, 4]
French:	<i>Zircon</i> ^[1]
German:	<i>Zirkon</i> ^[1]
Greek:	<i>Surikun, Sailkon, Salīqu'n, Saidofas</i> ^[2]
Hindi:	<i>Gomed, Gomed Manī, Ra Hortan</i> ^[5]
Latin:	<i>Syricum</i> ^[1]
Mineral name:	Read oxide of lead ^[2]
Persian:	<i>Zargu'n</i> ^[1]
Punjabi:	<i>Gomed</i> ^[4]
Sanskrit:	<i>Gomedak</i> ^[4]
Syrian:	<i>Zargu'n</i> ^[2]
Urdu:	<i>Gomia, Zargu'n</i> ^[1]

Methodology

Numerous authentic publications were searched for the collection of this data (identification, types, therapeutic effects and pharmacological studies), on Zircon (Red Oxide of Lead). All the relevant articles were obtained from five Unani books published during 1982-2022. Appropriate Unani terminologies were taken from the Standard Unani Medical Terminology book published by the Central Council for Research in Unani Medicine in collaboration with the World Health Organization.

Shanakht, Mahiyat and Husul (Identification, Nature and Acquisition):

Zircon is a very lustrous stone which is obtained from burnt lead. It is a precious stone which is available in various colours like blue, yellow, orange, brown, green, red (Hyacinth) and colourless (crystalline). Exceeding diamond in volume and weight but closely resembles in appearance with it that is why it becomes difficult to distinguish between the two. Historically Zircon has been esteemed among ancient gemstones.^[1]

Identification of Zircon involves rubbing it against wood to produce a gleam, real Zircon exhibits this, while imitation lacks the lustre. Another method involves observing its special color on a flame under microscope and is known as "French retain". If spirit is sprayed on it then it becomes colourless. Zircon can be identified based on weight and volume.^[1]

It is often extracted in pencil like crystals from ores and the crystals are square shaped. Its length is 1cm approximately 1/3 inches^[4]. Zircon is found in many countries, including Pakistan, Australia, Brazil, Norway, Sri Lanka, France, and Thailand. The highest quality is considered to be in Sri Lanka, followed by African zircon. In India, it is found in the Himalayas, Kashmir, and southern regions. Although zircon obtained from Myanmar was once considered the most reliable, it is no longer available.

Zircon is also used in various industries. In the field of photography, it is significant in photographic smoke powders. Additionally, it is utilized in manufacturing spark plugs for motorcycles and various types of two-stroke engine^[1]

Types:

It is of two types:

1. *Jarguns*: Superior quality with a light yellowish tint^[4]
2. Hyacinth: This historical red and reddish brown stone is often found in Sri Lanka.^[4]



Fig.1: Different types of Zirqun (Zircon).

Mizaj (Temperament): Cold and dry in 2nd degree^[2]

Miqdār (Dosage): 60mg^[4]

Nisbat-i-Sitāra (Associated Star): Mercury^[1]

Nafa' Khās (Main action)

The main actions of *Zircon* are, wound healing, used in Phlegmatic diseases, as a cardiac tonic and to alleviate digestion.^[1]

Afāl (Actions):

It used in Flatulence. It increases appetite, digestion, alleviates palpitation and cardiac weakness, and enhances intellect. It is effective against phlegmatic diseases, jaundice, skin diseases, eye disorders, and cough. It has properties similar to Chandrakanta (moon stone).^[5]

Iste'mālāt (uses): It is used in case of Bell's palsy, hemiplegia, amnesia, insomnia, loss of libido, hypertension, stammering, syphilis, wounds, joint pain, leucorrhoea, leprosy and more. It is beneficial against fatal diseases and ulcers^[1]. It generates warmth in body, aids blood circulation in stroke patients.^[4]

Table 1: Showing indications of Zircon in various systemic diseases.

S. No	System	Indications
1.	Amrād-i-Dimāgh wa A'sāb (Diseases of the CNS)	a. Badkhwābi (Insomnia): It positively impacts the human mind, reduces mental dryness, and promotes tranquillity. It is used in insomnia. ^[1] b. Nisyan (Dementia) ^[1] c. Faliy wa Laqwa (Paralysis and bell's palsy) ^[1]
2.	Amrad-i-Dahan (Diseases of Mouth)	a. Luknat-i-Zaban (stammering) ^[1]
3.	Amrad-i-Qalb (Heart Diseases)	a. Ḍaght al-Dam Qawī(hypertension) ^[1]
4.	Amrad-i-MakhsusaMardāna (Male reproductive diseases)	a. Du'f-i-Bah (sexual weakness): It enhances sexual desire, eliminates impotence, and eradicates specific organ weakness. ^[1]
5.	Amrad-i-Niswān (Female reproductive diseases)	Saylān al-Rahim (Leucorrhoea) ^[1]
6.	Amrad-i-Mafāsi (Joint diseases)	Waja' al-Mafasil (Arthralgia) ^[1]

Minerology of Zircon: Chemical components found in zircon includes silica, zirconium, manganese, platinum, and calcium. Platinum content in zircon is higher than other elements, making it a reliable substitute for platinum. It is used in atomic technology, including reactors for atomic power plants. Zircon's hardness ranges from 6.5 to 7.5 on the Mohs scale, compared to diamond with a hardness of 10. In comparison to diamonds, zircon is 50 percent impure. Its weight can be estimated by considering that if a diamond of one carat has a certain weight, zircon of the same size will weigh approximately 1.5 carats. When heated with borax, it melts into a glass-like substance. Phosphorus is produced in it through heat. No effect of acid is seen on it ^[1]. The specific gravity is 4.70; refractive index 1.92 and melting point 3000 degrees. ^[4]

CONCLUSION

On the basis of above findings it is concluded that Zircon is a precious stone used in vast range of diseases in single form. It is one of the preferred drug to treat Phlegmatic diseases, used in wound healing, as cardiac tonic, antifatulent etc. However, there are no scientific studies regarding

its pharmacological properties, so this paper is compiled to highlight the hidden medicinal uses of this stone and further necessary pharmacological researches to validate its medicinal properties as mentioned by various Unani physicians.

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