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Glassed stratite in Ancient Egypt

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Abstract:

The aim of the study is to identify the stone of ancient Egypt, known as steatite, which is related to geology, taking the science of ancient Egypt, although in ancient times it was more closely related to mining, and it is known that ancient Egypt was the base of science, including mining and stone. The ancient Egyptians have used this stone since presynaptic times, using vitrification associated with glass and glassmaking, with glazed steatite being the oldest and first glazed stone used in ancient Egyptian civilization, since the Bedar civilization.

It was used in the manufacture of glazed beads, amulets, belts, bracelets, and pins, and was also extensively used in the manufacture of glazed scarabs, as well as seals, especially button seals, and was associated with property in ancient Egypt through royal statues of this stone, as well as royal seals, scarabs, and pins, and was associated with religious beliefs in ancient Egypt. It was similar to the grain stone and shist, and was known as the soapstone because of its smooth texture, and was used in the manufacture of utensils, especially the kn jar associated with this stone in which oils, fats, and perfumes were placed. It was found in Egypt in several areas of the Eastern Desert, as well as southeast of Aswan, and it remained in use until the end of ancient Egyptian civilization.

Keywords: Steatite-Beads- Amulets- Seals -Scrabs

Introduction:

The study examines one of the oldest stones used in ancient Egyptian civilization, the etititit stone, which is known as divorce, in order to learn the characteristics of the recipes of this stone. It was in this spirit that I was motivated to choose to study this topic, Where the ancient Egyptians have been using this stone since before the families since the Badari civilization, It has been used throughout the ancient Egyptian civilization, especially in the industry of crocodiles and small artworks, It also caught my attention that most of these artworks were glazed, This is also another reference to one of the industries that the ancient Egyptian has come up with since these ancient times, namely his knowledge of glazing, glass and its constituent materials.

From this point of view I was called hard to know what and what characteristics this stone originated in ancient Egypt, which was associated with mining and ornamental industry in ancient Egypt, and this was one of the difficulties of studying alongside trying to figure out how this stone relates to religious and royal beliefs in ancient Egypt. The study relied on the analytical descriptive curriculum of works of art, especially the property made of this stone. Until we figure out how to choose the old Egyptian for this stone, So the ancient Egyptian is thought to be familiar with the characteristics and features of this stone as well as its disadvantages. And this was a motivation for me to associate this stone with geology, and it's old-fashioned mining. To be one of the sciences reached by the ancient Egyptian, to add note to the list of sciences that benefited all civilizations and humanity thereafter.

What it is:

It is worth mentioning that the Egyptian desert was the preferred place for the settlement of the ancient Egyptian man due to the rainfall above it, and it was human and animal. Since man is too weak to get his food in the hands of the abstract, so the search for a hunting instrument was necessary for life. The choice of this instrument was of such gravity that the weak weapon made the hunter good. We do not mean geology as a current science, which is the science of the Earth's layers and involves studying how the Earth originated, its history and its mineral riches. As a sign of the extent of reflection and observation of the ancient Egyptian, he used two words for gemstones and half precious stones, and these stones came from mines in the eastern desert, as well as from Nuba and some from Asia, but the stones were available in ancient Egypt and made from them various arts and artworks.

Characteristics

It consists of wet magnesium silicates Mg3 Si4 O10 (OH) 2, which is formed by the transformation of the rock dolomite and the alteration of the living stone (crocodile stone or rollercoaster) This is in its binary crystallization, which is also associated with the six stone, the degree of stiffness of the statite stone according to the mousse scale is one, which is very soft so it is called soap stone soap stone (shape 1). It is called because of the ease of forming and its soapy texture that is easy to refine, so that this stone can be scratched by the fingernail, and the estatite stone contains a glass face, which covers the crystal and this glass part keeps the crystal at a high temperature, and by heat the metal of estatite and the metal of clbenoastate.

Its colors are white, grey, green, blue, yellow and transparent, and the deposits of the outdoor stone are divided into four types:

Statite Mass-Release Trimolini-Divorce Laminate-Ores Outdoor Mixture. One characteristic of this stone is that it is non-fusion, making it glazable, heating it removes water and gains it hardness, and it is not affected by acids so it is difficult to fuse.

-Where to spread it:

It is worth noting that this stone can be found in the eastern desert, southeast of Aswan in these places: Wadi Attallah, Wadi Hammamah, Wadi Al-Tasaqi, Wadi Al-Qatara, Jabal Qatara (near Badari), Wadi Kahlan (South Aswan at Well Amr, in Mount Param), Jabal Al-Jarf, Jabal Zairah (South airah).

-Increase:

In fact, the glazed Statite Stone is one of the oldest products used by ancient Egyptians, since pre-family ages, especially as it appeared most visibly in the Badari civilization. It is likely that this stone can be cut easily and is carvable and formable, besides the badary near which Jebel Qatar is located, one of the places where this stone is located. This explains the abundance of beads and bracelets, amulets, seals, and the rest of the small arts, which are made of this stone and are one of the most beautiful pieces of art that dates back to that time.

According to Lux's classification of glass coatings, the glazed etititit stone was ranked first, so it is the first and oldest of glazed venans that appeared only at the beginning of the beds.

Glazing upbringing:

Ancient Egyptians are the first to make glazed ceramic pieces, where they used sodium chloride salt, they were mixing salts with mud before forming and drying them, these salts moving in the water that comes out to the surface of the piece and when burned, it becomes a shiny layer on the surface, so this layer can be colored by any colored material, the process of applying glaze coating later evolved, as it was coated on the surface rather than mixed. The old Egyptian introduced new types of glaze coating containing lead compounds, and the lead is taken from lead sulfide, crushed and used with other glazing materials, so his dish is given a glaze characterized by smoothness and serenity.

Materials in the glaze layer installation:

- Silica: It is worth noting that the source of silica is sand and powdered quartz, and results in cristobalite & tridymite which are formed when quartz heating and when heating results in the glass phase, which is known as glass silica.
- The silka ratio in the glazing ingredients, controls the melting grade and reduces liquidity, increases its glaze resistance to water and chemicals, increases hardness and strength, as well as expands the thermal range, depending on the quantity used on the type of smelting auxiliary.
- Smelting aids: the substances that result from their addition are low temperature, at which the technical pieces are matured and their components fused.

Smelting assistance is:

First: Bullet smelting aids: the lead is mainly used because it combines easily with other smelting aids, lowers the smelting temperature, and also gives the glaze coating a large glitter and glitter.

Second: Alkaline smelting aids: These are used as smelting aids in glazing mixtures such as:

Sodium compounds

They are found in local sediments in the Natrun Valley, whether crystallized or amorphous, and act as a powerful smelting assistant in glazing mixtures. Sodium oxide is one of the most common smelting aids, because it is considered the most low-temperature alkali, lowers tension force and gains elastic silica.

Potassium compounds

Potassium oxide is a low factor to the degree of melting, increasing its rigidity and glitter glaze, as well as lowering its liquidity temperature.

Filipino smelting assistance:

It is worth mentioning that all feldspar metals act as smelting aids, they are glass if heated to a high temperature, they lower the temperature and they have no specific melting degree, but when exposed to heat they gradually decompose until they turn into glassy glass blocks, and when cooled they freeze and the glass coloring occurs. So glazing symbolizes a glass layer that covers the body to be covered, as it closes the pores of the body's surface, increases its smoothness and glitter and makes it easy to clean.

Astiatite Stone's Association with Glaze:

Through what has been said about the steps and methods of various glazing industry, the materials in his industry, The researcher considers that the ancient Egyptian has well understood the characteristics and characteristics of the stones found in his environment, especially the stone of estatite, and that he knew how to deal with them, if he excelled and excelled in their optimal use, thereby establishing the principles of geology and mining, which greatly benefited him in the highness of his civilization and benefited human civilizations at that time. This is confirmed by the fact that Egypt's Estatite stone models do not exist in any of its neighbouring Mediterranean States.

So the researcher is likely that the ancient Egyptian has outgrown the glaze of the Estatite stone, colored it in different colors, and that he has begun to extract this stone from his various places of existence. And he produced a lot of wonderful artworks, carving the Estatist stone and covering it with a glass dish. As a very difficult project, to come up with different ways to glaze it, which he used extensively in works of art and small sculptures, this sculpture is one of the most important and ancient features of ancient Egyptian art, where its various and precise works have emerged since the civilization of Badari in the pre-family era.

His name: Atitit Stone is not known in ancient Egyptian writing yet.

Usage:

Estatite Stone used in its manufacture a lot of thin small arts, such as beads, belts, contracts, amulets, pots, seals, ornamental pins statues of kings and idols. Most of these works were associated with property in ancient Egypt and religious beliefs, from the ages before the families until the end of ancient Egyptian

civilization, most of which were besides their use of decoration, or for the lower life were also used as mascots.

Beads, Belts, Contracts:

It is worth mentioning that the use of beads in ancient Egypt dates back to about 12 thousand years BC. They were initially made of bones, gravel, seeds, shells, teeth, and were punctured. They were worn around the neck, arm, waist, hand, they are used for decoration. The old Egyptian used the stone of the antistatite in his beads and also glazed those beads, which he colored blue and green, and was one of the old Egyptian's favorite colors. The first symbolized zeal water and the Nile River, while the second symbolized fertility, regeneration and green crops. Beads have been used as a waist belt since prehistoric times.

The earliest found beads, made of glazed estatite stone, date back to the Badari civilization, where the ancient Egyptian began the first glazing of statite beads, where he had access to the work of his paste of quartz powder and sand and glaze (figure 2). This beaded belt was located around the waist of the deceased at Cemetery No. 5735 in Badari in a pit, and the deceased Moussad on its squat body, and this belt is located at the Petri Museum in London and bears the number "Uc.9250"

So the researcher is likely that these belts made of blue-colored beads from the colored estatite stone of the Badari civilization were used as a tool for decoration placed around the middle, and also as a mascot for protection, which confirms the existence of the belt around the waist of the deceased in his Badari cemetery, as a mascot in the other world to protect the deceased. One of the most beautiful pieces of the Badari era is its expression of small beads glazed from estatite stone (figure 3), which is located in the British Museum under number B.M.62150. There are also some beads used as mascots (shape 4) and glazed estatite. There is also a contract from the seventh or eighth dynasty found in Mahasna near Abidus, which is made of glazed estatite stone (figure 5) and is located in the Ashmolean Museum of Oxford under AN.1896-1908EE 457.

Pots

It is worth mentioning that the ancient Egyptian produced a lot of shapes for pots made of various stones. These pots were multifaceted and also different for various uses. They were represented in bodies such as: grand dishes, pitchers, cups, oil saucepans, eyeliners, paints, fat pots for beauty, evaporators and ritual tools. The researcher found that the Estatite stone was associated with some pots in ancient Egypt, and that the most famous of these pots made of this stone is the Qn pot where it came in this form

It was used for medical purposes, where fat used to treat eye disease was applied. Since the modern era of the family, 20, the colors of these pots have been yellow, where these stone pots also included medical paints and oils.

The fat of the slaughtered fat was also placed as a sacrifice, where it was burning this fat, resulting in the smell of the rising smell of the sky since the age of the 19th and 20th dynasty. The study found that there was a pot on its hedgehog, from glazed Statite Stone, back to its second critical period, about 6. It is currently located in the National Museum of Copenhagen (6 form). This pot is characterized by its opening from the highest breadth. The pumpkin is represented by its eyes and ears as well as its distinctive spines, which cover its body.

There is also a pot of green glazed etititit stone and it has been broken with inscriptions of King Thutmus I and it is located in the British Museum (figure 7) under the number B.M.4762 .In the modern era of the 18th dynasty, from the reign of King Mutahbul I, at the Metropolitan Museum in New York, there is a broken pot of glazed etititite stone. (Figure No. 8). There is also a pot in the eyeliner tractor of King Thutmus I, from the glazed Estatite Stone, with inscriptions of King Thutmus I. This is characterized by having a large neck, which is now present at the Metropolitan Museum in New York. (Figure 9). At the MMA.26.164 From the reign of King Thutmus III there is a pot of fish, made of blue-glazed ititite stone, which is believed to have been originally manufactured from the reign of the hexus and taken by King Thutmus III, and is found in the Metropolitan Museum in New York (10 form).

Royal statues and idols:

The ancient Egyptian used colored glazed etititit stone in making statues of kings as well as for idols. There is a statue of King Menhoub III made of blue glazed estatite stone. The statue was broken. It is located in the Egyptian Museum under the number SR4/11526, JE38596 the rest of the statue is located in a museum with an important role in England. The head is about 16 cm high and found in the crank environment (11 shape). There are also pieces of rare pieces of blue-glazed etititit stone, by Taurt, from the twelfth dynasty and located at the British Museum under 11862 (figure 12).

Decorative pin:

There is an ornamental pin of King Thutmus III of the 18th dynasty, currently located in the Turin Museum made of glazed estatite stone, encrusted by a gold tire with the king's name on it. (13 shape) and most likely used as a royal seal besides his role as an adornment tool.

Circular disk:

It is worth mentioning that there is a circular disk with the name of the products, Mayor of Taiba, of Family 25, and that this circular disc is 7 ×7 cm, made of blue glazed estatite stone, is located at the Museum of Inclusive in Oxford (figure 14) under the number AN 1879.349 The researcher believes that this circular disk is closely related to solar worship, it symbolizes the solar disk in the concept of circle "Shin", which symbolizes immortality, and the blue colour that represents fertility and development, which symbolizes the idol "Khabar", the first body of the sun, refers to the birth and resurrection associated with sunrise, and hopes that the deceased will shine as the sun "reborn" confirms that this rare piece was one of the individuals and is specific to the deceased.

Seals:

The ancient Egyptian used glazed estatite stone in making many seals since the beginning of the families and throughout the ancient Egyptian civilization and used several forms of seals, including:

A. Cylindrical seals

This type of seal appeared from prehistoric times and lasted until the end of the Old State, and the ancient Egyptian used the glazed Estatite stone to make this kind of seal. There has been an amulet of the cylindrical seal since the beginning of the families and it is a glazed estatite stone, possibly worn in this early period of the beds, which reflects and clarifies the administrative level, where it was found in an individual's cemetery, believed to be part of the funeral amulets, with unknown hieroglyphs and inscriptions, and located at the University of Pennsylvania Museum (figure 15).

There is also a cylindrical snatch of King Bibi I of the Sixth Dynasty of the glazed Estatite Stone 53 مم 53 mm high, located at the Metropolitan Museum in New York, with the King's poison and hieroglyph text. (Figure 16). There is also a cylindrical seal of the glazed estatite of Queen Spak Nefrew of the 12th Family, located in the British Museum, inscribed with the Royal Sovereignty and the text written below the Silk. (Figure 17).

There is also a cylindrical seal of glazed estatite, for King Snosert I and it is inscribed anchored with the king's cartridge, and the text of hieroglyph, (figure 18) is located at the Petri Museum in London.

B. Seals on button body

This kind of seal appeared at the end of the old state, and these were seals with a funeral mascot, where they were found in the graves of women and children along with the graves of men and found over the corpse, around the neck, in the neck, around the wrist of the hand, the ring in the hand, or inside the decorative boxes. Many of these seals were made of glazed estatite stone, and the species was then replaced by seals on the jars.

C. Seals in the form of Jaran:

This quality emerged in the late era of the first transition and the beginning of the Middle State era, and remained widespread throughout ancient Egyptian civilization. He replaced the seals on the button board. The ancient Egyptian used the colored glazed steatite stone to make this type of seal and produced thousands of it. Since the Middle State era it has been about 1.7 centimetres long, and it represents a bunk sitting on its oval base that has represented the decoy's thorns on its squares. (Form 19) It is located in the Egyptian Museum under the number JE.84320

Ja 'arin The ancient Egyptian used colored glazed estatite stone in the work of thousands of brothels throughout ancient Egyptian history. There are many brothels made with glazed estatite in blue and green found in four digs of Queen Hatchepsut's Temple of the Monastery, It is located in the Metropolitan Museum, and the rules of most of these brothels have been inscribed with the names and surname of his property. Some of them have been found with the name of King Thutmus III, some of them of her daughter Princess Nafro Ra. Some of these brothels were represented as mascots and seals. (20 form). There are also two jars of King Thutmus III made of glazed Estatite stone, and studded in gold at the Turin Museum, Italy. (21 form). There are also many jars for both Thutmus III and Enhotab III, also made from glazed estatite stone, with royal cartridges and writings, which are located in the Egyptian Museum. (22 form).

Conclusion and results

The study dealt with glazed estatite stone in ancient Egypt, in terms of its anomaly, characteristics, spread places, upbringing, and glazing genesis, which included materials in the installation of its glaze dish, such as silica and smelting aids: Lead smelting aids, alkaline smelting aids, which include sodium compounds and potassium compounds, and finally Filpari smelting aids. The study also examined the association of estatite stone with glaze, and its multiple uses in sculpting exquisite artworks such as beads, belts, contracts, pots,

ornamental pins, seals that included: On the cylindrical seals, seals on the button body, seals on the jars body, and finally carving the swaggers.

Among the study's most important findings are:

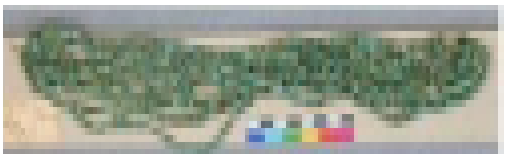
- The study notes that the ancient Egyptian has well understood the features and characteristics of the stones found in ancient Egypt. This is in addition to the science base of ancient Egypt, which we can call the science of the principles of geology and mining.
- The study shows that the Estatite stone was transparent, with several colors, but the most important of which is blue, is the grainy color of the ancient Egyptian, which is associated with fertility, resurrection and leaflets.
- It is clear from the study that this stone is not fusible, and this makes it glazable, and when heated it removes water from it and gains its durability, as it is not affected by acids. It's hard to fuse.
- The study shows that there are many places where this stone has spread in Egypt, and it has been concentrated in the Eastern Sahara and Southeast Aswan.
- The study shows that Estatit Stone is the most important, first and oldest stone that the ancient Egyptian has glazed, and that the oldest artworks found are due to the Badari civilization, many of which have beads, contracts, belts, and likely. The reason, behind this, is the proximity of Badari to Mount Qatar, which is one of the places where this stone spreads.
- The study shows the extent of his ancient Egyptian knowledge of glazing, and the materials involved in its industry; So the researcher suggests that the old Egyptian is the first mining and geological man because he glazed small beads and pierced them to make belts And decades ago, from prehistoric times since the civilization of Badari, this shows how superior the ancient Egyptian knew about the steps of glazing. Glass or its components, whether glass or quartz.
- The researcher is likely that the belts made of glazed estatite, which were found from one of Badari's tombs, were intended for religious funeral masculinities, along with a color of ornamental colors.
- The study found that the glazed estatite stone was associated with pots in ancient Egypt, particularly Qn, which was used for medical and therapeutic purposes, where it was placed, fat, oils that treated eye diseases, or placed on the body, and that these pots were colored yellow,

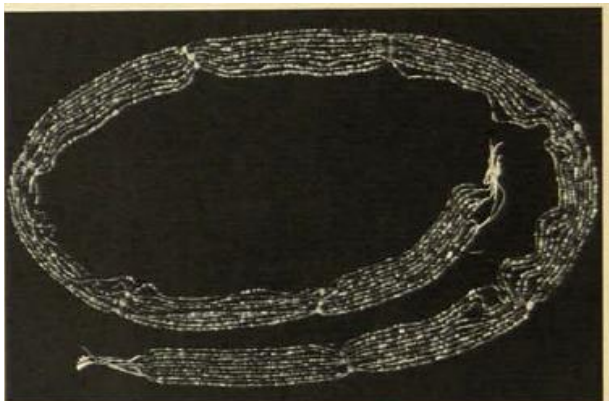
and were included in the list of pots associated with paints, oils and beauty.

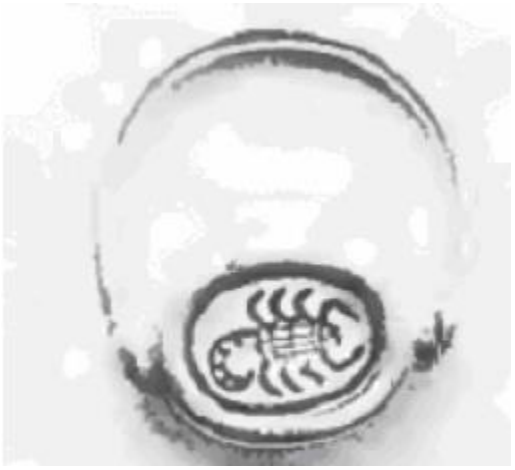
- The study found that the pots made from the glazed estatit of the 18 kings of the family, all of which were royal pots inscribed with the surname and the names of the kings. Some of them were kohl pots, all of which were colored in blue.
- The researcher believes that the pots that appeared on the hedgehog body may be related to the solar doctrine, but those that appeared on its thickness may be related to the Ozirian doctrine.
- It is clear from the study that the statues of idols and kings made of glazed estatite, have been colored blue or, green and is the grainy color of the ancient Egyptian.
- The study found that statues of kings and idols carved from glazed estatite are very little or small in size compared to small artworks such as beads, swaggers, and amulets, so the researcher is likely to be the reason for this is his ancient Egyptian knowledge of the features of this stone, and his fear that the statues will be broken.
- Note from the study that some gold-encrusted royal ornamental pins have been carved from glazed estatite stone.
- The researcher believes that most of the artworks sculpted from this glazed stone, which was specific to kings except for a few, were for princes such as a circular disc of the products of the good mayor of the family 25, and a decade of glazed beads for one of the members of the seventh or eighth family of the philanthropist, located in the Museum of the Ashmolean.
- The researcher believes that most of the exact artworks carved were used in daily and practical life along with their religious and funeral purposes, as mascots where they were found in cemeteries, and were placed around the different body parts of the deceased.
- The study found that the glazed Estatite stone made cylindrical seals from pre-family times until the end of the old State.
- It is clear from the study that the seals in the form of a button made of glazed estatite from the end of the old state and the beginning of the age of first transition to the middle state.
- The study showed that seals in the form of jars were made of glazed statite, replacing seals in the form of buttons from the era of the centrist state until the end of ancient Egyptian civilization.
- According to the researcher, the seals made of glazed estatite were all royal seals, except for only one cylindrical seal found in an individual

cemetery since the age of the families, which is located at the University of Pennsylvania Museum with unidentified inscriptions and symbols and is of religious and symbolic nutrition.

- The researcher believes that the seals on his body are jars that were carved out of glazed estatite, the vast majority of them colored blue and they were porous and religious meaningful besides their daily and practical use.
- The study found that thousands of brothels made from glazed estatite were closely related to solar worship, through the representation of the News and Blue Authority, which symbolizes rebirth again. (Baath and Leaflet) The majority of these brothels are inscribed with the names and surnames of many monarchs, especially the modern state: such as Hatshepsut, Thutmus III, as well as Princess Nafrabsut, his son Hatshepsut.
- The study shows that there is a circular disk of baptist baptist family 25, which is closely related to solar worship, through its incarnation of the sun disk symbolizing its label "Shin",
- As well as blue on this circular disk, which symbolizes news and sunrise again (send and post).
- Finally, the glazed Estatite stone associated with its glazing industry, in ancient Egypt, has been known since prehistoric times since the Badari civilization and lasted until the end of ancient Egyptian civilization.





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ثالثا: بعض المواقع الالكترونية:

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