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## **THE COMPONENT OF PAINTS USED IN ARCHITECTURAL MONUMENTS OF UZBEKISTAN AND THEIR TYPES**

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Architecture and Civil Engineering )**

**Abstract:** This article provides brief information about the types and composition of paints used in architectural monuments in Central Asia and Uzbekistan. It would not be a lie to say that it is the beginning of research on the composition and origin of paints.

**Keywords:** pigment, paint, rock art, natural dyes, metal oxides, colored tiles, interior and exterior decoration, rosettes, borders, copper oxide, chromium oxide, tin oxide, cobalt salts.

**Introduction:** Since ancient times, paints have occupied an important place in human life. Primitive people used paints of various compositions to decorate dishes, clothes and housing. The reason why the paints of this period have come down to us is not because of their indelible composition, but because they were applied to the deep walls of the cave. Natural phenomena could not but affect them.

When creating rock art, primitive man used natural dyes and metal oxides, which he used either in pure form or mixed. Pigment paint was made using a variety of binders, including water, plant sap, urine, animal fat, bone marrow, blood, and egg white. When analyzing later drawings, it was established that substances capable of forming a film were already used to prepare paints. In the paintings found in South Africa, bull's blood was found, and in the cave paintings of Fezzan in Libya (from 12 thousand years bs to the 1st century ad), casein was found[1]

**Materials and methods:** Uzbekistan is distinguished from other regions by its colorful ornaments and architectural ornaments.

Love for paints and flair for them, love for ornamental cleaning household items and the richness of this cleaning are characteristic

all the peoples of Central Asia[4]

Colored tiles in the interior and exterior decoration of architectural monuments are made on the basis of the craftsmanship of folk craftsmen and the knowledge of architectural schools passed down from generation to generation. Mirmukhsin wrote in his historical novel "Memor" that the Samarkand-Herat school spread to Khorasan and Movarunnahr, Lahore, Baghdad, Delhi, Damascus, Bukhara, Mashhad, Khiva and, the author mentions the names of the masters as Ustoz Samarkandi, Ustoz Kavom, Ustoz Najmiddin Bukhari, etc[6]

Hue and saturation of colors depend on what part of the picture is painted over. The background, main elements, and outline are all in contrasting colors to make them stand out from each other.

“The tones of the tiles that served as material for mosaics are exhausted by ultramarine, used mainly for backgrounds, turquoise for the stems and leaves of the ornament and occasionally for backgrounds, white for flowers, rosettes, borders, etc., green - for backgrounds and small insert into rosettes, yellow for borders, leaf colors and inscriptions, black for backgrounds, inserts and wider borders. In plug-in sockets, except mentioned tiles, there are also turquoise and matte bricks, painted in a matte dark ocher tone, preserved in its original form only on the mosaics inside the buildings...”[5]

The paint colors were created by burning inorganic substances under various conditions. The colors of the products obtained as a result of the combustion of inorganic substances were used as paints. They often use metal oxides and sulfates.

The component of glazes includes glass-forming materials and oxides. Lead glazes are a chemical combination of silica with lead oxides obtained by burning the metal in air. They are fragile, scratched and, due to the discrepancy between the coefficient of their expansion and the coefficient of expansion of the shard, give a

network of hair cracks. They are easily leached out by atmospheric acid. Lead-free glazes are more stable. They give a rich palette of colors. So, iron oxide in different flame conditions and combinations of compounds gives yellow, red, brown, gray, black and other colors. Copper oxide - a range of blue and greenish hues. Copper sulphide is used for restorative chandeliers (lighting effects). Chromium oxide gives pure green, cobalt salts blue, and so on. Tin oxide, being introduced into the glaze, drowns out its transparency (lead - tin, "deaf" glaze, or enamel); it was used to cover flat majolica tiles[2]

**Results:** Researches and opinions of scientists show that the composition of paints used in the architecture of Central Asia is an understudied field. I hope that a deeper study of this field will be an incentive to restore the traditions of ancient masters-architects and to use them in modern architecture.

### References

1. B.P.Denike “Architectural ornament of Central Asia” 1939. Moscow 134-135 p.
2. L.I.Rempel “Architectural ornament of Uzbekistan” 1961. Tashkent 259-260 p.
3. DA N., Erkinova D. A. FORMATION OF INTERIOR DESIGN OF EARLY MEDIEVAL MOSQUES IN UZBEKISTAN //International Journal of Engineering Mathematics (Online). – 2021. – Т. 3. – №. 1.
4. S. Dudin “Kyrgyz ornamentation” 2 p.
5. S.Dudin “Ornamentation” 1903. 55 p.
6. Mirmukhsin “Me`mor” - Historical novel- Tashkent 2001. 43 p.
7. қизи Аъзамова Д. А. ЎРТА АСР ЁДГОРЛИКЛАРИ ТАШҚИ ВА ИЧКИ МУҲИТИДА ҚЎЛЛАНИЛГАН ҚУРИЛИШ АШЁЛАРИ

//INTERNATIONAL CONFERENCE DEDICATED TO THE ROLE AND IMPORTANCE OF INNOVATIVE EDUCATION IN THE 21ST CENTURY. – 2022. – T. 1. – №. 4. – C. 196-201.

8. kizi Azamova D. A. FORMATION OF INTERIOR DESIGN OF EARLY MEDIEVAL MOSQUES IN UZBEKISTAN //INTERNATIONAL CONFERENCE DEDICATED TO THE ROLE AND IMPORTANCE OF INNOVATIVE EDUCATION IN THE 21ST CENTURY. – 2022. – T. 1. – №. 4. – C. 85-88.
9. N.Ivanov “Ornament”- Hermeneutics and glossary 2018.