

SOME STUDY RESULTS OF COLOR CHANGES DEPENDING ON MONGOLIAN ENVIRONMENTAL CONDITION

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We started a color experiment, which is tried to study the quality of colorants and color fading in ancient buildings. This long-term color measurement can be used to determine how the colorants change by environmental influence, and to develop the methodology for such analysis will predict the initial object color. This will allow the cultural heritage to be restored by its original color, as well as to determine which colorants have the least changing and the most durable. Therefore, in this study we prepared a measurement object to analyze color fading, performed long-term and short-term measurements weekly for five months. Processing of the measurement results shows that most of the pigments have faded and most of the dye were stable, but the white dye changed the most. It is possible that the change depends on the absorption of the color spectrum. In the future, we need to increase the measurement data, so the data analysis will be more precise, and the aim is to forecast the initial color of the object using a machine learning approach based on regression analysis by more color measurement values.

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