Smithsonian Center for Materials Research and Education

Topics in Conservation Science

Lecture

X-ray Microanalysis of Vitreous Materials in the Art Museum

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X-ray microanalysis in the scanning electron microscope (SEM-EDS/WDS) is a powerful technique to elucidate the composition and microstructure of many materials used in the art world, and is particularly useful for the analysis of vitreous materials such as glass, enamels and faience. The data obtained with this method can provide a reliable, objective means of comparing various objects, help characterize the technology and materials used in a specific culture, and aid in dating and provenance questions. This talk will discuss the advantages of this particular technique, and present the findings on a range of historical vitreous objects used to help answer art historical questions.

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