



## **The Raman study of the white pigment used in Cucuteni pottery**

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### **Abstract**

Shards from Cucuteni archaeological sites of Moldavia (eastern part of Romania) were analyzed through Raman spectroscopy in order to identify the white pigment used in the decoration of Cucuteni pottery (cca. 4500–3500 B.C.). Ti-minerals, namely anatase, rutile and titanite, were identified in the white pigment of nearly all the samples. Zircon, quartz and K-feldspars were also observed in a number of samples. Kaolinite was not discovered because the Raman bands of this mineral are masked by the Raman response of the previously listed minerals. The white pigment used in the painting of Cucuteni pottery is Ti-rich kaolinitic clay which forms residual clay accumulations developed on the Tertiary volcanic rocks from the Eastern Carpathians. These residual clays may also contain zircon, quartz and feldspars.

**Keywords:** Raman spectroscopy, Cucuteni pottery, white pigment.

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