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LABORATORIJSKO IZVJEŠĆE

LOKALITET: Ivanić Miljanski
OBJEKT: Kapela sv. Ivana
ŠIFRA: 1358/1
SVRHA UZORKOVANJA: određivanje sastava pigmenata
VRSTA ANALIZE: XRF spektroskopija, polarizacijska mikroskopija

UZORKOVANO: 31.3.2012.	UZORKOVAO: Ivan Srša	ANALIZU ZATRAŽIO: Ivan Srša
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LAB. BROJ	OPIS UZORKA I MJESTO UZORKOVANJA
16349	uzorak 1, unutarnji dio južne strane trijumfalnog luka, dekorativna traka - zeleni pigment
16350	uzorak 2, dekorativna traka ispod prozora na JI zidu lađe - zeleno modri pigment
16351	uzorak 3, JI zid svetišta, haljina sv. Mateja - zeleni pigment
16352	uzorak 4, JI zid lađe, scena Polagnja u grob - smeđe-crveni (ljubičasti) pigment

Kratki opis metode rada:

Pigmenti uzoraka analizirani su metodom rendgenske fluorescentne spektroskopije (XRF) uređajem Artax-Bruker, te polarizacijskim mikroskopom Olympus BX 51.

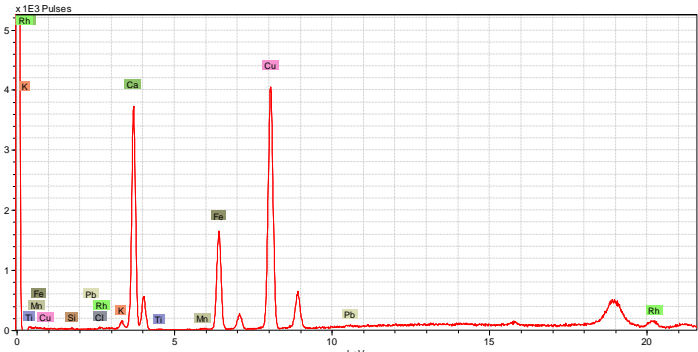
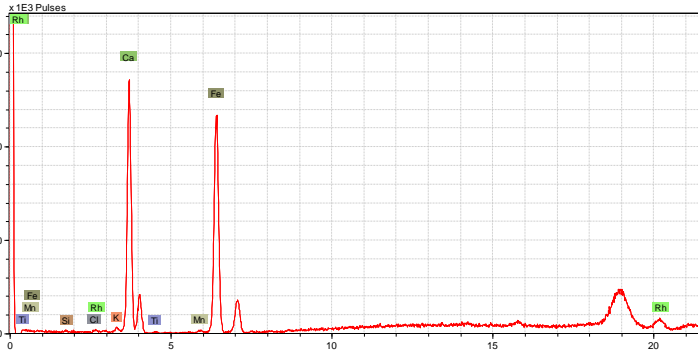
Rodij (Rh) vidljiv u spektrima potječe od rendgenske cijevi uređaja te nije prisutan u uzorcima.

Analizirao: Domagoj Mudronja, prof. geologije

U Zagrebu, 24.4.2012.

Rezultati analiza:

Broj uzorka	Boja slikanog sloja	Detektirani elementi (elementi u tragovima)	Određeni pigmenti	XRF spektar
16349	Zelena	Cu, Ca, Fe (Pb, K, Sr, Mn, Zn, Ti)	Malahit ($\text{CuCO}_3 \cdot \text{Cu(OH)}_2$)	<p>XRF spectrum for sample 16349. The y-axis is labeled 'x1E3 Pulses' and the x-axis is '-keV-'. The spectrum shows several peaks, with the most prominent ones labeled: Cu (at approximately 8.9 keV), Ca (at approximately 2.8 keV), Fe (at approximately 6.4 keV), Zn (at approximately 8.6 keV), Pb (at approximately 23.3 keV), Sr (at approximately 25.5 keV), Mn (at approximately 5.9 keV), Ti (at approximately 4.5 keV), K (at approximately 3.9 keV), Rh (at approximately 20.3 keV), and Ni (at approximately 7.5 keV).</p>
16350	Zelena	Ca, Cu, Fe (K, Si, Mn)	Malahit i zelena zemlja (kompleks silikata i hidrosilikata Fe, Mn, K)	<p>XRF spectrum for sample 16350. The y-axis is labeled 'x1E3 Pulses' and the x-axis is '-keV-'. The spectrum shows several peaks, with the most prominent ones labeled: Ca (at approximately 2.8 keV), Cu (at approximately 8.9 keV), Fe (at approximately 6.4 keV), K (at approximately 3.9 keV), Si (at approximately 1.7 keV), Mn (at approximately 5.9 keV), Rh (at approximately 20.3 keV), and Ni (at approximately 7.5 keV).</p>

Broj uzorka	Boja slikanog sloja	Detektirani elementi (elementi u tragovima)	Određeni pigmenti	XRF spektar
16351	Zelena	Cu, Ca, Fe, K (Si, Cl, Mn, Ti)	Malahit i zelena zemlja	 <p>The XRF spectrum for sample 16351 shows a red line plot of intensity versus energy in keV. The y-axis is labeled 'x 1E3 Pulses' and ranges from 0 to 5. The x-axis is labeled '-keV-' and ranges from 0 to 20. Several peaks are labeled with their corresponding elements: Rh (at ~0.1 keV), K (at ~0.4 keV), Ti (at ~0.5 keV), Cu (at ~0.9 keV), Si (at ~1.7 keV), Cl (at ~2.0 keV), K (at ~2.3 keV), Ca (at ~2.9 keV), Ti (at ~4.5 keV), Mn (at ~5.9 keV), Fe (at ~6.4 keV), Cu (at ~8.9 keV), Pb (at ~10.5 keV), and Rh (at ~20.1 keV).</p>
16352	Crveno smeđa	Ca, Fe (Mn, K, Cl, Si, Ti)	Željezni oksid	 <p>The XRF spectrum for sample 16352 shows a red line plot of intensity versus energy in keV. The y-axis is labeled 'x 1E3 Pulses' and ranges from 0.0 to 3.0. The x-axis is labeled '-keV-' and ranges from 0 to 20. Several peaks are labeled with their corresponding elements: Rh (at ~0.1 keV), Ti (at ~0.5 keV), Mn (at ~0.6 keV), Si (at ~1.7 keV), Cl (at ~2.0 keV), K (at ~2.3 keV), Ca (at ~2.9 keV), Ti (at ~4.5 keV), Mn (at ~5.9 keV), Fe (at ~6.4 keV), Pb (at ~10.5 keV), and Rh (at ~20.1 keV).</p>