

## ANALYTICAL RESULTS – OBJECT 9

<b>PARTNER:</b>	<b>UNITO - CCR</b>
<b>TYPE OF WORK:</b>	<b>Painted Metal Gate (Object 9)</b>
<b>COUNTRY:</b>	<b>Italy</b>
<b>CITY:</b>	<b>Turin</b>
<b>ADDRESS:</b>	<b>C.so Farini - corner Largo Berardi</b>
<b>OWNER / CUSTODIAN:</b>	<b>MAU - Museum of Urban Art</b>
<b>ARTIST:</b>	<b>Halo Halo</b>
<b>TITLE OF THE WORK:</b>	<b>No title</b>
<b>YEAR OF EXECUTION:</b>	<b>2010</b>
<b>MATERIALS:</b>	<b>Brush painting on metal</b>

## SAMPLING POINTS LOCATION



## TABLE OF ANALYTICAL RESULTS

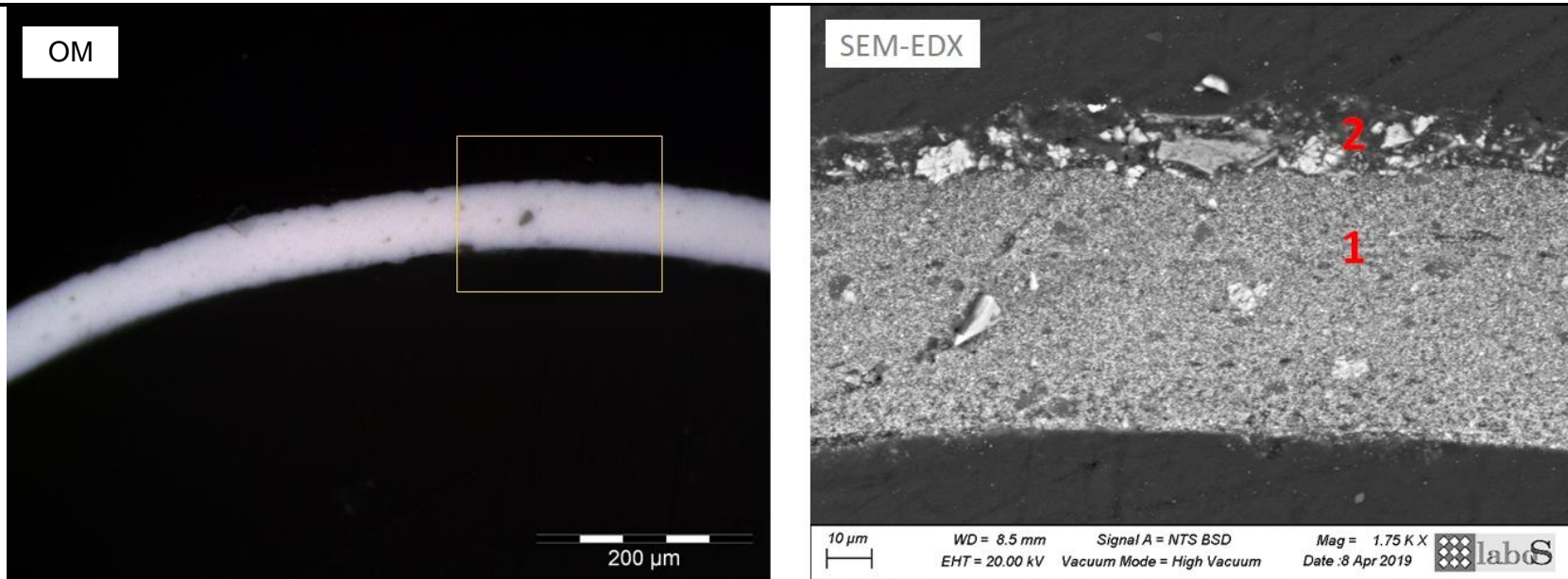
	Name of the sample	Original materials	No original materials	Pigments / dyes		Organic binders		Type of support*		Other**	
				Identification methods	Results	Identification methods	Results	Identification methods	Results	Identification methods	Results
1	<b>Cross section</b>	X		See pictures below							
2	<b>Cross section</b>	X									
3	<b>Black layer</b>	X		ATR-FTIR	Calcite, silicates	ATR-FTIR PY-GC/MS	Styrene-Acrylic				
4	<b>White Layer</b>	X		ATR-FTIR SEM-EDS	Ti white	ATR-FTIR PY-GC/MS	Nitrocellulose + Styrene-Acrylic				
5	<b>White paint filtering</b>	X		ATR-FTIR	Calcite, silicates	ATR-FTIR	Styrene-Acrylic				
6	<b>Rust</b>	X		ATR-FTIR	Iron oxide	ATR-FTIR	-				
7	<b>Adehesive layer</b>	X		ATR-FTIR	Kaolin	ATR-FTIR	Styrene-Acrylic				
8	<b>Black marker</b>	X		ATR-FTIR	Silicates	ATR-FTIR	Styrene-Acrylic				

\* mortars, stone, metal ect.

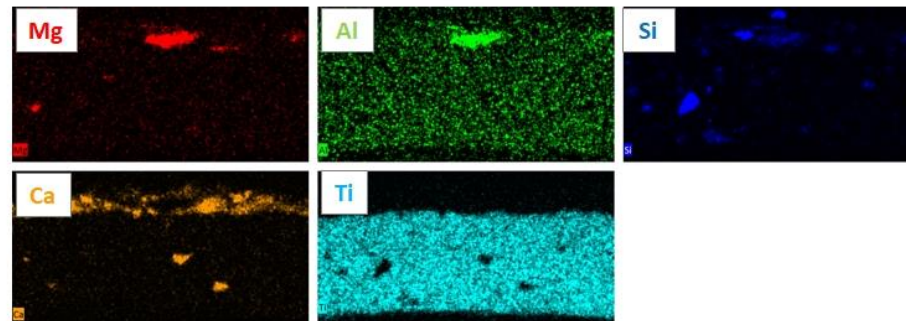
\*\* Additional research or analyzes, for example: aging tests, colorimetry, pH...

## STRATIGRAPHY OF THE MICROSAMPLES

Sample n°: OBJ9\_1

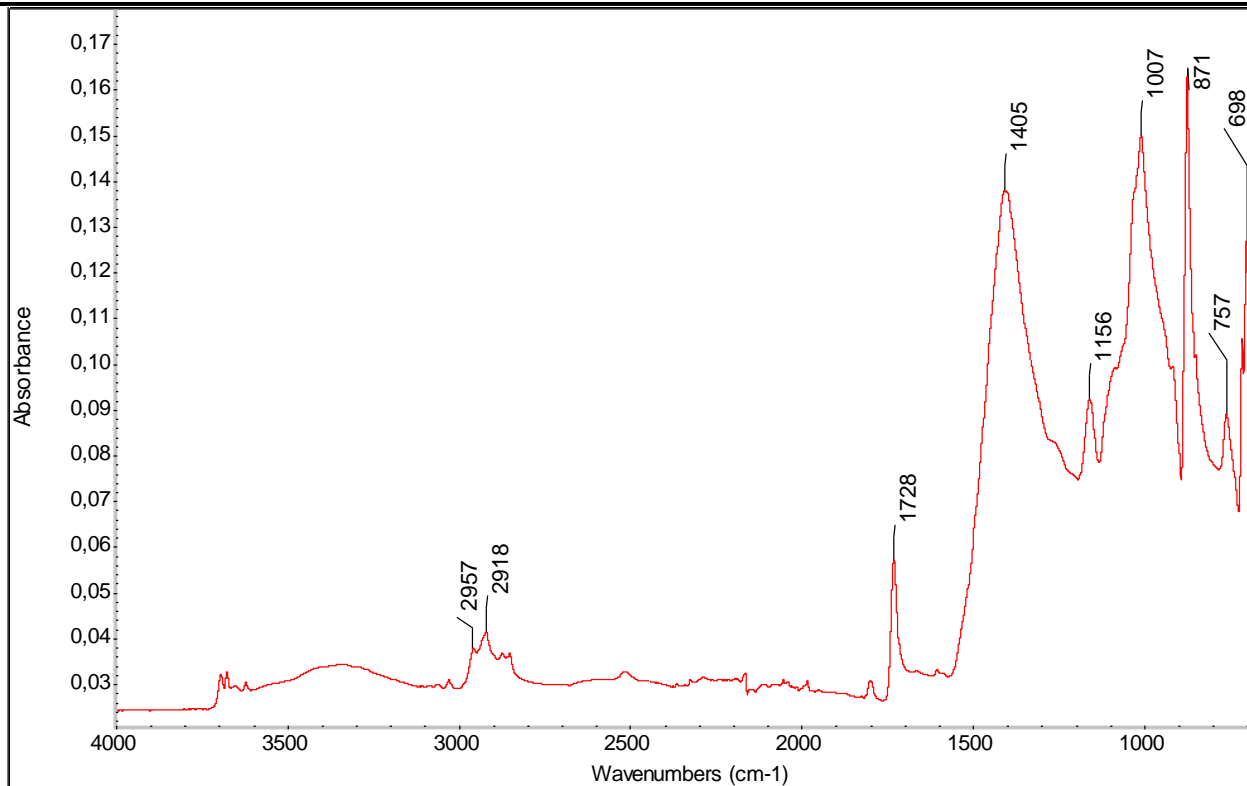


<b>1 – white</b>	<b>Ti, (Al), (Si), (Ca)</b> + quartz inclusions + carbonate aggregates + Al-silicate aggregates, with Ca, P
<b>2 – black</b>	<b>Ca, Al, Si, Mg</b> + carbonate aggregates + Mg,Al-silicate aggregates



## FOURIER-TRANSFORM INFRARED SPECTROSCOPY (FTIR)

Sample n°: OBJ 9-3



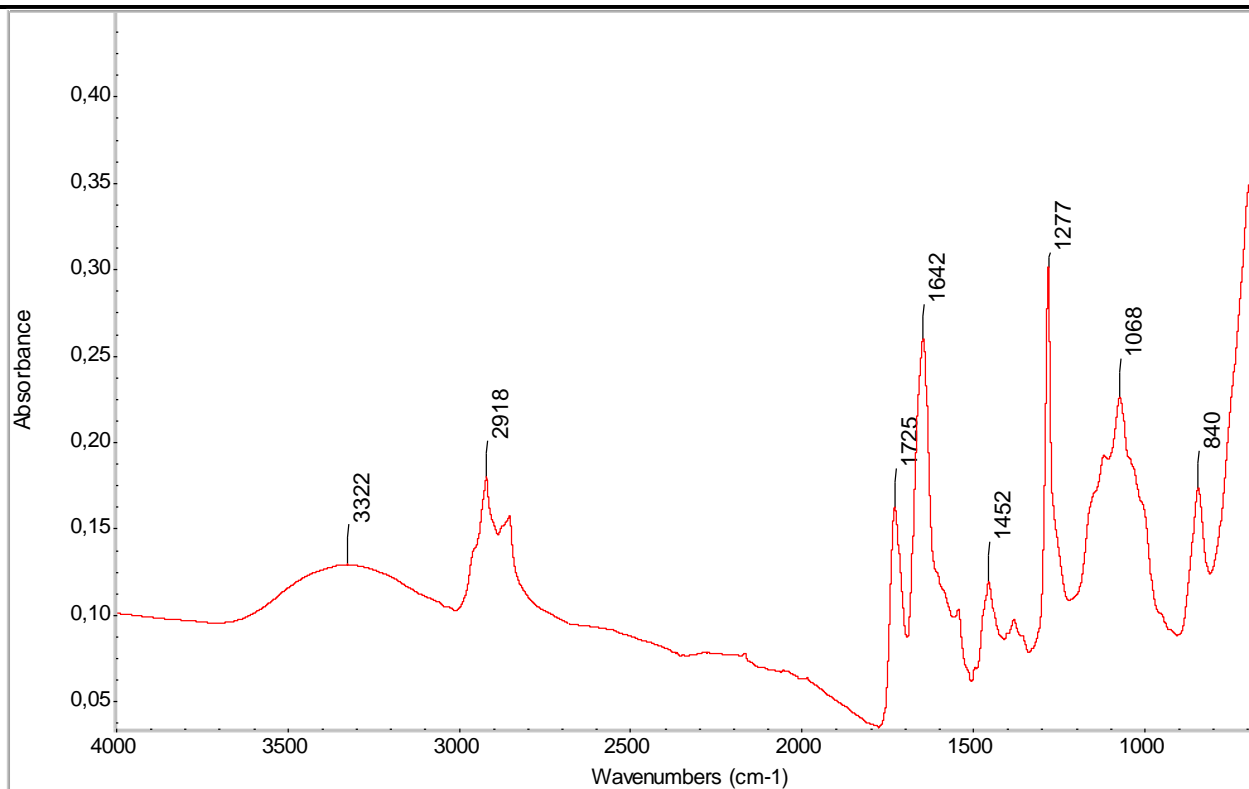
### ASSIGNMENTS:

**Acrylic-Styrene:** 3066 cm<sup>-1</sup>, 3030 cm<sup>-1</sup>, 2952 cm<sup>-1</sup>, 2874 cm<sup>-1</sup>, 1732 cm<sup>-1</sup>, 1148 cm<sup>-1</sup>, 1067 cm<sup>-1</sup>, 757 cm<sup>-1</sup>, 751 cm<sup>-1</sup>, 689 cm<sup>-1</sup>

**Calcite:** 2511 cm<sup>-1</sup>, 1796 cm<sup>-1</sup>, 1405 cm<sup>-1</sup>, 1877 cm<sup>-1</sup>, 712 cm<sup>-1</sup>

**Silicates:** 900-1200 cm<sup>-1</sup>

**Sample n°: OBJ 9-4**



**ASSIGNMENTS:**

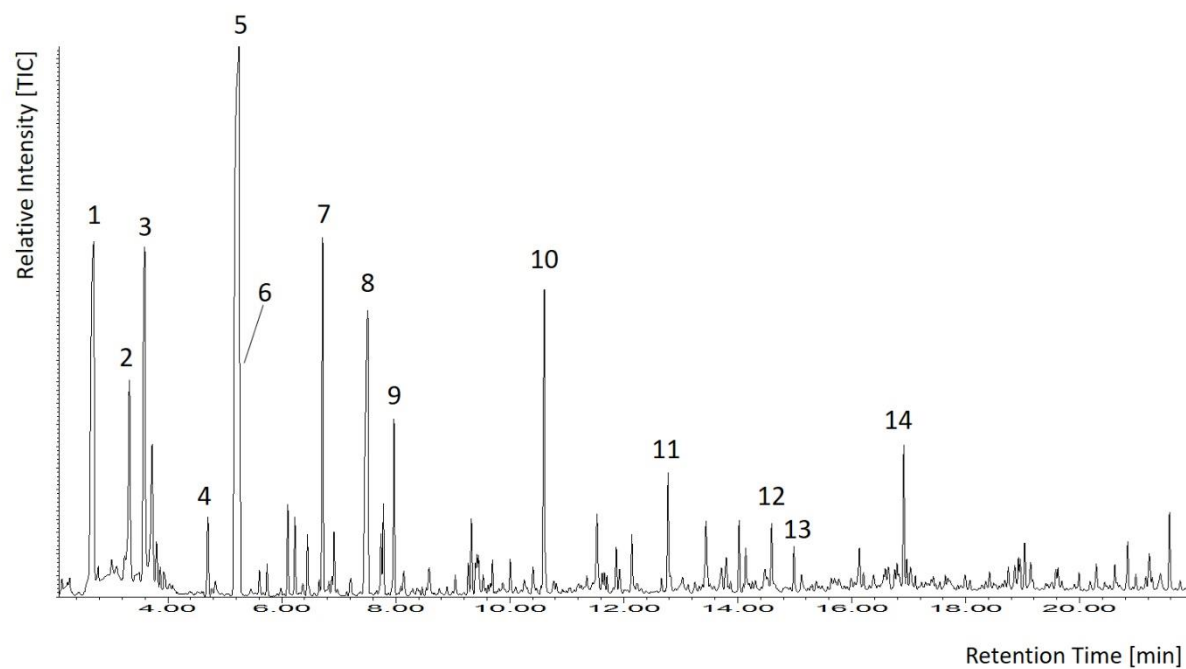
**Nitrocellulose:** 1642 cm<sup>-1</sup>, 1377 cm<sup>-1</sup>, 1277 cm<sup>-1</sup>, 1164 cm<sup>-1</sup>, 1122 cm<sup>-1</sup>, 1068 cm<sup>-1</sup>, 1030 cm<sup>-1</sup>, 1004 cm<sup>-1</sup>, 950 cm<sup>-1</sup>, 840 cm<sup>-1</sup>

**Acrylic:** 2952 cm<sup>-1</sup>, 2874 cm<sup>-1</sup>, 1725 cm<sup>-1</sup>, 1452 cm<sup>-1</sup>, 1277 cm<sup>-1</sup>, 1068 cm<sup>-1</sup>, 842 cm<sup>-1</sup>

**Titanium White :** < 600 cm<sup>-1</sup>

## PYROLYSIS-GAS CHROMATOGRAPHY/MASS SPECTROMETRY

Sample n°: OBJ 9-3



Peak N.	Assignment	Rt (min)
1	methyl methacrylate	2.7
2	toluene	3.3
3	3-methylene-heptane	3.6
4	ethylbenzene	4.7
5	styrene	5.2
6	butyl acrylate	5.3
7	$\alpha$ -methylstyrene	6.7
8	2-ethyl-1-hexanol	7.5
9	(1-methylenepropyl)-benzene	8.0
10	2-ethylhexyl acrylate	10.6
11	biphenyl	12.8
12	1,1'-(1,2-ethanediyl)bis-benzene	14.6
13	1,1'-(1-methyl-1,2-ethanediyl)bis-benzene	15.0
14	ethenylbenzene, dimer	16.9

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