

## ANALYTICAL RESULTS – OBJECT 13

<b>PARTNER:</b>	<b>UNITO - CCR</b>
<b>TYPE OF WORK:</b>	<b>Mural (Object 13)</b>
<b>COUNTRY:</b>	<b>Italy</b>
<b>CITY:</b>	<b>Turin</b>
<b>ADDRESS:</b>	<b>Via Passo Buole</b>
<b>OWNER / CUSTODIAN:</b>	<b>Municipality of Turin</b>
<b>ARTIST:</b>	<b>Rojo Roma</b>
<b>TITLE OF THE WORK:</b>	<b>No title</b>
<b>YEAR OF EXECUTION:</b>	<b>2010</b>
<b>MATERIALS:</b>	<b>Mixed painting on concrete</b>



## TABLE OF ANALYTICAL RESULTS

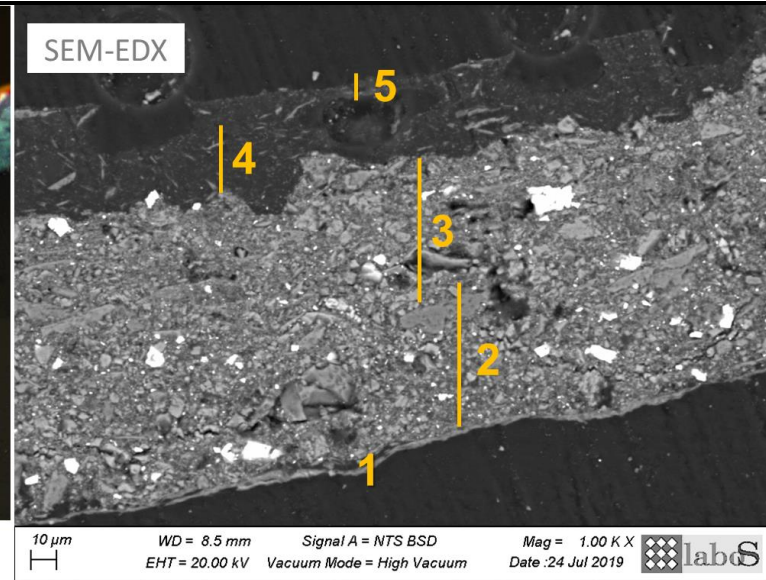
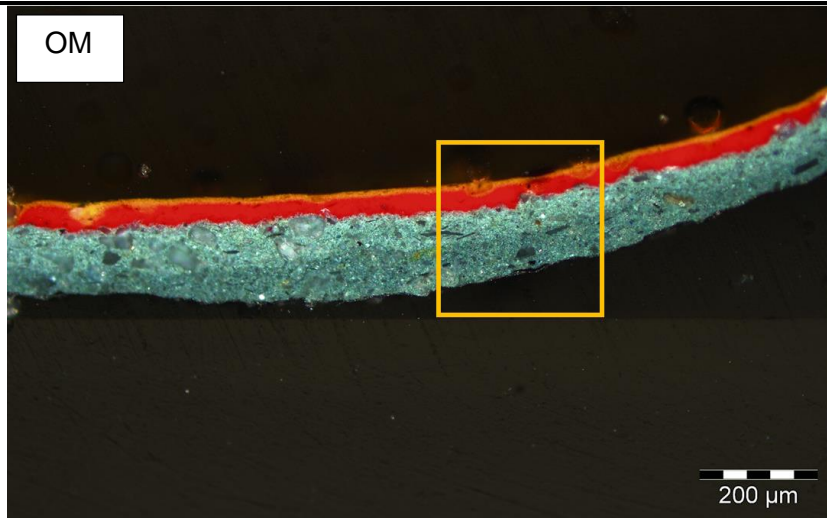
	Name of the sample	Original materials	No original materials	Pigments / dyes		Organic binders		Type of support*		Other**	
				Identification methods	Results	Identification methods	Results	Identification methods	Results	Identification methods	Results
1	Black paint layer	x		ATR-FTIR	Silicates	ATR-FTIR Py-GC/MS	Styrene-modified Alkyd			ATR-FTIR	oxalates
2	Green paint layer	x		ATR-FTIR	Silicates	ATR-FTIR Py-GC/MS	Styrene-modified Alkyd			ATR-FTIR	oxalates
3	Purple paint layer	x		ATR-FTIR	Silicates	ATR-FTIR	Alkyd			ATR-FTIR	oxalates
4*	Yellow paint layer	x		ATR-FTIR SEM-EDS	PY151 Silicates	ATR-FTIR	Alkyd			ATR-FTIR	oxalates
*	Cross Section	x									
5	Grey paint layer	x		ATR-FTIR	Silicates	ATR-FTIR	Alkyd				
6	Bordeaux paint layer	x		ATR-FTIR	Silicates	ATR-FTIR Py-GC/MS	Styrene-modified Alkyd				
7	Light blue paint layer	x		ATR-FTIR	Calcite, silicates, Ti white	ATR-FTIR	Alkyd				
8	Turquoise green paint layer	x		ATR-FTIR	Silicates, Ti white	ATR-FTIR	Alkyd				
9	Cross Section	x									

\* mortars, stone, metal ect.

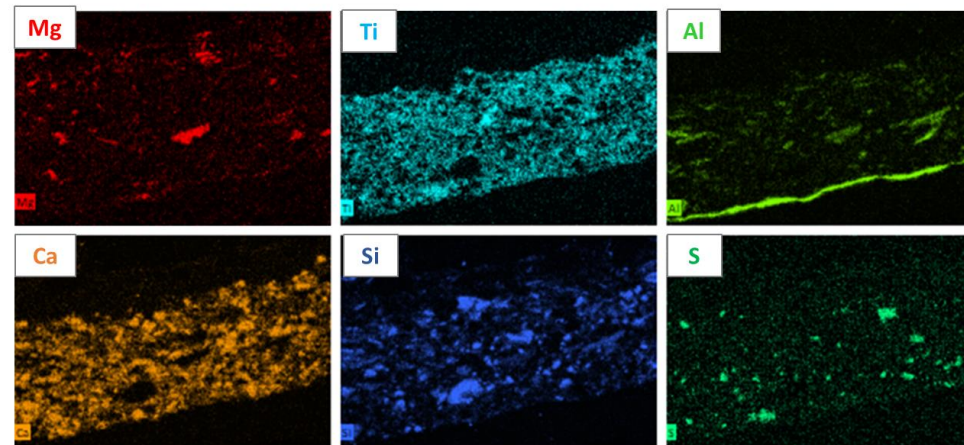
\*\* Additional research or analyzes, for example: aging tests, colorimetry, pH...

## STRATIGRAPHY OF THE MICROSAMPLES

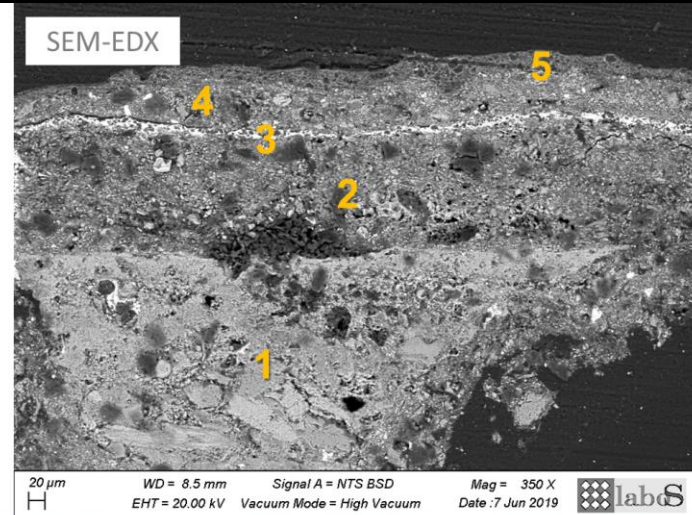
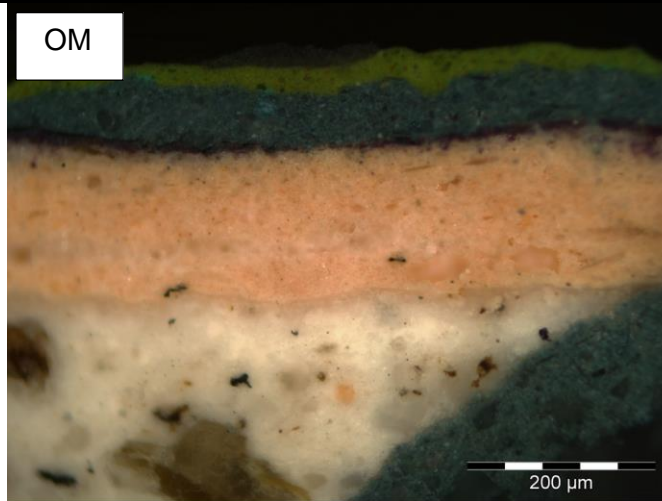
Sample n°: OBJ13\_4



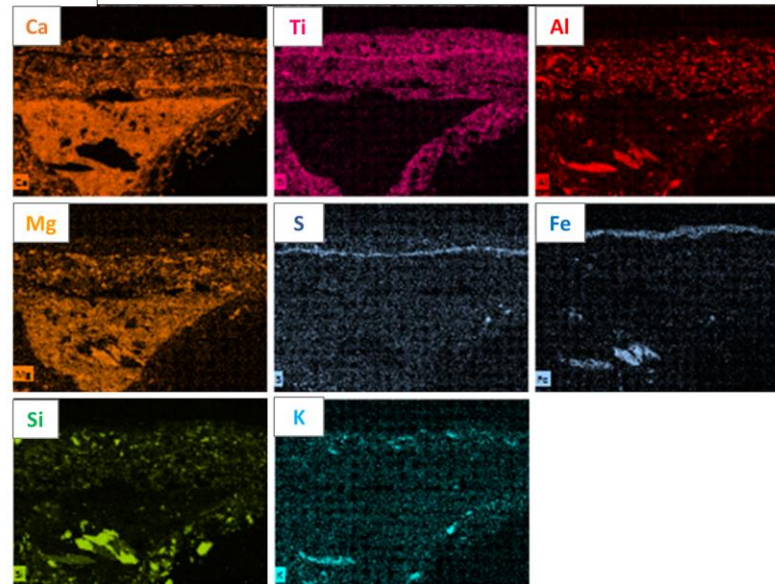
1 – silver	Al
2 – dark teal	Ca, Ti, Si, Al, Mg, K
3 – light teal	+ BaSO <sub>4</sub> grains, (Sr)
4 – red	Organic?
5 – yellow	Si, Mg, (Ca), (Fe)



Sample n°: OBJ13\_9

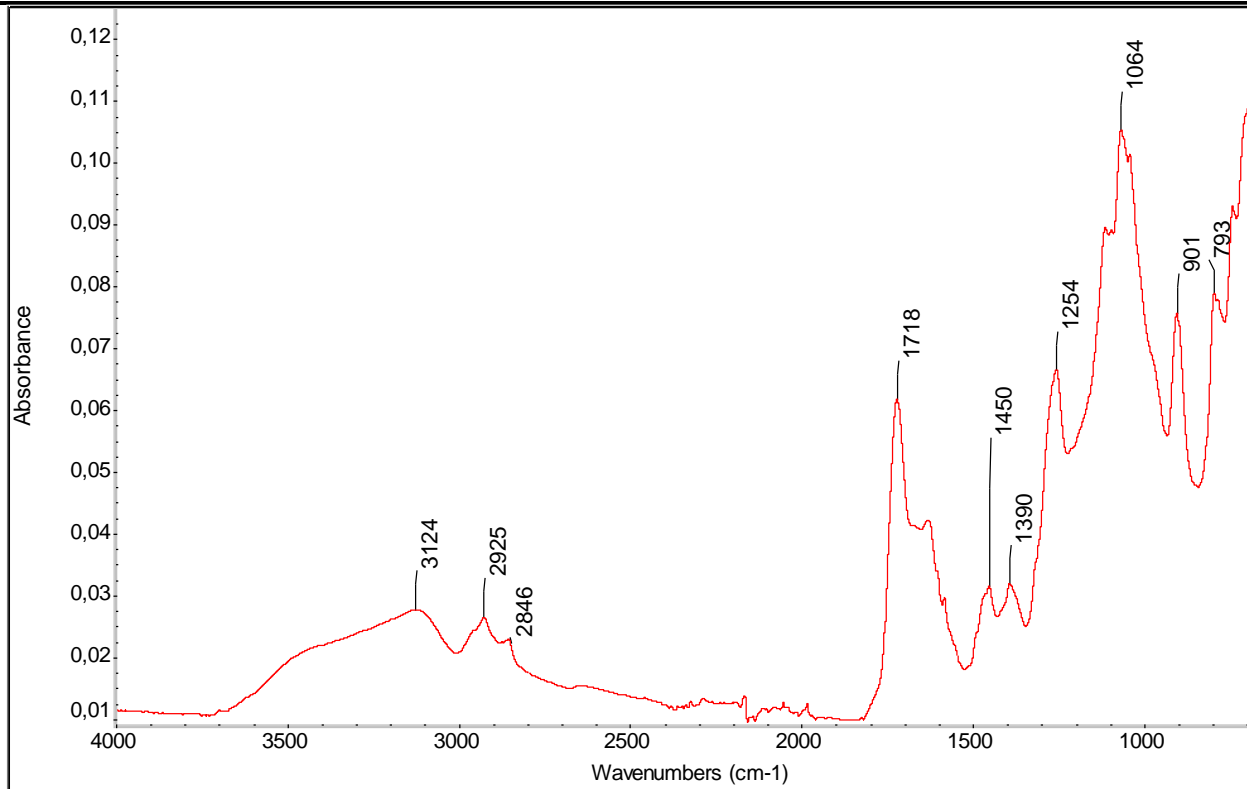


1 – white	Ca, Si, Mg, Al, (Fe), (K) + some BaSO <sub>4</sub> grains
2 – pink	Ca, Ti, Mg, Si, Al, (K), (Na)
3 – black	Ba, S, Pb, (Ca), (Si)
4 – dark green	Ca, Ti, Si, Al, K, S
5 – light green	Fe, Ti, Si



## FOURIER-TURNAM INFRARED SPECTROSCOPY (FTIR)

Sample n°: OBJ 13-2

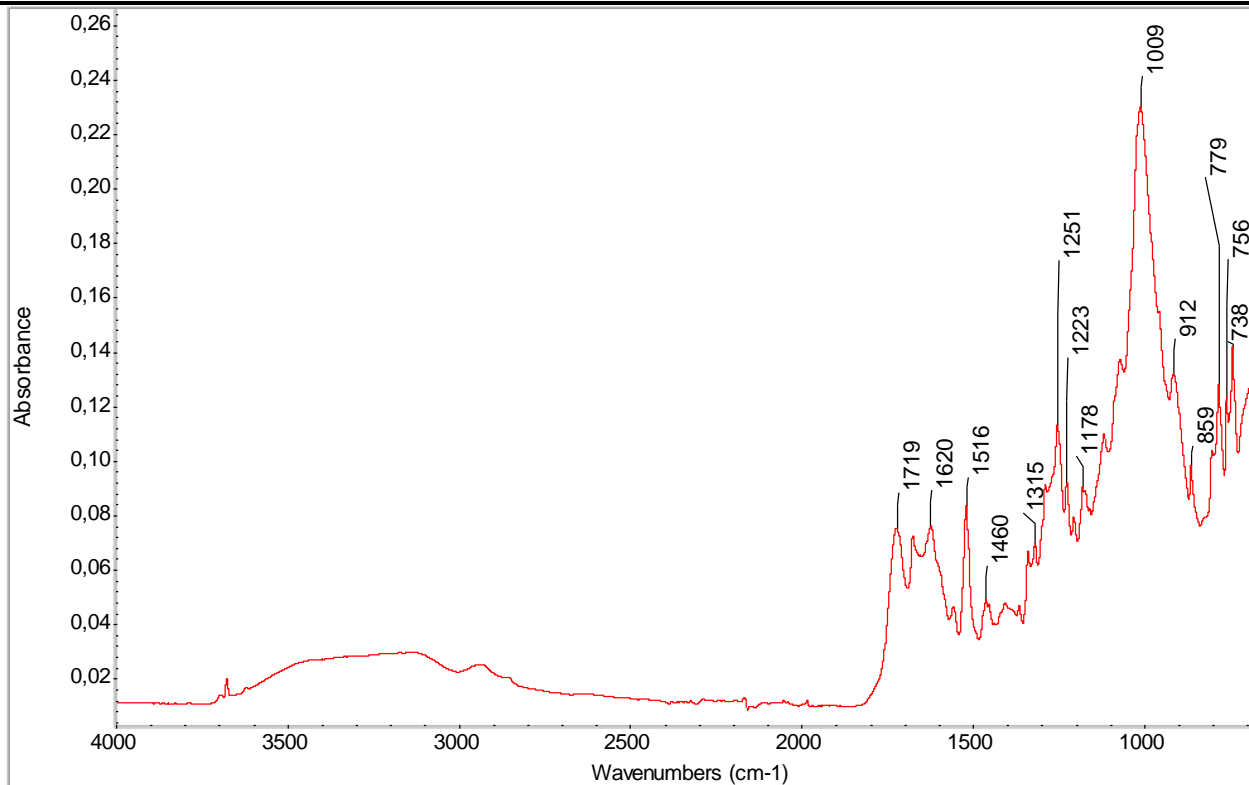


### ASSIGNMENTS:

**Alkyd-Styrene:** 2925 cm<sup>-1</sup>, 2846 cm<sup>-1</sup>, 1718 cm<sup>-1</sup>, 1603 cm<sup>-1</sup>, 1584 cm<sup>-1</sup>, 1493 cm<sup>-1</sup>, 1489 cm<sup>-1</sup>, 1450 cm<sup>-1</sup>, 1390 cm<sup>-1</sup>, 1254 cm<sup>-1</sup>, 1064 cm<sup>-1</sup>, 745 cm<sup>-1</sup>

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

**Sample n°: OBJ 13-4**



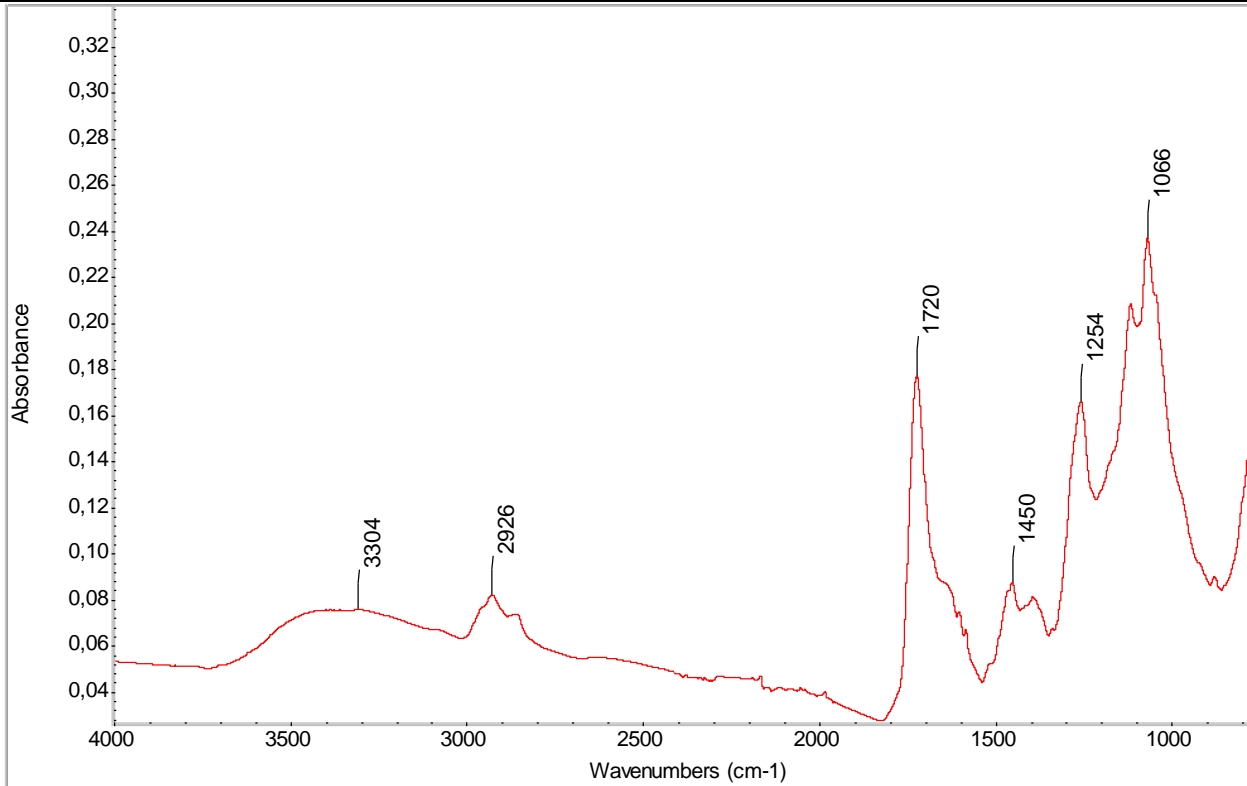
**ASSIGNMENTS:**

**Alkyd:** 2933 cm<sup>-1</sup>, 2854 cm<sup>-1</sup>, 1719 cm<sup>-1</sup>, 1460 cm<sup>-1</sup>, 1124 cm<sup>-1</sup>, 1065 cm<sup>-1</sup>, 738 cm<sup>-1</sup>, 702 cm<sup>-1</sup>

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

**PY151:** 1656 cm<sup>-1</sup>, 1618 cm<sup>-1</sup>, 1600 cm<sup>-1</sup>, 1565 cm<sup>-1</sup>, 1451 cm<sup>-1</sup>, 1361 cm<sup>-1</sup>, 1312 cm<sup>-1</sup>, 1255 cm<sup>-1</sup>, 967 cm<sup>-1</sup>, 956 cm<sup>-1</sup>

**Sample n°: OBJ 13-7**



**ASSIGNMENTS:**

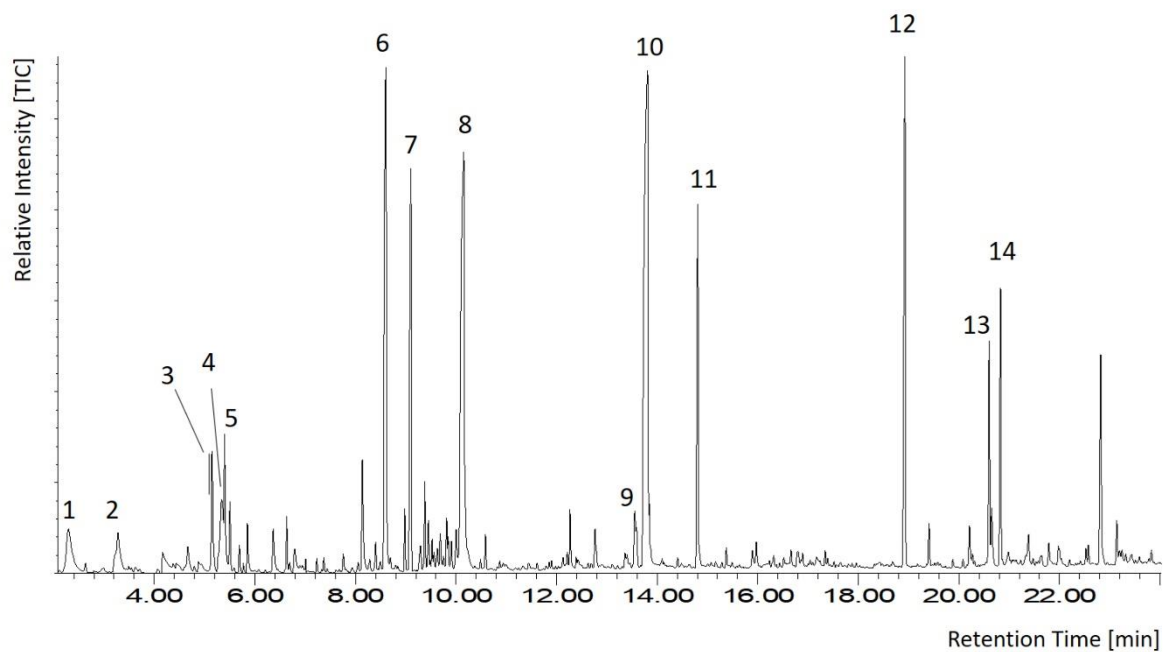
**Alkyd:** 2926 cm<sup>-1</sup>, 2854 cm<sup>-1</sup>, 1720 cm<sup>-1</sup>,  
1604 cm<sup>-1</sup>, 1583 cm<sup>-1</sup>, 1465 cm<sup>-1</sup>, 1254 cm<sup>-1</sup>

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



## PYROLYSIS-GAS CHROMATOGRAPHY/MASS SPECTROMETRY

Sample n°: OBJ 13-2



Peak N.	Assignment	Rt (min)
1	benzene	2.3
2	toluene	3.3
3	styrene	5.2
4	1,2,3-trimethoxy-propane	5.3
5	1,3-dimethoxy-2-propanol	5.4
6	benzoic acid, methyl ester	8.6
7	1,3-dimethoxy-2,2-bis(methoxymethyl)-propane	9.1
8	3-methoxy-2,2-bis(methoxymethyl)-propanol	10.1
9	octandioic acid, dimethyl ester	13.5
10	dimethyl phthalate	13.8
11	nonandioic acid, dimethyl ester	14.8
12	hexadecanoic acid, methyl ester	18.9
13	octadecanoic acid, methyl ester	20.6
14	octadecanoic acid, methyl ester	20.9

This document was produced within the project ***Conservation of Art in Public Spaces (CAPuS)***.

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