

ANALYTICAL RESULTS – OBJECT 2

PARTNER:	UNITO - CCR
TYPE OF WORK:	Mural (Object 2)
COUNTRY:	Italy
CITY:	Turin
ADDRESS:	Via Carso (Giardini De Valle)
OWNER / CUSTODIAN:	Turin Municipality
ARTIST:	BIGTATO, JOES, PIOVE, WENS, IBS
TITLE OF THE WORK:	WE LOVE ENAK
YEAR OF EXECUTION:	2011
MATERIALS:	Spray painting on brick

SAMPLING POINTS LOCATION

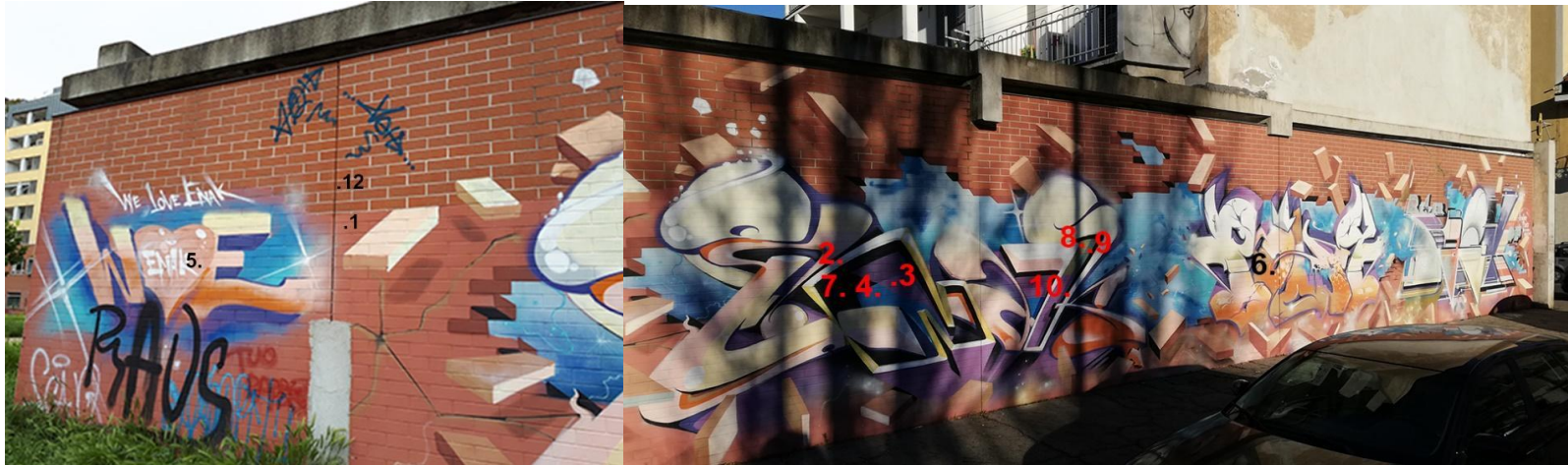


TABLE OF ANALYTICAL RESULTS

	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	Background paint layer	x		ATR-FTIR	Calcite, silicates	ATR-FTIR	Possibly PVA				
2	White paint Layer	x		ATR-FTIR Py-GC/MS	Silicates, Ti white	ATR-FTIR Py-GC/MS	Styrene-modified alkyd (main), VA/VeoVa (secondary)				

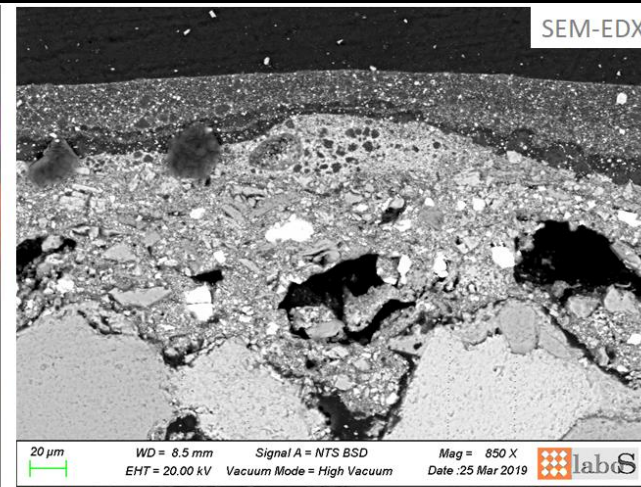
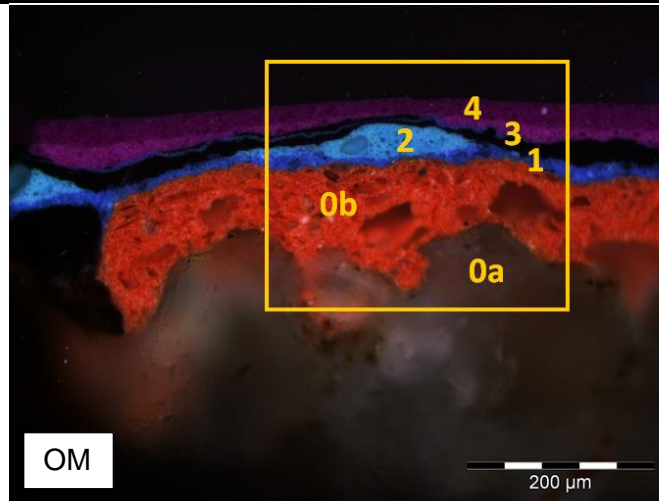
3	Purple paint layer	x		ATR-FTIR SEM-EDS	Cinquasia Violet (PV 19), silicates, calcite, Ti white	ATR-FTIR	Alkyd			ATR-FTIR	Oxalates
4	Light blue paint layer	x		ATR-FTIR SEM-EDS	Silicates, Ti white	ATR-FTIR	Alkyd			ATR-FTIR	Oxalates
5	Orange paint layer	x		ATR-FTIR	Calcite, silicates, possibly PO 5	ATR-FTIR Py-GC/MS	Styrene-modified alkyd (main), VA/VeoVa (secondary)				
6	Orange paint layer	x		ATR-FTIR	Calcite, silicates	ATR-FTIR	Alkyd			ATR-FTIR	Oxalates
7	Black paint layer	x		ATR-FTIR	Calcite, silicates	ATR-FTIR Py-GC/MS	Styrene-modified alkyd (main), VA/VeoVa (secondary)			ATR-FTIR	Oxalates
8	Green paint Layer	x		ATR-FTIR	Calcite	ATR-FTIR	Alkyd				
9	Dark green paint layer	x		ATR-FTIR	Silicates	ATR-FTIR	Alkyd			ATR-FTIR	Oxalates
10	Purple paint layer	x		ATR-FTIR	Silicates	ATR-FTIR	Alkyd			ATR-FTIR	Oxalates
11	Support	x						XRD	Quartz, K-feldspate (Microcline), Hematite, Plagioclase (Albite)		

* mortars, stone, metal ect.

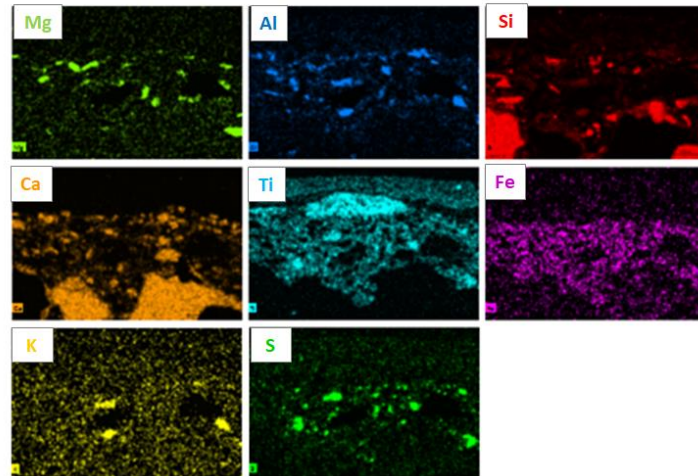
** Additional research or analyzes, for example: aging tests, colorimetry, pH

STRATIGRAPHY OF THE MICROSAMPLES

Sample n°: OBJ2_10

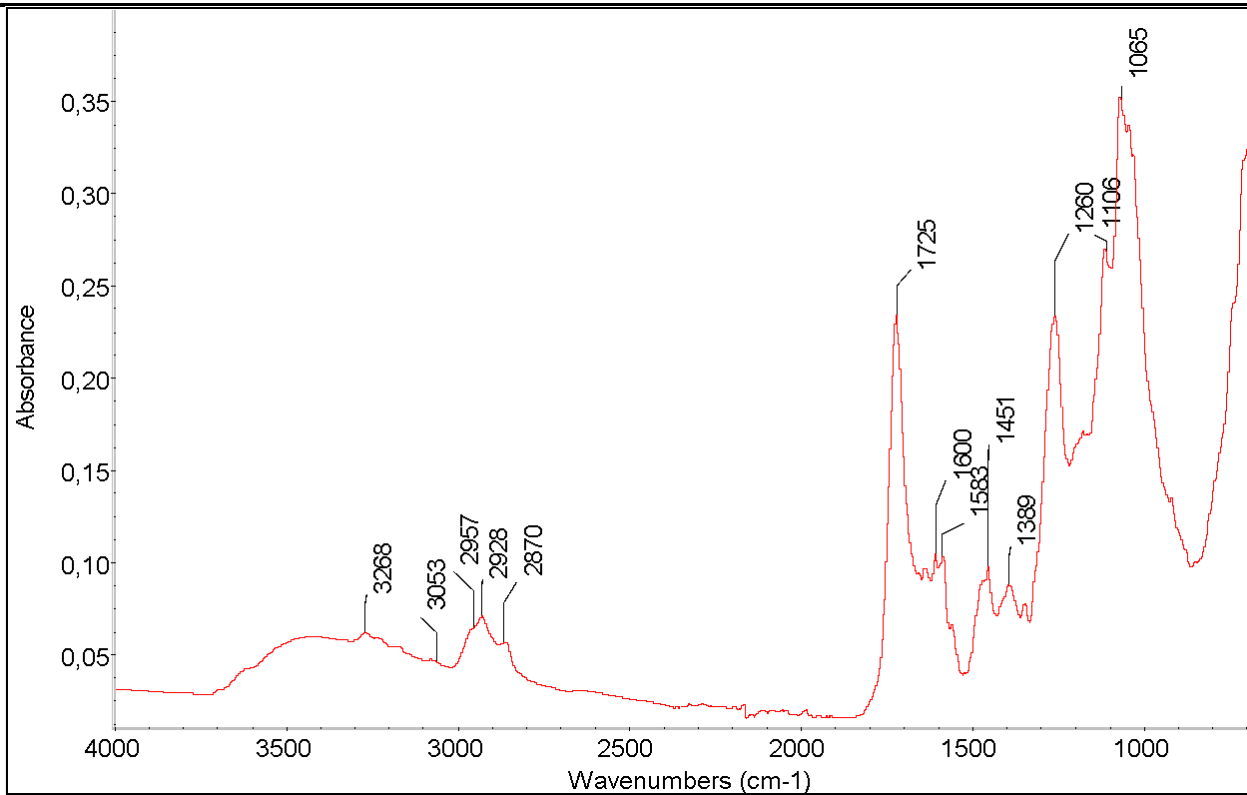


0a - support	Aggregates of Ca, (Mg), (Sr) Aggregates Si, Na, K
0b - support	Ca, Si, Al, Fe, Mg + aggregates of BaSO ₄
1 - blue	Ti, S, Ca, Si, (Al), (Fe)
2 - light blue	Ti, Si, Al, (Ca), (Mg)
3 - light purple	Ti, Si, (Al), (S)
4 - dark purple	Ti, Si, (Al), (S)



FOURIER-TURNFORM INFRARED SPECTROSCOPY (FTIR)

Sample n°: OBJ2-3



ASSIGNMENTS:

Alkyd: 2957 cm⁻¹, 2870 cm⁻¹, 1725 cm⁻¹, 1600 cm⁻¹, 1583 cm⁻¹, 1260 cm⁻¹, 1065 cm⁻¹,

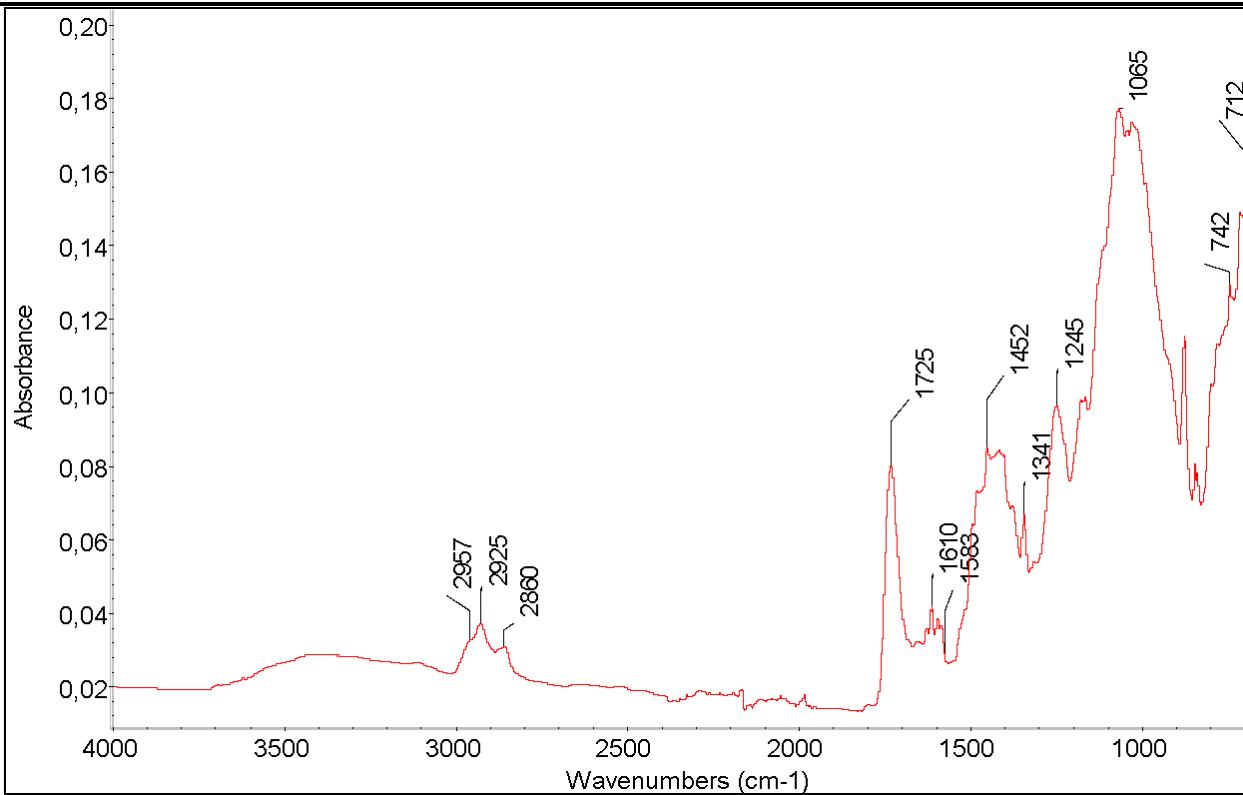
Calcite: 1394 cm⁻¹, 877 cm⁻¹, 712 cm⁻¹

Silicates: 900-1200 cm⁻¹

Titanium White : < 600 cm⁻¹

Oxalates: 3435 cm⁻¹, 3053 cm⁻¹, 1632 cm⁻¹, 1321 cm⁻¹, 782 cm⁻¹, 665 cm⁻¹

Sample n°: OBJ2-5



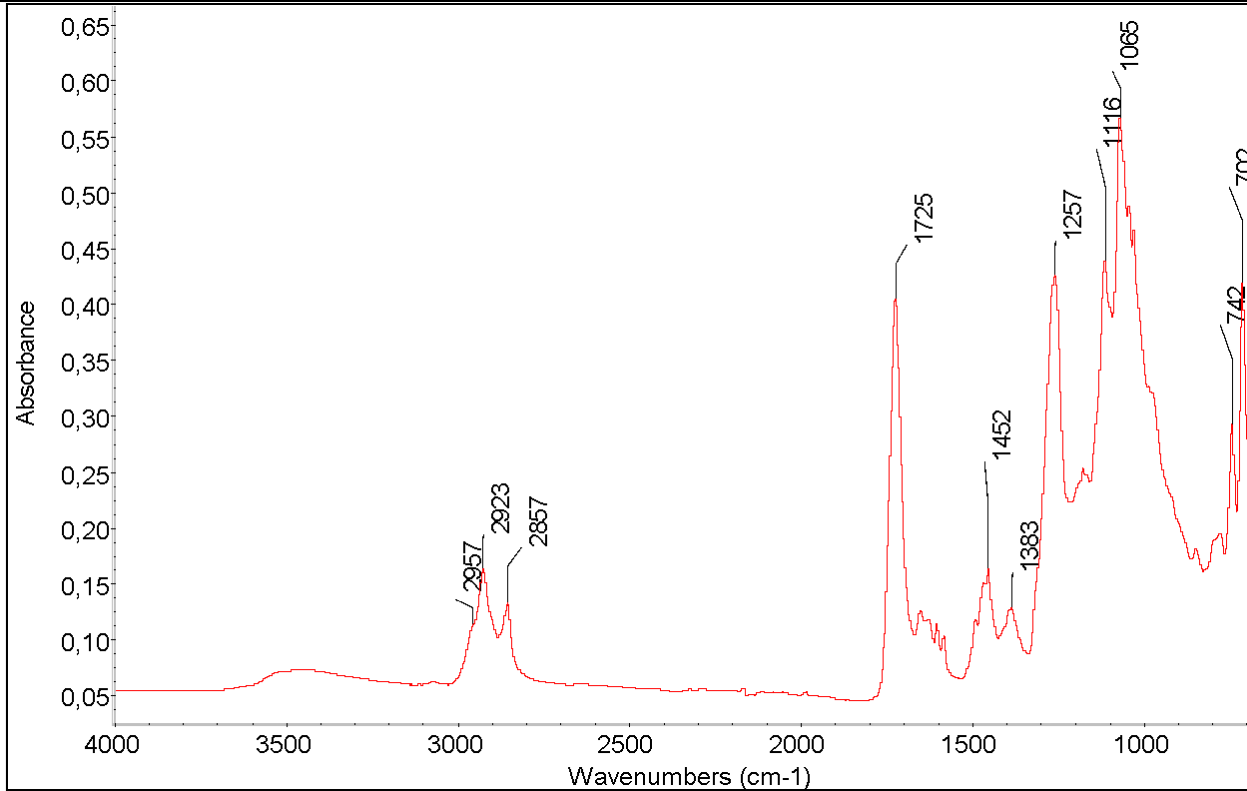
ASSIGNMENTS:

Alkyd-styrene: 2957 cm⁻¹, 2860 cm⁻¹, 1725 cm⁻¹, 1600 cm⁻¹, 1583 cm⁻¹, 1452 cm⁻¹, 1465 cm⁻¹, 1116 cm⁻¹, 1065 cm⁻¹, 742 cm⁻¹, 702 cm⁻¹

Calcite: 1796 cm⁻¹, 877 cm⁻¹, 712 cm⁻¹

Silicates: 900-1200 cm⁻¹

Sample n°: OBJ2-7



ASSIGNMENTS:

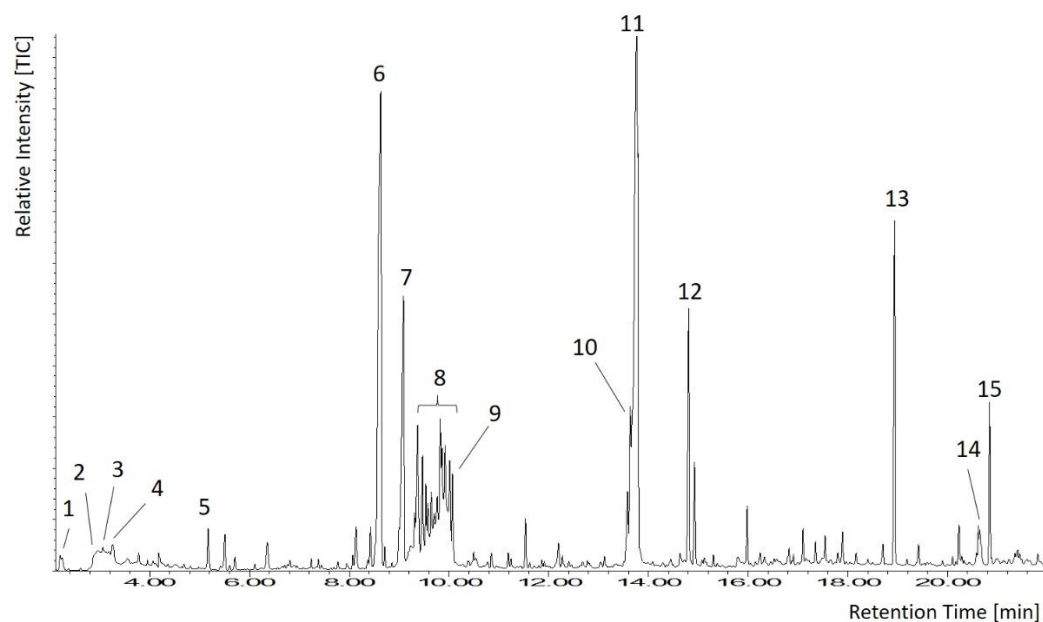
Alkyd-Styrene: 2957 cm⁻¹, 1725 cm⁻¹, 1600 cm⁻¹, 1583 cm⁻¹, 1492 cm⁻¹, 1452 cm⁻¹, 1465 cm⁻¹, 1257 cm⁻¹, 1116 cm⁻¹, 1065 cm⁻¹, 757 cm⁻¹, 742 cm⁻¹, 702 cm⁻¹

Silicates: 900-1200 cm⁻¹

Oxalates: 3435 cm⁻¹, 3053 cm⁻¹, 1632 cm⁻¹, 782 cm⁻¹

PYROLYSIS-GAS CHROMATOGRAPHY/MASS SPECTROMETRY

OBJ 2_5



Peak N.	Assignment	Rt (min)
1	benzene	2.3
2	acetic acid	3.1
3	toluene	3.2
4	styrene	5.2
5	benzaldehyde	6.4
6	benzoic acid, methyl ester	8.6
7	1,3-dimethoxy-2,2-bis(methoxymethyl)-propane	9.1
8	vinyl versatates	9.2-10.1
9	3-methoxy-2,2-bis(methoxymethyl)-propanol	10.1
10	octandioic acid, dimethyl ester	13.6
11	dimethyl phthalate	13.8
12	nonandioic acid, dimethyl ester	14.8
13	hexadecenoic acid, methyl ester	18.9
14	octadecanoic acid, methyl ester	20.6
15	octadecanoic acid, methyl ester	20.9

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

Authors:

Moira Bertasa, Tommaso Poli, Chiara Riedo, Dominique Scarlone (University of Torino)

Paola Croveri, Chiara Ricci (Fondazione Centro Conservazione e Restauro “La Venaria Reale”)



**Education, Audiovisual and
Culture Executive Agency**

Erasmus+: Higher Education-Knowledge
Alliances, Bologna Support, Jean Monnet

CAPuS project has received funding from the
European Commission, Programme Erasmus+
Knowledge Alliances 2017, Project N°
588082-EPP-A-2017-1-IT-EPPKA2-KA

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.