The case of two crucified christs for a new possibility of comparison in the classification of the "cristi feriti liguri"

<u>P. Fermo1</u>, A. Mearini², R. Bonomi², E. Arrighetti², V. Comite¹ ¹ Dipartimento di Chimica, Via Golgi19, Università degli Studi di Milano, Milan (Italy) ²Enaip-Restoration school of Botticino

Keywords: restoration, sculpture, pigments, binders

The polychrome wooden sculpture is a complex artifact because of the presence of different materials and techniques. Due to changes in style or decay, objects closely related to the cult were often over painted. The present study aim to identify and set-up a correct investigation methodology to identify pigments and binders of the original layer and subsequent overpaintings that often characterize polychrome wooden sculptures, pointing out how the acquisition of these data can be a support not only to the activity of the restorer, who frequently has to face the removal of the overlayers, but also to the deepening of the historical artistic context, connected to the knowledge of the work of art.

In this particular study a multi-analytical approach has been applied on two fifteenth-century Ligurian Christs, the first one from San Bartolomeo parish in Zuccarello, the second from Borghetto San Nicolò, both heavily rehashed. The application of different analytical techniques is in fact often successfully for paints analysis [1]. By comparing the results of XRF analysis performed with portable instrumentation on stratigraphic sequences related to samples coming from different layers could be identified, then confirmed by μ -FTIR that also revealed the chemical nature of the binders employed in the different overpaintings, later confirmed and identified by GC-MS analysis [2].

The study has allowed a new possibility of comparison, based on analytical data, in the classification system of the " selva dei Cristi feriti liguri quattrocenteschi nel Ponente", of which the two works are part, proposed in the text "La Sacra Selva. Scultura lignea in Liguria tra XII e XVI secolo " [3].

[1] Fermo, P., Piazzalunga, A., De Vos, M., Andreoli, M. Applied Physics A: Materials Science and Processing, 113 (2013)1109-1119.

[3] M. Bartoletti, F. Boggero, F. Cervini, La selva dei Cristi feriti. Crocifissi quattrocenteschi nel Ponente, in La Sacra Selva. Scultura lignea in Liguria tra XII e XVI secolo, a cura di F. Boggero, P. Donati, Skira, 2004.

^[2] Lluveras, A., Bonaduce, I., Andreotti, A., Colombini, M.P. (2010) Analytical Chemistry, 82 (2010), 376-386.

Please specify topic and preferred way of presentation:

TOPIC: 12 (select a single number from the list below)

ORAL PRESENTATION

POSTER PRESENTATION

List of topics:

- 1. X-ray analysis (XRF, PIXE, XRD, SEM-EDX)
- 2. Confocal X-ray microscopy (3D µ-XRF, 3D µ-PIXE, ...)
- 3. Synchrotron, ion beam and neutron-based techniques/instrumentation
- 4. FT-IR and Raman spectroscopy and microscopy
- 5. UV-Vis and NIR absorption/reflectance and fluorescence
- 6. Laser-based analytical methods (LIBS etc.)
- 7. Magnetic resonance techniques
- 8. Chromatography (GC, HPLC) and mass spectrometry
- 9. Optical and coherent imaging techniques
- 10. Mobile spectrometry and spectroscopy
- 11. Remote sensing and hyperspectral imaging
- 12. Case studies employing one or more analytical methods

Please specify the name and email of the author presenting the work:

Name: Paola Fermo Email: paola.fermo@unimi.it