



## **Immunodetection of proteins in paint media by ELISA and IFM**

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Immunological techniques are based on the highly specific antibody-antigen interaction which is widely exploited for analytical and clinical purposes in biochemistry and medicine. Their application in heritage science is very attractive for the major advantages they offer: high sensitivity and specificity, being able to distinguish different biological sources of the same protein.

In this contribution analytical potentials and limits of Enzyme Linked Immunosorbent Assay (ELISA) and Immunofluorescent Microscopy (IFM) techniques for the analysis of proteins in painting materials are presented and discussed. ELISA is cost affordable, relatively simple and fast, with limited sample manipulation and capable of multiple antigen recognition, while IFM is very promising for spatially resolved identification of target proteins in painting cross-sections.

Analytical issues and practical aspects on the use of these techniques in heritage science will be considered. The impact in the field, as well as perspectives of future developments of the immunological approach will be also discussed.