**Singular and complex cases related to artwork issues based on material characterization by using analytical techniques and chemometrics.**

**Description**
Heritage objects are complex material compendiums of the culture that generated them. The reading of these objects through instrumental analysis techniques requires a previous discussion, which contributes to define what should be analyzed; and subsequent treatment using data processing techniques that make it possible to reveal the information that may be masked.

In this access, the transdisciplinary study of singular problems of interest that require the contribution of material analysis and data processing is proposed.

For this study, most of the atomic, molecular, and chromatographic analysis techniques are available, which can be optimized according to the nature of the samples and also the type of information needed.

<table>
<thead>
<tr>
<th><strong>Fields of application</strong></th>
<th><strong>Materials</strong></th>
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<tbody>
<tr>
<td>Cultural heritage, archaeology and paleontology</td>
<td>inorganic, organic</td>
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<tr>
<td>Painting, Sculptures, Manuscripts and archaeological and paleontological remains</td>
<td></td>
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</tbody>
</table>

**Equipment**
Most instrumental analysis techniques: atomic, molecular, chromatographic.

**Potential Results**
The material aspects of heritage objects include information about their origin and vicissitudes.

The analysis of the objects will contribute to the knowledge of their composition and structure and to evidence hidden relationship.

**References**
- Torralba, I.; Bagán, H.; Esisenhofer, J.; Tarancón, A.; García, J.F. *Benin sculptures dating: Contribution of scintillation techniques to the restitution of cultural heritage objects.* Int. Conf. on Radioanalytical and Nuclear Chemistry (RANC 2019), Budapest(Hungary). Invited lecture.
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<tr>
<th>Requisites/needs for the service</th>
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<tr>
<td>• Discussion of the problem</td>
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<td>• Access to objects/Samples</td>
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**Provider**

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