



## **High Resolution Mass Spectrometry to Characterize the Composition of Art Pieces**

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Mass spectrometry-based proteomics has opened avenues to better characterize a variety of materials housed in museum collections around the world, including detection of the biologically-derived components of art objects. Proteomic methods were applied to Chinese lacquer Buddhas (late 6th to early 7th century) and a bodhisattva (13th century), in which bone was ground to a powder and used as filler. Mass spectrometric analysis was able to identify the species of origin for the bone as well as the lacquer. Proteomics was also applied to biological tissues from 18th-19th century Tlingit art, showing the diversity of species used to adorn the art pieces. In addition to these examples, mass spectrometry will be discussed and challenges associated with application of these techniques in paleoproteomics will be discussed.