

# ARTÍCULO PUBLICADO

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Paper: X-Ray Fluorescence and Laser-Induced Breakdown Spectroscopy analysis of Roman silver denarii

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**Abstract:** In this paper we present the results of a study performed on a large collection of silver Roman republican denarii, encompassing about two centuries of history. The joint use of Laser-Induced Breakdown Spectroscopy (LIBS) and X-Ray Fluorescence (XRF) spectroscopy allowed for an accurate determination of the coins' elemental composition; the measurements, performed mostly in situ at the "Monetiere" in Florence, revealed a striking connection between the "quality" of the silver alloy and some crucial contemporary events. This finding was used to classify a group of denarii whose dating was otherwise impossible. The comparison with other contemporary denarii disproves a recent theory on the origin of the so called "serrated" denarii (denarii showing notched chisel marks on the edge of the coin).