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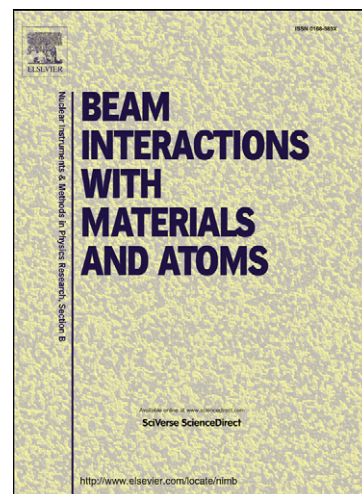
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**Analysis of surface stains on modern gold coins**V. Corregidor\*<sup>1,2</sup>, L.C. Alves<sup>1,2</sup>, J.Cruz<sup>1,2,3</sup>

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**Abstract**

It is a mandatory practice in the European Mint Houses to provide a certificate of guarantee of their products specially when issuing commemorative gold or silver coins. This practise should assure satisfaction and trust both for the mint house and for the demanding numismatic collector. For these reasons the Mint Houses follow a strict quality control in all the production steps in order to ensure a no-defect, fully supervised output. In spite of all the undertaken precautions, different surface stains with diverse origin on gold coins recently minted in Europe were observed. Those were compositionally studied by means of IBA techniques at the end-stage nuclear microprobe installed at IST/ITN. From this study it was possible to identify several possible sources for these stains. The presence of defects at the surface of these commemorative coins address the need of improving the quality control system and the results here presented point out where these improvements should occur, in order to reduce/eliminate them and give the customer a product that with time probably will be revalued.

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