TECHNOLOGY COATING THICKNESS TESTING



Precious metal coatings have become popular in the jewellery industry to provide customers with the glamorous appearance of gold and silver jewellery, but without the associated cost of items made entirely from precious metals.

The accurate analysis of precious metal coating thickness is essential across the industry. Jewellery manufacturers need

to be able to ensure that the thickness is sufficient to give the items the desired appearance but without wasting cost and materials by applying a coating that is too thick. Jewellers need to be able to reliably authenticate the content, thickness and value for these items. X-Ray Fluorescence (XRF) spectroscopy is a method capable of measuring thickness in single and multiple layers over any substrate.

The ARUN Technology AURUM X-Ray Fluorescence (XRF) analyser is a compact benchtop solution for coating thickness testing, equipped with a bespoke calibration capable of measuring all common metal coatings – making it a powerful tool for accurate measurements of both legitimate and fake jewellery items.



WHY CHOOSE THE AURUM FOR TESTING COATINGS?

- Non-Destructive Analysis The coating is not damaged during testing, meaning valuable jewellery items can be analysed without any risk of damage which would affect its value or appearance.
- Fast Results Coating thickness measurement is achieved within 10 seconds read out results from the easy to use touchscreen interface.
- Sleek and Compact The sleek design suits the jewellery retail environment and enables value assessment to take place in front of the customer, without taking up valuable counter space.
- Intelligent Algorithm The AURUM can analyse significantly thin coatings on the scale of 0.018µm for gold or 0.016µm for silver, up to saturation thicknesses in the range of 6-60µm, meaning it can be relied upon for a wide range of jewellery items.
- Low Cost Of Ownership The optional carbon fibre mesh anti-puncture window can shield the instrument's detector from irregular shaped and sharp items, avoiding the need for costly repairs.