GRAZIELLA

GOLD

HOW TO CHECK THE PURITY

TOUCHSTONE METHOD

Traditional procedure for verifying the gold karat:

1. Stamp inspection:

Check the hallmark engraved on the jewel (e.g., 750, 585) to verify the declared karat.

2.Surface coating removal:

Gently scrape the surface in a discreet area to expose the true color of the underlying gold.

3.Touchstone testing:

- *Rub the metal against the touchstone to leave a visible streak.*
- *Repeat the operation on a second point of the jewel for greater reliability*

4.Application of acid:

Apply the specific acid corresponding to the declared karat (e.g., acid for 18kt gold) on the streak.

If the streak remains intact, the karat is confirmed.

Note:

This is an effective but invasive method, which may damage or dull the jewel's surface, especially in the presence of special protective coatings.

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XRF METHOD

(X-Ray Fluorescence Spectrome)

Modern technology for non-destructive analysis of precious metals:

• How it works:

LXRF uses X-rays to excite the atoms within the metal.
Each element emits a unique fluorescence "signature" that allows precise identification of its chemical composition.

• Advantages:

• Accurate analysis of the alloy, including the exact percentage of gold and other metals.
• Fast and non-invasive method: does not damage or alter the object.
• Ideal for coated or delicate jewellery, such as pieces featuring Graziella Air technology.

• Limitations:

• The analysis focuses on the outermost layers of the metal (microns of depth).

Summary:

XRF is the ideal technology for analysing innovative, lightweight, and coated jewellery without compromising their aesthetic integrity.

XRF METHOD

GOLD VERIFICATION:
FROM COATING TO INGOT

Introduction

For an accurate verification of gold treated with protective coatings, it is necessary to remove all surface layers before analysis.

1. Stripping

Removal of the protective coating through chemical or mechanical processes to expose the bare metal.

2. Melting

The material is melted at high temperatures to eliminate impurities and obtain a homogeneous metal.

3. Ingot Formation

The molten gold is poured into molds to create a compact and uniform ingot.

4. Ingot Analysis

The ingot is verified through:

· **XRF** *(quick surface analysis)*
· **Saggio al fuoco** *(highly accurate chemical analysis of the gold content)*

Verification through melting ensures maximum precision in gold analysis, eliminating any surface alteration and providing a true determination of the metal's purity.

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