

APPLICATION NOTE

Using X-ray fluorescence for fast, reliable gold analysis in the gold-buying industry

The economic crisis has coincided with historically high gold prices to boost the importance of so-called “cash for gold” businesses. Because the buyer usually has only a few minutes to estimate the value of gold items presented for sale, methods like touchstone analysis are often used: Although this test severely scratches the piece it is still not 100% reliable. The industry demands a precise, quick and foolproof method for testing gold content that is, above all, non-destructive.



Fig. 1: Various items potentially presented for sale to gold buyers

Besides the weight, the gold content of an object determines its value. The commonly-used analysis methods pose different disadvantages for retail buyers of personal gold items: Fire assaying is time consuming and relies on chemical processes, and despite the fact that touchstone analysis also requires acids for testing, the results are still not always reliable. Because both methods damage the item in varying degrees, neither really meets the needs of the industry.

However, X-ray fluorescence analysis (XRF) offers a non-destructive method for quick material analysis and coating thickness measurement on jewellery, watches and other precious metal products; FISCHER's XRF instruments are simple to use, even for non-technicians. The FISCHERSCOPE® X-RAY XAN® 220 enables precise and reliable determination of gold and platinum content even under challenging circumstances. Fast and easy-to-use, the XAN 220 features excellent long-term

stability and rarely ever requires calibration. Operation is as simple as opening the hood, placing the item on the inspection window, closing the hood and starting the inspection with the press of a button. In less than a minute the exact content of gold and various other elements is presented on the screen.

Functionality and the minimisation of running costs took high priority during development of the XAN 220. Designed without moving parts – thus eliminating wear and tear – the XAN 220 is truly a precision instrument meant for real-life, daily use.

Advantages:

- Fast: results in less than a minute
- Easy: single-button functions
- Reliable and accurate: intelligent WinFTM® software prevents measurement errors
- Robust and stable: factory calibrated, no time-consuming re-adjustments



Fig. 2: Fast and non-destructive measurement of a gold wristband with the FISCHERSCOPE® X-RAY XAN® 220

The innovative FISCHERSCOPE® X-RAY XAN® 220 uniquely meets the needs of professional end-users in the gold buying market. With this measurement system, jewellery and other gold items can be analysed quickly, accurately and non-destructively. Your local FISCHER dealer will be happy to provide you with more information.