Hallmark of
The Goldsmiths' Company
since 1300

The
GOLDSMITHS'
Company

ASSAY OFFICE

Laboratory Services

Special assay, precious metal smelting and nickel testing

The Goldsmiths' Company Assay Office is proud to offer the latest state-of-the-art equipment

The Goldsmiths' Company Assay Office is where hallmarking began 700 years ago

Today we offer fully independent laboratory services. It's a highly respected service that's been UKAS* accredited for over 15 years. We are also selected by the Trading Standards Authorities to examine and witness the authenticity of metals.

Our laboratory services extend to special assay, nickel testing and precious metal smelting. We also measure plate thickness using X-ray fluorescence analysis, and, uniquely, conduct silver dating. We've simply added modern day science to our age-old skills.

We are constantly developing our service portfolio to meet the needs of our customers and are committed to serving as your centre for excellence.

UKAS accreditation

The Goldsmiths' Company Assay Office has been accredited by UKAS to international standard ISO 17025:2005 for its hallmarking and gold, silver, platinum and palladium special assay services for over 15 years. We are also certified for these services to ISO 9001:2008.

*United Kingdom Accreditation Service

Nickel has been shown to be the most common cause of skin contact allergy in Europe

Special assay
Bars or samples can be assayed for the following elements:

Metal	Accuracy
Gold	1 ppt
Silver	1 ppt
Platinum	10 ppt
Palladium	10 ppt
Other elements, sweeps and ores	10 ppt

Non-destructive compositional analysis
Articles can be submitted for an estimate of composition using X-ray fluorescence spectrometry. The technique is entirely non-destructive.

Smelting
We are pleased to offer a comprehensive smelt and assay service for precious metal scrap (Au, Ag, Pt & Pd*). Building on our laboratory's extensive experience in the field of precious metal analysis, this service produces a homogenous bar from the scrap material; this bar is stamped with a unique identification code traceable to the certificate of analysis. The bar is then analysed using the most suitable method. The results of this analysis are recorded on the aforementioned certificate along with the weight of the bar and the customer's details. This enables the sale of the bar without need for further testing.

Nickel testing
'The Dangerous Substances and Preparations (Nickel) (Safety) Regulations 2005' specifies the upper limit for nickel release in articles which have direct and prolonged contact with the skin - such as jewellery, fashion accessories, and metal adornments for apparel. It also specifies the upper limit for nickel contact in specific articles.

Anyone wishing to place items on the market for sale must recognise that they have a legal obligation to ensure that items meet the requirements of the legislation. The proof of this is known as showing 'due diligence'.

The supplier of a product which is found not to comply with the Nickel Regulations is committing an offence under the Consumer Protection Act. There cannot be any certainty that a product conforms to the Nickel Regulations without it undergoing full testing as required by the British Standards at an approved laboratory.
Three British reference tests that we offer to establish compliance with the Nickel Regulations include:

Nickel content
BS EN 1810:1998: The British Standard Specification reference test method for the measurement of nickel content.

Nickel durability
BS EN 12472:2005: The British Standard Specification reference test method for the simulation of wear and corrosion. The wear of objects in contact with the skin depends very much on nature and shape of the objects and the activities of the person concerned. The intention of this test is to produce a time-dependent wear and corrosion test which can be related to the duration of a coating in normal use over two years.

Nickel release
BS EN 1811:2011: The British Standard Specification reference test method to ascertain the release of nickel from products intended to come into direct and prolonged contact with the skin. These should not exceed 0.5 micrograms per square centimetre per week. Body piercing post assemblies should not exceed 0.2 micrograms per square centimetre per week.

* 120g minimum weight applies

Lead and cadmium testing

The ability to detect lead and cadmium in jewellery items is becoming more important due to the harmful effects that these toxic elements can have. In the EU, cadmium is already restricted by the REACH regulations and lead will be included from October 2013. Our lead and cadmium testing service for both precious metal and costume jewellery items is fully in line with the REACH regulations.

Silver dating

This service is unique to our laboratory.
It involves measuring the impurities of a sample taken from a silver article of unknown date using the technique of inductively coupled plasma optical emission spectrometry (ICP). The impurities are compared with those in our unique database of impurities of silver of known dates thus allowing the most probable date range to be calculated.

The Goldsmiths' Company Assay Office: Your centre for excellence

- The Goldsmiths' Company Assay Office was formed by Royal Charter in 1327 and since then has been protecting the jewellery trade and consumer through hallmarking
- UKAS accredited for over 15 years
- Today, we pride ourselves on our integrity, quality and services. Alongside our core hallmarking business we also provide:
  - Valuation services
  - Antique plate and authentication services
  - Educational programmes
- Prices and further technical information are available on our website

Why choose the Goldsmiths' Company Assay Office for your laboratory services

We run a highly accurate and fully independent laboratory service. Our systems guarantee that the highest quality of service is carried out according to rigorous procedures. Our unique portfolio of services complements all the needs of the modern jewellery and silversmithing industries.

Plating thickness measurement

Plating thickness can be measured. This is carried out by taking a cross section of an article, mounting it in resin and grinding and polishing it. The cross section and thickness of the plating is then examined through an optical microscope. Alternatively, a non-destructive plating thickness test is available with the use of X-Ray Fluorescence analysis. Quotations are provided on an individual job basis.

Analysis of other metals

The extensive range of laboratory equipment owned by the Assay Office can be used for the analysis of a wide range of non-precious metals. Contact us to discuss your requirements.

For further information contact:

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