

{multithumb}

The quality control of the submitted articles for hallmarking requires that the sample shall represent a homogeneity lot of articles.

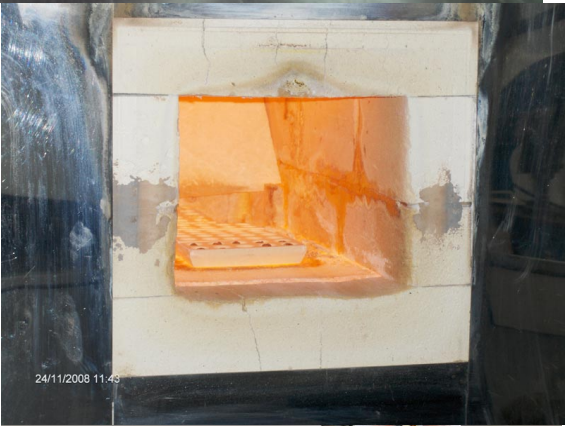
The determination of the alloy purity can be accomplished with the following two approved methods :

**i) Gold** : Cupellation method (ISO 11426)

According to the method, a small amount of sample with weight up to 250 mg, is weighed in a 5-digit balance. A specific amount of pure silver is added in the sample and then wrapped in a pure lead foil. The new alloy is placed in a preheated cupel in furnace at 1100 °C, where lead and other base metals are oxidized and absorbed into the cupel. The silver is then dissolved out with nitric acid, leaving a pure gold cornet, which can be weighed and the gold content is calculated by comparing with the original weight of the sample.

This method is very reliable and well known from the ancient era.





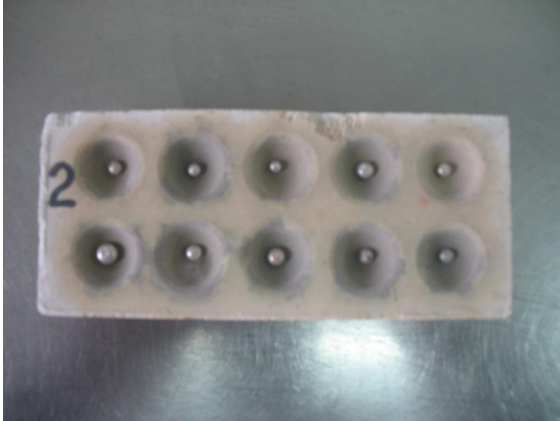




Figure 1: A person in a blue sleeveless top working at a laboratory bench with a scale. The person is looking at a piece of equipment on the bench. The bench is cluttered with various items, including a scale, papers, and small containers.

