COEI-2-TANTAL Tantalisation of platforms of l'Vov in graphite

1. Preparation of tantalum solution at 6% (m/v) according to the zatka process

Three grammes of tantalum powder are put in a 100 ml Teflon □ cylindrical vase.

Add 10 ml of hydrofluoric acid diluted to a half, 3 g of dehydrated oxalic acid and 0.5 ml of hydrogen peroxide at 30 vol.

Heat carefully to dissolve the metal.

Add a few drops of hydrogen peroxide as soon as the reaction slows down; when the dissolution is complete, add 4 g of oxalic acid and 30 ml of water.

The acid is dissolved and the solution is brought to 50 ml with ultra pure demineralised water.

Store this solution in a plastic flask.

2. Treatment of graphite platforms

The platform is placed inside the graphite tube or used pyrolytic graphite tube. It is set to the unit of atomisation of the spectrophotometer.

A volume of 10 µl of tantalum solution is injected on the platform using an automatic distributor of samples;

Put the tantalum solution in the blank's position on the sample holder.

The temperature cycle is set according to the following programme:

- drying at 100°C for 40 seconds
- mineralisation at 900°C for 60 seconds
- atomisation at 2600°C for 2.5 seconds
- argon is used as an inert gas.

3. Reference

- Zatka, Anal. Chem., vol 50, n° 3, March 1978.