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.