

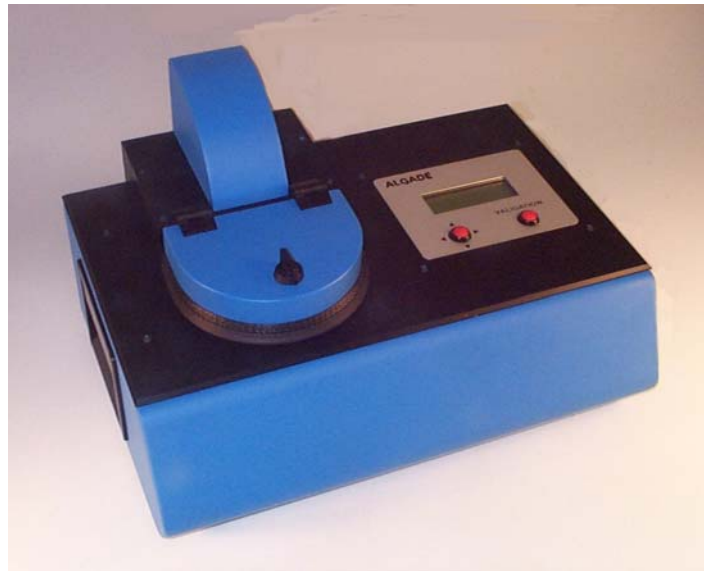
URANUS 2 FLUORIMETER

○ FOR MEASURING THE URANIUM CONTENT OF A SAMPLE

□ APPLICATIONS

- Analytical determination of Uranium for use in the fields of :

- medicine
- the environment
- food
- industry



- A compact easy-to-use laboratory instrument.
- Measuring principle based on the UV fluorescence of uranium.
- Automatic measurement of 18 samples.
- Microcontroller management for ease of use and for data acquisition.
- Display of results on a local screen.
- Transfer of results to a PC.
- Supplied with software for the transfer of results.

Features



URANUS 2 FLUORIMETER

FEATURES

Operating principle :

A sample containing uranium, activated by a UV light source, re-emits by fluorescence a luminous flux, 540 nm wavelength centred, with an intensity proportional to the uranium concentration.

Preparation of the sample :

(In accordance with the CETAMA* method : determination of Uranium by fluorimetry)

- concentration or dilution of the sample taken.
- addition of sodium carbonate and sodium fluoride.

Setting up the sample :

- the sample is placed in a platinum cup with a capacity of 0.1 ml.
- the cup is placed in a disk capable of holding 18 cups.

Measuring range :

- from 10^{-3} to 10^2 µg of uranium per sample.

Light source :

UV LED coupled to UV filter.

Lifetime 10^5 hours.

Power 0.75 W. No over heating of samples.

UV interference filter centred on 360 nm with a band width of 80 nm.

Detection :

By photomultiplier :

- high sensitivity,
- very low dark current.

Coupling to a green filter centred on 540 nm and 50 nm band width.

Control :

14 bit RISC micro-regulator.

Display on 4x20 back-lit LCD screen.

Dialogue with two push buttons.

Saving of parameters and data in case of mains supply failure.

Memory capacity : more than 2000 disks, each containing 18 samples.

Data transfer :

Serial link for PC.

Sample management :

- Automatic feed.
- Recognition of disk zero position.
- Detection of cup presence.

Power supply :

- 230 V single phase 50 Hz (with earth).
- Power absorbed : 20 W.

Temperature :

During operation : +10°C to +40 °C.

Casing :

Lacquered metallic casing.

Size : length 405mm x depth 284 mm x height 244 mm.

Weight : 6 kg.

* *French Atomic Energy Commission, Established of Analysis Methods Committee.*

ADDITIONAL

OPTIONS

Cups

Our cups are made of **platinum**. This metal was chosen for its chemical neutrality and its mechanical resistance to high temperatures.

Sample holder **disk**.

For sample preparation :

Epiradiator.

Flux pellets made of NaF and Na_2CO_3 . 220 g box for 1000 pellets.

Large size Mecker Burner. Allows heating of 18 samples per run.

Copper-Nickel grid.