

# EDP 7000 / EDP 9002 - Electrodeposition System

(Single and dual channel) For the preparation of samples for alpha spectroscopy analysis

This electrodeposition system is designed for the preparation of liquid samples for Alpha spectroscopy analysis, especially for nuclear medicine and research applications on radio-isotopes.

The advantage of the EDP7000/EDP 9002 is that consistent sample preparation is achieved ensuring uniformity of deposition, assured sample collection efficiency providing repeatable results.

## Main features

- The EDP is made of materials specially adapted to withstand the corrosive environment generated by the electrodeposition process.
- The EDP includes a high-flow fan cooling system below the sample holder, in order to avoid excessive heating of the sample solution during the electrolysis process. This prevents the solution to evaporate, allowing you for optimal sample preparation.
- The ergonomical design of the flask-holder/flask/disk setup allows the user for quick, easy and reliable assembly/disassembly.
- The equipment is also fitted with a removable collection vessel below the sample flask holder, allowing for the containment of liquid in case of accidental mishandling.
- The EDP is fitted with a polarity inverter, allowing the user to switch the equipment in electro-chemical pickling mode, in order to ensure a perfectly clean surface on the stainless steel electrolysis disk.
- The user can accurately adjust the electrical intensity of electrolysis current (up to 5 Amperes) as well as the electrode rotation speed thanks to precision potentiometers. An integrated timer with LCD display and audible alarm allows the user to set the exact duration of the electrolysis process.
- The advanced electronics of the power circuit is designed to provide high intensity (up to 5 amperes), far above normal operation level, allowing the equipment for an extended lifetime.



Dual channel electrodeposition device EDP 9002

## Principle of operation

The sample solution to be analysed is placed in a flask fitted with a stainless steel disk at the bottom (cathode), and a platinum electrode (anode) is placed in a sample solution.

The electrode is rotated within the solution, and a stabilised current is passed through the sample via the anode electrode.

The result is the electrolytic deposition of the present alpha emitters (cations) on to the surface of the disk.



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## Technical specifications

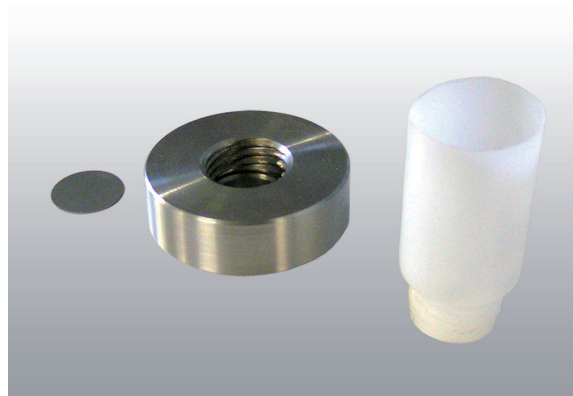
- **Electrode** : Platinum disk electrode (Ø10mm Pt disk), threaded connector.
- **Electrolysis current** : Stabilized current, adjustable from 0,1A to 5A. Resolution 10mA.
- **Polarity inversion mode**, for electro-chemical pickling of the electrodeposition disk.
- **Electrode rotation speed**: User adjustable from 10 to 6000 rpm, speed stability (torque dependent)  $\pm 5\%$  (drift < 1 tr/ min).
- **Current intensity and rotation speed display** on separate LCDs.
- **Passive timer**: Settable from 1 minute to 9 hours 59 with buzzer.
- **Cooling system**: Cooling of the cell by ventilated air.
- **Housing** made of a machined block of **ARNITE** (chemical resistant high-performance engineering plastic)
- **Flask, disc, flask-holder**: To ensure a uniform deposit, the disk is placed between the flask and the flask holder. This system guarantees a secure retention.
- **Mast** fitted with height-adjustable electrode holder and ruler.
- **Control panel**: Scratch-proof LEXAN cover.
- **Power supply** : 230 Volts 50 Hz, cord with IEC connector, max. Power: 100 Watts.
- Weight : 10 Kg.
- Dimensions : W x H x D = 245 x 650 x 255 mm (single channel model), W x H x D = 325 x 700 x 325 mm (dual channel).
- Operating temperature : 0°C to + 45°C.
- Storage Température : -25°C to + 70°C.



Single channel electrodeposition device EDP 7000

## Consumables and accessories

- Electrodeposition disks: Ø 19,6 or 24,5 mm (for 20 or 50 ml flasks), made of 304 grade stainless steel, one side polished
- Flask holder: Supplied in standard for 20 ml and 50 ml flasks.
- Electrodeposition flasks: Capacity 20 or 50 ml in standard (open bottom flasks, ready for use).



Disk, Flask-holder and electrodeposition Flask



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