

- **Battery-biased sample holder**
- **Electronically-controlled pressure regulator**
- **Reliable and easy to operate**

The Ion Recoil Contamination Avoidance Package (RCAP-2) is an accessory for ORTEC's ALPHA-ARIA Alpha Spectrometer (and most older model alpha spectrometers). It is intended for alpha spectroscopists quantifying radionuclides which may contaminate charged-particle (ULTRA™ or surface barrier) detectors by ion recoil.

To avoid recoil contamination, one can reduce the momentum of the positively-charged recoils by increasing the vacuum chamber pressure and negatively biasing the sample holders, to repel the ions from the detector. The result is achieved at some minor cost in energy resolution.

In an instrument equipped with RCAP-2, all sample holders are negatively biased at -12 volts.



The RCAP-2 can control the pressure in the range of 10^{-3} Torr to one atmosphere. The pressure control package consists of:

- A solenoid valve for On/Off control, a Granville-Phillips® Convector gauge tube for pressure measurements, and a valve for pump throttling at high pressures, **all mounted on a brass manifold**.
- A Granville-Phillips Vacuum Controller with digital readout of pressure and set point. Note that pressures below 1 Torr in the vacuum chambers can be read and displayed on the front-panel digital display.
- Eight biased sample trays.

Ordering Information

Model	Description
RCAP-2-120V	Ion Recoil Contamination Avoidance Package. 120 Volt.
RCAP-2-240V	Ion Recoil Contamination Avoidance Package. 240 Volt.
RCAP-ST	Biased Sample Tray Assembly for RCAP-2 Systems. Includes batteries and pegs to adjust for various sizes of samples.

Specifications subject to change
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