

UltraLo-1800

Next Generation Alpha Particle Counter

Advanced Alpha Particle Emission Metrology

MATERIALS SCREENING

Monitor your ultra low alpha materials ($0.001 \alpha/\text{cm}^2/\text{hr}$) with accurate measurements in just one day.

QUALITY CONTROL

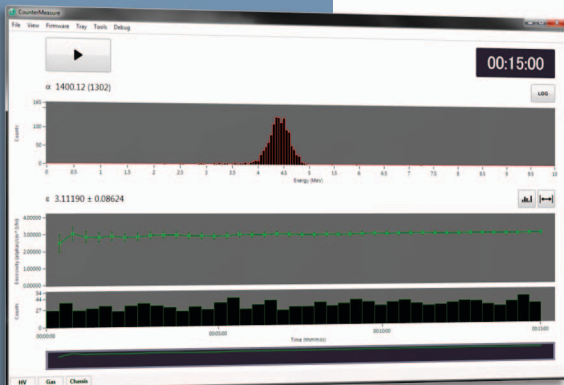
Ensure that your materials satisfy your design requirements by using the most sensitive instrument available.

- **Dramatically reduced counting times.**
Count ULA samples in hours or days, not weeks or months.
- **Repeatable and reliable measurement results.**
- **Advanced sample analysis.** Energy information allows for the identification of isotopes on sample surfaces.
- **Robust data management.** Easily access and review both current and historical measurement data.



The UltraLo-1800 is a revolutionary new design for low background alpha particle counters that employs electronic background suppression to drive achievable background rates to $0.0001 \alpha/\text{cm}^2/\text{hr}$ and below. This is a factor of 50 or more better than can be achieved by the conventional proportional counter systems that are currently available.

Through the use of novel, dual channel pulse-shape-analysis techniques, the UltraLo-1800 is able to distinguish between alpha particles emitted from the sample under test, and those emitted from other parts of the counter structure. By rejecting the latter, it achieves background rates approaching $0.0001 \alpha/\text{cm}^2/\text{hr}$. Under these conditions, it becomes feasible to measure samples having emissivities in the 0.001 to $0.0005 \alpha/\text{cm}^2/\text{hr}$ range in fewer than 10 hours, and to measure emissivities below $0.0005 \alpha/\text{cm}^2/\text{hr}$ in fewer than 100 hours.



CounterMeasure – the interface to the UltraLo-1800 system – is a powerful data analysis and instrument control application, with capabilities including the display of energy spectra, time stamped events, system health metrics, measurement error evolution, and much more.

Sophisticated yet intuitive, this tool provides users with unique insights into their alpha particle emission measurements.

CounterMeasure

UltraLo-1800 Interface Software

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XIA
Instruments That Advance The Art