RadEye HEC
Stand-alone scaler counter

Features

- Simultaneous alpha/beta measurements
- 800 hours battery operation
- Non-volatile data storage
- Customized library of up to 16 test sources with automated half life correction
- Library of up to 16 nuclide efficiencies
- Simple detector performance verification with 9 g Lutetium Test Adapter

RadEye HEC - alpha/beta sample counter

The RadEye HEC is a sample counting system that provides simultaneous alpha and beta measurements.

The system incorporates a 2" (5 cm) dual scintillation phosphor mated to a sliding drawer accommodating a 2" (5 cm) diameter sample. Using a height-adjustable sampling area the drawer permits the use of different sample types and must slide fully to the rear to initiate the counting.

The housing is made of durable plastic to withstand even rough handling. The built-in handle, in combination with the battery option, allows up to 800 hours field use before the batteries have to be charged again.

The last 4500 values of the measured data in the selected measuring unit are recorded internally and can be read out via serial or USB interface. Additionally the RadEye HEC logs the last 250 alarms, errors and changes of the configuration. All events can be read out via serial interface. A real time clock is provided to add a time stamp to all buffer data.

The characteristic features of the RadEye HEC are the use of sophisticated low power technology components, well known from all RadEye versions, and microprocessor based fully automatic self checks. No maintenance is required.

Detector	2" (5 cm) diameter alpha and beta sensitive scintillator
Efficiency	Typical 2 π efficiencies (50 mm sources) Alpha: ^{239}Pu typical 85 % (surface deposition) ^{241}Am typical 75 % (activated Al-layer of 6 μm) Beta: ^{99}Tc typical 45 % ^{90}Sr-^{90}Y typical 70 % ^{14}C typical 20 %
Background	<70 counts per minute (cpm) in the beta channel and < 2 cpm in the alpha channel in a background of 0.25 μSv/h (25 μR/h) gamma
Crosstalk	^{241}Am alpha to beta crosstalk < 10 %, ^{90}Sr-^{90}Y beta to alpha crosstalk 0.1 %
Sample drawer	2.03" (51.6 mm) diameter x 0.38" (9.6 mm) thick maximum. The sample thickness can be adjusted between 5/16" (3.2 mm) to 1/8" (7.9 mm). The sample holder and slide are black anodized for ease of decontamination
Mechanical	Single package design to allow for portability
Units	Counts, cpm, cps, Bq, Bq/cm², dpm, dps
Count time	User selectable count time between 1 second and several hours
Preset count	User selectable between 1 and 9999
Background update	User selectable count time 1 second to 60 minutes utilized in background subtraction of sample counts

Alarms	User-defined alarm limits on samples
Calibration	Via PC program
PC-software	Standard RadEye.exe > version 1.17
Power supply	100-240 VAC, 50-60 Hz
Count storage	Datalog samples using sequential up to 4500 samples. Each data point will include sample ID, sample count result, time and date
Temperature	0 to 50 °C (32 to 122 °F)
Humidity	10 to 90 % non-condensing
Count range:	1 to 6 million cpm (100, 000 cps) for beta and 1 to 0.6 million cpm (10,000 cps) for alpha
Audible	The RadEye HEC audible output is used to signal: - When the sample has completed its count - Whenever an alarm occurs (when activated) - Presence of alpha radiation (when activated)
Size and weight	15 x 4.75 x 12" (38.1 x 12.1 x 30.5 cm); 9 lbs. (4.1 kg)
Testing	CE approved

RadEye HEC accessories

Lutetium Test Adapter 9 g for RadEye HEC sample counting system # 425068571

Upgrade Kit for HandECount (with Palm™ Computer) available # 425069704