

# 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.

### 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 Specifications

Detector:	2" (5 cm) Diameter alpha and beta sensitive scintillator		
Efficiency:	Typical 2 $\pi$ efficiencies (50 mm sources)		
	Alpha:	<sup>239</sup> Pu typical 85% (surface deposition) <sup>241</sup> Am typical 75% (activated Al-layer of 6 $\mu$ m)	Beta: <sup>99</sup> Tc typical 45% <sup>90</sup> Sr- <sup>90</sup> Y typical 70% <sup>14</sup> 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 $\mu$ Sv/h (25 $\mu$ R/h) gamma		
Crosstalk:	<sup>241</sup> Am alpha to beta crosstalk < 10 %, <sup>90</sup> Sr- <sup>90</sup> 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/cm <sup>2</sup> , 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:	Data log 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) für beta and 1 to 0.6 million cpm (10 000 cps) für alpha		
Audible:	The RadEye HEC audible output is used to signal: <ul style="list-style-type: none"> <li>- When the sample has completed its count</li> <li>- Whenever an alarm occurs (when activated)</li> <li>- Presence of alpha radiation (when activated)</li> </ul>		
Size:	15" x 4.75" x 12" (38.1 x 12.1 x 30.5 cm)		
Weight:	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

