Product Specifications

# RadEye HEC

## Alpha/Beta Sample Counter

The RadEye HEC model is a portable sample counting system, providing simultaneous alpha and beta radiation measurements. Readings are automatically logged for later retrieval to a PC.

**Key Features and Benefits**

- 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

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.

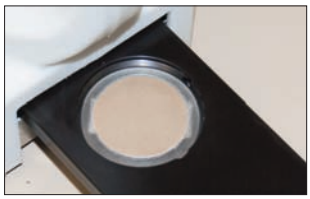
The characteristic features of the RadEye HEC are the use of sophisticated low power technology components, well known from all RadEye versions, and microprocessor based fully automatic self checks. No maintenance is required.

## RadEye HEC Specifications

| | |
|---|---|
| Detector: | 2" (5 cm) Diameter alpha and beta sensitive scintillator |
| Efficiency: | Typical 2 π efficiencies (50 mm sources)<br>Alpha: $^{239}$Pu typical 85% (surface deposition) Beta: $^{99}$Tc typical 45%<br>$^{241}$Am typical 75% (activated Al-layer of 6 µm) $^{90}$Sr-$^{90}$Y typical 70%<br>$^{14}$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: | 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:<br>- When the sample has completed its count<br>- Whenever an alarm occurs (when activated)<br>- Presence of alpha radiation (when activated) |
| 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 PalmTM Computer)
available **# 425069704**



**Europe, Africa, Middle East & Countries Not Listed**
Frauenauracher Strasse 96 +49 (0) 9131 998-226
D 91056 Erlangen, Germany +49 (0) 9131 998-172 fax
customerservice.eid.erlangen@thermofisher.com

**China**
7th Floor, Tower West, Yonghe Plaza +86 10 8419 3588
No. 28 Andingem E. Street, Beijing, 100007 China +86 10 8419 3581 fax
info.eid.china@thermofisher.com

**Singapore**
11 Biopolis Way, Helios, Units #12-07/08 +65 6478 9728
Singapore 138667 +65 6478 9505 fax
info.eid.singapore@thermofisher.com

**United Kingdom**
Bath Road, Beenham, +44 (0) 118 971 5042
Reading RG7 5PR United Kingdom +44 (0) 118 971 2835 fax
customerservice.eid.beenham@thermofisher.com

**USA, Canada, Mexico, Central & South America**
27 Forge Parkway +1 (508) 553 1700
Franklin, MA 02038 USA +1 (800) 274 4212 US toll-free
info.eid@thermofisher.com +1 (508) 520 2815 fax

**India**
Plot No. C -327, T.T.C. Industrial Area, Pawne +91-22-41578800
Navi Mumbai 400 705, India +91-22-41578801 fax
info.eid.india@thermofisher.com

www.thermoscientific.com

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