

## RAM SURF B

The RAM SURF B meter is designed for efficient surface monitoring of alpha, beta and gamma radiation contamination on skin, clothing, shoes, laboratory bench tops, floors, equipment etc. It is an ideal detector for maintaining the highest safety standards in laboratory environments, nuclear medicine, molecular biology, radiochemistry and transport of nuclear materials and storage facilities. The bar-code reader and the Rs232C com port make this tool compatible to SMARTS

A low voltage interface connects the meter to the GM -10 probe. The GM-10 uses a pancake GM detector with a thin mica window. This is encased in a rugged, splash proof housing for protection against shock, vibration and humidity. The probe also contains a high voltage power supply, pulse shaper, GM saturation indicator, detector identifier and malfunction detection circuitry. This configuration minimizes noise, improving sensitivity and stability



### Features

Rugged, lightweight construction (~2Kg)  
 Digilog, continuous ranging, combined digital and analog, LCD display  
 Programmable alarm thresholds  
 Smart software provides fast, yet stable response  
 Dead time correction  
 Alarms for detector overflow, low battery and detector failure  
 Automatic self diagnostic routines

### Specifications

**Display:** LCD Display showing: Detector failure, Low battery, Overflow, Threshold

**Measuring Units:** cpm

**Sensitivity (137Cs):** Approx 5.8 cps/m Sv/h (58 cps/mR/h)

**Count Rate Range:** 0 - 2.40 Mcpm

**Background:** 30 - 60 cpm

**Laser scanner:** Class II, maximum power 1.0 mW

**Controls:** Four key keypad with positive feedback. Key combinations for programming operating parameters.

**Power Source Meter:** Two 1.5 V C-type Alkaline cells 100-hour continuous operation.

**Laser Power Source:** One 9V alkaline cell, 6000 operations. Automatic battery check (1.5V, 9V)

**Temperature Range:** Operation: -10° C to +50° C (15° F to 122° F)  
 Storage: -20° C to +60° C (-5° F to 140° F)

**Humidity Range:** 40% to 95% RH (non condensing)

**Casing:** High impact plastic (ABS)

Surface Sensitivity (in contact): Beta emitting Isotopes				
Isotope	E <sub>max</sub> (keV)	2p -Eff (%)	Sensitivity (cps/Bq/cm <sup>2</sup> )	MDL* (Bq/cm <sup>2</sup> )
<sup>14</sup> C	156	3	0.25	9
<sup>35</sup> S	167	8	0.65	3.7
<sup>147</sup> Pm	224	15	1.25	2
<sup>99</sup> Tc	290	20	1.75	1.5

<sup>90</sup> Sr + <sup>90</sup> Y	580+2280	50	8.5	0.3
<sup>36</sup> Cl	714	45	3.5	0.7
<sup>210</sup> Pb	1160	50	4	0.6
<sup>32</sup> P	1710	70	5.5	0.5
<b>Additional radionuclides</b>				
Radionuclide	Sensitivity (cps/Bq/cm <sup>2</sup> )		MDL* (Bq/cm <sup>2</sup> )	
<sup>99</sup> Tc (g )	0.45		5.5	
<sup>125</sup> I (g )	0.04		63.0	
<sup>131</sup> I (b )	3		0.8	
<sup>230</sup> Th (a )	1		2.5	
<sup>241</sup> AM (a )	1		2.5	

\* MDL Minimum Detectable Level calculations are based on background readings of 1 cps. The confidence level is 99%

#### Ordering Information

RAM SURF B - cpm (with integrated laser) #4-0025

Note: Specifications subject to change without notice.