

Beeper mR Radiation Monitor

Model 05-106

- Continuously monitors radiation exposure and provides instant, accurate readings
- Measures “x” and gamma radiation
- Display can be easily read with the instrument in-pocket
- Sturdy casing with pocket clip protects against damage
- Features visible and audible “battery low” indicators
- Good energy and polar response...reliable readings match those from TLDs and film badges
- Recessed switch ensures the Beeper mR cannot be turned off accidentally

Introduction

The slim, compact Beeper mR is the ideal personal monitoring device for alerting personnel to the presence of radiation in medical, industrial or research settings. It accurately measures and displays the radiation dose received.

Applications

The only control is a switch to turnoff and reset the instrument, making Beeper mR extremely easy to use. For added safety, the switch is recessed. An easy-to-read LCD display provides a continuous indication of accumulated dose. The loud “bleep” sounds every 15 to 30 minutes on background and becomes more frequent as dose rate increases, becoming a continuous sound in high radiation fields. A series of quiet “clicks” indicates it is properly functioning. Beeper mR is an enhanced version of the highly popular Beeper III and utilizes the same proven technology.



Specifications

Bleep rates for background radiation

Approx. 1 bleep every 15 to 30 minutes.

1 mR/h: approx. 1 bleep every 20 seconds.

100 mR/h and above: continuous signal to at least 60 Sv/h (6000 R/h)

Energy range 45 keV to 6 MeV ($\pm 25\%$)

Doserate response Linear to 5 R/h ($\pm 20\%$)

Display LCD 0.1 mR to 999,999.9 mR

Battery Three alkaline batteries, size AAA. Typical battery life is 1 year

Temp. range - 4° to + 122°F (- 20° to + 50°C)

Dimensions 1.4 (w) x 6 in (d) (3.56 x 15.24 cm)

Display area 0.6 x 0.9 in (1.52 x 2.29 cm)

Weight 0.25 lb (0.11 kg)

Available model(s)

05-106 Beeper mR Radiation Monitor

05-106-2200 Beeper μ Sv Radiation Monitor



Beeper III Personal Radiation Monitor

Models 05-104

- Provides a continuous indication of gamma or x-ray dose rate
- Pocket-size... lightweight

Here is a simple, convenient instrument for alerting personnel to the presence of ionizing radiation. It provides a clear, audible indication of gamma and x-ray dose rates. No controls or adjustments are required.

The instrument operates continuously, giving a bleep every 15 minutes for normal background radiation, increasing with the dose rate to a continuous tone when high radiation doses are present. This compact unit slips easily into the pocket, where it is firmly held by a clip.

Specifications

Sensitivity to background radiation Approx. 1 bleep per 15 minutes. 1 mR/hr: approx.

1 bleep per 20 seconds. 100 mR/hr and up:

continuous signal (to at least 6000 R/hr)

Energy range 30 keV to 10 MeV

Temperature range - 4° to 122°F (- 20° to + 50°C)

Batteries Two alkaline AAA. Battery life approx. 1 year

Construction Plastic case with clip

Dimensions 1 (w) x 5.5 (d) x 0.63 in (t) (2.54 x 13.97 x 1.60 cm)

Weight 0.17 lb (0.08 kg)

Available model(s)

05-104 Beeper III Personal Radiation Monitor

For more information, receive our full product catalog, or order online, contact **Radiation Management Services** business of **Fluke Biomedical**: 440.248.9300 or www.flukebiomedical.com/rms.

Specifications are subject to change without notice.

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Direct Reading Pocket Dosimeters

Models 06-007 to 06-686

RS

Radiation Safety

Introduction

Direct-Reading Pocket Dosimeters are rugged, precision instruments designed specifically for measuring accumulated quantities of gamma and x radiation. In use, the dosimeter is normally clipped to a pocket or to the outside of a lead apron. By checking the dosimeter reading periodically, the wearer is able to determine the exposure received during specific procedures. By knowing where and when greater-than-normal exposures occur, the wearer can identify the source and take quick, corrective action. We currently offers five dosimeters. Each dosimeter has a color-coded clip that signifies its range. This will help the user to identify the dosimeter (i.e. black clip = 0 to 200 mR, blue clip = 0 to 5 R, etc.), and ensure that the intended dosimeter is utilized.

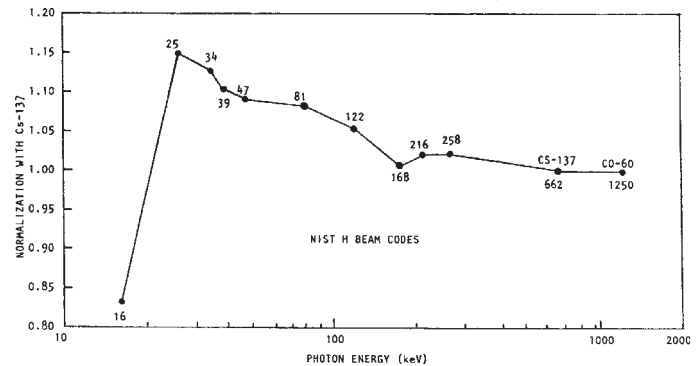


- **Low leakage:** measures background
- **Superior energy response:** 20 keV to 2 MeV
- **Rugged:** meets ANSI specifications N13.5 and N322
- **Highly resistant to shock and vibration**
- **Available in a wide selection of ranges to meet all of your requirements**

Applications

Direct-Reading Pocket Dosimeters are extremely easy-to-use. To read the integrated exposure, the user looks through the dosimeter eyepiece while pointing the unit toward any external light source. The exposure is determined by the position of a hairline fiber against a graduated scale. A Dosimeter Charger (Model 06-912) is used to re-zero the dosimeter.

The 0 to 200 mR Low-Energy Dosimeter is the most popular type for measuring personal radiation doses in hospital applications including fluoroscopy, portable radiography and angiography. Our dosimeters are ideal for nuclear medicine and health physics applications. All Direct-Reading Pocket Dosimeters are hermetically-sealed using state-of-the-art plastics and epoxy resins. These reliable, high-quality devices meet ANSI specifications N13.5 and N322, as well as military requirements.



Model 06-007

Specifications

Radiation detected Gamma and x-radiation from 20 keV to 2 MeV

Ranges 0-200 mR to 600 R

Energy response See response curve:

160 keV to 2 MeV: $\pm 10\%$

40 keV to 160 keV: + 20%, - 10%

20 keV to 40 keV: + 20%, - 30%

Accuracy Within $\pm 10\%$ of true exposure

Rate response Dose rate independent for gamma and x-radiation

Electrical leakage Less than 0.5% of full scale for 24 hours at 50°C

Relative humidity Up to 90%

Detector Fiber electrometer mounted in an electrically-conducting plastic ion chamber

Material

Detector housing Very low permeability plastics; hermetically-sealed

Clip Glass fiber-filled, high-strength plastic

Dimensions 0.6 in \varnothing x 4.5 (l) (1.5 x 12.4 cm)

Weight 0.06 lb (0.03 kg)

Available model(s)

06-007 Direct-Reading Pocket Dosimeter, 0 to 200 mR; Black Clip

06-007-2200 Direct-Reading Pocket Dosimeter, 0 to 2 mSv; Black Clip

06-611 Direct-Reading Pocket Dosimeter, 0 to 5 R; Blue Clip

06-622 Direct-Reading Pocket Dosimeter, 0 to 20 R; Green Clip

06-638 Direct-Reading Pocket Dosimeter, 0 to 200 R; Yellow Clip

06-686 Direct-Reading Pocket Dosimeter, 0 to 600 R; Red Clip

For more information, receive our full product catalog, or order online, contact **Radiation Management Services** business of **Fluke Biomedical**: 440.248.9300 or www.flukebiomedical.com/rms.

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Dosimeter Accessories

Models 06-201 to 06-912



Multi-Dosimeter Checker

- Allows simultaneous testing of up to five or six direct-reading pocket dosimeters
- ^{137}Cs source requires no license. The Multi-Dosimeter Checkers consist of a plastic cylinder containing either five or six holes surrounding a central, hermetically-sealed, $9\ \mu\text{Ci}\ ^{137}\text{Cs}$ source

This device makes checking dosimeters easy. Properly charged and zeroed dosimeters are placed in the cylinder and exposed for the required period of time, depending on their range. Typically, a six-hour exposure of a properly-calibrated dosimeter will yield a reading from 25 to 35 mR.

Specifications

Radioactive source $9\ \mu\text{Ci}\ ^{137}\text{Cs}$ source

Weight 0.5 lb (0.22 kg)

Cylinder materials Cylinder material is PVC

Available model(s)

Dimensions

06-201 Multi-Dosimeter Checker, six holes

Checker 2.5 in \varnothing x 2.5 (h)

Hole 0.6 in \varnothing x 2.5 in (d) (1.6 x 6.4 cm)
Model 06-201

06-201-5000 Multi-Dosimeter Checker, five holes

Hole 0.807 in \varnothing x 2.5 (d) (2.1 x 6.4 cm)
Model 06-201-5000

Dosimeter Charger and Storage Case Kit

- Convenient and cost-effective

Here you get the standard Dosimeter Charger (Model 06-912) in a rugged leatherette-covered case that holds up to 12 dosimeters. A chart conveniently affixed inside the case permits quick identification of each dosimeter and its user. The charger can be easily removed for battery change.



Specifications

Dimensions 5.25 (w) x 9.5 (d) x 5 in (h) (13.34 x 24.13 x 12.7 cm)

Weight 5 lb (2.3 kg)

Available model(s)

06-907 Dosimeter Charger and Storage Case Kit

06-907-1000 Dosimeter Storage Case without Charger

Dosimeter Charger

- For zeroing direct-reading dosimeters

This transistorized power supply zeroes all direct-reading dosimeters. A safety spring in the charging socket prevents damage from excessive pressure on the dosimeter. A protective cap keeps the socket free of dust and moisture when charger is not in use. One standard 1.5 V "D" cell battery (not included) permits thousands of chargings.



Specifications

Dimensions 4 (w) x 4 (d) x 3 in (h) (10 x 10 x 7.6 cm)

Weight 1 lb (0.45 kg)

Available model(s)

06-912 Dosimeter Charger