

## Direct Reading Dosimeters and Accessories

These direct reading dosimeters allow the wearer to read accumulated radiation exposure at any given time, without a separate readout device. The integrated exposure is read on a built-in scale that is illuminated by an external light source.

A film badge cannot provide an immediate answer if an overexposure has taken place; but a wearer of a direct reading dosimeter can tell when, where and whether the overexposure took place, and hazardous conditions can be corrected long before film badge readings can be known.

The low energy feature of these dosimeters have hospital applications in fluoroscopy, portable radiography, angiography and mammography.

These dosimeters may be reused repeatedly by resetting to zero with the Model 909 dosimeter charger after the accumulated exposure has been recorded in a log.

### Model 06-201-5000, Dosimeter Checker License exempt ▶ Checks up to five

The Multi-Dosimeter Checker allows the simultaneous testing of up to five direct reading dosimeters. It consists of a plastic cylinder that has five holes around a central, hermetically sealed 9 $\mu$ Ci 137Cs source.

The procedure for checking dosimeters is very simple. Properly charged and zeroed dosimeters are placed in the cylinder and exposed for the required period of time, depending on their range. Typically, a 6-hour exposure of a properly calibrated dosimeter will yield a reading from 25 to 35 mR.

#### Specifications

Radioactive source: ..... 9  $\mu$ Ci 137 Cs (license-exempt)  
Cylinder material: ..... Gray PVC  
Hole dimensions: ..... 2.05 cm diameter x 6.35 cm deep (0.8 in x 2.5 in)  
Outside dimensions: ..... 6.35 cm diameter x 6.35 cm (2.5 in x 2.5 in)  
Weight: ..... 200 mg (7 oz)



#### Specifications

Radiation detected: ..... gamma, X-ray, 16 keV to 2 MeV  
Accuracy: ..... within 10% of full scale  
Rate dependence: ..... independent for gamma and x-rays  
Energy response: .....  $\pm 15\%$  20 - 40 keV,  $\pm 10\%$  0 - 40 keV -  $^{60}\text{Co}$   
Detector: ..... conductive plastic ionization chamber  
Leakage: ..... less than 0.5% of full scale in 24 hours at 50° C  
Environmental: ..... -20° C to +50° C, up to 90% R.H.  
Display: ..... fiber image projected on internal linear scale  
Construction: ..... very low permeability plastic, hermetically sealed, color coded clips  
Zero reset: ..... with Model 909 dosimeter charger  
Dimensions: ..... 1.5 cm diameter x 12.4 cm (0.6 in x 4.5 in)  
Weight: ..... 25 g (1 oz)

Model	138	138S	720	725	730	742
Range	0 - 200 mR	0 - 2 mSv	0 - 2 R	0 - 5 R	0 - 20 R	0 - 200 R

### Model 909, Dosimeter Charger

This dosimeter charger zeroes all direct-reading dosimeters. One standard 1.5 V D cell permits thousands of chargings. A safety spring in the charging socket prevents damage to dosimeter in event that excessive force is applied during charging. Protective cap keeps the socket free of dust and moisture when charger is not in use.

#### Specifications

Controls: ..... one turn potentiometer for dosimeter zero adjust  
Charging voltage: ..... adjustable from 40 - 200 VDC  
Case: ..... ABS plastic, blue finish  
Power: ..... one D-cell battery  
Dimensions: ..... 10.2 cm x 10.2 cm x 7.6 cm (4 in x 4 in x 3 in)  
Weight: ..... 0.45 kg (1 lbs)



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