

# Model L-2000 with Model 243 Wipe Test Counter

*Radiation Detection for a Safer World*



Ludlum Measurements, Inc.

## Features

- General Purpose Scaler
- Portable Battery Operation
- Two Adjustable Discriminators
- Deep Shielded Well for Excellent Sensitivity



Part Numbers: 48-1648 & 47-1621

## Introduction

The Ludlum Model 2200 Scaler/ Ratemeter is the ideal economic solution for routine sample counting, single channel analyzing and routine radiopharmaceutical related procedures, when used with the Model 243 well scintillator (NaTI) detector. The Well Counter's 4 pi geometry and excellent shielding provides excellent sensitivity to higher energy isotopes like I-131.

Two independently adjustable discriminators allow the user to set an 'energy window; to count pulses within a user specified energy range. This portable unit can be powered by wall current or by four D-Cell batteries. The latter allows for continued operations during power interruptions. An optional printer is available for hardcopy archival of wipe test results.

## Specifications

### Model 2000 General Purpose Scaler

SCALER: six-digit LED display with a range of 0-999999 counts  
SCALER LINEARITY: reading within 2% of true value  
TIMER: push-wheel adjustment from 0-999 minutes with selectable X0.1 and X1 multipliers  
METER: 6.4 cm (2.5 in.) arc, 1 mA analog type; Meter Dial 0-2.5 kV  
HIGH VOLTAGE: adjustable from 200-2500 volts (will support 60 megohm scintillation loads)  
THRESHOLD: adjustable from 1.0-10.0  
DISCRIMINATOR: adjustable from 2-100 mV  
RS-232: 9-pin connector allowing for printer or computer interface  
POWER: 95-250 Vac 50-60 Hz or 4 "D" cell batteries (housed in externally accessible compartments)  
BATTERY LIFE: typically 120 hours with alkaline batteries (battery condition can be checked on meter)  
CONSTRUCTION: aluminum housing with beige powder coat  
TEMPERATURE RANGE: -20 to 50 °C (-4 to 122 °F)  
SIZE: 21.6 x 12.7 x 23.5 cm (8.5 x 5 x 9.3 in.) (H x W x L)  
WEIGHT: 3.1 kg (6.9 lb) without batteries

### Model 243 Shielded Well Gamma Sample Counter Head

WELL: 1.7 cm x 3.9 cm (0.7 x 1.6 in.) (Dia x L)  
DETECTOR: 4.5 x 5.1 cm (1.8 x 2 in.) (Dia x L) integral NaI(Tl) well scintillator  
SENSITIVITY: will detect 0.005 µCi gamma or 200 dpm removable contamination for <sup>99</sup>Tc, <sup>131</sup>I, <sup>201</sup>Tl, <sup>111</sup>In, <sup>125</sup>I, <sup>137</sup>Cs, and <sup>67</sup>Ga  
EFFICIENCY (4π): 65% for <sup>129</sup>I, 90% for <sup>99m</sup>Tc, 33% for <sup>137</sup>C, 43% for <sup>60</sup>Co  
BACKGROUND: 1000 cpm or less (optional 1.3 cm [0.5 in.] lead sleeve for background reduction: Part No. 7379-004)  
OPERATING VOLTAGE: 500 to 1200 volts  
PHOTOMULTIPLIER TUBE: 5.1 cm (2 in.) diameter  
CONSTRUCTION: 1.3 cm (0.5 in.) thick painted lead wall and removable cap  
SIZE: 27.9 x 20.3 x 20.3 cm (11 x 8 x 8 in.) (H x W x L)  
WEIGHT: 13.6 kg (30 lb)  
SHIPPING WEIGHT: 20.9 kg (46 lb)