

RADIATION MONITORING EQUIPMENT

Table 2. Beta and Gamma Survey Instruments

| Beta and Gamma Survey Instruments | | | | |
|---|------------------|---|---|--|
| Instrument | Type | Scale | Indicator | Description |
| AN/VDR-2 | GM | Digital Auto Ranging 0 to 9.99Gy/hr | Gy/hr | Portable beta and/or gamma survey instrument. Displays total accumulated dose or dose rate. (Replaces the AN/PDR-27 for Army applications.) |
| AN/PDQ-1 | GM | 1 Milliroentgen(mR)/h to 1000R/hr | R/hr | Uses ancillary probes; Detecting Head (DT)-680 for gamma/beta, DT-685 for beta probe interface, DT-681 for alpha, DT-682 for X ray, DT-683 for Neutron Indicator, DT-684 for Neutron, DT-686 for Radiography. |
| AN/PDQ-2 | GM | 1 mR/hr to 1000 R/hr | R/hr | Uses ancillary probes; DT-680 for gamma/beta, DT-685 for beta probe interface, DT-681 for alpha, DT-682 for X ray, DT-683 for Neutron Indicator, DT-684 for Neutron, DT-686 for Radiography. |
| AN/PDR – 78 | Photo Multiplier | 30 keV to 1.6 million electron volts (MeV) | Detector only. Uses an indicator light. | For underwater use to 300 feet. |
| Ludlum Model 3 (See table AP4.T1.) | GM | 0 to 200 mR/hr | mR/hr | Portable high- and low-range analyzer similar to AN/PDR-60. Probe 44-6 uses a GM tube to detect beta and gamma. Probe 44-9 detects low-energy gamma, 0 to 200 mR/hr. Both the 44-9 and 44-6 are sensitive to photon and medium & high energy β -particle radiations. The 44-9 has an active area of 15.5 cm ² and is sensitive to low-energy β -and γ -particles because the entrance window is sufficiently thin, i.e. 1.7±0.3 mg/cm ² . |
| AN/PDR-27 | GM | 0 to 500; 4 ranges | mR/hr | Low-range; suitable for personnel monitoring for beta and/or gamma emitters only. Not useful for alpha emissions. May saturate and read 0 in high radiation fields above 1,000 R/hr. |

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|---|--------------------------------------|--|--|---|
| Instrument | Type | Scale | Indicator | Description |
| AN/PDR-43 | GM | 0 to 500; 3 ranges | R/hr | High-range; does not saturate in high radiation area. Readings in gamma fields other than Co-60 may be inaccurate to greater than 20 percent. |
| Army, Navy/General Utility, RADIAC, Passive Detecting-13 | 1 GM tube. Pin Diode / Prompt Gammas | .01-999 1 – 999 | cGy/hr | As a rate meter, it measures residual gamma radiation. As a tactical dosimeter, it measures prompt radiation and residual dose. |
| ADM-300A | GM | Gamma: 10 to 10,000 Beta: 10 to 5 | μ R/hr R/hr μ R/hr R/hr | Portable beta and/or gamma survey instrument (with beta probe-100 or beta gamma probe (BGP)-100). Built in beta gamma detection and monitoring capability without additional probes. High-range. BGP-100 may be up to 300 feet from the ADM-300. Saturation level of 100,000 R/hr. |