

RAD Safety Water Monitor

Model - MEDA-SP

FEATURES:

- QUICK CHECK OF QUESTIONABLE WATER
- TWO SEPARATE DETECTORS
- SUBMERSIBLE GAMMA DETECTOR
- T-1190 ALPHA, BETA, GAMMA DETECTOR
- LIGHTWEIGHT – FITS IN BRIEFCASE



MEDA-SP

APPLICATION ~ QUICK CHECK:

- Roadside Chemical Spill
- Industrial Accident
- Terrorist Water Poisoning
- Dumping of Medical/Industrial Waste

SITE LOCATION:

- Use MEDA-SP Anywhere

MEASUREMENT CAPABILITIES:

- Gamma emitters, submersible sensor probes for reservoir, stream or sump.
- Alpha & Beta emitters in water samples
- Quick determination of water contamination
- Easy detection of surface contamination-Alpha, Beta, Gamma; hands, boots, clothing and equipment
- Identify personnel needing decontamination
- Search out stored radioactive materials or dirty bombs using Gamma probe

DESCRIPTION:

The MEDA-SP RATEMETER features an internally mounted 2 inch pancake GM detector with window looking downward from bottom of case and an external crystal scintillation probe for detection of low energy Gammas. A sliding shield protects pancake detector when not in use. This system is half the weight of other systems.

DESCRIPTION OF USE

1. Arrive at location of accident or attack

- Submerge Gamma sensor into reservoir, stream or sump.
- Increasing count rate indicates contamination by Gamma emitters.

2. Use PAN-AL (disposable Planchet)

- Place sample of suspect water in evaporator (EVAP-SP) for one minute
- Place sample under built-in pancake detector on bottom of ratemeter
- Increased count rate indicates contamination with Alpha or Beta emitters



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To Separate Alphas, Betas, and Gammas

1. Built-in sliding beta filter is standard
2. Alpha filter is optional

If count rate exceeds 2 times background, water is not safe.

3. Use built-in pancake GM detector on bottom of ratemeter to check people, clothing and objects for surface contamination.
4. If count rate exceeds 2 times background, the person should take off the contaminated clothing.
If count rate continues to exceed 2 times the background, hose them down and measure again.
5. Gamma probe count rate will increase as you approach a cache of radioactive materials.
Knowing this you can search a car or check-out suspicious objects.

SPECIFICATIONS:

- **Meter:** Rugged, recessed 2-1/2" meter.
- **Ranges:** 4 linear for each detector:
 - ❖ 0-500; 5,000; 50,000; 500,000 cpm for external
 - ❖ 0-0.15; 1.5; 15; 150 mR/hr. for internal detector.
 - ❖ Other scales and overlays available: Sieverts, etc.
- **Range Switch Positions:** Off; Battery Test; X1; X10; X100; X1,000.
- **Detector Switch (Toggle):** Internal (pancake), External (scintillator) PGS-3SUB
- **Time Constant Switch:** Fast, Slow (approx. 2 & 11 sec.)
- **Detectors:**
 - ❖ 2" O.D. Pancake Geiger for internal Alpha/beta,
 - ❖ Submersible, high sensitivity Gamma scintillation probe 1"x1". Nal (TI) crystal standard.
 - ❖ 2"x2" crystal optional.
- **Calibration:** Single master Cal Pot for each detector, plus individual Cal Pot for each scale. Pots adjust from outside case.
- **Power:** 9V transistor battery (Eveready E1220 or equivalent).
 - ❖ Battery life - 100 hrs with normal operation.
- **Dimensions:** 3" (7.6cm) wide x 5-1/4" (13.3cm) long x 2-1/4" (6cm) deep.
- **Total Weight:** 2.5 lbs. (including probe and battery)
- **Shipping Weight:** 4.4 lbs.

ACCESSORIES INCLUDE:

- EVAP-SP: Sample evaporator with vehicle adaptor or battery.
- PAN-AL: Disposable aluminum Planchets for sample evaporation.



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OPTIONS:

- PAN-SP: Re-usable planchets.
- PGS-3LSUB: 2"x2" crystal probe
- STB-3: Shielded pancake tube detector for enhanced Alpha beta sensitivity
- BAT-EVAP: Battery for evaporation process.

MEDA-SP

	INTERNAL DETECTOR	EXTERNAL DETECTOR
Radiation Detected	Alpha, Beta, Low Energy Gamma	Gamma
Sensor Size	2" dia z 1/2" thick	1" dia x 1" thick
Model	T-1190 Geiger Tube	PGS-3SUB Scintillator
Window	Mica 1.5 mg/cm ²	0.06" Anodized Aluminum
Optional	Alpha Filter Shielded STB-3 Detector	
Use/Method	Detects residue after quick evaporation of water in sample planchet	Submerge detector in reservoir, stream, or sump
Mounting	Faces downward from inside ratemeter case	Clips onto side of instrument
	Radiation Detected T-1190	
No Filter	(1) Alpha, Beta, Low Energy Gamma	
Optional Alpha Filter	(2) Beta, Low Energy Gamma	
Optional Beta Filter	(3) Higher Energy Gamma, Background Radiation	
Calculation Formulas		
Net Alpha	(1) minus (2)	
Net Beta	(2) minus (3)	
Gross Counts	(1)	



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