



MEDA-SP

# RAD Safety Water Monitor

## Model: MEDA-SP

## Features

- Quick Check of Questionable Water
- Two Separate Detectors
- Internal - T-1190 Alpha, Beta, Gamma Detector
- External - Submersible Gamma Detector
- Lightweight – Fits in Briefcase
- **Rugged, IP 63**
- **CE Mark**

## 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 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



**TECHNICAL ASSOCIATES**  
**OVERHOFF TECHNOLOGY**

DIVISIONS OF  
 US NUCLEAR CORP

7051 ETON AVENUE, CANOGA PARK, CA 91303 | 818-883-7043 | F: 818-883-6103  
RGOLDSTEINTA@USNUCLEARCORP.COM | TECH-ASSOCIATES.COM | USNUCLEARCORP.COM

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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


- **Read Out:** Digital recessed 2-1/2" display
- **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
- **Face Plate Switches:** On/Off; Battery Test with Light; Pulse Rate Light; Range Switch Positions: X1; X10; X100; X1,000; Reset; Dose Rate or Integrate without Accumulated; Volume Control Detector Switch (Toggle): Internal (pancake), External (scintillator) Submersible Probe (PGS-3SUB) Time Constant Switch: Fast, Slow (approx. 2 and 11 sec.)
- **Detectors:**
  - 2" O.D. Pancake Geiger for internal Alpha/Beta
  - Submersible, high sensitivity Gamma scintillation probe 1" x 1". NaI (TI) crystal standard
  - 2" x 2" crystal optional
- **Calibration:** Single master Cal Pot for each detector, plus individual Cal Pot for each scale Pots adjust from outside case
- **Power:** 6) AA Battery life - 100 hrs with normal operation
- **Dimensions:** 3" W x 5 1/4" L x 2 1/4" D (7.6cm W x 13.3cm L x 6cm D)
- **Total Weight:** 2.5 lbs. (including probe and battery)

## Accessories Included

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



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## Options


- PRS-232 Serial Port
- AN-SP: Re-usable planchets
- PGS-3LSUB: 2" x 2" 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" x 1/2" thick	1" dia x 1" thick for water <b>OPTIONAL:</b> 2" dia x 2" thick for spills and pollution in water
Model	T-1190 Geiger Tube	PGS-3SUB Scintillator (NaI(Tl))
Window	Mica 1.5 mg/cm <sup>2</sup>	0.06" Anodized Aluminum
Gamma Sensitivity	500 cps/mR/h	
Lowest Beta	70 KeV	
Range of Gamma or X-ray	40 KeV - 2 MeV	
<b>Optional</b>	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
	<b>Radiation Detected T-1190</b>	
No Filter	(1) Alpha, Beta, Low Energy Gamma	
<b>Optional Alpha Filter</b>	(2) Beta, Low Energy Gamma	
<b>Optional Beta Filter</b>	(3) Higher Energy Gamma, Background Radiation	
<b>Calculation Formulas</b>		
Net Alpha	(1) minus (2)	
Net Beta	(2) minus (3)	
Gross Counts	(1)	



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