

# Radium In Water Monitor

Model # Radium-TA

Model # Radium-MCA

## FEATURES:

System gives on site Measurements

1. Detects Radium: (224, 226, & 228)
2. Sensitivity is better than 3 Pico curie per Liter Total Radium
3. Portable (AC Operated)
4. 10 Flow Cell Refills (FCR-3) are standard
5. Model Radium-MCA, identifies specific radium nuclides.

This monitor has Two Components:

1. a (WS-R3) pump with a (RCC-3) radium collection cell.
2. a (STAM-2R) scintillation detector with a (PRS-5) scaler.

## 2 Step Process:

- 1) The pump and Radium collection cell are taken to the area to be tested.  
Water is pulled through the cell for a standard period of time.
- 2) The scintillator/scaler, receives the sample and counts the activity.

Note: A longer pull time increases sensitivity and gives a sensitivity measurement down to 1 picoCi/liter.



**TA** TECHNICAL ASSOCIATES

7051 ETON AVENUE, CANOGA PARK, CA 91303  
TELEPHONE (818) 883-7043 • FAX (818) 883-6103  
e-mail: tagold@nwc.net • www.tech-associates.com

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## Unit Model Setup & Comparison Chart

SYSTEM MODEL	RADIUM-TA	RADIUM-MCA
Types of Radium Measured	TOTAL RADIUM Ra-224 & Ra-226 & Ra-228	Alpha Spectrum helps identify Specific Radium Nuclides
Drinking Water Limit	5pCi/liter	5pCi/liter
Instrument Sensitivity	3pCi/liter	3pCi/liter
Extended Count	1 pCi/liter	1 pCi/liter

RADIUM COLLECTION	RADIUM-TA	RADIUM-MCA
Collection Cell	RCC-3	RCC-3
Pump	WS-R3	WS-R3F
Refill	FC-R3	FC-R3
Detection	STAM-2R	SCCA-2R
Alpha Detector Type	Z <sub>N</sub> S(Ag) Scintillator	Semiconductor Crystal
Analyzer & Display	PRS-5 or TBM-3D Digital Scalar	MCA-TA Alpha Spectrometer

This Chart Sets Up the comparison and possible component pairings to both Models listed on the cover page

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- Scintillator/Counter:** Model PRS-5 or TBM-3D electronics package is coupled and works in conjunction with sample counter; Model STAM-2R.
- Sensitivity:** 3 picoCi/Liter with standard water flow time.  
80 to 85% of 2 pi for 5 MeV alphas is typical.  
Gammas are rejected.  
Background radiation is typically less than one count per minute.
- FCR-3 Flow Cell Refills:**  
A. Treated Beads  
B. Treated ion exchange Disks

## OPTIONS: ADDITIONAL SENSORS AND GAUGES

DESCRIPTION	MODEL NUMBER	USED WITH
Radon Gas Chamber	PTG-7RN	Gas From Bubbles
Beta-Gamma Counter (Shielded)	PGS-3L-S	Flow Cell
Flow Meter	FLM-RA	Calibrated Metering Pump
Alpha-Beta Scintillation System	STG-ABS-42	Can Replace STAM- 2R-"Alpha-Only" System

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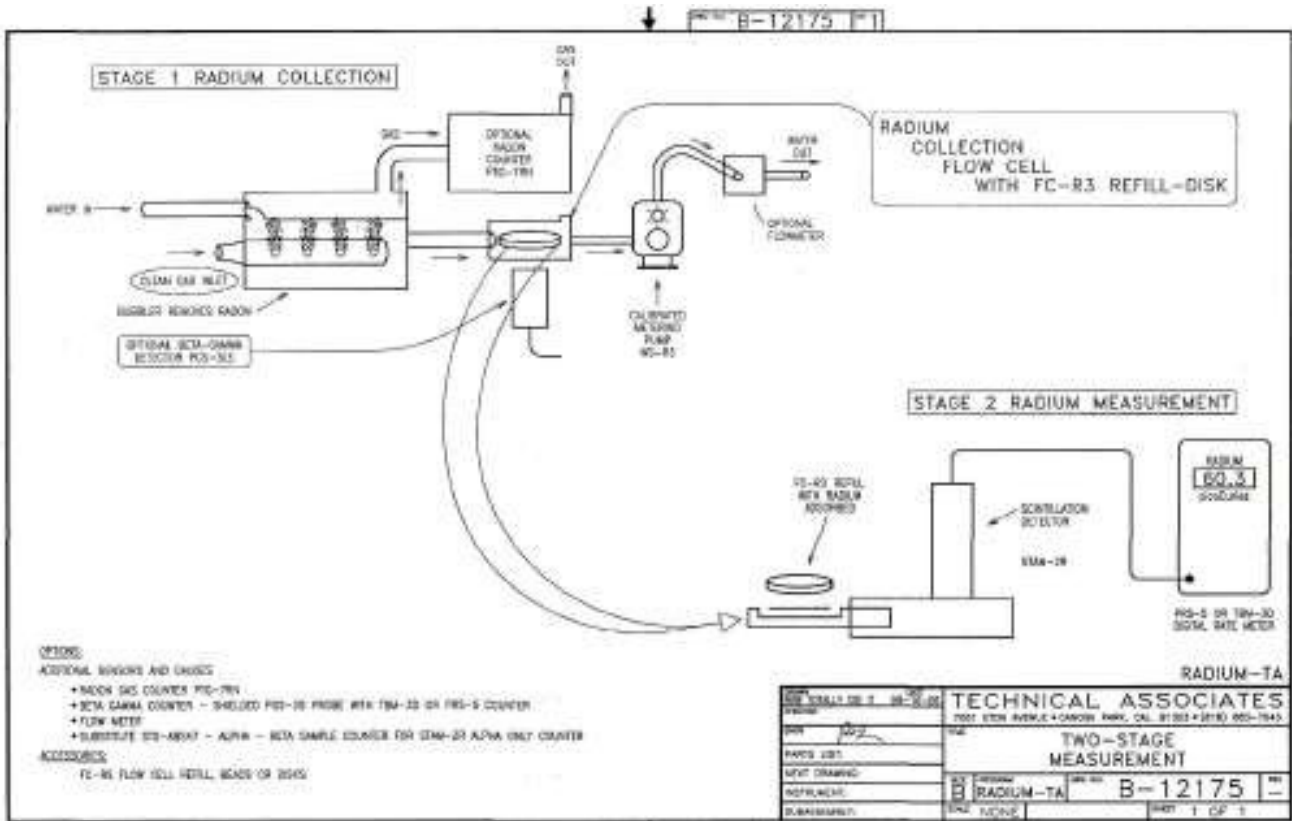
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Model # WS-R3 Water Sampler Pump



Radium In Water Monitor 2 Step Process.

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