

Radium in Water Monitor

Model Series~ Radium

Radium-TA & Model ~ Radium-MCA

FEATURES:

- SYSTEM GIVES ON SITE MEASUREMENTS
- DETECTS RADIUM: (224, 226, & 228)
- SENSITIVITY BETTER THAN 3 PICO CURIE PER LITER TOTAL RADIUM
- 10 FLOW CELL REFILLS (FCR-3) ARE STANDARD
- GAMMA REJECTION
- PORTABLE RADIUM DETECTOR
- **OPTIONAL:** IN-LINE RADIUM DETECTOR
- **MODEL RADIUM-MCA** IDENTIFIES SPECIFIC RADIUM NUCLIDES

ELECTRONICS:

- PRS-7 OR MCA-TA



PORTABLE
Sample Counter with STAM-2R

ELECTRONICS



MCA-TA



PRS-7



IN-LINE
RADIUM DETECTOR

DESCRIPTION;

MULTIPLE COMPONENTS

- WATER PUMP (WS-R3)
- RADIUM COLLECTION CELL (RCC-3)
- SCINTILLATION DETECTOR (STAM-2R)
- ELECTRONICS: PRS-7 OR MCA-TA



TECHNICAL ASSOCIATES
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THREE STEP PROCESS:

- 1) The pump and Radium collection cell are taken to the area to be tested.
- 2) Water is pulled through the cell for a standard period of time.
- 3) 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.

SPECIFICATIONS

Scintillator/Counter:	Model PRS-7 single channel analyzer electronics package is coupled and works in conjunction with sample counter; Model STAM-2R.
Sensitivity:	3 picoCi/Liter; 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

ELECTRONICS:

PRS-7 – Bench Top or Portable

- **Power:** AC Or Rechargeable Battery
- **Display:** Three Single Channel Analyzer Windows, Switch Selectable, Six Decades
- **Housing:** Splash Proof

Dimensions: 10" W x 4.1" D x 7" H (25 cm L x 10.5 cm W x 18 cm H). Includes handle.

Weight: 5 lbs (2.5 kg) including batteries.

Options:

- Alarm Relay
- RS-232, USB, etc. or complete data logging and acquisition systems.

MCA-TA – Bench Top

- **Electronics: High Quality Windows PC including:**
- **Operating Software:** TAcquire™ custom software plus Excel Spread Sheet
- **Radionuclide Library:** Radionuclide Library Tailored To Customer Request
- **Data:** Stores Data to MS ACCESS Database; ata Files are Importable into Excel
- **CPU with Data Acquisition:** High Resolution COLOR display, Audio
- **Data Ports:** USB & Ethernet
- **USB-Flash Drive:** For data storage – 10 years storage
- **Terabyte Hard Drive.** Stores programs & 20 YEAR'S of Detailed DATA plus alarm record.
- **Power:** 110 VAC - 60 Hz, 220 VAC optional 50/60 Hz
Internal Battery Backup, Fail Safe

Dimensions: 21" W x 16"D x 11" H (53.3 cm L x 40.6 cm W x 27.9 cm H)

Weight: 20 lbs (2.5 kg) including batteries.



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Unit Model Setup & Comparison Chart

SERIES MODEL	RADIUM-TA	RADIUM-MCA
Types of Radium Measured	TOTAL RADIUM Ra-224 & Ra-226 & Ra-228	Alpha Spectrum Identifies Specific Radium Nuclides
Drinking Water Limit	5-15pCi/liter	5-15pCi/liter
Instrument Sensitivity	20 pCi/liter	3pCi/liter
Extended Count	5 pCi/liter	1 pCi/liter

RADIUM SERIES	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	ZnS(Ag) Scintillator	Semiconductor Crystal
Analyzer & Display	PRS-7 Digital Scaler	MCA-TA Alpha Spectrometer

These charts show the comparisons and possible component pairings to the Radium Series Models listed on the cover page



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OPTIONS: ADDITIONAL SENSORS AND GAUGES

DESCRIPTION	MODEL NUMBER	USED WITH
Radon Gas Chamber	PTG-9RN	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



**Water Sampler Pump
WS-R3**



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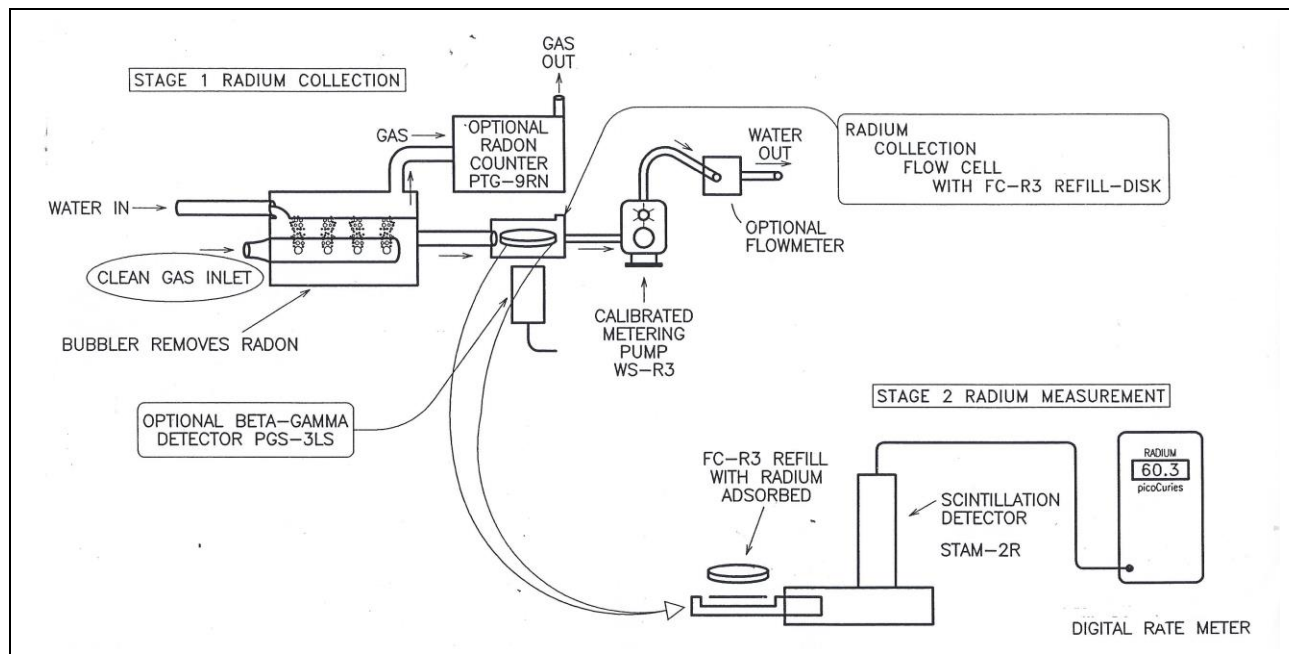


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RADIUM-TA - FLOW DIAGRAM



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