

# 라돈 측정기 (Radon and Thoron Monitor)



## Model : RAD8

### 용도(Applications)

- 실내 공기의 라돈 가스 농도 측정
- 라돈 및 토론 구분 측정으로 정확한 라돈 농도 측정
- 보건환경, 주택, 건축자재, 건강, 안전 등의 라돈 측정
- 지하수, 수중 라돈 및 토양 속 라돈 측정 (선택)

### 특징(Features)

- 단시간 측정 및 연속 장기간 측정 가능
- 0 ~ 2,500,000 Bq/m<sup>3</sup>의 고감도 측정 가능
- 최소 5분부터 24시간 범위의 측정주기 선택 기능
- IP67 방수, 방진 등급 및 컬러 터치스크린

### ◆ RAD7 대비 성능향상 내용

구분	RAD7	RAD8
측정범위 (3.4배 확대)	0 - 750,000 Bq/m <sup>3</sup> , 0 - 20,000 pCi/L	0 - 2,500,000 Bq/m <sup>3</sup> , 0 - 67,500 pCi/L
측정감도 (70% 높아짐)	<b>SNIFF</b> 0.0067 cpm/(Bq/m <sup>3</sup> ), 0.25 cpm/(pCi/L) <b>NORMAL</b> 0.013 cpm/(Bq/m <sup>3</sup> ), 0.5 cpm/(pCi/L)	<b>Rapid</b> 0.011 cpm/(Bq/m <sup>3</sup> ), 0.40 cpm/(pCi/L) <b>Precise</b> 0.022 cpm/(Bq/m <sup>3</sup> ), 0.82 cpm/(pCi/L)
배경농도 (3배 감소)	0.2 Bq/m <sup>3</sup> , 0.005 pCi/L	0.06 ± 0.02 Bq/m <sup>3</sup> , 0.0015 ± 0.0004 pCi/L
메모리 용량	1,000 records	수백만 records, 16 GB (저장 용량 걱정없음)
방수 및 방진 (케이스)	-	IP67 (일정한 조건에서 물에 잠겨도 이상없음) (미 육군 규격(MIL-SPEC) 인증 견고한 케이스)
소형, 경량	29.5 cm x 21.5 cm x 27.9 cm / 4.35kg	31.8 x 25.7 x 15.2 cm / 3.35kg
스크린	LCD 흑백 디스플레이	컬러 터치스크린
통신	RS-232, USB port	Wi-Fi, 2 USB ports, COM port

## RAD8 Functional Specifications

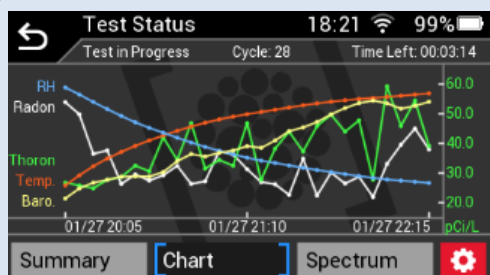
Analysis Modes	<ul style="list-style-type: none"> <li>• Rapid: Quick response and rapid recovery radon measurement</li> <li>• Precise: High sensitivity radon measurement</li> <li>• Auto: Automatic switch from Rapid to Precise after three hours</li> <li>• Radon source options include Air and Water</li> </ul>
Thoron Measurement	Built-in Sniff Protocol: Maximum flow rate for enhanced thoron sensitivity
Control Panel	Touchscreen or physical button controls Waterproof and dustproof with case open or closed (IP67)
Data Storage	16 GB storage for millions of records, each with full sensor and spectrum data
Sample Pumping	Built-in pump draws sample from chosen sampling point at ~0.6 L/min
Sensors	3 temperature sensors, RH sensor, barometer, accelerometer
Connectivity	Wi-Fi, 2 USB ports, COM port, Accessory port
Audio Output	Multiple audio output options for real-time communication of detection events
Tamper Resistance	Password-protected lock screen secures RAD8 against tampering RAD8 case securable with padlocks

## RAD8 Technical Specifications

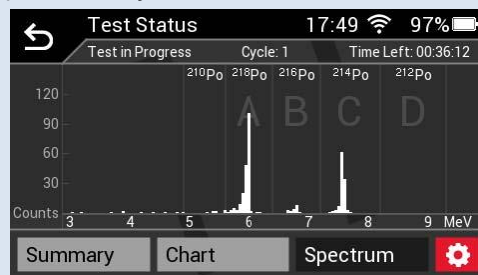
Principle of Operation	Electrostatic collection with silicon detector and alpha spectrometry Rapid Analysis Mode counts 218Po decays Precise Analysis Mode counts both 218Po and 214Po decays
Built-In Air Pump	0.6 L/min flow rate with bypass option for external pumping or flows
Measurement Accuracy	± 5% absolute accuracy, 0% - 100% RH
Nominal Sensitivity	Rapid Analysis Mode, 0.011 cpm/(Bq/m <sup>3</sup> ), 0.40 cpm/(pCi/L) Precise Analysis Mode, 0.022 cpm/(Bq/m <sup>3</sup> ), 0.82 cpm/(pCi/L)
Radon Range	0 - 2,500,000 Bq/m <sup>3</sup> ( 0 - 67,500 pCi/L )
Intrinsic Background	0.06 ± 0.02 Bq/m <sup>3</sup> (0.0015 ± 0.0004 pCi/L) for the life of the instrument
Recovery Time	Residual activity in Rapid Analysis Mode drops by factor of 1,000 in 30 minutes
Operating Ranges	Temperature: 0° - 50°C Humidity: 0% - 100%, non-condensing
Cycle Range	User controllable number of Cycles, from 1 to unlimited, per test User controllable Cycle time, from 5 minutes to 24 hours
Capture Software	<ul style="list-style-type: none"> <li>• Compatible with all major versions of Windows and macOS</li> <li>• Automatic RAD8 connection, data download, and real-time status monitoring</li> <li>• Graphs radon, thoron, temperature, humidity, and barometric data over time</li> <li>• Automatic correction for humidity and other factors</li> <li>• Statistical analysis tools track concentration averages and uncertainties</li> <li>• Control RAD8 operations from computer via direct or remote connection</li> <li>• Browse RAD8 data stored on Capture Cloud</li> </ul>

## Advanced Menu Options

Graph real-time measurements on the touchscreen



Alpha spectrometry measurements radon and thoron



## RAD8 Physical Specifications

Dimensions	31.8 x 25.7 x 15.2 cm (12.5" x 10.1" x 6")
Weight	3.35 kg (7.4 pounds)
LCD Display	IPS 480 x 272 full color touchscreen, sunlight readable, wide viewing angle
Case	Indestructible, MIL-SPEC certified, IP67
Power Input	11-15V DC (12V nominal) @ 2A, center pin positive
Battery	Rechargeable lithium ion battery provides 3 days continuous operation

## CONFIGURATIONS

RAD8 electronic radon detector	1 ea
12V adaptor with 4 plugs	1 set
USB-A to Mini-B cable	1 ea
Laboratory Drying Unit	1 ea
Opener tool for drying unit	1 ea
5 lbs desiccant	1 ea
Small Drying Tubes	4 ea
RAD8 air sample filter assemblies	5 ea
Dust filter	1 ea
Vinyl Tubing	3 ea
Removable Tubing Bridge	1 ea
RAD8 User's Manual	1 ea

## Optional Accessories

Thermal Printer w/ Printer cable, Printer Paper Rolls (x6)	1 set
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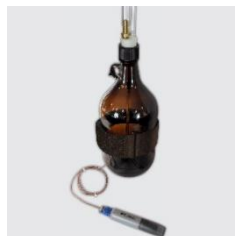
## 관련 약세사리



RAD H<sub>2</sub>O



RAD AQUA



Big Bottle System



Water Probe



DRYSTIK



Soil Gas Probes



Emission Chambers



Surface Chambers