

RADIOACTIVE SOURCES

Model RN-150A is a radon gas source that dispenses discrete quantities of radon gas

Calibrated gas sources were developed by Pylon to satisfy the need for a convenient and accurate means of calibrating field instrumentation. These sources feature reliable rates of emanation, high accuracy and ease of use. They are widely used for the calibration of radon measuring instruments.

The Pylon Model RN-150A Calibration Radon Gas Source is the most convenient method of dispensing precise quantities of radon gas for the calibration of Lucas type cells, Radon Detectors and other types of radon measuring instruments. The Model RN-150A consists of a 19 litre radon (Rn-222) gas source and a 14 millilitre gas dispenser. This allows a large number of successive samples to be taken per day. The classical method of producing radon gas involves degassing a solution containing radium salts; a process requiring careful attention to detail if accurate results are to be obtained. The equipment is fragile and generally not suitable for field use. There is also the attendant risk of spills and contamination.

The RN-150A is a portable, rugged unit which is ideal as either a field or laboratory source of radon gas. They contain a dry radium (Ra-226) source which provides calibrated quantities of radon (Rn-222) for laboratory or field use.

Applications:

- Radon monitor/detector calibration



RN-150A

Features:

- ANSI N538-1979 safety standard
- Multiple Samples
- High accuracy, repeatability
- Easy to use
- Continuous operation
- Constant rate of emanation

Theory of Operation:

The source material is in a form which reliably emanates 100% of the gas produced. This reaches equilibrium in the container. Due to the size of the container, multiple samples may be obtained without affecting the equilibrium.

RN - 150A

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Specifications:

	<u>RN-150A</u>	
Parent Nuclide:	Ra-226	
Nominal Activity:	< 30 (0.81)	kBq (uCi) Customer Specified
Loaded Activity Tolerance ¹ :	-10 / +25	%
Calibration Accuracy ^{2,3} :	± 4	%
Housing Material:	Aluminum	
Dispensing Ratio:	1:1350	
Sequential Variation ⁴ :	< 1	%
Operating Temperature Range:	0 to +50 (+32 to +122)	°C (°F)
Storage Temperature Range:	-20 to +75 (-4 to +167)	°C (°F)
Relative Humidity Range:	0 to 90	%
Diameter:	34.6(13.6)	cm (in.)
Height (w/o tubing):	33.5 (13.2)	cm (in.)
Weight:	5.3 (11.7)	kg (lb.)

¹ Loaded activity tolerance: -10 to +25% of nominal value. E.g., If 10 kBq is the specified nominal activity, the actual loaded activity will be between 9 kBq and 12.5 kBq.

² Calibration accuracy of the loaded activity. E.g., If the nominal activity is 10 kBq but the loaded activity is 11.5 kBq, the calibration accuracy is 11.5 kBq ± 0.46 kBq.

³ At a 1 σ Confidence Level.

⁴ Per 10 samples.

Ordering Information:

Model RN-150A Source: Order part number 7100500.

THIS SOURCE CONTAINS RADIOACTIVE MATERIALS. PYLON REQUIRES A COPY OF THE USER'S RADIOISOTOPE LICENCE PRIOR TO SHIPPING THIS PRODUCT.

Values are nominal and based on new units.
Specifications subject to change without notice.
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