

RL-100 and RL-300 Radioiodine Samplers



The RADēCO™ Models RL-100 and RL-300 Radioiodine Samplers are special sampling cartridges specifically designed for the evaluation of airborne concentrations of elemental radioiodine, organic radionuclides, and other radioiodine compounds. They are composed of selected 5% TEDA treated charcoal packaged in a plastic case.

Each batch of Model RL-100 and RL-300 cartridges is manufactured from pre-tested charcoal. After loading the material into the cartridges, random sample cartridges are selected and subjected to stringent radioiodine testing procedures. An independent laboratory develops a Certificate of Performance assuring the user of the quality of the product. This certificate is included with each purchase.

The Model RL-100 Radioiodine Sampler utilizes 40x50 mesh charcoal and is designed for very high collection efficiency at high flow rates for long term sampling. The Model RL-300 Radioiodine Sampler uses 20x 30 mesh charcoal and is designed for use at low flow sampling operations.

These cartridges are routinely used in-line and downstream of a high efficiency filter which will remove radioactive particulates which can interfere with the radioiodine measurement. Filter papers and combination pre-filter and cartridge sample holders are available as accessories for the RADēCO air samplers.

CAUTION: Radioiodine Samplers must not be used in personal respirators for breathing protection.

RL-100 GENERAL FEATURES

- 2.52" Diameter X 1.04" Thick
- 40x50 mesh TEDA treated charcoal
- Plastic case—Incinerable
- Uniform loading and density packed
- Certified for Performance
- Percent retention vs. flow rate

RL-300 GENERAL FEATURES

- 2.52" Diameter X 1.04" Thick
- 20x30 mesh TEDA treated charcoal
- Plastic case—Incinerable
- Uniform loading and density packed
- Certified for Performance
- Percent retention vs. flow rate

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TYPICAL CARTRIDGE DATA - RL-100

Flow Rate CFM(LPM)	Retention* 18 hour Purge	Retention* 7 day Purge	? P Across Cartridge Inches
1 (28)	99	99	.50
2 (55)	99	99	1.12
3 (85)	99	99	1.92
4 (113)	98	97	3.0
5 (142)	96	96	3.52
6 (130)	95	94	4.44
7 (198)	93	90	5.26

TYPICAL CARTRIDGE DATA - RL-300

Flow Rate CFM (LPM)	Retention* 18 hour Purge	Retention* 7 Day Purge	? P Across Cartridge Inches
1 (28)	99	98	.22
2 (57)	95	95	.51
3 (85)	89	89	.92
4 (113)	85	82	1.57
5 (142)	79	79	2.19

*Rounded to whole % -These collection efficiencies may vary slightly from batch to batch.

Testing - RADēCO™ cartridges are tested by an outside independent laboratory. Twenty-five (25) separate test measurements (or more) are utilized to produce our Certificate of Performance. These tests certify the retention efficiencies of methyl iodide at 30 C and 95% RH in accordance with ASTM D-3803-89, Sect 12

Labeling -Each Cartridge has shelf life data on label

Calibration Material - Methyl Iodide—This is the most difficult of the organic iodides to collect for analysis. The collection efficiency for other radionuclides will be higher.

Shelf Life - The RL-100 and RL-300 cartridges are packed in sleeves of 20 cartridges each. Each sleeve is of 10 mil plastic with the ends heat-sealed. The shelf life is ten years from date of material testing/manufacture. Special individual cartridge packaging is available.

