

VOLUME AIR SAMPLER KIT

EXCELLENT TOOL FOR EMERGENCY RESPONSE OR ROUTINE SAMPLING

**Complete Kits available
for meeting up to the
minute air sampling needs!**

Each Kit includes the following:

- ⇒ Air Sampler (Choose from the Sampler List)
- ⇒ Open Face Combo Filter Holder
- ⇒ C812 Air Flow Calibrator
- ⇒ 2500-80 Calibrator Adapter
- ⇒ RAD12/24 VDC-Battery Pack-If Required
- ⇒ CP100 Radioiodine Cartridge
- ⇒ 2" LB5211 Filter Paper

AIR SAMPLER MODELS

- H-809
- H-809C
- H-810
- H-810DC

H-809C



H-810



H-809V



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FILTER HOLDERS

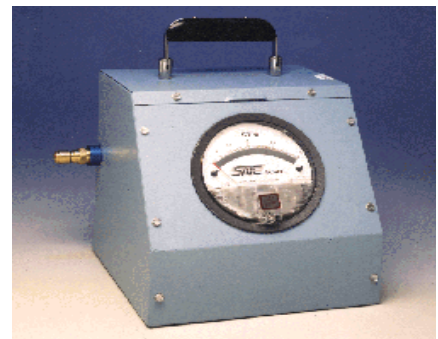
RADeCO has available the finest line of precision machined, all aluminum, holders for air sampling media. There are four different types of holders: (1.) Open Face Filter Holder, (2.) Inline Filter Holder, (3.) Open Face Combination Filter and Cartridge Holder, and (4.) Inline Combination Filter and Cartridge Holder. All four types are available for the RADeCO 787, 809, 810, 28, 29, and 60 series of air samplers as well as for other manufacturer's.



RADeCO pioneered the unique two O-ring method of preventing the sampling air from bypassing the cartridge in the combination holder. This method of sealing the cartridge in the lower body eliminated gasket creep and wrinkling which caused leakage past the cartridge. All 47 mm, 2 inch and 4 inch holders are hard anodized to give the sample holders good chemical resistance to prevent oxidation and to color code the various parts. The main body of each holder is colored blue, while the filter retainer nuts and the cartridge retainers are colored gold for 47 mm, black for 2 inch, and blue for 4 inch.

Air Flow Calibrator

- ⇒ **Rugged Construction**
- ⇒ **Direct Reading in CFM or LPM**
- ⇒ **Reflective ARC for Parallax Correction**
- ⇒ **Better than 5% Accuracy of Reading**
- ⇒ **Three Flow Ranges (see chart below)**
- ⇒ **Certified and Traceable to NIST**



RADeCO's Air Flow Calibrators are the most durable and repeatable calibration devices available. RADeCO Calibrators are constructed of a precision machined aluminum venturi tub and an appropriately ranged magnahelic gauge mounted in a rugged steel case. Our Air Flow Calibrators are simple, cost-effective and consistently accurate, year after year. RADeCO Air Flow Calibrators are available calibrated in cubic feet per minute, or in liters per minute. Dual calibrations are available on special request. Each calibrator is individually calibrated to an air flow instrumentation system whose calibration is certified and traceable to National Institute of Standards and Technology (NIST). The RADeCO Air Flow Calibrators are guaranteed to an accuracy of better than $\pm 5\%$, referenced to 29.92 inches of mercury and 70°F. A Certificate of Calibration is supplied with each calibrator. RADeCO maintains an Air Flow Calibrator re-certification and repair service for all RADeCO units. Similar units manufactured by competitors can also be serviced at our facility. Special calibrations are available upon request. An assortment of adapters is available which mate the calibrators to all RADeCO Sample Holders.

Specifications:

Accuracy: Better than 5% at 29.92"Hg and 70°F

Weight: Less than 5 pounds (2.3 Kg)

Calibration Frequency: For calibration laboratory use, re-certification is suggested once every two years. For field or dusty environment use, calibration should be once a year.

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12/24 Battery Pack



2000 Peak Amps

Use 12V for long term sampling or 24V for High Volume Grab Sampling



Enough power to sample for a variety of situations

- ⇒ Heavy duty cable and slip connector or jumper cable clamps
- ⇒ Powered by two 12 volt sealed, lead-acid batteries
- ⇒ 12 volt systems use the batteries in parallel, 24 volt systems in series
- ⇒ DC outlet powers a variety of 12 volt accessories
- ⇒ Weighs 36 lbs. 16" H x 7"D x 12" W
- ⇒ Recharge from any 120 volt AC or 12V DC power supply; 12 volt charger is included

POWER WITHOUT THE BACKACHE!

Power Anywhere!

- Emergency Lighting
- Back-up power
- Any 12 or 24v device
- Built in lighter style adapter

All Position Use!

- Sealed Lead Acid Genesis Battery won't leak
- Transport, use or store in any position

HOLDS A CHARGE FOR MONTHS!

Use test button to check for charge status

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RADIOIODINE CARTRIDGE-MODEL CP-100

The RADeCO Models CP-100 and CP-200 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 heavy aluminum case.



The Model CP-100 Radioiodine Sampler utilizes 40 to 50 mesh charcoal and is designed for very high collection efficiency at high flow rates for long term sampling. The Model CP-200 Radioiodine Sampler uses 20 to 30 mesh charcoal and is designed for use at low flow sampling operations.

Each batch of Model CP-100 and CP-200 cartridges is manufactured from pre-tested charcoal. After loading the material into the cartridges, random sample cartridges are selected and subjected to stringent RADeCO radioiodine testing procedures. From this test data, RADeCO develops and gives to each customer, a Certificate of Performance assuring the user of the quality of the product.

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

CAUTION: Models CP-100 and CP-200 Radioiodine Samplers must not be used in personal respirators for breathing protection

CP-100

2.27" Diameter X 1.04" Thick
40-50 Mesh TEDA Treated Charcoal Metal Case
Uniform Loading and Density Packed
Certified for Performance-Percent

CALIBRATION MATERIAL

Methyl Iodine - This is the most of the organic iodides to collect for analysis. The collection efficiency for other radionuclides will be higher.

PURGE DEFINITION

2 Hour Purge - After the methyl iodine is collected by the cartridge, air (at the sampling rate) is drawn through the cartridge to strip out loosely held material.

7 Day Purge - Before cartridge is loaded with methyl iodine, air is drawn through the cartridge (at the sampling rate) for seven days the collected media with moisture and other airborne containments which could interfere with iodine absorption.

Storage Life - The CP-100 and CP-200 cartridges are packed in sleeves of 20 cartridges each. Each sleeve is of 10 mil plastic with the ends heat-sealed. The shelf life should be indefinite if the pocket in which the cartridges are sealed remains in-tact. Special individual cartridge packaging is available.

Typical Cartridge Data

FlowRate (LPM)	Retention 2 Hour Purge	Retention 7 Day Purge	ΔP Across Cartridge (mmHg)
30	99.9	99.9	18.5
50	99.9	99.8	26.5
70	99.9	99.8	38.5
90	99.9	99.8	52.0
110	99.9	99.8	67.5
130	99.3	99.2	85.0
150	98.7	98.6	102.5

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FILTER PAPER

LB-5211 Laminated glass filter paper. These products are high efficiency multi-purpose filter materials with good heat resistance. They are particularly recommended for both gas and liquid filtration in the medical field and for air monitoring applications. The base material consists of micrograms borosilicate fibers with low amounts of acrylic resin, the composition of which corresponds to the description listed in DFR Title 21, Part 177.2260, Filter, Resin Bonded.

SPECIFICATIONS	LB-5211
BASIS WEIGHT, Pounds per 3000 sq. ft.	56.0
THICKNESS, inches	0.0
DOP SMOKE PENETRATION, %	
32 LPM (5.3 cm/sec or 10.5 ft/min)	0.0
AIR FLOW RESISTANCE, mm of water	
32 LPM (5.3 cm/sec or 10.5 ft/min)	38.0
TENSILE STRENGTH, pounds per inch width	
Machine Direction (dry)	5.5
Cross Machine Direction (dry)	3.5
DRY ELONGATION, %	
Machine Direction (dry)	2.0
Cross Machine Direction (dry)	2.5
COMBUSTABLE MATERIAL, %	
AIR PERMEABILITY, cfm	
(Cubic feet per ft ² per 0.5" water)	3.8
BUBBLE TEST, inches of water	35.0
RETENTION EFFICIENCY, %	99.99
(For 0.3 micron particles)	

