

Hazardous Materials Air Monitoring for Risk-Based Response

Course is 50% Hands On

INSTRUCTOR LED MOBILE TRAINING

COURSE TOPICS:

- Interpreting instruments and detection papers
- Hazard assessment
- Establishing control zones
- Exposure monitoring
- Turn-back values
- Product characterization
- Using cross sensitivities
- Correction factors



EG-92
VERSION 16-16
DATE: 2-3-21

WARNING: This meter auto-locks. Pay close attention to the units of measure and the location of the electrical pins.

Press to change to Units

Press to toggle modes: Count Rate, Mac, Counter

Display

Optional Dose Equivalent Filter

IM Tube (Sensor) location at top of unit under a thin mica window (the mica is extremely fragile!) Window area is 1.24 cm² (1.9 in²)

Battery door

Operational Range: 0 ppm to 999 ppm; 0.00 to 1,000 mBq/hr

Required Items to Set-up Ludlum Model 26-3

- Ludlum 26-3
- 2 AA batteries
- Radiation Check Source

WARNING: This meter is designed to detect Alpha, Beta and Gamma radiation. Neutron radiation may be present even if readings appear normal.

EQUIPMENT GUIDE 92 **Ludlum Model 26-3**

Hazard	CONSIDERATIONS FOR SETTING CONTROL ZONES BASED UPON HAZARD			Notes
	Cold (or Support) Zone No access to the public	Warm (or Contamination) Zone Access limited to authorized responders with proper PPE	Hot (or Exclusion) Zone Access limited to authorized responders with proper PPE and back-up team in place	
Flammable	< 1% of LEL	1 - 10% of LEL	≥ 10% LEL	The transition from cold zone to warm zone is often called the Inner Cardon while the transition from warm to hot zone is called the Outer Cardon.
Toxic or Corrosive (vapor forming)	< PEL	PEL - IDLH	≥ IDLH	Utilizes published respiratory exposure standards, therefore errs on the side of safety for dermal exposures.
Corrosive, Acid (non-vapor forming)	pH 6 - 8	pH 4 - 6	pH ≤ 4	For fuming/vapors, use toxicity endpoints. For non-vapor forming corrosives, there is little threat outside the exact area of the spill. Remember to leave ample space for "spattering" if carbonate-based neutralizers will be used.
Corrosive, Base (non-vapor forming)		pH 8 - 10	pH ≥ 10	
Oxygen (Low)	20.8 - 20.9%	19.6 - 20.7%	≤ 19.5%	
Oxygen (High)		21.0 - 23.4%	≥ 23.5%	
Radioactivity	≤ 2 mrem/hr	2 - 10 mrem/hr	≥ 10 mrem/hr	At 2 mrem/hr, it takes ~ 50 hours to get annual public dose. At 10 mrem/hr, it takes ~ 10 hours to get annual public dose. Measurements ≥ 2x background warrant further investigation.

WARNING: Control Zones designations are meant to be dynamic in nature and therefore must be continually re-evaluated throughout the response. See ERODS for Chemical Specific Guidance.

TECHNICAL GUIDE - 189 **CONTROL ZONES**

	Cl ₂	ClO ₂	CO	F ₂	H ₂	HCN	H ₂ S	H ₂ O	NO
	1	2		2.5			range from -2 to 0		
	1.7	1					-4		
			1		4		4		2
			1		3.6				3.5
			1		5		25		350
			500		3333		1		350
			1		3.3		5		3500
			60		2000		1		35
			1		ranges from -20 to +20		ranges from -30 to +30		2.9
					1		0.5		
			50		2000		1		87.5
Can affect reading			50				1		20
					can affect		10		1
									1
			1				-12.5		
			0.8	0.7			12.5		can affect
	0.33	1.1							100

Direct Reading Known Cross-Sensitivity Anticipated Cross-Sensitivity

COURSE DESCRIPTION

This 8-hour course is designed to enhance HazMat responders' ability to interpret readings from air monitoring instruments and make on scene tactical and safety decisions.

The training is 50% hands on. Attendees will participate in lecture and case studies followed by practical sessions with air monitoring equipment. Attendees will operate instruments and interpret readings from chemical samples and make decisions based on the readings.

The course content can be tailored to your teams equipment, mission, and local target hazards. The training focuses on instrument interpretation, participants should have previous Familiarity with air monitoring basic operating principals, or work alongside an experienced responder.

CONTACT US!

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