

Table 2-4: Survey Instruments & Estimated Range in Minimum Detectable Activity

Instruments	Application	Range Minimum Detectable Activity		Total Efficiency (4pi)	Background (cpm)	Window Thickness (mg/cm ²)
		Alpha (dpm/100cm ²)	Beta Gamma (dpm/100cm ²)			
Ludlum Model 43-37-1 Gas Proportional Detector Paired w/Ludlum Model 2360 Rate Meter	Alpha and beta/gamma Scan	125 - 200	550 - 700	Alpha: 7.3%; Beta/Gamma: 11.48%	Typically 10-30	0.8 mg/cm ²
	Alpha and beta/gamma Fixed -Point	N/A	N/A		Typically 800-2,000	
Ludlum Model 43-93 or 43-89 Alpha-Beta Detector (ZnS(Ag) and plastic scintillators) paired with a Ludlum Model 2224-1 or 2360 Ratemeter	Alpha and beta/gamma Scan	115 - 300	1,200 - 1,700	Alpha: 11.25%; Beta/Gamma: 11.25%	Not requested	1.2 mg/cm ²
	Fixed -Point	45 - 95	250 - 400			
Ludlum Model 3030 Alpha Beta Sample Counter (ZnS(Ag) and plastic scintillators)	Alpha and beta/gamma Fixed -Point	9 - 14	60 - 80	Alpha: 30-32%; Beta/gamma: 35-36%	Not requested	0.4 mg/cm ²
Ludlum Model 44-110 Tritium Detector (Windowless Gas Proportional) paired w/a Ludlum Model 2350-1 Ratemeter	Beta Fixed -Point	N/A	450 - 700	H-3: ~60% as determined by instrument manufacturer	Not requested	0

N/A- Not Applicable