

G3301 Series

Segregated Waste Clearance Monitor for free release (Bag Monitor)

Introduction

The ANTECH G3301 Series Segregated Waste Clearance Monitor quantifies and segregates gamma-ray emitting radioactive waste. The system detects gamma radiation in lightweight and low density bags and boxes. The shielded enclosure reduces background radiation so the G3301 Series can identify low levels of contamination. This enables the system to separate low-level waste from free release waste and to demonstrate that containers and equipment are free of radioactive contamination.

Six plastic scintillator detectors provide 4π coverage to allow fast, accurate measurements. A built-in weigh scale allows the specific activity of the sample to be identified in Bq/g. An embedded microprocessor performs data acquisition, background discrimination and system diagnostics. The results are displayed via a software interface on a local laptop PC or on an optional built-in touch screen PC. The software provides 60 configurable protocols (fingerprints) for the material to be assayed, with associated detection limits. An audible alarm and warning light indicate if the selected predetermined clearance level is exceeded. An Ethernet connection allows remote data processing and analysis.

Features

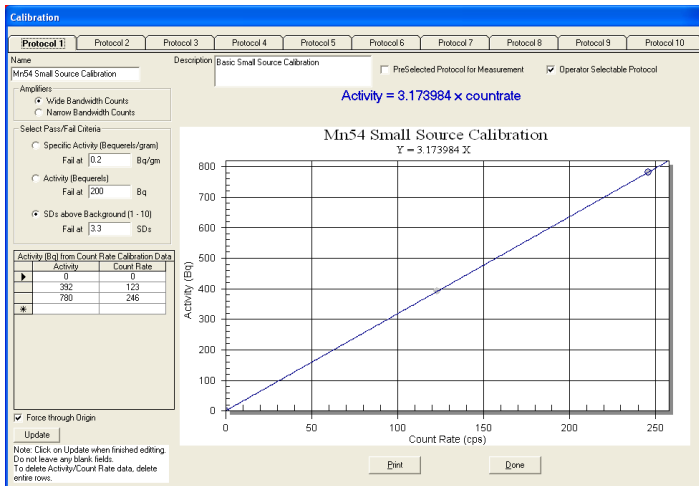
- Up to 60 configurable measurement protocols (fingerprints)
- Clear audio and visual limit alarms
- Optional bar code reader for sample ID input
- Continuous automatic background determination and averaging
- Plastic scintillator configuration provides up to 4π coverage
- Lead shielded chamber to reduce background count rate
- CE, UL and UL_c compliant

Benefits

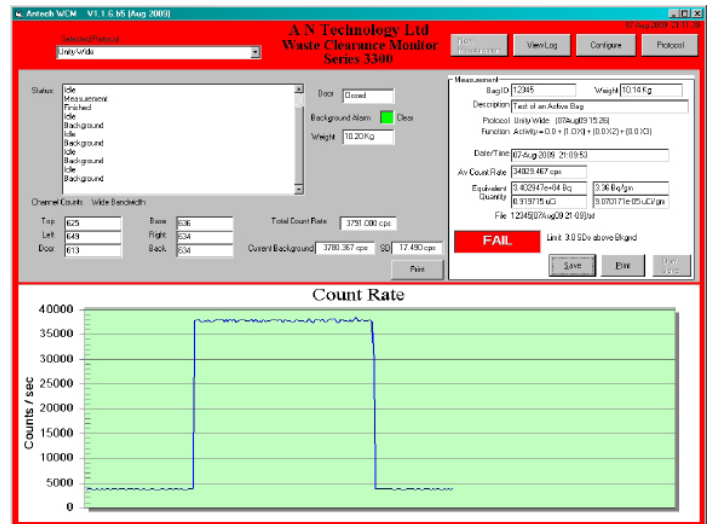
- Verifies that uncontaminated waste can be cleared as free-release waste rather than low-level waste, reducing disposal costs
- Verifies that items to be removed from controlled areas are free from contamination and can be safely handled
- High sensitivity scintillators provide a large detectable activity range, maximising detection efficiency
- Fast input of sample ID details via bar code reader
- Windows based menu driven software provides a user friendly operator interface
- Password protected system and configuration menus provide extra security



Bar code reader for waste data input



Screen images from the Segregated Waste Clearance Monitor user interface



Specification

		G3301-200	G3301-300
External dimensions (H x W x D)*		1320 mm x 932 mm x 869 mm (52 in x 36.7 in x 34.3 in)	1320 mm x 932 mm x 1150 mm (52 in x 36.7 in x 43.3 in)
Internal dimensions (H x W x D)*		762 mm x 533 mm x 533 mm (30 in x 20.9 in x 20.9 in)	762 mm x 533 mm x 762 mm (30 in x 20.9 in x 30 in)
Weight		2350 kg (5180 lb)	2910 kg (6416 lb)
Operating temperature		5-40 °C	
Network connection		Ethernet	
Weigh scale range *		0-50 kg (0-110.24 lb)	
Shielding		38 mm (1.5 in) lead 12.5 mm (0.5 in) steel	
Chamber capacity		200 L (7.4 cu ft)	310 L (11.5 cu ft)
Detectable activity range	¹³⁷ Cs	120 Bq in chamber (0.08 Bq/g at 3.3 SD for wastes of 1.5 kg or more)	
	⁶⁰ Co	55 Bq in chamber (0.04 Bq/g at 3.3 SD for wastes of 1.5 kg or more)	
Minimum detectable activity (typical)	¹³⁷ Cs	120 Bq	
	⁶⁰ Co	55 Bq	
Specific activity typically detected at 3.3 standard deviations for wastes of 1.5 kg or more	¹³⁷ Cs	0.08 Bq/g	
	⁶⁰ Co	0.04 Bq/g	
Power supply		110 - 240 VAC, 50-60 Hz	
Power consumption		< 200 W (including PC)	
Analysis software		Windows operating platform, ANTECH MasterWCM user interface	

* 0 - 120 kg operating range option available upon request