

Captus® 3000 Well Counting System

The Captus® 3000 Well Counting System has state-of-the-art wipe testing with a simple menu-driven format and a desktop computer system. The system will perform a peak search on each wipe identifying any contamination by peak and by nuclide. The user decides how many wipe locations are entered; there are no location limits. Trigger levels may be selected on a user-specified limit set to flag wipes above a specific activity level. Wipes may be grouped by location.



Captus® 3000 Well Counting System

Features

- Lab Tests
- 1024 Multichannel Analyzer
- Wipe testing module allows flexibility of pre-defined or user groupings
- Improved data storage, archive and reporting functions
- "Quick Start" menu
- Automated QC functions, including energy calibration, constancy, Chi-Square and MDA backscatter from lead X-rays

Specifications

- Desktop computer system
- MCA interface PC board: 1024 channels.
- Maximum count rate of 100,000 cps.
- ROI's are automatic or manual.
- Preset live time, real time or total counts.
- Automatic peak-finding.
- Flat field collimated to meet ANSI N44.3-1973.

- Drilled well with 1" lead shielding (optional 2' shielding available) and brass liner.
- Calibration sources: Cs-137 and Eu-152 (calibrated exempt sources provided at no charge).
- Power requirements: (With circuit protection, line filter and isolation transformer)
 - Standard: 115V 90-127V 50-60HZ
 - Optional: 220V 180-250V 50-60HZ

CAPTUS 3000 Well Counting System	5430-0075
Optional 2" Shielding Well Detector	5430-0069
Custom Protocol	0960-0152
Test Tubes (100 Count)	5420-0090

Auto Calibration For Well

The Autocalibrate module provides high voltage, zero offset and automatic gain adjustment; as well as a linearity correction and constancy test. Also included in QA are automatic chi-square and MDA calculation selections. Finally, the program has the ability to automatically perform efficiency calculation and storage for various isotopes.

MCA: Accuspec
Date / Time: 01/30/2002 17:04

Step 1		Eu152 Linearity Correction
Gain: 7.09		Channel Energy % Difference
Peak Found		(keV)
		16.6 32.9 0.7
Step 2		21.1 40.8 3.6
High Energy Peak Channel: 330.8		64.9 121.8 6.6
Gain: 7.09		176.9 344.3 2.8
		330.8 661.7 0.0
Step 3		388.2 778.7 -0.3
Low Energy Peak Found		558.9 1100.9 1.5
		746.2 1408.0 6.0
Step 4		
Iteration : 1		
Gain Adjust		Constancy Test
High Energy Peak Channel: 331.8		Counting Rate: 114.6kcpm
Low Energy Peak Channel: 16.8		Live Time: 4.9sec
Gain: 7.08		Activity Calculated As: 0.387µCi
Zero Offset Adjust		Activity Measured As: 0.383µCi
Low Energy Peak Channel: 16.7		Deviation: -0.9%
High Energy Peak Channel: 331.1		
Zero: 1.28%		

Calibration Successful
Cs137
High Energy Peak Channel: 330.8
Low Energy Peak Channel: 16.6
Gain: 7.08
Zero: 1.28%
High Voltage: 1000V
Threshold: 1.50%

FWHM
FWHM: 7.2%

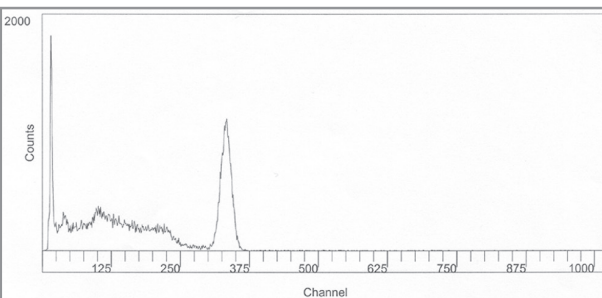
Wipe History

The highly versatile wipe test module will allow users to establish as many locations as needed and to arrange the locations into either pre-defined or user-defined groupings. The program will perform an automatic peak and isotope identification of wipe results in order to advise the user of the type contamination encountered. There are pre-set trigger levels loaded or the user can define their own trigger levels, either way the results will flag any wipe that exceeds a trigger. Finally, the system will maintain a history of wipe results that can be printed as a whole or in part.

		Net Counting Rate		Net Activity	
AM Package	Background	10/17/2001 11:01	765.0 cpm	60 sec	Trigger: 200 dpm
	Full Spectrum				
	Cs137	517.0 cpm		795.4 dpm	HIGH
		149.0 cpm		1280 dpm	HIGH
PM Package	Background	10/17/2001 11:00	765.0 cpm	60 sec	Trigger: 200 dpm
	Full Spectrum				
	Cs137	517.0 cpm		795.4 dpm	HIGH
		149.0 cpm		1280 dpm	HIGH
Waiting Room	Background	10/17/2001 11:00	765.0 cpm	60 sec	Trigger: 200 dpm
	Full Spectrum				
	Cs137	517.0 cpm		795.4 dpm	HIGH
		149.0 cpm		1280 dpm	HIGH
Bathroom	Background	10/17/2001 11:00	765.0 cpm	60 sec	Trigger: 200 dpm
	Full Spectrum				
	Cs137	517.0 cpm		795.4 dpm	HIGH
		149.0 cpm		1280 dpm	HIGH
Hot Lab	Background	10/17/2001 11:00	765.0 cpm	60 sec	Trigger: 2000 dpm
	Full Spectrum				
	Cs137	517.0 cpm		795.4 dpm	
		149.0 cpm		1280 dpm	

MCA Spectrum Report

The Multi-Channel Analyzer is very user friendly. ROI's can be selected from a convenient menu of isotopes with predefined regions or the user can define them. Protocols can be defined for real time, live time or acquired counts. Results are reported with full spectrum counts and counts by region of interest. All results can be saved in the database or exported to a spreadsheet.



ID:

Spectrum Data	
Acquisition Date	01/30/2002
Acquisition Time	11:12
Real Time	0.00 Sec
Live Time	32400.00 Sec
Measured In	Probe
High Voltage	1000 V
Gain	1.00
Zero Offset	0.00 %
Threshold	0.00 %
FWHM	5.8 %
Total Counts	85170
Total Spectrum Counting Rate	158 cpm

ROI #	Start Chan	End Chan	Integral	Centroid	cpm
1	298	364	25713	332.2	48

Lab Test Report

In vitro lab test protocols are incorporated into the software; the user has access to Schilling, RBC Survival and both Cr51 and I125 blood volume studies. The program will integrate all patient demographic, physician and dose data and will perform automatic result calculations. By utilizing the report functionality all of the test data can be documented in a hardcopy format for physician review or for documentation in the patients file.