



Innovator In Spectroscopy Equipment

ABS2218

2" & 3"

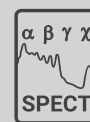


ALPHA AND BETA SPECTROSCOPY SYSTEM MODEL ABS2218 (2" & 3")

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CATALOG



SPECTROMETER



FREE DOWNLOAD

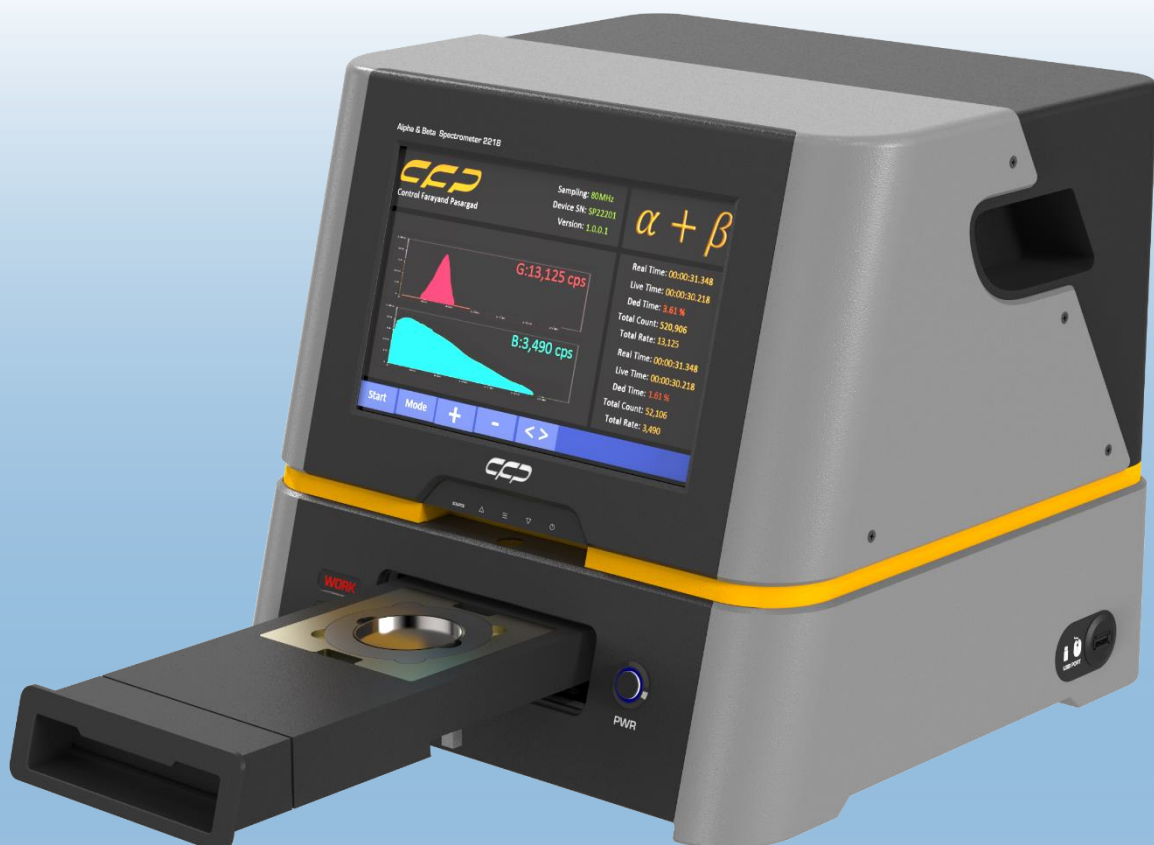
ALPHA AND BETA SPECTROSCOPY SYSTEM

MODEL ABS2218 (2" & 3")

Features

- High efficiency
- Wide counting rate range
- Wide temperature range
- Documentation of measured values
- Low limits of detection and decision
- Highly sensitive and uniform response
- Supporting different data extraction and reanalysis procedures
- Lightweight field deployable alpha/beta spectroscopy in 2 versions (2" & 3")
- Closed measuring chamber for scintillation detectors (ZnS(Ag) + plastic (PVT))
- Printer interface
- Permanent memory for data
- Simultaneous and separate measurement
- Simple operation with touch display
- Capability of connecting to PC over USB for data transfer
- Continuous operation under severe environmental condition
- Special rugged design to withstand typical field usage,
- Waterproof against streaming water
- Fully dust protected

FAST, ACCURATE AND SIMULTANEOUS ALPHA AND BETA SPECTROSCOPY SYSTEM



Description

The ABS2218 (2" & 3") is a portable alpha-beta activity measurement system offering both simultaneous and separate measurement of alpha and beta activities in the sample. The system can be utilized in various applications including environmental analysis such as analysis of waste water after evaporation, detection of activities in small quantities of food samples and nuclear medicine such as in vitro tests. The ABS2218, produced in two versions namely 2" & 3", is equipped with a Phoswich detector (ZnS(Ag)) 25mg/cm² +0.25mm plastic scintillator (PVT)) which leads to impressively high spectrum resolution, high count rates and low measuring time. The holder considered for the sample is a sliding drawer capable of holding a planchet with maximum diameter 52mm and height 6.5mm in first version (2") and with maximum diameter 79mm and height 4.6mm in second version (3"). The sensitive touch screen display presents an intuitive user interface with simple and fast access to measuring procedures. Using modern digital signal

processing algorithms, the USB base can accurately distinguish between the two types of radiation and accurately measure their energies. It is easy to operate and provides quick and reliable measurement results which are presented clearly arranged on the display. The system can accurately distinguish between alpha, beta and mixed pulses. The instrument is ideally suited for nuclide-specific activity measurements in the radionuclide laboratory. The measurement electronics is a modular designed system accommodated in a desktop housing. It includes a high voltage unit with preamplifier and an ADC for the acquisition of spectra. The measurement electronics ABS2218 is operated via PC software. This allows very intuitive user guidance. Pulse height spectra can be depicted graphically and evaluated. Several service functions are available including background measurement, energy calibration and spectrum recording.

Specifications

Unit : ABS2218 (2" & 3")		
Type	Portable	
Version type	2"	3"
Energy detection	Alpha and Beta	
Input(s)		
USB port	DC +5V USB (200mA)	
power	AC 220V power cable (50Hz)	
Output(s)		
Output	No output signal	
Control(s)		
PWR	Power push button to turn ON or OFF device	
Touch screen display	Setting configure via touch screen display (set and read all data)	
Indicator(s)		
WORK	red color	
IDLE	Green color	
Display		
Type	Full color, IPS	
Size	10.1", 1280 × 800 pixels	
Performance		
Energy range	Alpha > 3MeV, Beta > 100keV	
False beta to true alpha	1:20000 (In true alpha window)	1:4600 (In true alpha window)
False alpha to true beta	1:1100 (in true beta window)	1:3700 (in true beta window)
Background measurement	Alpha ≤ 0.01cps, Beta ≤ 0.1cps (when optically closed)	Alpha ≤ 0.025cps, Beta ≤ 1.2cps (when optically closed)
Detector		
Active surface area	16 cm ²	35 cm ²
Alpha detector	ZnS(Ag), 25mg/cm ²	

Beta detector	Plastic scintillator (PVT), 0.25mm
PMT	14-pin 10-stage PMTs
Data Acquisition and Analysis	
OS	Windows 7 or higher versions
Software	ABS2218 (SOFTWARE)
Measurement/Spectrum	
High voltage	0 - 2000V, Positive, 12 bit resolution
Energy calibration	Linear calibration
ROI selection	4 ROIs to select on store
	Spectrum type
	2 simultaneous cumulative spectrums
ADC	
Channels	12bit in 4096CH @120MHz FRQ
Conversion time	200nsec with 8.3nsec time interval
Digital Signal Processing	
ADC	12-bit and 120 MHz ADC
Charge sensitive preamplifier gain	10 – 150mV/pC (selectable)
Amplifier coarse gain	(x1 to 150x) in 15 step
Amplifier fine gain	Amplifier fine gain: (0 - 2x) in 65536 step
Rise time	Integration time filter for the energy calculation with software adjustable rise time in the range 0 to 0.546ms @120MHz in 0 – 65536 step
Trigger	Trigger threshold software adjustment (0 to 100% scale) in 1024 step
Pole-Zero cancellation	Software fine tuning of the Pole-Zero cancellation
Stabilizing	Software gain stabilization
Pile-up	Pile-up rejection and live time correction
Baseline	Baseline restorer with programmable averaging

Application

- Research
- Nuclear medicine
- Radionuclide laboratories
- Environmental monitoring
- Radiation protective measures in case of nuclear disasters
- Determine the range and amount of radioactive particles in water, foodstuffs, agricultural and industrial, wood and building materials, environmental materials (soil, vegetables, etc.) and industrial products monitoring





Electrical, Mechanical and Environmental

Unit:ABS2218 (2" & 3")		
Type	Portable	
Version type	2"	3"
Electrical		
Power required	AC 220V, 50Hz	
Physical		
Dimensions (L x W x H)	350mm x 352mm x 318mm	350mm x 352mm x 318mm
Weight	16.80kg	16.80kg
Mechanical	<p style="text-align: right;">Unit: mm</p>	
Environmental		
Storage temperature	0°C to 50°C	
Operating temperature	10°C to 45°C	
Relative humidity	10 to 80%	

Software and user interface

Device GUI

Alpha and beta spectroscopy system model ABS2218 can be used standalone using the companion 10.1" touch screen display.

This sensor can be used with PC interfaces and the data collection ABS2218 software.

ABS2218 software containing fast access toolbar, menu bar, and different panels including new alpha histogram, new beta histogram, 3D separation, alpha trace, beta trace and state info.

Fast access toolbar provide several functionalities usually used by user.

New alpha histogram panel represents the alpha spectrum in real-time manner.

New beta histogram panel represents the beta spectrum in real-time manner.

3D separation panel indicates the separated version of all pulses based on their shape in 3d dimensions.

Alpha trace panel shows the alpha pulses sensed by detector.

Beta trace panel shows the beta pulses sensed by detector.

State info panel shows some information of detector parameters along with real time measurement results.

Menu bar shows the total command needed throughout the device functioning.

PC software

ABS2218 (SOFTWARE)

Input /Output (using supplied ABS2218 software)

USB

Data Output formats





*.MCA (text format)



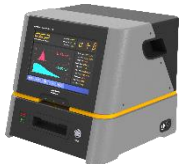



Software main window

Ordering info

ABS2218-2" Standard package includes

Part #	Image	Description
ABS2218-2" main		Includes the main body of device, 2" (detection system, linear stage, integrated display)
ACCE2218001-2"		CD user guide (1 Pack)
ACCE2218003*-2"		Guaranty (one year)
ACCE2218011-2"		Power cable

ABS2218-3" Standard package includes

Part #	Image	Description
ABS2218-3" main		Includes the main body of device, 3" (detection system, linear stage, integrated display)
ACCE2218001-3"		CD user guide (1 Pack)
ACCE2218003*-3"		Guaranty (one year)
ACCE2218011-3"		Power cable

* =we stand behind our products. We guarantee your satisfaction in the quality of our instruments by providing a complete one-year warranty covering any defect of workmanship, material, and/or design. If our products do not perform, we will provide complete repair and/or replacement. for guaranty conditions, please refer to manual device (ABS2218 - Manual)

Optional accessories and services

Part #	Image	Description
ACCE2218004		Installation
ACCE2218005		Training
ACCE2218006**		Re-calibration (interval) services. 1year factory maintenance suggested, not required
ACCE2218007		Hard case with foam insert
ACCE2218012		Printer cable
ACCE2218013		Plastic planchet (2" or 3")
ACCE2218014		Aluminum planchet (2" or 3")

** = The proper maintenance & calibration of your instruments is critical to ensure proper performance & accuracy. for Re-calibration (interval) services, please call with CFP company (021- 4604538)



Innovator in Spectroscopy Equipment



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