



**Standard Drawer System
No Shielding**



**Drawer System With
2" Shielding**

Alpha Beta Sample Counting System

**Model: STG-ABS-42S and
STG-ABS-42P**

Features

- **STG-42P:**
 - Portable** (Not Shown)
 - Lightweight, Hand Carry
 - Table-top** (Pictured)
 - Standard 2" Drawer System, Lightweight – No Shielding
- STG-42S:**
 - 2" Lead Shielded Drawer System (Pictured)
- STG-42S and STG-42P:**
 - Combines Alpha and Beta Dual Scintillation Detectors
 - Drawer System for Sample Positioning.
 - Windowless Operation with Light-tight Housing
 - Automatic HV Cutoff When Drawer is Opened
 - Designed for Easy Cleaning
 - Planchet Pack of 50 Sheets
 - **IP 52**
- Electronics – PRS-2F**
 - 5 Decade Range Eliminates Need For Automatic Range Changer
 - Dual Alarms: Alpha and Beta, Individually Settable
 - Battery Operated – **Optional** Rechargeable Batteries
 - User Settable Count Time
 - Units User Settable: Cps, Cpm (Bq Based On Calibration Constant)
 - RS-232 Port; **IP 64**

Description

The **STG-ABS-42 Series** Alpha Beta Scintillation System combines Alpha and Beta Dual Scintillation Detector plus drawer system for sample positioning. In this detection system, the protective window and grill are deleted to enhance sensitivity to Alpha and low energy Beta radiation.

Sensitivity: of the **STG-ABS-42** to 5 MeV Alphas is typically 80%-85% of 2 Pi.

Background: can be less than one count per minute.

Sample Diameter: 2"

Sample Cavity Depth: (2) options: (1) 0.4". (1) 3/16" user specified.

Alpha / Beta Dual Scintillation Detector: 4" diameter. The 90 cm² face of the probe allows shorter count times plus high sensitivity.

Application

STG-ABS-42 Series is especially well suited to counting Alpha and Beta emissions from air sampler filters.



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OTCQB-UCLC

Alpha Beta Sample Counting System

Model: STG-ABS-42S and STG-ABS-42P

Specifications: STG-ABS-42 Detector

	Alpha	Beta
Photomultiplier Tube:	2" (51mm) dia. 10-stage.	
Scintillator:	ZnS(Ag).	Plastic Scintillator, 0.02" thick.
Plateau:	200 Volt long.	
Slope:	Less than 5% per 100V.	
Efficiency:	Greater than 75% of 2 Pi. Pu ²³⁹ & Am ²⁴¹	Cs ¹³⁷ 75% pf 2 Pi. Sr ⁹⁰ Y ⁹⁰ 100% of 2 Pi. C ¹⁴ is 24% of 2 Pi. Tc99 is 35% of 2 Pi.
Typical Background	Less than 3 <u>cpm</u>	Less than 60 <u>cpm</u>

Weight and Dimensions – Standard Drawer System: STG-ABS-42P

Dimensions: 7" wide x 14" deep x 16" high

Weight: 16 lbs

Weight and Dimensions – 2" Shielding Drawer System: STG-ABS-42S

Dimensions: 16" wide x 12" deep x 15" high

Weight: 90 lbs

Specifications: PRS-2F Electronics

- Dual Display - Alpha and Beta
- Battery Operation
- Dual Alarms: Alpha and Beta, Individually Settable
- 2 Separate Scale Factors for Rate and Integrated up to 30 Minutes
- High Voltage 400V-1200V DC
- 0.1-99 sec Time Constant for Ratemeter
- 8 Digit LCD Bright Back Lit Display
- User Settable Units: cps, cpm, Bq
- RS-232 Serial Outputs
- Rechargeable Batteries with AC Adapter



« Alpha

« Beta



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Alpha Beta Sample Counting System

Model: STG-ABS-42S and STG-ABS-42P

Specifications: PRS-2F Electronics *continued*

Detector:	Mates scintillation detectors Detector connector: BNC - Standard Detector Bias Supply: 400 V DC to 1200 V regulated and filtered - other voltage levels-optional.
Alarm:	Alarm circuit with red LED and audio alarm Dual Alarms User Settable - ALPHA and BETA
Display:	Reads out 2 separate signals simultaneously from detector: ALPHA and BETA Energy discrimination
Power:	Batteries: in-place rechargeable batteries.
Battery Life:	100 hours
Construction:	All plug in circuit cards, essentially no wires. Rugged, lightweight

Weight and Dimensions – PRS-2F Electronics:

Dimensions:	3-1/4" H, 4-1/4" W, 7-1/4" long excluding probe holder and handle.
Weight:	2 lbs. 4 oz.
Options:	Other connectors - MHV etc

Digital Display	RATEMETER	SCALER INTEGRATER
Range	<u>6 digit LCD</u>	<u>8 digit LCD</u>
User Settable Scale Factor	0.1 - 20,000 count/sec	0-10,000,000 Total counts
Time Constant	0.01 to 99 seconds Display Refresh Rate	Free Running 1 sec – 30 minutes

Total Weight STG-ABS-42 ~ Detector, Drawer and PRS-2F


Standard System:	28 Lbs ~ STG-ABS-42P
2" Lead System:	90 Lbs ~ STG-ABS-42S



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