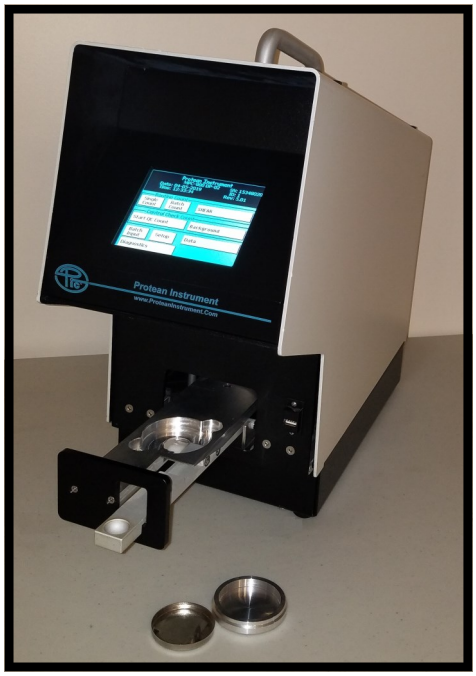
MPC-900-GF

Protean Instrument

Overview

The MPC-900-GF is a convenient and versatile “benchtop” counter equipped with a semi-hemispherical style gas flow proportional detector. The detector can be configured either with an aluminized mylar window or windowless. DUO Express software allows for easy system programming, data management, and control chart maintenance. Multiple instruments can be connected for user convenience. This sample counter is ideal for standard Health Physics applications such as smears and air filters. It can also be used in radiochemistry applications.

Features



- ⇒ Manual Single Sample Gross α/β Counter
- ⇒ Semi–Hemispherical Gas Flow Detector
- ⇒ GasPro™ Counting Gas Loss Detection
- ⇒ Touch Screen Interface
- ⇒ Lightweight Portability
- ⇒ Gas Conservation
- ⇒ 2 in. (5.1 cm) Standard Planchet Diameter
- ⇒ Radon Progeny Compensation for Air Filters
- ⇒ Window or Windowless Operation
- ⇒ Optional Lead Shielding to Reduce Background Levels

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MPC-900-GF

Windowed

Typical Efficiency				
Source	Top	1/8" Bottom	1/4" Bottom	5/16" Bottom
Pu-239	40%	32%	26%	24%
SrY-90	55%	48%	40%	37%
Tc-99	47%	37%	30%	27%
Ni-63	17%	10%	5%	3.5%

Background (Windowed & Windowless)				
	Warranted (cpm		Typical (cpm)	
Shielding	Alpha	Beta	Alpha	Beta
Without Pb	<0.1	<55	0.05	40
With Pb	<0.1	<45	0.05	30

Windowless

Typical Efficiency				
Source	Top	1/8" Bottom	1/4" Bottom	5/16" Bottom
Pu-239	47%	47%	47%	47%
SrY-90	63%	63%	62%	61%
Tc-99	56%	56%	56%	53%
Ni-63	48%	48%	47%	47%

Background (Windowed & Windowless)				
	Warranted (cpm		Typical (cpm)	
Shielding	Alpha	Beta	Alpha	Beta
Without Pb	<0.1	<55	0.05	40
With Pb	<0.1	<45	0.05	30

Instrument Options	
Option	Order Part #
1/8 Inch Planchet (set of 100)	700-0007
1/4 Inch Planchet (set of 100)	700-0008
5/16 Inch Planchet (set of 100)	700-0009
2 Inch X 1/8 Inch Sample Carrier	140-0278-1/8
2 Inch X 1/4 Inch Sample Carrier	140-0278-1/4
2 Inch X 5/16 Inch Sample Carrier	140-0278-5/16
1" Source Centering Ring	140-0045
Lead Shielding Ring	120-0010-GF
Extended Warranty	108-0001
Two Stage Regulator	120-0025
Installation	Install
Computer System	Computer
Vista FC Windowed /Vista 2000	Ask for quote
Supplied Accessories	**Quantity**
PIC Link Cable	1
5/16 Inch Sample Carrier	2

Instrument Specifications	
Category	Specifications
Sample Size	2 Inch Diameter (5.1 cm)
Sample Capacity	1
Cross Talk	α to β <0.1% β to α <0.1%
Data Export	USB Flash Drive, USB PIC Link
Interface	Touch Screen
Count Modes	Alpha Only, Alpha/Beta Simultaneously
Power	110-240 Vac, 50-60 Hz Input
Window	Aluminized, 80 µg/cm^2
Counting Gas	P-10, 60 cc/min at 10 psi
Operating Environment	10°C to 40°C (50°F to 104°F) Humidity 20% to 80% non condensing
Dimensions HxWxD	20" by 9" by 16" (52 by 23 by 41 cm)
Weight	40 lbs (Shielding adds 50 lbs)

- Efficiency determined using 2 inch NIST traceable distributed source.
- Measurements taken in environmental background of ~8 µR/hr.
- Provided sample carrier size can be changed at time of order.
- All specifications are subject to change without notice.
- ROHS compliant (lead by exemption)
- Alpha then Beta count mode available with Simplicity software.

Rev 03252020

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