

DETECTION UNITS

Model 503 Sample Holder with Scintillation Disks

The 503 Model is used to detect the radiation on filters that have been exposed to Alpha/Beta radioactive particles. The levels are measured with Pylon's AB-5.

The 503 Model consists of a light tight container, a cradle, and a scintillation disc designed to use with Pylon AB-5 monitor enabling the AB-5 to read 25 mm filters with the aid of a scintillation disc.

Applications:

- Grab samples from chambers
- Grab samples from process lines
- General filter measurements using the AB-5

Features:

- Convenient to use
- Can be used to determine WL

Theory of Operation:

Radon particulates are trapped on a filter. The filter is placed on the cradle with the scintillation disk. This is placed on the AB-5's PMT and covered with the light tight container. As the radon daughter particulates decay, they give off an alpha particle, which strike the scintillation disk, which in turn gives off a photon of light. The photon is detected, amplified and counted by the AB-5 monitor.



503

Specifications:

Radiation Detected:	Alpha
Scintillator:	ZnS(Ag)
Energy Ranges:	4.5 to 9 MeV
Efficiency:	46 %
Accuracy ¹ :	± 4 %
Active Surface Area:	4.9 (0.76) cm ² (in ²)
Detector Background:	<< 1 cpm
Calibration:	Upon Request
Filter Size:	25 (0.98) mm (in)
Operating Temperature Range:	0 to +50 °C (+32 to +122) (°F)
Storage Temperature Range:	-20 to +75 °C (-4 to +167) (°F)
Relative Humidity Range ² :	0 to 90 %
Diameter:	6 (2.4) cm (in)
Height:	9 (3.54) cm (in)
Weight:	120 (0.26) g (lb)

¹ At a 1 σ Confidence Level

² Non-Condensing

- Values are nominal.
- Specifications are based on new units which have been appropriately calibrated.

Ordering Information:

<u>Model</u>	<u>Part #</u>	<u>Description</u>
503	6200035	Sample holder with scintillation disks

Specifications subject to change without notice.
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Datasheet: 109 Rev 1

MODEL 503