

ALPHA PROBE

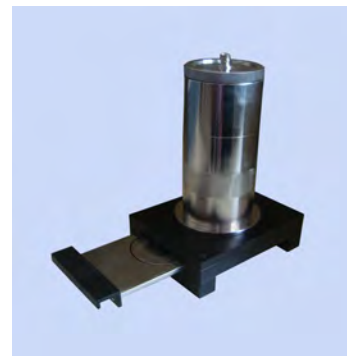
TYPE : AP 165

Technical Data

Alpha Probe type **AP165** manufactured by NUCLEONIX is meant to be used along with **Radiation Counting System** model **RC 605A** for counting alpha samples. Radiation Counting System along with Alpha Probe essentially works as an Alpha Counting System.

Alpha Probe of NUCLEONIX make is essentially an integration of ZnS (Ag) scintillator screen, optically coupled to a 2" PMT and covered by a pin hole free aluminized mylar foil to provide, sealing against ambient light. Scintillations received by PMT because of Alpha particles will be converted to electrical charge and in turn to voltage pulses. Each of these events after amplification in the RCS will be counted. The required high voltage is applied (which is typically 900V) through RCS to the Alpha Probe.

Probe has a drawer assembly which facilitates sample placement on sample tray for counting applications. The counting samples are usually deposited on planchets of 25mm diameter or filter paper deposited air activity sample, upto 50mm diameter. A circular SS ring placed over the filter paper secures it and prevents the paper from getting jammed inside the drawer.



Detector material	:	Zns (Ag) Screen covered with Aluminized mylar foil
Density	:	10mg/cm ² (1.5 micros thick)
Efficiency	:	Better than 30% for Am-241 alpha
Background counts / 900 sec.	:	Less than 5
Photomultiplier tube	:	PMT of ETL / Hamamatsu make or its equivalent
Size	:	50.8 dia (2")
Operating Voltage Range	:	800 to 900V
Drawer Assembly	:	Holds both 25mm dia SS planchets or 50mm dia filter paper
Application	:	This is an essential accessory for the Radiation Counting System when the system is used for alpha counting application.
Probe housing material for PMT(Shell)	:	Cylindrical shell of SS material.
Probe drawer assembly material	:	Aluminum with black polyethylene paint / Anodizing.