

ABP-150

External Alpha and Beta Probe



ABP-150 is a handheld frisking/surface contamination probe for sensitive alpha or beta measurement when using the RDS-31 as the main unit. It can be used in various applications in nuclear industry, nuclear fuel cycling process, decommissioning and waste management. The ABP-150 is also useful in the medical industry, especially in isotope laboratories and in research and environmental applications.

SPECIFICATIONS:

Radiological Characteristics	<ul style="list-style-type: none"> • radiation detected: alpha/beta • detector area: 100 cm² • detector type: <ul style="list-style-type: none"> • dual phosphor scintillation detector - ZnSAg for alpha - Plastic scintillator 0.25 mm for beta • sealing foil thickness 0.58 mg/cm² • metal protective grid, transparency 78 %
Functional Characteristics	<ul style="list-style-type: none"> • alpha or beta measurement selectable from RDS-31 menu
Mechanical Characteristics	<ul style="list-style-type: none"> • enclosure class: IP20 • connection cable: <ul style="list-style-type: none"> • extendable cord with Binder connector to the meter and AMP connector to the probe • standard length 1,5 m • dimensions: 100 x 100 x 250 mm (W x H x L) • weight: 0.7 kg
Electrical Characteristics	<ul style="list-style-type: none"> • power input +5V 0.25 W (from RDS-31) • serial communication with RDS-31
Environmental Characteristics	<ul style="list-style-type: none"> • temperature range, operational +5 to +35 °C • relative humidity max. 80 %, non-condensing

Nuclide	Minimum detectable activity [Bq.cm-2]				
	Sample measurement time (tb)				
	10 s	5 s	3 s	2 s	1 s
241Am	0,04	0,05	0,06	0,08	0,11
14C	0,7	0,96	1,23	1,5	2,11
90Sr +Y	0,09	0,13	0,16	0,2	0,28
137Cs	0,11	0,15	0,15	0,24	0,34
204Tl	0,12	0,17	0,21	0,26	0,37
60Co	0,16	0,23	0,29	0,35	0,5

Nuclide	Detector Efficiency		
	Eβmax	R	ε
	KeV	Cps, Bq-1	%
241Am	-	0.3	61
14C	156.48	0.04	7.5
90Sr +Y	546	0.3	44
137Cs	511.55	0.25	35
204Tl	763.4	0.23	35
60Co	317.9	0.17	29