

TECHNICAL SPECIFICATION FOR RADIATION HAND AND FOOT CONTAMINATION MONITOR WITH TRIPOD

Sr. No.	SYSTEM	TYPE
1	Radiation to be Detected	: α (alpha) for Hand & Clothing and β/γ (Beta/Gamma) for feet
2	Detector Technology	: ZnS Scintillator with PM tube for alpha hand & clothing, GM tube type 719 or equiv. for beta /gamma foot monitoring.
3	Measurement Range	: 0 to 9999 Counts/DPM/Bq for hands & foot. 0 to 9999CPM for clothing
4	Alpha Channels	: 5-Detectors are distributed in 3 channels 1) Left Hand, 2) Right Hand ,3) Clothing
5	Beta Channels	: 4-detector are distributed 2 channels: 1) Left Foot 2) Right Foot
6	Monitoring Time	: 1 to 99sec
7	Alarm Range	: 1 to 9999 counts / DPM / Bq for hands & Foot; 1 to 9999CPM for clothing
8	Alarm Indications	: By LEDs, LCD messages & Audio
9	Display Panel	: LCD panel showing messages for guidance in two languages Telugu, English displays contamination values giving pictures of hands, foot & clothing.
10	LED Indications	: Ready, clear, contaminated, count on, incomplete operation left hand contaminated, right hand contaminated, left foot contaminated, right foot contaminated
11	Turnstile Gate	: 2 no. Vertical Tripod turnstile for entry and exit
12	Cabinet displacement	: Through castor wheel
13	Detector for hand monitor	: PM Tube: 3½" PM Tube (11 dynodes, Gain: 2.7×10^6 typical, Dark Curr: 2nA typical, Shock: 30g/ 11ms/ 3 shocks per axis, Sinusoidal Vibration: 10-32Hz: 10mm, 32-2000Hz: 20g, 2 octaves/min) with S.S. window mesh of $11.5 \times 17.5 \text{ cm}^2$
14	Detector for foot monitor	: Set of 4 GM tubes (areal density $\approx 30\text{-}45 \text{ mg/cm}^2$, eff. length $\approx 9.0''$, effective diameter $\approx 0.625''$, $\approx 90 \text{ cps/mR/hr}$) or equiv. Detector housing with S.S. window area of $30 \times 13.5 \text{ cm}^2$ approx. & lead shielding of ½" thickness
15	Detector for clothing monitor	: Alpha Probe Type : PSP649/25 comprising of Aluminized Mylar, Zn S screen, PM Tube: 2" PM Tube (10 dynodes, Gain: 0.6×10^6 typical, Dark Curr: 0.3nA typical, Shock: 30g/ 11ms/ 3 shocks per axis, Sinusoidal Vibration: 10-32Hz: 10mm, 32-2000Hz: 20g, 2 octaves/min) in Aluminum cylinder with S.S. window mesh of 50mm diameter for sensing

FACILITIES

Data Storage with Date & Time: Data Records of about 100 contaminated persons with real time & date which can be retrieved through PC.