

HAND and SHOE MONITOR

Model # HSM-10ABS

FEATURES:

- DUAL SCINTILLATION GASES SEPARATE & SIMULTANEOUS ALPHA & BETA MEASUREMENTS
- FULL DYNAMIC BACKGROUND SUBTRACT
- COMPLETELY AUTOMATIC MONITORING
- FULL COLOR LCD MONITOR READ-OUT
- ALARM SETTINGS AS LOW AS BACKGROUND.
- POSITIVE WARNING OF INCOMPLETE CHECK.
- EXTERNAL CLOTHING PROBE WITH SEPARATE CIRCUITRY, METER, AND SPEAKER
- COMPLETELY SOLID STATE MODULAR ELECTRONICS

APPLICATION: The **Model HSM-10ABS** Hand and Shoe Monitor is a health physics instrument designed to provide completely automatic detection and measurement of beta-gamma & alpha contamination on the palm and back of each hand, the bottom surfaces of both shoes, and also the hair and clothing. Extremely simple operation allows the individual worker to perform this check without direct supervision of the health physicist.



DESCRIPTION: The **HSM-10** series monitors feature large full color **LCD** display screen that enable the user to tell - in one look - whether he is contaminated, and where. Numerical read-outs are provided along the bottom of the monitor panel, showing the total count on each hand and the combined count for both shoes. An outstanding feature of the instrument is the new lower warning levels, which permit alarm settings as low as the background count. A separate rate meter circuit is utilized for the **EXTERNAL CLOTHING PROBE**, including a speaker for audible check and a meter for visual check. All the detecting elements and sections exposed to contamination are designed for easy decontamination. A roll of **Kraft paper** is mounted in the base for use over the shoe deck to prevent contaminated material from dropping into the detector chambers. Quarter mil Mylar can be substituted for the Kraft paper to allow detection of alphas.

OPERATION: No skill is required in the operation of **HSM-10** series monitors. The user merely steps on the shoe deck and inserts hands into the two waist-high probe openings. The counting process is started and continued by pressure of the fingertips at the rear of the probe openings, and by the weight of the person on the shoe deck. As soon as the counting starts, the "**Ready for Use**" message is replaced by "**Counter in Operation**"

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NOTE: If at any time during the counting cycle, the user removes either hand from the hand probe or steps off the shoe deck, the cycle will automatically stop and the orange message, "**Check Incomplete - Reset and Repeat**" will light up. This positive warning prevents erroneous readings. As soon as the preset time has elapsed, the "**Counter in Operation**" is replaced by either the green "**Check O.K.**" panel or the bold red "**Decontamination Required**" depending upon whether the radioactivity present is above or below the alarm setting. If decontamination is required, bold red panels marked "**Left Hand**", "**Right Hand**", or "**Shoes**" will light up, indicating the location of contamination. The degree of contamination is indicated on the digital readout. After the check is completed, the instrument is automatically ready for the next user.

The **CLOTHING PROBE**, is used to detect contamination on the hair and clothing. The output of the clothing probe is read visually on it's own count rate meter and aurally by the speaker. The clothing Probe consists of the extremely sensitive **T/A Model P-15 Pancake Unit**. It has a wide face and a thin window for fast checking of surfaces and high sensitivity.

SPECIFICATIONS:

Sensitivity: Less than .01 uC of 0.2 MeV or higher beta.

•**Detectors:** Four Dual Scintillator Probes monitor each hand and one long Probe monitors each foot. Clothing probe is a T/A Model P-15 with a T-1190 pancake alpha, beta gamma sensitive GM tube.

•**Counters:** Three five-digit on-screen Counters for hand and shoe probes.

•**Shielding:** Hand and Shoe detectors are shielded by 1/4" lead.

•**Count Time:** Resettable 10, 20 or 30 seconds.

•**Count Range:** 0-99,999 counts Digital each hand or both feet; clothing probe has four analog ranges 0-500; 5,000; 50,000; 500,000 cpm.

•**Alarm:** Continuously settable to 10,000 total counts, either hand or both feet.

•**Readout:** Ready for Use, Counter in Operation, Check Incomplete, Reset and Repeat, Check O.K., Decontamination Required, Left Hand, Shoes, Right Hand. Also 5" meter for clothing probe, plus aural signal.

•**Power Requirements:** 105 to 125 volts, 60 cycle A.C., (220V A.C, 50/60Hz optional)

•**Dimensions:**

Cabinet: 67-3/4" high x 27-1/2" wide x 24" deep.

Shoe Deck: 23" long x 18" wide x 4-1/2" high.

•**Finish:** Grey baked enamel.

•**Shipping Weight:** 650 lbs

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