

Sheldon M. Kasman Limited

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Decontamination mitt for the application of natural bentonite clay.

Canada's leading manufacturer of military dress, badges and regalia, Sheldon M. Kasman produces decontamination mitts for NBC conditions.

Decontamination mitt

The Kasman decontamination mitt is designed to serve as a ready means of individual decontamination and is used for the fast, efficient removal of liquid agents from skin or other surfaces. A pouch-type mitt, it encloses the whole hand and wrist, has a thumb opening on each side and is large enough to be worn over protective gloves.

The mitt is made of a carefully controlled open-weave material with Velcro™ fastener at the wrist. Pockets on both faces of the mitt contain a decontaminating powder of natural clay similar to Fuller's Earth. In use the powder is dusted onto the contaminated surface through the material of the mitt.

The Kasman mitt is expendable and is packaged in a sealed barrier bag made of laminated material.

Spectrum Engineering Corporation Limited

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A specialist in the design of instrumentation, robotics and nuclear systems, Spectrum manufactures the Individual Dosimetry System (IDS) to precisely determine the neutron and gamma dose to which individual armed forces personnel have been exposed. The IDS measures radiation exposure states quickly, efficiently and accurately. Designed for field conditions, the compact system is rugged and easily portable.

The Individual Dosimetry System

IDS consists of a lightweight dosimeter locket that records gamma and neutron doses and a hand-held precision reader that displays the gamma, neutron and total (gamma + neutron) doses.

Dosimeter locket

The locket is designed to be worn on individual ID tag chains. Housed in the moulded plastic case of the locket is a printed circuit board that contains the radiation sensing components.

The neutron dose is recorded by a PIN diode neutron dosimeter. The forward voltage drop across the diode at constant current is proportional to the absorbed neutron dose.

The gamma dose is recorded by a balanced pair of MOSFETs. The gate of one is biased while the other is unbiased. The characteristics of the biased and unbiased gates are affected differently by gamma radiation. Differential output of the dual MOSFET provides a measure of the gamma dose.

Neutron and gamma dose measurements are retained by the lockets after reading to permit multiple readings as well as the determination of the cumulative dose after subsequent exposure.

Dosimeter reader

The locket is inserted into the reader which automatically expresses total dose in cGy (1 cGy is equal to 1 Rad) on its LCD display. Gamma dose and neutron dose can each be read by pressing the pushbutton. MOSFET bias voltage and reader battery voltage can also be displayed. Low voltages are signalled by flashing of the corresponding legends on the display. The reader is powered by two replaceable standard 9 V batteries which generate more than 50 000 readouts.



With the locket in place, the reader provides accurate dose readouts on its LCD display.