

How to Use a Personal Digital Dosimeter

(English translation)

(Translated by the Red Cross Nuclear Disaster Resource Center)



日本赤十字社
Japanese Red Cross Society

Personal digital dosimeter

ALOKA MyDose Mini PDM-222VB

- Radiation types to measure: gamma (X) ray.
- Measurement of cumulative dose, dose rate and cumulative hours.
- Alert and attention can be preset.
Alert (sound, light, vibration) goes off at a preset value.
Default preset values: 1 mSv for cumulative dose alert;
0.5 mSv for caution.
- Put the dosimeter around the chest (men) or the abdomen (women).

Display side



Battery cap

Power switch

LC display

Detector side



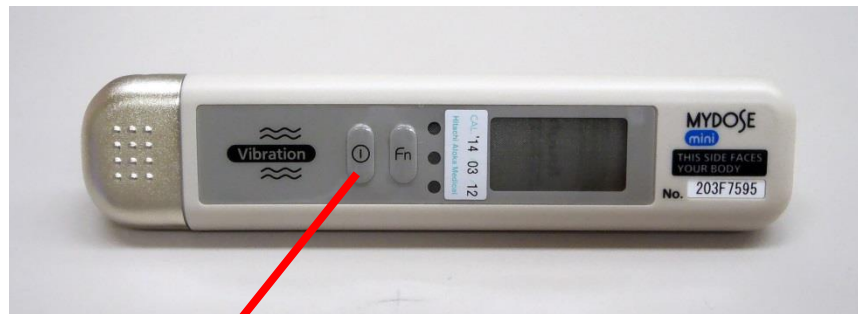
Detection point



Attach a string to the device.



Display side



Power switch

To switch on: Keep pressing the switch for 3 seconds.
To switch off: Keep pressing the switch for 3 seconds.

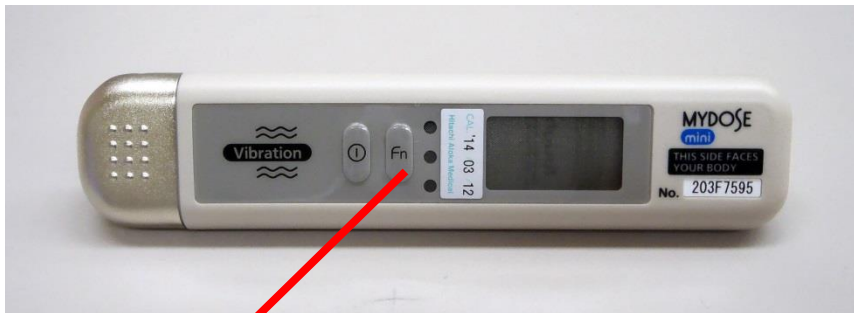
To reset cumulative dose and hours:

After confirming the dosimeter is off, keep pressing the power switch for about 15 seconds. When the display shows “0000”, get your finger off the switch.

To check measured values:

After confirming the dosimeter is on, press the power switch.
(Cumulative dose → Dose rate → On-hours → Cumulative hours →...)

Display side



Setting switch

Note: Make sure that the device administrator will change preset values.

Setting mode: Keep pressing the switch for 10 seconds. → “Go:SE” → Press the switch again.

To change items to preset: Press the switch in the setting mode.

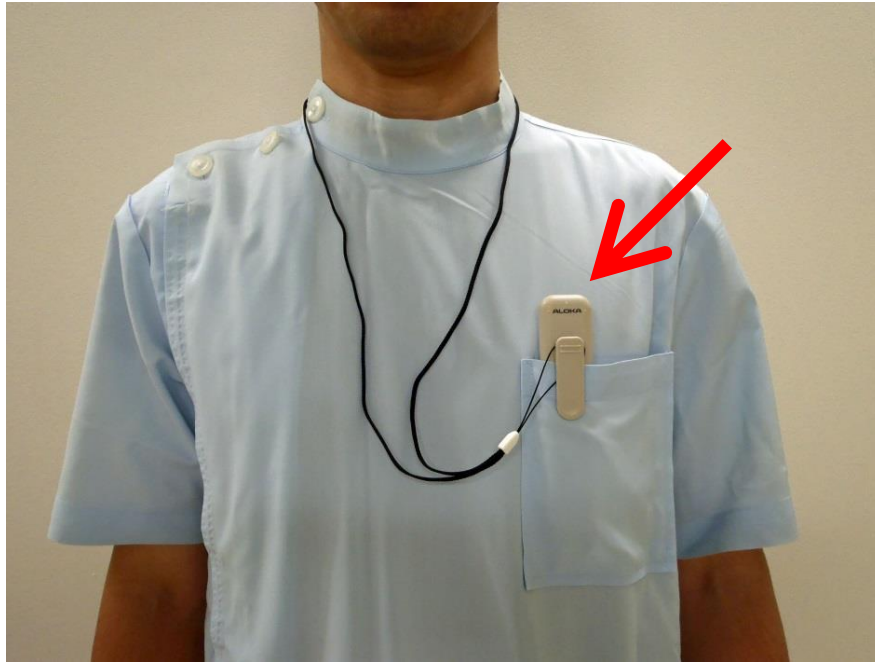
(“Volume” → “Cumulative dose alarm” → “Cumulative dose caution” →
“Dose rate alarm” → “Dose rate caution” → ON-hour alarm → “Data update
interval” → ...)

To change preset values: Change preset values using the power switch.

To update the changed preset values: Keep pressing the setting switch for 3 seconds.
→ “cPlt”

Note: If you switch off the dosimeter according to the procedures, the data will be retained even after taking the battery out of the device.

How to wear the personal digital dosimeter

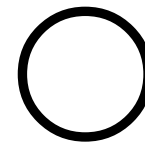


Men: Around the chest.



Women: Around the abdomen.

How to wear the personal digital dosimeter



Make sure that the detection point is shown to the fore.

How to Put on/Take off Protective Gear

(English translation)

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A set of protective suit deployed



I. Putting on the protective suit

- The suit prevents contamination from radioactive materials that are drifting in the air.
- The suit prevents contamination from on-the-surface radioactive materials.
- The mask prevents inhalation of radioactive materials into the body.
- Protective suit cannot shield radiation.
- Make sure not to expose the skin to the air. (Or make sure to reduce the skin exposure as much as possible.)
- For airtightness and quick action, tape the cuffs and edges.
- Putting on the protective suit in a simple way is acceptable, depending on activities.

1. Put on the inner gloves and then the protective gear



Be careful not to break the inner gloves when putting them on.



2. Put on the shoe covers and tape them



Tuck the gear trouser bottoms in the shoe covers.
Tape the upper part of the covers.

3. Put on the personal digital dosimeter

Put the string around the neck and put on the dosimeter.
Pay attention to the direction of the detection point of the digital dosimeter.



4. Put on the mask, hood and goggles

Put on the mask and then the hood.



Put on the goggles over the hood and mask so that there will be no skin exposure.



5. Put on the outer gloves and tape them

Tuck the protective gear's cuff in the outer glove and then tape the glove's edge.



6. Write your name

Have someone write your name and job type on the back and front.



II. Taking off the protective suit

- Do not contaminate the body.
- Do not contaminate around yourself.
- Do not bring radioactive materials from an undressing room to residential areas or non-contaminated areas.
- Put all wastes into a bag.

1. Remove the tape from the outer gloves and shoe covers

Remove the tape from the outer gloves and shoe covers.
Unlace the shoe cover strings.



2. Remove the outer gloves

Turn the gloves inside out to remove them.



3. Take off the goggles and hood

Be careful that these items do not touch the skin or hair.



4. Take off the protective gear and shoe covers

Take off the protective gear like rolling it outward.

Be careful that the outside of the gear does not touch the body.

Take off the shoe covers together with the gear.



5. Take off the mask and then the inner gloves

Make sure that the surface of these items do not touch the skin.



6. Put the wastes in a bag

Put all wastes in a bag and then store it in a designated place.



When a patient with contaminated wounds is decontaminated, radiation emergency medical personnel will take the following procedures to prevent contamination spreading:

- Tuck the protective gear cuff into the inner glove and tape the glove edge.
- Change outer gloves frequently.



e.g. Inner gloves: Rubber surgical gloves
Outer gloves: Disposable plastic gloves