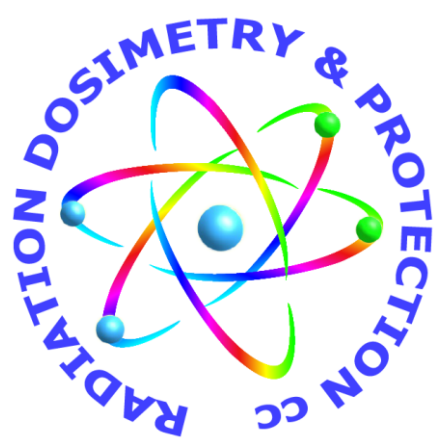




STAFF OCCUPATIONAL RADIATION MONITORING



Who needs to wear a TLD?

Any staff member who may be potentially exposed to more than 3/10 of the annual dose limit for radiation workers.

A radiation workers may not get a dose of more than 100 mSv over any 5 consecutive years, and not more than 50 mSv in any one of those 5 years.

The radiation protection officer of the hospital will determine whether you need to wear a TLD.

The dose limit for non-occupationally exposed staff member and members of the public is not more than 5 mSv over any 5 consecutive years.

How do I get a TLD?

Once the radiation protection officer has determined that you need to wear a TLD, you need to apply to become a radiation worker.

You will have to undergo a medical examination a be declared medically fit.

TLD's are available from the South African Bureau of Standards (012-428 6199/6880).

How do I wear my TLD?

Wear your body badge on the part of the body between your neck and waist most likely to be exposed to the greatest amount of radiation.



Wear it so that the name tag faces toward the source of radiation. The intent is to wear the badge in the area most likely to receive exposure.

Badges should be worn on the inside of lead aprons, unless you work near patients in a Cathlab and you do not wear thyroid and/or eye protection.

When your TLD is not being worn, store it in a location free from radiation and excess heat.

Never wear the TLD while you receive radiation treatment.

Do I have access to my dose records?

Your radiation exposure records are maintained by your workplace.

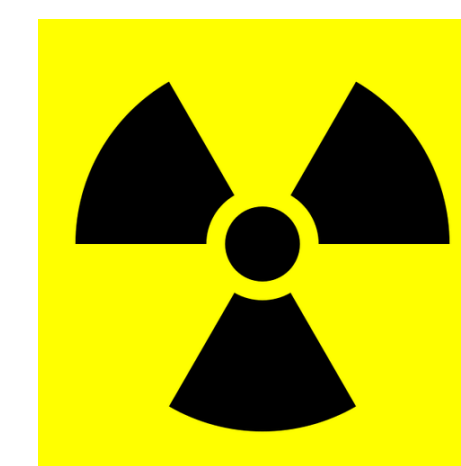
You have the right to inspect your dose records at any time.

An electronic copy of the dose records can also be requested from the SABS.

What does a TLD do?

It dose not protect you from radiation.

It passively detects and measures radiation to which you have been exposed.



The energy (radiation) is stored in crystals inside the TLD and read out by the SABS by annealing the TLD.

What happens when I become pregnant?

The unborn baby is protected to the same level as a member of the public.

You need to declare your pregnancy as soon as possible so that your work environment can be evaluated.



You will be given another direct-reading dosimeter.

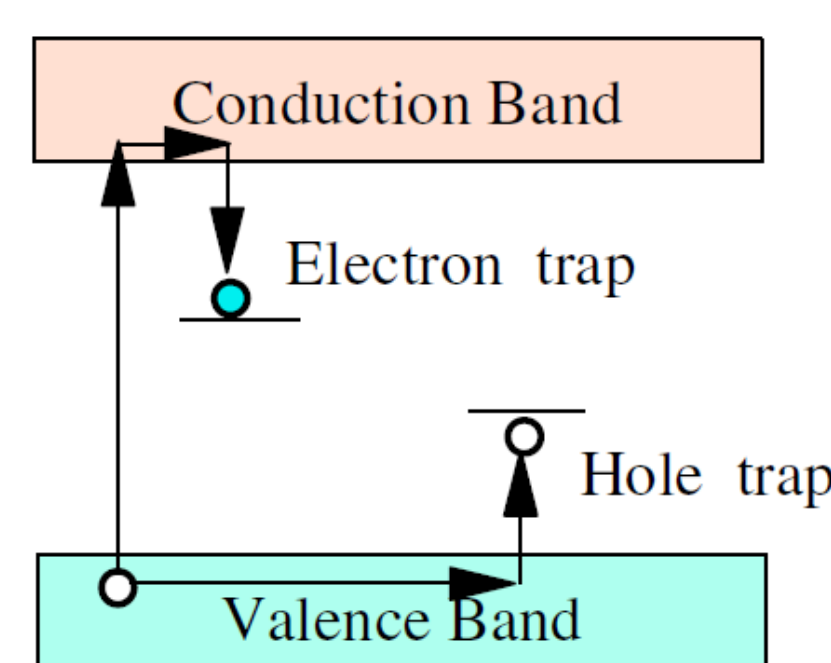
When do I return my TLD?

Dosimeters are issued 13 times a year, once every 4 weeks.

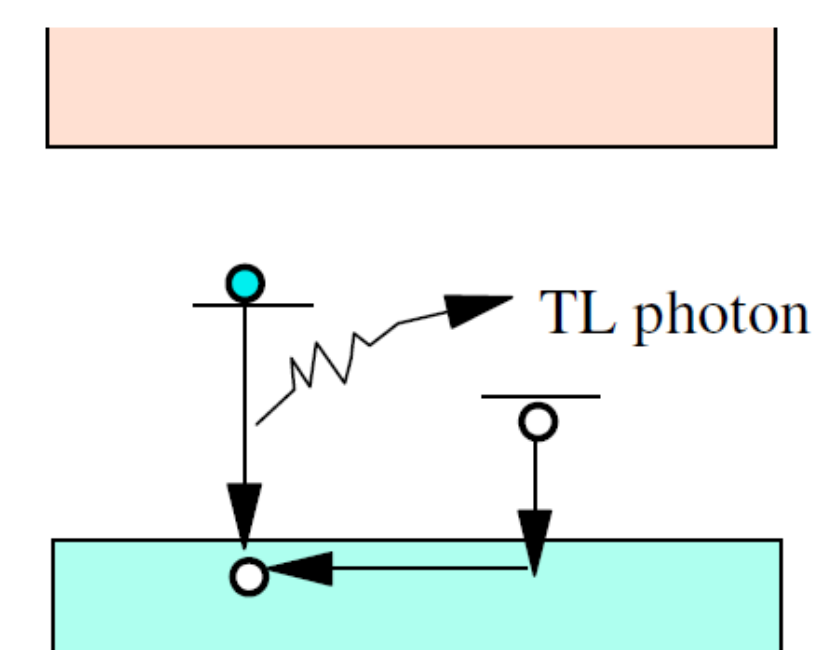
The wearing period is printed on the front of the badge, under your name, as a reminder of when to wear them.

Once the wearing period ends, return it to the radiation protection officer in your workplace and you will be issued with a replacement one.

How does a TLD work?



Exposure to Ionizing Radiation



Upon heating, the trap is vacated and a TL photon is emitted. In this example, the electron trap is the emitting center.

What do the results of the TLD mean?

To determine whether you did not receive a radiation over exposure.

To determine unsafe work practices and work areas.

To ensure that the ALARA principle is applied.

An exposure of more than 4 mSv over a single wearing period of 4 weeks must be investigated.