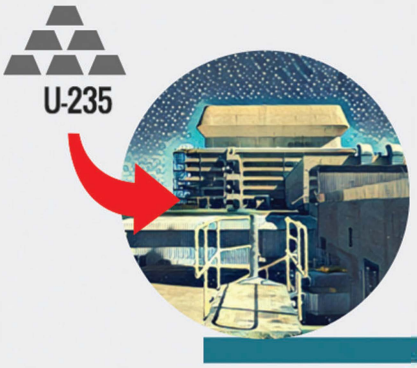
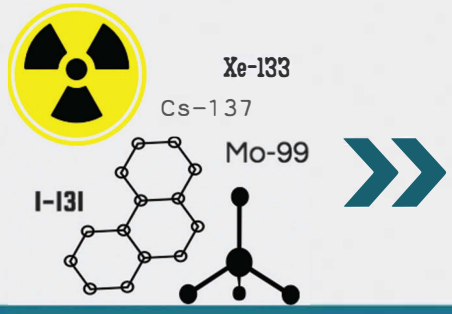
FISSION MOLYBDENUM-99

NTP Radioisotopes SOC Ltd



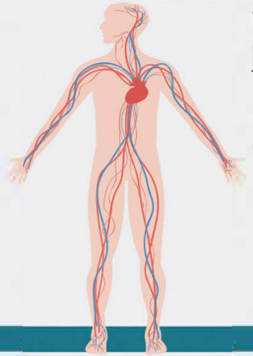
Uranium (U-235) targets are inserted into the core of the Safari-1 nuclear reactor at Pelindaba.



The U-235 is bombarded with neutrons and it forms as many as 400 isotopes.

After several days the target plates are removed and taken to shielded rooms called "hot cells".

The targets are dissolved and the valuable isotopes are separated from the solution, purified and tested. These isotopes include molybdenum-99 (Mo-99) and iodine-131 (I-131).



Tc-99m is used in as many as 40-million procedures globally each year.

Tc-99m plays a critical role in the diagnosis & treatment of conditions like heart disease and cancers.

Mo-99 decays to its daughter product, technetium-99m (Tc-99m).

Every 60 minutes 1% of the Mo-99 is lost to decay – so it has to be delivered immediately!

Mo-99 has a half-life of just 66 hours.

DID YOU KNOW?

NTP produces 20% of global demand for Mo-99!

NTP Actively enhancing life

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