

Isotopes

- Atoms of the same element having same atomic number but different atomic mass number are called as isotopes.
- Isotopes have the same properties because they have the same number of electrons in their outermost shell (valence shell).

There are two types of isotopes:

- Radioisotopes
- Non-radioactive isotopes

Uses of radioactive isotopes:

Medicinal use:

- **Cancer treatment:** An isotope of cobalt is used for this. The radiations given out by the radioisotope is used to kill cancer cells.
- Treatment of overactive thyroid glands
- Locating tumors in the body.

Industrial use:

- Used to check the leaks in oil and gas pipelines. A radioisotope is added to the oil or the gas in the pipeline and a radiation detector called as the Geiger-Muller counter is used which gives a high reading at the area of the leak.

