

8.3 Isotope

1. Some elements have atoms with the same number of _____ but different number of _____ are known as _____.
2. The _____ is the total number of protons and _____ in the nucleus of that atom.

Activity 8.6

Aim : To determine the number of protons, neutrons and the nucleon number of isotopes.

Instructions : Complete the table below with the number of protons, neutrons and the nucleon number for the given isotopes.

Isotope	Number of protons	Number of neutrons	Nucleon number
Chlorine -35		18	
Chlorine -37			37
Sodium -23	11		
Sodium-24		13	
Bromine -79			79
Bromine -81	35		

The Use of Isotopes in Various Fields

1. _____ are _____ isotopes that emit radioactive radiation.
2. Radioisotopes are used in medical field, agriculture, industry, power generation and research.

Activity 8.7

Aim : To search information on the use of the isotopes in various fields.

Field	Isotopes	Uses
Medical	Sodium -24	
	Cobalt -60	
	Iodine -131	
Agriculture	Phosphorus-32	
	Carbon -14	
Archaeology and Geology	Carbon -14	
Food technology	Cobalt-60	
Paper industry	Americium -241	
Electricity generation	Uranium -235	