

INDIUM - In

49

Atomic Number

CONSTITUTION OF INDIA



ADOPTED IN: 26/11/1949

INDIUM = India

CLUE : The name 'Indium' sounds similar to the country name 'India'. India is one of the largest democracies in this world. India adopted its constitution on dated 26-11-1949. The year 1949 is very important for India. Year 1949 contains number '49' that is the atomic number of element indium.

Facts about Indium

The name Indium is derived from its characteristic **indigo line** in its spectrum, the word '**Indi**' came from colour **Indigo**. Indium is soft, silvery white metal which is mainly used to make low melting alloys with gallium or germanium.

Type of Element : Metal

Atomic Number : 49

Electronic : 2, 8, 18, 18, 3 or

Configuration $1s^2, 2s^2 2p^6, 3s^2 3p^6 3d^{10}, 4s^2 4p^6 4d^{10}, 5s^2 5p^1$ or
 $[\text{Kr}]^{36} 4d^{10} 5s^2 5p^1$

Atomic Mass : 114.82 g/mol

Group, block : 13, p-block

Period : 5

Valency : 3

Oxidation States : +2

Isotopes : 1 ($_{49}\text{In}^{113}$)

Discovered by : German chemists Ferdinand Reich and Hieronymus
 Theodor Richter in 1863



Indium rod melting

Uses of Indium:

1. Indium is used to **dope** germanium to make photocells and electrical components such as transistors and rectifiers.
2. Indium can be used to make mirrors that are as reflective as silver mirrors but are more corrosion resistant.
3. Indium is also used to make **liquid crystal displays (LCDs)**.

Multiple Choice Question

Question 49: In which group of periodic table is indium found?

- | | |
|-------|-------|
| a) 13 | b) 14 |
| c) 15 | d) 16 |