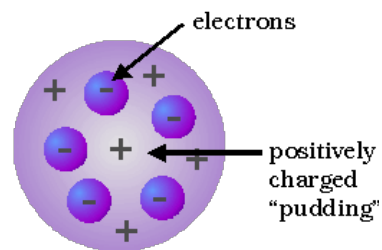


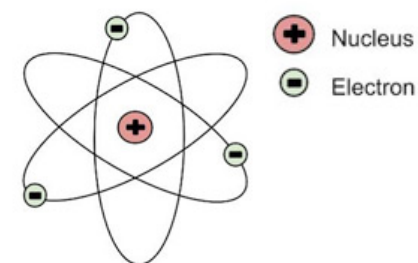
1. definitions

atom	All substances are made of atoms! They are the smallest part of an element that can exist (about 0.1 nm in size)
Element	A substance made of only one type of atom. Atoms of each element have a chemical symbol, eg O is oxygen.
compound	contain two or more elements chemically combined in fixed proportions and can be represented by formulae using the symbols of the atoms from which they were formed.
mixture	consists of two or more elements or compounds not chemically combined together.
Atomic no.	Number of protons in an atom. Atoms of the same element have the same number of protons.
Mass no.	The sum of protons and neutrons in an atom
Isotopes	Atoms of the same element with a different number of neutrons.
Relative atomic mass	The average mass of an atom of an element, taking into account the % of each isotope.
Metals	Found on the LHS of the periodic table. Form positive ions.
Non-metals	Found on the RHS of the periodic table. Form negative ions.
Ions	Charged particle formed if an atom loses or gains electrons

3. Models of Atomic Structure

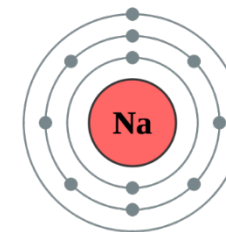


Plum pudding model



Rutherford's nuclear model

Sodium 2,8,1

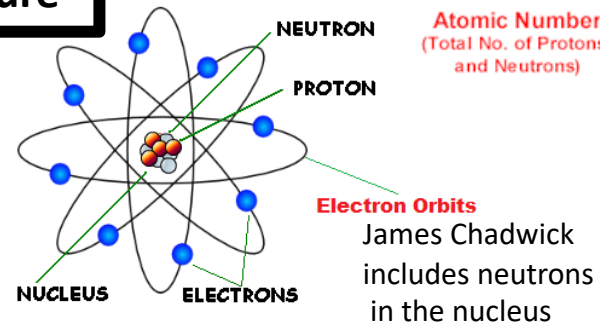


Neils Bohr model

Electrons orbit the nucleus at specific distances.

Electrons occupy the lowest available energy levels (shells). The inner shell can hold 2 electrons max, the others can hold up to 8 electrons

Atomic structure



Mass Number
(Total No. of Protons and Neutrons)

23

Atomic Number
(Total No. of Protons and Neutrons)

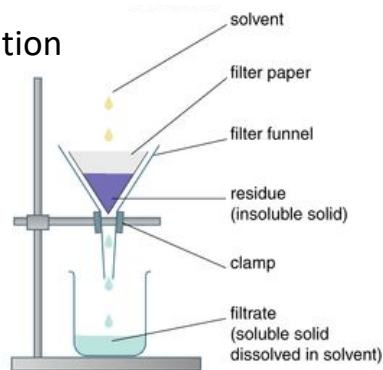
11

Na

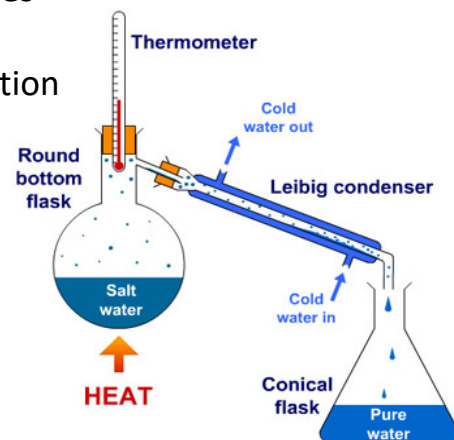
Sub atomic particle	Charge	Mass
Proton	+1	1
Electron	-1	0
Neutron	0	1

2. Separating mixtures by physical processes

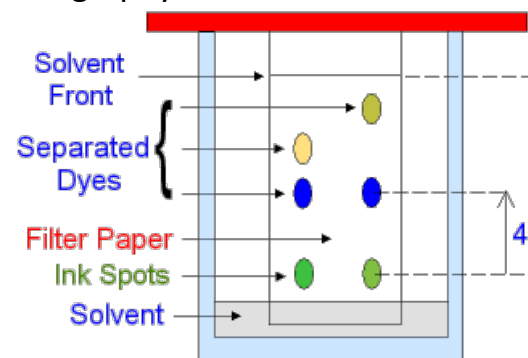
filtration



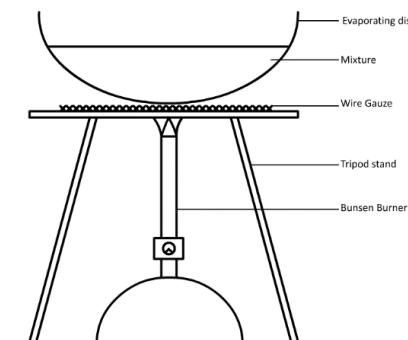
distillation



chromatography



crystallisation



Key words: atom, element, compound, mixture, atomic number, mass number, electron, proton, neutron, ion, shells, filtration, distillation, chromatography, crystallisation