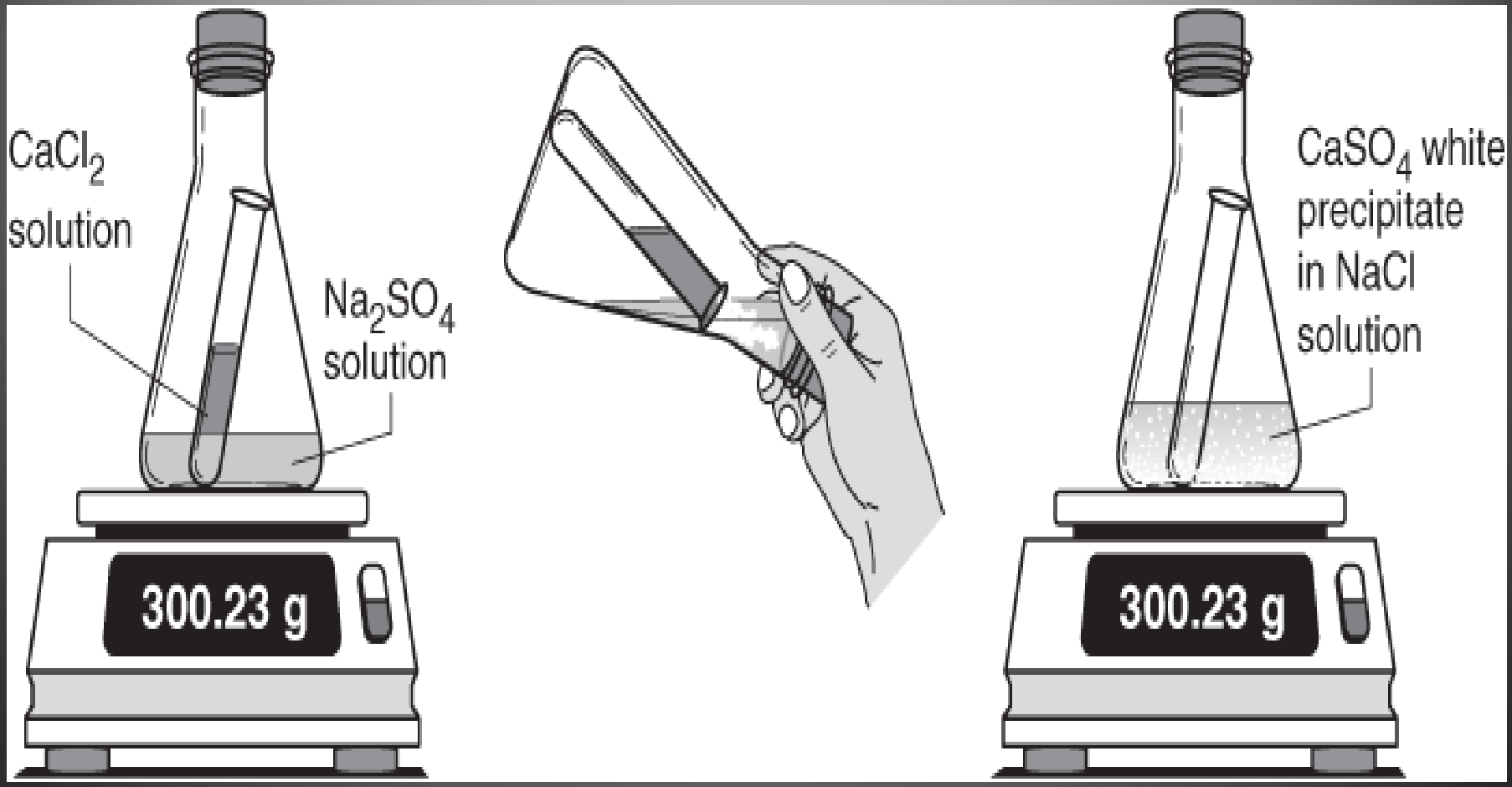
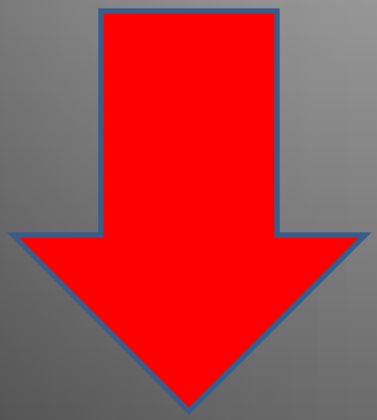
LAW OF CONSERVATION OF MASS (PAGE 79)

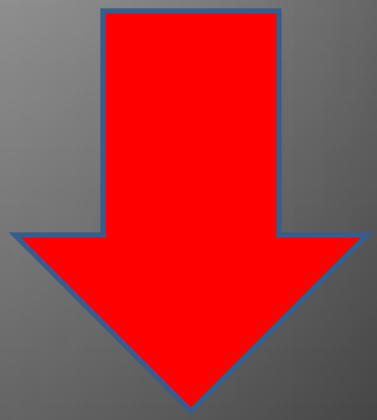
DESCRIPTION:

- In a **chemical reaction**, **the mass:**
  - **is conserved or**
  - **does not change or**
  - **is always the same**


$CaCl_2$ solution
Na_2SO_4 solution
300.23 g
$CaSO_4$ white precipitate in NaCl solution
300.23 g

1.00g carbon + 5.34g sulfur → 6.34g carbon disulphide





Total mass = 6.34g

Total mass = 6.34g

DESCRIPTION:

- In a chemical reaction (chemical change):

mass you start with = **mass you end** with

- In other words:

mass of reactants = mass of products

- In a chemical reaction:

atoms are not created nor destroyed

- In a chemical reaction:

all atoms present in the reactants are also present in the products

- In a chemical reaction:

The number of atoms of each different element must be the same on each side of the equation

For example:

$$C + O_2 \rightarrow CO_2$$

Element	Atoms on the left (reactants)	Atoms on the right (products)
Carbon (C)	1	1
Oxygen (O)	2	2

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Atoms of element X

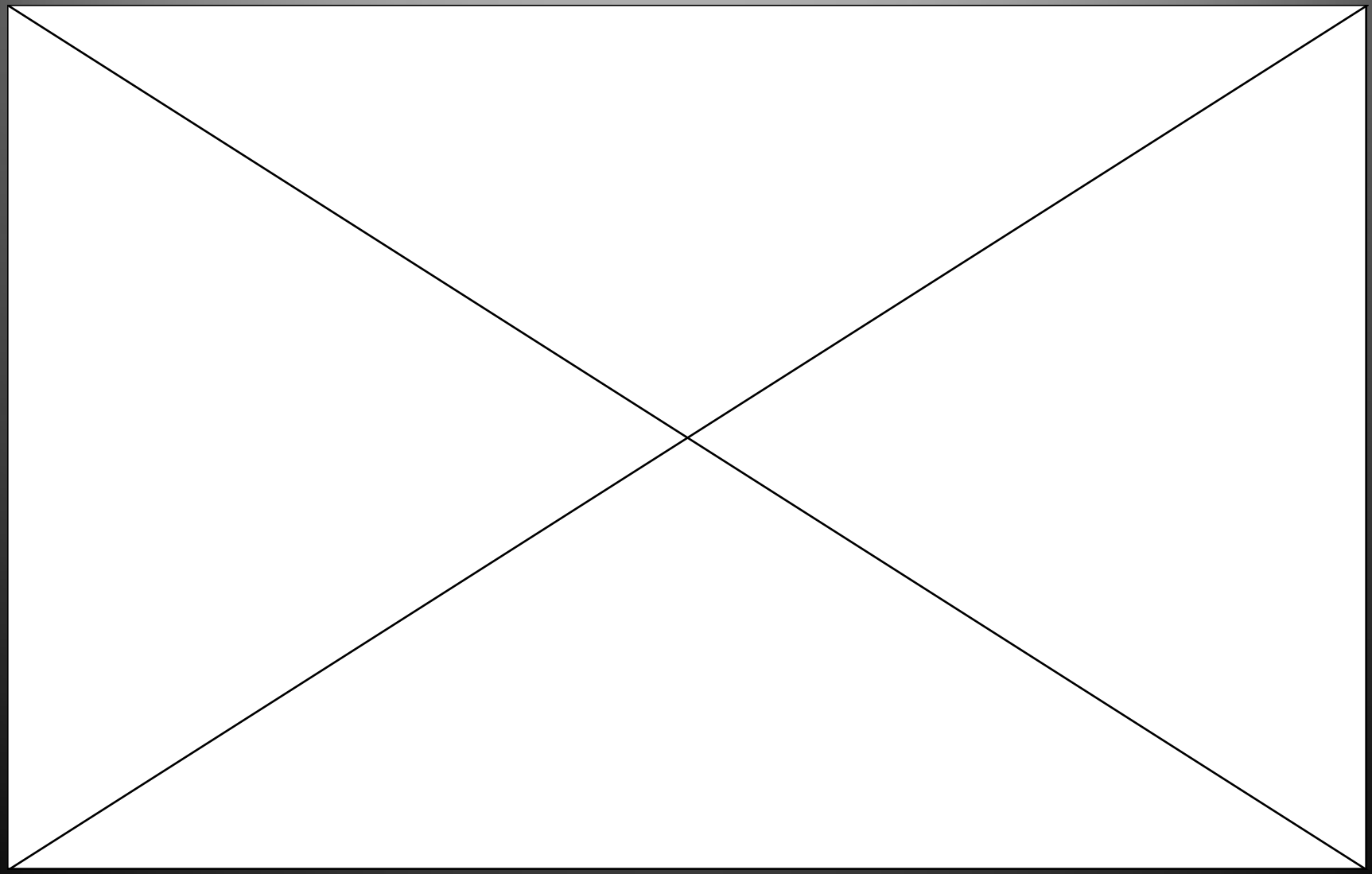
Atoms of element Y

(a)

Compounds of elements X and Y

(b)

Law of Conservation of Mass



Law of Conservation of Mass