Jabir Ibn Hayyan

Known as the 'father of Arab chemistry'

ABOUT

Jabir Ibn Hayyan was born in Persia (Fig. 1), which is now known as Iran, in 721 AD. His contributions to chemistry include discovering several chemical compounds and techniques which are used today. Jabir Ibn Hayyan discovered hydrochloric acid and nitric acid - two very important strong acids. These were discovered by the distillation of several salts with sulfuric acid. He then went on to combine both hydrochloric and nitric acid to form nitrohydrochloric acid, which is more commonly known as aqua regia that contains a 3:1 ratio of hydrochloric to nitric acid and can dissolve gold, which is extremely useful for gold extraction. Jabir Ibn Hayyan also discovered several laboratory techniques such as crystallisation, distillation, filtration and calcination. For distillation, he used an alembic (Fig. 2), which originates from the word ‘beaker’, and is a type of still.

Jabir Ibn Hayyan also discovered alkalis that can make water softer, which are called alkali and he also discovered how to prevent rusting and improved the production of steel. In mathematics and science the syllable ‘Al’ is often used: alchemy, alkali, alcohol, algebra. The syllable ‘Al’ originates from the Arabic language and means ‘The’. He also investigated other branches of science including medicine, pharmacology, zoology and astronomy.

Did you know?

Jabir Ibn Hayyan's work contains the oldest known systematic classification of chemical substances, and the oldest known instructions for deriving ammonium chloride, from organic substances by chemical means.

It is claimed by some that he wrote 300 books on philosophy, 1300 books on mechanical devises and hundreds of books on alchemy.

Some of Jabir's works were translated into Latin under the name "Geber", and in 13th-century Europe, a writer, referred to as "pseudo-Geber" started to produce writings under this name.

Fig. 1 Map showing Persia
Picture credit: DeviantArt

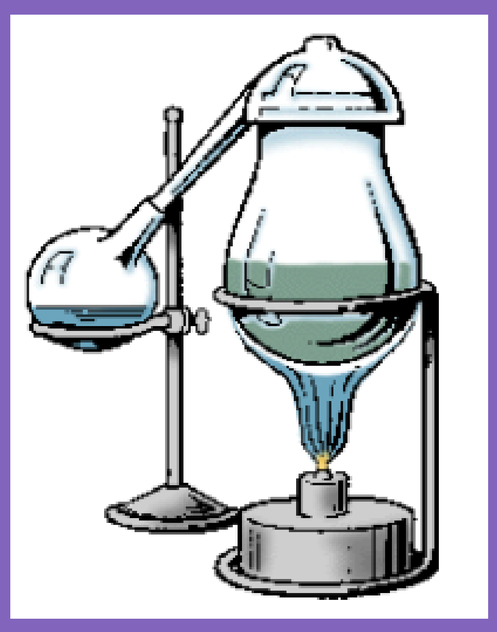

Fig. 2 Distillation apparatus used by Jabir.
Picture credit: Merriam-Webster

Picture credit: Great Personalities

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