



## Alembic Still and Distillation History

The **Alembic still** is a simple apparatus used for distilling. It has been used for many hundreds of years, very often related to the study of alchemy. The Egyptians were the first people to construct stills, and images of them adorn the ancient temple of Memphis, but it is from Arabic that we get the word '**alembic**' (*al ambic*) and alcohol (*al cohol*). The first means the distillation vessel, and the second, while it was used to describe a very hard lead or antimony based powder, expresses the idea of delicacy and subtlety, as in distillation vapour. The still was developed in 800 AD by the Arab alchemist Jabir ibn Hayyan. The word 'alembic' is derived from the metaphoric meaning of 'that which refines; which transmutes', through distillation.

**Distillation** is a method of separation based on the phenomenon of liquid-vapour balance in mixtures. In practical terms it means that when two or more substances form a liquid mixture, distillation may be an appropriate method to purify them: they only need to have reasonably different volatilities. One example of distillation which has been practised since antiquity is the distillation of alcoholic drinks. The drink is made by condensing the alcohol vapour released on heating a fermented must. As the alcohol content of the distilled drink is higher than that in the must, this is characterised as a purification process.

The first documented scientific studies on distillation date back to the Middle Ages, to around the year 800 and the alchemist Jabir ibn Hayyan (Geber). It was he, too, who invented the alembic, which has been used ever since to distil alcoholic drinks. Alchemy has its origins in Greece, and around the year 300 BC it is referred to in Egyptian and Babylonian records. In antiquity it seems to have been at its height in Alexandria between 200-300 AD. We have documentary evidence that the work of these alchemists came to the Arabs and the apparatus they used for distilling was described by Marco Graco in the 8<sup>th</sup> century. This may be regarded as the first historic document on the distillation of wine, though it does not say anything about the characteristics of the distillation product.

The middle of the 9<sup>th</sup> century saw the beginnings of the development of Arab alchemy, under the influence of the Alexandrian school.

In this period the Arabs compiled all the alchemical knowledge so far available in a volume entitled the *Book of Crates*.

But it was Geber's work, published in 850 and translated into Latin as *De Summa Perfectionis*, which led Europe to the thinking and methods of chemistry.

IbnYasid is regarded by some authorities as having discovered distillation to obtain alcohol.

The vast work on Philosophy and Arabian Medicine by Avicenna (10<sup>th</sup> century) is truly the masterpiece of the era. Even though it does not mention alcohol, it contains a detailed description of the alembic still and its uses.

The likely origins of the term 'spirituous', which is used to describe alcoholic drinks, dates back to the 13<sup>th</sup> century, since it was at this time that the expression 'spirit of wine' was widely used.



The French expression *Eau de Vie*, meaning ‘water of life’, derives from the medicinal properties of spirituous drinks, which were held to have the virtue of prolonging life.

Many ancient civilisations used potions based on these drinks, which had magical and ritualistic qualities.

There are documents showing that, around 1600, the Company of Jesus gave particular attention to the properties of brandy (*aguardente/spirit*), and spent a lot of time investigating new alcoholic substances and new distillation methods.

In this period, alembic stills were found not only in the homes of nobles, but in those of farmers too, who used the alembic still to improve their quality of life a little.

The use of herbs and roots in the distillation process made it possible to produce remedies, for both the official pharmacopoeia and household use.

Today, the traditional alembic type of still has been replaced by more sophisticated distilling apparatus for industrial output.

But traditional copper stills are nonetheless employed today to make certain spirituous drinks, like Cognac, Scotch whisky and Ketel One Vodka, being used also in the production of the world best beers. The typical shape of the copper alembic still is said to give the drink a special unique taste. And there is no doubt at all that the copper still is far and away the best option. These copper alembic stills are ideal not only for professional use, but also for household use, especially to make flower waters, essential oils and spirituous drinks and for other distillation purposes.