

## THE MAGIC OF AROMAS

Any smell that exists in nature has a great influence on a person: on his mood, perception of the world around him, and even health. In the modern world, scientists have developed tables by which you can find out which aroma can improve your mood or release from a headache. [1]

Aromatic substances can be obtained both naturally, by isolating them from aromatic plants (enfleurage), and artificially, through chemical experiments (the distillation process). [2]

Enfleurage is based on the fact that the released essential oil from the collected raw materials (mainly from flowers) is absorbed by sorbents (solid fats, activated carbon, etc.). This process is carried out in special frames, hermetically assembled by 30-40 pieces per battery. When working with solid fats, a fat sorbent (a mixture of pork and beef fat, etc.) with a layer of 3-5 mm is applied to both sides of the glass. The flowers are laid out on top of a sorbent up to 3 cm thick and left for 48-72 hours. After this period, the raw materials are removed and fresh raw materials are placed on the frames. [2]

This operation is repeated many times (up to 30 times) until the sorbents are saturated with essential oil. In this case, the waste raw materials, containing some more essential oil (mainly heavy fractions), are additionally processed by extraction or distillation with steam. [2]

Then the fat, saturated with essential oil, is removed from the glass, and the essential oil is extracted from the resulting lipstick with alcohol, the alcohol extraction is frozen and the precipitated impurities (fats, etc.) are removed from it by filtration. The alcohol is distilled off under vacuum to obtain a pure essential oil. [2]

The distillation process. During distillation steam passes through plant material, carrying its volatile components out through the top of the chamber. The steam and vaporized essence then condense to form fragrant water and essential oil. Because the oil collects on the water's surface, its easily drained off and collected in hand-held flask. This way of getting aromas is called perfumery. [2]

Perfumery is an alluring, mysterious world of fragrances that has its own rules. It is believed that perfumery originated in Ancient Egypt more than 5000 years ago. To create aromas, perfumers use a huge amount of raw materials - more than 6,000 components. [3] Surprisingly, fragrances

are made up of notes. The notes unfold over time and it takes you time to choose a perfume. [4]

The “top notes” are the first to manifest themselves. They play for up to 10 minutes, then they disappear. Then we “hear” deeper “heart notes” which last up to 4-5 hours, and as a result, “base notes” remain on the skin. For their manufacture, the most persistent essences are taken, which leave a smell on the hair and clothes for up to a day. They are usually made from resins, leather, wood. [4]

An example of the impact of fragrances on human health is aromatherapy, the main instruments of which are essential oils. They act as antiseptics and powerful natural antibiotics. Smells treat almost all diseases, especially cardiovascular, respiratory and infectious diseases. [5] For the general prevention of infections, chamomile, lavender, eucalyptus are used. Under stress- bergamot, jasmine, mint and cinnamon. To improve appetite vanillin, pear, grapefruit, coffee are used. We sense this delicate aromas by smelling. [6]

The sense of smell plays a great role in the life of each of us. It is associated with our emotions, impressions. According to one of the scientific theories, it is known that smells are captured by the olfactory receptors located in the upper part of the nasal cavity and then receptors send a nerve impulse to the brain. Our brain can distinguish about 10,000 different smells. [1]

Science is trying to understand the patterns of smell perception, and one of the important factors of this is the geometry of molecules. Therefore, the classification of fragrances pleasant to us is quite often associated with the structure of molecules and the nature of functional groups. So, many of the substances pleasant to us often contain one or more functional groups: alcohol, carbonyl, ester and others. The most extensive of these groups are esters. [7]

## REFERENCES

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