**Fragrance** Families



# Fragrance Families...

There is no doubt that olfaction is fundamentally a subjective sensory impression. "I like lavender because it reminds me of my grandmother's dresser drawers. No. I don't like lavender because it always reminds me of having to stay after school." Is it possible to objectively assess scents at all? Is there an olfactory language that rises above subjective perceptions and memories?

Just as we learn to give names to colors as children, we can also assign names to the various olfactory impressions. This produces an olfactory language with an extensive vocabulary that can also be scientifically underpinned.

As described above, molecules with differing structures only fit on their intended receptors, thus evoking a wide variety of stimuli. Molecules with similar structures can be combined into olfactory families, as shown in the Fragrance Circle.

The fragrance families that are of importance in perfumery are grouped within the circle, while highly specific and unpleasant odors are located outside it. Smokey warns against fire, sour against spoiled foods. As we near the center of the circle. the fragrance notes become more complex and are apparently perceived as being increasingly harmonious.

## The Fragrance Circle

Located in the outer circle are the above-mentioned fragrance families, at the center only one large group – that of the floral notes, which can be combined from the families in the outer circle. To a certain extent, the Fragrance Circle corresponds to the structure of a perfume. A perfume consists of a top note, a heart note and a base note, and thus lives from the different ways in which its fragrance compounds evaporate. And both evaporation as well as the olfactory effect it triggers are governed by the perfume's chemical structure - thus, related chemical structures also have related olfactory effects. Consequently, adjacent fragrance families are related to one another in terms of both their chemical structure and their olfactory characteristics. Nor were the colors in which the fragrance families are depicted selected merely by chance. Consumers were asked to associate colors to their olfactory impressions. The left side of the Fragrance Circle tends to con-

tain feminine colors as well as feminine fragrance families – while the riaht side tends to be masculine.

The Fragrance Circle Hendcous ierbal-spicy Fruity-dark Light Green Coniferous Sweetaromatic **Floral notes** Woody Heavy Arome Amber Oakmoss eathe

Hexylacetate imparts the fragrance impression of ripe pears.

"Green" smells like freshly mown grass.

## So what are these families all about?

#### Top note:

Serves as the first impression of a fragrance, is intended to arouse curiosity and vanishes quickly. The families positioned in the upper third of the circle are employed in composing the top note.

#### Heart note (bouquet):

Forms the actual fragrance character of the perfume and lasts for hours. It usually consists of floral notes that can be accentuated with the adjacent families.

#### Base note:

Serves as the foundation upon which the perfume is based, is intended to pleasantly underscore the fading scent, and can last up to a day. It is composed from the fragrance families positioned in the lower third of the circle.

## Top notes

## Citrus

Fresh, invigorating scents of citrus fruit, like lemon, orange, bergamot or grapefruit.

## Aldehyde

Olfactory chain of the long-chain fatty aldehydes. This is a typical, fatty-sweaty, somewhat pungent and soapy olfactory note. The spectrum ranges from almondyfruity green nuances to ironed laundry fragrances and metallic nuances right through to ozone, ocean-like and waxy scents. Some of the aldehyde fragrances are related to the smell of human skin and perspiration.Aldehyde C10 offers citrus aspects, while Aldehyde C11 undecylene produces an animalic effect and Aldehyde C12 Lauric a cool, almost ozone-like note.

## **Fruity-light**

Lively, light fruit fragrances, especially those from fruits with green and yellow peels. This group includes apple, pear, melon and pineapple scents, for example. As we have already seen, citrus fruits do not belong to this group. Fragrance examples include hexyl acetate, which has a pear-like scent, or melon bases.

## Green

This group characterizes typical botanical fragrance notes, like those of leaves, stalks or freshly mown grass, as well as cucumbery-violet-like green. Vertocitral is reminiscent of leafy green, cis-hexenol of green grass, while nonadienol tends to be reminiscent of violet and cucumber.

## **Herbaceaous**

Fragrance notes from the plant kingdom that are closely related to green. More complex than the actual green scents, herbaceous fragrances are more aromatic, generally with camphorous, minty, eucalyptus-like or earthy nuances. They are usually found on low-growing, unobtrusively blossoming plants, i.e. herbs. Typical examples include rosemary or sage, as well as peppermint and lavender, a fragrance that is both herbaceous and floral at once.

## Herbal-spicy

The typical fragrance notes of such herbaceous kitchen herbs as thyme or mugwort. In addition to its herbaceous underlying scent, there is also a pronouncedly uniquespicy element, which produces an aromatic impression.

## Coniferous

The fragrance note of whole or crushed conifer needles or resins, which can also display citrusy, herbaceous or aromatic-spicy elements, in addition to its typically earthy note. Moreover, these fragrances are more or less pronouncedly resinous and green. Pine needle oil is coniferous with citrus-like accents, while fir balsam tends to be aromatic-resinous with sweet aspects.

"Citrus" – the fresh, invigorating scent of citrus fruits. **Fragrance** Families

## Heart (bouquet) notes

## **Fruity-dark**

This group includes the sweet, sultry fragrance notes that mainly influence the heart and base notes of perfume compositions and have high substantivity. Examples include raspberry and peach.

## **Floral notes**

Floral notes usually form the heart of a perfume. They, too, can be classified into light, green, floral and heavy. "Light" includes typical springtime flowers like lily of the valley (Muguet), lilac, freesia and light rose notes, often with citrusy or fruity elements. "Green" includes violet, for example, as well as other blossoms in which a leafy note dominates but can often have herbaceous, earthy nuances. Narcotic floral fragrances that are more often found in southern climates than in more northerly regions are considered "heavy." These include, first and foremost, jasmin, tuberose, orange blossom and narcissus. In addition to the floral note,

this group often contains pronouncedly balsamic, spicy and animalic notes. There are also hybrid notes, like hyacinth, that tend to be floral-heavy, but also have clear green notes, as well as violet, which is very green but can also be given a floral-woody interpretation.

## **Base notes**

## Woody

This is a group of highly differing fragrances that are reminiscent of chipped wood. One of the differentiations that is made is cedar, which smells like a pencil with a camphorous off-note. Sandalwood tends to smell sultry, warm and somewhat animalic. Vetiver has a pronouncedly earthy root note. Patchouli also smells earthy, but also sweet with fruity nuances.

## Amber

Fragrance notes that are similar to natural amber. This olfactory note is difficult to describe: Oilywoody with metallic elements, but also slightly nutty with a

> Sandalwood – a representative of the "Woody" fragrance category.



Lilac is a floral note.

nuance of seawater. The scent of amber is somewhat reminiscent of human hair. Natural amber consists of pathological secretions of the sperm whale. Since this whale population has unfortunately been decimated, true amber is a rarity today and very expensive. However there are imitations that come quite close to the natural note, such as amber Vitessence, as well as amber notes of botanical origin, such as labdanum. The Ambre 83 base has a very sweet amber note.

### Animal

In addition to amber, there are three further notes of animal origin that are still employed in perfumery today – although they display the typical note of excrement, they offer an incomparable erogenous rounding-off effect in diluted form and in compositions. Musk was originally obtained from the olfactory glands of the musk deer that is native to Asia. This tincture smells sweet and urine-like, as well as somewhat medicinal. Genuine musk tincture is priceless today and is very rarely used. When speaking of musk notes today, what is generally meant are aroma chemicals that are largely reminiscent of this note, although they typically have a more powdery and significantly less animalic scent. Civet absolue is obtained from the secretions of the olfactory glands of an African cat, the civet. As these animals are captured to obtain the secretions, without causing them any harm, civet is still in very widespread use today as an animalic note. Its scent is fecal-acidic with a slight honey note.

#### Leather

The fragrance notes of genuine leather and Russian leather. This term is interpreted very broadly. The typical components of leather compositions include birch tar oil, for example. Isobutyl chinoline often serves as an important leather element. The leather Vitessence offers a clearly leathery smell.

## Oakmoss

This fragrance class refers to extraction products of specific lichen – especially those that grow on oak trees. The typical oakmoss note smells uniquely dry, algaelike, with a cheese-rind note and a tar-like, phenolic element, in addition to green nuances. Lichen that grow on other types of trees supply extraction products (tree moss) that smell woodier and more resinous.

#### Tobacco

Fragrance notes that are inspired by all tobaccolike notes, ranging from aromatically sauced pipe tobacco to cigar tobacco right through the smell of a stale ashtray. Tobacco absolue offers a typical scent.

## Aromatic-spicy

Invigorating aromatic spice notes that can also contain bitter and/or piquant elements. Typical examples of these fragrances include cardamom, nutmeg, curry, clove and cinnamon.

#### Balsamic

Heavy, sweet, rich fragrances with chocolate-vanilla-like, cinnamon-like to resinous fragrance elements. These scents were already popular "Oriental" notes in ancient times, such as Peru balm or olibanum, i.e. frankincense. Nuances of this family can also be found in many orchid notes. The name is derived from the word "balsam," which is used to denote certain kinds of resins.

## Sweet-aromatic

Pronouncedly sweet fragrances that smell like honey, almond, marzipan, anise or woodruff, e.g. coumarin, often with richfruity or spicy nuances. In Spite of the segmentation in the Fragrance Circle, it should be element. remembered that the first impression of a perfume is produced by the interplay between all of the fragrance materials that are

"Tobacco" in

fragrance

all of its facets

is an interesting

employed in it – while leather, for example, is a base note, it is responsible producing the overall character of the perfume, and is not just present in the after-scent.

> Cinnamon is a typical representative of invigorating aromatic Spice notes.