

The Terminology of Medicinal Plants in English and German. Linguistic and didactic aspects

Diplomarbeit

zur Erlangung des akademischen Grades

einer Magistra der Philosophie

an der Geisteswissenschaftlichen Fakultät

der Karl-Franzens-Universität Graz

vorgelegt von

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Jänner 2009

Danksagung

Ich möchte mich herzlich bei Herrn Prof. Dr. Peter Bierbaumer für die intensive Betreuung und Beratung bei meiner Arbeit bedanken.

Mein besonderer Dank gilt meinen Eltern, die mir dieses Studium ermöglicht haben, und mich immer tatkräftig unterstützt haben.

Meinem Freund Franz danke ich für seine Geduld, die guten Ratschläge und seine Liebe.

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1 General Introduction

The science of medicinal plants is one of the oldest sciences of mankind. After the decades-lasting dominance of chemically produced medicine, today the alternative medicine is booming. These days, more and more people try to fight their daily stress with wellness, Traditional Chinese Medicine or Feng Shui. As a result, people's interest in natural healing methods and medicinal plants has increased over the years. Therefore, the first part of this diploma thesis gives an overview about the development of the science of medicinal plants over the past millenia. Then the morphology and composition of plants are examined, followed by the most common types of active agents, and finally, the usage of the parts of plants is explained. Since this first part has been written for laymen, the German technical terms concerning medicinal plants are given in brackets right in the text.

The second part is concerned with word-formation processes, such as compounding or borrowing. It also deals with the question of how to handle technical terms in non-scientific communication.

The third part of this thesis is a didactic one which comprises questions on the target group, target needs and exercises which were developed after discussions with several pharmaceutics students, some of them have already finished their studies. The key to those exercises can be found in the appendix.

The last part is an English-German glossary which gives information on the etymology of the technical terms, as well as their definitions or explications. It also provides the names of the species, names and families of the medicinal plants that are mentioned in the first part.

2 Introduction to the field

2.1 History of the science of medicinal plants

The science of medicinal plants dates back to the early days of mankind. People's belief in the healing power of medicinal plants was shown in their belief in demons and magic. Myths, legends and fairy tales were told about healing plants. Tradition and superstition are the first appearances of primitive folk medicine. People's belief in the healing power of a medicinal plant grew with the myths and legends that were told about that plant. Like that, the science of medicinal plants had its beginning almost everywhere around the world, not only in China, India, Egypt, Persia, Greece and Germany, but also outside the Eurasian continent. With the invention of the script, nature was described and first discoveries were written down (cf. Willfort 1973: 15).

The oldest book about medicinal plants is believed to be a book written by the Chinese emperor Shennong who lived around 3700 before Christ. He was more a doctor than a ruler, setting his people an example of living in harmony with nature. In his book Shennong described more than 200 medicinal plants. Moreover, Shennong is believed to have invented the technique of acupuncture, only one reason why he is seen as the father of Chinese medicine (cf. Wikimedia Foundation Inc. (o. J.): [wikipedia.org](http://en.wikipedia.org/wiki/Shennong), in <http://en.wikipedia.org/wiki/Shennong> [21.10.2008]).

Another famous work is the *Papyrus Ebers* from Egypt, a collection of remedies dating back to the year 1500 before Christ where more than 700 medicinal plants are described. It even contains chapters dealing with dermatology, gynaecology, pregnancy diagnosis, contraception, dentistry and psychiatry (cf. Whonamedit.com: The world's most comprehensive dictionary of medical eponyms (o. J.): <http://www.whonamedit.com/synd.cfm/443.html> [21.10.2008]).

The experiences of those peoples were passed on to others. Unfortunately, only a small part of the medicinal treasure of literature has survived because many of the written documents were among the 700.000 scrolls of the Alexandrian library, and they were burnt with the destruction of this biggest library of ancient times (cf. Willfort 1973: 16).

A few indications to the extensive literature about medicinal plants can be seen in the already mentioned *Papyrus Ebers* and in the notes of some chroniclers of that epoch. The importance of medicinal plants even in ancient times is made clear by numerous pictures in the burial chambers of the pyramids and on several other tombs. The

ancient Greeks' usage of medicinal plants can be traced back even to legendary times. According to those legends, the centaur Cheiron is said to having healed Achilles' wound with yarrow (Schafgarbe), therefore, the plant's Latin name is *Achillea millefolium*. Furthermore, monkshood (Eisenhut), used by Medea as a poisonous and medicinal plant, is believed to have grown out of the hellhound Cerberus' slaver (Geifer), (cf. Willfort 1973: 16).

The founder of scientific medicine is considered to be Hippocrat (460 – 377 BC). In the Hippocratic collection of writings, the *Corpus Hippocraticum*, about 200 medicinal plants are described exactly. This collection contains lectures, textbooks, research, notes and philosophical essays on various subjects in medicine. None of the volumes in the *Corpus* is proven to be of Hippocrat's hand itself, in fact the works were probably produced by students and followers of his (cf. Wikimedia Foundation Inc.(o. J.): wikipedia.org, in http://en.wikipedia.org/wiki/Hippocratic_Corpus [21.10.2008]).

The philosopher and naturalist Theophrast of Eresos from the Greek island of Lesbos (370 – 285 BC), a student of Aristotle, is regarded as one of the first botanists to create the basis of the morphology of plants, (i.e. the scientific study of how plants and their parts are formed) and the physiology of plants (i.e. the science concerned with the study of how the bodies of living things work), (cf. Willfort 1973: 18).

The Romans as well took great interest in medicinal plants, taking over the Greeks' knowledge and broadening it. In this context, the name of Marcus Portius Cato the Elder (234 – 149 BC) is worth mentioning. He was not only a famous statesman and historian, but he was also concerned with botany, especially with the science of medicinal plants. Therefore, he wrote interesting treatises on anise, garlic, dill, caraway and chicory (Anis, Knoblauch, Dill, Kümmel, Zichorie), (cf. Willfort 1973: 18). During the time of Emperor Nero, there was a famous doctor and naturalist called Dioscorides, who travelled around the Orient and who was the first medical officer to be mentioned in history. His medical works contain long chapters about medicinal plants. His about 800 treatises on medicinal plants had disappeared for a long time but were discovered again in 1453 in Constantinople in their original editions (cf. Willfort 1973: 18).

The most important work in the field of medicinal plants is, without doubt, *Naturalis historia*, consisting of 37 volumes. Of this collection written by Caius Plinius Secundus, better known as Pliny the Elder (23 – 79 AD), 12 volumes deal with descriptions of medicinal plants. His works, most of which have survived over the

years, contain so many historically interesting observations on medicinal plants that they are of enormous value also in a cultural-historical context. As we all know, Pliny the Elder tragically died when the towns of Pompeji and Herculaneum were destroyed due to the eruption of the volcano Vesuvius (cf. Chevallier 2001: 32).

Another well-known name in the field of medicinal plants is Galenos (129 – 199 AD). He was born in Pergamon and became the personal physician of Emperor Marcus Aurelius. Galenos wrote down the medical knowledge of his time and developed exact doses of medicinal products. His herbal compositions were highly appreciated even a thousand years after his death and still today, plant tinctures (Pflanzentinkturen), ointments (Salben) and extracts are called *Galenica* in contrast to raw unprocessed drugs or synthetically produced substances. The Germanic tribes as well highly appreciated the power of medicinal plants. Therefore they often dedicated them to various deities (cf. Chevallier 2001: 33).

For the development of the science of medicinal plants in connection with practical instructions, the regulations of Emperor Charlemagne (742 – 814) concerning the cultivation of herbs and medicinal plants as well as of berries and fruit trees were very important. Those regulations indicated Charlemagne's enormous far-sightedness and so they were even expanded by his successors. Particularly those monks who came from the South in order to found monasteries north of the Alps took the prescriptions to heart. The monasteries played an important role in the development of the science of medicinal plants. The monks' and especially the Benedictines' experiences and the new ideas in the Germanic science of medicinal plants were united to form the so-called *monastic medicine*. In the monasteries herbal gardens were set up and so, various plants that originally grew only in Southern Europe, spread over the monastic gardens to farmer's gardens to finally become indigenous in our latitudes. Among them are anise (Anis), fennel (Fenchel), lavender (Lavendel), sage (Salbei) and hyssop (Ysop). The monastery of St. Gallen exhibits a handwritten plan of a herbal garden of the year 820 which today is still planted (cf. Willfort 1973: 20).

The development of the science of medicinal plants was also influenced by the Medical School of Salerno, founded in 984. Among the most important works of that school we can find the *Compendium Salernitanum* and the *Regimen Sanitatis* which contain precise descriptions of medicinal plants (cf. Willfort 1973: 20).

A famous name in the further development of the science of medicinal plants is the abbess Hildegard of Bingen (1096 – 1179). Later she was called Saint Hildegard. Her most important works are *Causae et Curae* and *Physica*. Those works, written in Latin and partially in German, can be regarded as the beginning of German botany (cf. Wikimedia Foundation Inc. (o.J.): wikipedia.org, in http://de.wikipedia.org/wiki/Hildegard_von_Bingen [21.10.2008]).

The invention of printing and woodcut increased the numbers of copies and improved the technical production of upcoming works about medicinal plants. On the threshold of modern age, the centuries-old knowledge about medicinal plants together with astrological-alembic ideas regained attention through the works of Theophrastus Bombastus of Hohenheim, better known as Paracelsus (1493 – 1541). This famous physician and naturalist not only gave renewed thrust to the medieval doctrine of signatures, but also introduced the beginning of chemical medicine with his combinations of medicinal plants with metals and earths. Being the son of a Swiss physician, Paracelsus studied medicine at several universities and lived a restless life. He tried to complete his medicinal knowledge in dealing with ordinary people, such as farmers and shepherds, and he increased his mineralogical and chemical knowledge in mining and metallurgy. Thus, he became one of the most genial and universal physicians of all time. After travelling all over Europe, Paracelsus returned to Germany and later he worked as a professor in Basle. He was the first to read his lectures in German, which many of his colleagues criticised. Furthermore, he highly appreciated medicinal plants and believed that nothing could exceed their power. Despite his success and his numerous works, Paracelsus died almost penniless in Salzburg (cf. Willfort 1973: 24).

Another famous book is *Commentarii in sex libros Pedanii Dioscoridis Anazarbei "De medica materia"*, written by the Italian physician Petrus Andreas Matthiolus (1501 – 1577), the personal physician of Emperor Ferdinand I. This work became one of the most successful books of that time. There were several editions in various languages, such as the *Venetian Edition* in Latin, or the German edition, called *New Kreuterbuch* which was published in Prague and Frankfurt (cf. Willfort 1973: 25).

For reasons of the increasing use of chemistry in medicine, ordinary household remedies were displaced more and more in the 18th century. However, some physicians stuck to the traditional methods of treatment, such as the famous botanist and physician Carl von Linné (1707 – 1778). He was a professor of botany at the

University of Uppsala and he introduced the Latin double designation for plants. He developed the so-called *Linnéan System*, which classifies all the plants according to the characteristics of their sexual organs (cf. Willfort 1973: 25).

At the beginning of the 19th century, the medicinal plants were almost completely substituted by the further development of chemistry and experimental pharmacology (i.e. the science of medicinal products). Medicinal plants only built the basis of the so-called folk medicine. The new scientific methods were not used to analyse the valuable properties of medicinal plants, but the thousands-of-years-old experiences with those plants were trivialized. Instead, the synthetically produced remedies gained higher and higher esteem. Undoubtedly, in the field of chemistry, numerous achievements were made, without which many diseases could not be fought. But it is also a fact that medicinal plants supply the human body with important biological substances. Those substances strengthen the body and make it more robust, they purify the blood and cleanse the organs. Thus, many diseases can be fought by the correct and early use of medicinal plants (cf. Willfort 1973: 27).

A famous pioneer of the slogan “Back to the medicinal plants” was the “herbal parish priest” (Kräuterpfarrer) Sebastian Kneipp (1821 – 1897), who always pleaded for the use of medicinal plants and who rescued essential knowledge of the healing power of those plants from oblivion. In his book *So sollt ihr leben*, Kneipp tried to convince people to take care of themselves in order to stay healthy. With his demand for a change in nutrition, clothing and living – that is in every situation of life – he reformed the often unnatural way of living of the common people. According to his ideas, everything unnatural should be eliminated (cf. Willfort 1973: 27).

2.2 The morphology of plants

To be able to understand descriptions of plants correctly, one should begin with the study of how plants and their parts are formed. That knowledge is also necessary for the collection and preparation of medicinal plants.

2.2.1 The roots (Wurzeln)

The root fixes the plant to the ground and enables it to take up water and nutrients. Either it can be perennial (ausdauernd), which means that it builds new shoots (Triebe) every year, or it dies like the other aerial parts (oberirdische Teile) of the plant.

There are more than 30 different types of roots for medicinal plants, among these, the most common ones are:

- **Taproot (Pfahlwurzel):** grows down vertically and builds thin roots on its sides which help to fix it better in the ground and make it easier to absorb nutrients (Nährstoffe) due to its depth and breadth.
- **Fleshy thickened taproot (fleischig verdickte Pfahlwurzel):** stores nutrients. The taproots as well as the plants that grow out of them are often used as vegetables or forage plants (Futterpflanzen), e.g. carrots or turnips (Rüben).
- **Fibre root (Faserwurzel):** a plant that has several equally thick roots (cf. Pahlow 2004: 16).

2.2.2 The shoots (Sprosse, Triebe)

Aerial shoot organs are either the herbaceous stalk (krautiger Stängel) or the ligneous stem (holziger Stamm). Herbaceous stems are built by annual plants (einjährige Pflanzen) which complete their development within one year, from germinating (keimen) in spring to dying in autumn.

Biennial or perennial plants sometimes have herbaceous stems, but more often they have ligneous stems. Usually, only the lower part is ligneous. Therefore, when using the herbs of a medicinal plant, it is better to take the upper part, which is not ligneous. Trees and shrubs are perennial and have a ligneous stem.

Leaves grow on the shoot, and in the axils (Achseln) of those leaves side shoots grow, building leaves as well. Out of the axils, often flowers (Blüten) and inflorescences (Blütenstände) are built. The leaves are an important part of the shoot. Even when it is growing as a root stock (Wurzelstock), it always develops leaves. The underground shoot organs, root stock and tuber (unterirdische Sprossorgane: Wurzelstock und Knolle), especially serve as a store for nutrients (cf. Pahlow 2004: 17).

2.2.3 The leaves (Blätter)

The leaves serve for assimilation, the supplience of the plant with organic substances. Out of carbon dioxide from the air and water from the ground, the leaves produce different kinds of sugar and starch (Stärke), which are necessary for the survival of the plant. For that process they also need sunlight and chlorophyll. Gas and water exchanges are regulated by small openings at the underside of the leaves. For the water exchange the position of the leaves can vary. Whereas most of the

plants turn the upperside of their leaves to the light, some plants are able to put them vertical to incidence of light if this is necessary to cope with extraordinary heat and insolation (Sonneneinstrahlung), e.g. compass plants (Kompasspflanzen). As a result, the water transpires (transpirieren) in smaller quantities. For the definition of plants, the form of their leaves and their positions at the stem are very important. The leafstalk can either be short or long, or it is missing completely. If that is the case, the leaves are called *stalkless* (sitzend, stängellos). Equally important for defining plants is the shape of the leaves, their borders as well as their distribution. Another essential criterion for the definition of plants is the venation (Äderung, Nervatur) of the leaves. The venation of plants that germinate with only one leaf, i.e. monocotyledons (Einkeimblättrler) runs parallel, whereas this is rarely the case with dicotyledons (Zweikeimblättrler), (cf. Pahlow 2004: 17f.).

2.2.4 The flowers (Blüten)

From the botanical point of view flowers are shoots that develop leaves. A shoot completes its development only rarely with just one single flower, e.g. tulip (Tulpe). In most cases several flowers develop to unify in one inflorescence. For the definition of a plant it is necessary to know the most common types of inflorescences. But there are numerous transitional forms that sometimes make it impossible to find an unambiguous definition. If, for example, the inflorescence looks like an umbel (Dolde) but botanically is not formed as an umbel, then other expressions, such as cyme (Trugdolde) or umbelliferous (doldig, doldenförmig) are chosen (cf. Pahlow 2004: 18).

2.2.5 The fruits (Früchte)

When the flowers are pollinated (bestäuben) they develop fruits. Here again, there are various types:

- **Follicle (Balg):** develops from one carpel (Fruchtblatt) and when it is mature it splits open alongside its seam (Naht).
- **Silique (Schote):** develops from two carpels and opens when they fold in.
- **Pod (Hülse):** develops from one carpel and splits open at its two seams.
- **Capsule (Kapsel):** develops from two or more carpels.
- **Berry (Beere):** the (real) berry is fleshy in all its parts, e.g. blueberry.
- **Nut (Nuss):** usually it has one seed and is surrounded by a hard shell.
- **Drupe (Steinfrucht):** has a fleshy part that surrounds a stone enclosing one seed, e.g. cherry, peach.

- **Aggregate fruit (Sammelfrucht):** a composed dense cluster of florets, e.g. strawberry.
- **Dehiscent fruit (Spaltfrucht):** splits into two or more portions which contain only one seed at ripeness. We can find them among umbellifers (Doldengewächse), e.g. caraway (Kümmel), (cf. Pahlow 2004: 19f.).

2.3 Active agents (Wirkstoffe)

Whereas the medical effect of medicinal plants has been known for thousands of years, the active agents and their compositions were explored only a rather short time ago. In this chapter the most common groups of active agents, as well as their characteristics and modes of action are described.

2.3.1 Essential oils (Ätherische Öle)

Essential oils are extremely volatile (flüchtig), which means they readily evaporate and they have a typical, rather pleasant smell. Most essential oils are liquid and “oily”. But as a contrast to fatty oils (fette Öle) they do not leave stains on paper and they are not chemically related to fatty oils. Since they are only slightly soluble (löslich) in water, but readily volatile with steam, they can be extracted from the plants by steam distillation (i.e. to evaporate before becoming liquid by cooling). Methods of extraction with organic solvents (organische Lösungsmittel) are much more expensive and therefore only used for the production of blossom oils (Blütenöle) in the perfume industry.

Whereas it is also possible to extract the essential oils using fats, citric oils (Zitrusöle) can be extracted by squeezing the peels (Schalen). Umbelliferae (Doldengewächse) and labiatae (Lippenblütler) as well as rue and pines (Rauten- und Kieferngewächse) are very rich in essential oils. According to their varieties of chemical compounds, essential oils can be used in numerous therapeutical ways.

Essential oils which contain mustard oil (Senföl), turpentine or rosemary oil (Terpentin- oder Rosmarinöl), are mainly skin irritating. As a result the blood circulation increases, a reddening and a feeling of inner heat as well as inflammations and blisters may appear. Furthermore, effects on inner organs, such as the improvement of the respiration and acceleration of the heartbeat are possible. Such essential oils are components especially of ointments (Salben) for rheumatic illnesses and neuralgia (Nervenschmerzen). Moreover, essential oils are often used

as cough medicine. For inhalations mountain pine oil (Latschenkiefernöl) and eucalyptus oil are best suitable.

After taking, the oils of fennel (Fenchel), anise (Anis) and thyme (Thymian) are partially expelled through the lungs, where they develop their antiseptic effects on sputum (Auswurf). Sputum are those substances that are expelled from the respiratory tract (Atemwege), such as blood and phlegm (Schleim). This effect is also used for several oral hygiene products (sage, menthol, thymol). Many drugs¹ containing essential oils are used to stimulate the digestion (Verdauung) and the appetite, or they are simply used as spices. They irritate the olfactory and taste nerves (Geruchs- und Geschmacksnerven) as well as the stomach lining which stimulates the secretion of the gastric juice (Magensaftabsonderung). Drugs containing bitter principles (Bitterstoffe) besides the essential oils are called aromatica amara (Bitteraromen), e.g. artemisia (Beifuß), bitter orange (Bitterorange). The anti-flatulent (blähungshemmend) effect of some oils is said to be based on their antispasmodic (krampflösend) characteristics. Among these are fennel (Fenchel), coriander (Koriander), garlic (Knoblauch), caraway (Kümmel) and camomile (Kamille).

Some drugs contain essential oils which aid to urinate by stimulating the kidneys. However, one should be very careful with the quantity, for the kidneys can be damaged in case of an overdose, of e.g. lovage (Liebstöckel), juniper berries (Wacholderbeeren), or the fruits of parsley (Petersilienfrüchte).

Relatively small quantities of womb-stimulating (gebärmuttererregend) oils that were formerly used for abortions (Abtreibungen), may also be detrimental (schädlich) or even fatal. Furthermore, essential oils are used as flavourings (Geschmacksstoffe), which means that they serve to improve the smell and flavour of food and medicine (cf. Schönfelder 1995: 15f.).

2.3.2 Alkaloids (Alkaloide)

Alkaloids are complicated nitrogenous (stickstoffhaltig) organic (i.e. consisting of dead animals or plants) compounds with basic (basisch) character. They have a strong physiological effect on human beings and animals, and some of them belong to the most potently toxic substances. Just a small quantity of alkaloids may cause severe poisoning or even death. However, if taken in the right dose, they are a very

¹ In this thesis, the term 'drugs' only signifies products made of plants that are used for the production of plant medicines.

effective remedy. Therefore, alkaloid drugs and preparations containing them are largely available only on prescription.

Most of the alkaloids have a certain acid as a basic element according to which they are divided into different groups. In most cases one species of plants contains several structurally related alkaloids, though usually one predominates in quantity which then is called primary alkaloid, whereas the others are the secondary alkaloids. Normally, the names of the alkaloids derive from the names of the species or genus of the plant from which the alkaloids were isolated for the first time, e.g. *nicotine* from *nicotiana*, or *atropine* from *atropa*. Sometimes the names derive from the medical effect, e.g. morphine from Morpheus, the god of sleep and dreams. Morphine is therefore used as a sleep-inducing drug and painkiller.

Plants that contain a lot of alkaloids are the buttercup family (Hahnenfußgewächse), e.g. monkshood (Eisenhut), used as a painkiller or for chronic articular rheumatism (chronischer Gelenksrheumatismus), muscular or neural pains, lily (Liliengewächse), e.g. autumn crocus (Herbstzeitlose), used for gout and rheumatism, poppy (Mohngewächse), e.g. opium poppy (Schlafmohn), used for severe pains and depression, and nightshade family (Nachtschattengewächse), e.g. thorn apple (Stechapfel), used for Parkinson's disease, antispasmodic for coughs and asthma (cf. Schönfelder 1995: 16).

2.3.3 Anthraglycosides (Anthraglykoside)

Drugs containing anthraglycosides are often used as laxatives (Abführmittel). Especially fresh plants contain anthron or anthranolglycoside (Anthron- bzw. Anthranolglykoside) which stimulate the large intestine's peristalsis (contracting and stretching). But laxatives that contain anthron should not be taken over a long time for they are likely to cause cancer of the large intestine (Dickdarm).

There are several plants growing in our latitudes that contain anthraglycosides, for example buckthorn (Kreuzdorn), or sorrel (Sauerampfer). In former times, plants containing chemically related substances were economically important due to their pigments (cf. Schönfelder 1995: 17).

2.3.4 Bitter principles (Bitterstoffe)

A lot of plants have an intense bitter taste. However, only those plants that are used exclusively for their bitter taste are called *bitter principles*. They do not show any other effect, like the cardiac glycosides (Herzglykoside), (see chapter 1.3.9) or some

alkaloids that taste bitter as well. Their therapeutic effect is to increase the secretion of the gastric juice and its acid content (Säuregehalt).

Furthermore, the secretion of bile and saliva (Gallensaft- u. Speichelabsonderung) is encouraged, which stimulates the appetite and the digestion and prevents from rotteness (Fäulnis) and fermentation (Gärung). To develop their optimal effects, bitter principles should be taken roughly half an hour before the meals.

Plants that mostly contain bitter principles are the gentian family (Enziangewächse), composite flowers (Korbblütler) and labiatae (Lippenblütler). The most common bitter principles are gentian (Enzian), holy thistle (Benediktenkraut), centaury (Tausendgüldenkraut) and wormwood (Wermut), (cf. Schönfelder 1995: 17).

2.3.5 Coumarins (Cumarine)

Coumarin is well-known as the scent of woodruff (Waldmeister). Fresh plants usually contain this substance as a glycosidic compound (glycoside is a compound of various types of saccharides and non-saccharidic elements) which is only released when the plants are dried.

Staying too long in intensively smelling hay or drinking too many coumarinic drinks, such as punch made of woodruff, may cause headache and drowsiness (Benommenheit). Whereas coumarin drugs, such as clover (Klee) are hardly ever used as medicinal products, dicumarol (Dicumarol) became more significant. This substance developed in mouldy hay and so it poisoned cattle. Its quality to stem the clotting of blood (Blutgerinnung) was discovered and afterwards synthetic derivatives, especially for the treatment of thrombosis (blood clots) were developed. Synthetic derivatives are chemically produced compounds which derive from other compounds by replacing one or more components.

Especially umbelliferae (Doldengewächse) and rues (Rautengewächse) contain coumarins, which function as photosensitising agents (Stoffe, die lichtempfindlich machen). These are substances that make the skin more sensitive, so that it becomes hypersensitive to sunlight. When getting into touch with the juice of those plants, e.g. garden angelica (Engelwurz), yarrow (Schafgarbe) the skin becomes sensitive to sunlight, it reddens and becomes inflamed, sometimes even severe disturbances of the general condition may appear. There are other coumarins, such as khelline (Khellin) or visnagine (Visnagin), which dilate the coronary vessel (Herzkranzgefäß) and have an antispasmodic (krampflösend) effect (cf. Schönfelder 1995: 18).

2.3.6 Fatty oils (Fette Öle)

The fatty oils in a plant can be found especially in its seeds and fruits. As a contrast to solid fats (feste Öle) which mainly appear in the fauna, fatty oils are liquid at room temperature. Since they lower the cholesterol level, they are used preventively for arteriosclerotic illnesses (i.e. hardening of the arteries). They are contained plentifully in groundnut oil (Erdnussöl) and wheat-germ oil (Weizenkeimöl). Due to their protective, antiphlogistic (entzündungshemmend) effect on the skin, fatty oils are of high pharmaceutical significance (cf. Schönfelder 1995: 19).

2.3.7 Flavonoids (Flavonoide)

The name flavonoids (from Latin *flavus* meaning 'yellow') derives from plant pigments that still today are used for dyeing wool and cotton yellow. Although they rarely appear as the primary active agents (Hauptwirkstoffe) they were found in numerous plants. Particularly important in medicine are rutine (Rutin), e.g. in horse chestnut (Roskastanie), rue (Weinraute), buckwheat (Buchweizen) and hesperidin (Hesperidin), e.g. in citrus fruits, which are used to lower an increased permeability and porosity of the capillaries. The capillaries are extremely thin blood vessels that connect the arteries and veins.

Flavonoids are also called permeability factors, bioflavonoids and formerly Vitamin P. They are used for venous diseases (Venenerkrankungen), arteriosclerosis, high blood pressure, diabetes and scurvy (Skorbut). Whereas the flavonoids of arnica (Arnika) and hawthorn (Weißdorn) influence the action of the heart, those of goldenrod (Goldrute) or horsetail (Ackerschachtelhalm) are diuretic (harntreibend). Furthermore, the antispasmodic effect of liquorice (Süßholz) is also traced back to flavonoids, such as the holy thistle's (Mariendistel) beneficial effect on liver (Leber) and bile (Galle). But the effect of the common sudorific (schweißtreibend) drugs, such as elder blossoms (Holunderblüten) is still controversial. Scientists are not sure if their effects are really based on their strength of flavonoids (cf. Schönfelder 1995: 20).

2.3.8 Tanning agents (Gerbstoffe)

Tanning agents are wide-spread, complicated organic compounds which are often able to convert animal skin into leather, that is they tan it. This process is based on their ability to build unsoluble structures with the protein of the skin.

This property is also medically important, for the low concentration of the tanning agents on the skin and the mucous membrane (Schleimhaut) leads to thickening the

tissue and to building a protective skin. As a result, pains are eased, capillary bleedings are stopped and toxic substances and disease-causing agents are prevented from getting into wounds.

Due to the fact that the protoplasm of bacteria is subjected to this effect as well, tanning agents also repress bacteria and kill them. The protoplasm is the basis of the living cell in which all the living processes take place. For this reason, preparations of drugs containing tanning agents are used for treatments of wounds and inflamed mucous membranes (entzündete Schleimhäute) in the oral and pharyngeal cavity (Mund- und Rachenraum), for varicose veins (Krampfadern), frostbites (Erfrierungen), burns (Verbrennungen) and diarrhoea (Durchfall).

Tanning agents occur especially in the roots and barks (Rinde) of plants, but also in their fruits and leaves. Heather (Heidekraut), rose, pea family (Schmetterlingsblütler), geranium family (Storchschnabelgewächse) contains particularly plentiful tanning agents. As a contrast, cruciferous plants (Kreuzblütler) and poppy (Mohn) contain no tanning agents at all.

In some drugs the tanning agents are the primary active agents (Hauptwirkstoffe), for example in oak bark (Eichenrinde) and common tormentil (Blutwurz). But they often just support other substances, for example in sage (Salbei) and peppermint where they fortify the effects of essential oils.

In other drugs, such as the leaves of bearberry (Bärentraub), they develop an undesirable effect, which may cause an irritation of the mucous membranes of the stomach and the intestines which can even lead to vomiting (cf. Schönfelder 1995: 20).

2.3.9 Cardiac glycosides (Labiatae)

By now more than a hundred cardiac glycosides have been isolated from plants. They help to stabilize the contraction of a weakened cardiac muscle. For that only a small quantity is needed, which does not show any effect on the healthy cardiac muscle. But the toxic dose is not far above, so that it is necessary to constantly monitor patients and to adjust the dose to the needed quantity.

Admittedly, all cardiac glycosides have the same specific effect, but they clearly differ in their onset effects, the period during which they remain in the body and the lack of side effects. Therefore, only a rather small part of the wide range of plants containing cardiac glycosides is medically used. Among them are foxglove (Fingerhut) or squill (Meerzwiebel), (cf. Schönfelder 1995: 21).

2.3.10 Saponines (Saponine)

The saponines have their name from their characteristic to foam like soap in combination with water (from Latin *sapo* meaning 'soap'). In a chemical sense they are not related to soap but they are glycosidic plant compounds.

Saponines cause haemolysis, that means that haemoglobin issues from the red blood corpuscles into the circumfluent liquid (Hämoglobin tritt aus den roten Blutkörperchen in die umgebende Flüssigkeit). Therefore they are highly toxic if injected right into the bloodstream. They are hardly ever taken through the gastrointestinal tract (Magendarmkanal), for example in cyclamen (Alpenveilchen) or corn cockle (Kornrade), as they cause poisoning. Drugs containing saponines, such as ivy (Efeu) or liquorice (Süßholz) are pharmaceutically used for coughs and to purify blood (cf. Schönfelder 1995: 22f.).

2.3.11 Mucilages (Schleime)

Mucilages of plants typically swell up with water to develop viscous solutions (zähflüssige Lösungen). Due to their ability to store water and the resulting increase of volume they have a stimulating effect on the peristalsis. Therefore, drugs containing mucilages are used as laxatives (Abführmittel). As so-called "wrapping remedies" (einhüllende Mittel) they weaken the effect of local irritating and inflammating substances. They also diminish the sensitivity of the taste nerves, therefore they are added to sour, bitter or hot tasting medicinal products in order to make them taste better. Their ability to store warmth develops particularly in poultices (Umschläge).

Furthermore, mucilages, especially those of algae (Algen), are important for the production of food and tablets. Other plants containing mucilages are marsh mallow (Eibisch), and coltsfoot (Huflattich, (cf. Schönfelder 1995: 24).

2.3.12 Starch (Stärke)

The saccharide that is built in a plant is partially transformed into starch and afterwards stored in various organs. The pharmaceutically important types of starch can be found in the tubers of potatoes (potato starch) or in the fruit of corn, e.g. corn starch, rice starch, wheat starch (Maisstärke, Reisstärke, Weizenstärke).

The size and form of starch seeds depend of the types. Starch is pharmaceutically used as a neutral and bland (reizlos) basis for powders. Due to their ability to store large quantities of water, they have a cooling effect and at the same time they prevent further inflammations by keeping away mechanical stimuli.

Since they are also easily digestible (verdaulich) and they have an anti-stimulating effect on the gastro-intestinal tract, they are used for numerous dietary products. Furthermore, they are pharmaceutically used as thinners of powders (cf. Schönfelder 1995: 24f.).

2.4 General information on herbal drugs

2.4.1 The pharmaceutical quality of herbal drugs

The scientific usage of the term *quality* corresponds to the original Latin significance of the word *qualitas* meaning 'characteristic, composition'. In scientific usage, quality does not have the common significance of 'high regard'. Here it is rather defined as the sum of the characteristics and properties of a product, which relate to its suitability for special requirements.

Each country has certain laws concerning drugs, which regulate the manufacture and distribution of medicines. The term *quality* is defined as the properties of a medicinal product that are determined by their identity, strength, purity, other chemical, physical, biological properties, or by their production process. Each quality parameter, such as identity, purity and strength is prescribed in the pharmacopoeia and other legal regulations and guidelines. There are certain prescriptions that are valid for medicinal products in general, and there are such that only determine specific demands on herbal drugs.

The quality definition of the law of drugs determines all the quality parameters that have to be examined and taken into account in order to judge the general quality of a medicinal product. Whereas a drug can be clearly defined by the examination of its identity, contaminations and adulterations caused by external influences are established by examining its purity. The strength is an important parameter concerning the value of drugs.

However, only when all the quality parameters have been examined, a clear definition can be made. The wanted and needed quality of drugs depends on several influences. But it is always necessary to remember that a high quality can only be achieved by various measures during the cultivation, collection, crop and storage of drugs. Afterwards an extensive and as far as possible complete examination has to take place to confirm the quality (cf. Steinegger/Hänsel 1998: 125f.).

2.4.1.1 Influences on the quality

There are usually three factors to define the quality of drugs: selection of the plants, origin and recovery (cf. Steinegger/Hänsel 1998: 127).

2.4.1.1.1 The selection and origin of plants

Herbal drugs can either be gained from wild-crafting or from plantations. About 70 – 90% of the drugs are still taken from wild-crafting. But unfortunately, there are several disadvantages, which often results in mistakes when defining the species. Furthermore, the heterogeneity (Verschiedenartigkeit) of each batch (Charge) is extremely high due to the mixing of drugs from different places and collectors.

In contrast, the growing of plants has many advantages. There can be made a genetic selection of plants, the time of collecting and the method of drying can be decided, the contamination (Verunreinigung) with heavy metals and pesticides can be prevented when clean soils are chosen, so that it is possible to grow high-quality plants that are composed regularly.

If plants, such as arnica (Arnika) or gentian (Enzian) are protected by law, there is no other possibility than to grow them, if they are needed for production. But regarding the exploitation of natural resources and the increasing need of plants that are used for medicinal products or food, growing plants is preferable in each case (cf. Steinegger/Hänsel 1998: 127).

2.4.1.1.2 Recovery of drugs

Not only the selection of plants and the environmental conditions, but also the treatment of the plants after the crop and their storage during transport and afterwards play an extremely important role. When the plants are not dried appropriately (too high temperature or humidity), their quality may worsen. For example, the amount of volatile (flüchtig) substances of content, such as essential oils may decrease. If the air is too humid, certain proteins may be activated that cause decomposition (Abbau) of substances of content. Moreover, at high temperature and humidity, there is a danger of mould (Schimmel).

Another important factor is the degree of comminution (Zerkleinerungsgrad) of the drugs. Extension of the surface makes the drugs more prone to negative influences, such as humidity, warmth and light. The influence of light is decisive especially for the herbs and leaves of a plant. Those drugs easily bleach and become unsightly. Besides, due to the influence of light, chemical processes may be expedited, which have a negative influence on the strength of the substances of content. For this reason, drugs should always be protected from light and stored as dry as possible (a relative humidity of about 60%) (cf. Steinegger/Hänsel 1998: 128f.).

2.4.2 Denotation/ Title

In the European pharmacopoeia, the Pharmacopoea Europaea (PhEur), as well as the German pharmacopoeia (DAB) and the Swiss pharmacopoeia (Helv), the vernacular (English, French, German) denotation of the drug is the title of the monography (Monographie), i.e. a treatise that deals with only one topic. The Latin denotation is written as the subtitle, for example, valerian root – valerianae radix (Baldrianwurzel). The denotation is composed of the botanical name of the plant and the plant organ, e.g. valerian root. To clearly characterise a plant, its genus (Gattung) and species (Art), sometimes also its variety (Varietät) may be added to the title. The variety is a category to classify the subspecies (Unterarten) of a plant (cf. Steinegger/Hänsel 1998: 130).

2.4.3 Definition of drugs

In the monographies of the pharmacopoeia, a definition of the drug follows the title and subtitle. This means that characteristics, origin and, if necessary, certain conditions of strength and drying are determined as well.

The definition contains the following information:

- Original plant
- Plant organ: precise information about the part of the plant; additionally, if necessary for the quality, the time of the crop (e.g. collected “during the inflorescence”); furthermore, if the fresh or the dried drug is used; if the plant contains sensitive substances of content, such as essential oils, certain conditions of drying are named.
- Degree of comminution (Zerkleinerungsgrad) of the drug: e.g. the whole drug, cut thickly (grob geschnitten), powdered (pulverisiert), etc. The condition of the drug may influence the strength of sensitive substances of content (empfindliche Inhaltsstoffe).
- Strength (Gehalt): information is given about certain substances of content (Inhaltsstoffe) or about one group of substances of content (cf. Steinegger/Hänsel 1998: 131f.).

2.4.4 Characterisation of drugs

2.4.4.1 Characteristics

Properties and characteristics of drugs, such as colour, smell, etc., are summarized. Though this information is not always unambiguous, during the examination of the drug it gives important indications about identity and purity of the drug.

Possible abnormalities may appear for reasons of:

- Confusion (Verwechslung)
- Contamination (Verunreinigung)
- Adulteration (Verfälschung)
- Inappropriate crop or storage (Unsachgemäße Ernte oder Lagerung)

2.4.4.1.1 Appearance (Aussehen)

In the monographies in most cases, the colour of the drug is added to the description, though the description is only rarely unambiguous, for example “light drab”. However, the description of the shape, e.g. of fruits, is easier to retrace according to the information in the monographies (cf. Steinegger/Hänsel 1998: 132f.).

2.4.4.1.2 Scent (Geruch)

A lot of drugs have a very characteristic smell. To examine drugs that are not powdered, they are ground between the fingers. By this kind of examination adulterations with other similar species can often be discovered more easily than by the microscope. Thus, for example, the genuine peppermint can be differentiated from other species of mint. Moreover, a possible mould or foulness may be discovered by the scent. Even indications of the loss of substances of content in essential oils (hardly any or no smell at all) can be recognized with the scent. For drugs containing fats, such as pumpkin seed, a possible foulness can be discovered due to a rancid (ranzig) smell (cf. Steinegger/Hänsel 1998: 133).

2.4.4.1.3 Taste (Geschmack)

There are four basic flavours (sweet, salty, sour and bitter), which can vary in their nuances for reasons of several factors, such as state of aggregation of the drug (solid, liquid), colour, temperature of the probe, sensitivity of the taster, etc. Besides the taste buds (Geschmacksknospen) on the tongue which make it possible to taste the four basic flavours, the sense organs for temperature and for pain play a decisive role in tasting (cf. Steinegger/Hänsel 1998: 133f.).

2.4.4.1.4 Surface (Oberfläche)

Characteristics of the cut or the whole drug can be discovered by pressing or breaking it, for example, an even break (glatter Bruch) or a fibred surface (faserige Fläche). The surface may be even (glatt), uneven (rau) or pubescent (behaart).

Besides the indications of the identity, by powdering the drug, sometimes a contamination, such as frass (Insektenfraß) may be recognized (cf. Steinegger/Hänsel 1995: 134).

2.4.4.1.5 Identity (Identität)

The aim of this examination is to unambiguously identify the drug. Usually, the identity of drugs is determined by a macroscopic examination, that means it is perceptible to the naked eye, or a microscopic examination, as well as by chemical reactions to colours (cf. Steinegger/Hänsel 1998: 134).

2.4.4.1.6 Purity (Reinheit)

This examination aims to avoid contaminations of the drug as far as possible, or to limit them to an acceptable degree. In the pharmacopoeia, the examinations of purity usually include the examination of foreign matter, loss of water, ember (Asche) and strength of extract (Extraktgehalt. On the one hand, possible contaminations of drugs can be additives (Beimengungen), which may reduce the value of the drug, and on the other hand, such additions which may develop a toxic effect. Therefore, the examinations of purity have to be carried out carefully. Due to pollution, especially for drugs that are not cultivated it is necessary to carry out a series of elaborate examinations (cf. Steinegger/Hänsel 1998: 134f.).

2.4.4.1.7 Foreign matter (Fremde Bestandteile)

In the pharmacopoeia, foreign matter are additions, such as mould, insects or other animal contaminations, and mineral substances, such as earth. Further additions can be other parts of plants which are not in accordance with the definition of the drug, or even different plants. The examination is carried out by looking at the plant with the naked eye or a magnifier, and later by selecting the foreign matter. Thus, the percentage of additions is determined. Powder drugs are examined with the microscope. They only meet the demands when the foreign matter only occurs sporadically. Even when the drugs are collected carefully, contaminations cannot be avoided completely. As a result, small clods of earth can be found in radix drugs, or pieces of stems can be found on leaf and flower drugs. Depending on the type of crop, small pieces of other plants can be discovered as well.

If the drugs are not stored or transported appropriately, they can be contaminated with insects. This can be seen with the naked eye, because in this case, the parts of the drugs are kept together like a cobweb or they easily fall apart (cf. Steinegger/Hänsel 1998: 135).

2.4.4.1.8 Loss of water, ember, water content

Important parameters for the permanency of drugs are their water content and residual moisture (Restfeuchtigkeit). If the drugs are not dried thoroughly, they create a culture medium especially for mould, which within a short time can result in a loss in value. Depending on their condition, fresh plants have a relatively high water content. For herbal and leaf drugs it can be about 70-85%, whereas for radix and ligneous drugs it is naturally lower. According to atmospheric humidity, dried trading drugs have a water content of between 5 and 15%, but the ideal percentage would be about 12%.

Usually the loss of water during drying is determined at 105°C. With this method, not only the water content of the drug is examined, but also all the substances that are volatile at this temperature. Moreover, the examination of the loss of water gives information about the appropriate crop, storage and transport of the drugs. The determination of the loss of water has a special significance in the production of homoeopathic tinctures that are made of fresh plants. Substances that are not volatile and remain when drugs are burnt and annealed (ausglühen) afterwards, are called ember (cf. Steinegger/Hänsel 1998: 135f.).

2.4.4.1.9 Strength of extract

With this examination, scientists try to get some information about the volatile substances of content. The strength of extract is the amount of all the soluble substances which can be taken from a drug with the help of a certain solvent (Lösungsmittel) under precisely determined conditions. When the solvent has evaporated (verdunsten), the percentage of the remainder shows the result of the strength of extract (cf. Steinegger/Hänsel 1998: 136).

2.4.4.1.10 Strength (Gehalt)

Another very important characteristic for the quality of drugs is the examination of the strength. In the monographies, maximum and minimum values for typical substances of content are determined. Ideally, these are substances or groups of substances that are relevant for the pharmacological effect of the drugs. If this is not possible, index substances can be used to determine the strength. These are substances that

are contained in a drug, but that cannot be proven to be involved in the effect of the drug.

Due to the drugs from wild-craftings that are predominant still today, this usually heterogeneous material has to be mixed with homogenous material in order to guarantee a constant quality of the medicinal products. However, this causes an additional effort in the production of herbal medicines (cf. Steinegger/Hänsel 1998: 136f.).

2.4.5 Storage of drugs (Lagerung der Drogen)

During storage, usually all drugs have to be protected from light, since for example, leaf and flower drugs easily bleach in the light and chemical reactions such as decomposition (Abbau, Zerfall) or changing of the substances of content are accelerated. This also applies to the temperature which can cause a changing of the substances of content or a decrease of those that are volatile, such as essential oils. When the air is too humid, decompositional reactions of the substances of content are evoked and resulting from that mould may develop. In that case, the degree of comminution of the drug plays an important role, since the above mentioned negative influences have quicker and heavier effects when the particle surface is larger. For certain drugs it is advisable to store them together with appropriate desiccants (Trockenmittel), such as mullein (Wollblume), (cf. Steinegger/Hänsel 1998: 141).

2.5 Types of drugs

In the following chapter the most common types of herbal drugs and their compositions are explained.

2.5.1 Radix drugs (Wurzeldrogen)

A radix drug consists of the primary root and the tap root (see chapter 1.2.1) of a medicinal plant. However, the pharmaceutical term *radix* does not always conform with the morphological term *root*. There are a number of radix drugs, consisting of roots and parts of the stem. These can either be rhizomes (Wurzelstock) that are collected with the roots, or rhizomes that turn gradually into the roots. Examples of radix drugs are the roots of archangel (Engelwurz), valerian (Baldrian) or lovage (Liebstöckel), (cf. Steinegger/Hänsel 1998: 119).

2.5.2 Rhizome drugs (Wurzelstockdrogen)

Rhizomes are underground growing, thickened stems of perennial herbs, that have distinct surfaces on both sides, if they are growing horizontally. Whereas they have

roots on their undersides, the uppersides annually develop new shoots that die after the ripening of the fruit. Examples of rhizome drugs are the roots of Javanese curcuma (Javanische Gelbwurz) or tormentil (Blutwurz), (cf. Steinegger/Hänsel 1998: 119).

2.5.3 Tuber drugs (Knollendrogen)

Tubers are mostly underground organs of various shapes: spheroidal (kugelig), oval or longish. Morphologically, a tuber can emanate from various parts. According to that, we differentiate between the tubers of shoots, hypocotyl (Keimachse unterhalb der Keimblätter der Blütenpflanzen) and roots. So, for example, potatoes develop shoot tubers, the Salep tuber and the Jalapae tuber are root tubers (cf. Steinegger/Hänsel 1998: 119).

2.5.4 Cortex drugs (Rindendrogen)

The cortex drugs exclusively develop from perennial ligneous plants after the secondary diameter growth (sekundäres Dickenwachstum). This term includes the part of the stem or root of ligneous plants that is outside of the cambium zone (Kambiumring). Cambium is the term for the meristem (Bildungsgewebe) of the secondary diameter growth. However, it is the part inside of the cambium zone that is used for ligneous drugs. Examples of cortex drugs are cascara bark (Cascararinde), cinchona bark (Chinarinde), cinnamon (Zimtrinde), (cf. Steinegger/Hänsel 1998: 120).

2.5.5 Leaf drugs (Blattdrogen)

Leaves are composed of a leaf base (Blattgrund) which often consists of stipules (Nebenblätter) or a leaf sheath (Blattscheide), a leafstalk (Blattstiel) which can also be missing and a leaf blade (Blattspreite). Leaf drugs can be just green leaves, or in some cases they additionally contain blooming twigs (blühende Zweigspitzen). For example: belladonna leaves (Tollkirschenblätter) and thorn apple leaves (Stechapfelblätter), (cf. Steinegger/Hänsel 1998: 120).

2.5.6 Bulb drugs (Zwiebeldrogen)

A bulb is a usually underground shoot for storage, the fleshy leaves of which are filled with reserve substances. Bulb drugs do not always represent the whole bulb. So, for example the squill (Meerzwiebel) only consists of the dried, fleshy middle parts. As to the bulb garlic there is one leaf that covers numerous small bulbs, each of them developed from one thickened leaf (cf. Steinegger/Hänsel 1998: 120f.).

2.5.7 Flower drugs (Blütendrogen)

Flower drugs can either consist of dried single flowers (Einzelblüten) or of dried inflorescences (Blütenstände). From the morphological point of view, a flower is that part of the shoot the leaves of which are metamorphosed for sexual reproduction.

Normally, the morphological term and the pharmaceutical term *flower* do not have the same meaning. Examples of flower drugs are arnica blossoms or hibiscus blossoms (cf. Steinegger/Hänsel 1998: 121).

2.5.8 Fruit drugs (Fruchtdrogen)

The term *fruit* includes all the organs of a plant that cover the seeds until ripeness and later help to spread them.

The various types of fruits are classified according to different aspects (cf. Steinegger/Hänsel 1998: 121f.):

- according to the behaviour of the mature seed (dehiscent fruit, indehiscent fruit = Streufrucht, Schließfrucht)
- according to the state of development of the pericarp (Fruchtwand), which is the part that encloses the seeds (dry fruit, fleshy fruit)
- according to the number of capillaries (number of fruit leaves) and connation (Verwachsung), (fruit with only one leaf)

The botanical term is not always identical with the pharmaceutical term.

Examples:

- anise: in trading goods usually available with the stem;
- caraway: when dried, this drug consists of the single dehiscent fruit;
- rose hip (Hagebutte): consists of the dried axle cups and the fruits they contain, which are often misleadingly confused with seeds;
- juniper berry (Wacholderbeere): the hard seeds are enclosed by metamorphosed leaves, so that it looks like a berry.

2.5.9 Semen drugs (Samendrogen)

The semen is the organ of the semen plant which contains the embryo and often also the nutritive tissue (Nährgewebe). It is enclosed by a hard cover and it serves for distribution. The semen are classified by the absence or existence of the nutritive tissue. In general, the botanical and pharmaceutical terms of semen are identical, but there are exceptions (cf. Steinegger/Hänsel 1998: 122):

- cola semen: these are the dried kernels, which means the semen without the seed coat (Samenschale);
- coffee beans: they consist of the shucked semen (enthülste Samen); these are semen without seed coats but with a thin semen skin;
- nutmeg apples (Muskatnüsse): they as well are only the kernels.

2.5.10 Herbal drugs (Krautdrogen)

Herbal drugs consist of the aerial parts (oberirdische Teile) of plants that do not have a ligneous stem (holziger Stängel). They sometimes also consist of the herbaceous shoot apices (krautige Triebspitzen) of half shrubs (Halbsträucher). These are ligneous plants, where only the lower part lignifies (verholzen) whereas the upper part dies each year (cf. Steinegger/Hänsel 1998: 122).

2.5.11 Ligneous drugs (Holzdrogen)

The tissue of roots and shoots from old trees and shrubs (ligneous plants) that lies within the cambium (Bildungsgewebe) is known as wood. Examples are sandalwood (Sandelholz), guaiacum (Guajakholz), and juniper wood (Wacholderholz). Today, ligneous drugs are hardly used any more (cf. Steinegger/Hänsel 1998: 122).

3 Linguistic aspects

In this part I will take a closer look on the formation of technical terms in the language of medicinal plants.

3.1 Morphology: Word-formation

Morphology is the study of the structure of words, the elements forming words are called **morphemes**. For example, the word *reopened* consists of three morphemes. One minimal unit is *re-*, meaning ‘again’, another minimal unit is *open*, and the third one is *-ed*, indicating past tense.

Morphemes are further distinguished by **free**, that means they can stand by themselves as single words, e.g. *walk*, and **bound**, that means they normally cannot stand alone, and therefore, are usually attached to other forms, e.g. *re-* (see example above). These types can again be divided into **lexical morphemes**, i.e. words that carry the content of messages, and **functional morphemes**, which have a certain function in a message, for example, prepositions, pronouns, etc. Bound morphemes can be split up as well. There are **derivational morphemes**, which are elements used to make new words, that are grammatically different from the stem, e.g. the suffix *-ment* which changes the verb *pay* into the noun *payment*.

The second set of bound morphemes are called **inflectional morphemes**, and they are used to indicate aspects of the grammatical function of a word. So they show if a word is past tense or not, or if it is singular or plural, etc. (cf. Yule 2004: 76f.)

3.1.1 Compounding

Compounding refers to the process of combining separate words in order to produce one single form. The result of compounding is a series of words that modify one another and can either be **endocentric**, which means that the compound as a whole is equivalent to one or more of its parts, or **exocentric**, i.e. the compound meaning differs from the meanings of the combined words (cf. Yule 2004: 65). Referring to the terminology of medicinal plants there are plenty of examples, e.g. *leafstalk*, *leaf blade*, *leaf sheath*, *wild-crafting*, but especially of plant names, such as *horse chestnut*, *opium poppy*, *bearberry* (endocentric), *foxglove*, *corncockle*, *nightshade*, *hawthorn*, *woodruff*, *horsetail* (exocentric), etc. This process is extremely productive in modern English. All of the examples mentioned above are noun-compounds, which means that the compound is formed by two nouns.

3.1.2 Derivation

This is by far the most common word-formation process in the production of modern English words. It is accomplished by **affixation**, i.e. when at least one bound morpheme is added to another morpheme. Usually, the affixes are borrowed from other languages, especially Greek and Latin. There are two types of affixes: **prefixes**, which are affixes added to the beginning of a word (*un-*, *de-*) and **suffixes**, which are added to the end (*-ish*, *-ful*), (cf. Yule 2004: 69). Some examples relating to medicinal plants are *antiphlogistic*, *derivative*, *ligneous*, *inflammation*, *indehiscent*, *monocotyledon*, *permeable*, etc.

3.1.3 Conversion (zero- derivation)

Conversion indicates a change in the function of a word, for example, when a noun becomes a verb without any reduction. This word-formation process is quite productive in modern English (cf. Yule 2004: 67). Examples of conversion are *acupuncture* (n) and *to acupuncture*, *blister* (n) and *to blister*, *dose* (n) and *to dose*, *extract* (n) and *to extract*, *laxative* (n) and *laxative* (adj), *derivative* (n) and *derivative* (adj).

3.1.4 Borrowing

One of the most common processes of forming new words in English is named **borrowing**, which basically describes the taking over of words from other languages. Throughout its history, a huge amount of loan-words have entered the English language, such as *alcohol* (Arabic), *piano* (Italian), *croissant* (French), etc. (cf. Yule 2004: 65).

In the field of medicinal plants most of the loan-words derive from Latin and Greek, e.g. *desiccant*, *derivative*, *decomposition*, *extract*, *fennel* (Latin), *cinnamon*, *coriander*, *antiphlogistic*, *centaury*, *chicory* (Greek), but also from Arabic, e.g. *alchemy*, *alkaloid* and *hyssop*. These borrowings are often indicated in prefixes (*anti-*, *de-*) and suffixes (*-ology*, *-ation*, *-ition*), for example *antispasmodic*, *anti-flatulent*, *debase*, *decomposition*, *dermatology*, *pharmacology*, *contamination*, *concentration*.

3.2 How to handle technical terms in non-scientific communication

The following chapter gives options how to handle technical terms in non-scientific communication.

3.2.1 Explanation of technical terms with direct, precise definitions

A technical term can be explained with a definition, that means that its scientific contents are explained with a defining description. A popularizing definition is not a precise scientific definition but it tries to refer to a rather general knowledge. This should guarantee a correct explanation context for laymen as well. But the most important aspect is to explain the term and its functional contents. Further, the functional information can be amplified, for example by language-related references, such as the origin of a term (cf. Niederhauser 1999: 143f.).

3.2.2 Explanation of the technical terms with short definitions and short explanations

In popular science texts it is often sufficient to explain technical terms with short definitions or short explanations, instead of extensive definitions. These are definitions which are not formulated as whole sentences but only consist of parentheses or ellipses. However, the disadvantage is that too short explanations of technical terms may cause wrong ideas in people's minds or they may be imprecise (cf. Niederhauser 1999: 147).

3.2.3 Implicit explanations

An implicit explanation of technical terms means that the term is quoted at several passages of a text and its explanation is extended over the whole passage. From that textual interlinking, the significance of a technical term can be deduced. This method prevents from school book like definitions. Explanations are integrated in the text without interrupting it (cf. Niederhauser 1999: 150f.).

3.2.4 Leaving out technical terms by paraphrasing

In the non-scientific communication technical terms can be left out but then their technical contents are paraphrased without using the technical terms themselves.

This method prevents from using too many technical terms (cf. Niederhauser 1999: 153f.).

3.2.5 Unexplained technical terms

In popular science texts technical terms can also be used without any explanations. But then it is assumed, that the interested readers have a certain general knowledge about the field and that they already know most of the technical terms. The decision which terms are regarded as generally known and are therefore not explained determines the addressees (cf. Niederhauser 1999: 155f.).

3.2.6 Linguistic reference and play on words

Regarding technical terms from their expressional aspect, they are linguistic elements that also relate to linguistic elements. For this reason, the explanation can sometimes refer to the word form or to linguistic associations, caused by the term.

However, this method is hardly ever used since not every technical term is suitable for a corresponding reference (cf. Niederhauser 1999: 158f.).

3.2.7 Fictitious comprehensibility of technical terms

To make technical terms more comprehensible they are often replaced by their English synonyms, because English words are regarded as more comprehensible than the usually Latin or Greek words. This method is called “double-terminology”.

But here it is possible that the synonyms are misunderstood for they aren’t regarded as difficult (cf. Niederhauser 1999: 160f.).

4 Didactic Aspects

4.1 Questions on the Target Group

When teaching a language or any other field for a specific purpose it is of high importance to take the following questions into account before starting (cf. Hutchinson 1987: 59f.):

- a) Why is the language needed?
(for study, for work, for training, for a combination of these, for some other purpose, such as promotion examination)
- b) How will the language be used?
(speaking, writing, reading, telephone, face to face, academic texts, lectures, informal conversations, technical manuals, catalogues)
- c) What will the content areas be?
(Subjects, such as medicine, biology, etc. and level, e.g. technician, postgraduate, school)
- d) Who will the learner use the language with?
(Native or non-native speakers, experts, lay persons, students, colleagues, teachers, customers, etc.)
- e) Where will the language be used?
(Office, lecture theatre, hotel, alone, meetings, on telephone, in home country, abroad)
- f) When will the language be used?
(Currently with the ESP course or subsequently, or frequently, seldom, in small amounts)

For this “assumed course” the questions can be answered as follows:

Ad a) Since the people in this course are Austrian pharmaceuticals students, they will need English for pharmaceuticals for their study and also as a preparation for their jobs.

Ad b) They will need the language particularly for reading English technical literature, but also for writing scientific papers, and speaking.

Ad c) The content areas are pharmaceuticals, which naturally overlap with other sciences, such as chemistry, physics, or biology.

Ad d) The learners will use the language with English-speaking colleagues, sometimes with customers, and in most cases experts.

Ad e) The language will sometimes be used when talking to English-speaking customers in the pharmacy, and more frequently of course in conversation with colleagues in the field of research, for there, English is the most frequently used language.

Ad f) The language will be used in the ESP course and later frequently in scientific contexts and seldom in the pharmacy.

4.2 Target Needs

It is useful to look at the target situation in terms of *necessities*, *lacks*, and *wants*.

4.2.1 Necessities

Necessities can be seen as the demands of the target situation, in other words, what the learner has to know in order to function effectively in the target situation (cf. Hutchinson 1987: 55).

According to pharmaceuticals students this would mean that it is really important for them to know the correct terms in order to be able to produce good and grammatically correct texts. Referring to speaking skills, it may depend on the situation and on the person(s) they would be talking to.

4.2.2 Lacks

When teaching a language it is also important to know what the learners do already know, in order to decide which of the necessities they still lack (cf. Hutchinson 1987: 56). A method to find out the lacks of pharmaceuticals students would be to make them read texts about pharmaceutical topics. The amount of help they need will give information about their lacks.

4.2.3 Wants

The only persons who can decide what the wants of the learners are, are the learners themselves. Depending on the individual situation of each single learner, the teacher has to be aware that the wants of the learners may differ from each other. For this part of the thesis, pharmaceuticals students were asked about their wants, and they all agreed on the need for technical terms and the improvement of their grammar knowledge.

The following exercises try to comprise all three components of the target needs.

4.3 Exercises

(see key on pages 41 – 43)

4.3.1 Find the correct technical terms for the following expressions from the list below

assimilation	condensation	pericarp
batch	antispasmodic	laxative
cardiac glycoside	cambium	liquorice
carpel	perennial	saturated

- 1) A medicine or something that you eat which makes your bowels empty easily.
- 2) The female reproductive unit of a flower, consisting of the ovary with ovules.
- 3) The incorporation or conversion of nutrients into protoplasm that in animals follows digestion and absorption and in higher plants involves both photosynthesis and root absorption.
- 4) (Of plants) living for more than two years.
- 5) Drugs used in the treatment of congestive heart failure.
- 6) Being a solution that is unable to dissolve or absorb any more of a solute at a given temperature and pressure.
- 7) The process of change from gas to liquid.
- 8) A thin formative layer between the xylem and phloem of most vascular plants that gives rise to new cells and is responsible for secondary growth.
- 9) A black substance produced from the root of a plant, used in medicine and sweets.
- 10) The part of a fruit enclosing the seeds that develops from the wall of the ovary.
- 11) A quantity of food, medicine etc. that is produced or prepared at the same time.
- 12) Capable of preventing or relieving spasms or convulsions.

4.3.2 Read the following text on yarrow and try to answer the questions below in full sentences

Yarrow has seen historical use as a medicine, mainly because of its astringent effects. Decoctions have been used to treat inflammations such as piles (hemorrhoids), and also headaches. Confusingly, it has been said to both stop bleeding and promote it. Infusions of Yarrow, taken either internally or externally, are said to speed recovery from severe bruising. The most medicinally active part of the plant are the flowering tops. They also have a mild stimulant effect, and have been used as a snuff. Today, yarrow is valued mainly for its action in colds and influenza, and also for its effect on the circulatory, digestive, and urinary systems. The flowers, rich in chemicals are converted by steam into anti-allergenic compounds. The flowers are used for various allergic mucus problems, including hay fever. Harvest during summer and autumn: drink the infused flower for upper respiratory phlegm or use externally as a wash for eczema. Inhale for hay fever and mild asthma, use fresh in boiling water. The leaves encourage clotting, so it can be used fresh for nosebleeds. However, inserting a leaf in the nostril may also start a nosebleed; in the past this was done to relieve migraines. Harvest throughout the growing season: the aerial parts are used for phlegm conditions, as a bitter digestive tonic to encourage bile flow, and as a diuretic. The aerial parts act as a tonic for the blood, stimulate the circulation, and can be used for high blood pressure. Also useful in menstrual disorders, and as an effective sweating remedy to bring down fevers. Harvest during flowering: the tincture is used for urinary disorders or menstrual problems. Prescribed for cardiovascular complaints. Soak a pad in an infusion or dilute tincture to soothe varicose veins. Yarrow intensifies the medicinal action of other herbs taken with it, and helps eliminate toxins from the body (cf. Wikimedia Foundation Inc. (o. J.): wikipedia.org, in: <http://en.wikipedia.org/wiki/Yarrow> [23.10.2008]).

- 1) What are the main reasons for the use of yarrow in medicine?
- 2) What is the most medicinally active part of yarrow?
- 3) For which effects is yarrow most valued today?
- 4) What are the aerial parts of yarrow used for?
- 5) What are the effects of the flowers of yarrow?

4.3.3 Try to explain the following technical terms in your own words

transpire	wild-crafting	derivative
mould	venation	extract
sudorific	meristem	volatile
desiccant	blister	permeable

4.3.4 Try to connect the Latin names of the plants on the left side with their English equivalents on the right side

digitalis purpurea	tormentil
tropaeolum minus	foxglove
valeriana officinalis	thorn apple
papaver somniferum	nasturtium
allium sativum	marsh mallow
atropa belladonna	valerian
althaea officinalis	opium poppy
rumex acetosa	elder
silybum marianum	nightshade
sambucus nigra	garlic
potentilla erecta	holy thistle
datura stramonium	sorrel

4.3.5 Try to connect the right terms for the leaf margins with the leaves on the picture below. The explanations of the terms and their German equivalents will help you.

Serrulate: having small, fine teeth or notches along the edge (fein gesägt)

Lobed: having major divisions which extend almost to the base or centre (gelappt)

Serrate: having sawlike notches along the edge (gesägt)

Laciniate: having a fringe; cut deeply into narrow, jagged segments (fein gezackt)

Cleft: divided by one or more narrow spaces extending more than halfway to the midrib (gebuchtet)

Crenulate: having tiny notches or scallops (fein gekerbt)

Dentate: having a toothed margin (gezähnt)

Entire: having an unbroken margin, without notches or indentations (ganzrandig)

Ciliate: having small hairlike processes extending from certain plant cells and forming a fringe (haarig gefranst)

Lacerate: having jagged edges (gezackt)

Revolute: rolled backward or downward at the tips or margins (nach außen gerollt)

Doubly serrate: having serrations along the serrations (doppelt gesägt)

Sinuate: having an indented, wavy margin (gebuchtet)

Incised: having the edges deeply notched (eingeschnitten)

Pinnatifid [sic]: having leaves in a featherlike arrangement, with narrow lobes whose clefts extend more than halfway to the axis (gefiedert)

Denticulate: finely dentate (fein gezähnt)

Involute: rolled inward at the edges (nach innen gerollt)

Crenate: having a notched or scalloped edge (gekerbt)

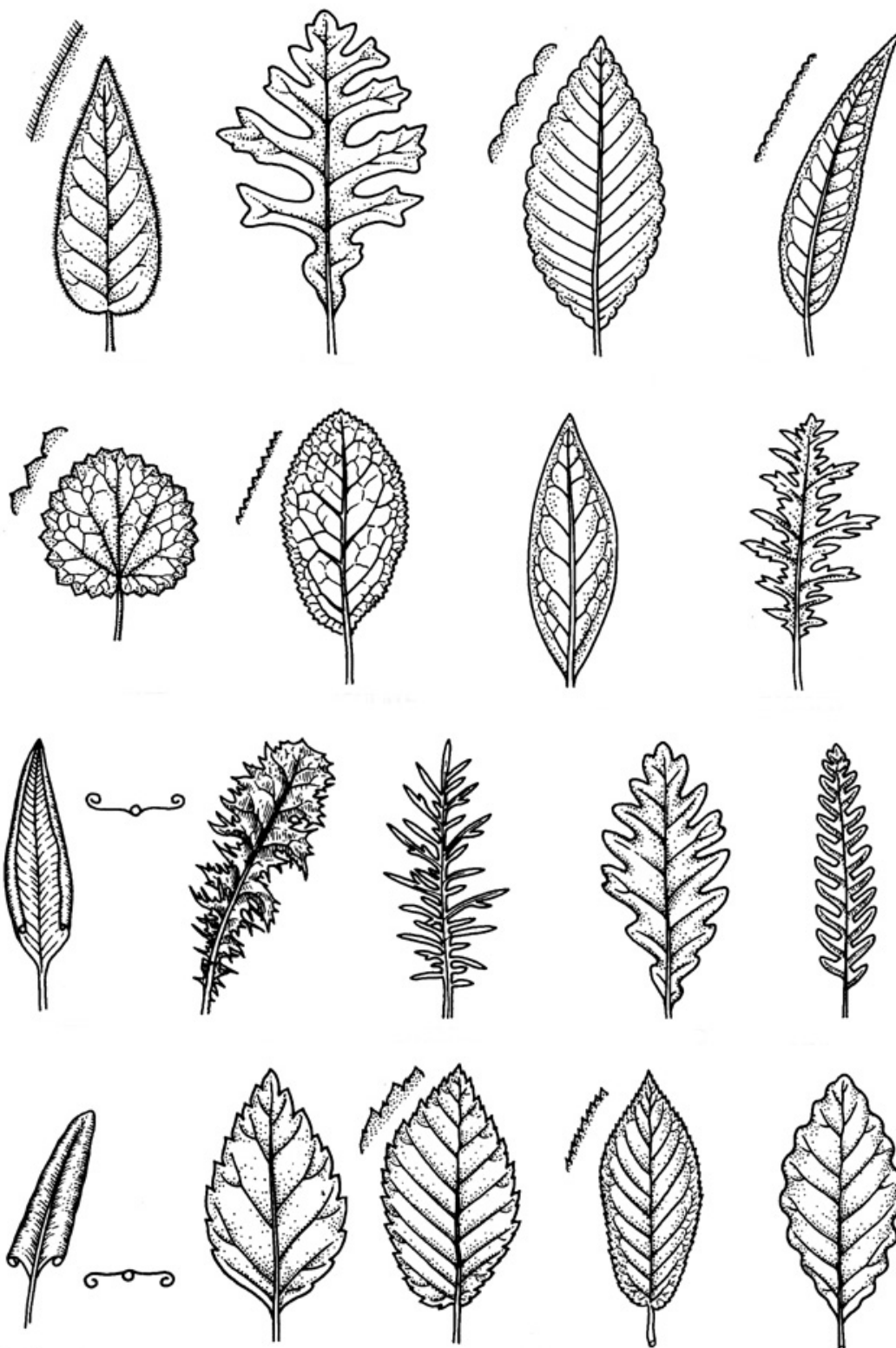


Figure 1: leaf margins (cf. The vPlants Project. vPlants: A Virtual Herbarium of the Chicago Region (© 2001 – 2006): <http://www.vplants.org/plants/glossary/plate04.jpg> [23.10. 2008])

4.4 Key to exercises

4.3.1

- 1) laxative
- 2) carpel
- 3) assimilation
- 4) perennial
- 5) cardiac glycoside
- 6) saturated
- 7) condensation
- 8) cambium
- 9) liquorice
- 10) pericarp
- 11) batch
- 12) antispasmodic

4.3.2

Text from (Wikimedia Foundation Inc.(o. J.): wikipedia.org, in: <http://en.wikipedia.org/wiki/Yarrow> [23.10.2008]).

4.3.3

transpire→ When a plant transpires, it gives off water from its surface.

mould→ A soft green or black substance that grows on food which has been kept too long, and on objects that are in warm, wet air.

sudorific→ Causing or inducing sweat.

desiccant→ A drying agent.

wild-crafting→ Collection of herbs from a natural habitat.

venation→ The arrangement of veins in a leaf.

meristem→ A plant tissue responsible for growth, whose cells divide and differentiate to form the tissues and organs of the plant.

blister→ A swelling on your skin containing clear liquid, caused for example by a burn or continuous rubbing.

derivative→ Something that has developed or been produced from something else.

extract→ A substance taken from another substance by using a special process.

volatile→ A volatile liquid or substance changes easily into a gas.

permeable→ Material that is permeable allows water, gas, etc to pass through it.

4.3.4

digitalis purpurea ↔ foxglove

tropaeolum minus ↔ nasturtium

valeriana officinalis ↔ valerian

papaver somniferum ↔ opium poppy

allium sativum ↔ garlic

atropa belladonna ↔ nightshade

althaea officinalis ↔ marsh mallow

rumex acetosa ↔ sorrel

silybum marianum ↔ holy thistle

sambucus nigra ↔ elder

potentilla erecta ↔ tormentil

datura stramonium ↔ thorn apple

4.3.5

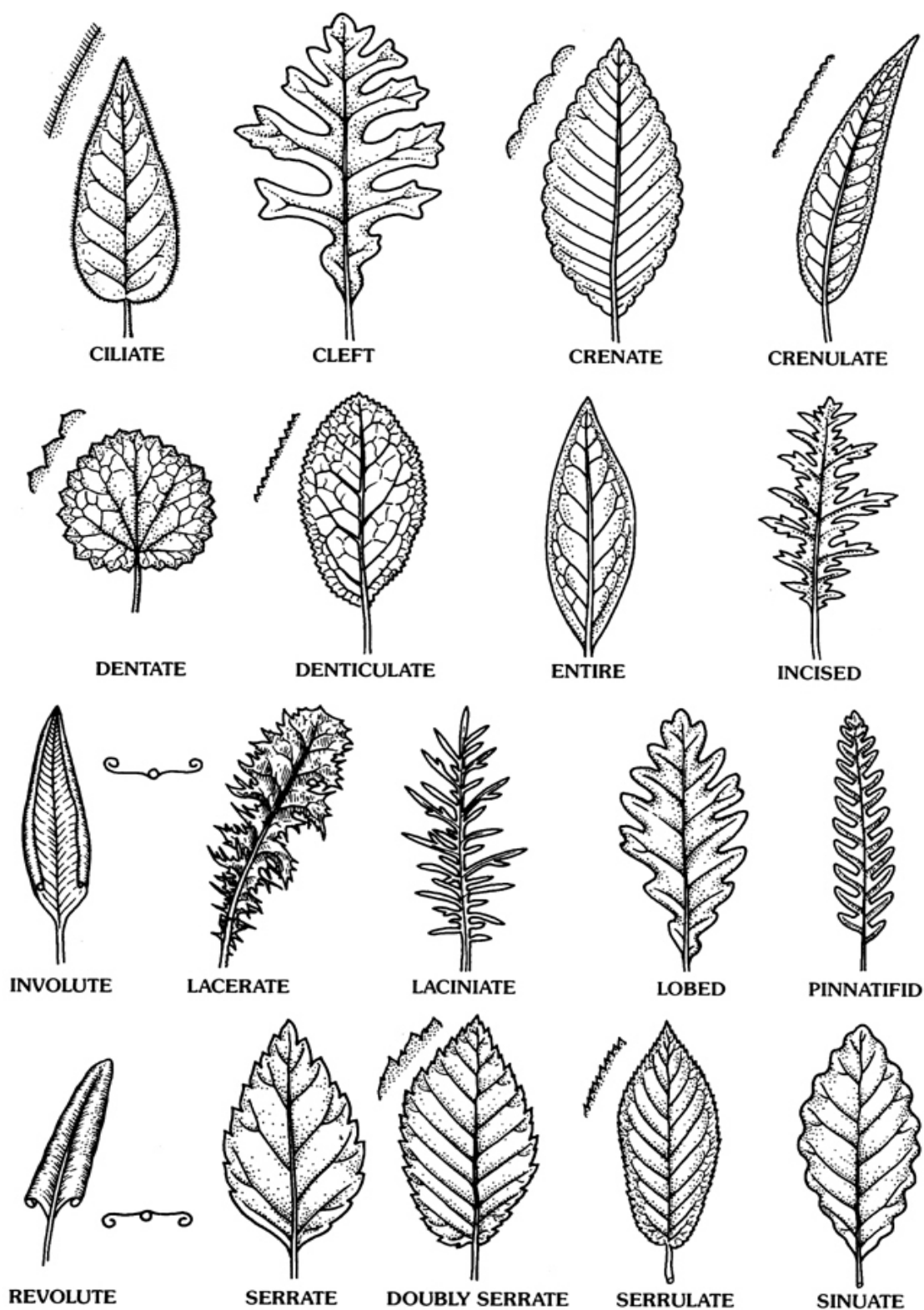


Figure 2: leaf margins (cf. The vPlants Project. vPlants: A Virtual Herbarium of the Chicago Region (© 2001 – 2006): <http://www.vplants.org/plants/glossary/plate04.jpg> [23.10. 2008])

5 Glossary

5.1 Medicinal plants in English and German

Explanation of abbreviations:

m: masculine	sg: singular	etym: etymology
f: feminine	pl: plural	syn: synonym
n: neutral	adj: adjective	ant: antonym
def: definition	v: verb	expl: explication

If a definition or an explication is not quoted, it is written by myself.

active agent, sg

Def: "A chemical or substance that makes other substances change."
(*Longman Dictionary of Contemporary English* 1995: s.v. agent).

deutsch (dt.): Wirkstoff, m, sg

Def: "Substanz, die im lebenden Organismus biologische Wirkungen hervorruft." (Burger/Wachter 1998: s.v.).

acupuncture, sg

Def: "A method of stopping pain and curing disease by putting special needles into particular parts of the body." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Akupunktur, f, sg

Etym: von lateinisch *acus* = 'Nadel', *punctura* = 'das Stechen' (Wahrig-Burfeind 2000: s.v.)

Expl: "Jahrtausende altes chinesisches, heute auch in Europa wieder aufgenommenes Heilverfahren, bei dem durch Einstich goldener und silberner Nadeln an lehrmäßig festgelegten Hautpunkten erkrankte innere Organe beeinflusst werden, auch zur Anästhesie verwendet."
(Wahrig-Burfeind 2000: s.v.)

adulterate, v
verfälschen, v
↑ **to debase**

aggregate fruit, sg

Etym: from Latin *aggregatus*, past participle of *aggregare* = 'to add to'
(*The Times English Dictionary & Thesaurus* 2000: s.v. aggregate).

Def: "Composed of a dense cluster of florets" (*The Times English Dictionary & Thesaurus* 2000: s.v. aggregate).

dt.: Sammelfrucht, f, sg

Def: "Zahlreiche freie Früchte gehen aus einem apokarpen Gynoeceum hervor, die bei Reife wie Einzelfrüchte abfallen." (Burger/Wachter 1998: s.v.).

alchemy, sg only

Def: "A science studied in the Middle Ages that involved trying to change ordinary metals into gold." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Alchimie, f, sg

Etym: von arabisch *alkimia*, *chemeia* = 'Chemie' (Wahrig-Burfeind 2000: s.v.).

Def: "Mittelalterliche Chemie, besonders Goldmacherkunst." (Wahrig-Burfeind 2000: s.v.).

alkaloid, sg

Def: "Any of numerous usually colorless, complex and bitter organic bases (as morphine or caffeine) containing nitrogen and usually oxygen that occur especially in seed plants and are typically physiologically active." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/alkaloid> [15.07. 2008]).

dt.: Alkaloid, n, sg

Etym: von arabisch *al-qalī* = 'Laugensalz' (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v.)

Expl: "Einer der verschiedenartigen, häufig sehr kompliziert gebauten Naturstoffe mit heterozyklischen Ringsystemen (heterozyklischen Verbindungen) und gemeinsamen Merkmalen, wie basischer Charakter, Vorkommen in Pflanzen und Giftigkeit." (Wahrig-Burfeind 2000: s.v.).

anise (pimpinella anisum), sg: species

pimpinella: genus

apiaceae: family

Def: "A Eurasian annual herb of the carrot family having carminative and aromatic seeds." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/anise> [14.07.2008]).

dt.: Anis, m, sg: Art

Bibernellen: Gattung

Doldenblütler: Familie

Etym: Der Name geht auf das griechische Wort *ánison* für 'Dill' zurück, mit dem der Anis verwechselt wurde (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v.).

Def: "Ein Doldenblütler, dessen Samen als Geruchs- und Geschmackskorrigens und als hustenlösendes Mittel verwendet werden." (wissen.de GesmbH Gesellschaft für Online- Information (Copyright 2000-2005): München: <http://www.wissen.de> [09.07.2008]).

annual, adj

Etym: from Latin *annus* = 'year' (*Longman Dictionary of Contemporary English* 1995: s.v.)

Def: "A plant that lives for one year or season." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: einjährig, adj

Def: "Nur ein Jahr lebend, blühend, nicht überwinternd." (Wahrig-Burfeind 2000: s.v.).

anti-flatulent, adj

dt.: blähungshemmend, adj

↑ **flatulent, adj**

antiphlogistic, adj

Def: "Of or relating to the prevention or alleviation of inflammation." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: antiphlogistisch, adj

Etym: von griechisch *anti* = 'gegen', *phlogeos* = 'flammend' (Wahrig-Burfeind 2000: s.v.)

Def: "entzündungshemmend" (Wahrig-Burfeind 2000: s.v.).

antiseptic, adj

Def: "Helping to prevent infection." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: antiseptisch, adj

Etym: von griechisch *anti* = 'gegen', *sepsis* = 'Fäulnis' (Wahrig-Burfeind 2000: s.v.)

Def: "Krankheitserreger abtötend." (Wahrig-Burfeind 2000: s.v.).

antispasmodic, adj

Def: "Capable of preventing or relieving spasms or convulsions." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/antispasmodic> [15.07.2008]).

dt.: krampflösend, adj

Syn: antispastisch

Etym: von griechisch *anti* = 'gegen', *spasmos* = 'Krampf' (Wahrig-Burfeind 2000: s.v. spastisch)

Def: "Verkrampfungen lösend." (Wahrig-Burfeind 2000: s.v. spastisch).

arnica (arnica), sg: species

arnica: genus

asteraceae: family

Def: "Any of a genus of Northern temperate or arctic plants having yellow flowers." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Arnika (Arnica), f, sg: Art

Arnica: Gattung

Korbblütler: Familie

Etym: von griechisch *arnos* = 'Lamm' (Wahrig-Burfeind 2000: s.v.)

Syn: Schafkraut

Def: "Angehörige einer Gattung gelb blühender Korbblütler, Heilpflanze mit anregender Wirkung." (Wahrig-Burfeind 2000: s.v.).

assimilation, sg

Def: "The incorporation or conversion of nutrients into protoplasm that in animals follows digestion and absorption and in higher plants involves both photosynthesis and root absorption." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/assimilation> [09.07.2008]).

dt.: Assimilation, f, sg

Etym: von lateinisch *assimilatio* = 'Angleichung' (Wahrig-Burfeind 2000: s.v.)

Def: "Umwandlung der von einem Lebewesen aufgenommenen Stoffe in körpereigene Substanz." (Wahrig-Burfeind 2000: s.v.).

autumn crocus (colchicum autumnale), sg: species

colchicum: genus

colchicaceae: family

Syn: meadow saffron, naked lady

Def: "A plant of the lily family having pink or purplish autumn flowers." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Herbstzeitlose (*Colchicum autumnale*), f, sg: Art

Colchicum: Gattung

Zeitlosengewächse: Familie

Syn: Nackte Jungfer, Nackte Hure

Etym: von mittelhochdeutsch *zit(e)los(e)*, in der alten Zeit eine Frühlingsblume wie Krokus, später übertragen auf die *Herbstzeitlose*, die Verdeutlichung durch *Herbst-* im 18. Jh. Die Bildung ist wahrscheinlich eine Umdeutung von lateinisch *citatim*, *citatus* = 'hurtig, schnell' (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v.)

Def: "Von August bis Oktober blühende, zu den Liliengewächsen gehörende Pflanze mit hell lilafarbenen Blüten, enthält das giftige Alkaloid Kolchizin." (Wahrig-Burfeind 2000: s.v.).

axil, sg

Etym: from Latin *axilla* = 'armpit' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "The upper angle between a branch or leafstalk and the stem from which it grows." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Blattachsel, f, sg

Def: "Der Begriff bezeichnet bei Samenpflanzen den Winkel bzw. Bereich, an dem Blattoberseite (bzw. Blattstieloberseite) und Sprossachse ineinander übergehen. (Wikimedia Foundation Inc. (o.J.): wikipedia.org, in <http://de.wikipedia.org/wiki/Blattachsel> [08.12.2008]).

bark, sg

Def: "The outer covering of a tree." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Rinde, f, sg

Def: "Äußerer Gewebemantel an Stamm, Ast, Wurzel höherer Pflanzen." (Wahrig-Burfeind 2000: s.v.).

basic. adj

Ant: acid

Def: "Building salt in acids." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: basisch, adj

Ant: sauer

Def: "Mit Säuren Salze bildend und in wässriger Lösung Hydroxidionen abspaltend." (Wahrig-Burfeind 2000: s.v.).

batch, sg

Def: "A quantity of food, medicine etc. that is produced or prepared at the same time." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Charge, f, sg

Def: "Serie von Wirkstoffen, die in einem bestimmten Prozess hergestellt und verpackt worden sind." (Wahrig-Burfeind 2000: s.v.).

bearberry (arctostaphylos uva-ursi), sg: species

arctostaphylos: genus

ericaceae: family

Def: "A trailing evergreen plant of the heath family with astringent foliage and red berries." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/bearberry> [10.12.2008]).

dt.: Bärentraube, Echte (Arctostaphylos uva-ursi), f, sg: Art

Arctostaphylos: Gattung

Heidekrautgewächse: Familie

Etym: von griechisch *arctos* = 'Bär', *staphylé* = 'Weintraube' (Gemoll 1959: s.v.).

von lateinisch *uva* = 'Weintraube', *ursus* = 'Bär'

Def: "Der Preiselbeere ähnliches Heidekrautgewächs." (Wahrig-Burfeind 2000: s.v.).

berry, sg

Def: "A small soft fruit with small seeds." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Beere, f, sg

Def: "Fleischiges Perikarp aus einem bis mehreren Karpellen und mit einem bis mehreren Samen." (Burger/Wachter 1998: s.v.).

biennial, adj

Etym: from Latin *bi* = 'two' and *annus* = 'year' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "A biennial plant stays alive for two years and produces seeds in the second year." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: zweijährig, adj

Def: "Pflanzen, die ihren Entwicklungszyklus erst im zweiten Jahr mit Blüte und Fruchtbildung abschließen" (Wahrig-Burfeind 2000: s.v.).

bitter principle, sg

Def: "A bitter substance found in plants, which has not yet been chemically classified." (*Longman Dictionary of Contemporary English* 1995: s.v. bitter).

dt.: Bitterstoff, m, sg

Def: "Pflanzliches Stoffwechselprodukt chemisch verschiedenartiger, stickstoffreicher Substanzen." (wissen.de GesmbH Gesellschaft für Online-Information (Copyright 2000-2005): München: <http://www.wissen.de> [09.07.2008]).

blister, sg

Def: "A swelling on your skin containing clear liquid, caused for example by a burn or continuous rubbing." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Brandblase, f, sg

Def: "Durch Verbrennung entstandene Hautblase." (Wahrig-Burfeind 2000: s.v.).

blueberry, sg

Def: "The edible blue or blackish berry of any of several North American plants of the heath family." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/blueberry> [15.07.2008]).

dt.: Blaubeere, f, sg

Syn: Heidelbeere

Def: "Angehörige einer Gattung der Heidekrautgewächse ; Halbstrauch mit meistens blau-schwarzen Beeren." (Wahrig-Burfeind 2000: s.v.).

botany, sg

Def: "The scientific study of plants." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Botanik, f, sg

Etym: von griechisch *botanikós* = 'pflanzlich, die Heilkräuter betreffend' (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v.)

Def: "Wissenschaftliches Teilgebiet der Biologie, das die Pflanzen zum Gegenstand hat." (Burger/Wachter 1998: s.v.).

buckthorn (rhamnus catharticus), sg: species

rhamnus: genus

rhamnaceae: family

Def: "Any of several thorny small-flowered shrubs whose berries were formerly used as a purgative." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Kreuzdorn (*Rhamnus catharticus*), m, sg: Art

Rhamnus: Gattung

Kreuzdorngewächse: Familie

Etym: "Der deutsche Gattungsname bezieht sich auf die Stellung der Sprossdornen zu den gerade Ästen, die mit diesen ein rechtwinkliges Kreuz bilden. Der wissenschaftliche Name geht auf den antiken Arzt und Naturforscher Dioskurides zurück, der unter *Rhamnus* verschiedene Dornsträucher des Mittelmeerraumes zusammenfasste." (Wikimedia Foundation Inc. (o.J.): [wikipedia.org](http://de.wikipedia.org/wiki/Kreuzdorn), in <http://de.wikipedia.org/wiki/Kreuzdorn>[10.12.2008])

Def: "Baum oder Strauch der nördl. gemäßigten Zone, oft mit Dornen. Die schwarzen Früchte einiger Arten werden zum Färben und als Abführmittel benutzt." (Wahrig-Burfeind 2000: s.v.).

buckwheat (fagopyrum esculentum), sg: species

fagopyrum: genus

polygonaceae: family

Etym: "*Buckwheat* or *beech wheat* comes from its triangular seeds, which resemble the much larger seeds of the beech nut from the beech tree, and the fact that it is used like wheat." (Wikimedia Foundation Inc.(o.J.): [wikipedia.org](http://en.wikipedia.org/Buckwheat): <http://en.wikipedia.org/Buckwheat> [08.12.2008]).

Def: "A type of small grain used as food for chickens, and for making flour." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Buchweizen, m, sg: Art
Fagopyrum: Gattung
Knöterichgewächse: Familie

Etym: von mittelniederländ. *boecweit*. "Die Benennung erfolgte nach der Form der Samen, die kleinen Bucheckern ähnlich sehen; -*weizen* nach Geschmack und Verwendung (der Buchweizen ist aber kein Getreide, sondern ein Knöterichgewächs)." (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v.).

Def: "Angehöriger einer Gattung der Knöterichgewächse, dessen dreikantige Früchte den Bucheckern ähneln und dessen Mehl als Grütze gegessen wird." (Wahrig-Burfeind 2000: s.v.).

cambium, sg

Def: "A thin formative layer between the xylem and phloem of most vascular plants that gives rise to new cells and is responsible for secondary growth." (Encyclopaedia Britannica Inc. (2005): <http://www.britannica.com/ebc/article-9359569> [10.07.2008]).

dt.: Kambium, n, sg

Etym: von lateinisch *cambiare* = 'wechseln' (Wahrig-Burfeind 2000: s.v.)

Def: "Bildungsgewebe in den pflanzlichen Stängeln und Wurzeln, das das Dickenwachstum veranlasst." (Wahrig-Burfeind 2000: s.v.).

camomile (matricaria recutita), sg: species

matricaria: genus

asteraceae: family

Etym: from Greek *chamaimēlon* = 'earth apple', because of the apple-like scent of the plant (*The Times English Dictionary & Thesaurus* 2000: s.v.).

Def: "A perennial composite herb of Europe and North Africa with aromatic foliage and flower heads." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/camomile> [15.07.2008]).

dt.: Kamille (*Matricaria recutita*), f, sg: Art

Kamillen: Gattung

Korbblütler: Familie

Syn: Feldkamille, Mägedeckraut

Def: "Angehörige einer Gattung der Korbblütler." (Wahrig-Burfeind 2000: s.v.).

capsule, sg

Etym: from Latin *capsula* = 'box' (*The Times English Dictionary & Thesaurus* 2000: s.v.).

Def: "A dry fruit that liberates its seeds by splitting." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Kapsel, f, sg

Def: "Perikarp aus zwei bis mehreren Karpellen hervorgegangen, ein- oder mehrfächerig." (Burger/Wachter 1998: s.v.).

caraway (carum carvi), sg: species

carum: genus

apiaceae: family

Etym: probably from Medieval Latin *carvi*, from Greek *karon* (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "A plant whose strong-tasting seeds are used to give a special taste to food." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Kümmel (Carum carvi), m, sg: Art

Kümmel: Gattung

Doldenblütler: Familie

Def: "Angehöriger einer Gattung der Doldengewächse." Wahrig-Burfeind 2000: s.v.).

cardiac glycoside, sg

Etym: from Ancient Greek *kardiakos* = 'relating to the heart', *glykys* = 'sweet' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "Drugs used in the treatment of congestive heart failure." (Wikimedia Foundation Inc.(0.J.): [wikipedia.org: http://en.wikipedia.org/wiki/Cardiac_glycoside](http://en.wikipedia.org/wiki/Cardiac_glycoside) [10.07.2008])

dt.: Herzglykosid, n, sg

Syn: herzwirksames Glykosid

Def: "Substanz zur Förderung der Kontraktionskraft der Herzmuskulatur." (Burger/Wachter 1998: s.v.).

carpel, sg

Etym: from Greek *karpos* = 'fruit' (*Longman Dictionary of Contemporary English* 1995: s.v.)

Def: "The female reproductive unit of a flower, consisting of the ovary with ovules." (Sugden, A. 1990: s.v.).

dt.: Fruchtblatt, f, sg

Syn: Karpell

Def: "Das die Samenanlage tragende weibliche Geschlechtsorgan der Blüte." (Wissen.de GmbH - Gesellschaft für Online-Information(Hrsg.) (2005): wissen.de, in: www.wissen.de [14.07.2008]).

centaury (centaurium erythraea), sg: species

centaurium: genus

gentianaceae: family

Etym: from Greek *kentaureion* = 'the Centaur', from the legend that Chiron the Centaur divulged its healing properties (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "Any of a genus of Eurasian plants having purplish-pink flowers and is believed to have medicinal properties." (*The Times English Dictionary & Thesaurus* 2000: s.v.)

dt.: Tausendgüldenkraut (*Centaurium erythraea*), n, sg: Art

Centaurium: Gattung

Enziangewächse: Familie

Def: "Auf Wiesen vorkommendes Enziangewächs, das einen magenstärkenden Bitterstoff enthält." (Wahrig-Burfeind 2000: s.v.).

chicory (cichorium intybus), sg: species

cichorium: genus

asteraceae: family

Def: "A European plant with blue flowers whose leaves are eaten and whose roots are sometimes used as coffee." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Zichorie (*Cichorium intybus*), f, sg: Art

Cichorium: Gattung

Korbblütler: Familie

Syn: Gemeine Wegwarte

Etym: von griechisch *kichórion*, dessen Herkunft ungeklärt ist. (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v.)

Def: "Ein Korbblütler, aus dessen getrockneten oder gerösteten Wurzeln früher Kaffeeersatz und Kaffeezusatz gewonnen wurde." (Wahrig-Burfeind 2000: s.v.).

chlorophyll, sg

Def: "The green-coloured substance in plants." (*Longman Dictionary of contemporary English* 1995: s.v.).

dt.: Chlorophyll, n, sg

Etym: von griechisch *chloros* = 'hellgrün' und *phyllon* = 'Blatt' (Wahrig-Burfeind 2000: s.v.)

Def: "Dem Einfangen der Lichtenergie dienender grüner Pflanzenfarbstoff." (Wahrig-Burfeind 2000: s.v.).

cinnamon, sg only

Def: "A sweet smelling substance used for giving a special taste to cakes etc." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Zimt, m, sg

Etym: von griechisch *kinnamon* (Wahrig-Burfeind 2000: s.v.).

Def: "Aus der Rinde des Zimtbaumes gewonnenes Gewürz." (Wahrig-Burfeind 2000: s.v.).

clover (trifolium), sg: species

trifolium: genus

fabaceae: family

Def: "A small plant with three leaves on each stem." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Klee (Trifolium), m, sg: Art

Trifolium: Gattung

Hülsenfrüchtler: Familie

Etym: von lateinisch *tri* = 'drei', *folium* = 'Blatt' (Wahrig-Burfeind 2000: s.v.)

Def: Angehöriger einer Gattung der Hülsenfrüchtler, aufrechtes oder niederliegendes, häufig kriechendes Kraut mit gefingerten Blättern." (Wahrig-Burfeind 2000: s.v.).

coltsfoot (tussilago farfara), sg: species

tussilago: genus

asteraceae: family

Def: "A European plant with yellow daisy-like flowers and heart-shaped leaves." (*The Times English Dictionary & Thesaurus* 2000: s.v.)

dt.: Huflattich (*Tussilago farfara*), m, sg: Art
Tussilago: Gattung
Korbblütler: Familie

Etym: von lateinisch *tussis* = 'Husten', *agere* = 'vertreiben', *farina* = 'Mehl', *ferre* = 'tragen'; damit wird auf die flaumige Behaarung Bezug genommen, welche die Pflanze wie mehlig bestäubt aussehen lässt.
(Wikimedia Foundation Inc. (o.J.): wikipedia.org, in <http://de.wikipedia.org/wiki/Huflattich>[10.12.2008])

Def: "Korbblütler mit gelben Blüten und rundlich-herzförmigen Blättern."
(Wahrig-Burfeind 2000: s.v.).

compass plant, sg

Def: "A yellow-flowered composite plant that has large pinnatifid [sic] leaves in which the leaf edges typically align in a northerly and southerly direction and that occurs especially in prairies and along roadsides of the central United States." (*Merriam-Webster Online Dictionary* (2005):<http://www.merriam-webster.com/dictionary/compass%20plant> [15.07.2008]).

dt.: Kompasspflanze, f, sg

Def: "Ein Korbblütler, der seine Blätter nach der Nord-Süd-Richtung stellt."
(Wahrig-Burfeind 2000: s.v.).

concentration, sg

Def: "The amount of substance contained in a liquid." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Konzentration, f, sg

Etym: von lateinisch *con* = 'gemeinsam', 'mit' und *centrum* = 'Mittelpunkt'
(Wahrig-Burfeind 2000: s.v.)

Def: "Gehalt einer Lösung an gelöstem Stoff." (Wahrig-Burfeind 2000: s.v.).

condensation, sg

Def: "The process of change from gas to liquid." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Kondensation, f, sg

Etym: von lateinisch *condensatio* = 'Verdichtung' (Wahrig-Burfeind 2000: s.v.)

Def: "Reaktion, bei der zwei Moleküle unter Abspaltung eines einfachen Stoffes (z.B. Wasser) zu einem neuen Molekül reagieren oder bei der

innerhalb eines Moleküls ein einfacher Stoff abgespalten wird." (Wahrig-Burfeind 2000: s.v.).

contamination, sg

Def: "Pollution of substances through chemicals or poison." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Kontamination, f, sg

Etym: von lateinisch *contaminatio* = Befleckung, Verderbnis' (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v.)

Def: "Die Verunreinigung von Räumen, Gegenständen, Lebensmitteln, Boden, Luft und Wasser u.a. durch Mikroorganismen, Giftstoffe oder radioaktive Substanzen." (Wissen.de GmbH - Gesellschaft für Online-Information(Hrsg.) (2005): wissen.de, in: www.wissen.de [10.07.2008]).

contraception, sg only

Etym: from Latin *contra* = 'against', *recipere* = 'to receive' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "The practice of making it possible to have sex without having a baby, or the methods for doing this." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Empfängnisverhütung, f, sg

Def: "Verhinderung der Befruchtung einer Eizelle durch eine Samenzelle." (Wahrig-Burfeind 2000: s.v.).

coriander (coriandrum sativum), sg: species

coriandrum: genus

apiaceae: family

Def: "An annual herb of the carrot family with aromatic fruits." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/coriander> [15.07.2008]).

dt.: Koriander (*Coriandrum sativum*), m, sg: Art

Koriander: Gattung

Doldenblütler: Familie

Etym: von griechisch *coris* = 'Wanze', *amon* = 'Anis', da die Blätter nach Wanzen und die Beeren nach Anis riechen (Wahrig-Burfeind 2000: s.v.)

Def: "Angehöriger einer Gattung der Doldengewächse, als Küchengewürz verwendete Art." (Wahrig-Burfeind 2000: s.v.).

corncockle (agrostemma githago), sg: species
agrostemma: genus
caryophyllaceae: family

Def: "A European plant that has reddish-purple flowers and grows in cornfields and by roadsides." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Kornrade (Agrostemma githago), f, sg: Art
Agrostemma: Gattung
Nelkengewächse: Familie

Etym: von griechisch *agros* = 'Acker, Feld', *stemma* = 'Kranz, Binde', *githago* bezieht sich auf die (nicht sehr deutliche) Ähnlichkeit mit dem Schwarzkümmel (*Nigella sativa*), der bei Plinius als 'gith' bezeichnet wurde. (<http://www1.tu-darmstadt.de/fb/bio/bot/agrostemma/index.html> [10.12.2008])

Def: "Zu den Nelkengewächsen gehöriges Getreidekraut mit purpurroten Blüten." (Wahrig-Burfeind 2000: s.v.).

cyclamen (Cyclamen europaeum), sg: species
cyclamen: genus
primulaceae: family

Def: "A plant of the genus cyclamen, having white, pink, or red flowers, with reflexed petals." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Alpenveilchen, Europäisches (Cyclamen europaeum), n, sg: Art
Cyclamen: Gattung
Primelgewächse: Familie

Etym: von griechisch *kyklaminos* = 'runder Gegenstand, Rundung', wegen der runden Wurzelknolle (Wahrig-Burfeind 2000: s.v.)

Def: "Primelgewächs mit immergrünen Blättern und karminroten Blüten, kommt nur in den Voralpen und niederen Bergen vor." (Wahrig-Burfeind 2000: s.v.).

cyme, sg, n

Etym: from Latin *cyma* = 'cabbage sprout', from Greek *kuma* 'anything swollen' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "An inflorescence in which each floral axis terminates in a single flower." (Encyclopaedia Britannica Inc. (2005): <http://www.britannica.com/dictionary?book=Dictionary&va=cyme> [10.07.2008]).

dt.: Trugdolde, f, sg

Def: "Mehr oder weniger schirmförmiger Blütenstand, bei dem unterhalb der endständigen Blüte mehrere Nebenachsen entspringen, die sich wie die Hauptachse verzweigen können." (Wahrig-Burfeind 2000: s.v.).

to debase, v

Etym: from Latin *de* = 'away from, out of', *basis* = 'pedestal, foundation, origin' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "To lower in status, esteem, quality or character." (Encyclopaedia Britannica Inc.(2005): [10. <http://www.britannica.com/dictionary?book=Dictionary&va=debase> 07.2008]).

dt.: verfälschen, v

Def: "In einen schlechteren, minderwertigeren Zustand versetzen." (Wahrig-Burfeind 2000: s.v.).

decompositon, sg

Etym: from Latin *de* = 'away from, out of', *componere* = 'to arrange' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "To break up into simpler chemical compounds, either by chemical action, or by natural decay." (*The Times English Dictionary & Thesaurus* 2000: s.v.)

dt.: Zerfall, m, sg

Def: "Zerfall von festen Arzneiformen (z.B.Tabletten) in Einzelbestandteile oder Pulverpartikel." (Burger/Wachter 1998: s.v.).

dehiscent fruit, sg

Etym: from Latin *dehiscere* = 'to split open' (*The Times English Dictionary & Thesaurus* 2000: s.v. fruit)

Def: "A dry fruit that splits into two or more one-seeded portions at maturity." (*The Times English Dictionary & Thesaurus* 2000: s.v. fruit).

dt.: Spaltfrucht, f, sg

Def: "Karpelle lösen sich bei der Fruchtreife voneinander, fallen bei Reife also in mehrere Teilfrüchte." (Burger/Wachter 1998: s.v.).

dentistry, sg only

Etym: from Latin *dens* = 'tooth' (*The Times English Dictionary & Thesaurus* 2000: s.v.).

Def: "The medical study of the mouth and teeth." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Zahnheilkunde, f, sg

Def: "Teilgebiet der Medizin, das sich mit Zahn- und Mundkrankheiten befasst." (Wahrig-Burfeind 2000: s.v.).

desiccant, sg

Etym: from Latin *desiccare* = 'to dry up' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A substance that absorbs water and is used to remove moisture." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Trockenmittel, n, sg

Def: "Stoffe, die Wasserdampf aus der Luft oder anderen Gasen oder auch in organischen Flüssigkeiten enthaltene geringe Wassermengen aufnehmen und binden." (Wissen.de GmbH - Gesellschaft für Online-Information (Hrsg.) (2005): wissen.de, in: www.wissen.de [10.07.2008]).

derivative, sg

Def: "Something that has developed or been produced from something else." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Derivat, n, sg

Etym: von lateinisch *derivatus* = 'abgeleitet' (Wahrig-Burfeind 2000: s.v.)

Def: "Chemische Verbindung, die aus einer anderen durch Ersatz (Substitution) von Atomen durch andere Atome oder Atomgruppen abgeleitet und dargestellt wird." (Wahrig-Burfeind 2000: s.v.).

dermatology, sg only

Def: "The part of medical science that deals with the skin, its diseases, and their treatment." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Dermatologie, f, sg

Etym: von griechisch *derma* = 'Haut', *logos* = 'Rede, Darstellung, Kunde' (Wahrig-Burfeind 2000: s.v.)

Def: "Lehre von den Haut- und Geschlechtskrankheiten." (Wahrig-Burfeind 2000: s.v.)

dicotyledon, sg

Etym: from Greek *di-* = 'two', *kotýlē* = 'cup, bowl' (Sugden, A. 1990: 131)

Expl: "An angiosperm of the class dicotyledones. The seeds of dicotyledons have two cotyledons. Dicotyledons have secondary thickening in the stems." (Sugden, A. 1990: 131).

dt.: Dikotyledone, f, sg

Def: "Mit zwei Keimblättern versehen." (Wahrig-Burfeind 2000: s.v.).

diuretic, adj

Etym: from Greek *dia* = 'through', *ourein* = 'to urinate' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "Increasing the flow of urine." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: harntreibend, adj

Syn: diuretisch

Def: "Die Harnausscheidung anregend." (Wahrig-Burfeind 2000: s.v.).

doctrine of signatures, sg

Expl: "The doctrine of signatures was given renewed thrust in the writings of the Swiss physician Paracelsus von Hohenheim and continued to be embraced until the 17th century. It held that plants bearing parts that resembled human body parts, animals or other subjects, had useful relevancy to those parts, animals or objects." (Wikimedia Foundation Inc. (o.J.): wikipedia.org, in: http://en.wikipedia.org/wiki/Doctrine_of_signatures#Some_.22wort.22_plants_and_their_signatures [10.07.2008]).

dt.: Signaturenlehre, f, sg

Syn: Signatura rerum

Def: "Sie Signaturenlehre ist die von den Zeichen in der Natur, die als äußere Merkmale auf Ähnlichkeiten, Verwandtschaften und innere Zusammenhänge hinweisen." (Wikimedia Foundation Inc. (o.J.): wikipedia.org, in <http://de.wikipedia.org> [10.07.2008]).

dose, sg

Def: "A measured amount of a medicine." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Dosis, f, sg

Etym: von griechisch *dosis* = 'Gabe' (Wahrig-Burfeind 2000: s.v.)

Def: "Genau zugemessene Menge eines Stoffes oder einer Strahlung." (Wahrig-Burfeind 2000: s.v.).

drug, sg

Def: "A substance used as a medicine or in the preparation." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/drug> [09.07.2008]).

dt.: Droge, f, sg

Def: "Im weiteren Sinne einfache Rohstoffe zur Arzneibereitung aus Pflanzen und (seltener) Tierkörpern." (Wissen.de GmbH - Gesellschaft für Online-Information(Hrsg.) (2005): [wissen.de](http://www.wissen.de), in: www.wissen.de [10.07.2008]).

drupe, sg

Etym: from Latin *druppa* = 'wrinkled overripe olive' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "Any fruit that has a fleshy or fibrous part around a stone that encloses a seed." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Steinfrucht, f, sg

Def: "Exokarp häutig, Mesokarp fleischig, Endokarp hart." (Burger /Wachter 1998: s.v.).

elder (sambucus nigra), sg: species

sambucus: genus

caprifoliaceae: family

Def: "A small wild tree with white flowers and black berries." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Holunder, Schwarzer (*Sambucus nigra*), m, sg: Art

Sambucus: Gattung

Geißblattgewächse: Familie

Etym: von mittelhochdeutsch *holunter* (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v.).

Def: "Angehöriger einer Gattung der Geißblattgewächse, Holzgewächs mit dickem Mark, gefiederten Blättern und schirm- oder straußförmigen Blütenständen." (Wahrig-Burfeind 2000: s.v.).

ember, sg

Def: "A piece of wood or coal in a fire that is no longer burning but is still red and very hot." (*Longman Dictionary of contemporary English* 1995: s.v.).

dt.: Asche, f, sg

Def: "Glüh- oder Verbrennungsrückstand organischer Verbindungen und Drogen." (Burger./Wachter1998: s.v.).

essential oil, sg

Def: "An oil from a plant that has a strong smell and is used for making perfume or in aroma therapy." (*Longman Dictionary of contemporary English* 1995: s.v. essential).

dt.: Ätherisches Öl, n, sg

Def: "Meist stark aromatisch riechendes, vollständig verdunstendes, aus Pflanzen zu gewinnendes Öl." (Wahrig-Burfeind 2000: s.v. ätherisch).

evaporate, v

Etym: from Latin *vapor* = 'steam' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "To change or cause to change from a liquid or solid state to a vapour." (*The Times English Dictionary & Thesaurus* 2000: s.v.)

dt.: verdunsten, v

Def: "(Langsam) in Gasform übergehen (Flüssigkeit)." (Wahrig-Burfeind 2000: s.v.).

even, adj

Ant: uneven

Def: "Completely flat with all parts at the same height." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: glatt, adj

Def: "Frei von Unebenheiten, keine Reibung bietend." (Wahrig-Burfeind 2000: s.v.).

extract, sg

Etym: from Latin *extractus* = 'drawn forth' (*Longman Dictionary of Contemporary English* 1995: s.v.)

Def: "A substance taken from another substance by using a special process." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Extrakt, n, sg

Def: "Konzentrierte, gegebenenfalls auf einen bestimmten Wirkstoffgehalt eingestellte Zubereitung aus Drogen." (Burger/Wachter 1998: s.v.).

extraction, sg

Def: "The process of removing an object or substance from inside something else." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Extraktion, f, sg

Etym: von lateinisch *extractio* = 'das Herausziehen' (Wahrig-Burfeind 2000: s.v.)

Def: "Das Herauslösen einzelner Stoffe aus einem festen oder flüssigen Gemenge mithilfe eines geeigneten Lösungsmittels." (Wahrig-Burfeind 2000: s.v.).

family, sg

Def: "A group of related animals, plants, languages etc." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Familie, f, sg

Def: "Taxonomische Einheit zwischen Ordnung (ordo) und Gattung (genus)." (Burger/Wachter 1998: s.v.).

fatty acid, sg

Etym: from Latin *acere* = 'to be sour' (*The Times English Dictionary & Thesaurus* 2000:s.v. acid)

Def: "Any of the saturated or unsaturated monocarboxylic acids (as palmitic acid) usually with an even number of carbon atoms that occur naturally in the form of glycerides in fats and fatty oils." (Encyclopaedia Britannica Inc. (2005): <http://www.britannica.com/dictionary&book=Dictionary&va=fatty%20acid> [09.07.2008]).

dt.: Fettsäure, f, sg

Def: "Gesättigte und ungesättigte, langkettige (höhere) Monocarbonsäure." (Wahrig-Burfeind 2000: s.v.).

fatty oils, pl

Def: "Any of numerous compounds of carbon, hydrogen and oxygen that are glycerides of fatty acids." (Encyclopaedia Britannica Inc. (2005): <http://www.britannica.com/dictionary?hdwd=fat> [09.07.2008]).

dt.: Fette Öle, n, pl

Def: "Ester des dreiwertigen Alkohols Glycerin mit drei Fettsäuren." (Wissen.de GmbH - Gesellschaft für Online-Information (Hrsg.) (2005): www.wissen.de, in: www.wissen.de [10.07.2008]).

fennel (foeniculum vulgare), sg: species

foeniculum: genus

apiaceae: family

Def: "A perennial European herb of the carrot family having two cultivated forms." (Merriam-Webster Online Dictionary (2005): <http://www.merriam-webster.com/dictionary/fennel> [14.07.2008]).

dt.: Fenchel (*Foeniculum vulgare*), m, sg: Art

Foeniculum: Gattung

Doldenblütler: Familie

Etym: von lateinisch *feniculum* oder *foeniculum*, der Verkleinerungsform von *fenum* oder *faenum* = 'Heu' (Wahrig-Burfeind 2000: s.v.)

Expl: "Doldengewächs, dessen Kraut und Früchte als Gewürz benutzt werden. Die Früchte dienen auch als schleimlösendes und blähungstreibendes Mittel." (Wahrig-Burfeind 2000: s.v.).

to ferment, v

Etym: from Latin *fermentare* = 'to leaven' (Longman Dictionary of Contemporary English 1995: s.v.)

Def: "If fruit, beer, wine, etc. ferments or if it is fermented, the sugar in it changes to alcohol, especially because of the action of yeast." (Longman Dictionary of Contemporary English 1995: s.v.).

dt.: Gären, v

Def: "Verwandlung von Fruchtsäuren in Ethanol durch Hefen." (Wahrig-Burfeind 2000: s.v.).

fibred, adj

Def: "Having fibres on the surface, which are parts of plants, that you eat but cannot digest." (Longman Dictionary of Contemporary English 1995: s.v.).

dt.: faserig, adj

Def: "Voller Fasern, d. h. länglicher Zellformen des Pflanzenkörpers." (Wahrig-Burfeind 2000: s.v.).

flatulent, adj

Ant: anti-flatulent

Etym: from Latin *flare* = 'to blow' (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/flatulent> [08.12.2008]).

Def: "Causing too much gas in the stomach." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: blähend, adj

Ant: blähungshemmend

Def: "Darmgase bildend." (Wahrig-Burfeind 2000: s.v.).

flavonoid, sg

Def: "Any of a group of aromatic compounds that includes many common pigments." (Encyclopaedia Britannica Inc. (2005): <http://www.britannica.com/dictionary?book=Dictionary&va=flavonoid&query=flavonoid> [09.07.2008]).

dt.: Flavonoid, n, sg

Etym: von lateinisch *flavus* = 'goldgelb' und der Endung *-oid* = 'ähnlich' (Wahrig-Burfeind 2000: s.v.)

Def: "Substanz, die einer therapeutisch wirksamen Gruppe von Pflanzenfarbstoffen angehört." (Wissen.de GmbH - Gesellschaft für Online-Information(Hrsg.) (2005): [wissen.de](http://www.wissen.de), in: www.wissen.de [09.07.2008]).

flavouring, sg

Def: "A substance used to increase the flavour of something." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Aromastoff, m, sg

Etym: von griechisch *aroma* = 'Würze' (Wahrig-Burfeind 2000: s.v.)

Def: "Künstlich hergestellter Geschmacksstoff für Speisen." (Wahrig-Burfeind 2000: s.v.).

floret, sg

Def: "A single small flower, usually a member of a cluster, such as a head; used particularly in grasses and composites." (The vPlants Project. vPlants: A Virtual Herbarium of the Chicago Region (© 2001 – 2006): <http://www.vplants.org/plants/glossary.html> [2.12. 2008])

dt.: Blütchen, n, sg

Def: "Einzelne kleine Blüte, Bestandteil eines Blütenstandes." (Wahrig-Burfeind 2000: s.v.).

flower, sg

Def: "The coloured part of a plant or tree that produces seeds or fruit." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Blüte, f, sg

Def: "Fortpflanzungsorgan höherer Pflanzen." (Wahrig-Burfeind 2000: s.v.).

follicle, sg

Etym: from Latin *folliculus* = 'small bag' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A dry fruit that splits along one side only to release its seeds." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Balg, m, sg

Def: "Perikarp aus einem Karpell hervorgegangen, an der Bauchnaht aufspringend." (Burger/Wachter 1998: s.v.).

forage plant, sg

Def: "Food for horses and cattle." (*Longman Dictionary of Contemporary English* 1995: s.v. forage).

dt.: Futterpflanze, f, sg

Def: "Für Viehfutter angebaute Pflanze." (Wahrig-Burfeind 2000: s.v.).

foxglove (digitalis purpurea), sg: species**digitalis: genus****scrophulariaceae: family**

Etym: from Latin *digitus* = 'finger' (*The Times English Dictionary & Thesaurus* 2000: s.v.).

Def: "A tall plant with many bell-shaped flowers." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Fingerhut, Roter (Digitalis purpurea), m, sg: Art

Digitalis: Gattung

Rachenblütler: Familie

Def: "Angehöriger einer giftigen, als Herz- und Kreislaufmittel verwendeten, Glykoside enthaltenden Gattung der Rachenblütler." (Wahrig-Burfeind 2000: s.v.).

fruit, sg

Def: "The part of plant, bush, or tree that contains the seeds." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Frucht, f, sg

Def: "Blüte im Zustand der Samenreife." (Burger/Wachter 1998: s.v.).

garden angelica (angelica archangelica), sg: species

angelica: genus

apiaceae: family

Def: "An umbelliferous plant, the aromatic seeds, leaves, and stems of which are used in medicine and cookery." (*The Times English Dictionary & Thesaurus* 2000: s.v. angelica).

dt.: Echte Engelwurz (Angelica archangelica), f, sg: Art

Angelica: Gattung

Doldenblütler: Familie

Etym: von griechisch *angelos* = 'Bote, Engel', *arché* = 'Anfang, Ursprung', *archaios* = 'uranfänglich, uralt, alt' (Gemoll 1959: s.v.)

Syn: Angelika, Brustwurz, Heiliggeistwurz

Def: "Angehörige einer Gattung der Doldengewächse, deren Wurzeln arzneilich und als aromatisches Bittermittel verwendet werden." (Wahrig-Burfeind 2000: s.v. Engelwurz).

garlic (allium sativum), sg: species

allium: genus

alliaceae: family

Etym: Old English *gārlēac*, from *gār* = 'spear' (in reference to the cloves) + *lēac* = 'leek'. (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/garlic> [15.07.2008])

Def: "A European allium widely cultivated for its pungent compound bulbs much used in cookery." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/garlic> [15.07.2008]).

dt.: Knoblauch (*Allium sativum*), m, sg: Art

Lauch (*allium*): Gattung

Lauchgewächse: Familie

Def: "Zu den Liliengewächsen gehörende Pflanze mit zwiebeltragenden Dolden von scharfem Geruch." (Wahrig-Burfeind 2000: s.v.).

gastric juice, sg

Etym: from Greek *gaster* = 'abdomen' (*The Times English Dictionary & Thesaurus* 2000: s.v.).

Def: "The acids in your stomach that break food into smaller parts." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Magensaft, m, sg

Def: "Im Magen ausgeschiedene, zur Verdauung benötigte Flüssigkeit." (Wahrig-Burfeind 2000: s.v.).

gentian (gentiana lutea), sg: species

gentiana: genus

gentianaceae: family

Def: "A small plant with blue flowers that grows in mountain areas." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Enzian (*Gentiana lutea*), m, sg: Art

Gentiana: Gattung

Enziangewächse: Familie

Etym: von lateinisch *gentiana* (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v.)

Def: "Angehöriger einer im Gebirge vorkommenden Familie krautiger Pflanzen mit gelben und blauen Blüten." (Wahrig-Burfeind 2000: s.v.).

genus, sg, n

Etym: from Latin *genus* = 'race' (*Longman Dictionary of Contemporary English* 1995: s.v.)

Def: "One of the groups into which scientists divide animals or plants, below a family and above a species." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Gattung, f, sg

Syn: Genus

Def: "Taxonomische Einheit zwischen Familie (familia) und Art (species); umfasst eine oder mehrere Arten mit bestimmten gemeinsamen Merkmalen." (Burger/Wachter 1998: s.v.).

to germinate, v

Etym: from Latin *germinare* = 'to sprout' (*Longman Dictionary of Contemporary English* 1995: s.v.)

Def: "If a seed germinates or if it is germinated, it begins to grow." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: keimen, v

Def: "Aus einem Keim zu wachsen beginnen, Triebe hervorbringen." (Wahrig-Burfeind 2000: s.v.).

glycoside, sg

Etym: from Greek *glykys* = 'sweet' (*Longman Dictionary of Contemporary English* 1995: s.v.)

Def: "Any of numerous sugar derivatives that contain a nonsugar group bonded on an oxygen or nitrogen atom and that on hydrolysis yield a sugar (as glucose)." (Encyclopaedia Britannica Inc. (2005): <http://www.britannica.com/dictionary?book=Dictionary&va=glycoside> [09.07.2008]).

dt.: Glykosid, n, sg

Def: "Verbindung von Zuckerarten mit zuckerfremden Bestandteilen." (Wahrig-Burfeind 2000: s.v.).

goldenrod (solidago), sg: species

solidago: genus

asteraceae: family

Def: "A plant of the asteraceae family of North America, Europe, and Asia, having spikes of small yellow flowers." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Goldrute (Solidago), f, sg: Art

Solidago: Gattung

Korbblütler: Familie

Def: "Angehörige einer Gattung der Korbblütler mit goldgelben Rispen." (Wahrig-Burfeind 2000: s.v.).

gynaecology, sg only

Def: "The study and treatment of medical conditions and illnesses affecting only women." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Gynäkologie, sg

Etym: von griechisch *gyne*, Gen. *gynaikos* = 'Frau', *logos* = 'Kunde' (Wahrig-Burfeind 2000: s.v.)

Def: "Lehre von den Krankheiten der Frau." (Wahrig-Burfeind 2000: s.v.).

haemolysis, sg only

Def: "The disintegration of red blood cells, with the release of haemoglobin." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Hämolysse, f, sg

Etym: von griechisch *haima* = 'Blut', *lysis* = 'Auflösung' (Wahrig-Burfeind 2000: s.v.).

Def: "Austreten des roten Blutfarbstoffes aus den Blutkörperchen und blutige Verfärbung des Blutwassers durch Auflösung der roten Blutkörperchen." (Wahrig-Burfeind 2000: s.v.).

half shrub, sg

Def: "A small bushy plant that is woody except for the tips of the branches." (*The Times English Dictionary & Thesaurus* 2000: s.v. shrub).

dt.: Halbstrauch, m, sg

Def: "Holzpflanze von geringer Höhe und buschartigem Wuchs, deren Zweige absterben und durch neue ersetzt werden." (Wissen.de GmbH - Gesellschaft für Online-Information (Hrsg.) (2005): wissen.de, in: www.wissen.de [09.07.2008]).

hawthorn (crataegus monogyna), sg: species

crataegus: genus

rosaceae: family

Etym: from Old English *haguthorn*, from *haga* = 'hedge', *thorn* = 'thorn' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "Any of various thorny trees or shrubs of a Northern temperate genus, having white or pink flowers and reddish fruits (haws)." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Weißdorn (*Crataegus monogyna*), m, sg: Art
Crataegus: Gattung
Rosengewächse: Familie

Def: "Angehöriger einer Gattung der Rosengewächse mit weißen oder rosa Blüten und roten Früchten." (Wahrig-Burfeind 2000: s.v.).

heather (*calluna vulgaris*), sg: species
calluna: genus
ericaceae: family

Def: "A low-growing evergreen shrub that grows in dense masses on open ground and has clusters of small bell-shaped typically pinkish-purple flowers." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Heidekraut (*Calluna vulgaris*), n, sg: Art
Calluna: Gattung
Heidekrautgewächse: Familie

Syn: Besenheide

Def: "Mitglied einer Gattung der Heidekrautgewächse, vorwiegend Zwergsträucher mit meist immergrünen, nadel- oder schuppenartigen, kleinen Blättern." (Wahrig-Burfeind 2000: s.v.).

herbaceous, adj

Etym: from Latin *herba* = 'grass, green plants' (*Longman Dictionary of Contemporary English* 1995: s.v.)

Def: "Plants that are herbaceous have soft stems rather than wood stems" (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: krautig, adj

Def: "krautartig, wie Kraut" (Wahrig-Burfeind 2000: s.v.).

hesperidin, sg

Def: "A crystalline glycoside found in most citrus fruits and especially in orange peel." (*Merriam-Webster Online Dictionary* (2005):<http://www.merriam-webster.com/dictionary/hesperidin> [06.12.2008]).

dt.: Hesperidin, n, sg

Etym: "Nach den Äpfeln der Hesperiden, jenen Nymphen, die im Göttergarten die goldenen Äpfel des Lebens hüten; nach der Abendgöttin *Hesperis*." (Wahrig-Burfeind 2000: s.v.)

Def: "Glykosid aus den Fruchtschalen unreifer Orangen." (Wahrig-Burfeind 2000: s.v.).

heterogeneity, sg

dt.: Heterogenität

↑ **heterogeneous**

heterogeneous, adj

Etym: from Greek *heteros* = 'other', *genos* = 'race' (*Longman Dictionary of Contemporary English* 1995: s.v.)

Def: "Consisting of parts or members that are very different from each other." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: heterogen, adj

Def: Aus unterschiedlichen Teilen bestehend.

holy thistle (silybum marianum), sg: species

silybum: genus

asteraceae: family

Syn: blessed thistle

Def: "An annual plant, growing to 60 cm tall, with leathery, hairy leaves up to 30 cm long and 8 cm broad, with small spines on the margins." (Wikimedia Foundation Inc.(o.J.) http://en.wikipedia.org/wiki/Holy_thistle [08.12.2008]).

dt.: Mariendistel (*Silybum marianum*), f, sg: Art

Silybum: Gattung

Korbblütler: Familie

Etym: von griechisch *silibon* = 'Quaste', *marianum* = 'Marien-' (http://www.awl.ch/heilpflanzen/silybum_marianum/index.htm [10.12.2008])

Syn: Frauendistel

Def: "Korbblütler mit milchweiß marmorierten Blättern." (Wahrig-Burfeind 2000: s.v.).

homogeneity, sg

dt.: Homogenität

↑ **homogeneous**

homogeneous, adj

Etym: from Greek *homos* = 'same', *genos* = 'race' (*Longman Dictionary of Contemporary English* 1995: s.v.)

Def: "Consisting of people or things that are all of the same kind" (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: homogen, adj

Def: Aus gleichen Teilen bestehend.

horse chestnut (aesculus hippocastanum), sg: species

aesculus: genus

sapindaceae: family

Def: "A tree which produces shiney brown nuts and has white and pink flowers." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Rosskastanie (*Aesculus hippocastanum*), f, sg: Art

Aesculus: Gattung

Seifenbaumgewächse: Familie

Etym: "Der Name bezieht sich auf die Edelkastanien-ähnlichen Samen, die von den Osmanen als Pferdefutter und als Heilmittel gegen Pferdehusten mitgeführt wurden und so nach Mitteleuropa gelangten." (Wikimedia Foundation Inc. (o.J.): [wikipedia.org](http://de.wikipedia.org/wiki/Rosskastanie), in <http://de.wikipedia.org/wiki/Rosskastanie> [10.12.2008])

Def: "Zierbaum mit traubenförmigem Blütenstand und braunen Früchten, die in stacheligen Kapseln sitzen." (Wahrig-Burfeind 2000: s.v.).

horsetail (equisetum arvense), sg: species

equisetum: genus

equisetaceae: family

Etym: from Latin *equus* = 'horse', *seta* = 'bristle' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A plant having jointed stems with whorls of small dark toothlike leaves and producing spores within conelike structures at the tips of the stems." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Ackerschachtelhalm (*Equisetum arvense*), m, sg: Art

Equisetum: Gattung

Schachtelhalmgewächse: Familie

Def: "Angehöriger einer Gattung der Schachtelhalmgewächse, deren Stängel aus ineinander geschachtelten Gliedern bestehen." (Wahrig-Burfeind 2000: s.v.).

hypocotyl, sg

Etym: from Greek *hypo* = 'under', *kotyle* = 'cup, bowl' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "The part of the axis of a plant embryo or seedling below the cotyledon." (*Merriam-Webster Online Dictionary* (2005):<http://www.merriam-webster.com/dictionary/hypocotyl> [10.12.2008]).

dt.: Hypokotyl, n, sg

Syn: Keimachse

Def: "Keimachse unterhalb der Keimblätter der Blütenpflanzen." (Wahrig-Burfeind 2000: s.v.)

hyssop (hyssopus officinalis), sg: species

hyssopus: genus

lamiaceae: family

Def: "A European mint that has highly aromatic and pungent leaves and is sometimes used as a potherb." (*Merriam-Webster Online Dictionary* (2005):<http://www.merriam-webster.com/dictionary/hyssop> [15.07.2008]).

dt.: Ysop (*Hyssopus officinalis*), m, sg: Art

Hyssopus: Gattung

Lippenblütler: Familie

Syn: Josefskraut, Eisop

Etym: von arabisch *Ysop* = 'heiliges Kraut' (Wahrig-Burfeind 2000: s.v.)

Def: "In Südeuropa heimischer Lippenblütler mit dunkelblauen, rosenroten oder seltener weißen Blüten, in Deutschland als Zierpflanze gehalten." (Wahrig-Burfeind 2000: s.v.).

identity, sg

Etym: from Vulgar Latin *identitas*, ultimately from Classical Latin *idem* = 'the same' (*Longman Dictionary of Contemporary English* 1995: s.v.)

Def: "The individual characteristics by which a person or thing is recognized." (*The Times English Dictionary & Thesaurus* 2000: s.v.)

dt.: Identität, f, sg

Def: "Wissenschaftlich eindeutige Charakterisierung von Pflanzen und Drogen." (Wahrig-Burfeind 2000: s.v.)

inflammation, sg

Etym: from Latin *inflammare* = 'to catch fire' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "Swelling and soreness on or in part of your body, which is often red and hot to touch." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Entzündung, f, sg

Def: "Vom Körper zur Abwehr durch Krankheitserreger verursachter, durch chemische, physikalische u.a. Schädigungen ausgelöster Vorgang an den Körpergeweben, wobei aus den Gefäßen Blutflüssigkeit und später weiße Blutzellen austreten." (Wahrig-Burfeind 2000: s.v.).

inflorescence, sg

Etym: from Latin *inflorescere* = 'to begin to flower' (*The Times English Dictionary & Thesaurus* 2000: s.v.).

Def: "The part of a plant that consists of the flower-bearing stalks." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Blütenstand, m, sg

Syn: Infloreszenz, f, sg

Def: "Der Blüten tragende, blattlose Teil des Pflanzensprosses." (Wahrig-Burfeind 2000: s.v.).

ivy (hedera helix), sg: species

hedera: genus

araliaceae: family

Etym: from Old English *ifig* (*The Times English Dictionary & Thesaurus* 2000: s.v.).

Def: "A woody climbing or trailing plant having lobed evergreen leaves and black berry-like fruits." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Efeu (*Hedera helix*), m, sg: Art

Hedera: Gattung

Efeugewächse: Familie

Def: "Angehöriger einer Gattung der Efeugewächse mit immergrünen Blättern und unscheinbaren, gelbgrünen, unangenehm riechenden Blüten." (Wahrig-Burfeind 2000: s.v.).

juniper (juniperus communis), sg: species

juniperus: genus

cupressaceae: family

Etym: from Latin *juniperus* (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A coniferous shrub or small tree of the Northern hemisphere having purple, berry-like cones." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Wacholder (*Juniperus communis*), m, sg: Art

Juniperus: Gattung

Zypressengewächse: Familie

Etym: von mittelhochdeutsch *wachsolter*, *wahsholunter*, *althochdeutsch wehhalter* u.ä. Da der Baum althochdeutsch auch *queckolder* (zu *quick* = 'lebendig' heißt, ist ein Anschluss an *wachen* nicht ausgeschlossen. (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v.)

Def: "Angehöriger einer Gattung meist strauchiger Nadelhölzer mit schwarzblauen Beeren." (Wahrig-Burfeind 2000: s.v.).

labiatae, sg

Syn: *lamiaceae*

Etym: from Latin *labiatus* = 'lip' (*The Times English Dictionary & Thesaurus* 2000: s.v.).

Def: "A plant family which has square stems, aromatic leaves, and a two-lipped corolla." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Lippenblütler, m, pl

Syn: *Labiatae, Lamiaceae*

Def: "Krautige Pflanzen und Halbsträucher mit vierkantigem Stängel und stark dorsiventralen Blüten." (Wissen.de GmbH - Gesellschaft für Online-Information(Hrsg.) (2005): [wissen.de](http://www.wissen.de), in: www.wissen.de [09.07.2008]).

large intestine, sg

Etym: from Latin *intestina* = 'bowels' (*Longman Dictionary of Contemporary English* 1995: s.v. intestine)

Def: "The lower part of your bowels, where food is changed into solid waste matter." (*Longman Dictionary of Contemporary English* 1995: s.v. intestine).

dt.: Dickdarm, m, sg

Def: "Teil des Darmes der Wirbeltiere und des Menschen zwischen Dünndarm und Mastdarm." (Wahrig-Burfeind 2000: s.v.).

lavender (*lavandula angustifolia*), sg: species

lavandula: genus

lamiaceae: family

Def: "A Mediterranean mint widely cultivated for its narrow aromatic leaves and spikes of lilac-purple flowers which are dried and used in sachets and from which is extracted an aromatic oil used chiefly in perfumery."
(*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/lavender> [14.07.2008]).

dt.: Lavendel (*Lavandula angustifolia*), m, sg: Art

Lavendel: Gattung

Lippenblütler: Familie

Etym: von mittelhochdeutsch *lavendel* (e); ist entlehnt aus ital. *lavanda* 'was zum Waschen gebraucht werden kann' (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v.)

Def: "Angehöriger einer Gattung von Lippenblütlern, dessen Blüten zur Gewinnung eines in der Parfumindustrie gebrauchten ätherischen Öles benutzt werden." (Wahrig-Burfeind 2000: s.v.).

laxative, sg

Etym: from Latin *laxare* = 'to loosen' (*Longman Dictionary of Contemporary English* 1995: s.v.)

Def: "A medicine or something that you eat which makes your bowels empty easily." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Abführmittel, n, sg

Def: "Arzneimittel, das die Darmentleerung herbeiführt, erleichtert oder beschleunigt." (Wahrig-Burfeind 2000: s.v.).

leaf, sg

Def: "One of the flat green parts of a plant that are joined to its stem or branches." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Blatt, n, sg

Def: "Flaches, durch Blattgrün gefärbtes Organ höherer Pflanzen, das in typischer Form aus Blattspreite, Blattstiel und Blattscheide besteht." (Wahrig-Burfeind 2000: s.v.).

leaf blade, sg

Def: "The expanded part of a foliage leaf." (*Encyclopaedia Britannica* (2005): [http://www.britannica.com/dictionary?book=Dictionary&va=leaf blade](http://www.britannica.com/dictionary?book=Dictionary&va=leaf+blade) [10.07.2008]).

dt.: Blattspreite, f, sg

Def: "Fläche des Pflanzenblattes ohne Blattstiel und Blattscheide." (Wahrig-Burfeind 2000: s.v.).

leaf sheath, sg

Def: "A tubular structure effected by the formation of leaf margins around the stem." The vPlants Project. vPlants: A Virtual Herbarium of the Chicago Region (© 2001 – 2006): <http://www.vplants.org/plants/glossary/sheath> [10.12.2008]).

dt.: Blattscheide, f, sg

Def: "Scheidenförmig um einen Stängel gelegtes Blatt." (Wahrig-Burfeind 2000: s.v.).

leafstalk, sg

Def: "The stalk attaching a leaf to a stem or branch." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Blattstiel, m, sg

Def: "Teil des Pflanzenblattes, der die Blattspreite mit der Sprossachse verbindet." (Wahrig-Burfeind 2000: s.v.).

ligneous, adj

Etym: from Latin *lignum* = 'wood' (*Longman Dictionary of Contemporary English* 1995: s.v.)

Def: "like wood" (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: holzig, adj

Def: "Mit Holzfasern durchsetzt, mit festen Fasern durchsetzt." (Wahrig-Burfeind 2000: s.v.).

liquorice, sg

Etym: from Latin *liquere* = 'to be liquid' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A black substance produced from the root of a plant, used in medicine and sweets." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Süßholz, n, sg

Def: "Als Hustenmittel und zur Herstellung von Lakritze verwendeter Wurzelstock des Schmetterlingsblütlers *Glycyrrhiza glabra*." (Wahrig-Burfeind 2000: s.v.).

lovage (*levisticum officinale*), sg: species

levisticum: genus

apiaceae: family

Etym: from Latin *ligusticum* = lit. 'Ligurian (plant)' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "Any of several aromatic perennial herbs of the carrot family, a European herb sometimes cultivated for use in medicine especially as a diuretic and in cookery usually as a flavoring agent." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/lovage> [15.4.07.2008]).

dt.: Liebstöckel (*Levisticum officinale*), m, sg: Art

Levisticum: Gattung

Doldenblütler: Familie

Syn: Maggikraut

Def: "Angehöriger einer Gattung der Doldengewächse, in Südeuropa heimische, bei uns als Küchengewürz angebaute Art." (Wahrig-Burfeind 2000: s.v.).

marsh mallow (*althaea officinalis*), sg: species

althaea: genus

malvaceae: family

Def: "A tall wild plant with pink flowers." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Eibisch, Echter (*Althaea officinalis*), m, sg: Art

Althaea: Gattung

Malvengewächse: Familie

Etym: entlehnt von lateinisch (h)ibiscum, das seinerseits aus dem Keltischen entlehnt ist; weitere Herkunft unklar (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v. Eibisch)

Def: "Angehöriger einer Gattung von Kräutern und Sträuchern der Malvengewächse; wirkt bei Bronchialkatarrhen schleimlösend und reizlindernd." (Wahrig-Burfeind 2000: s.v. Eibisch).

medicinal plant, sg

Def: "A small plant that is used to improve the taste of food, or to make medicine." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Heilpflanze, f, sg

Syn: Arzneipflanze

Def: "Pflanze, die aufgrund ihres Gehaltes an Wirkstoffen gegen bestimmte Krankheiten verwendet wird." (Wahrig-Burfeind 2000: s.v.).

medicinal product, sg

Def: Any substance or combination of substances used for curing or preventing illness or disease.

dt.: Arzneimittel, n, sg

Def: "Aus der belebten oder unbelebten Natur gewonnener oder künstlich hergestellter Stoff, der in fester, flüssiger oder gasförmiger Form einzeln oder in Zusammensetzung, am oder im menschlichen oder tierischen Körper zum Zweck der Heilung, der Vorbeugung oder der Diagnose angewendet wird." (Wissen.de GmbH - Gesellschaft für Online-Information (Hrsg.) (2005): wissen.de, in: www.wissen.de [10.07.2008]).

meristem, sg only

Etym: from Greek meristos = 'divided' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A plant tissue responsible for growth, whose cells divide and differentiate to form the tissues and organs of the plant." (*The Times English Dictionary & Thesaurus* 2000: s.v.)

dt.: Bildungsgewebe, n, sg

Def: "Pflanzliches Gewebe in dem Zellteilung und Neubildung stattfinden." (Wahrig-Burfeind 2000: s.v.).

moisture, sg only

Def: "Small amounts of water that are present in the air, in a substance, or on a surface." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Feuchtigkeit, sg

Def: "Gehalt an Wasser oder Wasserdampf in der Luft." (Wahrig-Burfeind 2000: s.v.).

monkshood (aconitum napellus), sg: species

aconitum: genus

ranunculaceae: family

Syn: aconite, wolf's bane

Def: "Any of a genus of usually bluish flowered poisonous herbs of the buttercup family." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/monkshood> [14.07.2008]).

dt.: Eisenhut, blauer (Aconitum napellus), m, sg: Art

Aconitum: Gattung

Hahnenfußgewächse: Familie

Etym: von griechisch *akónitos*, nach *akóne* = 'Wetzstein', aus *ak* = 'spitz, scharf', *kônos* = 'Kegel', bezieht sich höchstwahrscheinlich auf die spitzen Blätter. *Napellus* ist abgeleitet von *napus* = 'Rübe', Bezug nehmend auf die rübenförmigen Wurzeln. (<http://www.avogel.ch/de/pflanzenlexikon/index.php> [10.12.2008])

Syn: Mönchs-, Fischer-, Reiterkappe

Def: "Angehöriger einer Gattung der Hahnenfußgewächse mit helmartigem, aufrecht stehendem hinterem Blumenblatt. Meist meterhohe, giftige Alkaloide enthaltende Staude mit knollig verdickten Wurzeln." (Wahrig-Burfeind 2000: s.v. Eisenhut).

monocotyledon, sg

Etym: from Greek *monos* = 'single, alone', *kotýlē* = 'cup, bowl' (Sugden, A. 1990: s.v.).

Expl: "An angiosperm of the class monocotyledones. Their seeds have one cotyledon. Monocotyledons do not have secondary thickening and most are small herbaceous plants with parallel venation and floral parts in whorls of three or multiples of three." (Sugden, A. 1990: s.v.).

dt.: Monokotyledone, f, sg

Def: "Mit nur einem Keimblatt versehen." (Wahrig-Burfeind 2000: s.v.).

morphology of plants, sg

Def: "The scientific study of how plants and their parts are formed." (*Longman Dictionary of Contemporary English* 1995: s.v. morphology).

dt.: Pflanzenmorphologie, f, sg

Etym: von griechisch *morphe* = 'Gestalt' und *logos* = 'Lehre' (Wahrig-Burfeind 2000: s.v.)

Def: "Lehre von der Gestalt der Pflanzen." (Wahrig-Burfeind 2000: s.v.).

mould, sg

Def: "A soft green or black substance that grows on food which has been kept too long, and on objects that are in warm, wet air." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Schimmelpilz, m, sg

Def: "Auf feuchten Nahrungsmitteln und verderbenden Früchten verbreiteter Schlauchpilz der Gattungen *Aspergillus* und *Penicillium*, der den als Schimmel bekannten Überzug bildet." (Wahrig-Burfeind 2000: s.v.).

mucilage, sg

Etym: from Latin *mucere* = 'to be mouldy' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A gelatinous substance of various plants (as legumes or seaweeds) that contains protein and polysaccharides and is similar to plant gums." (Encyclopaedia Britannica Inc. (2005): <http://www.britannica.com/dictionary?book=Dictionary&va=mucilage> [10.07.2008]).

dt.: Schleim, m, sg

Syn: Mucilagine, f, pl

Def: "Quellbare, nicht fadenziehende Polysaccharide." (Wissen.de GmbH - Gesellschaft für Online-Information (Hrsg.) (2005): [wissen.de](http://www.wissen.de), in: www.wissen.de [10.07.2008]).

mucous membrane, sg

Etym: from Latin *mucosus* = 'slimy', *membrana* = 'skin covering a part of the body' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "The thin surface that covers certain inner parts of the body, such as the inside of the nose." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Schleimhaut, f, sg

Def: "Die bei den Menschen und Wirbeltieren alle nach außen sich öffnenden Höhlen und Kanäle auskleidende Membran." (Wahrig-Burfeind 2000: s.v.).

mugwort (*artemisia vulgaris*), sg: species

artemisia: genus

asteraceae: family

Syn: common wormwood

Etym: from old Norse *muggi* = 'marsh', Germanic *wuertz* = 'root' (Wikimedia Foundation Inc.(o. J.): <http://en.wikipedia.org/wiki/Mugwort> [08.12.2008]).

Def: "Any of a genus of aromatic composite herbs and shrubs." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/artemisia> [15.07.2008]).

dt.: Beifuß, Gemeiner (*Artemisia vulgaris*), m, sg: Art
Artemisia: Gattung
Korbblütler: Familie

Etym: von Althochdeutsch *bōßen* = stoßen, da dem Beifuß abstoßende Wirkung gegen dämonische Kräfte nachgesagt wurde (Wahrig-Burfeind 2000: s.v. Beifuß)

Def: "Angehöriger einer Gattung der Korbblütler, Kraut oder Strauch von meist aromatischem Geruch, Gewürzpflanze." (Wahrig-Burfeind 2000: s.v.).

mullein (*verbascum thapsus*), sg: species
verbascum: genus
scrophulariaceae: family

Syn: mullen

Etym: from Latin *mollis* = 'soft' (*The Times English Dictionary & Thesaurus* 2000: s.v.).

Def: "A Mediterranean herbaceous plant, typically having tall spikes of yellow flowers and broad hairy leaves." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Wollblume (*Verbascum thapsus*), f, sg: Art
Verbascum: Gattung
Rachenblütler: Familie

Syn: Kleinblütige Königskerze, Marienkerze, Frauenkerze

Def: "Angehörige einer Gattung der Rachenblütler, filzige oder wollige Pflanze mit großen, endständigen Blütentrauben." (Wahrig-Burfeind 2000: s.v.).

nasturtium (*tropaeolum minus*), sg: species
tropaeolum: genus
tropaeolaceae: family

Etym: from Latin *nasus* = 'nose', *tortus* = 'twisted', because the pungent smell causes one to wrinkle one's nose (Wikimedia Foundation Inc.(o. J.): <http://en.wikipedia.org/wiki/Nasturtium> [08.12.2008]).

Def: "Any of a genus of herbs of Central and South America with showy spurred flowers and pungent edible seeds and leaves." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/nasturtium> [15.07.2008]).

dt.: Kapuzinerkresse, Kleine (*Tropaeolum minus*), f, sg: Art

Tropaeolum: Gattung

Kapuzinerkressengewächse: Familie

Def: "Angehörige der einzigen Gattung der Kapuzinerkressegewächse, krautige, vielfach kletternde Pflanze mit gelappten, fingerförmigen oder schildförmigen Blättern und gelben, roten oder bläulichen Blüten." (Wahrig-Burfeind 2000: s.v. Kapuzinerkresse).

neuralgia, sg only

Def: "A sharp pain along the length of a nerve." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Neuralgie, sg

Syn: Nervenschmerzen

Etym: von griechisch *neuron* = 'Sehne, Nerv', *algos* = 'Schmerz' (Wahrig-Burfeind 2000: s.v.)

Def: "Anfallsweise auftretender Schmerz von Nerven." (Wahrig-Burfeind 2000: s.v.)

nightshade (atropa belladonna), sg: species

atropa: genus

solanaceae: family

Def: "A poisonous plant of the nightshade family having purple or green bell-shaped flowers, glossy black berries, and root and leaves that yield atropine." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/belladonna> [10.12.2008]).

dt.: Tollkirsche (*Atropa belladonna*), f, sg: Art

Atropa: Gattung

Nachtschattengewächse: Familie

Etym: von griechisch *atropos* = 'unabwendbar' (wegen der tödlichen Wirkung) (Wahrig-Burfeind 2000: 199)
von italienisch *bella donna* = 'schöne Frau', (weil der in die Augen geträufelte Extrakt die Pupillen weitet und dem Augapfel ein interessantes Aussehen gibt), (Wahrig-Burfeind 2000: s.v.)

Def: "Nachtschattengewächs mit schwarzen, kirschenähnliche, sehr giftigen Beeren." (Wahrig-Burfeind 2000: s.v.).

nitrogen, sg

Etym: from Greek *nitron* = 'sodium carbonate', French *gène* = 'producing' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "A gas that is an element (= a simple substance) without colour or smell, that forms most of the Earth's air." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Stickstoff, m, sg

Def: "Chemisches Element, Hauptbestandteil der Luft." (Wahrig-Burfeind 2000: s.v.).

nitrogenous, adj

Etym: from Greek *nitron* = 'sodium carbonate', French *gène* = 'producing' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "Containing nitrogen" (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: stickstoffhaltig, adj

Def: "Das chemische Element Stickstoff enthaltend." (Wahrig-Burfeind 2000: s.v.).

nut, sg

Def: "A dry one-seeded indehiscent fruit that usually possesses a woody wall." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Nuss, f, sg

Def: Harte, meist einsamige Schließfrucht.

nutmeg apple, sg

Def: "The seed of a tropical tree from which a powder used as a spice is made." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Muskatnuss, f, sg

Etym: eigentlich 'nach Moschus duftende Nuss', von griechisch *móschos* = 'Moschus, Hode' (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v.).

Def: "getrockneter Same des Muskatnussbaumes, eines tropischen Holzgewächses mit pfirsichähnlichen Früchten; ein Gewürz." (Wahrig-Burfeind 2000: s.v.).

nutrient, sg

Etym: from Latin *nutrire* = 'to nourish' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "A chemical or food that provides what is needed for plants or animals to live and grow." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Nährstoff, m, sg

Def: "Stoff, den ein Lebewesen zu seiner Ernährung, seinem Körperaufbau braucht." (Wahrig-Burfeind 2000: s.v.).

ointment, sg

Etym: from Latin *unguentum* = 'unguent' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "A soft substance made of solid oil that you rub into your skin, especially as a medical treatment." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Salbe, f, sg

Def: "Halbfeste Arzneizubereitung zur lokalen Anwendung." (Pschyrembel, Willibald 1998: s.v.).

opium poppy (papaver somniferum), sg: species

papaver: genus

papaveraceae: family

Def: "A poppy with greyish-green leaves and typically white or reddish flowers; widely cultivated as a source of opium." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Schlafmohn (*Papaver somniferum*), m, sg: Art

Papaver: Gattung

Mohngewächse: Familie

Etym: von lateinisch *somniferum* = 'Schlaf bringend', verweist auf die Verwendung als Schlafmittel für Kinder in der griechischen Antike (Wikimedia Foundation Inc. (o.J.): [wikipedia.org](http://de.wikipedia.org/wiki/Papaver_somniferum), in http://de.wikipedia.org/wiki/Papaver_somniferum [10.12.2008])

Def: "Mohnart des östlichen Mittelmeerraums, die das Opium liefert." (Wahrig-Burfeind 2000: s.v.).

oral, adj

Def: "Concerned with or involving the mouth." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: oral, adj

Etym: von lateinisch *os* = 'Mund' (Wahrig-Burfeind 2000: s.v.)

Def: "Zum Mund gehörig, durch den, mit dem Mund." (Wahrig-Burfeind 2000: s.v.).

organic, adj

Def: "Living, or produced by or from living things." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: organisch, adj

Etym: von lateinisch *organum*, griechisch *organon* = 'Werkzeug', 'Hilfsmittel' (Wahrig-Burfeind 2000: s.v.).

Def: "Der belebten Natur angehörig, tierisch-pflanzlich" (Wahrig-Burfeind 2000: s.v.).

Parkinson's disease, sg only

Def: "A serious illness in which your muscles become very weak and your arms and legs shake." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Parkinsonsche Krankheit, f, sg

Def: "Schüttellähmung; nach dem englischen Arzt James Parkinson." (Wahrig-Burfeind 2000: s.v.).

peel, sg only

Def: "The outer layer of some fruits." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Schale, f, sg

Def: "Hülle von Früchten, Keimen." (Wahrig-Burfeind 2000: 1087).

perennial, adj

Etym: from Latin *per* = 'through', *annus* = 'year' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "(Of plants) living for more than two years." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: ausdauernd, adj

Def: "Mehrere Jahre hindurch fortlebend." (Wahrig-Burfeind 2000: s.v.).

pericarp, sg

Def: "The part of a fruit enclosing the seeds that develops from the wall of the ovary." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Perikarp, n, sg

Etym: von griechisch *peri* = 'herum' und *karpos* = 'Frucht' (Wahrig-Burfeind 2000: s.v.).

Syn: Fruchtwand

Def: "Jener Teil der Frucht, der die Samen umgibt." (Wahrig-Burfeind 2000: s.v.).

peristalsis, sg

Etym: from Greek *peri* = 'around', *stalsis* = 'compression' (*The Times English Dictionary & Thesaurus* 2000: s.v.).

Def: "The succession of waves of involuntary muscular contraction of various bodily tubes, esp. of the alimentary tract, where it effects transport of food and waste products." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Peristaltik, f, sg

Def: "Bewegung von Hohlorganen, deren Wände Muskeln enthalten; durch abwechselndes Kontrahieren und Erschlaffen einzelner Muskelabschnitte kommt es zu einer fortlaufenden Kontraktionswelle." (Wahrig-Burfeind 2000: s.v.).

permeable, adj

Etym: from Latin *permeare* = 'to pervade' (*The Times English Dictionary & Thesaurus* 2000: s.v.).

Ant: impermeable

Def: "Material that is permeable allows water, gas, etc to pass through it." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: permeabel, adj

Def: "durchdringbar, durchlässig" (Wahrig-Burfeind 2000: s.v.).

pesticide, sg

Def: "An agent used to destroy pests." (Encyclopaedia Britannica Inc. 2005): <http://www.britannica.com/thesaurus?va=pesticide> [10.07.2008]).

dt.: Pestizid, n, sg

Etym: von lateinisch *pestis* = 'ansteckende Krankheit', 'Seuche' (Wahrig-Burfeind 2000: s.v.).

Def: "Mittel zur Vernichtung von Schädlingen." (Wahrig-Burfeind 2000: s.v.).

pharmaceutical quality, sg

Def: Profile of a medical product with regard to identity, strength, purity etc.

dt.: Pharmazeutische Qualität, f, sg

Def: "Beschaffenheit eines Arzneimittels (Identität, Gehalt, Reinheit, sonstige chemische, physikalische, biologische Eigenschaften, Herstellverfahren, die es für den vorhergesehenen Zweck geeignet macht." (Hanke 1984: s.v.).

pharmacology, sg

Def: "The scientific study of drugs and medicines." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Pharmakologie, f, sg

Etym: von griechisch *pharmakon* = 'Heilmittel' und *logos* = 'Lehre' (Wahrig-Burfeind 2000: s.v.).

Def: "Wissenschaft von den Arzneimitteln." (Wahrig-Burfeind 2000: s.v.).

pharmacopoeia, sg

Etym: from Greek *pharmakopoiia* = 'preparation of drugs' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "An official book giving information about medicines." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Arzneibuch, n, sg

Def: "Das amtliche Vorschriftenbuch für die Zubereitung, Qualität, Prüfung, Bezeichnung, Lagerung und Abgabe einer bestimmten Auswahl von Arzneimitteln, den sogenannten offizinellen Mitteln." (Burger /Wachter 1998: s.v.).

pharyngeal, adj

dt.: Rachen-

↑pharynx**pharynx, sg**

Etym: from Greek *pharynx* = 'throat' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "The part of the alimentary canal between the mouth and the oesophagus." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Rachen, m, sg

Def: "Die hinter dem Gaumensegel liegende Erweiterung des Schlundes." (Wahrig-Burfeind 2000: s.v.).

photosensitize, v

Def: "To make something sensitive to the action of light, for example by changing colour or form." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: lichtempfindlich machen, v

Syn: photosensibilisieren

Etym: von griechisch *photos* = 'Licht' und lateinisch *sensibilis* = 'empfinden könnend, sinnlich' (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v.)

Def: "Empfindlich gegen natürliches und künstliches Licht machen." (Wahrig-Burfeind 2000: s.v.).

photosynthesis, sg

Def: "The production by a green plant of special substances like sugar that it uses as food, caused by the action of sunlight on chlorophyll." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Photosynthese, f, sg

Etym: von griechisch *photos* = 'Licht' und *synthesis* = 'Zusammensetzung' (Wahrig-Burfeind 2000: s.v.)

Def: "Ausnutzung von Licht durch die grüne Pflanze für die Umwandlung von Kohlendioxid in Kohlenhydrate." (Wahrig-Burfeind 2000: s.v.).

physiology of plants, sg

Def: "The science concerned with the study of how the bodies of living things work." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Pflanzenphysiologie, f, sg

Etym: von griechisch *physis* = 'Natur' und *logos* = 'Lehre' (Wahrig-Burfeind 2000: s.v.)

Def: "Lehre von den pflanzlichen Lebenserscheinungen." (Wahrig-Burfeind 2000: s.v.).

pine (pinus), sg: species

pinus: genus

pinaceae: family

Etym: from Latin *pena* = 'pain' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A tall tree with long hard sharp leaves that do not fall off in winter." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Kiefer (Pinus), f, sg: Art

Kiefern: Gattung

Kieferngewächse: Familie

Def: "Angehörige einer Gattung der Koniferen mit zwei bis fünf Nadeln an einem Kurztrieb." (Wahrig-Burfeind 2000: s.v.).

pod, sg

Def: "The outer covering of a fruit or seed." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Hülse, f, sg

Def: "Perikarp aus einem Karpell hervorgegangen, an der Bauch- und Rückennaht aufspringend." (Burger/Wachter 1998: s.v.).

poisonous plant, f, sg

Expl: These are plants that are dangerous for human beings and animals due to their strength of toxic substances.

dt.: Giftpflanze, f, sg

Def: "Für Menschen und Tiere aufgrund des Gehaltes an Giftstoffen schädliche Pflanze." (Wahrig-Burfeind 2000: s.v.).

to pollinate, v

Def: "To make a flower or plant produce seeds by giving it pollen." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: bestäuben, v

Def: "Den Blütenstaub (Pollen) der Staubgefäße auf die weiblichen Blütenorgane einer Pflanze übertragen." (Wahrig-Burfeind 2000: s.v.).

powder, sg

Def: "A preparation in the form of fine particles especially for medicinal or cosmetic use." (Encyclopaedia Britannica Inc. (2005): <http://www.britannica.com/dictionary?hdwd=powder&book=Dictionary&jump=powder> [09.07.2008]).

dt.: Pulver, n, sg

Etym: von lateinisch *pulvis* = 'Staub' (Wahrig-Burfeind 2000: s.v.)

Def: "Staubfein zerteilter, fester Stoff." (Wahrig-Burfeind 2000: s.v.).

powdered, adj

dt.: pulverisiert, adj

↑ **powder**

preparation, sg

Etym: from Latin *prae* = 'before', *parare* = 'to make ready' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A medicine used for treating illness, for example a liquid or a tablet." (*The Times English Dictionary & Thesaurus* 2000: s.v.)

dt.: Präparat, n, sg

Def: "Etwas Zubereitetes, z.B. ein Arzneimittel oder medizinisches Anschauungsmaterial." (Wissen.de GmbH - Gesellschaft für Online-Information (Hrsg.) (2005): [wissen.de](http://www.wissen.de), in: www.wissen.de [09.07.2008]).

protoplasm, sg only

Etym: from Greek *protos* = 'first', *plasma* = 'form' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "The colourless substance that forms the cells of plants and animals." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Protoplasma, n, sg

Def: "Die von der Zellmembran umhüllte Grundsubstanz der lebenden Zelle, in der alle Lebensvorgänge ablaufen." (Wahrig-Burfeind 2000: s.v.).

pubescent, adj

Etym: from Latin *pubescens* = 'to become hairy, downy, or an adult' (Sugden, A. 1990: s.v.).

Def: "hairy" (Sugden, A. 1990: s.v.).

dt.: behaart, adj

Def: "Mit Haaren bewachsen." (Wahrig-Burfeind 2000: s.v.).

to pulverize, v

Def: "To reduce (as by crushing, beating, or grinding) to very small particles." (Encyclopaedia Britannica Inc. (2005): <http://www.britannica.com/thesaurus?hdwd=&book=Thesaurus&jump=pulverize> [10.07.2008]).

dt.: pulverisieren, v

Def: "Staubfein zerkleinern." (Wahrig-Burfeind 2000: s.v.).

purity, sg

Expl: "Purity pertains to evaluating that there are no adulterants present in the plant material. It can be evaluated by pharmacognostic evaluations like shape and size in leafy plant material, palisade ratio, starch granulates shape and size, calcium oxalate crystals, ash values and other such tests like extractive values." (Mukherjee, Pulok K. 2002: 19).

dt.: Reinheit, f, sg

Expl: "Die Prüfungen auf Reinheit erstrecken sich sowohl auf Ausgangsstoffe (Drogen und Extrakte) als auch auf das Fertigprodukt. Sie umfassen Untersuchungen auf Fremdbestandteile und Verunreinigungen [...], Wassergehalt [...], Asche [...], Pestizide [...], Ethylenoxid und Ethylenchlorhydrin [...], Lösungsmittelrückstände, Schwermetalle und mikrobiologische Reinheit unter besonderer Berücksichtigung pathogener Keime." (Hanke 1984: s.v.).

rancid, adj

Def: "Oily or fatty food that is rancid smells or tastes unpleasant because it is no longer fresh." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: ranzig, adj

Etym: von lateinisch *rancidus* = 'nach Fäulnis riechend' (Wahrig-Burfeind 2000: s.v.).

Def: "Alt, nicht mehr frisch, schlecht." (Wahrig-Burfeind 2000: s.v.).

remedy, sg

Def: "A medicine to cure an illness or pain that is not very serious." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Heilmittel, n, sg

Def: "Stoff oder Maßnahme mit heilender Wirkung zur Behandlung von Krankheiten." (Wahrig-Burfeind 2000: s.v.).

rheumatism, articular, sg

Def: "A disease that makes your joints or muscles painful and stiff." (*Longman Dictionary of Contemporary English* 1995: s.v. rheumatism).

dt.: Gelenksrheumatismus, m, sg

Etym: von griechisch *rheumatízein* = 'am Fluß (Krankheit) leiden' (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v.)

Def: "Fieberhafte Erkrankung der Gelenke, durch Krankheitserreger oder deren Gifte hervorgerufen, oft von Herdinfektionen (Mandeln, Zähnen, Nebenhöhlen) ausgehend." (Wahrig-Burfeind 2000: s.v.).

rhizome, sg

Etym: from Greek *rhiza* = 'root' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Syn: rootstock

Def: "Thick stem of some plants such as the iris, which lies flat along the ground with roots and leaves growing from it." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Wurzelstock, m, sg

Syn: Rhizom

Def: "Unterirdischer Spross, mit dessen Hilfe die damit versehenen Pflanzen zu überwintern vermögen." (Wahrig-Burfeind 2000: s.v.).

ripe, adj

Def: "Ripe fruits or crops are fully grown and ready to eat." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: reif, adj

Def: "In der körperlichen Entwicklung vollendet (Person, Frucht)." (Wahrig-Burfeind 2000: s.v.).

root, sg

Def: "The part of a plant or tree that grows under the ground and gets water from the soil." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Wurzel, f, sg

Syn: Radix

Def: "Der Befestigung und der Ernährung dienendes Pflanzenorgan." (Wahrig-Burfeind 2000: s.v.).

rose hip, sg

Def: "The small red fruit of some kinds of rose bush, used in medicines and juices." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Hagebutte, f, sg

Etym: von niederdeutsch *hambutten* u.ä., zu *hagan* = 'Dornstrauch, Heckenrose'. Die älteste Form *haganbutta* = 'Weißdorn' (auch der Weißdorn hat rote Früchte), (*Kluge Etym. Wörterb. d. dt. Spr.* 2002: s.v.)

Def: "Die rote, beerenartige Scheinfrucht der Rosen." (Wahrig-Burfeind 2000: s.v.).

rue, sg

Def: "A European strong-scented perennial woody herb that has bitter leaves used medicinally." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/rue>[3] [15.07.2008]).

dt.: Raute, f, sg

Def: "Angehörige einer Gattung der Rautengewächse." (Wahrig-Burfeind 2000: s.v.).

rutine, sg only

Def: "A yellow crystalline flavonol glycoside that occurs in various plants and is used in medicine chiefly for strengthening capillary walls." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/rutine> [14.07.2008]).

dt.: Rutin, n, sg

Def: "In zahlreichen Pflanzen vorkommender Naturstoff, der zur Behandlung von Venenerkrankungen und Durchblutungsstörungen eingesetzt wird." (Wahrig-Burfeind 2000: s.v.).

sage (salvia officinalis), sg: species

salvia: genus

lamiaceae: family

Def: "A European perennial mint with grayish-green aromatic leaves used especially in flavoring meats." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/sage> [14.07.2008]).

dt.: Salbei (*Salvia officinalis*), m, sg: Art

Salbei: Gattung

Lippenblütler: Familie

Etym: von lateinisch *salvare* = 'heilen' (Wahrig-Burfeind 2000: s.v.)

Def: "Angehöriger einer Gattung der Lippenblütler mit blauen oder rötlich violetten Blüten." (Wahrig-Burfeind 2000: s.v.).

saponin, sg

Def: "Any of various mostly toxic glucosides that occur in plants (as soapwort or soapbark) and are characterized by the property of producing a soapy lather." (*Encyclopaedia Britannica Inc.* (2005): <http://www.britannica.com/dictionary?book=Dictionary&va=saponin&query=saponin> [10.07.2008]).

dt.: Saponin, n, sg

Etym: von lateinisch *sapo* = 'Seife' (Wissen.de GmbH - Gesellschaft für Online-Information(Hrsg.) (2005): [wissen.de](http://www.wissen.de), in: www.wissen.de [10.07.2008])

Def: "Eine Gruppe pflanzlicher Glykoside, die u.a. in Panamarinde, Seifenkraut, Rosskastanie u.a. enthalten sind." (Wissen.de GmbH - Gesellschaft für Online-Information(Hrsg.) (2005): [wissen.de](http://www.wissen.de), in: www.wissen.de [10.07.2008]).

saturated, adj

Etym: from Latin *satis* = 'enough' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "Being a solution that is unable to dissolve or absorb any more of a solute at a given temperature and pressure." (*Encyclopaedia Britannica Inc.* (2005): <http://www.britannica.com/dictionary?hdwd=saturate&book=Dictionary&jump=saturated> [09.07.2008]).

dt.: gesättigt, adj

Def: "Den zu lösenden Stoff in der größtmöglichen lösbaren Menge enthaltend." (Wahrig-Burfeind 2000: s.v.).

scent, sg

Def: "A pleasant smell that something has." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Duft, m, sg

Def: "Zarter, meist angenehmer Geruch." (Wahrig-Burfeind 2000: s.v.).

seam, sg

Def: "A line which connects two halves, for example of a pod." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Naht, f, sg

Def: "Unbewegliche Verbindung zweier Hälften." (Wahrig-Burfeind 2000: s.v.).

secondary diameter growth, sg only

Etym: from Greek *dia* = 'through', *metron* = 'measure' (*The Times English Dictionary & Thesaurus* 2000: s.v.).

Def: The growing in thickness of ligneous plants, caused by the continuous division of the cambium.

dt.: Sekundäres Dickenwachstum, n, sg

Def: "Der Zuwachs an Leit- und Festigungsgewebe bei Holzgewächsen, hervorgerufen durch eine bis zum Tode fortgesetzte Teilungsaktivität des Kambiums. Somit ist das sekundäre Dickenwachstum verantwortlich für die Bildung von Holz." (wissen.de GesmbH Gesellschaft für Online- Information (Copyright 2000-2005): München: <http://www.wissen.de> [10.12.2008]).

shoot, sg

Def: "The part of a plant that comes up above the ground when it is just beginning to grow." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Trieb, m, sg

Def: "Neuer, sich entwickelnder Teil einer Pflanze." (Wahrig-Burfeind 2000: s.v.).

side effect, sg

Def: "An effect that a drug has on your body in addition to curing pain or illness." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Nebenwirkung, f, sg

Expl: "Nebenwirkungen können je nach Eigenschaft eines Arzneistoffes schon bei therapeutischen Dosen oder erst durch Überdosierung auftreten. Weitere Ursachen sind individuell unterschiedliche Toleranz, z.B. infolge genetisch oder altersbedingter Variationen des Enzymmusters, ebenso verminderte Nierenfunktion [...] Nebenwirkungen können rasch nach Applikation eines Pharmakon oder erst nach einer Latenzzeit auftreten." (Burger/Wachter 1998: s.v.).

silique, sg

Etym: from Latin *siliqua* = 'pod' (*The Times English Dictionary & Thesaurus* 2000: s.v.).

Def: "The long dry dehiscent fruit of cruciferous plants, such as the wallflower." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Schote, f, sg

Def: "Perikarp aus zwei Karpellen hervorgegangen." (Burger/Wachter. 1998: s.v.).

soluble, adj

Etym: from Latin *solvere* = 'to free' (*Longman Dictionary of Contemporary English* 1995: s.v.)

Def: "A soluble substance can be dissolved in a liquid." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: löslich, adj

Def: "So beschaffen, dass man es (in Flüssigkeit) auflösen kann." (Wahrig-Burfeind 2000: s.v.).

solvent, sg

Etym: from Latin *solvere* = 'to free' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "A liquid that is able to turn a solid substance into liquid." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Lösungsmittel, n, sg

Def: "Flüssigkeit, die andere Gase, Flüssigkeiten oder feste Stoffe lösen kann." (Wahrig-Burfeind 2000: s.v.).

sorrel (rumex acetosa), sg: species

rumex: genus

polygonaceae: family

Etym: from Old French *surele* = 'sour' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A plant with leaves that taste sour that is used in cooking." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Sauerampfer (*Rumex acetosa*), m, sg

Rumex: Gattung

Knöterichgewächse: Familie

Syn: Säuerling

Def: "Als Wildgemüse verwendeter Ampfer." (Wahrig-Burfeind 2000: s.v.).

species, sg

Etym: from Latin *species* = 'view, appearance, vision, dream, semblance' (*Longman Dictionary of Contemporary English* 1995: s.v.)

Def: "A group of animals or plants which are all similar and can breed together to produce young animals or plants of the same kind as them." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Art, f, sg

Syn: Spezies

Def: "In der biologischen Systematik die unter der Gattung (Genus) stehende Kategorie." (Burger/Wachter1998: s.v.).

spheroidal, adj

Etym: from Greek *sphaira* = 'ball', *eidos* = 'shape'. (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "Similarly shaped to a ball, but not a perfect sphere." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: kugelig, adj

Def: "Wie eine Kugel geformt." Wahrig-Burfeind 2000: s.v.).

sputum, sg

Etym: from Latin *spuere* = 'to spit out' (*Longman Dictionary of contemporary English* 1995: s.v.)

Def: "Liquid in your mouth which you have coughed up from your lungs." (*Longman Dictionary of contemporary English* 1995: s.v.).

dt.: Auswurf, m, sg

Def: "Aus den Atemwegen entleerter Stoff." (Wahrig-Burfeind 2000: s.v.).

squill (urinea maritima), sg: species

urinea: genus

liliaceae: family

Etym: from Latin *squilla* = 'sea onion' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A mediterranean plant of the lily family." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Meerzwiebel (*Urginea maritima*), f, sg: Art

Urginea: Gattung

Liliengewächse: Familie

Def: "Zu den Liliengewächsen gehörende, stattliche Pflanze an den Küsten des Mittelmeeres mit großen, graugrünen Blättern und bis zu 1m hohem Blütenstand, deren Zwiebel herzwirksame Glykoside liefert." (Wahrig-Burfeind 2000: s.v.).

stalk, sg

Def: "A long narrow part of a plant that supports leaves, fruits, or flowers." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Stängel, m, sg

Def: "Sprossachse der höheren Pflanzen." (Wahrig-Burfeind 2000: s.v.).

starch, sg

Etym: from Old English *stercan* = 'to stiffen' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A white odorless tasteless granular or powdery complex carbohydrate that is the chief storage form of carbohydrate in plants." (Encyclopaedia Britannica Inc. (2005): <http://www.britannica.com/dictionary?hdwd=starch> [10.07.2008]).

dt.: Stärke, f, sg

Def: "Ein in unter- und oberirdischen Nährgeweben von höheren Pflanzen in Form von gekörnten Polysacchariden vorkommendes Assimilationsprodukt und Reservesubstanz." (Burger/Wachter 1998: s.v.).

stem, sg

Def: "The long thin central part of a plant above the ground or the smaller parts that grow from it, from which leaves grow." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Stamm, m, sg

Def: "Das Astwerk tragender Holzkörper des Baumes." (Wahrig-Burfeind 2000: s.v.).

stipule, sg

Def: "A small paired usually leaflike outgrowth occurring at the base of a leaf or its stalk." (*The Times English Dictionary & Thesaurus* 2000: s.v.)

dt.: Stipel, f, sg

Etym: von lateinisch *stipula* = 'Halm' (Wahrig-Burfeind 2000: 1206)

Def: "Nebenblatt" (Wahrig-Burfeind 2000: s.v.).

strength, sg

Def: "Degree of potency of effect or of concentration." (Encyclopaedia Britannica Inc. (2005):[http://www.britannica.com/dictionary? Book = Dictionary& va=strength](http://www.britannica.com/dictionary?Book=Dictionary&va=strength) [09.07.2008]).

dt.: Gehalt, m, sg

Def: "Chemischer allgemeiner (qualitativer) Überbegriff für Konzentration und Anteil." (Burger/Wachter 1998: s.v.).

sudorific, adj

Etym: from Latin *sudor* = 'sweat' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "Causing or inducing sweat." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/sudorific> [15.07.2008]).

dt.: schweißtreibend, adj

Def: "Schweiß hervorbringend, zum Schwitzen anregend." (Wahrig-Burfeind 2000: s.v.).

synthetic, adj

Def: "Produced by combining different artificial substances, rather than being naturally produced." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: synthetisch, adj

Etym: von griechisch *synthesis* = 'Zusammensetzung' (Wahrig-Burfeind 2000: s.v.)

Def: "Aus einfachsten Stoffen chemisch hergestellt." (Wahrig-Burfeind 2000: s.v.).

tanning agent, sg

Expl: Tanning agents are used for tanning the skin of animals.

dt.: Gerbstoff, m, sg

Def: "Stoff, der tierische Haut in Leder überzuführen in der Lage ist." (Burger/Wachter 1998: s.v.).

taproot, sg

Def: "The main root of a plant, that grows straight down and produces smaller side roots." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Pfahlwurzel, f, sg

Def: "Lange, gerade, pfahlförmige Wurzel." (Wahrig-Burfeind 2000: s.v.).

taste bud, sg, usually pl

Def: "One of the small parts of the surface of your tongue which can tell the difference between foods according to their taste." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Geschmacksknospe, sg

Def: "Jedes der beim Menschen auf der Zunge befindlichen, knospenförmigen Organe des Geschmackssinnes." (Wahrig-Burfeind 2000: s.v.).

thorn apple (datura stramonium), sg: species

datura: genus

solanaceae: family

Def: "A poisonous plant of the Northern hemisphere, having white funnel-shaped flowers and spiny fruits." (*The Times English Dictionary & Thesaurus* 2000: s.v.)

dt.: Stechapfel (*Datura stramonium*), m, sg: Art

Datura: Gattung

Nachtschattengewächse: Familie

Etym: von arabisch *datura*, *stramonium* aus griechisch *strychnon* und *manikon* = 'Wahnsinn' (http://www.awl.ch/heilpflanzen/datura_stramonium/index.htm [10.12.2008])

Def: "Giftiges Nachtschattengewächs mit stacheligen Früchten, dessen Blätter Asthma lindernde Mittel enthalten." (Wahrig-Burfeind 2000: s.v.).

thyme, common (thymus vulgaris), sg: species

thymus: genus

lamiaceae: family

Etym: from Latin *thymum*, from Greek *thuein* = 'to make a burnt offering' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "Any of a genus of Eurasian mints with small pungent aromatic leaves." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/thyme> [15.07.2008]).

dt.: Thymian, echter (*Thymus vulgaris*), m, sg: Art

Thymiane: Gattung

Lippenblütler: Familie

Def: "Angehöriger einer ätherische Öle enthaltenden Gattung halbsträuchiger Lippenblütler." (Wahrig-Burfeind 2000: s.v.).

tincture, sg, n

Etym: from Latin *tingere* = 'to dye' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "A medical substance mixed with alcohol." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Tinktur, f, sg

Def: "Durch Mazeration oder Perkolation hergestellter Auszug aus getrockneten Arzneipflanzen mit Äthanol." (Pschyrembel, Willibald 1998: s.v.).

tissue, sg

Etym: from Latin *texere* = 'to weave' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "The material forming animal or plant cells." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Gewebe, n, sg

Def: "Gefüge gleichartiger Zellen." (Wahrig-Burfeind 2000: s.v.).

tormentil (potentilla erecta), sg: species

potentilla

rosaceae: family

Etym: from Latin *tormentum* = 'agony'; from its use in relieving pain (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A perennial plant of Europe and West Asia, having yellow flowers and an astringent root used in medicine, tanning , and dyeing." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Blutwurz (Potentilla erecta), f, sg: Art

Potentilla: Gattung

Rosengewächse: Familie

Syn: Rotwurz, Siebenfinger

Def: "Fingerkraut mit kleinem, gelben und roten Saft enthaltenden Wurzelstock." (Wahrig-Burfeind 2000: s.v.).

toxic, adj

Syn: poisonous

Def: Of, or relating to, or caused by a poison. (Encyclopaedia Britannica Inc.(2005):<http://www.britannica.com/dictionary?book=Dictionary&va=toxic> [10.07.2008]).

dt.: toxisch, adj

Syn: giftig

Etym: von lateinisch *toxicum* = 'Pfeilgift' (Wahrig-Burfeind 2000: s.v.)

Def: "Für den Körper schädlich, in vielen Fällen auch tödlich." (Wahrig-Burfeind 2000: s.v.).

transpire, v

Etym: from Latin *trans* = 'across, through, beyond', *spirare* = 'to breathe' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "When a plant transpires, it gives off water from its surface." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: transpirieren, v

Def: "Wasserdampf abgeben." (Wahrig-Burfeind 2000: s.v.).

tuber, sg

Etym: from Latin *tuber* = 'hump' (*Longman Dictionary of Contemporary English* 1995: s.v.)

Def: "A round swollen part that grows below the ground on the stem of certain plants, such as the potato, from which new plants grow." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Knolle, f, sg

Def: fleischig verdicktes pflanzliches Organ, das der Speicherung von Nährstoffen und zum Teil auch der vegetativen Vermehrung dient." (Wahrig-Burfeind 2000: s.v.).

tulip (tulipa), sg: species

tulipa: genus

liliaceae: family

Etym: from Turkish *tülbend* = 'turban' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "A brightly coloured flower that is shaped like a cup and grows from a bulb in spring." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Tulpe (Tulipa), f, sg: Art

Tulpen: Gattung

Liliengewächse: Familie

Def: "Liliengewächs der gemäßigten Zone der Alten Welt mit aufrechten, endständigen Einzelblüten." (Wahrig-Burfeind 2000: s.v.).

turnip, sg

Def: "A large round pale yellow vegetable that grows under the ground, or the plant that produces it." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Rübe, f, sg

Def: "Ganz oder teilweise verdickte pflanzliche Pfahlwurzel; Pflanze, deren verdickte Pfahlwurzeln genutzt werden." (Wahrig-Burfeind 2000: s.v.).

twig, sg

Etym: from Old English *twigge* (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A small very thin stem of wood that grows from a branch on a tree." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Zweig, m, sg

Def: "Dünner Ast." (Wahrig-Burfeind 2000: s.v.).

umbel, sg

Etym: from Latin *umbella* = 'umbrella' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A racemose inflorescence, characteristic of umbelliferous plants, in which the flowers arise from the same point in the main stem and have stalks of the same length, to give a cluster with the youngest flowers at the centre." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: Dolde, f, sg

Def: "Büscheliger Blütenstand." (Wahrig-Burfeind 2000: s.v.).

umbelliferae, pl

Etym: from Latin *umbella* = 'umbrella' and *ferre* = 'to bear' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A family of aromatic plants with bushy inflorescences." (*The Times English Dictionary & Thesaurus* 2000: s.v.)

dt.: Doldenblütler, m, pl

Def: "Vertreter einer Pflanzenordnung, deren Blüten büschelig wachsen." (Wahrig-Burfeind 2000: s.v.).

umbelliferous, adj

Def: "Of or belonging to a family of herbaceous plants and shrubs, typically having hollow stems, divided or compound leaves, and flowers in umbels." (*The Times English Dictionary & Thesaurus* 2000: s.v.).

dt.: doldig, adj

Def: Charakteristisch für eine Pflanzenfamilie, deren Blütenstände büschelig wachsen.

uneven, adj

Ant: even

Def: "Not smooth, flat, or level." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: rau, adj

Def: "Voller kleiner Unebenheiten, nicht glatt, rissig, aufgesprungen." (Wahrig-Burfeind 2000: s.v.).

unsaturated, adj

Etym: from Latin *satis* = 'enough' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "Capable of absorbing or dissolving more of something." (Encyclopaedia Britannica Inc. (2005): <http://www.britannica.com/dictionary?book=Dictionary&va=unsaturated> [10.07.2008]).

dt.: ungesättigt, adj

Def: "Mehrfachbindungen enthaltend." (Wahrig-Burfeind 2000: s.v.).

valerian (valeriana officinalis), sg: species**valeriana: genus****valerianaceae: family**

Etym: from Latin *valere* = 'to be strong or healthy' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "A hardy perennial flowering plant, with heads of sweetly scented pink or white flowers" (Wikimedia Foundation Inc.(o. J.): http://en.wikipedia.org/wiki/Valerian_herb [08.12.2008]).

dt.: Baldrian (*Valeriana officinalis*), m, sg: Art

Valeriana: Gattung

Baldriangewächse: Familie

Def: "Heilpflanze, deren Wurzeln das als Beruhigungsmittel verwendete Baldrianöl liefern." (Wahrig-Burfeind 2000: s.v.).

variety, sg

Etym: from Latin *varietas* = 'diversity' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "A type of plant or animal that is different from others in the same group." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: Varietät, f, sg

Def: "Systematische Kategorie zur Untergliederung von Unterarten." (Burger /Wachter 1998: s.v.).

venation, sg

Etym: from Latin *vena* = 'vein' (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "The arrangement of veins in a leaf." (*The Times English Dictionary & Thesaurus* 2000: s.v.)

dt.: Nervatur, f, sg

Syn: Äderung

Def: "Gesamtheit der Nerven im Blatt oder in den Flügeln von Insekten." (Wahrig-Burfeind 2000: s.v.).

volatile, adj

Etym: from Latin *volare* = 'to fly' (*Longman Dictionary of Contemporary English* 1995: s.v.).

Def: "A volatile liquid or substance changes easily into a gas." (*Longman Dictionary of Contemporary English* 1995: s.v.).

dt.: flüchtig, adj

Def: "Leicht verdunstend." (Wahrig-Burfeind 2000: s.v.).

wild-crafting

Def: Collection of herbs from a natural habitat.

dt.: Wildsammlung, f, sg

Def: "Aus natürlichem Vorkommen geerntete Pflanzen." (Wenzel 1996: s.v.).

woodruff (galium odoratum), sg: species

galium: genus

rubiaceae: family

Etym: from Old English *wudurofe*, from *wood* + *rofe* (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "Any of several plants, esp. the sweet woodruff of Eurasia, which has small sweet-scented white flowers and whorls of narrow fragrant leaves used to flavour wine and liqueurs and in perfumery." (*The Times English Dictionary & Thesaurus* 2000: s.v.)

dt.: Waldmeister (*Galium odoratum*), m, sg: Art
Galium: Gattung
Rötegewächse: Familie

Syn: Maikraut

Def: "In schattigen Wäldern vorkommendes Rötegewächs, das wegen seines Gehaltes an Kumin zum Würzen von Bowle verwendet wird." (Wahrig-Burfeind 2000: s.v.).

yarrow (*achillea millefolium*), sg: species

achillea: genus

asteraceae: family

Etym: from Old English *gearwe* (*The Times English Dictionary & Thesaurus* 2000: s.v.)

Def: "A widely naturalized strong-scented Eurasian composite herb with finely dissected leaves and small usually white corymbose flowers." (*Merriam-Webster Online Dictionary* (2005): <http://www.merriam-webster.com/dictionary/yarrow> [14.07.2008]).

dt.: Schafgarbe (*Achillea millefolium*), f, sg: Art
Schafgarben: Gattung
Korbblütler: Familie

Def: "Als Arznei- und Wildgemüsepflanze verwendete Art der Korbblütler mit fein zerteilten Blättern." (Wahrig-Burfeind 2000: s.v.).

5.2 Index German – English Terminology

A

Abführmittel	laxative
Ackerschachtelhalm	horsetail
Äderung	venation
Akupunktur	acupuncture
Alchimie	alchemy
Alkaloid	alkaloid
Alpenveilchen, Europäisches	cyclamen
Anis	anise
antiphlogistisch	antiphlogistic
antiseptisch	antiseptic
Arnika	arnica
Aromastoff	flavouring
Art	species
Arzneibuch	pharmacopoeia
Arzneimittel	medicinal product
Asche	ember
Assimilation	assimilation
Ätherisches Öl	essential oil
ausdauernd	perennial
Auswurf	sputum

B

Baldrian	valerian
Balg	follicle
Bärentraube, Echte	bearberry
basisch	basic
Beere	berry
behaart	pubescent
Beifuß, Gemeiner	mugwort
bestäuben	to pollinate
Bildungsgewebe	meristem
Bitterstoff	bitter principle
blähend	flatulent
blähungshemmend	anti-flatulent
Blatt	leaf
Blattachsel	axil
Blattscheide	leaf sheath
Blattspreite	leaf blade
Blattstiel	leafstalk
Blaubeere	blueberry
Blümchen	floret
Blüte	flower
Blütenstand	inflorescence
Blutwurz	tormentil
Botanik	botany
Brandblase	blister
Buchweizen	buckwheat

C

Charge
Chlorophyll

batch
chlorophyll

D

Derivat
Dermatologie
Dickdarm
Dikotyledone
Dolde
Doldenblütler
doldig
Dosis
Droge
Duft

derivative
dermatology
large intestine
dicotyledon
umbel
umbelliferae
umbelliferous
dose
drug
scent

E

Efeu
Eibisch, Echter
einjährig
Eisenhut
Empfängnisverhütung
Engelwurz, echte
Entzündung
Enzian
Extrakt
Extraktion

ivy
marsh mallow
annual
monkshood
contraception
garden angelica
inflammation
gentian
extract
extraction

F

Familie
faserig
Fenchel
Fette Öle
Fettsäure
Feuchtigkeit
Fingerhut, Roter
Flavonoid
flüchtig
Frucht
Fruchtblatt
Futterpflanze

family
fibred
fennel
fatty oils
fatty acid
moisture
foxglove
flavonoid
volatile
fruit
carpel
forage plant

G

gären
Gattung
Gehalt
Gelenksrheumatismus
Gerbstoff
gesättigt
Geschmacksknospe
Gewebe

to ferment
genus
strength
rheumatism, articular
tanning agent
saturated
taste bud
tissue

Giftpflanze	poisonous plant
glatt	even
Glykosid	glycoside
Goldrute	goldenrod
Gynäkologie	gynaecology
H	
Hagebutte	rose hip
Halbstrauch	half shrub
Hämolyse	haemolysis
harntreibend	diuretic
Heidekraut	heather
Heilmittel	remedy
Heilpflanze	medicinal plant
Herbstzeitlose	autumn crocus
Herzglykosid	cardiac glycoside
Hesperidin	hesperidin
heterogen	heterogeneous
Heterogenität	heterogeneity
Holunder, Schwarzer	elder
holzig	ligneous
homogen	homogeneous
Homogenität	homogeneity
Huflattich	coltsfoot
Hülse	pod
Hypokotyl	hypocotyl
I	
Identität	identity
K	
Kambium	cambium
Kamille	camomile
Kapsel	capsule
Kapuzinerkresse, Kleine	nasturtium
keimen	to germinate
Kiefer	pine
Klee	clover
Knoblauch	garlic
Knolle	tuber
Kompasspflanze	compass plant
Kontamination	contamination
Konzentration	concentration
Koriander	coriander
Kornrade	corncockle
krampflösend	antispasmodic
krautig	herbaceous
Kreuzdorn	buckthorn
kugelig	spheroidal
Kümmel	caraway

L

Lavendel
lichtempfindlich machen
Liebstöckel
Lippenblütler
löslich
Lösungsmittel

lavender
photosensitize
lovage
labiatae
soluble
solvent

M

Magensaft
Mariendistel
Meerzwiebel
Monokotyledone
Muskatnuss

gastric juice
holy thistle
squill
monocotyledon
nutmeg apple

N

Nährstoff
Naht
Nebenwirkung
Nervenschmerzen
Nuss

nutrient
seam
side effect
neuralgia
nut

O

oral
organisch

oral
organic

P

Parkinsonsche Krankheit
Perikarp
Peristaltik
permeabel
Pestizid
Pfahlwurzel
Pflanzenmorphologie
Pflanzenphysiologie
Pharmakologie
Pharmazeutische Qualität
Photosynthese
Präparat
Protoplasma
Pulver
pulverisieren
pulverisiert

Parkinson's disease
pericarp
peristalsis
permeable
pesticide
taproot
morphology of plants
physiology of plants
pharmacology
pharmaceutical quality
photosynthesis
preparation
protoplasm
powder
to pulverize
powdered

R

Rachen
ranzig
rau
Raute
reif
Reinheit

pharynx
rancid
uneven
rue
ripe
purity

Rinde
Rosskastanie
Rübe
Rutin

bark
horse chestnut
turnip
rutine

S

Salbe
Salbei
Sammelfrucht
Saponin
Sauerampfer
Schafgarbe
Schale
Schimmelpilz
Schlafmohn
Schleim
Schleimhaut
Schote
schweißtreibend
sekundäres Dickenwachstum
Signaturenlehre
Spaltfrucht
Stamm
Stängel
Stärke
Stechapfel
Steinfrucht
Stickstoff
stickstoffhaltig
Stipel
Süßholz
synthetisch

ointment
sage
aggregate fruit
saponin
sorrel
yarrow
peel
mould
opium poppy
mucilage
mucous membrane
silique
sudorific
secondary diameter growth
doctrine of signatures
dehiscent fruit
stem
stalk
starch
thorn apple
drupe
nitrogen
nitrogenous
stipule
liquorice
synthetic

T

Tausendgüldenkraut
Thymian
Tinktur
Tollkirsche
toxisch
transpirieren
Trieb
Trockenmittel
Trugdolde
Tulpe

centaury
thyme
tincture
nightshade
toxic
transpire
shoot
desiccant
cyme
tulip

U

ungesättigt

unsaturated

V

Varietät
verdunsten

variety
to evaporate

verfälschen

to debase

W

Wacholder
Waldmeister
Weißdorn
Wildsammlung
Wirkstoff
Wollblume
Wurzel
Wurzelstock

juniper
woodruff
hawthorn
wild-crafting
active agent
mullein
root
rhizome

Y

Ysop

hyssop

Z

Zahnheilkunde
Zerfall
Zichorie
Zimt
Zweig
zweijährig

dentistry
decomposition
chicory
cinnamon
twig
biennial

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Zusammenfassung

Diese Diplomarbeit zum Thema Heilpflanzen besteht aus vier Teilen. Der erste ist vorwiegend an ein deutschsprachiges, aus Laien bestehendes Publikum gerichtet, das bedeutet, dass die Leser keine fachlichen Kenntnisse haben müssen. Um den Lesefluss nicht zu behindern und den Adressaten lästiges Nachschlagen im Glossar zu ersparen, sind die deutschen Fachbegriffe direkt im Text in Klammern angegeben. Der erste Teil der Arbeit umfasst einen Überblick über das Thema Heilpflanzenkunde, eine der ältesten Wissenschaften der Menschheit. Aufgrund der Fülle an herausragenden Persönlichkeiten und ihren wissenschaftlichen Erkenntnissen ist es unmöglich, hier im Detail auf alle einzugehen, jedoch wurde versucht, die allerwichtigsten Namen aller Epochen zu nennen. Beginnend mit der primitiven Volksmedizin, die sich noch an Mythen und Legenden orientierte, über die Erfindung der Schrift und die Entdeckungen, die zum ersten Mal niedergeschrieben werden konnten, bis hin zur modernen Medizin, die sich mit Hilfe der Chemie die Vorteile der Heilpflanzen zu Nutze macht, wird hier ein Überblick über dieses weite Gebiet gegeben.

Im zweiten Kapitel dieses Teils wird die Morphologie, also der Aufbau und die Form der Heilpflanzen näher beleuchtet. Die einzelnen Pflanzenteile, wie die Wurzeln, Sprossen, Blätter, Blüten und Früchte werden untersucht, um dem Leser die Beschreibung von Pflanzen besser verständlich zu machen. Dieses Wissen ist für das Sammeln und Verarbeiten von Pflanzen unabdingbar.

Im dritten Kapitel des ersten Teils werden verschiedene Wirkstoffe untersucht, ein Thema, das erst seit relativ kurzer Zeit wissenschaftlich erforscht wird. Hier wird nicht nur die therapeutische Wirkung von Ätherischen Ölen, Fetten Säuren, Alkaloiden, Cumarinen, etc. erklärt, sondern auch in welchen Pflanzen diese Wirkstoffe vorkommen.

Das vierte Kapitel dieses Teils beinhaltet allgemeine Informationen über pflanzliche Drogen, wie zum Beispiel deren pharmazeutische Qualität und durch welche äußeren Faktoren diese beeinträchtigt werden kann. Des Weiteren wird erklärt, wie die Benennung der Pflanzen zu Stande kommt, und welche Parameter zur Definition einer Droge beitragen, zum Beispiel ihr Aussehen, Geruch, Geschmack, Identität oder Reinheit. In diesem Kapitel wird auch erklärt, wie die Drogen am besten gelagert werden sollten, um eine gute Qualität zu garantieren. Weiters werden die

am Häufigsten auftretenden Drogenarten, wie Radixdrogen, Cortexdrogen, Fruchtdrogen, etc. erwähnt.

Im zweiten Teil wird der Aufbau der fachspezifischen Termini beleuchtet. Da es sich bei dieser Arbeit um eine Übersetzung aus dem Deutschen handelt und der erste Teil an ein Laienpublikum gerichtet ist, wird auf den Umgang mit Fachbegriffen noch näher eingegangen. Hier gibt es verschiedene Herangehensweisen, wie etwa das Erklären des Fachbegriffs mit einer direkten, genauen Definition, oder mit einer kurzen Definition und Explikation. Des Weiteren können Fachbegriffe weggelassen und nur umschrieben werden. In manchen Fällen können sie auch ohne weitere Erklärung im Text verwendet werden. Diese Methode setzt allerdings voraus, dass der Leser ein gewisses Maß an fachlichem Vorwissen mitbringt, wobei hier für den Autor schwierig ist, dieses einzuschätzen. Somit bestimmt die Verwendung von Fachbegriffen indirekt auch die Adressaten des Textes.

Der dritte Teil dieser Arbeit beschäftigt sich mit didaktischen Aspekten und untersucht zum Beispiel welche Fragen zuerst geklärt werden müssen, bevor eine Sprache für einen bestimmten Zweck unterrichtet wird. Dazu zählen wofür die Sprache benötigt wird, wie sie verwendet wird, mit wem der Kursadressat die Sprache sprechen wird und wo und wann er sie gebraucht. Unter Berücksichtigung dieser Fragen werden anschließend Übungen zu einem fiktiven Kurs mit dem Titel "English for Pharmacists" gezeigt. Diese Übungen wurden nach Gesprächen mit mehreren Pharmaziestudierenden, bzw. auch Personen, die ein Pharmaziestudium abgeschlossen haben und sich bereits im Arbeitsprozess, sowohl in Apotheken als auch in Forschungsfirmen befinden, erstellt. Im Zuge dieser Gespräche hat sich herausgestellt, dass der richtige Gebrauch von Fachbegriffen und das Verfassen wissenschaftlicher Texte, aber auch von Texten in englischer Sprache im Allgemeinen, die größten Schwierigkeiten bereiten. Aus diesem Grund wurde versucht, in den Übungen auf diese Punkte besonders einzugehen. Lösungen zu den einzelnen Übungen sind unter "Appendix" am Ende der Arbeit zu finden.

Der vierte und abschließende Teil dieser Diplomarbeit besteht aus einem Glossar in englischer und deutscher Sprache. Hier werden jene Fachbegriffe, die im ersten Teil als unbekannt vorausgesetzt und daher in Klammern ins Deutsche übersetzt wurden, in alphabetischer Reihenfolge aufgelistet. Zu den aus dem Lateinischen oder Griechischen abgeleiteten Begriffen, aber auch zu den Namen der Heilpflanzen werden etymologische Erklärungen angeführt. Zudem werden die Begriffe mit

Definitionen oder Explikationen erklärt. Auch die Art-, Gattungs- und Familiennamen der einzelnen Heilpflanzen werden angegeben.