



Bundesamt für  
Verbraucherschutz und  
Lebensmittelsicherheit



## BVL-Report · 8.8

- ▶ List of Substances of the Competent Federal Government and Federal State Authorities  
Category “Plants and plant parts”



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# BVL-Reporte

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# Explanatory notes on the List of Substances of the Competent Federal Government and Federal State Authorities – Category “Plants and plant parts”

## 1.1 Introduction

The Lists of Substances of the Competent Federal Government and Federal State Authorities (lists of substances) are created to facilitate the classification and assessment of substances regarding their use as food or food ingredient. They are designed to serve as a reference guide for authorities and food distributors. The final assessment of products containing these substances or preparations thereof must always be made on a case-by-case basis, giving due regard to all criteria relevant to that assessment.

Lists of Substances of the Competent Federal Government and Federal State Authorities are to be created for various categories. To provide a uniform system for the lists of substances, the entries in the categories are referred to as “substances”, although they may not always be chemically defined individual substances. A more detailed definition may be provided in addition to the categories.

The lists of substances do not claim to be complete and do not exempt the food business operator from the responsibility to ensure that the relevant product is safe and legally marketed as a food in Germany. They are subject to updating in order to take account of new scientific findings as well as developments in the food industry.

## 1.2 Legal framework

Article 2 of the Regulation (EC) No. 178/2002 (General Food Law Regulation)<sup>1</sup> specifies “food” as any substance or product, whether processed, partially processed or unprocessed, intended to be, or reasonably expected to be ingested by humans.

Substances used as source materials for flavourings or foods with flavouring properties are governed by the provisions of the Regulation (EC) No. 1334/2008 on flavourings and certain food ingredients with flavouring properties for use in and on foods<sup>2</sup>.

visions of the Regulation (EC) No. 1334/2008 on flavourings and certain food ingredients with flavouring properties for use in and on foods<sup>2</sup>.

Foods or food ingredients which have not been used for human consumption to a significant degree in the EU before 15 May 1997 are governed by the provisions of the Regulation (EC) No. 258/97 on novel foods and novel food ingredients (Novel Food Regulation)<sup>3</sup>, if they fall into one of the following categories:

- Foods and food ingredients with a new or intentionally modified primary molecular structure,
- Foods and food ingredients consisting of or isolated from micro-organisms, fungi or algae,
- Foods and food ingredients consisting of or isolated from plants and food ingredients isolated from animals, except for foods and food ingredients obtained by traditional propagating or breeding practices and having a history of safe food use
- Foods and food ingredients to which has been applied a production process not currently used, where that process gives rise to significant changes in the composition or structure of the foods or food ingredients which affect their nutritional value, metabolism or level of undesirable substances.

Flavourings for use in foods do not fall within the scope of the Novel Food Regulation. However, if relevant substances are used for purposes other than flavouring, they may need to be classified as novel within the meaning of the Novel Food Regulation.

Article 2 (d) of the General Food Law Regulation stipulates that food does not include medicinal products. The definition of a medicinal product is laid down in Section 2

<sup>1</sup> Regulation (EC) No. 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety

<sup>2</sup> Regulation (EC) No. 1334/2008 of the European Parliament and of the Council of 16 December 2008 on flavourings and certain food ingredients with flavouring properties for use in and on foods and amending Council Regulation (EEC) No. 1601/91, Regulations (EC) No. 2232/96 and (EC) No. 110/2008 and Directive 2000/13/EC

<sup>3</sup> Regulation (EC) No. 258/97 of the European Parliament and of the Council of 27 January 1997 concerning novel foods and novel food ingredients

Clause 1 of the Law governing the Trade of Medicinal Products (Medicinal Products Act – The Drug Law, AMG)<sup>4</sup>, with which the European definition of medicinal products was enacted into national law in accordance with Article 1 of the Directive 2001/83/EC (Medicinal Products Directive)<sup>5</sup>.

Article 2 (g) of the General Food Law Regulation stipulates that food also does not include narcotic and psychotropic substances. According to the General Food Law Regulation, this is laid down in the United Nations Single Convention on Narcotic Drugs of 1961<sup>6</sup> as well as in the United Nations Convention on Psychotropic Substances of 1971<sup>7</sup>. Additionally, the Narcotic Drugs Act (BtMG) applies in German law<sup>8</sup>.

### 1.3 Instruction on how to use the List of Substances

“Substances” within the meaning of this category are plants and plant parts. The substances are viewed and categorised as such. Preparations of substances, such as extracts or isolates, may differ from the actual substances regarding their composition, especially in terms of their nutritional and toxicological properties. In each individual case, it therefore needs to be determined whether the classification of a substance can be applied to a preparation thereof. The classification is made on the basis of a decision tree developed for this category (see Chap. 2).

To understand the List of Substances in the category of “plants and plant parts”, the following should additionally be noted:

1. The sub lists have the following meanings:
  - List A: Substances not recommended for use in foods
  - List B: Substances for which restricted use in foods is recommended
  - List C: Substances which cannot yet be completely assessed due to lack of sufficient data
2. If substances are usually used in foods only to a very limited extent, for example as spices or as ingredients in the production of spirits, they are designated by the following abbreviations in the “Food (F)” column:

- F: Known exclusively for use as a food ingredient with flavouring properties or as a source material for flavourings
- S: Known for use as a spice
- C: Known for use as a colouring agent
- T: Known for use as a tea

Such limitations are generally not documented by placing a substance on List B. In exceptional cases, a substance is also placed on List B if it is associated with effects that necessitate a restriction of its use.

Classification is made under the assumption that the relevant substance is used as documented in the list. Any other use, e.g. in higher doses, can lead to effects that may require a different classification.

3. Substances that should be treated before consumption (e.g. heated) are designated by the letter “b” in the “Food (F)” column.
4. When classifying a substance as a novel food/novel food ingredient (NF) within the meaning of the Novel Food Regulation or as not novel in food supplements (Not NFS), the Novel Food Catalogue of the European Commission<sup>9</sup> was taken into account. However, it should be noted that this catalogue does not have any entries for a large number of substances from the List of Substances in the category “plants and plant parts”. Any other available information regarding use for human consumption to a significant degree before 15 May 1997 was also taken into account.
5. If any restrictions of use as a food or food ingredient are recommended for a substance (List B) due to evidence of a pharmacological effect (No. 4 in the explanatory notes on the decision tree), such a restriction always refers to the substance described in that evidence (e.g. dried plant or dried plant part). Evidence of a pharmacological effect that leads to a classification as a medicinal product in accordance with Section 2 Clause 1 No. 2a AMG included court-approved sources such as monographs, marketing authorisations or classifications of competent authorities. Other evidence (e.g. results of clinical studies) may additionally be relevant to the classification of a substance as a medicinal product.
6. Substances for which a pharmacological effect or efficacy as a medicinal product is plausible based on use and experience over many years (“traditional evidence”) in accordance with Sections 39a ff. of the Medicinal Products Act will not be placed on List B based on that traditional evidence alone. For a substance to be placed on List B, pharmacological effects,

<sup>4</sup> Law governing the Trade of Medicinal Products (Medicinal Products Act – AMG)

<sup>5</sup> Directive 2001/83/EC of the European Parliament and of the Council of 6 November 2001 on the Community code relating to medicinal products for human use

<sup>6</sup> Single Convention on Narcotic Drugs of 30 March 1961

<sup>7</sup> Law approving the Convention on Psychotropic Substances of 21 February 1971

<sup>8</sup> Law governing the Trade of Narcotic Drugs (Narcotic Drugs Act – BtMG)

<sup>9</sup> [http://ec.europa.eu/food/food/biotechnology/novelfood/novel\\_food\\_catalogue\\_en.htm](http://ec.europa.eu/food/food/biotechnology/novelfood/novel_food_catalogue_en.htm)

as specified above in item 5, or risks must be reported due to which restricted use in foods is recommended.

7. The classification of substances into this list is made only on the basis of their effect after oral ingestion.

Substances which, according to monographs, are intended for external use only are not designated as medicinal products in the List of Substances.

## Decision tree: Explanatory notes on the classification of substances in the List of Substances of the Competent Federal Government and Federal State Authorities – Category “Plants and plant parts”

The decision tree serves as the basis for the classification of substances in the category of “plants and plant parts” as “food (F)”, “medicinal product (MP)” and/or “novel food/novel food ingredient (NF)” as well as possible combinations thereof (ambivalent substances). It also provides instructions for the classification of the substances in the Lists A, B and C.

Classification as a medicinal product – except for ambivalent substances (see No. 3 below) – is made based on the definition of medicinal products by function set out in Section 2 Clause 1 No. 2a of the Medicinal Products Act (AMG). These are characterised by their pharmacological, metabolic or immunological effect. For the sake of clarity, the term “pharmacological effect” is used in the decision tree for this definition. Classification as a medicinal product by presentation as defined in Section 2 Clause 2 No. 1 AMG is not taken into account.

Based on the answers to the questions in the decision tree, plants and plant parts are classified as follows:

### **No. 1: Food**

#### **(Decision tree I – via question 3)**

Common foods without any known use as medicinal products. Based on their previous use, any restrictions of use are not required.

### **No. 2: Food + List B**

#### **(Decision tree III – via question 3)**

Common foods without any known use as medicinal products.

Dose restrictions and restrictions of use are required due to risks posed by the constituents of the plant or plant part. Such restrictions are expressed by placing the substance on List B.

### **No. 3: Food + traditional medicinal product**

#### **(Decision tree II – via question 5)**

For traditional herbal medicinal products, a pharmacological effect is plausible based on use and experience

over many years in accordance with Sections 39a ff. of the Medicinal Products Act (AMG). At present, processing monographs for plants/plant parts that can be contained in traditional medicinal products are being created or revised by the European Medicines Agency (EMA). Where these monographs have been adopted and published, they are taken into account accordingly. Some of the plants/plant parts used therein have also long since been used in food. A restriction (List B) was not recommended in individual cases where it would have been done exclusively on the basis of traditional evidence of pharmacological effect. Despite such evidence of pharmacological effect, classification as ambivalent substance (F/MP) without any restrictions is therefore made **in this case only**.

### **No. 4: Food + medicinal product + List B**

#### **(Decision tree III/IV – via question 5)**

Common foods that are also used as medicinal products. Pharmacological effects are reported above a certain dose. If no significant pharmacological effects are identified, the substance can be classified as food. When reaching the pharmacologically effective dose, it is defined as a medicinal product by function. This is expressed by placing the substance on List B.

### **No. 5: Novel food**

#### **(Decision tree VIII – via question 9)**

The substance is not known to be used as either food or a medicinal product. The substance is also not known to be associated with any risks that would restrict its use in food. The further assessment takes place in accordance with the Novel Food Regulation.

### **No. 6: Novel food + medicinal product**

#### **(Decision tree IV/V – via question 8)**

The substance has so far been known as a medicinal product only. However, it is not associated with any risks that would restrict its use in food. Its use in food would there-

fore be conceivable after assessment in accordance with the Novel Food Regulation.

Medicinal products and novel foods are distinguished on the basis of the pharmacologically effective dose (by analogy with No. 4). The substance cannot be placed on List B as it is no common food.

**No. 7: Novel food (Not NFS) + List C  
(Decision tree VIII – via question 9)**

A number of substances are classified as not novel exclusively when used in food supplements. When used in foods other than food supplements, these substances are usually placed on List C, since no sufficient information is available for their conclusive assessment.

**No. 8: Novel food (Not NFS) + List B + medicinal product  
(Decision tree IV/V – via question 8)**

The substance is known as a medicinal product. It is additionally used in food supplements and is classified as not novel in this case only. The necessary restriction of use in FS due to the pharmacological effect is expressed by placing the substance on List B.

**No. 9: Medicinal product + List A  
(Decision tree VI – via question 7)**

The substance has so far been known as a medicinal product only. Due to the associated risks, its use in food is not recommended, irrespective of the dose.

**No. 10: List A substance  
(Decision tree VII – via question 9)**

The substance, which is not a medicinal product, is associated with risks. Its use in food is therefore not recommended, irrespective of the dose.

## 2.1 Classification in the lists A, B and C

### List A

Substances that are not recommended for use as food or food ingredient due to known risks (No. 10) are placed on List A. These substances may be or may have been used as medicinal products (No. 9).

### List B

Substances that are only used in food and for which a dose restriction is required due to certain constituents (No. 2) are placed on List B.

Furthermore, substances that are known as both foods and medicinal products with a pharmacological effect demonstrated on the basis of clinical data are placed on this list. This is also done by strict application of the decision tree in respect of basic foods in usual amounts of intake (No. 4).

Finally, substances that are used as food exclusively in food supplements (but are otherwise novel foods) and are known as medicinal products with a demonstrable pharmacological effect are placed on list B (No. 8).

Substances that are known as both foods and medicinal products with exclusively traditional evidence of pharmacological effect (No. 3) are not placed on List B.

### List C

Substances that have so far been used exclusively in food supplements but are otherwise novel foods are placed on list C (No. 7).

2.2 Decision tree

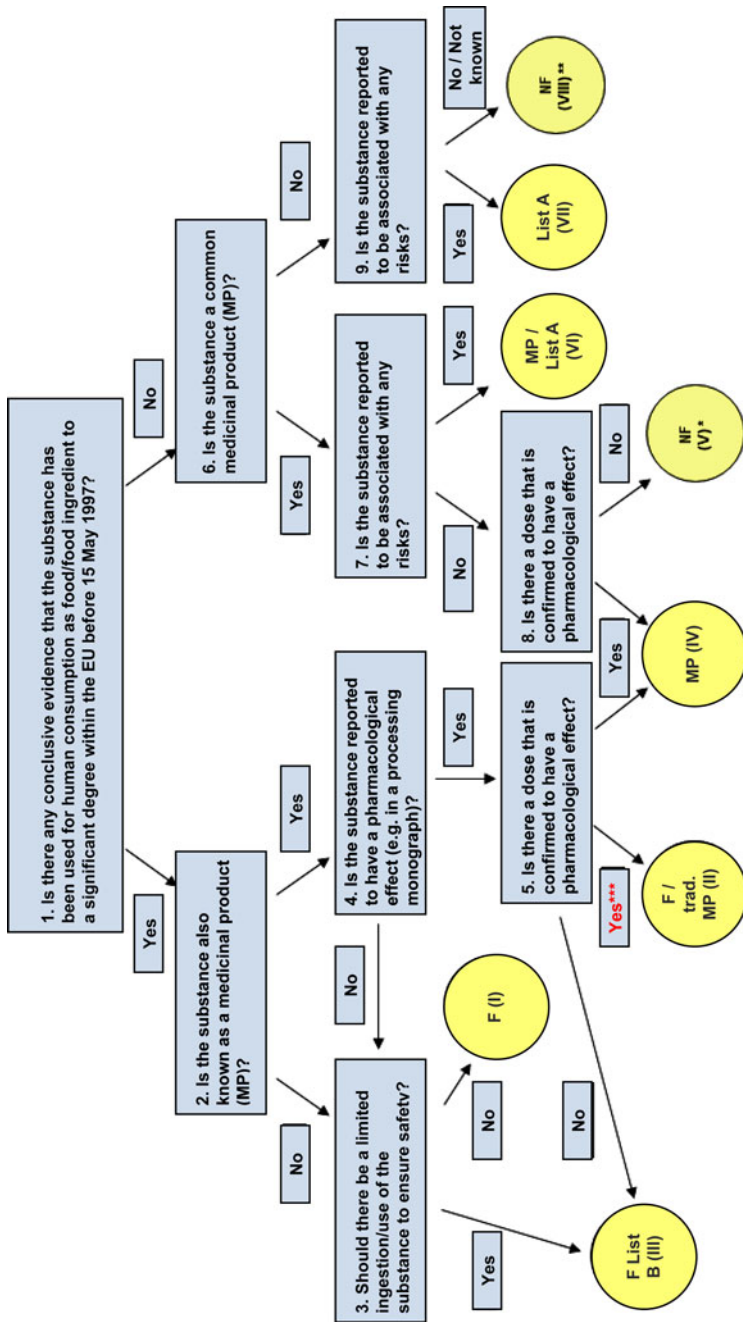


Figure 1 Decision tree

\* Assessment of potential use as food/food ingredient according to the Novel Food Regulation (If the substance is classified as not novel in food supplements [Not NFS], it may need to be placed on List B.)

\*\* Assessment of potential use as food/food ingredient according to the Novel Food Regulation (If the substance is classified as not novel in food supplements [Not NFS], it may need to be placed on List C.)

\*\*\* See No. 3 of the explanatory notes

Abbreviations: F = food, MP = medicinal product, trad. MP = traditional medicinal product, NF = novel food/novel food ingredient, FS = food supplement

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## List of Substances of the Competent Federal Government and Federal State Authorities – Category “Plants and plant parts”

Status: December 2013



**Table 1** List of Substances – Category “Plants and plant parts”

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<i>Abies</i> spp.	Shoot (tip)	× T						
<i>Achillea millefolium</i> L.	Herb, flower	× S, T		×	×		×	
<i>Aconitum napellus</i> L.	all plant parts			×		×		
<i>Acorus calamus</i> L., syn. <i>Acorus aromaticus</i> GARZ., <i>Oronchium cochinchinensis</i> LOUR.	Rhizome	× F			×		×	
<i>Actinidia deliciosa</i> (CHEV.) A.R. FERG.	Fruit	×						
<i>Adonis vernalis</i> L., syn. <i>Adonanthe vernalis</i> SPACH	Herb			×		×		
<i>Aegopodium podagraria</i> L., syn. <i>Aegopodium angelicaefolium</i> ST. LAGER, <i>Aegopodium latifolium</i> TURCZ.	Leaf	×						
<i>Aesculus hippocastanum</i> L., syn. <i>Aesculus castanea</i> GILIB., <i>Aesculus procera</i> SALISB., <i>Hippocastanum vulgare</i> GAERTNER	Leaf, flower		Not NFS					×
<i>Aesculus hippocastanum</i> L., syn. <i>Aesculus castanea</i> GILIB., <i>Aesculus procera</i> SALISB., <i>Hippocastanum vulgare</i> GAERTNER	Bark		Not NFS		×			×

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> loss of appetite, digestive problems such as mild gastrointestinal cramps, <b>standard marketing authorisation:</b> 1249.99.99, <b>ESCOP monograph:</b> loss of appetite, dyspeptic disorders such as mild spasmodic complaints in the abdominal region, <b>WHO monograph:</b> loss of appetite, common cold, dyspeptic ailments such as mild spastic discomfort of the gastrointestinal tract, as a choleric and for the treatment of fevers, <b>HMPC monograph:</b> traditional use	Contraindications: hypersensitivity to yarrow or other Asteraceae species (Commission E monograph)	Proazulenes, azulenes, monoterpenes (e.g. camphor, eucalyptol [=1,8-cineol])	<b>Commission E:</b> 4 g drug/day, equivalent preparations <b>ESCOP:</b> 2–4 g drug/3–4 times a day, equivalent preparations, administration to children aged between 3 and 12 only under medical supervision <b>WHO:</b> 4.5 g drug/day or 3 g flower tea/day
<b>Negative monograph:</b> due to risks, use in MP only in homeopathic doses, monkshood ( <i>Aconitum napellus</i> ), extremely toxic Ia (Wink/Wyk), extremely toxic +++ (Roth/Daudeker)	Aconitine is a strong nerve and muscle poison, numbness, paraesthesia, paralysis (Wink/Wyk), cardiac arrhythmia, sensitivity to cold, nausea, cramps, paralysis of tongue, facial and extremity muscles, circulatory failure (Roth/Daudeker)	Alkaloids (e.g. aconitine)	
Risks reported (in dependence on the variant used), use of tetraploid subspecies as source material for flavourings and foods with flavouring properties prohibited by Reg. (EC) No. 1334/2008, maximum amount of beta-asarone in alcoholic beverages: 1 mg/kg, licensed anthroposophic medicinal product acc. to Section 21 AMG, toxic + (Roth/Daudeker), mildly toxic II to toxic III (Wink/Wyk)	Risks reported for tetraploid variants e.g. <i>A. calamus</i> var. <i>angustatus</i> BESS. because of their high beta-asarone content. Beta-asarone demonstrated a mutagenic and carcinogenic effect in animal experiments (Hager, Frohne/Pfänder); diploid subspecies e.g. <i>A. calamus</i> L. var. <i>americanus</i> (RAF.) WULFF. are free from beta-asarone	Beta-asarone	
<b>Positive monograph, indications:</b> slightly reduced cardiac output, especially when accompanied by nervous symptoms, very toxic Ib (Wink/Wyk), highly toxic ++ (Roth/Daudeker)	Nausea, vomiting, cardiac arrhythmia, contraindications and interactions reported (Commission E monograph), cardiac arrest, symptoms of cardiac glycoside poisoning, diuresis, digestive tract irritation (Wink/Wyk)	cardioactive glycosides (some prescription-only)	<b>Commission E:</b> 0.6–3 g standardised Adonis powder (DAB 9)/day, equivalent preparations
<b>Neutral monograph</b>			
<b>Neutral monograph, HMPC monograph:</b> traditional use			

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Aesculus hippocastanum L.</b> , syn. <i>Aesculus castanea</i> GILIB., <i>Aesculus procera</i> SALISB., <i>Hippocastanum vulgare</i> GAERTNER	Seed		Not NFS	×	×		×	
<b>Agrimonia eupatoria L.</b> , syn. <i>Agrimonia adherens</i> GILIB., <i>Agrimonia officinalis</i> LAM., <i>Agrimonia parviflora</i> SPRENG., <i>Agrimonoides</i> STEUD., <i>Aremonia agrimonoides</i> D.C.	Herb	× T		×			×	
<b>Agrimonia procera WALLR.</b> , syn. <i>Agrimonia odorata</i> auct. non MILLER, <i>Agrimonia odorata</i> WALLR.	Herb	× T		×			×	
<b>Agropyron repens (L.) P. BEAUV.</b> , syn. <i>Elymus repens</i> (L.) GOULD, <i>Elytrigia repens</i> DESV. ex NEVSKI, <i>Triticum repens</i> L.	Root	× T		×	×		×	
<b>Alchemilla alpina L. em. BUSER</b>	Herb		×		×			
<b>Alchemilla vulgaris auct.</b> , <i>Alchemilla vulgaris</i> L.	Herb	× T		×			×	
<b>Alkanna tuberculata (FORSSK.) MEIKLE</b> , syn. <i>Alkanna tinctoria</i> (L.) TAUSCH, <i>Alkanna tuberculata</i> GREUTER, <i>Lithospermum tinctorium</i> L.	Root					×		
<b>Allium cepa L.</b> , syn. <i>Allium esculentum</i> SALISB., <i>Cepa esculenta</i> S.F. GRAY, <i>Cepa vulgaris</i> RENAULT, <i>Kepa esculenta</i> RAFIN., <i>Porrum cepa</i> RCHB.	Bulb	×		×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> symptomatic treatment of diseases of crural veins (chronic venous insufficiency), e.g. pain and feeling of heaviness in legs, night leg cramps, itching and swollen legs, <b>WHO monograph:</b> treatment of symptoms of chronic venous insufficiency, including pain, feeling of heaviness in the legs, nocturnal calf-muscle spasms, itching and oedema, <b>ESCOPE monograph:</b> chronic venous insufficiency, varicosis, <b>HMPC monograph:</b> treatment of chronic venous insufficiency, which is characterised by swollen legs, varicose veins, a feeling of heaviness, pain, tiredness, itching, tension and cramps in the calves, traditional use, slightly toxic + (Roth/Daudeurer), mildly toxic III (Wink/Wyk)	Nausea, gastrointestinal complaints, hot flushes, oedemas, vomiting, diarrhoea, hypertension, loss of consciousness, circulatory collapse (Wink/Wyk, Roth/Daudeurer)	Saponins	<b>Commission E:</b> 100 mg aescin/day, equivalent to 250–312.5 mg extract in delayed release form 2 times a day <b>ESCOPE:</b> equivalent to 50–150 mg triterpene glycosides (calculated as aescin), no administration to children <b>WHO:</b> 250–312.5 mg standardised comminuted extract, equivalent to 100 mg aescin
<b>Positive monograph, indications:</b> mild, non-specific, acute forms of diarrhoea, inflammations of oral and pharyngeal mucosa, <b>ESCOPE monograph:</b> Agrimony has widely documented uses as a remedy to treat mild diarrhoea, <b>HMPC monograph:</b> in progress, <b>standard marketing authorisation:</b> 2379.99.99			<b>Commission E:</b> 3–6 g drug/day, equivalent preparations <b>ESCOPE:</b> 3–12 g drug, 3 times a day, children!
<b>Positive monograph, indications:</b> mild, non-specific, acute forms of diarrhoea, inflammations of the oral and pharyngeal mucosa, <b>HMPC monograph:</b> in progress			<b>Commission E:</b> 3–6 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> increase of urinary output for catarrhs of the lower urinary tract, adjuvant treatment of catarrhs of the upper respiratory tract, <b>standard marketing authorisation:</b> 1169.99.99, contraindications reported, <b>ESCOPE monograph:</b> irritable bladder and other urinary tract disorders, <b>HMPC monograph:</b> traditional use	Contraindications: irrigation therapy of oedemas associated with cardiac or renal insufficiency (Commission E monograph)		<b>Commission E:</b> 6–9 g drug/day, equivalent preparations <b>ESCOPE:</b> 5–10 g drug/day, no administration to children under the age of 12
<b>Neutral monograph</b>			
<b>Positive monograph, indications:</b> mild, non-specific forms of diarrhoea			<b>Commission E:</b> 5–10 g drug/day, equivalent preparations
Substance of concern (AMK – Drug Commission of German Pharmacists), BfArM [Federal Institute for Drugs and Medical Devices] graduated plan of 5 June 1992 concerning medicinal products containing pyrrolizidine alkaloids, toxic II (Wink/Wyk), toxic + (Roth/Daudeurer)	Pyrrolizidine alkaloids contained in the drug are mutagenic, carcinogenic, ingestion of high doses causes digestive problems and CNS disorders (Wink/Wyk)	Pyrrolizidine alkaloids	
<b>Positive monograph, indications:</b> loss of appetite, prevention of age-dependent vascular changes, <b>WHO monograph:</b> the principal use of <i>Bulbus Allii Cepae</i> today is to prevent age-dependent changes in the blood vessels, and loss of appetite, non-toxic but irritating to skin (Roth/Daudeurer), mildly toxic III (Wink/Wyk), <b>HMPC assessment report</b>	Ingestion of higher doses, especially in children, causes digestive tract irritation accompanied by vomiting, nausea, colic and diarrhoea (Wink/Wyk)	Allicin, allyl sulphide	<b>Commission E:</b> 50 g fresh onions or 20 g dried drug, equivalent preparations <b>WHO:</b> 20 g drug/day, equivalent preparations

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Allium porrum</b> L., syn. <i>Allium ampeloprasum</i> f. <i>porrum</i> GAY, <i>Allium laetum</i> SALISB.	Leaf	×						
<b>Allium sativum</b> L., syn. <i>Porrum sativum</i> RCHB.	Bulb	×		×			×	
<b>Allium ursinum</b> L., syn. <i>Allium latifolium</i> GILIB., <i>Allium nemorale</i> SALISB.	Herb	× S			×			
<b>Aloe barbadensis</b> MILL., <i>Aloe chinensis</i> BAK.	Leaf gel	×						
<b>Aloe barbadensis</b> MILL., <i>Aloe chinensis</i> BAK.	Leaf juice			×		×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<p><b>Positive monograph, indications:</b> adjuvant treatment of increased blood lipid concentrations, prevention of age-related vascular changes, <b>WHO monograph:</b> as an adjuvant to dietetic management in the treatment of hyperlipidaemia, and in the prevention of atherosclerotic (age-dependent) vascular changes. The drug may be useful in the treatment of mild hypertension, <b>ESCOPE monograph:</b> prophylaxis of atherosclerosis, treatment of elevated blood lipid levels insufficiently influenced by diet, also used for respiratory tract infections and catarrhal conditions, although clinical data to support this indication is not available, <b>HMPC monograph:</b> in progress, BfArM graduated plan of 11 Mar 2008 concerning medicinal products containing plant substances or preparations of <i>Allium sativum</i> (<a href="http://www.bfarm.de/DE/Pharmakovigilanz/risikoinfo/stufenplanverf/Liste/stp-allium-sativum.html">http://www.bfarm.de/DE/Pharmakovigilanz/risikoinfo/stufenplanverf/Liste/stp-allium-sativum.html</a>), toxic for humans only after overdose + (Roth/Daudeker), mildly toxic III (Wink/Wyk)</p>	<p>Higher doses may have a toxic effect (especially in children), digestive tract irritation accompanied by vomiting, excessive sweating, nausea, colic and diarrhoea (Wink/Wyk)</p>	<p>Alliin, allicin, allyl sulphide</p>	<p><b>Commission E:</b> 4 g fresh garlic/day, equivalent preparations <b>ESCOPE:</b> 0.5–1 g drug/day <b>WHO:</b> 0.4–1.2 g powder or 2–5 g fresh garlic/day</p>
<p>non-toxic or hardly toxic (+) (Roth/Daudeker), mildly toxic III (Wink/Wyk)</p>	<p>Ingestion of higher doses, especially in children, causes digestive tract irritation accompanied by vomiting, nausea, colic and diarrhoea (Wink/Wyk)</p>	<p>Allicin, allyl sulphide</p>	
<p>Mucilage from the parenchymatous tissue of the leaf interior, free from anthranoids, addition of isolated aloin prohibited by Reg. (EC) No. 1334/2008, <b>WHO monograph:</b> (traditional use, external)</p>			<p><b>WHO:</b> 10–70 % of fresh gel for external use</p>
<p><b>Positive monograph, indications:</b> constipation, <b>WHO monograph:</b> short-term treatment of occasional constipation, <b>ESCOPE monograph:</b> for short term use in cases of occasional constipation, <b>HMPC monograph:</b> short-term use in cases of occasional constipation, BfArM graduated plan of 21 June 1996 concerning medicinal products for human use containing anthranoid-containing plant genera, toxic II (Wink/Wyk), toxic + (Roth/Daudeker)</p>	<p>gastrointestinal cramps observed in individual cases, long-term use/abuse causes electrolyte loss, in particular potassium, albuminuria and haematuria. Loss of potassium may cause cardiac dysfunction and muscular asthenia (Commission E processing monograph), menstrual and uterine haemorrhage. Long-term use observed to cause functional disorders of the genital system accompanied by follicular atresia and hypertrophy of interstitial tissue. Abortion may occur, strong laxative effect, intestinal bleeding, tenesmus, haemorrhoids, increased diuresis, renal irritation (Roth/Daudeker)</p>	<p>Anthranoids (e.g. aloin/Aloe emodin)</p>	<p><b>Commission E, ESCOPE:</b> equivalent to 10–30 mg hydroxyanthracene derivatives (calculated as barbaloin)/day, no administration to children under the age of 10 <b>WHO:</b> 0.1 g drug/day, single dose: 40–110 mg <b>HMPC:</b> equivalent to 10–30 mg hydroxyanthracene derivatives (calculated as barbaloin)/day, no administration to children under the age on 12</p>

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Aloe ferox</b> MILL., syn. <i>Aloe horrida</i> HAW., <i>Pachidendron ferox</i> HAW.	Leaf juice			×		×		
<b>Alpinia galanga</b> (L.) WILLD., syn. <i>Maranta galanga</i> L.	Rhizome	× S, T						
<b>Alpinia officinarum</b> HANCE	Rhizome	× S, T		×			×	
<b>Althaea officinalis</b> L.,	Leaf	× T		×			×	
<b>Althaea officinalis</b> L.,	Root	× T		×	×		×	
<b>Althaea rosea</b> L.	Flower	× T						
<b>Amaranthus caudatus</b> L.	Seed	×						
<b>Amaranthus cruentus</b> L.	Seed	×						
<b>Amaranthus tricolor</b> L.	Herb	×						
<b>Ammi visnaga</b> (L.) LAM., syn. <i>Daucus visnaga</i> L., <i>Apium visnaga</i> CRANTZ	Fruit		Not NFS	×			×	
<b>Ananas comosus</b> (L.) MERR.	Fruit	×						
<b>Anemone</b> spp.	all plant parts					×		
<b>Anemopaegma mirandum</b> MART.	Bark		Not NFS					×
<b>Anethum graveolens</b> L.	Fruit	× S		×	×		×	
<b>Anethum graveolens</b> L.	Herb	× S						
<b>Angelica archangelica</b> L., syn. <i>Angelica archangelica</i> ALL.	Stem	× T, S						

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> constipation, <b>WHO monograph:</b> short-term treatment of occasional constipation, <b>ESCOP monograph:</b> for short term use in cases of occasional constipation, <b>HMPC monograph:</b> short-term use in cases of occasional constipation, BfArM graduated plan of 21 June 1996 concerning medicinal products for human use containing anthranoid-containing plant genera, toxic II (Wink/Wyk), toxic (Roth/Daunderer)	gastrointestinal cramps observed in individual cases, strong laxative effect, intestinal bleeding, tenesmus, haemorrhoids, increased diuresis, electrolyte loss (in particular potassium), which may cause cardiac dysfunction and muscular asthenia, albuminuria, haematuria (Commission E monograph), menstrual and uterine haemorrhage. Long-term use observed to cause functional disorders of the genital system accompanied by follicular atresia and hypertrophy of interstitial tissue, abortion may occur (Roth/Daunderer)	Anthranoids	<b>Commission E:</b> 20–30 mg hydroxyanthracene derivatives/day, calculated as anhydrous aloin <b>ESCOP:</b> preparations equivalent to 10–30 mg hydroxyanthracene derivatives (calculated as barbaloin)/day, no administration to children under the age of 10 <b>HMPC:</b> equivalent to 10–30 mg hydroxyanthracene derivatives (calculated as barbaloin)/day, no administration to children under the age of 12
<b>Positive monograph, indications:</b> digestive problems, loss of appetite			<b>Commission E:</b> 2–4 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> inflammations of the oral and pharyngeal mucosa, dry cough, mild inflammations of the gastric mucosa, <b>standard marketing authorisation:</b> 1469.99.99			<b>Commission E:</b> 5 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> inflammations of the oral and pharyngeal mucosa, dry cough, <b>ESCOP monograph:</b> dry cough, irritation of the oral pharyngeal or gastric mucosa, <b>WHO monograph, HMPC monograph:</b> traditional use, <b>standard marketing authorisation:</b> 8899.99.99			<b>Commission E:</b> 6 g drug/day, equivalent preparations <b>ESCOP, WHO:</b> 0.5–3 g drug, up to 15 g drug/day
<b>Negative monograph:</b> due to risks, <b>WHO monograph:</b> as antispasmodic, muscle relaxant and vasodilator, non-toxic or hardly toxic (+) (Roth/Daunderer)	slightly phototoxic, overdose and long-term use cause vertigo, nausea, constipation, lack of appetite, headache (Hänsel/Sticher, Roth/Daunderer)	Furochromones (e.g. visnagin, khellin)	<b>WHO:</b> 50–150 mg drug/day, administration to children only under medical supervision
toxic II (Wink/Wyk), toxic + (Roth/Daunderer)	Nausea and CNS disorders, digestive and kidney problems, blistering and ulceration, skin rash (Wink/Wyk)	Protoanemonin	
individually or mixed with other barks designated as catuaba			
<b>Positive monograph, indications:</b> digestive problems, <b>WHO monograph:</b> treatment of dyspepsia, gastritis and flatulence, and stomach ache			<b>Commission E, WHO:</b> 3 g drug/day, equivalent preparations
<b>Neutral monograph</b>			
<b>Negative monograph:</b> due to risks, slightly toxic (+) (Roth/Daunderer)	phototoxic	Coumarins, furocoumarins	



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Angelica archangelica L.</b> , syn. <i>Angelica archangelica</i> ALL.	Root	× F		×	×		×	
<b>Angelica silvestris L.</b> , syn. <i>Angelica brachyradia</i> FREYN	all plant parts		Not NFS					×
<b>Angelica sinensis (OLIV.) DIELS</b>	all plant parts		Not NFS		×			×
<b>Antennaria dioica (L.) GAERTN.</b> , syn. <i>Cyttarium dioicum</i> (L.) PE- TERM., <i>Gnaphalium dioicum</i> L.	Flower	× C						
<b>Anthriscus cerefolium (L.) HOFFM.</b> var. <i>cerefolium</i> [var. <i>sativus</i> (LAM.) ENDL.]	Herb	× S						
<b>Apium graveolens L.</b> , syn. <i>Apium celleri</i> GÄRTNER, <i>Celeri graveolens</i> BRITTON, <i>Selinum graveolens</i> E.H.L. KRAUSE, <i>Seseli graveolens</i> SCOP., <i>Sison ruta</i> BURM.	Leaf	× S						
<b>Apium graveolens L.</b> , syn. <i>Apium celleri</i> GÄRTNER, <i>Celeri graveolens</i> BRITTON, <i>Selinum graveolens</i> E.H.L. KRAUSE, <i>Seseli graveolens</i> SCOP., <i>Sison ruta</i> BURM.	Fruit	× S, T						
<b>Apium graveolens L.</b> , syn. <i>Apium celleri</i> GÄRTNER, <i>Celeri graveolens</i> BRITTON, <i>Selinum graveolens</i> E.H.L. KRAUSE, <i>Seseli graveolens</i> SCOP., <i>Sison ruta</i> BURM.	Root, stem	×						
<b>Aquilegia vulgaris L.</b> , syn. <i>Aquilegia cornuta</i> GILIB.	all plant parts					×		
<b>Arctium lappa L.</b> , syn. <i>Articum majus</i> BERNH., <i>Lappa major</i> GAERTN.	Root	× T			×			
<b>Arctostaphylos uva-ursi (L.) SPRENGEL</b> , syn. <i>Arbutus uva-ursi</i> L., <i>Arctostaphylos media</i> GREENE	Leaf		Not NFS	×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> lack of appetite, digestive problems such as mild gastrointestinal cramps, feeling of fullness, bloating, <b>standard marketing authorisation:</b> 1419.99.99, <b>ESCOPE monograph:</b> dyspeptic complaints such as mild gastrointestinal spasms, sluggish digestion, flatulence and feeling of fullness, loss of appetite, anorexia, bronchitis, slightly toxic (+) (Roth/Daunderer)	phototoxic	Coumarins, furocoumarins	<b>Commission E:</b> daily dose: 4.5 g drug or 1.5–3 g fluid extract (1:1) or 1.5 g tincture (1:5), equivalent preparations <b>ESCOPE:</b> 3–6 g drug/day, no administration to children
<b>WHO monograph (root):</b> traditional use, <b>HMPC assessment report</b>	phototoxic	Coumarins, furocoumarins	<b>WHO:</b> 4.5–9 g drug/day, no administration to children
<b>Neutral monograph</b>			
		Estragole (=methyl chavicol)	
<b>Negative monograph:</b> due to risks	phototoxic, Commission E: celery may induce allergic reactions and even anaphylactic shock (celery-carrot-mugwort syndrome)	Furocoumarins	
<b>Negative monograph:</b> due to risks	phototoxic, Commission E: celery may induce allergic reactions and even anaphylactic shock (celery-carrot-mugwort syndrome)	Furocoumarins	
<b>Negative monograph:</b> due to risks	phototoxic, Commission E: celery may induce allergic reactions and even anaphylactic shock (celery-carrot-mugwort syndrome)	Furocoumarins	
toxic II (Wink/Wyk), toxic + (Roth/Daunderer), whole plant, especially the seeds	Vertigo, pupillary changes, dizziness, loss of consciousness, dyspnoea (Wink/Wyk), diarrhoea (Roth/Daunderer)	Isoquinoline alkaloids (e.g. magnoflorine), cyanogenic glycosides	
<b>HMPC monograph:</b> traditional use			
<b>Positive monograph, indications:</b> inflammatory diseases of the lower urinary tract, <b>WHO monograph, HMPC monograph:</b> traditional use, <b>standard marketing authorisation:</b> 8299.99.99, <b>ESCOPE monograph:</b> uncomplicated infections of the lower urinary tract such as cystitis, when antibiotic treatment is not considered essential, mildly toxic III (Wink/Wyk), slightly toxic (+) (Roth/Daunderer)	Nausea and vomiting may occur in people with a weak stomach (Commission E monograph), uterus contractions, long-term use may cause symptoms of poisoning such as haemolytic anaemia, cachexia, fatty liver disease and hair discoloration resulting from the release of hydroquinones and/or methylhydroquinones in the body, contraindications and interactions reported (Roth/Daunderer)	Hydroquinones (e.g. arbutin)	<b>Commission E, WHO:</b> 3 g in 150 ml water, up to 4 times a day, no administration to children under the age of 12 <b>ESCOPE:</b> equivalent to 400–800 mg arbutin/day, no administration to children

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Arctostaphylos uva-ursi (L.) SPRENGEL</b> , syn. <i>Arbutus uva-ursi</i> L., <i>Arctostaphylos media</i> GREENE	Fruit		×					
<b>Areca catechu L.</b>	Fruit					×		
<b>Argyrea nervosa (BURM.f.) BOJ.</b> , syn. <i>Argyrea speciosa</i> (L.f.) SWEET, <i>Convolvulus nervosus</i> BURM.f.	Seed					×		
<b>Aristolochia spp.</b>	all plant parts			×		×		
<b>Armoracia lapathifolia GILIB.</b> , syn. <i>Armoracia rusticana</i> G.M. SCH., <i>Armoracia sativa</i> BERNH., <i>Cardamine armoracia</i> O. KTZE.	Root	×		×			×	
<b>Arnica montana L.</b> , syn. <i>Doronicum arnica</i> DESF.	Flower					×		
<b>Aronia melanocarpa (MICHX.) ELLIOT</b>	Fruit	×						
<b>Artemisia abrotanum L.</b> , syn. <i>Artemisia abrotanifolium</i> SALISB., <i>Artemisia angustifolia</i> S.F. GRAY	Herb	×	S, T					
<b>Artemisia absinthium L.</b> , syn. <i>Absinthium majus</i> GEOFFR., <i>Absinthium officinale</i> LAM., <i>Absinthium vulgare</i> LAM.	Herb	×	T	×	×		×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
toxic II (Wink/Wyk), toxic + (Roth/Daunderer), psychotropic. Consumption in the form of “betel quids” consisting of areca seeds, betel leaves (Piper betle), dissolved lime as well as flavour-enhancing additives. When chewed, the alkaloid arecaidine (hydrolysis of arecoline) is released, which has a central stimulating effect. CNS-stimulant, narcotic	neurotoxic, arecoline activates mAChR, therefore psychotropic, stimulates salivation, bradycardia, respiratory and cardiac arrest. People who regularly chew betel quids often suffer from oral tumours (Wink/Wyk). Higher doses (8–10 g seeds) may be fatal (Hager)	Alkaloids (e.g. arecoline, arecaidine)	
toxic Ib to very toxic II (Wink/Wyk)	psychotropic, highly psychedelic, effect similar to that of LSD, seeing colours (Wink/Wyk)	Ergot alkaloids (e.g. lysergic acid, ergine = lysergic acid amide, LSA)	
BfArM graduated plan of 3 June 1981 concerning medicinal products containing aristolochic acid, including phytotherapeutic and homeopathic medicinal products, and BfArM graduated plan of 22 June 2010 concerning medicinal products produced using plants of the Asarum genus of the Aristolochiaceae family, substance of concern (AMK), toxic II (Wink/Wyk), toxic + (Roth/Daunderer)	Vomiting, gastroenteritis, drop in blood pressure, cramps, tachycardia, serious damage to urinary tract and kidneys may occur, aristolochic acids have a mutagenic and carcinogenic effect, ingestion of higher doses may cause death in coma by apnoea (BfArM, Roth/Daunderer)	Aristolochic acids	
<b>Positive monograph, indications:</b> catarrhs of the respiratory tract, adjuvant treatment of lower urinary tract infections	gastrointestinal complaints, contraindications reported (Commission E monograph)		<b>Commission E:</b> 20 g fresh root/day, equivalent preparations
<b>Positive monograph</b> for external use only, <b>standard marketing authorisation:</b> 5799.99.99 (tincture), 8199.99.99 (flower), <b>WHO monograph, ESCOP monograph:</b> for external use only, toxic II (Wink/Wyk), slightly toxic (+) but often sensitising (Roth/Daunderer), <b>HMPC monograph:</b> in progress (external use)	Skin irritation, severe gastroenteritis accompanied by diarrhoea and gastric pain, headache, vertigo, bradycardia, anxiety and agitation, strong heartbeat, abortifacient effect (Wink/Wyk), due to its toxic side effects observed, arnica should not be used internally (Roth/Daunderer) (AMKdA)	Sesquiterpene lactones (e.g. hehelenalin)	<b>Commission E, ESCOP, WHO:</b> 2 g drug/day for external use
<b>Positive monograph, indications:</b> loss of appetite, digestive problems, dyskinesia of the biliary tract, <b>ESCOP monograph:</b> Anorexia, for example after illness, dyspeptic complaints, <b>HMPC monograph:</b> traditional use, <b>standard marketing authorisation:</b> 1339.99.99, mildly toxic II to toxic III (Wink/Wyk), slightly toxic (+) to toxic + (Roth/Daunderer)	Vomiting, severe diarrhoea, dizziness, headache and cramps (Wink/Wyk)	Thujone	<b>Commission E:</b> 2–3 g drug/day as water extract <b>ESCOP:</b> 1–1.5 g drug in 150 ml water up to 3 times a day

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Artemisia cina</b> O.C. BERG et C.F. SCHMIDT, syn. <i>Artemisia cina</i> BERG, <i>Artemisia mogoltavica</i> POLJAK.	Flower, seed					×		
<b>Artemisia dracunculus</b> L., syn. <i>Artemisia inodora</i> WILLD., <i>Artemisia redowskyi</i> LEBED., <i>Oligosporus condimentarius</i> CASS.	Leaf	× T, S						
<b>Artemisia vulgaris</b> L., syn. <i>Artemisia lactiflora</i> WALL. ex DC., <i>Artemisia samamistica</i> BESS.	Herb	× S, T			×			
<b>Arum</b> spp.	all plant parts					×		
<b>Asarum europaeum</b> L., syn. <i>Asarum officinale</i> MOENCH.	all plant parts					×		
<b>Aspalathus linearis</b> (BURM.F.) DAHLG., syn. <i>Aspalathus contaminata</i> (THUNB.) DRUCE, <i>Aspalathus cognata</i> PRESL., <i>Borbonia pinifolia</i> MARL., <i>Lebeckia linearis</i> (BURM.F.) DC., <i>Psoralea linearis</i> BURM.F.	Herb	× T						
<b>Asparagus officinalis</b> L., syn. <i>Asparagus altilis</i> ASCHERS., <i>Asparagus hortensis</i> MILL.	Rhizome	×		×			×	
<b>Aspidosperma quebracho-blanco</b> SCHLECHT, syn. <i>Aspidosperma chakensis</i> SPEG., <i>Macaglia quebracho</i> O. KTZE.	Bark, wood					×		
<b>Astragalus membranaceus</b> (FISCH) BGE., syn. <i>Phaca membranacea</i> FISCH. INDC.	Root		Not NFS		×			×

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
very toxic Ib (Wink/Wyk), highly toxic ++ (Roth/Daunderer)	Loss of consciousness, epileptic fits, visual disturbances, excessive gall production, icterus, diarrhoea, nausea, vomiting, cold spells, hypersalivation, excessive lacrimation, dyspnoea, facial muscle cramps, haematuria resulting from kidney damage, crural paralysis, delirium, coma, death by respiratory arrest (Wink/Wyk)	Sesquiterpene lactones (e.g. santonin, artemisin)	
concerning estragole content, s. BfR statement: <a href="http://www.bfr.bund.de/cm/208/minimierung_von_estragol_und_methyleugenol_gehalten_in_lebensmitteln.pdf">http://www.bfr.bund.de/cm/208/minimierung_von_estragol_und_methyleugenol_gehalten_in_lebensmitteln.pdf</a>	Estragole and methyl eugenol demonstrated a genotoxic effect in in-vitro and in-vivo animal experiments (SCF, BfR)	Estragole (=methyl chavicol), methyl eugenol	
<b>Negative monograph:</b> due to risks	abortifacient effect reported, allergic reactions may be induced after previous sensitisation (Commission E monograph), belongs to the most potent plant allergens (Schilcher)	Thujone, camphor, eucalyptol (=1,8-cineol)	
extremely toxic Ia (Wink/Wyk), extremely toxic +++ (Roth/Daunderer)	Irritating to skin, burning in the mouth and throat, cardiac arrhythmia, cramps, internal haemorrhage, CNS disorders, digestive problems (Wink/Wyk), hypersalivation, gingival, gastrointestinal and uterine bleeding (Roth/Daunderer)	Aroin, saponins, cyanogenic glycosides	
toxic II (Wink/Wyk), toxic + (Roth/Daunderer), substance of concern (AMK), due to detection of aristolochic acids, BfArM graduated plan procedure resulted in recall of medicinal products containing Asarum species: <a href="http://www.bfarm.de/cae/servlet/contentblob/1207042/publicationFile/">http://www.bfarm.de/cae/servlet/contentblob/1207042/publicationFile/</a>	Ingestion of high doses causes digestive problems and CNS disorders, burning in the mouth and throat, nausea, vomiting, gastric pain, gastroenteritis accompanied by diarrhoea and uterine haemorrhage, in extreme cases death by central apnoea (Wink/Wyk, Roth/Daunderer)	Asarone, aristolochic acids	
<b>Positive monograph, indications:</b> irrigation therapy of inflammatory diseases of the lower urinary tract and prevention of kidney gravel			<b>Commission E:</b> 45–60 g drug, equivalent preparations
highly toxic ++ (Roth/Daunderer), toxic Ib to very toxic II (Wink/Wyk)	affects vessels (vasoconstrictive), affects respiratory activity, local anaesthetic action, emetic in high doses (Roth/Daunderer, Wink/Wyk)	Indole alkaloids (e.g. aspidospermine, yohimbine)	
<b>WHO monograph:</b> traditional use			<b>WHO:</b> 9–30 g/day

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<i>Atropa belladonna</i> L.	all plant parts			×		×		
<i>Avena sativa</i> L., syn. <i>Avena cinerea</i> ROEM. et SCHULT.	Herb	×			×			
<i>Avena sativa</i> L., syn. <i>Avena cinerea</i> ROEM. et SCHULT.	Fruit	×			×			
<i>Backhousia citriodora</i> F. MUELL.	Leaf	×	S					
<i>Banisteriopsis caapi</i> (SPRUCE ex GRISEB.) MORTON, syn. <i>Banisteriopsis inebrians</i> MORTON	Bark, wood					×		
<i>Barosma betulina</i> (THUNB.) BARTL. et WENDL., syn. <i>Agathosma betulina</i> (BERG.) PILLANS	Leaf	×	F		×			
<i>Bellis perennis</i> L.	Flower	×	T					
<i>Berberis vulgaris</i> L.	Fruit	×						
<i>Berberis vulgaris</i> L.	Bark			×		×		
<i>Berberis vulgaris</i> L.	Root, root cortex					×		
<i>Beta vulgaris</i> L. ssp. <i>vulgaris</i> var. <i>Conditiva</i> ALEF.	Tuber	×						
<i>Betula pendula</i> ROTH and <i>Betula pubescens</i> EHRH.	Leaf	×	T	×	×		×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph:</b> cramps and colic-like pain in the gastrointestinal and biliary tract, extremely toxic Ia (Wink/Wyk), extremely toxic +++ (Roth/Daunderer), isolated tropane alkaloids contained in the drug prescription-only, deadly nightshade pharmacy-only	psychotropic, all plant parts extremely toxic, dry mouth, accommodation difficulties, reddened and dry skin, hyperthermia, tachycardia, hallucinations, cramps, micturition difficulties, delirium, fever, cardiac arrest, apnoea, death, contraindications and interactions with medicinal products reported (Frohne, Commission E monograph)	Tropane alkaloids (e.g. atropine, L-hyoscyamine, scopolamine)	<b>Commission E:</b> Belladonnae pulvis normatus: average single dose 0.05–0.1 g, max. single dose: 0.2 g equivalent to 0.6 mg total alkaloids, max. daily dose: 0.6 g equivalent to 1.8 mg total alkaloids; Belladonnae radix: average single dose: 0.05 g, max. daily dose: 0.3 g equivalent to 1.5 mg total alkaloids
<b>Neutral monograph, HMPC monograph:</b> traditional use			
<b>Neutral monograph, HMPC monograph:</b> traditional use			
highly toxic ++ (Roth/Daunderer), toxic II (Wink/Wyk), used to produce ayahuasca, yagé or caapi	Beta-carboline alkaloids contained in the drug are strong monoamine oxidase (MAO) inhibitors, hallucinations, mydriasis, hypersalivation, vomiting, sweating, nausea, tremor, abdominal pain, rectal tenesmus (Wink/Wyk)	Beta-carboline alkaloids (e.g. harmala, harmaline)	
<b>Neutral monograph</b>	gastric irritation (Schilcher)	Diosphenol and pulegone	
<b>Neutral monograph:</b> toxic II (Wink/Wyk), slightly toxic (+) (Roth/Daunderer). Ripe berries are edible (Roth/Daunderer), alkaloid content decreases with increasing maturity (Hager)		Isoquinoline alkaloids (e.g. berberine)	
<b>Negative monograph:</b> due to risks, toxic II (Wink/Wyk), slightly toxic (+) (Roth/Daunderer), <b>WHO monograph:</b> used orally for the treatment of digestive complaints, such as dyspepsia, diarrhoea, gastritis, feelings of distention and flatulence	Dizziness, nasal bleeding, vomiting, diarrhoea, renal irritation, nephritis, ingestion of higher doses causes poisoning by respiratory arrest and haemorrhagic nephritis (Wink/Wyk)	Isoquinoline alkaloids (e.g. berberine)	<b>WHO:</b> 0.5–1 g drug, 3 times a day, no administration to children under the age of 12
<b>Negative monograph:</b> due to risks, toxic II (Wink/Wyk), slightly toxic (+) (Roth/Daunderer)	Dizziness, nasal bleeding, vomiting, diarrhoea, renal irritation, nephritis, ingestion of higher doses causes poisoning by respiratory arrest and haemorrhagic nephritis (Wink/Wyk)	Isoquinoline alkaloids (e.g. berberine)	
<b>Positive monograph, indications:</b> irrigation therapy of bacterial, inflammatory and other diseases of the lower urinary tract and kidney gravel, adjuvant treatment of rheumatic symptoms, <b>standard marketing authorisation:</b> 8399.99.99, <b>ESCOPE monograph:</b> irrigation of the urinary tract, especially in cases of inflammation and renal gravel and as an adjuvant in the treatment of bacterial infections, <b>HMPC monograph:</b> traditional use	Contraindications: irrigation therapy of oedemas associated with cardiac or renal insufficiency (Commission E monograph)		<b>Commission E:</b> 6–10 g drug/day, equivalent preparations, average daily dose: 2.0–3.0 g drug, several times a day, equivalent preparations <b>ESCOPE:</b> 2–3 g drug, 2–3 times a day, equivalent preparations



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Bixa orellana L.</b> , syn. Bixa POIR., Bixa platycarpa RUIZ et PAV.	Seed	× S						
<b>Borago officinalis L.</b>	Herb	× S					×	
<b>Borago officinalis L.</b>	Seed	×					×	
<b>Boswellia serrata ROXB. ex COLEBR.</b> , syn. Boswellia glabra ROXB., Boswellia thurifera ROXB. ex FLEM., Libanus thuriferus COLEBR.	Resin		Not NFS	×			×	
<b>Brassica nigra (L.) KOCH</b> , syn. Bras- sica bracteoloata FISCH et MEY., Crucifera sinapis E.H.L. KRAUSE, Erysimum glabrum PRESL., Melanosinapis communis SCHIMP. et SPENN., Mutarda nigra BERNH., Sinapis nigra L.	Seed	× S						
<b>Brassica oleracea L.</b>	Inflorescence, stem	×						
<b>Brassica oleracea L. var. suttoni- ana LEV.</b> , syn. Crucifera brassica E.H.L. KRAUSE	Leaf	×						
<b>Brassica oleracea var. sabellica L.</b>	Leaf	×						
<b>Brugmansia spp.</b>	all plant parts					×		
<b>Bryonia spp.</b>	Root			×		×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
used as spice or colouring (Teuscher, Gewürzdrogen), extracts of it as additive E160b, colouring, restrictions of use as additive acc. to Annexes 1b, 1c of the ZZuV [Regulation on the Authorisation of Food Additives], as from 1 June 2012 use acc. to Reg. (EU) No. 1129/2011, specification acc. to Reg. (EU) No. 231/2012			
<b>Negative monograph:</b> due to risks, toxic II (Wink/Wyk), non-toxic to hardly toxic (+) (Roth/Daunderer), borage is a substance of concern as it contains pyrrolizidine (AMK), due to this pyrrolizidine content, it should only be used sparingly (Teuscher), BfArM graduated plan of 5 June 1992 concerning medicinal products containing pyrrolizidine	contains varying amounts of toxic pyrrolizidine alkaloids (PA), which are known to have an organotoxic, in particular hepatotoxic effect. PA demonstrated a carcinogenic effect with a genotoxic mechanism of action in animal experiments (Hager). All plant parts contain varying amounts of pyrrolizidine alkaloids.	Pyrrolizidine alkaloids	
toxic II (Wink/Wyk), licensed anthroposophic medicinal product, indications: haemorrhoids, varicose syndrome, borage is a substance of concern as it contains pyrrolizidine (AMK), BfArM graduated plan of 5 June 1992 concerning medicinal products containing pyrrolizidine, the cold-pressed oil of borage seeds is usually used as food	contains varying amounts of toxic pyrrolizidine alkaloids (PA), which are known to have an organotoxic, in particular hepatotoxic effect. PA demonstrated a carcinogenic effect with a genotoxic mechanism of action in animal experiments (Hager). All plant parts contain varying amounts of pyrrolizidine alkaloids. Cold-pressed borage oil contains no or only traces of pyrrolizidine alkaloids. (Frohne/Pfänder)	Pyrrolizidine alkaloids	
<b>WHO monograph:</b> orally for the management of arthritis, bronchial asthma, Crohn's disease and ulcerative colitis, <b>ESCOP monograph:</b> relief of painful osteoarthritis, symptomatic treatment of inflammatory bowel disease			<b>ESCOP:</b> 250–3,600 mg/day <b>WHO:</b> 1–3 g drug/day
Harmful in high doses (+) (Roth/Daunderer), toxic II–III (in high doses) (Wink/Wyk)	Ingestion of high doses causes gastrointestinal complaints, nausea, vomiting, diarrhoea, severe poisoning causes central paralysis, bradycardia and bradypnoea, even coma and death (Roth/Daunderer, Wink/Wyk)	Glucosinolates	
formerly belonged to the genus of Datura, extremely toxic +++ (Roth/Daunderer), extremely toxic Ia (Wink/Wyk)	psychotropic, CNS-inhibitor and sedative in low concentrations, ingestion of high doses causes hallucinations, euphoria, disorientation, insomnia and even death by respiratory arrest (Wink/Wyk)	Alkaloids (tropane alkaloids, e.g. L-hyoscyamine, L-scopolamine, atropine)	
<b>Negative monograph:</b> due to risks, use as drastic laxative and emetic obsolete, very toxic Ib (Wink/Wyk), highly toxic ++ (Roth/Daunderer)	Vertigo, vomiting, intense colic, severe watery, sometimes also bloody diarrhoea, gastroenteritis, kidney damage, abortion, cramps, death by respiratory arrest (Wink/Wyk, Roth/Daunderer)	Cucurbitacins	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Buxus sempervirens L.</b>	all plant parts					×		
<b>Calendula officinalis L.</b> , syn. <i>Calendula officinalis</i> var. <i>anemonaeflora</i> HORT., <i>Calendula officinalis</i> var. <i>hortensis</i> FIORI, <i>Calendula santamaria</i> FONT-QUER, <i>Caltha officinalis</i> MOENCH	Flower	× T			×			
<b>Calluna vulgaris (L.) HULL</b> , syn. <i>Calluna sagittaeifolia</i> GRAY, <i>Erica vulgaris</i> L.	Herb	× T						
<b>Camellia sinensis (L.) O. KUNTZE</b> , syn. <i>Camellia assamica</i> (J.W. MATTHEWS) W. WIGHT, <i>Camellia chinensis</i> (SIMS) KUNTZE, <i>Thea bohea</i> L., <i>Thea viridis</i> RAF.	Leaf, leaf bud	× T						
<b>Cannabis sativa L.</b>	Seed	×					×	
<b>Capparis spinosa L.</b>	Bud	× S						
<b>Capsella bursa-pastoris (L.) MEDIK.</b> , syn. <i>Bursa pastoris</i> WIGG., <i>Capsella polymorpha</i> CAV., <i>Iberis bursa-pastoris</i> CRANTZ	Herb	× T		×	×		×	
<b>Capsicum annum L. convar. grossum</b>	Fruit	×						
<b>Capsicum frutescens L.</b>	Fruit	× S						
<b>Carica papaya L.</b> , syn. <i>Carica hermaphrodita</i> , <i>Papaya carica</i> GAERTN., <i>Papaya vulgaris</i> DC.	Leaf		Not NFS					×
<b>Carica papaya L.</b> , syn. <i>Carica hermaphrodita</i> , <i>Papaya carica</i> GAERTN., <i>Papaya vulgaris</i> DC.	Fruit	×						
<b>Carthamus tinctorius L.</b>	Flower	× C		×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
very toxic Ib (Wink/Wyk), highly toxic ++ (Roth/Daunderer)	Contact dermatitis, ingestion causes first excitement then paralysis and drop in blood pressure, nausea, vomiting, diarrhoea, vertigo, cramps circulatory collapse, death by respiratory arrest (Wink/Wyk)	steroidal alkaloids	
<b>Positive monograph:</b> for external use, <b>WHO monograph,</b> <b>HMPC monograph:</b> traditional use, <b>ESCOP monograph:</b> for external use only, <b>standard marketing authorisation:</b> 1209.99.99			<b>ESCOP:</b> external use only <b>WHO:</b> external use only <b>Commission E:</b> 1–2 g/150 ml for external, local use
<b>Neutral monograph</b>			
<b>HMPC monograph:</b> in progress (unfermented leaves)			
Cannabis sativa as well as the cannabionid $\Delta^9$ -tetrahydrocannabinol (THC) are subject to the provisions of the BtMG [Narcotic Drugs Act]. According to Annex I to Section I Clause 1 BtMG, the seeds of C. sativa are exempted from this, unless they are intended for illegal cultivation. Processing in food production as well as distribution of products produced using Cannabis seeds is thus permitted under the Narcotic Drugs Act. Mildly toxic III (Wink/Wyk), toxic + (Roth/Daunderer)	euphorogenic and hallucinogenic effect, aphrodisiac, overdose causes cardiac complaints and CNS disorders, state of intoxication, illusion, mydriasis, impaired reactions, loss of sense of time, incorrect estimation of distance and speed, impaired concentration and attention, disorientation, impaired coordination, accelerated pulse, sudden blackout may occur after 1–3 months (Roth/Daunderer)	Cannabinoids (e.g. THC)	
	irritating, skin irritation may occur on contact with the plant (Roth/Daunderer)	Leek oils, glucosinolates	
<b>Positive monograph, indications:</b> mild menorrhagia, nasal bleeding, <b>HMPC monograph:</b> traditional use, <b>standard marketing authorisation:</b> 1539.99.99			<b>Commission E:</b> 10–15 g drug/day, equivalent preparations
<b>HMPC monograph:</b> in progress			
<b>Positive monograph:</b> for external use, <b>ESCOP monograph:</b> for external use, mildly toxic III (Wink/Wyk), slightly toxic + (Roth/Daunderer), <b>HMPC monograph:</b> in progress	chronic poisoning resulting from abuse (e.g. overdose as spice) is accompanied by lack of appetite, chronic gastritis, kidney and liver damage (Roth/Daunderer)	Capsaicin	
<b>Neutral monograph</b>			
<b>WHO monograph:</b> treatment of amenorrhoea, dysmenorrhoea and wounds or sores with pain and swelling, and prevention of atherosclerosis, used as colouring and colouring food (safflower)			<b>WHO:</b> 3–9 g drug/day

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Carum carvi L.</b> , syn. <i>Apium carvi</i> (L.) CRANTZ, <i>Seseli carvi</i> LAM., <i>Ligusticum carvi</i> ROTH.	Fruit	× T, S		×			×	
<b>Cassia fistula L.</b> , syn. <i>Bactrylobium fistula</i> WILLD., <i>Cassia bonplandiana</i> DC., <i>Cassia excelsa</i> H.B.K., <i>Cassia fistuloides</i> COLL., <i>Cathartocarpus excelsus</i> G. DON	Fruit	× F						
<b>Cassia senna L. syn. Cassia acutifolia DEL.</b> , <i>Senna acutifolia</i> LINK and <i>Cassia angustifolia</i> VAHL. syn. <i>Cassia lanceolata</i> WIGHT et ARN., <i>Senna alexandrina</i> MILL., <i>Senna angustifolia</i> BATKA	Leaf, fruit			×		×		
<b>Catha edulis FORSK.</b> , syn. <i>Catha edulis</i> (VAHL.) FORSK. ex ENDL, <i>Celastrus edulis</i> VAHL.	all plant parts			×		×		
<b>Catharanthus roseus (L.) G. DON</b> , syn. <i>Vinca rosea</i> L., <i>Lochnera rosea</i> (L.) RCHB., <i>Ammocallis</i> SMALL	all plant parts					×		
<b>Caulophyllum thalictroides (L.) MICHX.</b> , syn. <i>Leontice thalictroides</i> L.	all plant parts					×		
<b>Centaurea cyanus L.</b> , syn. <i>Cyanus arvensis</i> MOENCH, <i>Cyanus segetum</i> LAM.	Flower	× T						

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<p><b>Positive monograph, indications:</b> digestive problems such as mild gastrointestinal cramps, bloating and feeling of fullness, <b>standard marketing authorisation:</b> 1109.99.99, <b>ESCOPE monograph:</b> spasmodic gastro-intestinal complaints, flatulence, bloating. Flatulent colic of infants, <b>HMPC monograph:</b> in progress</p> <p>used to produce spirits</p>			<p><b>Commission E:</b> 1.5–6 g drug/day, equivalent preparations  <b>ESCOPE:</b> 1.5–6 g drug/day</p>
<p><b>Positive monograph, indications:</b> short-term treatment of constipation, <b>standard marketing authorisation:</b> 7399.99.99 (senna leaves), 1259.99.99 (senna fruits, Alexandrian), 1269.99.99 (senna fruits, Tinnevely), <b>WHO monograph (leaves and fruits):</b> short-term use in occasional constipation, <b>ESCOPE monograph (leaves and fruits):</b> for short-term use in cases of occasional constipation, <b>HMPC monograph (leaves and fruits):</b> short-term treatment of occasional constipation; BfArM graduated plan of 21 June 1996 concerning medicinal products for human use containing anthranoid-containing plant genera, slightly toxic (+) (Roth/Daunderer), mildly toxic III (Wink/Wyk)</p>	<p>Electrolyte loss (in particular potassium) may be accompanied by muscular asthenia and cardiac dysfunction, albuminuria, haematuria, pseudomelanosis coli, aggravation of colonic inertia (development of laxative addiction) resulting from paralysis of intestinal muscles due to loss of potassium, contraindications and interactions reported (Commission E monograph), damage to intestinal nerves due to stimulation of uterine muscles, risk of abortion in pregnant women (Hager)</p>	Anthranoids	<p><b>Commission E:</b> 20–30 mg hydroxyanthracene derivatives/day, calculated as sennoside B  <b>ESCOPE:</b> preparations equivalent to 15–30 mg hydroxyanthracene derivatives (calculated as sennoside B), no administration to children under the age of 10  <b>WHO:</b> 1–2 g drug/day equivalent to 10–30 mg sennosides, no administration to children under the age of 10  <b>HMPC:</b> equivalent to 15–30 mg hydroxyanthracene derivatives/day (calculated as sennoside B), no administration to children under the age of 12</p>
<p>Some plant substances are prescription-only and/or are subject to the provisions of the Narcotic Drugs Act (BtMG), mildly toxic II to toxic III (Wink/Wyk), toxic + (Roth/Daunderer)</p>	<p>psychotropic, effect similar to amphetamines, excitement, constipation, circulatory distress (Wink/Wyk, Roth/Daunderer)</p>	Alkaloids (e.g. cathinone, cathine [=D-norpseudoephedrine])	
<p>highly toxic ++ (Roth/Daunderer), toxic Ib to very toxic II (Wink/Wyk), BfArM graduated plan of 20 July 1987 concerning medicinal products containing Madagascar rosy periwinkle</p>	<p>mitotic inhibition, neurological disorders, nausea, vomiting, paraesthesia of hands and feet, visual disturbances and hearing, fever, inhibition of leucocytopoiesis, loss of hair, impairment of intestinal mucosa, constipation, diarrhoea, neuromuscular vegetative disorders, affects CNS and mental state, apoplexy (Wink/Wyk, Roth/Daunderer)</p>	Indole alkaloids (Vinca alkaloids)	
<p>toxic Ib to very toxic II (Wink/Wyk), toxic + (Roth/Daunderer)</p>	<p>causes diarrhoea, vomiting and gastroenteritis in low doses, ingestion of high doses causes burning in the mouth, hypersalivation, sweating, mydriasis, uterus contractions, nausea, paralysis, also hallucinations, delirium, respiratory arrest (Wink/Wyk), risk of abortion during pregnancy reported, oestrogenic and antispasmodic effects reported (Roth/Daunderer)</p>	Quinolizidine alkaloids, saponins	
<b>Neutral monograph</b>			

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Centaurium erythraea</b> RAFN, syn. Centaurium minus GARSALT, Centaurium minus MOENCH P.P., Centaurium umbellatum GILBERT, Erythraea centaurium BORKH.	Herb	× T		×	×		×	
<b>Cephaelis asiatica</b> (L.) URBAN, syn. Centella asiatica (L.) NANNF., Centella triflora (R. et P.) NANNF., Hydrocotyle asiatica L.	Herb	×		×			×	
<b>Cephaelis ipecacuanha</b> (BROT.) A. RICH., syn. Uragoga ipecacuanha (WILLD.) BAILL., Psychotria ipecacuanha (BROT.) MUELL. ARG. (auch STOKES)	Root			×		×		
<b>Ceratonia siliqua</b> L., syn. Ceratonia coriacea SALISB., Ceratonia inermis STOKES	Fruit	×						
<b>Chamaemelum nobile</b> (L.) ALL., syn. Anthemis nobilis L.	Flower	× T			×			
<b>Chelidonium majus</b> L., syn. Chelidonium grandiflorum DC., Chelidonium japonicum THUNB., Chelidonium luteum GILIB., Chelidonium umbelliferum STOCK.	Herb			×		×		
<b>Chenopodium ambrosioides</b> L. var. Anthelminticum A. GRAY, syn. Chenopodium ambrosioides L. ssp. eu-ambrosioides AELLEN var. anthelminticum AELLEN	all plant parts			×		×		
<b>Chondrodendron tomentosum</b> RUIZ et PAV., syn. Botryopsis platyphylla BENTH.	all plant parts			×		×		
<b>Cicer arietinum</b> L.	Seed	×						

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> lack of appetite, digestive problems <b>standard marketing authorisation:</b> 1319.99.99, <b>ESCOP monograph:</b> dyspeptic complaints, lack of appetite, <b>HMPC monograph:</b> traditional use			<b>Commission E:</b> average daily dose: 6 g drug, equivalent preparations <b>ESCOP:</b> 1–4 g drug/150 ml water, up to 3 times a day
<b>WHO monograph, indications:</b> extracts have been administered orally to treat stress-induced stomach and duodenal ulcers, toxic II (Wink/Wyk), toxic + (Roth/Daunderer), <b>ESCOP monograph, indications:</b> chron. venous insufficiency, varicosis, wound healing, <b>HMPC assessment report</b>	Irritation of skin and mucous membranes, ingestion of higher doses may cause digestive problems (Wink/Wyk)	Triterpene saponins, hydrocotyline (alkaloid)	<b>WHO:</b> 0.33–0.68 g drug, 3 times a day, equivalent preparations <b>ESCOP:</b> 0.6 g drug, up to 4 times a day
<b>WHO monograph, indications:</b> a syrup made from the roots is used as an emetic, to empty the stomach in cases of poison ingestion, extremely toxic +++ (Roth/Daunderer), emetines prescription-only, <i>Cephaelis ipecacuana</i> and <i>Cephaelis acuminata</i> pharmacy-only, used in medicinal products as an ingredient of expectorants and emetics	Pneumonia, nausea, vomiting, bloody diarrhoea, pain, exhaustion, bradycardia, myoplegia, anuria (Roth/Daunderer)	Alkaloids (e.g. cephaeline, emetine)	<b>WHO:</b> 21–42 mg total alkaloid content (special doses for children)
Carob bean gum additive E 410			
<b>Negative monograph:</b> due to risks, <b>HMPC monograph:</b> traditional use	Allergic reactions may occur (Commission E monograph)		
<b>Positive monograph, indications:</b> cramps in the biliary and gastrointestinal tract, <b>WHO monograph:</b> used for the symptomatic treatment of mild to moderate spasms of the upper gastrointestinal tract, minor gallbladder disorders, and dyspeptic complaints such as bloating and flatulence, <b>ESCOP monograph:</b> symptomatic treatment of mild to moderate spasms of the upper gastrointestinal tract, minor gall bladder disorders, dyspeptic complaints such as bloating and flatulence; BfArM graduated plan of 9 Apr 2008 concerning medicinal products for internal use containing celandine, <a href="http://www.bfarm.de/DE/Pharmakovigilanz/risikoinfo/stufenplanverf/Liste/stp-schoellkraut.html">http://www.bfarm.de/DE/Pharmakovigilanz/risikoinfo/stufenplanverf/Liste/stp-schoellkraut.html</a> , highly toxic ++ (Roth/Daunderer), toxic II (Wink/Wyk), <b>HMPC assessment report</b>	Inflammations and burning in the mouth, vomiting, paralysis, vesical tenesmus, dizziness, arrhythmia, gastrointestinal complaints accompanied by bloody diarrhoea, bradycardia, drop in blood pressure, finally death by circulatory collapse, hepatotoxic (Wink/Wyk, Roth/Daunderer)	Isoquinoline alkaloids (e.g. chelidonine, sanguinarine, berberine)	<b>Commission E:</b> 2–5 g drug/day <b>WHO:</b> 2–5 g drug/day <b>ESCOP:</b> 1.2–3.6 g/day
toxic + (plant), highly toxic ++ (oil) (Roth/Daunderer), very toxic, Ib (Wink/Wyk), information: oil prescription-only ( <i>Chenopodium anthelminthicum</i> oleum)	Ingestion of higher doses causes CNS disorders, loss of consciousness, paralysis, drop in blood pressure, increased tendency to haemorrhage, cerebral haemorrhage, damage to the cochlear nerve, impaired hearing, digestive tract inflammations accompanied by cramps, abortifacient (Roth/Daunderer)	Terpenes (monoterpenes e.g. ascaridole)	
extremely toxic Ia (Wink/Wyk), pareira and preparations thereof prescription-only	strong muscle relaxant, hypotensive, circulatory collapse, bronchospasm, death by cardiac arrest or respiratory arrest (Wink/Wyk)	Alkaloids (e.g. tubocurarine)	



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Cichorium intybus L. var. foliosum</b> HEGI	Leaf bud	×						
<b>Cichorium intybus L. var. intybus</b> = ssp. intybus var. sylvestre VISIANI = C. sylvestre G. BANK	Herb, root	× T		×	×		×	
<b>Cichorium intybus L. var. sativum</b> LAM. et DC. = ssp. sativum (DC.) JANCHEN var. radicosum ALEF.	Root	×						
<b>Cicuta virosa L.</b> , syn. Cicuta angustifolia KIT., Cicuta aquatica DUMORT., Selinum virosum (L.) E.H. KRAUSE	all plant parts			×		×		
<b>Cimicifuga racemosa (L.) NUTT.</b> , syn. Actaea racemosa L., Botrophis actaeoides RAFIN.	Rhizome			×		×		
<b>Cinchona pubescens VAHL</b> , Cinchona succirubra PAVON ex KLOTSCH	Bark	× F		×			×	
<b>Cinnamomum cassia NEES ex BL.</b> , syn. Cinnamomum aromaticum NEES, Laurus cassia NEES	Flower	× S						
<b>Cinnamomum cassia NEES ex BL.</b> , syn. Cinnamomum aromaticum NEES, Laurus cassia NEES	Bark	× S		×			×	
<b>Cinnamomum ceylanicum</b> BL., syn. Cinnamomum verum J.S. PRESL, Laurus cassia BURM.	Bark	× S		×	×		×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> lack of appetite, digestive problems, <b>HMPC monograph:</b> traditional use			<b>Commission E:</b> 3 g drug/day, equivalent preparations
Pharmacy-only (only homeopathic drugs on the market), very toxic Ib (Wink/Wyk), extremely toxic +++ (Roth/Daudeker)	Burning in mouth and throat, nausea, vomiting, gastric pain, mydriasis, headache, tremor, bradycardia, epileptic fits, delirium, coma, paralysis, death by respiratory arrest (Wink/Wyk, Roth/Daudeker)	Polyacetylenes (e.g. cicutoxin, cicutol)	
<b>Positive monograph, indications:</b> premenstrual and dysmenorrhoeal as well as climacteric neurovegetative symptoms, <b>WHO monograph:</b> treatment of climacteric symptoms such as hot flushes, profuse sweating, sleeping disorders and nervous irritability, <b>ESCOP monograph:</b> climacteric symptoms such as hot flushes, profuse sweating, sleep disorders and nervous irritability, BfArM graduated plan of 9 June 2009 concerning medicinal products containing Cimicifuga, <b>HMPC monograph:</b> herbal medicinal product for the relief of menopausal complaints such as hot flushes and profuse sweating	hepatotoxic, s. HMPC statement: <a href="http://www.bfarm.de/SharedDocs/1_Downloads/DE/Pharmakovigilanz/stufenplverf/cimicifuga_hmpc_assessment.pdf?__blob=publicationFile">http://www.bfarm.de/SharedDocs/1_Downloads/DE/Pharmakovigilanz/stufenplverf/cimicifuga_hmpc_assessment.pdf?__blob=publicationFile</a> , s. BfArM notification: <a href="http://www.bfarm.de/SharedDocs/1_Downloads/DE/Pharmakovigilanz/stufenplverf/cimicifuga_bescheid.pdf?__blob=publicationFile">http://www.bfarm.de/SharedDocs/1_Downloads/DE/Pharmakovigilanz/stufenplverf/cimicifuga_bescheid.pdf?__blob=publicationFile</a>	Triterpene glycosides, isoquinoline alkaloids (e.g. cytisine)	<b>Commission E, WHO:</b> 40–60 % alcoholic extract, equivalent to 40 mg drug
<b>Positive monograph, indications:</b> lack of appetite, digestive problems such as feeling of fullness and bloating, <b>standard marketing authorisation:</b> 1459.99.99, toxic II (Wink/Wyk), toxic + (Roth/Daudeker), source material for quinine, dose restriction for quinine acc. to the Flavouring Regulation, BfR statement on quinine: <a href="http://www.bfr.bund.de/cm/208/chininhaltige_getraenke_koennen_gesundheitlich_problematisch_sein.pdf">http://www.bfr.bund.de/cm/208/chininhaltige_getraenke_koennen_gesundheitlich_problematisch_sein.pdf</a>	Overdose may cause fever, icterus, haematuria, vomiting, diarrhoea, shivering, dyspnoea, internal haemorrhage and respiratory arrest (Wink/Wyk, Roth/Daudeker)	Alkaloids (e.g. quinine, quinidine)	<b>Commission E:</b> 1–3 g drug/day
<b>Negative monograph:</b> due to risks, use as taste improver is considered to be safe (Commission E monograph)	frequently induces allergic reactions of skin and mucous membranes, contraindications reported (Commission E monograph)	Cinnamic aldehyde	
<b>Positive monograph, indications:</b> lack of appetite, digestive problems such as mild gastrointestinal cramps, feeling of fullness or bloating, s. BfR statement: <a href="http://www.bfr.bund.de/cm/343/neue-erkenntnisse-zu-cumarin-in-zimt.pdf">http://www.bfr.bund.de/cm/343/neue-erkenntnisse-zu-cumarin-in-zimt.pdf</a>		Cinnamic aldehyde, coumarin	<b>Commission E, WHO:</b> 2–4 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> lack of appetite, digestive problems such as mild gastrointestinal cramps, feeling of fullness or bloating, <b>ESCOP monograph:</b> dyspeptic complaints such as gastrointestinal spasms, bloating and flatulence, loss of appetite, diarrhoea, <b>WHO monograph, HMPC monograph:</b> traditional use, <b>standard marketing authorisation:</b> 1709.99.99, s. BfR statement: <a href="http://www.bfr.bund.de/cm/343/neue-erkenntnisse-zu-cumarin-in-zimt.pdf">http://www.bfr.bund.de/cm/343/neue-erkenntnisse-zu-cumarin-in-zimt.pdf</a>		Cinnamic aldehyde, coumarin	<b>Commission E, WHO:</b> 2–4 g drug/day, equivalent preparations

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Cistus x incanus L.</b>	all plant parts		Not NFS	×			×	
<b>Citrullus colocynthis (L.) SCHRAD.</b> , syn. <i>Cucumis colocynthis L.</i> , <i>Colocynthis officinalis SCHRAD.</i>	all plant parts			×		×		
<b>Citrus aurantifolia (CHRISTM.) SWINGLE</b> and <i>Citrus latifolia TANAKA</i>	Peel	× T						
<b>Citrus aurantifolia (CHRISTM.) SWINGLE</b> , syn. <i>Citrus aurantiifolia (CHRISTM. et PANZ.) SWINGLE</i> , <i>Limonia acidissima HOUTT.</i> (non L.), <i>Limonia aurantifolia CHRISTM.</i>	Fruit	×						
<b>Citrus aurantium L. ssp. aurantium</b> , syn. <i>Citrus aurantium L. ssp. amara (L.) ENGL.</i> , <i>Citrus communis LEMAOUT. &amp; DECAISN.</i> , <i>Citrus florida SALISB.</i>	Leaf	× T						
<b>Citrus aurantium L. ssp. aurantium</b> , syn. <i>Citrus aurantium L. ssp. amara (L.) ENGL.</i> , <i>Citrus communis LEMAOUT. &amp; DECAISN.</i> , <i>Citrus florida SALISB.</i>	Flower	× C						
<b>Citrus aurantium L. ssp. aurantium</b> , syn. <i>Citrus aurantium L. ssp. amara (L.) ENGL.</i> , <i>Citrus communis LEMAOUT. &amp; DECAISN.</i> , <i>Citrus florida SALISB.</i>	Fruit	×						
<b>Citrus aurantium L. ssp. aurantium</b> , syn. <i>Citrus aurantium L. ssp. amara (L.) ENGL.</i> , <i>Citrus communis LEMAOUT. &amp; DECAISN.</i> , <i>Citrus florida SALISB.</i>	Peel	×		×			×	
<b>Citrus latifolia TANAKA</b>	Fruit	×						
<b>Citrus limon (L.) BURM.f.</b> , syn. <i>Citrus limonum RISSO.</i> , <i>Limon vulgaris MILL.</i>	Fruit	×						
<b>Citrus limon (L.) BURM.f.</b> , syn. <i>Citrus limonum RISSO.</i> , <i>Limon vulgaris MILL.</i>	Peel	× S, T						
<b>Citrus paradisi MACF.</b> , syn. <i>Citrus decumana var. patoniaca RICCOB.</i> , <i>Citrus decumana var. racemosa ROEM.</i>	Fruit	×						

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
Notification of the Federal Institute for Drugs and Medical Devices acc. to Section 21 Clause 4 AMG [Medicinal Products Act] of 4 Mar 2008 and decision of the North-Rhine Westphalia Higher Administrative Court of 15 Mar 2010 (file ref: 13 A 2612/09) on the classification of products containing preparations of <i>Cistus incanus</i> as medicinal products			
<b>Negative monograph:</b> due to risks, highly toxic ++ (Roth/Daunderer), very toxic Ib (Wink/Wyk)	cytotoxic, irritating to gastrointestinal mucosa up to bloody diarrhoea, kidney damage, haemorrhagic cystitis, cramps, abortifacient effect (Wink/Wyk, Roth/Daunderer)	Cucurbitacins	
	concerning synephrine s. BfR statement: <a href="http://www.bfr.bund.de/cm/343/gesundheitsbewertung-von-synephrin-und-koffeinhaltigen-sportlerprodukten-und-schlankheitsmitteln.pdf">http://www.bfr.bund.de/cm/343/gesundheitsbewertung-von-synephrin-und-koffeinhaltigen-sportlerprodukten-und-schlankheitsmitteln.pdf</a>	Synephrine	
<b>Positive monograph, indications:</b> lack of appetite, digestive problems, <b>standard marketing authorisation:</b> 1629.99.99, hardly toxic (Roth/Daunderer)	phototoxic, concerning synephrine s. BfR statement: <a href="http://www.bfr.bund.de/cm/343/gesundheitsbewertung-von-synephrin-und-koffeinhaltigen-sportlerprodukten-und-schlankheitsmitteln.pdf">http://www.bfr.bund.de/cm/343/gesundheitsbewertung-von-synephrin-und-koffeinhaltigen-sportlerprodukten-und-schlankheitsmitteln.pdf</a>	Furocoumarins	<b>Commission E:</b> 4–6 g drug/day, equivalent preparations

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Citrus paradisi</b> MACF., syn. <i>Citrus decumana</i> var. <i>patoniaca</i> RICCOB., <i>Citrus decumana</i> var. <i>racemosa</i> ROEM.	Peel	× F						
<b>Citrus reticulata</b> BLANCO, syn. <i>Citrus deliciosa</i> TEN., <i>Citrus nobilis</i> ANDR. (non LOUR.), <i>Citrus nobilis</i> var. <i>genuina</i> TANAKA, <i>Citrus nobilis</i> var. <i>major</i> KERR.	Fruit	×						
<b>Citrus reticulata</b> BLANCO, syn. <i>Citrus deliciosa</i> TEN., <i>Citrus nobilis</i> ANDR. (non LOUR.), <i>Citrus nobilis</i> var. <i>genuina</i> TANAKA, <i>Citrus nobilis</i> var. <i>major</i> KERR.	Peel	× T						
<b>Citrus sinensis</b> (L.) OSBECK, syn. <i>Aurantium sinensis</i> MILL., <i>Citrus aurantium</i> LOUR. (non L.)	Leaf	× T						
<b>Citrus sinensis</b> (L.) OSBECK, syn. <i>Aurantium sinensis</i> MILL., <i>Citrus aurantium</i> LOUR. (non L.)	Flower	× C						
<b>Citrus sinensis</b> (L.) OSBECK, syn. <i>Aurantium sinensis</i> MILL., <i>Citrus aurantium</i> LOUR. (non L.)	Fruit	×						
<b>Citrus sinensis</b> (L.) OSBECK, syn. <i>Aurantium sinensis</i> MILL., <i>Citrus aurantium</i> LOUR. (non L.)	Peel	× T, S		×			×	
<b>Knicis benedictus</b> L., syn. <i>Calceptrapa benedicta</i> LAM., <i>Carbenia benedicta</i> BENTH. et HOOK.	Herb	× T		×	×		×	
<b>Cocos nucifera</b> L., syn. <i>Calappa nucifera</i> KUNTZE, <i>Cocos mamillaris</i> BLANCO	Seed	×						
<b>Coffea arabica</b> L., syn. <i>Coffea laurifolia</i> SALISB., <i>Jasminum arabicum laurifolia</i> DEJUSS.	Seed	×						
<b>Cola nitida</b> (VENT.) SCHOTT et ENDL., syn. <i>Cola acuminata</i> ENDL.	Seed	×		×	×		×	
<b>Colchicum autumnale</b> L., syn. <i>Colchicum commune</i> NECK, <i>Colchicum crociflorum</i> ANDERS	all plant parts			×		×		
<b>Colutea arborescens</b> L., syn. <i>Colutea vesicaria</i> SEGUIER	all plant parts					×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> lack of appetite			<b>Commission E:</b> 10–15 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> lack of appetite, digestive problems, hardly toxic but sensitising (Roth/Daunderer)	Cnicin contained in the drug causes heat and burning in the throat and the oesophagus, nausea, colic and diarrhoea in low doses (Roth/Daunderer), allergic reactions may occur (Commission E monograph)	Sesquiterpene lactones (e.g. cnicin)	<b>Commission E:</b> 4–6 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> mental and physical fatigue, <b>HMPC monograph:</b> traditional use, mildly toxic III (Wink/Wyk), slightly toxic (Roth/Daunderer)	Ingestion of higher doses causes headache, vertigo, sleep disturbances, agitation and tachycardia (Wink/Wyk)	Purine alkaloids (e.g. caffeine, theobromine)	<b>Commission E:</b> 2–6 g drug/day
<b>Positive monograph, indications:</b> acute attacks of gout, familial Mediterranean fever, cytotoxic, extremely toxic Ia (Wink/van Wyk), extremely toxic +++ (Roth/Daunderer)	Nausea, vomiting, watery and bloody diarrhoea, intense abdominal pain, haematuria, drop in blood pressure, convulsions, paralysis, overdose causes death by respiratory and circulatory arrest (Wink/Wyk), contraindications and interactions reported (Commission E monograph)	Colchicum alkaloids (e.g. colchicine)	<b>Commission E:</b> 0.5–1.5 mg colchicine/day, max. dose = 8 mg colchicine
toxic II (Wink/Wyk), toxic + (Roth/Daunderer)	Diarrhoea, sometimes vomiting (Wink/Wyk)	L-canavanine, lectins	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Conium spp.</b>	all plant parts			×		×		
<b>Consolida regalis S.F. GRAY, syn.</b> Delphinium consolida L.	Flower	× C						
<b>Convallaria majalis L., syn.</b> Con- vallaria fragrans SALISB., Convallaria latifolia MILL., Polygonatum majale ALL.	Herb			×		×		
<b>Convolvulus scammonia L., syn.</b> Convolvulus syriacus MORIS, Convolvulus pseudoscammonia C. KOCH	all plant parts			×		×		
<b>Coriandrum sativum L., syn.</b> Coriandrum maius GOUAN, Co- riandrum diversifolium GILIB.	Herb	× S, T						
<b>Coriandrum sativum L., syn.</b> Coriandrum maius GOUAN, Co- riandrum diversifolium GILIB.	Fruit	× S		×			×	
<b>Corylus avellana L., syn.</b> Corylus silverstris SALISB.	Leaf	× T						
<b>Corylus avellana L., syn.</b> Corylus silverstris SALISB.	Seed	×						
<b>Crataegus laevigata (POIRET) D.C.,</b> syn. Crataegus oxyacantha L.P.P. et AUCT.	Leaf, flower	× T		×			×	
<b>Crataegus laevigata (POIRET) D.C.,</b> syn. Crataegus oxyacantha L.P.P. et AUCT.	Fruit	×		×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
extremely toxic +++ (Roth/Daunderer), extremely toxic Ia (Wink/Wyk), used only in homeopathic drugs	all plant parts extremely toxic, paralysis of motor nerve ends involving the following symptoms: burning in mouth and throat, paralysis of tongue, vomiting, hypersalivation, diarrhoea, tachycardia, dyspnoea, disorientation, ascending paralysis, cold spills and numbness, death by apnoea usually while the patient is fully conscious (Wink/Wyk, Roth/Daunderer)	Piperidine alkaloids (e.g. coniine)	
<b>Neutral monograph</b> (for use as colouring in amounts of up to 1%): poisonous plant, toxic + (Roth/Daunderer), extremely toxic Ia (Wink/Wyk), the (toxic) alkaloids are found in the underground parts, the tops and the seeds (Rimpler). Reliable information about the alkaloid content in the flowers is not available; according to the literature, their use as colouring in tea blends, i.e. in amounts of <1%, is considered to be safe (BGA monograph)	Nausea, excitement, cardiac arrhythmia, cramps, gastroenteritis, respiratory arrest (Roth/Daunderer, Wink/Wyk), relevant diterpene alkaloids are found especially in seeds and roots (Hager)	Alkaloids (e.g. delphinine)	
<b>Positive monograph, indications:</b> mild exercise insufficiency, senile heart disease, chronic pulmonary heart disease, lily-of-the-valley plant itself pharmacy-only, extremely toxic +++ (Roth/Daunderer), very toxic Ib (Wink/Wyk)	Nausea, vomiting, diarrhoea, arrhythmia, hypertension, coma, cardiac arrest, interactions with medicinal products (Wink/Wyk, Roth/Daunderer, Schilcher)	cardioactive glycosides (e.g. convallatoxin)	<b>Commission E:</b> 0.6 g/day standardised lily-of-the-valley powder, equivalent preparations
drastic laxative		Glycorretins	
<b>Positive monograph, indications:</b> digestive problems, lack of appetite, <b>standard marketing authorisation:</b> 1079.99.99			<b>Commission E:</b> 3 g drug/day, equivalent preparations
<b>Positive monograph for combination only (Crataegi folium cum flore), indications:</b> decreasing cardiac output equivalent to stage II acc. to NYHA, active ingredients: flavonoids (e.g. hyperoside, rutin and OPC), effect demonstrated for standardised extracts from leaves with flowers, <b>ESCOP monograph and WHO monograph for combinations (Crataegi folium cum flore):</b> declining cardiac performance corresponding to Functional Capacity Class II as defined by the NYHA, nervous heart complaints, support of cardiac and circulatory functions, <b>HMPC monograph:</b> in progress			<b>Commission E:</b> 160–900 mg native, water-alcohol extract (ethanol 45% or methanol 70%; DER 4–7:1 with defined flavonoid or procyanidin content) equivalent to 30–168.7 mg oligomer procyanidins calculated as epicatechin or 3.5–19.8 mg flavonoids calculated as hyperoside in 2 or 3 single doses <b>ESCOP, WHO:</b> 1–1.5 g drug, 3–4 times a day
<b>Neutral monograph, ESCOP monograph:</b> cardiac complaints, support of cardiac and circulatory functions, <b>standard marketing authorisation:</b> 1349.99.99, <b>HMPC monograph:</b> in progress			<b>ESCOP:</b> 0.3–1 g drug, 3 times a day



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Crocus sativus L.</b> , syn. <i>Crocus autumnalis</i> SM., <i>Crocus officinalis</i> MARTYN.	Stigma, style	× S		×			×	
<b>Croton spp.</b>	all plant parts			×		×		
<b>Cucumis melo L.</b> , syn. <i>Cucumis acidus</i> JACQ., <i>Cucumis deliciosus</i> SALISB., <i>Melo agrestis</i> PANG., var. <i>reticulata</i> and var. <i>cantalupa</i> and var. <i>inodorus</i>	Fruit	×						
<b>Cucurbita pepo L.</b> , syn. <i>Cucurbita courgero</i> SER., <i>Pepo melopepo</i> MOENCH	Seed	×		×	×		×	
<b>Cuminum cyminum L.</b> , syn. <i>Cuminia cyminum</i> J.F. GMELIN	Fruit	× S						
<b>Curcuma longa L.</b> , syn. <i>Curcuma domestica</i> VAL.	Rhizome	× S		×	×		×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Negative monograph:</b> due to risks, <b>WHO monograph:</b> tonic, sedative, emmenagogue, prevention of arteriosclerosis, also used as food, psychotropic, toxic II (Wink/Wyk), toxic + (Roth/Daunderer)	As much as 5 g of stigma may cause severe symptoms. Ingestion of as much as 10 g per day causes abortion and uterine haemorrhage, whereas a dose of 20 g is lethal. In low doses typically used in cuisine, saffron is harmless. Ingestion of higher doses causes uterine haemorrhage, bloody diarrhoea, haematuria and bleeding eyelids, effects on CNS such as excitement accompanied by fits of laughter, followed by vomiting, delirium, visual disturbances, lethargy, tachycardia, cardiac palpitation, central paralysis and death. Skin and mucous membranes take on a yellowish colour (Wink/Wyk)	Pinenes, eucalyptol (=1,8-cineol), safranal	<b>WHO:</b> 3–9 g drug/day, doses below 5 g/day recommended due to toxicity
extremely toxic +++ (Roth/Daunderer), extremely toxic Ia (Wink/Wyk), use of seed oil as a medicinal product, e.g. as a drastic laxative, obsolete, Croton cascarilla, Croton eleuteria and Croton tiglium pharmacy-only, substance of concern (AMK)	very toxic seeds, drastic laxative effect due to their croton oil content. As many as 4 seeds or approx. 20 drops of oil are fatal to humans, burning and tickle in the mouth, vomiting, oppression and agitation, watery, sometimes bloody diarrhoea, dizziness, vertigo, circulatory collapse, arrhythmia, nephritis, delirium, cocarcinogenic effect (Wink/Wyk, Roth/Daunderer)	Phorbol ester, tiglic acid	
<b>Positive monograph, indications:</b> irritable bladder, micturition difficulties resulting from stage I–II prostatic adenoma, active ingredients: amongst others cucurbitin, phytosterol, <b>WHO monograph:</b> for symptomatic treatment of difficulties with micturition associated with stage I–II prostatic adenoma and irritable bladder, <b>ESCOP monograph:</b> symptomatic treatment of micturition disorders (such as dysuria, pollakisuria, nocturia, urine retention and hesitancy) in benign prostatic hyperplasia at stages I and II as defined by Alken or stage II and III as defined by Vahlen-sieck, irritable bladder, <b>HMPC monograph:</b> traditional use			<b>Commission E, WHO:</b> 10 g drug/day, equivalent preparations <b>ESCOP:</b> 10–20 g drug/day
<b>Positive monograph, indications:</b> digestive problems, <b>WHO monograph:</b> the principal use of Rhizoma Curcumae Longae is for the treatment of acid, flatulent, or atonic dyspepsia, <b>ESCOP monograph:</b> symptomatic treatment of mild digestive disturbances and minor biliary dysfunction, <b>HMPC monograph:</b> traditional use, <b>standard marketing authorisation:</b> 2339.99.99			<b>Commission E, ESCOP, WHO:</b> 1.5–3 g drug/day, equivalent preparations

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Curcuma xanthorrhiza</b> ROXB., syn. <i>Curcuma zanthorrhiza</i> ROXB.	Root	× S		×	×		×	
<b>Curcuma zedoaria</b> (BERG) ROSC., syn. <i>Amomum latifolium</i> LAM., <i>Amomum zedoaria</i> WILLD., <i>Amomum zerumbeth</i> KOEN. non L., <i>Curcuma speciosa</i> HORT. ex LINK., <i>Curcuma zerumbeth</i> (KOEN.) ROXB.	Rhizome	× S						
<b>Cyclamen</b> spp.	Root tuber					×		
<b>Cyclopia genistoides</b> (THUNB.) R. BR.	Herb	× T						
<b>Cydonia oblonga</b> MILLER, syn. <i>Cydonia communis</i> POIRET ex DUHAMEL, <i>Cydonia vulgaris</i> DE-LARBRE, <i>Pyrus cydonia</i> L., <i>Sorbus cydonia</i> CRANTZ	Fruit	×						
<b>Cymbopogon citratus</b> (DC.) STAPP, syn. <i>Andropogon citratus</i> DC., <i>Andropogon ceriferus</i> HACK., <i>Andropogon citriodorum</i> DESF., <i>Andropogon roxburghii</i> NEES ex STEUD.	Herb	× S, T						
<b>Cynara scolymus</b> L., syn. <i>Cynara cardunculus</i> L. ssp. <i>Scolymus</i> (L.) HAY	Foliage leaf		Not NFS	×	×		×	
<b>Cynara scolymus</b> L., syn. <i>Cynara cardunculus</i> L. ssp. <i>Scolymus</i> (L.) HAY	Receptacle, scale leaf	×			× (buds)			
<b>Cynodon dactylon</b> (L.) PERS., syn. <i>Capriola dactylon</i> (L.) KTZE., <i>Panicum dactylon</i> L., <i>Digitaria stolonifera</i> SCHRAD., <i>Dactylon officinale</i> VILL., <i>Tibichia umbellata</i> KOELER	Rhizome		Not NFS					×
<b>Cynoglossum officinale</b> L., syn. <i>Cynoglossum clandestinum</i> DESF.	Herb			×		×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> digestive problems, <b>ESCOPE monograph:</b> symptomatic treatment of mild digestive disturbances and minor biliary dysfunction, <b>HMPC monograph:</b> in progress	Long-term use causes gastric complaints, contraindications reported (Commission E monograph)	Curcuminoids, xanthorrhizol	<b>Commission E, ESCOP:</b> 2 g drug/day, equivalent preparations
<b>Neutral monograph</b>			
toxic II (Wink/Wyk), toxic + (Roth/Daunderer)	Nausea, vomiting, gastric pain, diarrhoea, sweats, circulatory distress, cramps, symptoms of paralysis, haemolysis Local irritations also reported (Roth/Daunderer)	Saponins (e.g. cyclamine)	
<b>Neutral monograph</b>			
<b>Positive monograph, indications:</b> digestive problems, <b>WHO monograph:</b> treatment of digestive complaints (e.g. dyspepsia, feeling of fullness, flatulence, nausea, stomach ache and vomiting). Adjunct treatment of mild to moderate hypercholesterolaemia, <b>ESCOPE monograph:</b> digestive complaints (e.g. stomach ache, nausea, vomiting, feeling of fullness, flatulence) and hepatobiliary disturbance, adjuvant to a low fat diet in the treatment of mild to moderate hyperlipidaemia, <b>HMPC monograph:</b> traditional use			<b>Commission E:</b> 6 g drug/day, equivalent preparations <b>ESCOPE:</b> 5–10 g dried drug/day (no administration to children) <b>WHO:</b> 1–10 g drug/day, equivalent preparations, not recommended to children under the age of 12
<b>Negative monograph:</b> due to risks, substance of concern (AMK), BfArM graduated plan of 5 June 1992 concerning medicinal products containing pyrrolizidine alkaloids	contains pyrrolizidine alkaloids with hepatotoxic, carcinogenic, partly also mutagenic and teratogenic properties (Frohne/Pfänder)	Pyrrolizidine alkaloids	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Cytisus scoparius (L.) LINK</b> , syn. <i>Genista angulata</i> POIRET, <i>Sarothamnus scoparius</i> (L.) WIMMER ex. KOCH, <i>Spartium</i> <i>scoparium</i> L.	all plant parts			×		×		
<b>Daphne spp.</b>	all plant parts					×		
<b>Datura spp.</b>	all plant parts			×		×		
<b>Daucus carota L. ssp. sativus</b> (HOFFM.) ARCANG.	Root	×						
<b>Delphinium elatum L.</b> , syn. <i>Del-</i> <i>phinium intermedium</i> AIT.	all plant parts					×		
<b>Delphinium staphisagria L.</b> , syn. <i>Delphinium officinale</i> WENDER, <i>Staphydis agria</i>	all plant parts			×		×		
<b>Dendranthema grandiflora</b> TZVELEV, syn. <i>Chrysanthemum</i> <i>morifolium</i> RAMAT., <i>Dendran-</i> <i>thema grandiflora</i> (RAMAT.) KITAM., <i>Dendranthema morifo-</i> <i>lia</i> (RAMAT.) TZVELEV	Flower		×					
<b>Dendrocalamus asper</b> (SCHULTES f.) HEYNE and <b>Dendrocalamus</b> <b>latiflorus</b> MUNRO, syn. <i>Bambusa</i> <i>latiflora</i> (MUNRO) KURZ	Sprout	× b						
<b>Digitalis spp.</b>	all plant parts			×		×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Negative monograph:</b> due to risks associated with Scotch broom flowers, <b>Positive monograph:</b> for Scotch broom, indications: functional cardiovascular disorders, <b>standard marketing authorisation:</b> 1439.99.99, toxic II (Wink/Wyk), toxic + (all plant parts), (Roth/Daunderer)	circulatory collapse, arrhythmia, tachycardia, sweating, vomiting, diarrhoea, dizziness, vertigo, convulsions, headache, ascending paralysis, death by apnoea, hypertonia in pregnancy, contraindications reported (Wink/Wyk)	Alkaloids (e.g. sparteine)	<b>Commission E:</b> 1–1.5 g drug/day, water-ethanol extract
poisonous plant, extremely toxic +++ (Roth/Daunderer), extremely toxic Ia (Wink/Wyk)	Burning, swelling, blistering and redness in the mouth, hypersalivation, swallowing difficulties, nausea, bloody vomiting and bloody diarrhoea, disturbance of consciousness, fever, cramps, paralysis, kidney damage, tachycardia, circulatory collapse and death. After skin contact, there is a risk of swelling and blistering preceded by itching and redness (Wink/Wyk, Roth/Daunderer)	Phorbol ester (e.g. mezerein), cumaroyl glycoside (e.g. daphnin)	
<b>Negative monograph:</b> due to risks associated with the leaves and seeds of <i>Datura stramonium</i> , isolated alkaloids prescription-only, <i>Datura</i> species pharmacy-only, extremely toxic +++ (Roth/Daunderer), extremely toxic Ia (Wink/Wyk)	psychotropic, calmative and sedative in low doses, ingestion of higher doses causes intense hallucinations, excitement, facial blush, dry mouth, euphoria, mydriasis, disorientation, insomnia, respiratory arrest and death (Wink/Wyk)	Tropane alkaloids (e.g. atropine, L-hyoscyamine, scopolamine)	
	sometimes irritating, phototoxic	Furocoumarins	
poisonous plant, extremely toxic +++ (Roth/Daunderer), extremely toxic Ia (Wink/Wyk)	Nausea, excitement, cardiac arrhythmia, cramps, gastrointestinal tract inflammations, muscular asthenia, cardiac arrest, central paralysis, dyspnoea, death by myoplegia and cardioplegia (Wink/Wyk)	Terpene alkaloids (e.g. delphinine)	
<b>Negative monograph:</b> due to risks, extremely toxic +++ (Roth/Daunderer), extremely toxic Ia (Wink/Wyk), <i>Delphinium staphisagria</i> (stavesacre) pharmacy-only	Nausea, excitement, cardiac arrhythmia, cramps, gastroenteritis, respiratory arrest (Roth/Daunderer, Wink/Wyk), relevant diterpene alkaloids are found especially in seeds and roots (Hager)	Terpene alkaloids (e.g. delphinine, staphisine)	
toxic II (Wink/Wyk), cook before consumption	When injured, the sprouts release hydrocyanic acid (HCN). HCN inhibits cellular respiration in mitochondria. Symptoms of HCN poisoning. HCN must be eliminated before consumption (by cooking) (Wink/Wyk)	cyanogenic glycosides	
extremely toxic Ia (Wink/Wyk), extremely toxic +++ (Roth/Daunderer)	typical cardiac glycoside poisoning, very narrow therapeutic range, bradycardia, cardiac arrest, cardiac arrhythmia, nausea accompanied by constant retching, diarrhoea, gastroenteritis, visual disturbances, agitation, headache, convulsions, CNS disorders, disorientation, delirium, hallucinations, drop in blood pressure, disturbance of consciousness, sudden death (Wink/Wyk, Roth/Daunderer)	cardioactive glycosides (e.g. digoxin, digitoxin)	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Dipteryx odorata (AUBL.) WILLD.</b> , syn. Coumarouna odorata AUBL., Baryosma tongo GAERTN.	Seed	× F						
<b>Dracocephalum moldavica L.</b>	Herb	× S						
<b>Drosera spp.</b>	Herb	× T		×			×	
<b>Dryopteris filix-mas (L.) SCHOTT</b> , syn. Aspidium filix-mas (L.) SW., Lastrea filix-mas (L.) PRESL., Poly- podium filix-mas L.	all plant parts			×		×		
<b>Ecballium elaterium (L.) A. RICH.</b> , syn. Ecballium officinale NEES, Momordica elaterium L.	all plant parts					×		
<b>Echinacea angustifolia DC.</b> , syn. Brauneria angustifolia (DC.) A. HELLER, Echinacea pallida var. angustifolia (DC.) CRONQ.	Herb	× T						
<b>Echinacea angustifolia DC.</b> , syn. Brauneria angustifolia (DC.) A. HELLER, Echinacea pallida var. angustifolia (DC.) CRONQ.	Root	× T		×	×		×	
<b>Echinacea pallida (NUTT.) NUTT.</b> , syn. Brauneria pallida BRITTON, Echinacea angustifolia HOOKER, Echinacea pallida (NUTT.) NUTT. f. albida STEYERM., Rudbeckia pallida NUTT.	Herb		Not NFS					×
<b>Echinacea pallida (NUTT.) NUTT.</b> , syn. Brauneria pallida BRITTON, Echinacea angustifolia HOOKER, Echinacea pallida (NUTT.) NUTT. f. albida STEYERM., Rudbeckia pallida NUTT.	Root		Not NFS	×	×		×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
	contains coumarin, s. BgVV statement: <a href="http://www.bfr.bund.de/cm/343/gehalte_an_cumarin_safrol_methyleugenol_und_estragol_in_lebensmitteln.pdf">http://www.bfr.bund.de/cm/343/gehalte_an_cumarin_safrol_methyleugenol_und_estragol_in_lebensmitteln.pdf</a>	Coumarin	
<b>Positive monograph, indications:</b> paroxysmal and dry cough	Overdose causes inflammations in the mouth and throat, vomiting, ulcers in the digestive tract, bloody diarrhoea (Roth/Daunderer)		<b>Commission E:</b> 3 g drug/day, equivalent preparations
<b>Negative monograph:</b> due to risks, toxic II (Wink/Wyk), toxic + (Roth/Daunderer)	Nausea, vomiting, abdominal pain, diarrhoea, cramps, cardiac insufficiency, fainting fits, dyspnoea, respiratory arrest, fatal poisoning (Wink/Wyk, Roth/Daunderer), Commission E: due to the risks (many cases of poisoning, also with fatal outcome), internal use cannot be justified	Acylphloroglucins, flavaspidic acid	
highly toxic ++ (Roth/Daunderer), very toxic Ib (Wink/Wyk)	Hypersalivation, vomiting, headache, severe, bloody diarrhoea, kidney damage, ingestion of higher doses causes convulsions, death by respiratory arrest (Wink/Wyk)	Cucurbitacins	
<b>Negative monograph:</b> due to risks associated with parenteral use	allergic reactions		<b>ESCOP:</b> 3 times 1 ml extract, equivalent preparations
<b>Negative monograph:</b> due to risks associated with parenteral use, <b>WHO monograph:</b> Supportive therapy for colds and infections of the respiratory and urinary tract. Beneficial effects in the treatment of these infections are generally thought to be brought about by stimulation of the immune response, <b>ESCOP monograph:</b> adjuvant therapy and prophylaxis of recurrent infections of the upper respiratory tract (common cold), <b>HMPC monograph:</b> traditional use	allergic reactions		
<b>Negative monograph:</b> due to risks associated with parenteral use	allergic reactions		
<b>Positive monograph, indications:</b> adjuvant treatment of influenza, <b>WHO monograph:</b> supportive therapy for colds and infections of the respiratory and urinary tract. Beneficial effects in the treatment of these infections are generally thought to be brought about by stimulation of the immune response, <b>ESCOP monograph:</b> adjuvant therapy and prophylaxis of recurrent infections of the upper respiratory tract (common cold), <b>HMPC monograph:</b> traditional use	allergic reactions		<b>Commission E:</b> tincture equivalent to 900 mg drug/day <b>ESCOP:</b> 900 mg drug/day, equivalent preparations <b>WHO:</b> 0.5 tsp. (approx. 1 g) in 150 ml water, 3 times a day



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Echinacea purpurea (L.) MOENCH</b> , syn. <i>Brauneria purpurea</i> (L.) BRITTON, <i>Echinacea intermedia</i> LINDLEY, <i>Echinacea purpurea</i> (L.) MOENCH f. <i>ligettii</i> STEYERM., <i>Rudbeckia hispida</i> HOFFMGG., <i>Rudbeckia purpurea</i> L.	Herb		Not NFS	×	×		×	
<b>Echinacea purpurea (L.) MOENCH</b> , syn. <i>Brauneria purpurea</i> (L.) BRITTON, <i>Echinacea intermedia</i> LINDLEY, <i>Echinacea purpurea</i> (L.) MOENCH f. <i>ligettii</i> STEYERM., <i>Rudbeckia hispida</i> HOFFMGG., <i>Rudbeckia purpurea</i> L.	Root		Not NFS	×	×		×	
<b>Echinopsis peruviana (BRIT- TON et ROSE) H.FRIEDRICH et G.D.ROWLEY</b> , syn. <i>Trichocereus</i> <i>peruviana</i>	all plant parts					×		
<b>Elettaria cardamomum (L.) MA- TON</b> , syn. <i>Alpinia cardamomum</i> ROXB.	Fruit	× S, T		×			×	
<b>Eleutherococcus senticosus (RUPR. et MAXIM.) MAXIM.</b> , syn. <i>Acanthopanax senticosus</i> (RUPR. et MAXIM.) HARMS, <i>Hedera senticosa</i> RUPR. et MAXIM.	Root		Not NFS	×	×		×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> adjuvant treatment of recurrent infections of the respiratory tract and the lower urinary tract, <b>WHO monograph:</b> supportive therapy for colds and infections of the respiratory and urinary tract, beneficial effects in the treatment of these infections are generally thought to be brought about by stimulation of the immune response, <b>ESCOP monograph:</b> adjuvant therapy and prophylaxis of recurrent infections of the upper respiratory tract (common cold) and also of the urogenital tract, <b>HMPC monograph:</b> short-term prevention and treatment of coughs and colds	Immediate allergic reactions may occur in individual cases (Commission E monograph)		<b>Commission E, ESCOP, WHO:</b> 6–9 ml pressed juice, equivalent preparations <b>HMPC:</b> 6–9 ml pressed juice, no administration to children under the age of 12
<b>Negative monograph:</b> due to risks associated Adjuvant therapy and prophylaxis of recurrent infections of the upper respiratory tract (common cold), <b>HMPC monograph:</b> traditional use	allergic reactions		<b>ESCOP:</b> 3 times 300 mg, equivalent preparations
very toxic Ib (Wink/Wyk), mescaline contained in the drug is a non-marketable narcotic acc. to Annex 1 of the Narcotic Drugs Act (BtMG)	psychotropic, ingestion of higher doses causes gastrointestinal complaints, drop in blood pressure, bradycardia, apnoea, vasodilation, paralysis (Wink/Wyk)	Mescaline	
<b>Positive monograph, indications:</b> digestive problems, <b>WHO monograph (seeds):</b> treatment of dyspepsia	Contraindications: in case of gallstones, use only after consultation with a physician (Commission E monograph)		<b>Commission E, WHO:</b> 1.5 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> tonic for strengthening and invigoration in case of fatigue and faintness, decreasing physical performance and powers of concentration as well as in convalescence, <b>WHO monograph:</b> prophylactic and restorative tonic for enhancement of mental and physical capacities in cases of weakness, exhaustion and tiredness, and during convalescence, <b>ESCOP monograph:</b> decreased mental and physical capacities such as weakness, exhaustion, tiredness and loss of concentration, as well as during convalescence, <b>HMPC monograph:</b> traditional use	Contraindications: hypertension (Commission E monograph)		<b>Commission E, ESCOP, WHO:</b> 2–3 g drug/day, equivalent preparations

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<i>Ephedra</i> spp.	all plant parts			×		×		
<i>Epilobium angustifolium</i> L., syn. <i>Chamaenerion angustifolium</i> SCOP., <i>Epilobium gesneri</i> VILLAIN, <i>Epilobium persicifolium</i> VILL.	Herb	× T						
<i>Epilobium parviflorum</i> SCHREBER, syn. <i>Epilobium molle</i> LAM., <i>Epilobium pubescens</i> ROTH, <i>Epilobium rivulare</i> HEGETSCHW., <i>Epilobium villosum</i> CURT.	Herb	× T						
<i>Epimedium grandiflorum</i> MORR., syn. <i>Epimedium macranthum</i> MORR. et DECNE	Herb		×					
<i>Epimedium sagittatum</i> (SIEB. et ZUCC.) MAXIM.	Herb		×					
<i>Equisetum arvense</i> L., syn. <i>Equisetum boreale</i> (L.) BÖRNER, <i>Allosites arvense</i> BRONGN.	Herb	× T		×	×		×	
<i>Erysimum cheiri</i> (L.) CRANTZ, syn. <i>Cheiranthus cheiri</i> L., <i>Cheiranthus corinthius</i> BOISS.	all plant parts					×		
<i>Erythroxyllum catuaba</i> A.J. SILVA ex RAYM.-HAMET	Bark		×					
<i>Erythroxyllum coca</i> LAM., syn. <i>Erythroxyllon coca</i> LAM.	Leaf					×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<p><b>Positive monograph, indications:</b> respiratory diseases accompanied by mild bronchial spasm in adults and schoolchildren, <b>WHO monograph:</b> treatment of nasal congestion due to hay fever, allergic rhinitis, acute coryza, common cold, and sinusitis. The drug is further used as a bronchodilator in the treatment of bronchial asthma (4, 8, 10, 21–23), toxic II (Wink/Wyk), toxic + (Roth/Daunderer), some of the alkaloids contained in the drug are subject to the provisions of the BtMG (e.g. cathine), Ephedra species and preparations prescription-only, alkaloids contained in the drug (e.g. ephedrine) prescription-only, Ephedra species pharmacy-only. Ephedra is a “scheduled substance” of category 1 acc. to Article 2a of Regulations (EC) No. 273/2004 and No. 111/2005 and is thus subject to the provisions of the Precursors Control Act (GÜG).</p>	<p>sympathomimetic properties similar to amphetamines (Wink/Wyk), insomnia, agitation, irritability, headache, vomiting, micturition difficulties, tachycardia, ingestion of higher doses causes drastic increase in blood pressure, cardiac arrhythmia, development of addiction (Roth/Daunderer), deaths in the USA due to consumption of food supplements containing Ephedra: <a href="http://www.bfr.bund.de/de/presseinformation/2002/09/bgvv_und_bfarm_warnen_schwere_gesundheitsschaeden_durch_ephedra_kraut-1007.html">http://www.bfr.bund.de/de/presseinformation/2002/09/bgvv_und_bfarm_warnen_schwere_gesundheitsschaeden_durch_ephedra_kraut-1007.html</a></p>	<p>Alkaloids (Ephedra alkaloids, e.g. ephedrine, norpseudoephedrine, cathine)</p>	<p><b>Commission E:</b> 300 mg total alkaloids/day, calculated as ephedrine (special doses for children) <b>WHO:</b> 1–6 g drug/day, no administration to children under the age of 6</p>
<p><b>Positive monograph, indications:</b> posttraumatic and static oedema, irrigation therapy of bacterial or inflammatory diseases of the lower urinary tract and kidney gravel, <b>WHO monograph:</b> used internally for kidney and bladder diseases, oedema and as an adjuvant in slimming diets. It is applied as irrigation therapy for infectious and inflammatory diseases of the genitourinary tract, and kidney stones, <b>HMPC monograph:</b> traditional use, <b>standard marketing authorisation:</b> 1239.99.99</p>	<p>Contraindications: oedemas associated with cardiac or renal insufficiency (Commission E monograph)</p>		<p><b>Commission E, WHO:</b> 6 g drug/day, equivalent preparations</p>
<p>toxic II (Wink/Wyk), toxic + (Roth/Daunderer)</p>	<p>Symptoms of cardiac glycoside poisoning accompanied by pronounced digestive problems (Wink/Wyk)</p>	<p>Cardenolides (e.g. cheirotoxin), glucosinolates</p>	
<p>individually or mixed with other barks designated as catuaba</p>			
<p>very toxic Ib (Wink/Wyk), highly toxic ++ (Roth/Daunderer), psychotropic, subject to the provisions of the Narcotic Drugs Act (BtMG)</p>	<p>psychotropic, strong CNS-stimulant, tachycardia, overdose causes death by respiratory arrest, episodes of schizophrenia, strong psychological addiction (Wink/Wyk)</p>	<p>Alkaloids (e.g. cocaine)</p>	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Eucalyptus globulus LABILL.</b> , syn. <i>Eucalyptus cordata</i> MIQ., <i>Eucalyptus diversifolia</i> MIQ., <i>Eucalyptus gigantea</i> DEHNH.	Leaf	× T		×	×		×	
<b>Eucommia ulmoides OLIV.</b>	Bark		Not NFS					×
<b>Euphorbia spp.</b>	all plant parts					×		
<b>Euphrasia officinalis L.</b>	Herb	× T						
<b>Fagopyrum esculentum MOENCH.</b> , syn. <i>Fagopyrum cereale</i> (SALISB.) RAFIN.	Fruit	×						
<b>Fagopyrum esculentum MOENCH.</b> , syn. <i>Fagopyrum cereale</i> (SALISB.) RAFIN.	Herb	× T		×	×		×	
<b>Feijoa sellowiana BERG.</b> , syn. <i>Acca sellowiana</i> (BERG) BURRET, <i>Orthostemon sellowianus</i> BERG	Fruit	×						
<b>Ficus carica L.</b> , syn. <i>Caprificus insectifera</i> GASP., <i>Ficus communis</i> LAM., <i>Ficus latifolia</i> SALISB.	Fruit	×						
<b>Filipendula ulmaria (L.) MAXIM.</b> , syn. <i>Spiraea ulmaria</i> L., <i>Ulmaria palustris</i> MOENCH, <i>Ulmaria pentapetala</i> GILIB.	Flower, herb	× T		×	×		×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> coughs and colds of the respiratory tract, <b>standard marketing authorisation:</b> 9299.99.99, <b>WHO monograph (leaves, oil):</b> traditional use, <b>ESCOP monograph (oil):</b> adjuvant treatment of chronic obstructive respiratory complaints including bronchitis and bronchial asthma, symptomatic relief of colds and catarrh of the upper respiratory tract, mildly toxic II to toxic III (Wink/Wyk), slightly toxic + (Roth/Daunderer), <b>HMPC monograph:</b> traditional use	Higher doses of the essential oil cause CNS disorders and gastrointestinal complaints (Wink/Wyk), ingestion of higher doses causes drop in blood pressure and bradypnoea, dyspepsia, vomiting, diarrhoea, circulatory distress, cardiac insufficiency, circulatory collapse (Roth/Daunderer), ingestion of Eucalyptus preparations may cause nausea, vomiting and diarrhoea in rare cases, contraindications reported (Commission E monograph)	Eucalyptol (=1,8-cineol)	<b>ESCOP:</b> 100–200 mg, 2–5 times a day <b>WHO:</b> 4–6 g drug/day, no administration to children
highly toxic ++ (Roth/Daunderer), very toxic Ib (Wink/Wyk)	Irritation of skin and mucous membranes, allergic reactions, gastric pain, nausea and retching, laxative, bloody diarrhoea, arrhythmia, hepatic and renal dysfunction, coma, cocarcinogenic (Wink/Wyk)	Phorbol ester, triterpenes	
<b>Neutral monograph, HMPC assessment report</b>			
peel fruits before consumption	The red hull surrounding the grains contains naphthodianthrones (e.g. fagopyrin). Fagopyrin may induce photodermatitis (fagopyrism) (Ternes)	Naphthodianthrones (e.g. fagopyrin)	
mildly toxic III (Wink/Wyk), slightly toxic (+) (Roth/Daunderer), licensed medicinal product	contains naphthodianthrones (e.g. fagopyrin), which may induce photodermatitis. Fagopyrin not detected in aqueous preparations (Frohne), ingestion of high doses causes digestive problems (Wink/Wyk).	Naphthodianthrones (e.g. fagopyrin)	
<b>Neutral monograph</b>			
<b>Positive monograph, indications:</b> adjuvant treatment of coughs and colds, <b>standard marketing authorisation:</b> 1609.99.99, <b>ESCOP monograph:</b> supportive therapy for the common cold, <b>HMPC monograph:</b> traditional use	Contraindications: known hypersensitivity to salicylates (due to the salicylates contained in the drug) (Commission E monograph)		<b>Commission E:</b> 2.5–3.5 g flower or 4–5 g herb/day, equivalent preparations <b>ESCOP:</b> 2–6 g drug/day

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Foeniculum vulgare MILLER ssp. vulgare var. dulce (MILLER) THEULLUNG, syn. Anethum foeniculum dulce SCHKUHR</b>	Fruit	× T, S		×	×		×	
<b>Foeniculum vulgare MILLER ssp. vulgare var. vulgare (MILLER) THELLUNG, syn. Anethum foeniculum vulgare SCHKUHR</b>	Fruit	× T, S		×	×		×	
<b>Fragaria ananassa DUCHESNE ex ROZIER</b>	Leaf	× T						
<b>Fragaria ananassa DUCHESNE ex ROZIER</b>	Fruit	×						
<b>Fragaria vesca L., syn. Fragaria botryformis E. KÖNIG, Fragaria hortensis DUCH.</b>	Leaf	× T						
<b>Fragaria vesca L., syn. Fragaria botryformis E. KÖNIG, Fragaria hortensis DUCH.</b>	Fruit	×						
<b>Fraxinus ornus L., syn. Fraxinus mannifera STEUD., Fraxinus rotundifolia MILL., Ornus europaea PERS.</b>	Resin		Not NFS	×			×	
<b>Fumaria officinalis L., syn. Fumaria media LOIS., Fumaria sturmii OPIZ, Fumaria vulgaris BUB.</b>	Herb		Not NFS	×	×		×	
<b>Galeopsis segetum NECK., syn. Galeopsis ochroleuca LAM.</b>	Herb	× T		×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> digestive problems such as mild gastrointestinal cramps, feeling of fullness, bloating, catarrhs of the upper respiratory tract, <b>standard marketing authorisation:</b> 5199.99.99, <b>WHO monograph:</b> symptomatic treatment of dyspepsia, bloating and flatulence, as an expectorant for mild inflammation of the upper respiratory tract, treatment of pain in scrotal hernia, and dysmenorrhoea, <b>ESCOPE monograph:</b> dyspeptic complaints such as mild, spasmodic gastrointestinal ailments, bloating and flatulence, catarrh of the upper respiratory tract, included in Annex 1 of Reg. 2001/83 (s. Commission Decision 2008/911/EC), <b>HMPC monograph:</b> traditional use	Side effects: allergic reactions of the skin and the respiratory tract observed in individual cases (Commission E monograph)	Trans-anethole, estragole (=methyl chavicol)	<b>Commission E:</b> 5–7 g drug/day, equivalent preparations <b>WHO, ESCOP:</b> 5–7 g drug/day
<b>Positive monograph, indications:</b> digestive problems such as mild gastrointestinal cramps, feeling of fullness, bloating, catarrhs of the upper respiratory tract, <b>standard marketing authorisation:</b> 5199.99.99, <b>WHO monograph:</b> symptomatic treatment of dyspepsia, bloating and flatulence, as an expectorant for mild inflammation of the upper respiratory tract, treatment of pain in scrotal hernia, and dysmenorrhoea, <b>ESCOPE monograph:</b> dyspeptic complaints such as mild, spasmodic gastrointestinal ailments, bloating and flatulence, catarrh of the upper respiratory tract, included in Annex 1 of Reg. 2001/83 (s. Commission Decision 2008/911/EC), <b>HMPC monograph:</b> traditional use	Side effects: allergic reactions of skin and respiratory tract observed in individual cases (Commission E monograph)	Trans-anethole, estragole (=methyl chavicol)	<b>Commission E:</b> 5–7 g drug/day, equivalent preparations <b>WHO, ESCOP:</b> 5–7 g drug/day
<b>Neutral monograph</b>	Hypersensitivity reactions may occur in patients with a predisposition (Schilcher)		
<b>HMPC monograph:</b> in progress			
<b>Positive monograph, indications:</b> constipation, conditions in which easy defaecation with a soft stool is desirable, e.g. anal fissures, haemorrhoids and after rectal-anal surgical procedures	Sensitive patients may experience nausea and bloating, contraindications: intestinal occlusion (Commission E monograph)		<b>Commission E:</b> 20–30 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> cramps in the gall bladder, the biliary tract and the gastrointestinal tract, <b>standard marketing authorisation:</b> 1479.99.99, <b>ESCOPE monograph:</b> digestive complaints (e.g. stomach ache, nausea, vomiting, feeling of fullness, flatulence) due to hepatobiliary disturbance, <b>HMPC monograph:</b> traditional use, toxic II (Wink/Wyk), toxic + (Roth/Daunderer)	slightly psychotropic, calmative, narcotic, ingestion of high doses causes burning in the mouth and throat, nausea, vomiting, diarrhoea, drop in blood pressure (Wink/Wyk)		<b>Commission E:</b> 6 g drug/day, equivalent preparations <b>ESCOPE:</b> 4–6 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> mild catarrhs of the respiratory tract			<b>Commission E:</b> 6 g drug, equivalent preparations



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Galium odoratum (L.) SCOP.</b> , syn. <i>Asperula odorata</i> L., <i>Asperula odora</i> SALISB., <i>Chlorostemma odoratum</i> FOURR.	Herb	× T					×	
<b>Galium verum L.</b> , syn. <i>Galium luteum</i> LAM.	Herb	× T						
<b>Garcinia cambogia DESROUSS.</b> , syn. <i>Cambogia gutta</i> L.	Fruit	× S						
<b>Gelsemium sempervirens (L.) JAUME ST.-HIL.</b> , Syn. <i>Gelsemium nitidum</i> MICHX., <i>Anonymos sempervirens</i> L.	Rhizome			×		×		
<b>Genista tinctoria L.</b> , syn. <i>Cystisus tinctorius</i> VIS., <i>Genista depressa</i> BIEB.	Flower					×		
<b>Gentiana lutea L.</b> , syn. <i>Asterias lutea</i> BORKH., <i>Swertia lutea</i> VEST.	Root	× T		×	×		×	
<b>Geum urbanum L.</b> , syn. <i>Caryophyllata officinalis</i> MOENCH, <i>Caryophyllata urbana</i> SCOP., <i>Caryophyllata vulgaris</i> LAM., <i>Geum caryophyllata</i> GILIB.	Herb		Not NFS					×
<b>Geum urbanum L.</b> , syn. <i>Caryophyllata officinalis</i> MOENCH, <i>Caryophyllata urbana</i> SCOP., <i>Caryophyllata vulgaris</i> LAM., <i>Geum caryophyllata</i> GILIB.	Root	× T						

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Neutral monograph:</b> BfArM graduated plan of 23 May 1997 concerning coumarin-containing phytopharmaceuticals and homeopathic drugs up to potency D2 containing sweet clover ( <i>Meliloti herba</i> ) or sweet woodruff ( <i>Gallii odorati herba</i> ) (for internal use), slightly toxic (+) (Roth/Daudeurer), maximum amount of coumarin when adding coumarin-containing foods/food ingredients to foods as flavouring specified in Reg. (EC) No. 1334/2008	Consumption of sweet woodruff preparations may cause headache (Roth/Daudeurer)	Coumarin	
<b>Negative monograph:</b> extremely toxic Ia (Wink/Wyk), extremely toxic +++ (Roth/Daudeurer)	excessive sweating, central paralysis, faintness, convulsions, drop in blood pressure and cardiac activity, visual disturbances, convulsions similar to those induced by strychnine, death by respiratory arrest (Wink/Wyk, Roth/Daudeurer)	Indole alkaloids, steroids, iridoid glycosides	
highly toxic ++ (Roth/Daudeurer), very toxic Ib (Wink/Wyk)	slightly psychotropic, hallucinogenic, diuretic, uterus contractions, abdominal pain, tachycardia, cardiac arrhythmia, vomiting, diarrhoea, vertigo (Wink/Wyk)	Quinolizidine alkaloids (e.g. cytisine, anagyrine)	
<b>Positive monograph, indications:</b> lack of appetite, digestive problems such as feeling of fullness and bloating, <b>standard marketing authorisation:</b> 9199.99.99, <b>WHO monograph:</b> treatment of digestive complaints, such as loss of appetite, feeling of distension and flatulence. As an appetite stimulant during convalescence, <b>ESCOP monograph:</b> Anorexia e.g after illness, dyspeptic complaints, <b>HMPC monograph:</b> traditional use	Headache may occasionally occur in patients with a particular predisposition, contraindications reported (Commission E monograph)		<b>Commission E:</b> 2–4 g drug/day <b>ESCOP:</b> 0.1–2 g drug/day, special dosage instructions for children <b>WHO:</b> 0.1–2 g drug, up to 3 times a day, no administration to children

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<i>Ginkgo biloba</i> L., syn. <i>Pterophyllus salisburyensis</i> NELSON, <i>Salisburia adiantifolia</i> SMITH	Leaf	× T		×			×	
<i>Glechoma hederacea</i> L., syn. <i>Calamintha hederacea</i> SCOP.	Leaf	× T						
<i>Gloriosa superba</i> L., syn. <i>Methonica superba</i> LAM. and <i>Gloriosa rothschildiana</i> O'BRIEN. and <i>Gloriosa simplex</i> L., syn. <i>Gloriosa virescens</i> LINDL., <i>Gloriosa plantii</i> LOUD.	all plant parts					×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<p><b>Negative monograph:</b> due to risks associated with ginkgo leaves as well as various alcoholic extracts due to inadequate evidence of pharmacological effect and risks that cannot be ruled out, <b>Positive monograph</b> for standardised acetone/water dry extract, indications: psycho-organic performance disorders, dementia, impaired memory, concentration difficulties, depression, vertigo, tinnitus, headache, <b>HMPC monograph:</b> in progress, <b>WHO monograph:</b> extracts have been used for symptomatic treatment of mild to moderate cerebrovascular insufficiency (demential syndromes in primary degenerative dementia, vascular dementia, and mixed forms of both) with the following symptoms: memory deficit, disturbance in concentration, depressive emotional condition, dizziness, tinnitus, and headache. Such extracts are also used to improve pain-free walking distance in people with peripheral arterial occlusive disease such as intermittent claudication, Raynaud disease, acrocyanosis, and post-phlebitis syndrome, and to treat inner ear disorders such as tinnitus and vertigo of vascular and involutive origine. Extracts and doses other than those described in Dosage forms and Posology are used for similar but milder indications, <b>ESCOPE monograph:</b> preparations based on standardized extracts: Symptomatic treatment of: mild to moderate demetia symptoms including primary degenerative demtia, vascular dementia and mixed forms; cerebral insufficiency, neurosensory disturbances such as: dizziness/vertigo and tinnitus, enhancement of cognitive performance, symptomatic treatment of peripheral arterial occlusive disease (intermittent claudication), BfArM graduated plan of 27 May 1997 concerning medicinal products containing Ginkgo biloba leaves, <b>BfR statement:</b> <a href="http://www.bfr.bund.de/cm/343/die_sicherheit_von_ginkgoblatter_haltigen_tees_kann_wegen_mangelnder_daten_nicht_beurteilt_werden.pdf">http://www.bfr.bund.de/cm/343/die_sicherheit_von_ginkgoblatter_haltigen_tees_kann_wegen_mangelnder_daten_nicht_beurteilt_werden.pdf</a></p>	Contact allergies may be induced by the ginkgolic acids contained in the drug (Commission E monograph)	Diterpene lactones, ginkgolic acids	<b>Commission E, ESCOP, WHO:</b> 120–240 mg extract/day
slightly toxic (+) (Roth/Daunderer)	toxic to animals, cases of poisoning in humans not known (Hager)		
extremely toxic Ia (Wink/Wyk), highly toxic ++ (Roth/Daunderer)	Spindle poison, abortifacient effect, nausea, pain in the throat and oesophagus, cramps, arrhythmia, internal haemorrhage, peripheral neuropathy, abdominal pain, cold extremities, grey skin, tachycardia, respiratory arrest reported (Wink/Wyk, Roth/Daunderer)	Colchicine	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Glycyrrhiza glabra L.</b> , syn. Glycyrrhiza echinata LEPECH., Glycyrrhiza glandulifera WALDST. et KIT., Glycyrrhiza hirsuta L., Liquiritia officinalis MOENCH	Root	× T, S		×	×		×	
<b>Gratiola officinalis L.</b>	all plant parts					×		
<b>Grindelia robusta NUTT. and Grindelia squarrosa PURSH (DUN.)</b> , syn. Donia squarrosa PURSH, Grindelia squarrosa DUN.	Herb		Not NFS	×	×		×	
<b>Guaiacum officinale L. and Guaiacum sanctum L.</b> , syn. Guaiacum verticale ORTEGA	Wood	× F		×			×	
<b>Gymnema silvestre (WILLD.) R. BR.</b> , syn. Gymnema parviflorum ROXB., Asclepias geminata ROXB.	Leaf					×		
<b>Gypsophila paniculata L.</b> , syn. Arrostia paniculata (L.) RAF., Gypsophila parviflora MOENCH, Saponaria paniculata (L.) NEUMAYER	Root		Not NFS	×			×	
<b>Hamamelis virginiana L.</b> , syn. Hamamelis androgyna WALT.	Leaf	× T		×	×		×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> catarrhs of the upper respiratory tract, gastric ulcers, <b>standard marketing authorisation:</b> 1309.99.99, <b>WHO monograph, HMPC monograph:</b> traditional use, <b>ESCOP monograph:</b> adjuvant therapy of gastric and duodenal ulcers and gastritis, coughs and bronchial catarrh, as an expectorant, special precautions as specified in the LMKV [Food Labelling Regulation], as from 13 Dec 2014 as specified in Reg. (EC) No. 1169/2011	Long-term use and higher doses may cause mineral corticoid effects manifesting in sodium and water retention, loss of potassium accompanied by hypertension, oedemas and hypokalaemia, in rare cases also myoglobinurina, contraindications and interactions reported (Commission E monograph)	Glycyrrhizic acid	<b>Commission E:</b> liquorice from 5 g/day, Succus Liquiritiae from 0.5 g/day <b>ESCOP:</b> 1.5–15 g drug/day <b>WHO:</b> 5–15 g drug/day, equivalent preparations
very toxic Ib (Wink/Wyk), highly toxic ++ (Roth/Daunderer)	strong laxative effect, ingestion of high doses may cause digestive problems accompanied by nausea, vomiting, hypersalivation, bloody diarrhoea, nephritis, dyspnoea and cardiac dysfunction, death by respiratory arrest, abortifacient effect (Wink/Wyk)	Cucurbitacins	
<b>Positive monograph, indications:</b> catarrhs of the upper respiratory tract, <b>ESCOP monograph:</b> productive cough, catarrhs of the upper respiratory tract, <b>HMPC monograph:</b> traditional use	Side effects: irritation of gastric mucosa observed in rare cases (Commission E monograph)		<b>Commission E, ESCOP:</b> 4–6 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> adjuvant treatment of rheumatic conditions, mildly toxic II to toxic III (Wink/Wyk), toxic + (Roth/Daunderer)	Ingestion of higher doses causes gastroenteritis accompanied by nausea and diarrhoea, cardiac palpitation, vertigo (Wink/Wyk)		<b>Commission E:</b> 4.5 g drug, equivalent preparations
toxic II (Wink/Wyk), toxic + (Roth/Daunderer)	Lack of appetite, faintness, fever, diarrhoea, death by apnoea, irritation of cardiovascular system, polyuria, irritation of uterus, hypoglycaemia (Roth/Daunderer) (Wink/Wyk)	Gymnemic acid	
<b>Positive monograph, indications:</b> catarrhs of the upper respiratory tract	Irritation of gastric mucosa observed in rare cases (Commission E monograph)		<b>Commission E:</b> 30–150 mg drug/day, equivalent preparations
<b>Positive monograph, indications:</b> superficial skin lesions, local inflammations of skin and mucosa, haemorrhoids, varicose veins, <b>standard marketing authorisation:</b> 9699.99.99 (witch hazel leaves), 9799.99.99 (witch hazel bark), <b>WHO monograph:</b> external use only, <b>ESCOP monograph:</b> symptomatic treatment of complaints related to varicose veins such as painful and heavy legs and of haemorrhoids, <b>HMPC monograph:</b> traditional use		Tanning agents (tannins)	<b>Commission E:</b> 0.1–1 g drug, several times a day, equivalent preparations <b>ESCOP:</b> 2–3 g drug 2–3 times a day, equivalent preparations <b>WHO:</b> 0.1–1 g drug/day, equivalent preparations

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Hamamelis virginiana L.</b> , syn. Hamamelis androgyna WALT.	Bark		Not NFS	×	×		×	
<b>Harpagophytum procumbens (BURCH.) DC.</b> , syn. Harpagophy- tum burcherllii DECNE	Root	× T		×	×		×	
<b>Harungana madagascariensis LAM. ex POIR.</b> , syn. Haronga madagascariensis (LAM. ex POIR.) CHOISY	Leaf, bark		Not NFS	×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> superficial skin lesions, local inflammations of skin and mucosa, haemorrhoids, varicose veins, <b>standard marketing authorisation:</b> 9699.99.99 (witch hazel leaves), 9799.99.99 (witch hazel bark), <b>WHO monograph:</b> external use only, <b>ESCOPE monograph:</b> inflammation of mucous membranes of the oral cavity, short-term symptomatic treatment of diarrhoea, <b>HMPC monograph:</b> traditional use		Tanning agents (tannins)	<b>Commission E:</b> 0.1–1 g drug, several times a day, equivalent preparations <b>ESCOPE:</b> 2–3 g drug 2–3 times a day, equivalent preparations <b>WHO:</b> 0.1–1 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> lack of appetite, digestive problems, adjuvant treatment of degenerative diseases of the locomotor system, <b>WHO monograph:</b> treatment of pain associated with rheumatic conditions, treatment of loss of appetite and dyspeptic complaints, supportive treatment of degenerative rheumatism, painful arthrosis and tendonitis, <b>ESCOPE monograph:</b> symptomatic treatment of painful osteoarthritis, relief of low back pain, loss of appetite and dyspepsia, <b>HMPC monograph:</b> traditional use	Contraindications: gastric and duodenal ulcers, in case of gallstones, use only after consultation with a physician (Commission E monograph)		<b>Commission E:</b> 1.5 g/day, preparations of equivalent bitter value (lack of appetite), otherwise 4.5 g drug/day, equivalent preparations, standardised extracts equivalent to 30–100 mg harpagoside <b>ESCOPE:</b> 2–5 g drug/day, equivalent preparations <b>WHO:</b> 1–3 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> digestive problems, mild exocrine pancreatic insufficiency	Photosensitisation especially in light-skinned patients due to the hypericin and pseudohypericin contained in the drug, contraindications reported (Schilcher)	Naphthodianthrone derivatives (leaves: hypericin, pseudohypericin), anthraquinones (bark: madagascin)	<b>Commission E:</b> 25–50 mg drug/day, equivalent preparations



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Hedera helix L.</b> , syn. <i>Hedera caucasigena</i> POJARK, <i>Hedera chrysocarpa</i> WALSH	Leaf			×	×	×		
<b>Helianthus annuus L.</b> , syn. <i>Helianthus cultus</i> VENTSL., <i>Helianthus erythrocarpus</i> BARTL., <i>Helianthus indicus</i> L., <i>Helianthus pumilus</i> PERS.	Petal	× T						
<b>Helianthus annuus L.</b> , syn. <i>Helianthus cultus</i> VENTSL., <i>Helianthus erythrocarpus</i> BARTL., <i>Helianthus indicus</i> L., <i>Helianthus pumilus</i> PERS.	Seed	×						
<b>Helianthus tuberosus L.</b> , syn. <i>Helianthus mollissimus</i> E.E. WATSON	Stem tuber	×						
<b>Helichrysum arenarium (L.) MOENCH</b> , syn. <i>Gnaphalium arenarium</i> L.	Flower	× T		×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<p><b>Positive monograph, indications:</b> catarrhs of the upper respiratory tract, symptomatic treatment of chronic bronchitis, <b>ES COP monograph:</b> coughs, particularly when associated with hypersecretion of viscous mucus, as adjuvant treatment of inflammatory bronchial diseases, toxic II (Wink/Wyk), toxic + (Roth/Daunderer), toxic + (Roth/Daunderer), <b>HMPC monograph:</b> expectorant for productive cough</p>	<p>Local irritations of mucous membranes, digestive tract irritation, dizziness, tachycardia, headache, nausea, vomiting, skin rash, CNS disorders, hyperthermia and cardiac palpitation observed in individual cases, especially in higher doses, overdose may cause death by respiratory arrest (Wink/Wyk, Roth/Daunderer)</p>	<p>Saponins</p>	<p><b>Commission E:</b> average daily dose: 0.3 g drug, equivalent preparations  <b>ES COP:</b> ethanolic preparations: 250–420 mg drug/day, deviating doses for children, ethanol-free preparations: 300–945 mg drug/day, deviating doses for children  <b>HMPC: adults and adolescents:</b>  a) single dose: 15–65 mg, 1–3 times a day up to a daily dose of 45–105 mg (note: max. daily dose for ethanolic ready-to-use products: 67 mg equivalent to 420 mg drug)  b) single dose: 14–18 mg, 3 times a day  c) single dose: 33 mg, 2 times a day  d) single dose: 100 mg, 3 times a day  <b>children aged between 6 and 12:</b>  a) single dose: 11–33 mg, 2–3 times a day up to a max. daily dose of 33–70 mg (note: max. daily dose for ethanolic ready-to-use products: 34 mg equivalent to 210 mg drug)  b) single dose: 9–18 mg, 2–3 times a day up to a max. daily dose of 15–40 mg  c) single dose 25 mg, 2 times a day  d) single dose: 75 mg 3 times a day  <b>children aged between 2 and 5:</b>  a) single dose: 8–18 mg 2–3 times a day up to a max. daily dose of 24–36 mg (note: max. daily dose for ethanolic ready-to-use products: 24 mg equivalent to 150 mg drug)  <b>No administration to children under the age of 2</b></p>
<p><b>Positive monograph, indications:</b> digestive problems, <b>WHO monograph:</b> treatment of dyspeptic disorders, <b>standard marketing authorisation:</b> 1649.99.99</p>	<p>Contraindications: occlusion of biliary tract, in case of gallstones, use only after consultation with a physician (Commission E monograph)</p>		<p><b>Commission E:</b> 3 g drug/day, equivalent preparations</p>

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Heliotropium arborescens L.</b> , syn. <i>Heliotropium corymbosum</i> RUIZ et PAV, <i>Heliotropium odoratum</i> MOENCH, <i>Heliotropium peruvianum</i> L.	all plant parts					×		
<b>Helleborus spp.</b>	all plant parts			×		×		
<b>Herniaria glabra L.</b>	Herb	× T			×			
<b>Herniaria hirsuta L.</b>	Herb	× T			×			
<b>Hibiscus sabdariffa L.</b> , syn. <i>Sabdariffa rubra</i> KOSTEL., <i>Sida sabdariffa</i> L.	Flower	× T						
<b>Hibiscus sabdariffa L.</b> , syn. <i>Sabdariffa rubra</i> KOSTEL., <i>Sida sabdariffa</i> L.	Seed		Not NFS					×
<b>Hippophae rhamnoides L. ssp. rhamnoides</b> , <i>Hippophae rhamnoides</i> L. ssp. <i>fluviatilis</i> , syn. <i>Hippophae angustifolia</i> “LODD.” ex DIPPEL, <i>Hippophae fasciculata</i> WALL ex STEUDEL, <i>Hippophae littoralis</i> SALISB.	Fruit	×		×			×	
<b>Hoodia gordonii (MASS.) SWEET</b>	all plant parts		×					
<b>Hordeum vulgare L.</b> , syn. <i>Hordeum sativum</i> JESS.	Fruit	×						
<b>Humulus lupulus L.</b> , syn. <i>Humulus cordifolius</i> MIQ.	Flower	×		×	×		×	
<b>Hydrastis canadensis L.</b> , syn. <i>Warneria canadensis</i> LILL., <i>Warneria diphylla</i> RAF.	Rhizome			×		×		
<b>Hyoscyamus spp.</b>	all plant parts			×		×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
toxic II (Wink/Wyk), toxic + (Roth/Daudeurer), substance of concern (AMK), BfArM graduated plan of 5 June 1992 concerning medicinal products containing pyrrolizidine alkaloids	Pyrrolizidine alkaloids contained in the drug may cause liver damage (Wink/Wyk, Frohne), tachycardia, mydriasis, central apnoea and cardiac arrest (Wink/Wyk).	Pyrrolizidine alkaloids	
Helleborus viridis, Helleborus niger and various species pharmacy-only, extremely toxic +++ (Roth/Daudeurer), extremely toxic Ia (Wink/Wyk)	tickle in mouth and throat, nausea, hypersalivation, mydriasis, raging thirst, abdominal pain and colic, gastrointestinal complaints, diarrhoea, exhaustion, symptoms of cardiac glycoside poisoning, coma, death by cardiac or respiratory arrest (Wink/Wyk)	Alkaloids (e.g. celliamine, sprintillamine), cardioactive glycosides (e.g. bufadienolides), steroidal saponins (e.g. helleborine)	
<b>Neutral monograph</b>			
<b>Neutral monograph</b>			
<b>Neutral monograph</b>			
<b>WHO monograph:</b> treatment of cirrhosis of the liver, used to relieve cough with profuse expectoration, to promote digestion in people with prolonged gastrointestinal transit with abdominal pain, and for treatment of amenorrhoea			<b>WHO monograph:</b> 40–50 g fresh fruit in 1 litre water, 2–3 cups a day
<b>Positive monograph, indications:</b> emotional symptoms such as agitation and states of anxiety, sleep disturbances, <b>standard marketing authorisation:</b> 1029.99.99, <b>WHO monograph:</b> as a sedative for the treatment of nervous tension and insomnia. Treatment of dyspepsia and lack of appetite, <b>ESCOP monograph:</b> tenseness, restlessness and sleep disorders, <b>HMPC monograph:</b> traditional use	fresh hop cones: dermatitis on skin contact, conjunctivitis, in severe cases vomiting, fever, dyspnoea, bradycardia and sweats (Roth/Daudeurer)		<b>Commission E, ESCOP, WHO:</b> single dose: 0.5 g drug, equivalent preparations, no administration to children under the age of 12
<b>WHO monograph:</b> treatment of digestive complaints, such as dyspepsia, gastritis, feeling of distension and flatulence, toxic Ib to very toxic II (Wink/Wyk), highly toxic ++ (Roth/Daudeurer)	Ingestion of higher doses causes vomiting, gastrointestinal complaints, uterus contractions, vasoconstrictive, CNS-depressor, spasmogenic, may cause myoplegia, hallucinations, delirium and cyanosis (Wink/Wyk)	Isoquinoline alkaloids (e.g. hydrastine, berberine)	<b>WHO:</b> 0.5–1 g drug, 3 times a day
<b>Positive monograph for Hyoscyamus niger, indications:</b> gastrointestinal cramps, extremely toxic Ia (Wink/Wyk), extremely toxic +++ (Roth/Daudeurer)	psychotropic, calmative and sedative in low doses, ingestion of higher doses causes hallucinations, euphoria, disorientation, insomnia, fits of rage, loss of consciousness and death by respiratory arrest, facial blush, dry mouth, mydriasis, accelerated pulse (Wink/Wyk)	Tropane alkaloids (e.g. L-hyoscyamine, L-scopolamine, atropine)	<b>Commission E:</b> 0.5 g standardised powder (single dose), 3.0 g standardised powder (maximum daily dose)

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Hypericum perforatum L.</b> , syn. <i>Hypericum officinarum</i> CRANTZ, <i>Hypericum officinale</i> GATER ex STEUD., <i>Hypericum vulgare</i> LAM.	Herb, flower	× F		×	×		×	
<b>Hyssopus officinalis L.</b> , syn. <i>Hyssopus arisatus</i> GODR., <i>Hyssopus canascens</i> (DC.) NYM.	all plant parts	× S, T						
<b>Iberis amara L.</b> , syn. <i>Biauricula amara</i> BUBANI, <i>Crucifera iberis</i> KRAUSE, <i>Thlaspi amarum</i> CRANTZ	all plant parts			×		×		
<b>Ilex aquifolium L.</b>	Fruit, leaf					×		
<b>Ilex paraguariensis ST. HIL.</b> , syn. <i>Ilex bonplandiana</i> MÜNTER, <i>Ilex domestica</i> REISS.	Leaf	× T		×	×		×	
<b>Illicium verum HOOK. FIL.</b> , syn. <i>Illicium anisatum</i> GAERTN. NON. L., <i>Illicium stellatum</i> L.	Fruit	× T, S		×			×	
<b>Inula helenium L.</b> , syn. <i>Aster helenium</i> (L.) SCOP., <i>Corvisartia helenium</i> (L.) MÉRAT, <i>Helenium grandiflorum</i> GILIB.	Root	× S, T			×			
<b>Ipomoea purga (WENDER.) HAYNE</b> , syn. <i>Exogonium purga</i> (WENDER.) BENTH.	all plant parts			×		×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<p><b>Positive monograph, indications:</b> psychovegetative disorders, depression, anxiety and/or nervous agitation. Oily Hypericum preparations for digestive problems, <b>standard marketing authorisation:</b> 1059.99.99, <b>WHO monograph:</b> symptomatic treatment of mild and moderate depressive episodes (classified as F32.0 and F32.1, respectively, in the International statistical classification of diseases and related health problems, Tenth revision (ICD-10), <b>ESCOP monograph:</b> episodes of mild depressive disorders or mild to moderate depressive episodes in accordance with ICD-10 categories F32.0, F32.1, F33.0 and F33.1, <b>HMPC monograph:</b> herbal medicinal product for the treatment of mild to moderate depressive episodes (according to ICD-10). short term treatment of symptoms in mild depressive disorders, BfArM graduated plan of 10 Oct 2005 concerning medicinal products for internal use containing St. John's wort (Hypericum): <a href="http://www.bfarm.de/SharedDocs/1_Downloads/DE/Pharmakovigilanz/stufenplverf/Johanniskraut-Bescheid-051010.pdf?_">http://www.bfarm.de/SharedDocs/1_Downloads/DE/Pharmakovigilanz/stufenplverf/Johanniskraut-Bescheid-051010.pdf?_</a></p>	<p>Photosensitiser, enzyme inductor (suppression of effect of concomitant medication), toxic increase of serotonin concentration in CNS (Wink/Wyk)</p>	<p>Naphthodianthrones (e.g. hypericin, pseudohypericin), xanthone derivatives</p>	<p><b>Commission E:</b> 2–4 g drug/day <b>ESCOP, WHO:</b> 2–4 g drug/day, administration to children only under medical supervision</p>
<p><b>Neutral monograph:</b> use of hyssop as taste improver in tea blends in amounts of up to 5 % is considered to be safe (Commission E monograph)</p>	<p>Consumption of oil reported to cause clonic and/or tonic-clonic cramps (Commission E monograph)</p>	<p>Pinocamphone, esopinocamphone</p>	
<p>Ingredient of licensed medicinal products, toxic + (Roth/Daunderer), mildly toxic II to toxic III (Wink/Wyk)</p>	<p>Ingestion of higher doses causes vomiting, gastroenteritis, bloody diarrhoea, abdominal pain, respiratory depression, arrhythmia (Wink/Wyk)</p>	<p>Cucurbitacins</p>	
<p>highly toxic ++ (Roth/Daunderer), toxic Ib to very toxic II (Wink/Wyk)</p>	<p>gastrointestinal complaints, gastritis, vomiting, diarrhoea, cardiac arrhythmia, paralysis, kidney damage, drowsiness, possibly death (Wink/Wyk)</p>	<p>Triterpenes, nitrile (menesdaurin)</p>	
<p><b>Positive monograph, indications:</b> mental and physical fatigue, <b>HMPC monograph:</b> traditional use</p>			<p><b>Commission E:</b> 3 g drug/day, equivalent preparations</p>
<p><b>Positive monograph, indications:</b> catarrhs of the respiratory tract, digestive problems, <b>standard marketing authorisation:</b> 2419.99.99</p>			<p><b>Commission E:</b> 3 g drug or 0.3 g essential oil/day, equivalent preparations</p>
<p><b>Negative monograph:</b> due to risks, practically non-toxic but allergenic (Roth/Daunderer)</p>	<p>Sesquiterpene lactones contained in elecampane are irritating to mucous membranes, sensitising and induce allergic contact dermatitis (Commission E monograph), ingestion of higher doses causes vomiting, diarrhoea, cramps, symptoms of paralysis (Roth/Daunderer)</p>	<p>Sesquiterpene lactones (alantolactones, isoalantolactones)</p>	
<p>toxic II (Wink/Wyk), toxic (Roth/Daunderer), resin and root tuber as MP prescription-only, whole plant pharmacy-only</p>	<p>drastic laxative, gastric pain, vomiting, diarrhoea, tenesmus, nausea (Wink/Wyk, Roth/Daunderer)</p>	<p>Convolvulin, jalapin, glycoretin</p>	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Ipomoea violacea L.</b> , syn. <i>Ipomoea tricolor</i> CAV.	Seed					×		
<b>Iris germanica L.</b> and <b>Iris pallida LAM.</b> and <b>Iris florentina L.</b>	Rhizome	× F						
<b>Iris versicolor L.</b> , syn. <i>Iris virginica</i> JACQ., PURSH (non L.)	Root		×					
<b>Jasminum grandiflorum L.</b>	Flower	× T						
<b>Jasminum officinale L.</b> ,	Flower	× T						
<b>Juglans regia L.</b> , syn. <i>Nux juglans</i> DUHAM.	Flower	× C					×	
<b>Juglans regia L.</b> , syn. <i>Nux juglans</i> DUHAM.	Seed	×						
<b>Juglans regia L.</b> , syn. <i>Nux juglans</i> DUHAM.	Peel	× F						
<b>Juniperus communis L.</b>	Fruit	× S, T		×	×		×	
<b>Juniperus communis L.</b>	Wood	× T						
<b>Juniperus sabina L.</b> , syn. <i>Sabina officinalis</i> GARCKE	all plant parts			×		×		
<b>Krameria triandra RUIZ et PAVON</b> , syn. <i>Krameria lappacea</i> (DOMBEY) BURDET et SIMPSON, <i>Krameria canascens</i> WILLD. ex SCHULTES	Root	× T						
<b>Laburnum anagyroides MEDICUS</b> , syn. <i>Cytisus laburnum</i> L., <i>Genista laburnum</i> KRAUSE	all plant parts			×		×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
highly toxic ++ (Roth/Daunderer), very toxic Ib (Wink/Wyk), narcotic	psychotropic, hallucinogenic effect, nausea, vomiting and faintness, ingestion of high doses causes death by apnoea (Roth/Daunderer, Wink/Wyk)	Indole alkaloids (e.g. ergometrine, ergine, chanoclavin, lysergic acid and lysergic acid derivatives)	
<b>Neutral monograph:</b> used to produce spirits			
<b>Positive monograph:</b> for external use, <b>standard marketing authorisation:</b> 2429.99.99, <b>HMPC monograph:</b> traditional use (external use)	The high tannin content may cause irritation of gastric mucosa. Since a mutagenic effect is demonstrated for juglone, internal use of the drug is contraindicated in pregnancy (Hager)	Juglone	
<b>Negative monograph:</b> due to risks, as flavouring in spirits production	Local daily use of preparations containing juglone is associated with a high incidence of tongue cancer and leucoplakia (Commission E monograph)	Juglone	
<b>Positive monograph, indications:</b> digestive problems, <b>standard marketing authorisation:</b> 1369.99.99, <b>ESCOP monograph:</b> traditional use, non-toxic to slightly toxic (+) (Roth/Daunderer), mildly toxic II to toxic III (Wink/Wyk), <b>HMPC monograph:</b> traditional use	Long-term use or overdose (more than 150 mg of essential juniper oil per day, note by Schilcher) may cause kidney damage (Schilcher), contraindications reported (Commission E monograph)	Mono- and sesquiterpenes (e.g. alpha-pinene)	<b>Commission E:</b> 2–10 g/day equivalent to 20–100 mg essential oil <b>ESCOP:</b> 2–3 g drug in 150 ml water, 3–4 times a day
		Terpene, tanning agents, lignans	
extremely toxic +++ (Roth/Daunderer), extremely toxic Ia (Wink/Wyk), substance of concern (AMK)	Ingestion causes nausea, vomiting, abdominal pain, excitement, arrhythmia, tachycardia, convulsions, respiratory arrest, serious kidney and liver damage, profuse internal haemorrhage, haematuria, uterus contractions, abortion, death as a result of central apnoea in coma (Wink/Wyk). Essential oil has a strong irritating effect on the skin, which may even cause necrosis and damage to deeper skin layers.	Monoterpenes (e.g. thujone, sabinene)	
<b>Positive monograph:</b> for external use, <b>standard marketing authorisation:</b> 1179.99.99 (root), 7199.99.99 for external or local use only, <b>ESCOP monograph:</b> for external or local use	allergic reactions of mucous membranes observed in very rare cases (Commission E monograph)		<b>ESCOP, Commission E:</b> external use only
very toxic Ib (Wink/Wyk), extremely toxic +++ (Roth/Daunderer)	slightly psychotropic and hallucinogenic, diuretic, uterus contractions, abdominal pain, tachycardia, drop in blood pressure, cardiac arrhythmia, vomiting, diarrhoea, vertigo, cramps, headache, delirium, nicotinergetic effect (Wink/Wyk)	Quinolizidine alkaloids (e.g. cytisine)	



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Lactuca virosa</b> L., syn. <i>Lactuca altissima</i> M.B., <i>Lactuca lactucarii</i> LAMOTTE, <i>Lactuca sylvestris</i> LAM.	all plant parts			×		×		
<b>Lamium album</b> L., syn. <i>Lamium capitatum</i> SM., <i>Lamium vulgatum</i> var. <i>album</i> BENTH	Flower	× T		×			×	
<b>Lamium album</b> L., syn. <i>Lamium capitatum</i> SM., <i>Lamium vulgatum</i> var. <i>album</i> BENTH	Herb	× T						
<b>Laurus nobilis</b> L.	Leaf	× S						
<b>Lavandula angustifolia</b> MILL., syn. <i>Lavandula officinalis</i> CHAIX ex VILL., <i>Lavandula angustifolia</i> MUCH, <i>Lavandula spica</i> L.	Leaf	× T		×	×		×	
<b>Ledum palustre</b> L., syn. <i>Rhododendron tomentosum</i> HARMAJA	Herb					×		
<b>Leonurus cardiaca</b> L., syn. <i>Cardiaca trilobata</i> LAM., <i>Cardiaca vulgaris</i> MOENCH	Herb	× T		×	×		×	
<b>Lepidium peruvianum</b> CHACON, syn. <i>Lepidium meyenii</i> WALP.	Root	×						
<b>Lespedeza capitata</b> MICHX.	all plant parts		Not NFS					×
<b>Levisticum officinale</b> KOCH, syn. <i>Angelica levisticum</i> ALL., <i>Hippoposelinum levisticum</i> BRITTON et ROSE, <i>Levisticum levisticum</i> KARSTEN	Fruit	× S						

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
very toxic Ib (Wink/Wyk), highly toxic ++ (Roth/Daunderer)	persistent irritation of skin and mucous membranes, calmative properties similar to opium, visual disturbances, headache, sweats, vertigo, drowsiness, tachypnoea and tachycardia (Wink/Wyk, Roth/Daunderer)	Sesquiterpene lactones	
<b>Positive monograph, indications:</b> catarrhs of the upper respiratory tract, mild infections of the oral and pharyngeal mucosa			<b>Commission E:</b> 3 g drug/day, equivalent preparations
<b>Neutral monograph</b>			
	irritating to skin, allergenic (Roth/Daunderer)	Eucalyptol (=1,8-cineol), sesquiterpene lactones	
<b>Positive monograph, indications:</b> emotional symptoms such as agitation, sleep disturbances, functional epigastric disorders (nervous irritable stomach, ROEMHELD syndrome, meteorism, nervous intestinal disorders), <b>standard marketing authorisation:</b> 1119.99.99, <b>WHO monograph:</b> symptomatic treatment of restlessness, insomnia, and as a carminative and antispasmodic for gastrointestinal disorders of nervous origin, <b>ESCOP monograph:</b> symptoms of mood disturbance such as restlessness, agitation of insomnia, functional abdominal complaints, mildly toxic III (Wink/Wyk), <b>HMPC monograph:</b> traditional use	Overdose may induce hepatic and renal dysfunction (Wink/Wyk)	Monoterpenes, coumarins	<b>Commission E, ESCOP, WHO:</b> 1–2 tsp. Drug, 0.8–1.6 g/cup (150 ml), 3 times a day
<b>Negative monograph:</b> due to risks, toxic (Roth/Daunderer), toxic II (Wink/Wyk)	gastrointestinal irritation accompanied by vomiting and diarrhoea, irritation and damage of kidneys and lower urinary tract, sweats, pain in muscles and joints, CNS excitement accompanied by states of intoxication, cramps and subsequent paralysis (Commission E monograph)	Sesquiterpenes (e.g. ledol, palustrol), arbutin	
<b>Positive monograph, indications:</b> nervous cardiac disorders, adjuvant treatment of hyperthyroidism, <b>WHO monograph:</b> used against cerebral ischaemia, it is also used for treatment of heart palpitations occurring with anxiety attacks or other nervous disorders, <b>HMPC monograph:</b> traditional use, mildly toxic III (Wink/Wyk)	slightly anaesthetic, calmative (Wink/Wyk)	Iridoids, diterpenes, triterpenes	<b>Commission E:</b> 4.5 g drug, equivalent preparations <b>WHO:</b> 2–4.5 g drug, equivalent preparations
Statement of the Federal Institute for Risk Assessment (BfR): <a href="http://www.bfr.bund.de/cm/343/risikobewertung_macahaltiger_nahrungsergaenzungsmittel.pdf">http://www.bfr.bund.de/cm/343/risikobewertung_macahaltiger_nahrungsergaenzungsmittel.pdf</a>		Glucosinolates, imidazole alkaloids	
	phototoxic	Furocoumarins	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Levisticum officinale KOCH</b> , syn. <i>Angelica levisticum</i> ALL., <i>Hipposelinum levisticum</i> BRITTON et ROSE, <i>Levisticum levisticum</i> KARSTEN	Herb	× S						
<b>Levisticum officinale KOCH</b> , syn. <i>Angelica levisticum</i> ALL., <i>Hipposelinum levisticum</i> BRITTON et ROSE, <i>Levisticum levisticum</i> KARSTEN	Root	× S, T		×	×		×	
<b>Linaria vulgaris MILL.</b> , syn. <i>Antirrhinum linaria</i> L.	Herb		Not NFS					×
<b>Linum usitatissimum L.</b>	Seed	×		×	×		×	
<b>Lippia triphylla (L'HÉR.) KUNTZE</b> , syn. <i>Aloysia citrodora</i> PALAU, <i>Aloysia citriodora</i> ORTEGA ex PERS., <i>Aloysia sleumeri</i> MOLDENKE, <i>Aloysia triphylla</i> (L'HÉR.) KUNTZE, <i>Verbena citriodora</i> CAV., <i>Verbena triphylla</i> L'HÉR., <i>Zapania citrodora</i> LAM.	Herb	× S, T						
<b>Lobelia spp.</b>	all plant parts			×		×		
<b>Lophophora williamsii (LEM. ex SALM-DYCK) COULT.</b> , syn. <i>Anhalonium williamsii</i> (LEM. ex SALM-DYCK) LEM., <i>Anhalonium lewinii</i> HENN., <i>Ariocarpus williamsii</i> VOSS., <i>Echinocactus lewinii</i> (HENN.) SCHUM.	all plant parts					×		
<b>Lupinus spp.</b>	Seed	×						

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
	phototoxic	Furocoumarins	
<b>Positive monograph, indications:</b> irrigation therapy of inflammatory diseases of the lower urinary tract, irrigation therapy to prevent of kidney gravel, <b>HMPC monograph:</b> traditional use, <b>standard marketing authorisation:</b> 1569.99.99	phototoxic	Furocoumarins	<b>Commission E:</b> 4–8 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> habitual constipation, colon affected by laxatives, irritable colon, diverticulitis, as gruel preparation for gastritis and enteritis, <b>standard marketing authorisation:</b> 1099.99.99, <b>ESCAP monograph:</b> constipation, irritable bowel syndrome, diverticular disease, symptomatic short-term treatment of gastritis and enteritis, <b>HMPC monograph:</b> treatment of habitual constipation or in conditions in which easy defaecation with soft stool is desirable, traditional use, toxic II (Wink/Wyk)	Cases of poisoning in humans caused by cyanogenic glycosides in flax not known to date (Hager, Frohne/Pfänder)	cyanogenic glycosides, lignans	<b>Commission E:</b> 1 tbsp./150 ml liquid, 2–3 times a day <b>ESCAP:</b> 5–10 g drug/day <b>HMPC:</b> 10–15 g, 2–3 times a day, no administration to children under the age of 12
Lobelia inflata prescription-only, Lobelia species in general pharmacy-only, Lobelia inflata: highly toxic ++ (Roth/Daunderer), very toxic Ib (Wink/Wyk)	nicotinic effect, vomiting, diarrhoea accompanied by colic and cramps, stimulates respiration in low doses, causes apnoea in higher doses, bradycardia, drop in blood pressure, convulsions, death by respiratory arrest (Wink/Wyk, Roth/Daunderer)	Piperidine alkaloids (e.g. lobeline)	
narcotic, highly toxic ++ (Roth/Daunderer), very toxic Ib (Wink/Wyk), mescaline contained in the drug is a non-marketable narcotic acc. to Annex 1 of the Narcotic Drugs Act (BtMG)	psychotropic, hallucinogenic, visual disturbances and distorted thinking patterns, intense, even schizophrenic symptoms, loss of perception, insomnia, drop in blood pressure, mydriasis, pain, respiratory depression, vasodilation, faintness, liver damage and vomiting, ascending paralysis in high doses (Wink/Wyk, Roth/Daunderer)	Alkaloids (e.g. mescaline)	
low-alkaloid/alkaloid-free types are used in foods (sweet lupine or leached, ripe seeds of bitter lupines) (van Wyk), other types moderately to highly toxic (Roth/Daunderer), toxic (Wink/Wyk), subject to labelling requirement acc. to Food Labelling Regulation, statement of the Federal Institute for Risk Assessment (BfR) on the allergenicity of lupine proteins: <a href="http://www.bfr.bund.de/cm/343/allergie-durch-lupineneiweiss-in-lebensmitteln.pdf">http://www.bfr.bund.de/cm/343/allergie-durch-lupineneiweiss-in-lebensmitteln.pdf</a>	Lupine poisoning (caused by alkaloids) may cause hypersalivation, vomiting, swallowing difficulties, arrhythmia, convulsions and death by respiratory arrest (Wink/Wyk)	Quinolizidine alkaloids	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Lycium barbarum L.</b> , syn. <i>Lycium halimifolium</i> MILLER, <i>Lycium flaccidum</i> (VEILLARD) K. KOCH	Fruit	×						
<b>Lycopodium clavatum L.</b> , syn. <i>Lepidotis clavata</i> (L.) PAL. BEAUV.	Herb					×		
<b>Lycopus europaeus L.</b> , syn. <i>Lycopus aquaticus</i> MOENCH, <i>Lycopus palustris</i> LAM., <i>Lycopus vulgaris</i> PERS. and <i>Lycopus virginicus</i> L., syn. <i>Lycopus macrophyllus</i> BENTH., <i>Lycopus uniflorus</i> MICHX., <i>Lycopus virginicus</i> MICHX.	Herb			×		×		
<b>Macadamia ternifolia F. v. MUELL.</b>	Seed	×						
<b>Malpighia puniceifolia L.</b> , syn. <i>Malpighia glabra</i> L.	Fruit	×						
<b>Malus domestica BORKH.</b>	Fruit	×						
<b>Malus sylvestris (L) MILL.</b>	Fruit	×						
<b>Malva sylvestris L.</b> , syn. <i>Malva ambigua</i> GUSS., <i>Malva erecta</i> C. PRESL., <i>Malva mauritiana</i> L.	Leaf, flower	× T		×			×	
<b>Mandragora officinarum L.</b>	Root			×		×		
<b>Mangifera indica L.</b>	Fruit	×						
<b>Marrubium vulgare L.</b> , <i>Marrubium album</i> GILIB.	Herb	×		×	×		×	
<b>Marsdenia condurango REICHB. F.</b> , syn. <i>Gonolobus condurango</i> (REICHB. F.) TRIANA	Bark	× T		×	×		×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
mildly toxic III (Wink/Wyk), highly toxic ++ (Roth/Daunderer), the presence of toxic amounts of tropane alkaloids, which is the basis of the above assessment, is not confirmed in a recent BfR statement on <i>L. barbarum</i> : <a href="http://www.bfr.bund.de/cm/350/risikobewertung-von-pflanzen-und-pflanzlichen-zubereitungen.pdf">http://www.bfr.bund.de/cm/350/risikobewertung-von-pflanzen-und-pflanzlichen-zubereitungen.pdf</a>			
toxic II (Wink/Wyk), toxic + (Roth/Daunderer)	neurotoxic, symptoms of poisoning similar to those induced by curare, excessive sweating, nausea, vertigo, psychotropic, causes impaired sensory perception, impaired speech, cramps, vomiting, diarrhoea (Wink/Wyk)	Quinolizidine alkaloids (e.g. lycopodine, clavatin)	
<b>Positive monograph, indications:</b> mild forms of hyperthyroidism accompanied by vegetative-nervous disorders, mastalgia	Long-term use and high doses may cause enlargement of the thyroid gland, sudden discontinuation of treatment intensifies the symptoms, interactions and contraindications reported (Commission E monograph)	Coumarins	<b>Commission E:</b> 1–2 g drug/day (tea), water-ethanol extract equivalent to 20 mg drug
<b>Positive monograph, indications:</b> irritation of oral and pharyngeal mucosa accompanied by dry cough, <b>standard marketing authorisation:</b> 1579.99.99 (mallow leaves), <b>ESCOP monograph for flowers:</b> dry cough, irritation of the oral, pharyngeal or gastric mucosa			<b>Commission E:</b> 5 g drug/day, equivalent preparations <b>ESCOP:</b> 1.5–2 g drug/day
psychotropic, root and preparations thereof prescription-only, mandrake pharmacy-only, very toxic Ib (Wink/Wyk), highly toxic ++	calmative and sedative in low doses, ingestion of higher doses causes hallucinations, euphoria, disorientation, insomnia, vertigo, tremor, impaired speech, excitement, nausea, vomiting, mydriasis and death by central paralysis (Wink/Wyk)	Tropane alkaloids (e.g. L-hyoscyamine, D,L-scopolamine, atropine)	
<b>Positive monograph, indications:</b> lack of appetite, digestive problems such as feeling of fullness and bloating, catarrhs of the respiratory tract, slightly toxic (+) (Roth/Daunderer), <b>HMPC monograph:</b> traditional use	Ingestion of high doses causes cardiac arrhythmia (Roth/Daunderer)	Diterpenes (e.g. marrubiin)	<b>Commission E:</b> 4.5 g drug/day, 2–6 tbsp. pressed juice, equivalent preparations
<b>Positive monograph, indications:</b> lack of appetite, mildly toxic II to toxic III (Wink/Wyk), slightly toxic (+) (Roth/Daunderer)	Ingestion of high doses may cause digestive problems and CNS disorders (Wink/Wyk), hypersalivation, vomiting, stiffness of extremities, convulsive fits accompanied by twitching of facial muscles, central apnoea (Roth/Daunderer)	steroidal glycosides (e.g. conduragins)	<b>Commission E:</b> 2–4 g drug/day, equivalent preparations

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Matricaria recutita L.</b> , syn. Chamomilla recutita (L.) RAUSCHERT, Matricaria chamomilla L. PROPORTE	Flower	× T		×			×	
<b>Matricaria recutita L.</b> , syn. Chamomilla recutita (L.) RAUSCHERT, Matricaria chamomilla L. PROPORTE	Seed		Not NFS					×
<b>Medicago sativa L.</b>	Sprout	×						
Melaleuca alternifolia (MAIDEN and BETCH) CHEEL., syn. Melaleuca linariifolia var. alternifolia MAIDEN et BETCHE.	Leaf		×					
<b>Melilotus officinalis (L.) PALLAS</b> , syn. Melilotus arvensis WALLR., Melilotus melilotus-officinalis ASCHERS. et GRAEBN., Melilotus officinalis DESR. and Melilotus altissima THUILL., syn. Melilotus gigantea WENDER., Melilotus macrorrhiza PERS.	Herb	× T		×	×		×	
<b>Melissa officinalis L.</b> , Melissa altissima SM. INSIBTH. et SM., Thymus melissa E.H.L. KRAUSE	Leaf	× S, T		×	×		×	
<b>Mentha aquatica L.</b> , syn. Mentha hirsuta HUDS.	Herb	× S, T						

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<p><b>Positive monograph, indications:</b> gastrointestinal cramps and inflammatory diseases of the gastrointestinal tract, <b>standard marketing authorisation:</b> 7999.99.99, <b>WHO monograph:</b> symptomatic treatment of digestive ailments such as dyspepsia, epigastric bloating, impaired digestion, and flatulence, infusions of camomile flowers have been used in the treatment of restlessness and in mild cases of insomnia due to nervous disorders, <b>ESCOP monograph:</b> symptomatic treatment of gastrointestinal complaints such as minor spasms, epigastric distension, flatulence and belching, <b>HMPC monograph:</b> in progress</p>			<p><b>Commission E:</b> 1 tbsp. (approx. 3 g), 3–4 times a day  <b>ESCOP:</b> 3 g drug, 3–4 times a day, special dosage instructions for children  <b>WHO:</b> 2–8 g, 3 times a day, special dosage instructions for children, no administration to children under the age of 3</p>
<p><b>Positive monograph:</b> for external use, the essential oil is used mostly, which may induce contact allergies when used externally (s. BfR statement: <a href="http://www.bfr.bund.de/cm/206/verwendung_von_unverduenntem_teebaumoel_als_kosmetisches_mittel.pdf">http://www.bfr.bund.de/cm/206/verwendung_von_unverduenntem_teebaumoel_als_kosmetisches_mittel.pdf</a>), <b>WHO monograph and ESCOP monograph (oil):</b> for external use</p>		Terpenes (e.g. eucalyptol [=1,8-cineol])	<b>ESCOP, WHO, Commission E:</b> for external use
<p><b>Positive monograph, indications:</b> chronic venous insufficiency (especially pain and feeling of heaviness in legs, night leg cramps, itching, swelling), adjuvant treatment of thrombophlebitis, postthrombotic syndrome, haemorrhoids, lymphatic blockage, <b>ESCOP monograph:</b> symptomatic treatment of problems related to varicose veins, such as painful and heavy legs, nocturnal cramps in the legs, itching and swelling, <b>HMPC monograph:</b> traditional use, BfArM graduated plan of 23 May 1997 concerning coumarin-containing phytopharmaceuticals and homeopathic drugs up to potency D2 containing sweet clover (<i>Meliloti herba</i>) or sweet woodruff (<i>Gallii odorati herba</i>) (for internal use)</p>	Nausea, vomiting, headache (Roth/Daudeker), contains coumarin, s. BgVV statement: <a href="http://www.bfr.bund.de/cm/208/gehalte_an_coumarin_safrol_methyleugenol_und_estragol_in_lebensmitteln.pdf+O245">http://www.bfr.bund.de/cm/208/gehalte_an_coumarin_safrol_methyleugenol_und_estragol_in_lebensmitteln.pdf+O245</a>	Coumarin	<b>Commission E, ESCOP:</b> equivalent to 3–30 mg coumarin per day, equivalent preparations
<p><b>Positive monograph, indications:</b> nervous sleep disturbances, functional gastrointestinal disorders, <b>standard marketing authorisation:</b> 1149.99.99, <b>WHO monograph, HMPC monograph:</b> traditional use, <b>WHO monograph:</b> external use, <b>ESCOP monograph:</b> tenseness, restlessness and irritability, symptomatic treatment of digestive disorders such as minor spasms</p>			<p><b>Commission E, WHO:</b> 1.5–4.5 g drug, several times a day  <b>ESCOP:</b> 2–3 g drug, 2–3 times a day, equivalent preparations</p>
		Menthofuran, eucalyptol (=1,8-cineol)	



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Mentha pulegium L.</b> , syn. <i>Mentha gibraltarica</i> WILLD., <i>Mentha hirtiflora</i> OPIZ ex TOPIZ, <i>Pulegium erectum</i> MILL.	Herb	× S					×	
<b>Mentha spicata L. emend. L. var. crispa BENTH.</b>	Leaf	× T, S						
<b>Mentha suaveolens EHRH.</b>	Herb	× T, S						
<b>Mentha x piperita L.</b> , syn. <i>Mentha piperita</i> (L.) HUDS.	Leaf	× T, S		×	×		×	
<b>Menyanthes trifoliata L.</b> , syn. <i>Menyanthes palustris</i> TOURN, <i>Trifolium castoris</i> THAL	Leaf	× T		×	×		×	
<b>Momordica charantia L.</b>	Fruit	×		×			×	
<b>Monarda didyma L.</b> , syn. <i>Monarda purpurea</i> LAM., <i>Monarda coccinea</i> MICHX.	Flower	× T						
<b>Morus alba L.</b> , syn. <i>Morus bombycis</i> KOIDZ., <i>Morus constantinopolitana</i> POIR., <i>Morus indica</i> L.	Leaf		Not NFS					×
<b>Morus alba L.</b> , syn. <i>Morus bombycis</i> KOIDZ., <i>Morus constantinopolitana</i> POIR., <i>Morus indica</i> L.	Fruit	×						
<b>Morus nigra L.</b>	Leaf		Not NFS					×
<b>Morus nigra L.</b>	Fruit	×						
<b>Mucuna pruriens (L.) DC.</b> , syn. <i>Dolichos pruriens</i> L.	all plant parts					×		
<b>Murraya koenigii (L.) SPRENG.</b>	Leaf	× S						
<b>Musa acuminata X Musa balbisiana</b> , syn. <i>Musa paradisiaca</i> L.	Fruit	×						
<b>Myrciaria dubia (KUNTH) McVAUGH</b> , syn. <i>Psidium dubium</i> KUNTH	Fruit		Not NFS					×
<b>Myristica fragrans HOUTT.</b> , syn. <i>Myristica americana</i> ROTTB., <i>Myristica aromatica</i> SWARTZ, <i>Myristica officinalis</i> L.	Dried aril	× S					×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
slightly toxic to toxic (Roth/Daunderer), toxic II (Wink/Wyk) contains pulegone (dose restriction acc. to Reg. (EC) No. 1334/2008)	Ingestion of higher doses causes retching, vomiting, increase in blood pressure, central anaesthesia-like paralysis, death by central apnoea, cases of poisoning after abuse as aborticide known (Roth/Daunderer)	Monoterpenes (e.g. pulegone)	
		L-carvone, limonene, eucalyptol (=1,8-cineol)	
<b>Positive monograph, indications:</b> cramps in the gastrointestinal tract, the gall bladder and the biliary tract, <b>standard marketing authorisation:</b> 1499.99.99, <b>WHO monograph (leaves, oil), HMPC monograph:</b> traditional use, <b>ESCOP monograph:</b> symptomatic treatment of digestive disorders, such as flatulence, irritable bowel syndrome, symptomatic treatment of coughs and colds		Menthol, menthone, eucalyptol (=1,8-cineol)	<b>Commission E:</b> 3–6 g drug/day, equivalent preparations <b>ESCOP:</b> 1.5–3 g drug in 150 ml water 3 times a day <b>WHO:</b> 1–3 g drug 3 times a day
<b>Positive monograph, indications:</b> lack of appetite, digestive problems, hardly toxic (+) (Roth/Daunderer)	unpleasant headache, ingestion of high doses causes vomiting and diarrhoea (Roth/Daunderer)		<b>Commission E:</b> 1.5–3 g drug/day, equivalent preparations
Seeds and pericarp of ripe fruits very toxic Ib (Wink/Wyk), therefore only young fruits should be used in food, <b>WHO monograph:</b> emetic, laxative and tonic	Seeds and pericarp of ripe fruits cause severe vomiting and diarrhoea, inhibition of ribosomal biosynthesis (Wink/Wyk)	Cucurbitacins	<b>WHO:</b> 2–15 g drug/day
		Carvacrol, thymol	
toxic + (Roth/Daunderer), toxic II (Wink/Wyk)	hallucinogenic, psychotropic (Wink/Wyk)	Indole alkaloids, levodopa, serotonin	
toxic when abused + (Roth/Daunderer)	Ingestion of high doses causes headache, dizziness, changes in consciousness up to hallucinations, ventricular tachycardia, vertigo, mydriasis, vomiting, abortifacient effect. Safrole contained in the essential oil has a mutagenic effect and demonstrated a carcinogenic effect in animal experiments (Wink/Wyk)	Myristicin, safrole	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Myristica fragrans</b> HOUTT., syn. <i>Myristica americana</i> ROTTB., <i>Myristica aromatica</i> SWARTZ, <i>Myristica officinalis</i> L.	Seed	× S					×	
<b>Nasturtium officinale</b> R. BR., Syn. <i>Baeumerta nasturtium</i> GAERTN., MEY., SCHERB.	Herb	×		×	×		×	
<b>Nelumbo nucifera</b> GAERTN., syn. <i>Nelumbium nelumbo</i> (L.) DRUCE	Flower	× C						
<b>Nepeta cataria</b> L., syn. <i>Nepeta minor</i> MILL., <i>Nepeta vulgaris</i> LAM., <i>Cataria vulgaris</i> MOENCH	Herb	× S, T						
<b>Nerium oleander</b> L., syn. <i>Nerium laurifolium</i> LAM.	Leaf			×		×		
<b>Ocimum basilicum</b> L. syn. <b>Basilicum Indicum et citratum</b> RUMPH., <i>Ocimum album</i> L., <i>Ocimum menthaefolium</i> HOCHST. ex BENTH.	Herb	× S						
<b>Ocimum tenuiflorum</b> L, <i>Ocimum sanctum</i> L., syn. <i>Ocimum album</i> BLANCO, <i>Ocimum virgatum</i> BLANCO	Herb	× S			×			
<b>Olea europaea</b> L., syn. <i>Olea officinarum</i> CRANTZ, <i>Olea pallida</i> SALISB.	Leaf	× T			×			
<b>Ononis spinosa</b> L., syn. <i>Ononis arvensis</i> L., <i>Ononis campestris</i> KOCH et ZIZ.	Root	× T		×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Negative monograph:</b> due to risks, toxic when abused + (Roth/Daunderer), toxic II (Wink/Wyk)	Ingestion of high doses causes headache, dizziness, changes in consciousness up to hallucinations, ventricular tachycardia, vertigo, mydriasis, vomiting, abortifacient effect. Safrole contained in the essential oil has a mutagenic effect and demonstrated a carcinogenic effect in animal experiments (Wink/Wyk). Ingestion of approx. 5 g of nutmeg seeds causes a series of mental disorders, which may manifest themselves in slight changes in consciousness up to intense hallucinations. Ingestion of 9 teaspoons of nutmeg powder per day observed to produce an effect similar to that of atropine. The drug has an abortifacient effect in high doses (Commission E monograph)	Myristicin, safrole	
<b>Positive monograph, indications:</b> catarrhs of the respiratory tract, slightly toxic only in larger amounts (+) (Roth/Daunderer)	Contraindications: gastrointestinal complaints observed in rare cases Contraindications: gastrointestinal ulcers, inflammatory kidney diseases (Commission E monograph)	Glucosinolates	<b>Commission E:</b> daily dose: 4–6 g drug or 20–30 g fresh herb or 60–150 g freshly pressed juice, equivalent preparations
<b>Negative monograph:</b> due to risks, oleander glycosides prescription-only, oleander pharmacy-only, highly toxic ++ (Roth/Daunderer), extremely toxic Ia (Wink/Wyk)	Numbness of tongue and throat, nausea, vomiting, cramps, disorientation, visual disturbances, diarrhoea, cardiac arrhythmia, apnoea, shock, bradycardia, death may occur 2–5 hours after ingestion (Wink/Wyk, Roth/Daunderer)	cardioactive glycosides	
<b>Negative monograph:</b> due to risks	contains estragole. After metabolic activation, isolated estragole has a mutagenic effect. Animal experiments provide indications of carcinogenic effect. Risks during pregnancy and lactation, for infants and young children as well as during long-term use cannot be ruled out (Schilcher)	Estragole (=methyl chavicol)	
<b>WHO monograph:</b> traditional use			<b>WHO:</b> 6–12 g drug/day
<b>Neutral monograph, HMPC monograph:</b> traditional use			
<b>Positive monograph, indications:</b> irrigation therapy of inflammatory diseases of the lower urinary tract, prevention of kidney gravel, <b>standard marketing authorisation:</b> 9899.99.99, <b>ESCOP monograph:</b> irrigation of the urinary tract, especially in cases of inflammation and renal gravel, and as an adjuvant in treatment of bacterial infections of the urinary tract, <b>HMPC monograph:</b> in progress	Contraindications reported (Commission E monograph)		<b>Commission E:</b> 6–12 g drug/day, equivalent preparations <b>ESCOP:</b> 2–3 g drug, 2 times a day

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Origanum majorana L.</b> , syn. <i>Amaracus majorana</i> (L.) SCHINZ et THELLUNG, <i>Majorana hortensis</i> MOENCH	Herb	× S						
<b>Origanum majorana L.</b> , syn. <i>Amaracus majorana</i> (L.) SCHINZ et THELLUNG, <i>Majorana hortensis</i> MOENCH	Fruit		Not NFS					×
<b>Origanum vulgare L.</b> , syn. <i>Origanum anglicum</i> HILL., <i>Origanum creticum</i> L., <i>Origanum latifolium</i> MILL., <i>Origanum venosum</i> WILLD. ex BENTH.	Herb	× S			×			
<b>Orthosiphon aristatus (BLUME) MIQUEL</b> , syn. <i>Orthosiphon stamineus</i> BENTH., <i>Orthosiphon spicatus</i> (THUNB.) BAK., <i>Ocimum grandiflorum</i> BOLD	Leaf	× T		×	×		×	
<b>Oryza sativa L.</b>	Fruit, seed	×						
<b>Osmanthus fragrans (THUN.) LOUR.</b>	Flower		×					
<b>Paeonia officinalis (L.) emend. WILLD.</b> , syn. <i>Paeonia feminea</i> MILL., <i>Paeonia foemina</i> GARS.	Flower	× C						
<b>Panax ginseng C.A. MEY.</b> , syn. <i>Aralia ginseng</i> (C.A. MEY.) BAILL., <i>Panax quinquefolius</i> L. var. <i>coreensis</i> LIEB.	Root	× T		×			×	
<b>Panax notoginseng CHEN.</b>	Root		Not NFS					×
<b>Panax pseudoginseng WALL.</b>	Root		Not NFS					×
<b>Panax quinquefolius L.</b> , syn. <i>Aralia canadensis</i> TOURN., <i>Aureliana canadensis</i> LAFIT., <i>Ginseng quinquefolium</i> WOOD., <i>Panax americanum</i> RAF.	Root		Not NFS		×			×
<b>Panicum miliaceum L.</b> , syn. <i>Panicum</i> PERS.	Seed	×						

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Negative monograph:</b> due to risks	Hydroquinone contained in the drug demonstrates a carcinogenic effect in animal experiments (Commission E monograph)	Hydroquinones and hydroquinone derivatives (e.g. arbutin)	
<b>Neutral monograph, WHO monograph:</b> traditional use			
<b>Positive monograph, indications:</b> irrigation therapy of bacterial and inflammatory diseases of the lower urinary tract and kidney gravel, <b>ESCOP monograph:</b> irrigation of the urinary tract, especially in cases of inflammation and renal gravel, and as an adjuvant in the treatment of bacterial infections of the urinary tract, <b>HMPC monograph:</b> traditional use, <b>standard marketing authorisation:</b> 1159.99.99	Contraindications: oedemas associated with cardiac and renal insufficiency (Commission E monograph)		<b>Commission E:</b> 6 to 12 g drug, equivalent preparations <b>ESCOP:</b> 2–3 g in 150 ml water, 2–3 times a day, equivalent preparations
<b>Neutral monograph:</b> slightly toxic (+) (Roth/Daudeurer)	Flowers and seeds may induce gastroenteritis accompanied by vomiting, colic and diarrhoea (Roth/Daudeurer)		
<b>Positive monograph, indications:</b> tonic for strengthening and invigoration in case of fatigue and faintness, decreasing physical performance and powers of concentration as well as in convalescence, <b>WHO monograph:</b> used as a prophylactic and restorative agent for enhancement of mental and physical capacities, in cases of weakness, exhaustion, tiredness, and loss of concentration, and during convalescence, <b>ESCOP monograph:</b> decreased mental and physical capacities such as weakness, exhaustion, tiredness and loss of concentration, as well as during convalescence, <b>HMPC monograph:</b> in progress, hardly or only slightly toxic (+) (Roth, Daudeurer)	Long-term use in higher doses causes diarrhoea, insomnia, euphoria, hypertension and oedemas. “ginseng abuse” syndrome (Roth/Daudeurer, Frohne)	Ginsenosides	<b>Commission E:</b> 1–2 g drug/day, equivalent preparations <b>WHO:</b> 0.5–2 g/day, equivalent preparations, no administration to children
<b>WHO monograph:</b> traditional use			<b>WHO:</b> 3–9 g drug/day

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Papaver rhoeas L.</b>	Petal		Not NFS					×
<b>Papaver somniferum L.</b> , syn. Papaver amplexicaule STOKES, Papaver nigrum CRANTZ, Papaver officinale GMD., Papaver opiiferum FORSK.	Dried latex			×		×		
<b>Papaver somniferum L.</b> , syn. Papaver amplexicaule STOKES, Papaver nigrum CRANTZ, Papaver officinale GMD., Papaver opiiferum FORSK.	Seed	×						
<b>Passiflora edulis (AUBL.) SCHUM.</b>	Fruit	×						
<b>Passiflora incarnata L.</b> , syn. Granadilla incarnata MEDIK.	Herb	× T		×	×		×	
<b>Passiflora incarnata L.</b> , syn. Granadilla incarnata MEDIK.	Flower	× C						
<b>Pastinaca sativa L.</b> , syn. Pastinaca opaca BERNH., Pastinaca pratensis H. MART., Pastinaca sativa var. edulis DC., Pastinaca sativa var. longa ALEF., Selinum pastinacae CRANTZ	Root	×						
<b>Paullinia cupana KUNTH ex H.B.K.</b> , syn. Paullinia cupana H.B.K., Paullinia sorbilis (L.) MART.	Seed	×		×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Neutral monograph</b>			
the clotted milky sap (=dried latex) of plants belonging to the <i>Papaver somniferum</i> species referred to as opium is subject to the provisions of the Narcotic Drugs Act (BtMG) highly toxic ++ (Roth/Daunderer), very toxic Ib (Wink/Wyk)	reduced mental performance, sopor, irregular respiration, anaesthetic muscular relaxation, nausea, vomiting, bradycardia, dizziness, vertigo, tonic-clonic cramps, central paralysis, pulmonary oedema, cerebral oedema, anaphylaxis, acute bilateral loss of hearing, colonic inertia, death by apnoea (Hager, Roth/Daunderer)	Opium alkaloids (e.g. morphine, codeine, papaverine)	
s. BfR statement on opium poppy: <a href="http://www.bfr.bund.de/cd/6279">http://www.bfr.bund.de/cd/6279</a> , <a href="http://www.bfr.bund.de/cd/7409">http://www.bfr.bund.de/cd/7409</a>			
<b>Positive monograph, indications:</b> nervous agitation, <b>standard marketing authorisation:</b> 1619.99.99, <b>WHO monograph:</b> mild sedative for nervous restlessness, insomnia and anxiety. Treatment of gastrointestinal disorders of nervous origin, <b>ESCOP monograph:</b> tenseness, restlessness and irritability with difficulty in falling asleep, <b>HMPC monograph:</b> traditional use; information provided in the literature stating that passion flower contains harmala alkaloids not confirmed in more recent studies. Only traces of harmala alkaloids (below 1 ppm) detected in individual samples. Whether these amounts are sufficient for CNS activity needs to be investigated in in-vivo studies. (Hänsel/Sticher, Hager)	HCN release due to cyanogenic glycosides ( <i>Passiflora incarnata</i> contains at most traces of these compounds (Hager)), release of harmala alkaloids is likely to cause hallucinogenic effects (Wink/Wyk)	cyanogenic glycosides, harmala alkaloids	<b>Commission E:</b> 4–8 g drug/day, equivalent preparations <b>ESCOP, WHO:</b> 0.5–2 g drug, 3–4 times a day
Information provided in the literature stating that passion flower contains harmala alkaloids not confirmed in more recent studies. Only traces of harmala alkaloids (below 1 ppm) detected in individual samples. Whether these amounts are sufficient for CNS activity needs to be investigated in in-vivo studies. (Hänsel/Sticher, Hager)	Release of harmala alkaloids is likely to cause hallucinogenic effects (Wink/Wyk)	Harmala alkaloids	
		Myristicin, furocoumarin	
mildly toxic III (Wink/Wyk), toxic only when abused + (Roth/Daunderer), <b>ESCOP monograph:</b> tonic in cases of fatigue, exhaustion or convalescence, <b>HMPC monograph:</b> traditional use	CNS stimulant, ingestion of higher doses causes poisoning accompanied by headache, vertigo, cardiac palpitation, sleep disturbances, agitation, vomiting, diarrhoea, severe diuresis (Wink/Wyk)	Caffeine, saponins	<b>ESCOP:</b> 1–3 g drug/day, equivalent preparations



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Pausinystalia yohimbe</b> (K. SCHUM.) PIERRE ex BEILLE, syn. <i>Corynanthe yohimbe</i> K. SCHUM.	all plant parts			×		×		
<b>Peganum harmala L.</b>	all plant parts			×		×		
<b>Petasites spp.</b> , e.g. <i>Petasites hybridus</i> (L.) GAERTN., MEY. et SCHERB.	all plant parts			×		×		
<b>Petroselinum crispum (MILL.)</b> NYM. ex A.W. HILL., syn. <i>Apium hortense</i> E.H.L. KRAUSE, <i>Apium petroselinum</i> L., <i>Apium vulgare</i> LAM., <i>Carum petroselinum</i> BENTH. et HOOK.	Seed	× T					×	
<b>Petroselinum crispum (MILL.)</b> NYM. ex A.W. HILL., syn. <i>Apium hortense</i> E.H.L. KRAUSE, <i>Apium petroselinum</i> L., <i>Apium vulgare</i> LAM., <i>Carum petroselinum</i> BENTH. et HOOK.	Herb	× S		×			×	
<b>Petroselinum crispum (MILL.)</b> NYM. ex A.W. HILL., syn. <i>Apium hortense</i> E.H.L. KRAUSE, <i>Apium petroselinum</i> L., <i>Apium vulgare</i> LAM., <i>Carum petroselinum</i> BENTH. et HOOK.	Root	×		×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Negative monograph:</b> due to risks associated with Yohimbe bark, Yohimbe pharmacy-only, yohimbic acid and its esters prescription-only, very toxic Ib (Wink/Wyk), highly toxic ++ (Roth/Daunderer) s. BfR statement: <a href="http://www.bfr.bund.de/cm/350/risikobewertung-von-pflanzen-und-pflanzlichen-zubereitungen.pdf">http://www.bfr.bund.de/cm/350/risikobewertung-von-pflanzen-und-pflanzlichen-zubereitungen.pdf</a>	Vertigo, hypersalivation, faintness, cold spills, sweats, nervous excitement, cardiac palpitation, insomnia, gastric complaints, headache, gastrointestinal complaints, increase in blood pressure and tachycardia, tremor, irritability (Hager)	Alkaloids (e.g. yohimbine)	
<b>WHO monograph:</b> treatment of different forms of myasthenia, myopathy and atony of the bowels, highly toxic ++ (Roth/Daunderer), very toxic Ib (Wink/Wyk)	psychotropic, hallucinogenic, hypersalivation, vomiting, muscular tremor (Hager, Wink/Wyk, Roth/Daunderer)	Indole alkaloids (e.g. harmine, harmaline), quinazoline alkaloids	<b>WHO monograph:</b> a teaspoon of the preparation of a teaspoon of drug in one cup of water, 3–4 times a day
<b>Positive monograph:</b> for <i>Petasites hybridus</i> rhizoma (butterbur rootstock), <b>indications:</b> adjuvant treatment of acute cramps in the lower urinary tract, <b>Negative monograph:</b> due to risks associated with <i>Petasites hybridus</i> folium (butterbur leaves), classification of <i>Petasitidis folium</i> as substance of concern (AMK), BfArM graduated plan of 5 June 1992 concerning medicinal products containing pyrrolizidine alkaloids, toxic + (Roth/Daunderer), mildly toxic II to toxic III (Wink/Wyk)	All plant parts of butterbur contain varying amounts of hepatotoxic pyrrolizidine alkaloids, which demonstrated a mutagenic and carcinogenic effect in animal experiments (Schilcher)	Pyrrolizidine alkaloids	<b>Commission E:</b> 4.5–7 g drug/day
<b>Negative monograph:</b> due to risks, Roth/Daunderer: hardly toxic (+), mildly toxic III (Wink/Wyk)	In high doses, the essential oil in parsley seeds and the phenyl propanoid derivative apiol contained in it induce vascular congestions and enhance the contractility of the smooth muscles of the bladder, the intestines and especially the uterus. Parsley seeds and parsley oil therefore formerly used as aborticide; irritation, damage to renal epithelial tissues and cardiac arrhythmia reported, higher doses of apiol in parsley may cause fatty liver disease, emaciation, bloody stool, profuse haemorrhage of mucous membranes and haemorrhagic-inflammatory infiltrations in the gastrointestinal tract, haemolysis, methaemoglobinuria and anuria (Commission E monograph). Toxic effects are not expected in usual doses (Roth/Daunderer), phototoxic	Furocoumarins, phenyl propanoids (e.g. myristicin, apiol)	
<b>Positive monograph, indications:</b> irrigation therapy of diseases of the lower urinary tract and kidney gravel, Roth/Daunderer: hardly toxic (+), mildly toxic III (Wink/Wyk)	like seeds, but lower essential oil content, phototoxic	Furocoumarins, phenyl propanoids (e.g. myristicin, apiol)	<b>Commission E:</b> 6 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> irrigation therapy of diseases of the lower urinary tract and kidney gravel, Roth/Daunderer: hardly toxic (+), mildly toxic III (Wink/Wyk)	like seeds, but lower essential oil content, phototoxic	Furocoumarins, phenyl propanoids (e.g. myristicin, apiol)	<b>Commission E:</b> 6 g drug/day, equivalent preparations

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Peumus boldus</b> MOL., syn. <i>Peumus fragrans</i> PERS., <i>Boldea fragrans</i> JUSS., <i>Boldea fragrans</i> C. GAY	Leaf			×	×	×		
<b>Pfafia paniculata</b> (MART.) KUNTZE	Root		Not NFS					×
<b>Phaseolus vulgaris</b> L., syn. <i>Phaseolus nanus</i> L.	Pod	× b		×			×	
<b>Phaseolus vulgaris</b> L., syn. <i>Phaseolus nanus</i> L.	Seed	× b						
<b>Phoenix dactylifera</b> L.	Fruit	×						
<b>Phyllanthus emblica</b> L., <i>Emblica officinalis</i> GAERTN., <i>Phyllanthus mairei</i> LÉV.	Fruit		Not NFS					×
<b>Physostigma venenosum</b> BALFOUR	Seed			×		×		
<b>Phytolacca americana</b> L., syn. <i>Phytolacca decandra</i> L., <i>Phytolacca vulgaris</i> CRANTZ.	Fruit					×		
<b>Picea abies</b> (L.) KARSTEN, syn. <i>Abies excelsa</i> LAM. et DC., <i>Abies picea</i> MILLER, <i>Pinus abies</i> L.	Shoot (tip)	× T		×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> mild gastrointestinal cramps, digestive problems, <b>standard marketing authorisation:</b> 2329.99.99, <b>ESCOP monograph:</b> minor hepatobiliary dysfunction, symptomatic treatment of mild digestive disturbances, <b>HMPC monograph:</b> traditional use, toxic II (Wink/Wyk), toxic + (Roth/Daunderer)	neurotoxic effect observed, ingestion of higher doses causes paralysis, hallucinations and CNS disorders (Wink/Wyk), contraindications: occlusion of biliary tract, severe liver diseases, pregnancy (because of ascaridole content). In case of gallstones, use only after consultation with a physician. (Commission E monograph)	Alkaloids (e.g. boldine), monoterpenes (e.g. ascaridole)	<b>Commission E:</b> average daily dose: 3.0 g drug, equivalent preparations <b>ESCOP:</b> 2–5 g drug/day
<b>Positive monograph, indications:</b> slightly diuretic, <b>standard marketing authorisation:</b> 8499.99.99; in unprocessed form mildly toxic II to toxic III (Wink/Wyk), highly toxic ++ (Roth/Daunderer), heat thoroughly before consumption, <b>HMPC monograph:</b> traditional use	Seeds and pods contain lectin (“phasin”). Since phasin is a protein, it is destroyed by cooking, but not by drying. Symptoms usually occur after 2 to 3 hours. The severity of the disease varies from case to case. Symptoms include nausea, abdominal pain and vomiting, gastroenteritis and cramps. May be accompanied by bloody diarrhoea. Besides fever, shivering and sweats, convulsive fits and shock may occur. (Bonn Poison Control Centre)	Lectin (“phasin”)	<b>Commission E:</b> 5–15 g drug/day, equivalent preparations
in unprocessed form mildly toxic II to toxic III, highly toxic ++ (Roth/Daunderer), heat thoroughly before consumption	Seeds and pods contain lectin (“phasin”). Since phasin is a protein, it is destroyed by cooking, but not by drying. Symptoms usually occur after 2 to 3 hours. The severity of the disease varies from case to case. Symptoms include nausea, abdominal pain and vomiting, gastroenteritis and cramps. May be accompanied by bloody diarrhoea. Besides fever, shivering and sweats, convulsive fits and shock may occur. (Bonn Poison Control Centre)	Lectin (“phasin”)	
poisonous plant, extremely toxic (Roth/Daunderer), extremely toxic (Wink/Wyk), physostigmine prescription-only, Physostigma species pharmacy-only	Paraesthesia, inflammation of mucous membranes, tremor, tachycardia, persistent vertigo, death by cardioplegia and respiratory arrest (Wink/Wyk)	Alkaloids (e.g. physostigmine)	
toxic + (Roth/Daunderer), toxic II (Wink/Wyk)	Nausea, vomiting, diarrhoea, abdominal pain, colic, headache, circulatory distress, abortion may occur, fatal poisoning possible (Wink/Wyk, Roth/Daunderer)	Lectins, triterpene saponins	
<b>Positive monograph, indications:</b> catarrhs of the respiratory tract			<b>Commission E:</b> 5–6 g drug/day

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Pilocarpus jaborandi</b> HOLMES, syn. <i>Pilocarpus cearensis</i> RIZZINI, <i>Pilocarpus officinalis</i> POEHL	Leaf			×		×		
<b>Pimenta officinalis</b> LINDL., syn. <i>Pimenta officinalis</i> BERG, <i>Pimenta vulgaris</i> LINDL., <i>Eugenia pimenta</i> DC., <i>Myrtus pimenta</i> L., <i>Pimenta dioica</i> (L.) MERR.	Fruit	× S						
<b>Pimpinella anisum</b> L., syn. <i>Anisum vulgare</i> GAERTN.	Fruit	× T, S		×	×		×	
<b>Pimpinella major</b> (L.) HUDS., syn. <i>Apium pimpinella</i> CARUEL	Herb	× S						
<b>Pimpinella major</b> (L.) HUDS., syn. <i>Apium pimpinella</i> CARUEL	Root	× T,S		×	×		×	
<b>Pimpinella saxifraga</b> L., syn. <i>Pimpinella alpestris</i> SPRENG.	Herb	× S						
<b>Pimpinella saxifraga</b> L., syn. <i>Pimpinella alpestris</i> SPRENG.	Root	× T,S		×	×		×	
<b>Pinus mugo</b> TURRA, syn. <i>Pinus echinata</i> HORT., <i>Pinus montana</i> MILLER	Shoot (tip)	× T						
<b>Pinus sylvestris</b> L., syn. <i>Pinus nigra</i> MILL.	Shoot (tip)	× T		×			×	
<b>Piper cubeba</b> L.f., syn. <i>Cubeba officinalis</i> RAF.	Fruit	× S					×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
Pilocarpine prescription-only, Pilocarpus species pharmacy-only, extremely toxic (Roth/Daunderer), very toxic (Wink/Wyk), substance of concern (AMK)	parasympathomimetic effect, hypersalivation, sweating, visual disturbances, vomiting, diarrhoea, uterus contractions, abortion, bradycardia, cardiac palpitation, convulsions, tremor, dyspnoea, arrhythmia, vesical tenesmus, headache, vertigo, death by cardiac arrest, leucocytosis (Wink/Wyk, Roth/Daunderer)	Imidazole alkaloids (e.g. pilocarpine)	
<b>Positive monograph, indications:</b> digestive problems, catarrhs of the respiratory tract, <b>standard marketing authorisation:</b> 8099.99.99, <b>WHO monograph (fruit and oil):</b> treatment of dyspepsia and mild inflammation of the respiratory tract, <b>ESCOP monograph:</b> dyspeptic complaints such as mild spasmodic gastrointestinal complaints, bloating, flatulence, catarrh of the upper respiratory tract, <b>HMPC monograph:</b> traditional use	allergic reactions of skin, respiratory tract and gastrointestinal tract occur occasionally (Commission E monograph)	Trans-anethole, furocoumarins, estragole (=methyl chavicol)	<b>Commission E, ESCOP, WHO:</b> 3 g drug/day, equivalent preparations
<b>Neutral monograph</b>	phototoxic (Hager)	Furocoumarins	
<b>Positive monograph, indications:</b> catarrhs of the upper respiratory tract	phototoxic (Hager)	Furocoumarins	<b>Commission E:</b> 6–12 g drug/day, equivalent preparations
<b>Neutral monograph</b>	phototoxic (Hager)	Furocoumarins	
<b>Positive monograph, indications:</b> catarrhs of the upper respiratory tract	phototoxic (Hager)	Furocoumarins	<b>Commission E:</b> 6–12 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> catarrhs of the upper respiratory tract			<b>Commission E:</b> 2–3 g drug/day, equivalent preparations
toxic II (Wink/Wyk), toxic + (Roth/Daunderer)	Ingestion of higher doses causes painful urinary tract inflammations, pain in kidneys and bladder, albuminuria, tachycardia, nausea, vomiting, diarrhoea, CNS disorders, spasmodic urinary retention, accelerated pulse, cardialgia, diarrhoea and skin rash (Wink/Wyk, Roth/Daunderer)	Cubebin, cubebic acid	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Piper methysticum</b> G. FORST., syn. <i>Macropiper latifolium</i> MIQ.	Rhizome			×		×		
<b>Piper nigrum</b> L., syn. <i>Muldera multinervis</i> MIQ., <i>Piper aromaticum</i> LAM., <i>Piper trioicum</i> ROXB.	Fruit	× S						
<b>Piscidia erythrina</b> L., syn. <i>Comp-tosema pinnatum</i> BENTH., <i>Piscidia piscipula</i> (L.) SARG.	Root cortex					×		
<b>Pistacia vera</b> L., syn. <i>Pistacia narbonensis</i> L., <i>Pistacia nigricans</i> CRANTZ, <i>Pistacia officinarum</i> AITON	Seed	×						
<b>Pisum sativum</b> L.	Seed	×						
<b>Plantago lanceolata</b> L., <i>Arnoglossum lanceolatum</i> (L.) GRAY, <i>Plantago flexuosa</i> GAUD ex RAPIN, <i>Plantago lanceifolia</i> SALISB.	Herb	× T		×	×		×	
<b>Plantago major</b> L., syn. <i>Plantago asiata</i> L., <i>Plantago latifolia</i> SALISB.	Herb		Not NFS	×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<p>withdrawal of marketing authorisation due to risks following the graduated plan procedure (BfArM notification of 21 Dec 2007: <a href="http://www.bfarm.de/DE/Pharmakovigilanz/risikoinfo/stufenplanverf/Liste/stp-kavakava.html;jsessionid=7AF6D40DED621345B74BFDC9AD51_cid332">http://www.bfarm.de/DE/Pharmakovigilanz/risikoinfo/stufenplanverf/Liste/stp-kavakava.html;jsessionid=7AF6D40DED621345B74BFDC9AD51_cid332</a>), <b>Positive monograph, indications:</b> states of nervous anxiety, stress and agitation, <b>WHO monograph:</b> short-term symptomatic treatment of mild states of anxiety or insomnia, due to nervousness, stress or tension, <b>ESCOP monograph:</b> anxiety, tension and restlessness arising from various causes of non-psychotic origin, substance of concern (AMK): kava-kava and kavain, toxic + (Roth/Daunderer), mildly toxic (Wink/Wyk)</p>	<p>severe hepatotoxic reactions (Wink/Wyk, Roth/Daunderer, BfArM notification on graduated plan)</p>	<p>Kavapyrones (e.g. kavain)</p>	<p><b>ESCOP:</b> equivalent to 60–120 mg kavalactones/day, (no data available for children) <b>WHO:</b> 60–210 mg kavapyrones/day</p>
<p>Black pepper: dried, unripe fruit White pepper: ripe fruit without fruit pulp Green pepper: air-dried, freeze-dried, deep-frozen or pickled unripe fruit Pink pepper: fully ripe fruit (Teuscher)</p>			
<p>toxic + (Roth/Daunderer), very toxic Ib (Wink/Wyk)</p>	<p>Vomiting, hypersalivation, sweats, dizziness and tremor, first enhanced then depressed respiration, central paralysis, cardioplegia, used as fish and arrow poison (Wink/Wyk)</p>	<p>Isoflavones (jamaicin, mune-tone, ichthynone, rotenone)</p>	
<p><b>Positive monograph, indications:</b> catarrhs of the respiratory tract, inflammatory changes of the oral and pharyngeal mucosa, <b>standard marketing authorisation:</b> 1289.99.99, <b>ESCOP monograph:</b> catarrhs of the respiratory tract, temporary, mild inflammations of the oral and pharyngeal mucosa, <b>HMPC monograph:</b> traditional use</p>			<p><b>ESCOP, Commission E:</b> 3–6 g drug/day, equivalent preparations <b>WHO monograph:</b> 2–4 g drug, 3 times a day</p>
<p>WHO monograph, indications: catarrh of the respiratory tract, cough, bronchitis, inflammatory alterations of the oral mucosa, phlegm congestion, nephritis, cystitis, urinary retention, dysentery, epistaxis (nosebleed) and excessive diaphoresis (49, 50). It is also used for the treatment of diarrhoea and constipation</p>			



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<i>Plantago ovata</i> FORSSKAL, syn. <i>Plantago isphagula</i> ROXB. ex FLEMMING, <i>Plantago brunnea</i> MORRIS	Seed husk	×		×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<p>higher swelling number than psyllium seeds, risk of intestinal occlusion after overdose, Positive monograph, indications: habitual constipation, conditions in which easy defaecation is desirable, e.g. anal fissures, haemorrhoids, after rectal-anal surgical procedures and during pregnancy, adjuvant treatment of diarrhoea of various origins as well as irritable bowel, <b>WHO monograph:</b> a bulk-forming laxative used therapeutically for restoring and maintaining bowel regularity, treatment of chronic constipation, temporary constipation due to illness or pregnancy, irritable bowel syndrome and constipation related to duodenal ulcer or diverticulitis, also indicated for stool softening in the case of haemorrhoids, or after anorectal surgery, short-term use for the symptomatic treatment of diarrhoea of various etiologies, <b>ESCAP monograph:</b> treatment of occasional constipation, conditions in which easy defecation with soft stools desirable, e.g. in cases of anal fissures or haemorrhoids, after rectal or anal surgery, and during pregnancy; conditions which need an increased daily intake of fibre, e.g. irritable bowel syndrome, adjuvant symptomatic therapy in cases of diarrhoea from various causes, as an adjunct to a low fat diet in the treatment of mild to moderate hypercholesterolaemia, <b>HMPC monograph:</b> habitual constipation; in conditions in which easy defaecation with soft stool is desirable, e.g. in cases of painful defaecation after rectal or anal surgery, anal fissures and haemorrhoids; in patients to whom an increased daily fibre intake may be advisable e.g. as an adjuvant in constipation predominant irritable bowel syndrome, as adjuvant to diet in hypercholesterolemia</p>	<p>Side effects: hypersensitivity reactions may occur in individual cases, contraindications: pathologic stenosis of gastrointestinal tract, imminent or existing intestinal occlusion (ileus), difficult-to-control diabetes mellitus (Commission E monograph), oesophageal occlusion or obstruction up to intestinal occlusion may occur on improper use (HMPC monograph)</p>		<p><b>Commission E, ESCOP:</b> 4–20 g drug/day, equivalent preparations (children!)  <b>HMPC:</b> 7–20 g drug/day, equivalent preparations, special doses for children</p>

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Plantago ovata FORSSKAL</b> , syn. <i>Plantago isphagula</i> ROXB. ex FLEMMING, <i>Plantago brunnea</i> MORRIS	Seed	×		×			×	
<b>Plantago psyllium L.</b> , syn. <i>Plantago</i> <i>afra</i> L., <i>Plantago</i> (L.) MIRB.	Seed	×		×			×	
<b>Podophyllum peltatum L.</b>	Root, resin			×		×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<p><b>Positive monograph, indications:</b> habitual constipation, conditions in which easy defaecation is desirable, e.g. anal fissures, haemorrhoids, after rectal-anal surgical procedures and during pregnancy, adjuvant treatment of diarrhoea of various origins as well as irritable bowel, <b>standard marketing authorisation:</b> 1549.99.99, <b>WHO monograph:</b> as a bulk-forming laxative used to restore and maintain regularity, Semen Plantaginis is indicated in the treatment of chronic constipation, temporary constipation due to illness or pregnancy, irritable bowel syndrome, constipation related to duodenal ulcer or diverticulitis. It is also used to soften the stools of those with haemorrhoids, or after anorectal surgery, traditional use, <b>ESCOPE monograph:</b> treatment of occasional constipation, conditions in which easy defecation with soft stools desirable, e.g. in cases of anal fissures or haemorrhoids, after rectal or anal surgery, and during pregnancy; conditions which need an increased daily intake of fibre, e.g. irritable bowel syndrome, adjuvant symptomatic therapy in cases of diarrhoea from various causes, <b>HMPC monograph:</b> treatment of habitual constipation. In conditions in which easy defaecation with soft stool is desirable, e.g. in cases of painful defaecation after rectal or anal surgery, anal fissures and haemorrhoids.</p>	<p>allergic reactions observed in rare cases, especially with comminuted drug and liquid preparations (Commission E monograph), oesophageal occlusion or obstruction up to intestinal occlusion may occur on improper use (HMPC monograph)</p>		<p><b>Commission E:</b> 12–40 g drug/day, equivalent preparations  <b>ESCOPE:</b> 7–30 g/day, equivalent preparations, special doses for children and for the indication of hypercholesterolaemia  <b>WHO:</b> 7.5 g drug in 240 ml water, 1–3 times a day, special doses for children  <b>HMPC:</b> 8–40 g drug/day, equivalent preparations, special doses for children</p>
<p><b>Positive monograph, indications:</b> habitual constipation, irritable colon, <b>standard marketing authorisation:</b> 1509.99.99, <b>WHO monograph:</b> as a bulk-forming laxative used to restore and maintain regularity, Semen Plantaginis is indicated in the treatment of chronic constipation, temporary constipation due to illness or pregnancy, irritable bowel syndrome, constipation related to duodenal ulcer or diverticulitis, it is also used to soften the stools of those with haemorrhoids, or after anorectal surgery, <b>ESCOPE monograph:</b> treatment of occasional constipation, conditions in which easy defecation with soft stools desirable, e.g. in cases of anal fissures or haemorrhoids, after rectal or anal surgery, and during pregnancy, adjuvant symptomatic therapy in cases of diarrhoea from various causes, <b>HMPC monograph:</b> treatment of habitual constipation, in conditions in which easy defecation with soft stool is desirable, e.g. in cases of painful defecation after rectal or anal surgery, anal fissures and haemorrhoids.</p>	<p>Contraindications: oesophageal and gastrointestinal stenosis, side effects: allergic reactions observed in rare cases, especially with comminuted drug (Commission E monograph), oesophageal occlusion or obstruction up to intestinal occlusion may occur on improper use (HMPC monograph)</p>		<p><b>Commission E, ESCOPE:</b> 10–30 g drug/day, equivalent preparations (special doses for children)  <b>WHO:</b> 7.5 g drug in 240 ml water, 1–3 times a day, special doses for children  <b>HMPC:</b> 25–40 g drug/day, equivalent preparations, special doses for children</p>
<p><b>Positive monograph</b> for external use, also toxic when used externally, root and preparations thereof as well as various substances of <i>P. peltatum</i> prescription-only, use as vermifuge, laxative and diuretic reported (Roth/Daunderer), very toxic Ib (Wink/Wyk), toxic + to highly toxic ++ (Roth/Daunderer)</p>	<p>Plant cytostatic, strong mitotic poison, haemorrhagic gastroenteritis, bloody watery diarrhoea, impaired coordination, cramps, tachycardiac arrhythmia, paraesthesia, nephritis, coma, death by apnoea (Roth/Daunderer)</p>	<p>Podophyllin, lignans (e.g. podophyllotoxin, peltatin)</p>	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Pogostemon patchouly</b> PELLET., syn. <i>Pogostemon cablin</i> (BLANCO) BENTH., <i>Pogostemon intermedium</i> BENTH.	Leaf		Not NFS					×
<b>Polygala senega</b> L.	Root	× T		×	×		×	
<b>Polygonatum multiflorum</b> (L.) ALL., syn. <i>Convallaria multiflora</i> L.	all plant parts					×		
<b>Polygonum aviculare</b> L., syn. <i>Polygonum heterophyllum</i> LINDM.	Herb	× T		×			×	
<b>Potentilla anserina</b> L., syn. <i>Argentina anserina</i> RYDBERG, <i>Argentina vulgaris</i> LAM., <i>Dactylophyllum anserina</i> SPENNER	Herb	× T		×			×	
<b>Potentilla erecta</b> (L.) RÄUSCHEL, syn. <i>Potentilla tormentilla</i> NECKER, <i>Potentilla tormentilla</i> SCHRANK, <i>Potentilla tormentilla</i> STOKES, <i>Tormentilla erecta</i> L., <i>Tormentilla officinalis</i> CURT.	Rhizome	× F		×	×		×	
<b>Primula elatior</b> (L.) HILL, <i>Primula veris</i> L.	Flower	× C		×	×		×	
<b>Primula veris</b> L., syn. <i>Primula coronaria</i> SALISB. <i>Primula montana</i> REUT., <i>Primula odorata</i> GILIB. and <i>Primula elatior</i> (L.) HILL	Root	× T		×	×		×	
<b>Prunus amygdalus var. sativa</b> (L.) FOCKE, syn. <i>Amygdalus communis</i> L. var. <i>dulcis</i> DC.	Flower		Not NFS					×
<b>Prunus amygdalus var. sativa</b> (L.) FOCKE, syn. <i>Amygdalus communis</i> L. var. <i>dulcis</i> DC.	Seed	×						
<b>Prunus amygdalus BATSCH var. amara</b> (DC.) FOCKE	Seed	× F					×	
<b>Prunus armeniaca</b> L., syn. <i>Armeniaca vulgaris</i> LAM.	Fruit	×						

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> catarrhs of the upper respiratory tract, <b>ESCOP monograph:</b> productive cough, catarrh of the respiratory tract, chronic bronchitis, <b>WHO monograph:</b> traditional use	contains saponins, long-term use causes gastrointestinal irritation (Commission E monograph)		<b>Commission E, ESCOP, WHO:</b> 1.5–3 g drug/day, equivalent preparations, administration to children only under medical supervision
toxic + (Roth/Daudeker), mildly toxic II to toxic III (Wink/Wyk)	Nausea, diarrhoea, vomiting, used as emetic in traditional Russian medicine (Roth/Daudeker)	steroidal saponins	
<b>Positive monograph, indications:</b> mild catarrhs of the respiratory tract, inflammatory changes of the oral and pharyngeal mucosa, <b>WHO monograph:</b> supportive treatment of gingivitis, used for the relief of cough and cold symptoms			<b>Commission E, WHO monograph:</b> 4–6 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> mild dysmenorrhoea, adjuvant treatment of mild, non-specific, acute forms of diarrhoea, mild inflammations of the oral and pharyngeal mucosa, <b>standard marketing authorisation:</b> 9599.99.99	Symptoms of irritable stomach may be aggravated (Commission E monograph)		<b>Commission E:</b> 4–6 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> non-specific, acute forms of diarrhoea, mild inflammations of the oral and pharyngeal mucosa, <b>HMPC monograph:</b> traditional use, s. BfR statement: <a href="http://www.bfr.bund.de/cm/350/risikobewertung-von-pflanzen-und-pflanzlichen-zubereitungen.pdf">http://www.bfr.bund.de/cm/350/risikobewertung-von-pflanzen-und-pflanzlichen-zubereitungen.pdf</a>	Sensitive patients may experience gastric complaints (Commission E monograph)		<b>Commission E:</b> 4–6 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> catarrhs of the respiratory tract, <b>WHO monograph:</b> traditional use, <b>standard marketing authorisation:</b> 1659.99.99, <b>HMPC monograph:</b> traditional use	gastric complaints and nausea observed in rare cases, contraindications reported (Commission E monograph)		<b>Commission E:</b> 2–4 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> catarrhs of the respiratory tract, <b>standard marketing authorisation:</b> 2389.99.99, <b>ESCOP monograph:</b> productive cough, catarrh of the respiratory tract, chronic bronchitis, <b>HMPC monograph:</b> traditional use, mildly toxic III (Wink/Wyk)	Side effects: gastric complaints and nausea observed in rare cases, contraindications reported (Commission E monograph)	Saponins	<b>Commission E, ESCOP:</b> 0.5–1 g (5–10 g) drug/day, equivalent preparations
Guidelines for oils seeds as well as mixtures and sweets produced thereof laid down in the German Food Code			
Guidelines for oils seeds as well as mixtures and sweets produced thereof laid down in the German Food Code: Almonds may contain up to 5 wt% bitter almonds, very toxic Ib (Wink/Wyk), toxic + to highly toxic ++ (Roth/Daudeker)	Hydrocyanic acid (HCN) may be released on ingestion, HCN is a strong respiratory inhibitor, ingestion of higher doses causes burning in the throat, sweating, abdominal pain, vomiting, facial blush, hypersalivation, convulsions, respiratory and cardiac arrest (Wink/Wyk)	cyanogenic glycosides (e.g. amygdalin)	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Prunus armeniaca L.</b> , syn. <i>Armeniaca vulgaris</i> LAM.	Seed	×		×			×	
<b>Prunus avium L.</b>	Fruit	×						
<b>Prunus avium L.</b>	Stalk		Not NFS					×
<b>Prunus cerasus L.</b> , <i>Cerasus vulgaris</i> MILL., <i>Cerasus caproniana</i> DC., <i>Prunus caproniana</i> GAUD., <i>Druparia cerasus</i> CLAIRV.	Fruit	×						
<b>Prunus cerasus L.</b> , <i>Cerasus vulgaris</i> MILL., <i>Cerasus caproniana</i> DC., <i>Prunus caproniana</i> GAUD., <i>Druparia cerasus</i> CLAIRV.	Stalk		Not NFS					×
<b>Prunus domestica L.</b> , syn. <i>Prunus communis</i> HUDS. Non ARCANG., <i>Prunus sativa</i> ROUY et CAMUS	Fruit	×						
<b>Prunus persica (L.) SIEB. et ZUCC.</b> , syn. <i>Persica vulgaris</i> MILL., <i>Amygdalus persica</i> L.	Fruit	×						
<b>Prunus spinosa L.</b> , syn. <i>Druparia spinosa</i> CLAIRV.	Flower	× T						
<b>Prunus spinosa L.</b> , syn. <i>Druparia spinosa</i> CLAIRV.	Fruit	×						
<b>Psidium guajava L.</b>	Fruit	×						
<b>Psidium guajava L.</b>	Leaf		Not NFS	×			×	
<b>Psychotria viridis RUIZ et PAV.</b>	all plant parts					×		
<b>Pteridium aquilinum (L.) KUHN</b> , syn. <i>Pteris aquilina</i> L., <i>Asplenium aquilinum (L.) BERNH.</i>	all plant parts					×		
<b>Pterocarpus santalinus L.f.</b> , syn. <i>Lingoum santalinum (L.f.) KUNTZE.</i>	Wood	× S, T						
<b>Ptychopetalum olacoides BENTH.</b>	Wood		Not NFS					×
<b>Pueraria lobata (WILLD.) OHWI</b> , syn. <i>Pueraria thunbergiana</i> (SIEB. et ZUCC.) BENTH., <i>Pueraria hirsuta</i> (THUNB.) SCHNEID. non KURZ, <i>Dolichos japonicus</i> HORT.	Root	×						

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>WHO monograph:</b> symptomatic treatment of asthma, cough with profuse expectoration and fever. The seed oil is used for treatment of constipation; Guidelines for oils seeds as well as mixtures and sweets produced thereof: <a href="http://www.bmelv.de/SharedDocs/Downloads/Ernaehrung/Lebensmittelbuch/LeitsaetzeOelsamen.pdf?__blob=publicationFile">http://www.bmelv.de/SharedDocs/Downloads/Ernaehrung/Lebensmittelbuch/LeitsaetzeOelsamen.pdf?__blob=publicationFile</a>	Bitter apricot kernels have a high cyanogenic glycoside content, e.g. amygdalin, which breaks down to hydrogen cyanide during digestion, symptoms of acute poisoning include e.g. cramps, vomiting, dyspnoea, culminating in death by apnoea (BfR, FSA)	cyanogenic glycosides	<b>WHO:</b> 3–9 g drug/day, no administration to children
<b>Neutral monograph</b>			
<b>Positive monograph:</b> for external use (mouth-wash)			<b>Commission E:</b> 2–4 g drug/day, equivalent preparations
<b>WHO monograph:</b> acute diarrhoea, gingivitis, rotaviral enteritis			<b>WHO:</b> 500 mg drug, 3–4 times a day, no administration to children under the age of 12
mildly toxic III (Wink/Wyk), used together with Banisteriopsis caapi to produce ayahuasca, a narcotic, DMT is subject to the provisions of the BtMG	psychotropic, hallucinogenic (Wink/Wyk)	Tryptamine alkaloids (e.g. N,N-dimethyl-tryptamine=DMT)	
all plant parts very toxic Ib (Wink/Wyk), toxic + (Roth/Daunderer)	Increased incidence of gastric and oesophageal carcinoma reported (Frohne/Pfänder), ptaquiloside contained in the drug is highly mutagenic and causes stomach and bladder cancer, thiaminase contained in the drug destroys vitamin B1 (Wink/Wyk)	Ptaquiloside, thiaminase, cyanogenic glycosides	
<b>Neutral monograph</b>			
<b>Neutral monograph</b>			
		Isoflavones	



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Pulsatilla pratensis (L.) MILL.</b> , syn. <i>Anemone intermedia</i> SCHULT., <i>Anemona pratensis</i> L., <i>Pulsatilla breynii</i> RUPR.	all plant parts			×		×		
<b>Pulsatilla vulgaris</b> MILL., syn. <i>Anemona pulsatilla</i> L.	all plant parts			×		×		
<b>Punica granatum L.</b> , syn. <i>Granatum punicum</i> ST. LAG., <i>Punica florida</i> SALISB.	Fruit	×						
<b>Punica granatum L.</b> , syn. <i>Granatum punicum</i> ST. LAG., <i>Punica florida</i> SALISB.	Peel		Not NFS	×			×	
<b>Punica granatum L.</b> , syn. <i>Granatum punicum</i> ST. LAG., <i>Punica florida</i> SALISB.	Bark		×	×				
<b>Pyrus communis L.</b>	Fruit	×						
<b>Quassia amara L.</b> , syn. <i>Quassia alatifolia</i> STOKES, <i>Quassia cocea</i> VAHL, <i>Quassia gujanensis</i> D. DIETR.	Wood	×	F				×	
<b>Quercus robur L.</b> , syn. <i>Quercus femina</i> MILL., <i>Quercus fructipendula</i> SCHRANK, <i>Quercus germanica</i> LASCH	Bark	×	T	×	×		×	
<b>Quillaja saponaria MOLINA</b> , syn. <i>Quillaja molinae</i> DC.	Bark		Not NFS					×
<b>Raphanus sativus L.</b> , syn. <i>Raphanus officinalis</i> CRANTZ, <i>Raphanus raphanistrum</i> var. <i>sativus</i> BECK	Root	×		×			×	
<b>Rauvolfia serpentina (L.) BENTH. ex KURZ</b> , syn. <i>Ophioxylon obversum</i> MIQ., <i>Rauvolfia observa</i> (MIQ.) BAILL., <i>Rauvolfia trifoliata</i> (GAERTN.) BAILL.	Root			×		×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Negative monograph:</b> due to risks, Pulsatillae herba and preparations thereof prescription-only, pasque flower pharmacy-only, toxic + (Roth/Daunderer) toxic Ib to very toxic II (Wink/Wyk)	central paralysis, gastrointestinal complaints (nausea, vomiting, diarrhoea), irritation of mucous membranes, irritation of kidneys and lower urinary tract (Wink/Wyk, Roth/Daunderer), protoanemonin contained in the drug has an abortifacient and teratogenic effect (Schilcher)	Protoanemonin, saponins	
<b>Negative monograph:</b> due to risks, Pulsatillae herba and preparations thereof prescription-only, pasque flower pharmacy-only, toxic + (Roth/Daunderer) toxic Ib to very toxic II (Wink/Wyk)	central paralysis, gastrointestinal complaints (nausea, vomiting, diarrhoea), irritation of mucous membranes, irritation of kidneys and lower urinary tract (Wink/Wyk, Roth/Daunderer), protoanemonin contained in the drug has an abortifacient and teratogenic effect (Schilcher)	Protoanemonin, saponins	
<b>WHO monograph</b> for bark and pericarp: chronic diarrhoea, dysentery, gingivitis and intestinal parasites			<b>WHO:</b> pericarp 2.5–4.6 g/day, no administration to children under the age of 12
<b>WHO monograph</b> for bark and pericarp: diarrhoea, intestinal parasites	Ingestion of higher doses (more than 80 g) may cause nausea, diarrhoea, haemorrhage, vertigo, fever, tremor, circulatory collapse, visual disturbances (WHO monograph)		<b>WHO:</b> cortex (3–9 g drug/day), no administration to children under the age of 12
mildly toxic II to toxic III (Wink/Wyk), slightly toxic + (Roth/Daunderer), use as flavouring governed by Reg. (EC) No. 1334/2008	Ingestion of high doses causes digestive problems and CNS disorders (Wink/Wyk), gastric irritation, vomiting, contraindicated in pregnancy (Roth/Daunderer)	Quassin	
<b>Positive monograph, indications:</b> external use: inflammatory skin diseases, internal use: non-specific, acute forms of diarrhoea, local treatment of mild inflammations in the mouth and throat as well as in the genital and anal region, <b>HMPC monograph:</b> traditional use, <b>standard marketing authorisation:</b> 9099.99.99, mildly toxic (Wink/Wyk), non-toxic or hardly toxic (+) (Roth/Daunderer)	Interactions: absorption of alkaloids and other alkaline medicinal products may be reduced or inhibited (Commission E monograph)		<b>Commission E:</b> 3 g drug/day, equivalent preparations
may be slightly toxic (Roth/Daunderer)	Overdose causes gastrointestinal complaints accompanied by gastric pain and diarrhoea, irritating to mucous membranes (Roth/Daunderer)	Triterpene saponins	
<b>Positive monograph, indications:</b> digestive problems, especially as a result of dyskinesia of the biliary tract, catarrhs of the upper respiratory tract			<b>Commission E:</b> 50–100 ml pressed juice/day
<b>Positive monograph, indications:</b> mild, essential hypertension, <b>WHO monograph:</b> treatment of mild essential hypertension, Rauwolfia alkaloids prescription-only, R. serpentina, R. tetraphylla and R. vomitoria pharmacy-only, highly toxic ++ (Roth/Daunderer), very toxic Ib (Wink/Wyk)	Depression, fatigue, temporary impotence, contraindications and interactions with medicinal products reported (Commission E monograph), arrhythmia, bradycardia up to cardiac arrest, acidosis, shock (Roth/Daunderer)	Indole alkaloids (e.g. reserpine, ajmalin, yohimbine)	<b>Commission E:</b> 600 mg drug, equivalent to 6 mg total alkaloids/day <b>WHO:</b> 200 mg powder/day, average dose = 50–300 mg/day

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Rhamnus catharticus L.</b> , syn. <i>Cervispina cathartica</i> (L.) MOENCH, <i>R. wicklia</i> TEN., <i>Rhamnus wikkor</i> LUCÉ, <i>Rhamnus willdenowiana</i> HORT. ex K. KOCH	Fruit			×		×		
<b>Rhamnus frangula L.</b> , syn. <i>Frangula alnus</i> MILL., <i>Frangula frangula</i> (L.) KARST., <i>Frangula vulgaris</i> BORGH.	Bark			×		×		
<b>Rhamnus purshiana DC.</b> syn. <i>Frangula purshiana</i> (DC.) COOP.	Bark			×		×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<p><b>Positive monograph, indications:</b> short-term treatment of constipation, <b>standard marketing authorisation:</b> 1089.99.99, buckthorn berries and preparations thereof pharmacy-only, BfArM graduated plan of 21 June 1996 concerning medicinal products for human use containing anthranoid-containing plant genera, toxic (Roth/Daunderer), toxic II (Wink/Wyk)</p>	<p>strong laxative, gastrointestinal complaints observed in individual cases, long-term use/abuse causes electrolyte loss (in particular potassium), may be accompanied by muscular asthenia and cardiac dysfunction, albuminuria, haematuria, pseudomelanosis coli, aggravation of colonic inertia (development of laxative addiction) resulting from paralysis of intestinal muscles due to loss of potassium, nausea, vomiting, diarrhoea, renal irritation (Roth/Daunderer), contraindications and interactions reported (Commission E monograph)</p>	<p>Anthranoids</p>	<p><b>Commission E:</b> 20–30 mg hydroxyanthracene derivatives/day, no administration to children under the age of 12</p>
<p><b>Positive monograph</b> for <i>Rhamnus frangula</i>, indications: conditions in which easy defaecation with a soft stool is desirable, e.g. anal fissures, haemorrhoids, after rectal-anal surgical procedures, constipation, <b>standard marketing authorisation:</b> 9399.99.99, <b>WHO monograph:</b> short-term treatment of occasional constipation, as a single dose, for total intestinal evacuation before X-rays and other diagnostic examinations when electrolyte solutions alone are insufficient for adequate evacuation or the use of electrolyte solutions is not possible, <b>ESCOP monograph:</b> short-term treatment of occasional constipation, <b>HMPC monograph:</b> short-term use in cases of occasional constipation, toxic II (Wink/Wyk), BfArM graduated plan of 21 June 1996 concerning medicinal products for human use containing anthranoid-containing plant genera, toxic + (Roth/Daunderer)</p>	<p>gastrointestinal complaints observed in individual cases, long-term use/abuse causes electrolyte loss (in particular potassium), may be accompanied by muscular asthenia and cardiac dysfunction, albuminuria, haematuria, pseudomelanosis coli, aggravation of colonic inertia (development of laxative addiction) resulting from paralysis of intestinal muscles due to loss of potassium, contraindications and interactions reported, nausea, vomiting, bloody diarrhoea, abdominal pain, nephritis, circulatory collapse, assumed to be mutagenic (Commission E monograph)</p>	<p>Anthranoids</p>	<p><b>Commission E, ESCOP:</b> 20–30 mg hydroxyanthracene derivatives/day, calculated as glucofrangulin A <b>WHO:</b> 0.5–2.5 g drug/day, the individually correct dose is the smallest dose required to maintain a soft stool. No administration to children under the age of 10 <b>HMPC:</b> equivalent to 10–30 mg hydroxyanthracene derivatives/day (calculated as glucofrangulin) no administration to children under the age of 12</p>
<p><b>Positive monograph, indications:</b> constipation, colonic inertia, <b>standard marketing authorisation:</b> 8699.99.99, <b>WHO monograph:</b> short-term treatment of occasional constipation, <b>ESCOP monograph:</b> short-term use in cases of occasional constipation, <b>HMPC monograph:</b> short-term use in cases of occasional constipation, toxic II (Wink/Wyk), toxic + (Roth/Daunderer), BfArM graduated plan of 21 June 1996 concerning medicinal products for human use containing anthranoid-containing plant genera</p>	<p>strong laxative, nausea, vomiting, bloody diarrhoea, abdominal pain, nephritis, circulatory collapse, assumed to be mutagenic (Wink/Wyk), gastrointestinal complaints observed in individual cases, long-term abuse causes electrolyte loss, in particular potassium, albuminuria and haematuria, pigment implantation into the intestinal mucosa (pseudomelanosis coli), aggravation of colonic inertia (development of laxative addiction) resulting from paralysis of intestinal muscles due to loss of potassium, contraindications and interactions reported (Commission E processing monograph)</p>	<p>Anthranoids, saponins</p>	<p><b>Commission E:</b> 20–30 mg hydroxyanthracene derivatives/day calculated as cascarioside A <b>ESCOP:</b> 1.5–2 g drug/day, preparations equivalent to 20–30 mg hydroxyanthracene derivatives (calculated as cascarioside A), no administration to children under the age of 10 <b>WHO:</b> 0.3–1 g drug/day <b>HMPC:</b> equivalent to 10–30 mg hydroxyanthracene derivatives/day (calculated as cascarioside A), no administration to children under the age of 12</p>

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Rheum officinale BAILLON</b>	Root	× F		×			×	
<b>Rheum palmatum L.</b> , syn. Rhabarbarum palmatum (L.) MOENCH, Rheum laciniatum PRAIN	Root	× F		×			×	
<b>Rheum rhabarbarum L.</b> , syn. Rheum franzenbachii MÜNT., Rheum muricatum BLANCO, Rheum undulatum L.	Stem	×						
<b>Rhodiola rosea L.</b>	Herb		Not NFS					×
<b>Rhodiola rosea L.</b>	Root		Not NFS		×			×
<b>Rhododendron spp.</b> , (medicinal plant: Rhododendron ferrugineum L, syn. Chamaerhododendron ferrugineum BUBANI)	all plant parts					×		
<b>Rhus aromatica AIT.</b> , syn. Rhus canadensis MARSH. non MILL.	Bark		×					

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> constipation, <b>standard marketing authorisation:</b> 1189.99.99, <b>WHO monograph:</b> short-term treatment of occasional constipation, <b>ESCOP monograph:</b> short-term use in cases of occasional constipation, <b>HMPC monograph:</b> short-term use in cases of occasional constipation, BfArM graduated plan of 21 June 1996 concerning medicinal products for human use containing anthranoid-containing plant genera	contains anthranoids, disturbance of electrolyte balance (in particular potassium), albuminuria, haematuria, reflexory activation of uterus during pregnancy, transfer of aglycones into breast milk, gastrointestinal cramps observed in individual cases, contraindications and interactions reported (Schilcher)	Oxalic acid, anthranoids	<b>Commission E:</b> 20–30 mg hydroxyanthracene derivatives/day, calculated as rhein, 30–120 mg hydroxyanthracene derivatives equivalent to 1.2 to 4.8 g drug <b>ESCOP:</b> equivalent to 15–50 mg hydroxyanthracene derivatives/day (calculated as rhein), no administration to children under the age of 10 <b>WHO:</b> 0.5–1.5 g drug/day, equivalent to 10–30 mg hydroxyanthracene derivatives <b>HMPC:</b> equivalent to 20–30 mg hydroxyanthracene derivatives/day (calculated as rhein), no administration to children under the age of 12
<b>Positive monograph, indications:</b> constipation <b>standard marketing authorisation:</b> 1189.99.99, <b>WHO monograph (rhizoma):</b> short-term treatment of occasional constipation, <b>ESCOP monograph:</b> short-term use in cases of occasional constipation, <b>HMPC monograph:</b> short-term use in cases of occasional constipation, BfArM graduated plan of 21 June 1996 concerning medicinal products for human use containing anthranoid-containing plant genera, mildly toxic III (Wink/Wyk)	Disturbance of electrolyte balance (in particular potassium), albuminuria, haematuria, reflexory activation of uterus during pregnancy, transfer of aglycones into breast milk, gastrointestinal cramps observed in individual cases, contraindications and interactions reported (Schilcher)	Oxalic acid, anthranoids	<b>Commission E:</b> 20–30 mg hydroxyanthracene derivatives/day, calculated as rhein, 30–120 mg hydroxyanthracene derivatives, equivalent to 1.2 to 4.8 g drug <b>ESCOP:</b> equivalent to 15–50 mg hydroxyanthracene derivatives/day (calculated as rhein), no administration to children under the age of 10 <b>WHO:</b> 0.5–1.5 g drug/day, equivalent to 10–30 mg hydroxyanthracene derivatives <b>HMPC:</b> equivalent to 20–30 mg hydroxyanthracene derivatives/day (calculated as rhein), no administration to children under the age of 12
slightly toxic (+) (Roth/Daunderer), mildly toxic III (Wink/Wyk)	Cases of poisoning in children observed after consumption of large amounts of raw and unripe rhubarb stalks (Roth/Daunderer)	Oxalic acid, anthranoids	
s. BfR statement: <a href="http://www.bfr.bund.de/cm/350/risikobewertung-von-pflanzen-und-pflanzlichen-zubereitungen.pdf">http://www.bfr.bund.de/cm/350/risikobewertung-von-pflanzen-und-pflanzlichen-zubereitungen.pdf</a> , <b>HMPC monograph:</b> (Rhodiolae roseae rhizoma et radix): traditional use			
<b>Negative monograph:</b> due to risks associated with <i>Rhododendron ferrugineum</i> , toxic Ib to very toxic II (Wink/Wyk), toxic + to highly toxic ++ (Roth/Daunderer)	Burning in mouth and throat, hypersalivation, vomiting, cramps, diarrhoea, also affects CNS: headache, faintness, convulsions, death by respiratory arrest (Wink/Wyk)	Triterpenes (e.g. ursolic acid), hydroquinones (e.g. arbutin), andromedotoxin (grayanotoxin I)	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Rhus aromatica</b> AIT., syn. <i>Rhus canadensis</i> MARSH. non MILL.	Root cortex		Not NFS					×
<b>Rhus coriaria</b> L., <i>Toxicodendron coriaria</i> KUNTZE.	Fruit	× S						
<b>Rhus toxicodendron</b> L., syn. <i>Toxicodendron quercifolium</i> (MICHX.) GREENE, <i>Toxicodendron toxicodendron</i> (L.) BRITT	all plant parts					×		
<b>Ribes nigrum</b> L., syn. <i>Ribes olidum</i> MOENCH	Leaf	× T		×	×		×	
<b>Ribes nigrum</b> L., syn. <i>Ribes olidum</i> MOENCH	Fruit	×						
<b>Ribes rubrum</b> L., syn. <i>Ribes domesticum</i> JANCZ., <i>Ribes sativum</i> (RCHB.) SYME	Fruit	×						
<b>Ricinus communis</b> L., syn. <i>Croton spinosus</i> L., <i>Ricinus africanus</i> MILL., <i>Ricinus inermis</i> JACQ., <i>Ricinus vulgaris</i> MILL.	Seed					×		
<b>Robinia pseudoacacia</b> L., syn. <i>Pseudoacacia odorata</i> MOENCH	Flower	× T, S b					×	
<b>Rosa canina</b> L., syn. <i>Rosa armata</i> STEV. ex BESSER, <i>Rosa caucasica</i> PALL.	Fruit	×		×			×	
<b>Rosa gallica</b> L., syn. <i>Rosa grandiflora</i> SALISB., <i>Rosa provincialis</i> AIT., <i>Rosa provincialis</i> HERRM., <i>Rosa pumila</i> JACQ., <i>Rosa rubra</i> LAM.	Petal	× T						
<b>Rosa x centifolia</b> , syn. <i>Rosa centifolia x vulgaris</i> SERINGE ex DC., <i>Rosa gallica x centifolia</i> REGEL	Petal	× T						

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
extremely toxic Ia (Wink/Wyk)	strong irritation of mucous membranes in mouth, throat and gastrointestinal tract, nausea, vomiting, gastroenteritis accompanied by bloody diarrhoea and colic, vertigo, dizziness, excitement and serious kidney damage (Wink/Wyk)	Pyrocatechol derivatives (urushiols, toxicodendrine)	
<b>ESCOP monograph:</b> adjuvant in the treatment of rheumatic conditions, <b>HMPC monograph:</b> traditional use			<b>ESCOP:</b> 20–50 g leaves/litre, 250–500 ml/day, equivalent preparations
extremely toxic +++ (Roth/Daunderer), extremely toxic Ia (Wink/Wyk), <b>WHO monograph (oil):</b> short-term treatment (3–5 days) for acute constipation when other dietary methods or bulk-forming laxatives have not provided adequate relief. As a cathartic for use in bowel evacuation prior to surgery	Nausea, bloody diarrhoea, vomiting accompanied by haemorrhage, acute gastroenteritis, nephritis, liver damage, convulsions, tachycardia, circulatory arrest, death by cardiac or circulatory failure or uraemia, consumption of 6 seeds fatal to children, 10–20 seeds fatal to adults (Wink/Wyk)	Lectins (e.g. ricin), alkaloids (e.g. ricinin)	<b>WHO:</b> 1–10 ml, no administration to children under the age of 12
highly toxic ++ (Roth/Daunderer), very toxic Ib (Wink/Wyk),	all plant parts toxic, in particular seeds and fruits, contains the lectins phasin and robin, haemagglutinating properties, cytotoxic, nausea, vomiting, diarrhoea, drowsiness, mydriasis, convulsive fits, abdominal pain (Wink/Wyk), toxicity of robin is eliminated by heating (Roth/Daunderer)	Lectins (e.g. robin, phasin)	
<b>Neutral monograph, ESCOP monograph:</b> adjuvant treatment of pain and joint stiffness associated with osteoarthritis			<b>ESCOP:</b> 2–5 g drug, several times a day
<b>Positive monograph:</b> for external use			<b>Commission E:</b> 1–2 g drug/day, equivalent preparations
<b>Positive monograph:</b> for external use, <b>HMPC monograph:</b> in progress (external use)			



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Rosmarinus officinalis L.</b> , syn. <i>Rosmarinus angustifolius</i> MILL., <i>Rosmarinus flexuosus</i> JORD. et FOURR., <i>Rosmarinus laxiflorus</i> DENOÉ, <i>Salvia rosmarinus</i> SCHLEIDEN	Leaf	× S, T		×	×		×	
<b>Rubia tinctorum L.</b> , syn. <i>Rubia tinctoria</i> SALISB.	Root			×		×		
<b>Rubus fruticosus L.</b>	Leaf	× T		×			×	
<b>Rubus fruticosus L.</b>	Fruit	×						
<b>Rubus fruticosus L.</b>	Root		×					
<b>Rubus idaeus L.</b> , syn. <i>Rubus framboesianus</i> LAMK., <i>Rubus rosaefolius</i> SM.	Leaf	× T						
<b>Rubus idaeus L.</b> , syn. <i>Rubus framboesianus</i> LAMK., <i>Rubus rosaefolius</i> SM.	Fruit	×						
<b>Rubus suavissimus S. LEE</b> , syn. <i>Rubus chingii</i> var. <i>Suavissimus</i> S. LEE	Leaf	× T						
<b>Rumex acetosa L.</b> , syn. <i>Lapathum acetosa</i> SCOP., <i>Lapathum pratense</i> LAM.	Herb	×						
<b>Ruscus aculeatus L.</b>	Rhizome		Not NFS	×	×		×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> digestive problems, <b>standard marketing authorisation:</b> 1219.99.99, <b>WHO monograph:</b> carminative and spasmolytic to treat dyspepsia, traditional use, <b>ESCOP monograph:</b> improvement of hepatic and biliary function and in dyspeptic complaints, <b>HMPC monograph:</b> traditional use, slightly toxic (+) (Roth/Daunderer)	Ingestion of high doses causes coma, tonic-clonic cramps, impaired patellar reflex, reduced pupillary reflex, vomiting, gastroenteritis, uterine haemorrhage, leucocytosis, renal irritation, albuminuria, in severe cases death by pulmonary oedema (Roth/Daunderer), specific case reports on this are not available (Hager); preparations, predominantly in combination with a complex composition, formerly used for abortion; however, case reports indicating a causal connection between ingestion of rosemary and abortion are not known. Experimental studies allowing for assessing the risk are not available either (Hager)	Eucalyptol (=1,8-cineol), camphor, alpha-pinene	<b>Commission E:</b> 4–6 g drug/day <b>ESCOP:</b> 2–4 g drug/day <b>WHO:</b> 4–6 g drug/day or as infusion 2–4 g in 150 ml water, 3 times a day
<b>Negative monograph:</b> due to risks, BfArM graduated plan of 15 Mar 1993 concerning medicinal products containing Rubia tincturum, substance of concern (AMK) mildly toxic II to toxic III (Wink/Wyk)	Ingestion of high doses causes digestive problems, nausea, vomiting, bloody diarrhoea, abdominal pain, nephritis, assumed to be mutagenic (Wink/Wyk)	Hydroxyanthraquinones (e.g. lucidin)	
<b>Positive monograph, indications:</b> non-specific, acute forms of diarrhoea, mild inflammations of the oral and pharyngeal mucosa, <b>standard marketing authorisation:</b> 1449.99.99			<b>Commission E:</b> 4.5 g drug/day, equivalent preparations
<b>Neutral monograph</b>			
<b>Neutral monograph, HMPC monograph:</b> in progress			
slightly toxic (Roth/Daunderer)	Due to the oxalic acid content, care should be taken when consuming fresh sorrel (Frohne)	Oxalic acid	
<b>Positive monograph, indications:</b> adjuvant treatment of chronic venous insufficiency (especially pain and feeling of heaviness in legs, night leg cramps, itching, swelling), adjuvant treatment of symptoms associated with haemorrhoids such as itching and burning, <b>HMPC monograph:</b> traditional use, <b>ESCOP monograph:</b> supportive therapy for symptoms of chronic venous insufficiency, such as painful, tired and heavy legs, tingling and swelling, supportive therapy for symptoms of haemorrhoids, such as itching and burning, slightly toxic (+) to toxic + (Roth/Daunderer), mildly toxic III (Wink/Wyk)	Gastric complaints and nausea may occur in rare cases (Commission E monograph)		<b>Commission E, ESCOP:</b> extract equivalent to 7–11 mg rusco-genin/day

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Ruta graveolens L.</b> , syn. <i>Ruta graveolens L. var. vulgaris WILLK.</i> , <i>Ruta hortensis MILL.</i>	Leaf, herb			×		×		
<b>Salix alba L.</b>	Bark	× T		×	×		×	
<b>Salvia divinorum EPLING et JÁTIVA</b>	all plant parts					×		
<b>Salvia officinalis L.</b> , syn. <i>Salvia chromatica et papillosa HOFFMG.</i> , <i>Salvia maior et minor GMELI.</i> , <i>Salvia tomentosa MILL.</i>	Leaf	× S, T		×	×		×	
<b>Salvia sclarea L.</b> , syn. <i>Aethiopsis sclarea (L.) FOURR.</i> , <i>Salvia vulgaris MILL.</i>	Leaf	× S						
<b>Salvia sclarea L.</b> , syn. <i>Aethiopsis sclarea (L.) FOURR.</i> , <i>Salvia vulgaris MILL.</i>	Flower		Not NFS					×
<b>Salvia triloba L. FIL.</b> , syn. <i>Salvia fruticosa MILL.</i> , <i>Salvia lobryana AZNAV.</i>	Leaf	× S, T						
<b>Sambucus ebulus L.</b> , syn. <i>Ebulum humile GARCKE</i>	Fruit		×					
<b>Sambucus nigra L.</b> , syn. <i>Sambucus arborescens GILIB.</i> , <i>Sambucus medullina GILIB.</i>	Leaf		Not NFS					×
<b>Sambucus nigra L.</b> , syn. <i>Sambucus arborescens GILIB.</i> , <i>Sambucus medullina GILIB.</i>	Flower	×		×	×		×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Negative monograph:</b> due to risks, toxic + (Roth/Daunderer), toxic Ib to very toxic II (Wink/Wyk)	Contact dermatitis, swelling of tongue, hypersalivation, severe gastroenteritis, diuresis, mydriasis, visual disturbances, haematuria, even death, uterus contractions, therefore formerly used as aborticide (Wink/Wyk)	Furocoumarins, quinoline alkaloids	
<b>Positive monograph, indications:</b> febrile diseases, rheumatic conditions, headache, <b>WHO monograph:</b> symptomatic treatment of fever and pain, and symptomatic treatment of mild rheumatic conditions, treatment of the common cold, traditional use, <b>ESCAP monograph:</b> relief of low back pain, symptomatic relief of mild osteoarthritis and rheumatic complaints, <b>HMPC monograph:</b> short-term treatment of low back pain, traditional use	gastrointestinal complaints, allergic or pseudoallergic reactions to the salicylates contained in the drug (Wichtl, Schilcher), Reye's syndrome	Salicylates	<b>Commission E:</b> 60–120 mg total salicin/day <b>ESCAP, WHO:</b> equivalent to 120–240 mg salicin <b>HMPC:</b> 1572 mg extract/day on indication of well-established use, 260–500 mg comminuted drug, 3 times a day on indication of traditional use
toxic II, psychotropic (Wink/Wyk), non-marketable narcotic acc. to Annex 1 of the Narcotic Drugs Act (BtMG)	Psychotropic, hallucinogenic (Wink/Wyk), sweats, headache, disorientation, psychosis, anxiety and panic attacks reported ( <a href="http://www.erowid.org">www.erowid.org</a> )	Diterpenes (e.g. salvinorin A)	
<b>Positive monograph, indications:</b> digestive problems, excessive sweat secretion, <b>ESCAP monograph:</b> inflammations and infections of the mouth and throat such as stomatitis, gingivitis and pharyngitis, hyperhidrosis, <b>HMPC monograph:</b> traditional use, <b>WHO monograph:</b> treatment of influenza, bronchitis, sinusitis, meningitis and neuritis, <b>standard marketing authorisation:</b> 1229.99.99, slightly or hardly toxic (Roth/Daunderer)	Long-term use of alcoholic extracts and pure essential oil may cause epileptiform cramps (Commission E monograph)	Thujone, eucalyptol (=1,8-cineol), camphor	<b>Commission E:</b> 4–6 g drug/day, equivalent preparations <b>ESCAP:</b> 1–1.5 g drug in 150 ml water, also several times a day <b>WHO:</b> 4 g/day
		Eucalyptol (=1,8-cineol), camphor, eucalyptol (=1,8-cineol), camphor, eucalyptol (=1,8-cineol), camphor	
		Eucalyptol (=1,8-cineol), camphor, eucalyptol (=1,8-cineol), camphor	
		Thujone, eucalyptol (=1,8-cineol), camphor	
mildly toxic III (Wink/Wyk), toxic + (Roth/Daunderer)	Nausea, vomiting, diarrhoea, tickle in the throat, vertigo, headache, visual disturbances, cardiac complaints, bloody diarrhoea, cases of fatal poisoning also known (Wink/Wyk)	Iridoid glycosides (e.g. ebuloside), lectins	
mildly toxic III (Wink/Wyk), hardly toxic (+)	Ingestion of higher doses causes vomiting and diarrhoea (Wink/Wyk)	cyanogenic glycosides (e.g. sambunigrin), lectins	
<b>Positive monograph, indications:</b> coughs and colds, <b>standard marketing authorisation:</b> 1019.99.99, <b>WHO monograph:</b> traditional use, <b>HMPC monograph:</b> traditional use			<b>Commission E:</b> 10–15 g drug/day, equivalent preparations <b>WHO:</b> 3–5 g drug, 3 times a day

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Sambucus nigra L.</b> , syn. <i>Sambucus arborescens</i> GILIB., <i>Sambucus medullina</i> GILIB.	Fruit	× b						
<b>Sanicula europaea L.</b> , syn. <i>Astrantia diapensia</i> SCOP., <i>Caucalis capitata</i> SALISB., <i>Sanicula officinalis</i> GOUAN, <i>Sanicula trilobata</i> GILIB., <i>Sanicula vulgaris</i> (KOCH) LANDOZ.	Herb		Not NFS	×			×	
<b>Santalum album L.</b> , syn. <i>Santalum album</i> RUMPH., <i>Santalum myrtifolium</i> (L.) ROXB., <i>Sirium myrtifolium</i> L.	Wood		Not NFS	×			×	
<b>Saponaria officinalis L.</b> , syn. <i>Boottia nervosa</i> GILIB., <i>Lychnis officinalis</i> (L.) SCOP., <i>Saponaria hybrida</i> MILL., <i>Saponaria nervosa</i> GILIB., <i>Silene officinarum</i> RUPR., <i>Silene saponaria</i> FRIES.	Root	×		×			×	
<b>Sassafras spp.</b>	all plant parts					×		
<b>Satureja biflora</b> (Buch.-Ham. ex D. Don) Briq.	Herb		×					
<b>Satureja hortensis L.</b> , syn. <i>Clinopodium hortense</i> O. KUNTZE, <i>Satureja brachiata</i> STOKES, <i>Satureja officinarum</i> CRANTZ,	Herb	× S						
<b>Schinus molle L.</b> , syn. <i>Schinus molle</i> var. <i>areira</i> (L.) DC., <i>Schinus areira</i> L. and <i>Schinus terebinthifolius</i> RADDI, syn. <i>Schinus antiarthriticus</i> MART. ex MARCH, <i>Schinus mellisii</i> ENGL., <i>Schinus mucronulata</i> MART.	Fruit	× S					×	
<b>Schisandra chinensis</b> (TURCZ.) BAILL., syn. <i>Idesia polycarpa</i> MORR. et DEVOS, <i>Kadsura chinensis</i> TURCZ., <i>Maximowiczia amurensis</i> RUPR.	Fruit	×		×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
Use ripe fruits, heat sufficiently (cook) before consumption, <b>HMPC monograph:</b> in progress	Unripe fruits, seeds and green plant parts contain sambunigrin and lectin which can be deactivated by thermal exposure (Ternes), ingestion of higher doses of unripe, unheated fruits causes vomiting and diarrhoea (Wink/Wyk)	cyanogenic glycosides (e.g. sambunigrin), lectins	
<b>Positive monograph, indications:</b> catarrhs of the respiratory tract			<b>Commission E:</b> 4–6 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> adjuvant treatment of lower urinary tract infections, toxic + (Roth/Daunderer), toxic II (Wink/Wyk)	Ingestion of high doses may cause nephritis, digestive problems, heartburn, dyspepsia and haematuria, irritating to skin (Wink/Wyk)	Santalol	<b>Commission E:</b> 1.0–1.5 g essential oil/day, 10–20 g drug, equivalent preparations
use in foods only known as an ingredient of “halva” recipes <b>Positive monograph, indications:</b> catarrhs of the upper respiratory tract	Irritation of gastric mucosa observed in rare cases (Commission E monograph)	Triterpene saponins	
poisonous plant, toxic + (Roth/Daunderer), toxic II (Wink/Wyk), BfArM graduated plans of 19 Jan 1995 and 13 Aug 1997 concerning medicinal products containing Sassafras, sassafras oil is a “scheduled substance” of category 1 acc. to Article 2 a of Regulations (EC) No. 273/2004 and No. 111/2005 and is thus subject to the provisions of the Precursors Control Act (GÜG).	The toxicity is basically attributed to safrole contained in the drug, which is a genotoxic carcinogen (Hager), ingestion of higher doses causes nephritis, loss of consciousness, faintness and liver damage, irritating to skin (Wink/Wyk)	Safrole	
		Carvacrol	
Both species are commercially available. (s. Guidelines for spices and other seasoning ingredients), <i>Schinus terebinthifolius</i> : highly toxic (Roth/Daunderer), toxic II (Wink/Wyk). After consumption of small amounts of <i>S. terebinthifolius</i> as spice, the reported undesirable effects were, however, not detected with fruits imported from the Réunion Island	<i>Schinus terebinthifolius</i> : headache, swollen eyelids, digestive problems (Wink/Wyk)		
<b>WHO monograph:</b> treatment of chronic cough and asthma, diabetes, urinary tract disorders, as a general tonic for treating fatigue associated with illness			<b>WHO:</b> 1.5–6 g drug/day

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Schoenocaulon officinale</b> (SCHLECHTEND. et CHAM.) A. GRAY, syn. Sabadilla officinarum BRANDT, Veratrum officinale SCHLECHTEND. et CHAM., Asagraea officinalis LINDL.	Seed			×		×		
<b>Scopolia spp.</b>	all plant parts			×		×		
<b>Scutellaria baicalensis GEORGI</b> , syn. Scutellaria macrantha FISCH.	Leaf		Not NFS					×
<b>Scutellaria baicalensis GEORGI</b> , syn. Scutellaria macrantha FISCH.	Root		Not NFS	×			×	
<b>Senecio spp.</b>	all plant parts			×		×		
<b>Serenoa repens (BARTR.) SMALL</b> , Sabal serrulata (MICH.) NUTALL ex SCHULT., Sabal serrulata ROEM. et SCHULT., Brahea serrulata (MICHX.) H. WENDL., Chamaerops serrulata MICHX., Serenoa serrulata HOOK.	Fruit		Not NFS	×			×	
<b>Sideritis scardica GRISEB.</b>	Herb	×	T					

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
poisonous plant, Veratrum alkaloids prescription-only, highly toxic ++ (Roth/Daunderer), extremely toxic Ia (Wink/Wyk)	The alkaloids contained in the drug act as nerve and muscle poison, burning in the mouth and throat, nausea, diarrhoea, fits of rage, bradycardia, dyspnoea, convulsions, even death, highly irritating to skin (Wink/Wyk), affects CNS, mental excitement, cramps, uncontrolled rage, paralysis of the myelencephalic centres, in low doses vertigo, darkened vision, marasmus, hypothermia, bradycardia, dyspnoea and gastrointestinal irritation, damage to striated muscles (Roth/Daunderer)	steroidal alkaloids (e.g. veratridine, cevadine, saba-dine)	
<b>Positive monograph (rhizome of <i>Scopolia carniolica</i> JACQ.), indications:</b> cramps in the gastrointestinal, biliary and lower urinary tract in adults and schoolchildren, isolated alkaloids and rhizome prescription-only, highly toxic Ib (Wink/Wyk) extremely toxic +++ (Roth/Daunderer)	psychotropic, facial blush, dry mucosa, tachycardia, mydriasis, hallucinations, euphoria, disorientation, micturition difficulties, insomnia, death by respiratory arrest (Wink/Wyk, Roth/Daunderer)	Tropane alkaloids (e.g. atropine, L-hyoscyamine, scopolamine)	<b>Commission E:</b> 0.25–3.0 mg total alkaloids/day, calculated as hyoscyamine
	assumed to be hepatotoxic (Parker S. Herbal medicines, adverse reactions. The Regulatory Affairs Journal, 1994, 5:29)		
<b>WHO monograph:</b> treatment of fever, nausea and vomiting, acute dysentery, jaundice, coughs, carbuncles and sores, and threatened abortion	assumed to be hepatotoxic (Parker S. Herbal medicines, adverse reactions. The Regulatory Affairs Journal, 1994, 5:29)		<b>WHO:</b> 3–9 g drug/day, no administration to children under the age of 12
<b>Negative monograph:</b> due to risks associated with wood ragwort ( <i>Senecio fucusii</i> ), substance of concern (AMK), toxic + (Roth/Daunderer) toxic II (Wink, Wyk)	hepatotoxic, withdrawal of marketing authorisations in 1992 for drugs containing pyrrolizidine alkaloids due to risks, s. Federal Gazette of 17 June 1992	Pyrrolizidine alkaloids	
<b>Positive monograph, indications:</b> micturition difficulties resulting from benign stage I–II prostatic hyperplasia, <b>WHO monograph:</b> treatment of lower urinary tract symptoms (nocturia, polyuria, urinary retention) secondary to BPH stages I and II, as defined by Alken, in cases where diagnosis of prostate cancer is negative, <b>ESCOF monograph:</b> symptomatic treatment of micturition disorders (dysuria, pollakisuria, nocturia, urinary retention) in mild to moderate benign prostatic hyperplasia (BPH), i.e. stages I and II as defined by Alken, stages II and II as defined by Vahlensieck, or a comparable severity of symptoms as evaluated by the International Prostate Symptom Score and associated diagnostic tests, <b>HMPC monograph:</b> in progress	Side effects: gastric complaints observed in rare cases (Commission E monograph)		<b>Commission E, WHO:</b> 1–2 g drug or 320 mg extract/day, equivalent preparations



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Silybum marianum (L.) GAERTN.</b> , syn. <i>Carduus marianus</i> L., <i>Carthamus maculatus</i> LAM., <i>Cri-</i> <i>sium, maculatum</i> SCOP., <i>Mariana</i> <i>mariana (L.) HILL.</i> , <i>Silybum macu-</i> <i>latum</i> MOENCH	Fruit	× T		×			×	
<b>Sinapis alba L.</b> , syn. <i>Bonnania</i> <i>officinalis</i> PRESL., <i>Brassica alba</i> RABENH., <i>Crucifera lamsana</i> E.H.L. KRAUSE, <i>Eruca alba</i> NOUL., <i>Sinapis hispida</i> TEN.	Seed	× S						
<b>Smilax officinalis KUNTH in</b> <b>H.B.K.</b>	Root	×					×	
<b>Solanum dulcamara L.</b> , syn. <i>Dulca-</i> <i>mara flexuosa</i> MOENCH, <i>Solanum</i> <i>laxum</i> ROYLE, <i>Solanum lyratum</i> THUNB.	Stem				×	×		
<b>Solanum nigrum L. emend. MILL.</b> , syn. <i>Solanum alpinum</i> ZOLL. et MOR., <i>Solanum americanum</i> MILL., <i>Solanum vulgare</i> PARKINS.	all plant parts					×		
<b>Solidago virgaurea L.</b> , syn. <i>Am-</i> <i>phiraphis leiocarpa</i> DC., <i>Dectis</i> <i>decurrens</i> RAF. var. <i>leiocarpa</i> BENTH., <i>Solidago cantonensis</i> LOUR.	Herb	× T		×	×		×	
<b>Sorbus aucuparia L.</b> , syn. <i>Aucu-</i> <i>paria silvestris</i> MED.	Fruit	× b						
<b>Spartium junceum L.</b> , syn. <i>Sarothamnus junceus</i> LINK, <i>Spar-</i> <i>tianthus junceus (L.) LINK</i>	all plant parts					×		
<b>Spinacia oleracea L.</b>	Leaf	×						
<b>Stachys officinalis (L.) TREVISAN,</b> syn. <i>Betonia officinalis</i> L.	Herb		Not NFS					×

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> digestive problems, toxic liver damage, adjuvant treatment of chronic inflammatory liver diseases and liver cirrhosis, <b>standard marketing authorisation:</b> 1589.99.99, <b>WHO monograph:</b> supportive treatment of acute or chronic hepatitis and cirrhosis induced by alcohol, drugs or toxins, <b>HMPC monograph:</b> in progress, <b>ESCOPE monograph:</b> toxic liver damage, supportive treatment in patients with chronic inflammatory liver conditions and hepatic cirrhosis			<b>Commission E, WHO:</b> 12–15 g drug/day, equivalent preparations <b>ESCOPE:</b> equivalent to 154–324 mg silymarin/day
<b>Positive monograph:</b> for external use, harmful in high doses (+) (Roth/Daudeker), toxic II–III (in high doses) (Wink/Wyk)	Ingestion of high doses causes gastrointestinal complaints, nausea, vomiting, diarrhoea, severe poisoning causes central paralysis, bradycardia and bradypnoea, even coma and death (Roth/Daudeker, Wink/Wyk)	Glucosinolates	
<b>Negative monograph:</b> due to risks, slightly toxic (+) (Roth/Daudeker)	gastric irritation, temporary liver damage (Commission E monograph), diarrhoea accompanied by vomiting, central paralysis (Roth/Daudeker)	steroidal saponins	
<b>Positive monograph:</b> for external use, <b>HMPC monograph:</b> (traditional use, external use), BfArM only accepted external use in the post-authorisation procedure, highly toxic ++ (Roth/Daudeker), toxic Ib to very toxic II (Wink/Wyk)	Nausea, vomiting, mydriasis, paralysis of tongue and loss of speech, fever, visual snow, painful diarrhoea, alternating pulse, dyspnoea, cramps, apnoea (Roth/Daudeker)	steroidal alkaloid glycosides	<b>Commission E:</b> 1–3 g drug/day, equivalent preparations
highly toxic ++ (Roth/Daudeker), toxic Ib to very toxic II (Wink/Wyk)	all plant parts toxic, including unripe berries, nausea, severe vomiting, mydriasis, paralysis of tongue, loss of speech, fever, visual snow, painful diarrhoea, alternating pulse, dyspnoea, cramps, leg cramps, finally apnoea (Roth/Daudeker)	steroidal alkaloid glycosides	
<b>Positive monograph, indications:</b> irrigation therapy of inflammatory diseases of the lower urinary tract, prevention of urinary stones and kidney gravel, <b>ESCOPE monograph:</b> irrigation of the urinary tract, especially in cases of inflammation and renal gravel, and as an adjuvant in the treatment of bacterial infections of the urinary tract, <b>HMPC monograph:</b> traditional use	abdominal complaints, contact allergies (Hager), contraindications: oedemas associated with cardiac or renal insufficiency (Commission E monograph)	Sesquiterpene lactones	<b>Commission E:</b> 6–12 g drug/day, equivalent preparations <b>ESCOPE:</b> 2–3 g drug, 2–3 times a day, equivalent preparations, special dosage instructions for children
<b>Neutral monograph:</b> mildly toxic III (Wink/Wyk), slightly toxic (+), only ripe (mealy) fruits should be consumed. Heat/dry before consumption.	Fresh mountain ash berries contain parasorbic acid, which may cause local irritations, nausea, vomiting, diarrhoea and kidney damage. Parasorbic acid is largely destroyed or eliminated by drying or cooking the berries (Frohne/Pfänder).	Parasorbic acid, prunasin, amygdalin	
highly toxic ++ (Roth/Daudeker), very toxic Ib (Wink/Wyk)	Cases of poisoning accompanied by vomiting, kidney damage and apnoea reported (Roth/Daudeker), slightly psychotropic and hallucinogenic (Wink/Wyk)	Quinolizidine alkaloids (e.g. cytisine)	
<b>Neutral monograph</b>			

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b><i>Stevia rebaudiana</i> (BERTONI) HEMSL., syn. <i>Eupatorium rebaudianum</i> BERTONI</b>	Herb		×					
<b><i>Strophantus</i> spp.</b>	all plant parts			×		×		
<b><i>Strychnos ignatii</i> BERG., syn. <i>Ignatia amara</i> L. FIL., <i>Ignatia philippinensis</i> BLUME</b>	Seed			×		×		
<b><i>Strychnos nux vomica</i> L., syn. <i>Strychnos lucida</i> WALL., <i>Strychnos colubrina</i> WIGHT</b>	Seed			×		×		
<b><i>Swertia chirata</i> BUCH.-HAMILT., syn. <i>Agathodes chirata</i> (DON.) GRISEB.</b>	Herb, root		Not NFS					×
<b><i>Symphytum officinale</i> L.</b>	Herb, root					×		
<b><i>Syzygium aromaticum</i> (L.) MERR. et L.M. PERRY, syn. <i>Caryophyllus aromaticus</i> L., <i>Eugenia aromatica</i> BAILL.</b>	Flower bud	×	S					
<b><i>Syzygium cumini</i> (L.) SKEELS, syn. <i>Eugenia cumini</i> (L.) DRUCE, <i>Myrtus cumini</i> L.</b>	Leaf, fruit		Not NFS					×
<b><i>Syzygium cumini</i> (L.) SKEELS, syn. <i>Eugenia cumini</i> (L.) DRUCE, <i>Myrtus cumini</i> L.</b>	Bark		Not NFS	×			×	
<b><i>Syzygium cumini</i> (L.) SKEELS, syn. <i>Eugenia cumini</i> (L.) DRUCE, <i>Myrtus cumini</i> L.</b>	Seed		Not NFS					×
<b><i>Tabebuia impetigenosa</i> (MARTIUS ex DC.) STANDLEY, syn. <i>Bignonia heptaphylla</i> sensu auct., <i>Gelseminum avellanadae</i> (LORENTZ ex GRISEB.) KUNTZE</b>	Bark	×	T					
<b><i>Tabernanthe iboga</i> BAILL.</b>	Root					×		
<b><i>Tamarindus indica</i> L., syn. <i>Siliqua arabica</i> BAUH., <i>Tamarindus officinalis</i> HOOK.</b>	Fruit	×						
<b><i>Tamus communis</i> L.</b>	all plant parts					×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
Steviol glycosides licensed as additive (E 960)			
extremely toxic +++ (Roth/Daunderer), extremely toxic Ia (Wink/Wyk), seeds and strophanthins prescription-only, Strophanthus species pharmacy-only	positive inotropic effect, bradycardia up to cardiac arrest, bloody diarrhoea, nausea, vomiting, oppression, headache and neck pain, loss of consciousness, convulsions (Wink/Wyk, Roth/Daunderer)	Cardenolides (strophanthin, strophanthidin, ouabain)	
extremely toxic +++ (Roth/Daunderer), extremely toxic Ia (Wink/Wyk) strychnine prescription-only, Ignatius bean pharmacy-only	Cramps, epileptic fits, states of anxiety, hypersalivation, death by respiratory arrest (Wink/Wyk)	Indole alkaloids (e.g. strychnine, brucine)	
<b>Negative monograph:</b> due to risks, extremely toxic Ia (Wink/Wyk), extremely toxic +++ (Roth/Daunderer)	Cramps, epileptic fits, states of anxiety, hypersalivation, death by respiratory arrest (Wink/Wyk), faintness, exhaustion, mental disorders, icterus, permanent blindness (Roth/Daunderer)	Alkaloids (e.g. strychnine, brucine, colubrin)	
<b>Positive monograph:</b> for external use only, toxic II-III (Wink/Wyk), slightly toxic (+) (Roth/Daunderer), <b>ESCOPE monograph:</b> for external use, BfArM graduated plan of 5 June 1992 concerning medicinal products containing pyrrolizidine alkaloids	Pyrrolizidine alkaloids contained in the drug are hepatotoxic, mutagenic and carcinogenic. High doses inhibit peripheral nerves and may induce digestive problems. (Wink/Wyk)	Pyrrolizidine alkaloids	<b>Commission E, ESCOP:</b> external use only, equivalent preparations with 35 % root extract
<b>Positive monograph</b> for external use, <b>WHO monograph:</b> for external use, <b>HMPC assessment report</b>			
<b>Positive monograph, indications:</b> non-specific forms of diarrhoea			<b>Commission E:</b> 3–6 g drug/day, equivalent preparations
<b>Negative monograph:</b> due to risks	In view of safe therapeutic alternatives, use for the treatment of diabetes mellitus cannot be justified. (Commission E monograph)		
mildly toxic (Wink/Wyk)	Naphthoquinones are irritating to skin and mucous membranes, ingestion of high doses causes cytotoxic effects and digestive problems (Wink/Wyk)	Naphthoquinones (e.g. lapachol)	
highly toxic ++ (Roth/Daunderer), very toxic Ib (Wink/Wyk)	anaesthetic, psychotropic, hallucinogenic, motor disturbances, paralysis, death by cardiac failure (Wink/Wyk, Roth/Daunderer)	Indole alkaloids (e.g. ibogaine)	
toxic + (Roth/Daunderer), mildly toxic III (Wink/Wyk)	Burning in the mouth, vomiting, diarrhoea, gastroenteritis, overdose may be fatal (Wink/Wyk)	steroidal saponins, oxalate raphides	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Tanacetum vulgare L.</b> , syn. <i>Chrysanthemum vulgare</i> (L.) BERNH., non <i>Leucanthemum vulgare</i> L.	Flower, herb			×		×		
<b>Taraxacum officinale WEB. ex WIGG.</b> , syn. <i>Taraxacum officinale</i> (WITH.) WIGGERS, <i>Leontodon officinale</i> WITH., <i>Leontodon taraxacum</i> L.	Herb, root	×		×	×		×	
<b>Taraxacum officinale WEB. ex WIGG.</b> , syn. <i>Taraxacum officinale</i> (WITH.) WIGGERS, <i>Leontodon officinale</i> WITH., <i>Leontodon taraxacum</i> L.	Flower	× T						
<b>Teucrium chamaedrys L.</b> , syn. <i>Chamaedrys officinalis</i> MOENCH, <i>Teucrium officinale</i> LAM.	all plant parts	× F					×	
<b>Theobroma cacao L.</b> , syn. <i>Cacao guianensis</i> AUBL., <i>Cacao minus</i> GAERTN.	Seed	×						
<b>Theobroma cacao L.</b> , syn. <i>Cacao guianensis</i> AUBL., <i>Cacao minus</i> GAERTN.	Seed husk	× T						
<b>Thevetia peruviana (PERS.) K. SCHUM.</b> , syn. <i>Thevetia neriifolia</i> JUSS. ex STEUD., <i>Cerbera thevetia</i>	all plant parts					×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Negative monograph:</b> due to risks, toxic + (Roth/Daunderer), toxic II (Wink/Wyk), substance of concern (AMK), tansy pharmacy-only	neurotoxic properties, tonic-clonic cramps, strong tachypnoea, irregular cardiac activity, liver and kidney damage, vomiting, severe gastroenteritis, mydriasis, abortifacient effect, loss of consciousness, death (Roth/Daunderer, Wink/Wyk)	Monoterpenes (e.g. eucalyptol [=1,8-cineol], thujone, camphor)	
<b>Taraxaci herba: positive monograph, indications:</b> lack of appetite, digestive problems such as feeling of fullness and bloating, <b>Taraxaci radix cum herba: positive monograph, indications:</b> disturbance of biliary flow, stimulation of diuresis, lack of appetite, digestive problems such as feeling of fullness and bloating, <b>standard marketing authorisation:</b> 1139.99.99 (Taraxaci radix cum herba), <b>WHO monograph</b> (Taraxaci radix cum herba): to stimulate diuresis, increase bile flow and stimulate appetite, and for treatment of dyspepsia, <b>ESCOP monograph</b> (Taraxaci radix): restoration of hepatic and biliary function, dyspepsia, loss of appetite, (Taraxaci folium): as an adjunct to treatments where enhanced urinary output is desirable, for example, rheumatism and the prevention of renal gravel, <b>HMPC monograph</b> (Taraxaci radix cum herba and Taraxaci folium): traditional use	Latex: vomiting, abdominal pain, diarrhoea, superacid gastric complaints, contraindications reported (Roth/Daunderer, Commission E monograph)	Sesquiterpene lactones (e.g. taraxinic acid glycosides)	<b>Taraxaci herba:</b> <b>Commission E:</b> 4–10 g drug, 3 times a day <b>ESCOP:</b> 4–10 g, 3 times a day <b>WHO:</b> 3–4 g comminuted drug, 3 times a day, 0.75–1 g extract <b>Taraxaci radix cum herba:</b> <b>Commission E:</b> 1 tbsp. cut drug in 1 cup of water as tea or 3–4 g cut or comminuted drug in 1 cup of water <b>ESCOP:</b> 3–5 g, 3 times a day <b>WHO:</b> 3–4 g comminuted drug, 3 times a day, 0.75–1 g extract
Flavourings and food ingredients with flavouring properties produced using wall germander may only be used to produce alcoholic beverages (Reg. (EC) No. 1334/2008), maximum amount of teucriin A in bitter spirits (5 mg/kg) specified in Reg. (EC) No. 1334/2008, BfArM graduated plan of 10 Aug 1992 concerning medicinal products containing Teucrium chamaedris (wall germander)	Hepatotoxic effect reported (Hager)		
<b>Neutral monograph</b>			
<b>Neutral monograph</b>			
highly toxic ++ (Roth/Daunderer), very toxic Ib (Wink/Wyk)	Approx. 4 seeds may be fatal to children, 8–10 seeds fatal to adults, numbness of tongue and throat, nausea, vomiting, faintness, cramps, disorientation, visual disturbances, very slow, fading heartbeat, bradycardia, AV block, ventricular fibrillation, death (Wink/Wyk)	cardioactive glycosides	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<i>Thuja</i> spp.	all plant parts			×		×		
<i>Thymus serpyllum</i> L.s.I.	Herb	× S		×			×	
<i>Thymus vulgaris</i> L., syn. <i>Thymus aestivus</i> REUTER ex WILLK. et LANGE, <i>Thymus durius</i> DOD.	Herb	× S, T		×			×	
<i>Thymus x citriodorus</i> (PERS.) SCHREB., syn. <i>Thymus comptus</i> HORT., <i>Thymus jankae</i> HORT., <i>Thymus lanuginosus</i> MILL. var. <i>citriodorum</i> PERS., <i>Thymus serpyllum</i> L. var. <i>vulgaris</i> BENTH.	Herb	× S						
<i>Tilia cordata</i> MILL., syn. <i>Tilia europaea</i> L. γ <i>ulmifolia</i> L., <i>Tilia ulmiflora</i> SCOP. and <i>Tilia platyphyllos</i> SCOP., syn. <i>Tilia europaea</i> L. p.p., <i>Tilia grandiflora</i> EHRH. ex W.D.J. KOCH	Leaf	× T						
<i>Tilia cordata</i> MILL., syn. <i>Tilia europaea</i> L. γ <i>ulmifolia</i> L., <i>Tilia ulmiflora</i> SCOP. and <i>Tilia platyphyllos</i> SCOP., syn. <i>Tilia europaea</i> L. p.p., <i>Tilia grandiflora</i> EHRH. ex W.D.J. KOCH	Flower	× T		×	×		×	
<i>Tilia tomentosa</i> MOENCH., syn. <i>Tilia argentea</i> DESF.	Leaf	× T						
<i>Tilia tomentosa</i> MOENCH., syn. <i>Tilia argentea</i> DESF.	Flower	× T						
<i>Tribulus terrestris</i> L.	Fruit		Not NFS	×			×	
<i>Trichilia catigua</i> A. JUSS.	Bark		Not NFS					×
<i>Trichocereus pachanoi</i> BRITT. et ROSE, syn. <i>Echinopsis pachanoi</i> , <i>Cereus peruvianus</i>	all plant parts					×		
<i>Trifolium pratense</i> L., syn. <i>Trifolium purpureum</i> GILIB. non LOISEL	Flower	× T			×			

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
Tree of life pharmacy-only, extremely toxic +++ (Roth/Daunderer), very toxic Ib (Wink/Wyk)	Mydriasis, fever, visual disturbances, headache, gastroenteritis accompanied by severe vomiting and diarrhoea, tachycardia, very intense cramps, degenerative kidney, cardiac and liver damage, death by respiratory and circulatory arrest (Wink/Wyk)	Monoterpenes (e.g. thujone)	
<b>Positive monograph, indications:</b> catarrhs of the upper respiratory tract		Carvacrol	<b>Commission E:</b> 4–6 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> symptomatic treatment of bronchitis and whooping cough, catarrhs of the upper respiratory tract, <b>standard marketing authorisation:</b> 1329.99.99, <b>WHO monograph:</b> traditional use, <b>HMPC monograph:</b> traditional use, <b>ESCAP monograph:</b> catarrh of the upper respiratory tract, bronchial catarrh and supportive treatment of pertussis, stomatitis and halitosis		Monoterpenes (e.g. camphor, carvacrol, eucalyptol [=1,8-cineol])	<b>Commission E, ESCOP, WHO:</b> 1–2 g drug/day, equivalent preparations
<b>Neutral monograph</b>			
<b>Positive monograph, indications:</b> coughs and colds, dry cough, <b>WHO monograph:</b> use for colds and cold-related coughs, dry cough, diaphoretic, antispasmodic, <b>HMPC monograph:</b> traditional use, <b>standard marketing authorisation:</b> 1129.99.99			<b>Commission E, WHO:</b> 2–4 g drug/day, equivalent preparations
<b>Neutral monograph, HMPC assessment report</b>			
<b>WHO monograph:</b> treatment of cough, headache and mastitis, traditional use, toxic II (Wink/Wyk), s. BfR statement: <a href="http://www.bfr.bund.de/cm/350/risikobewertung-von-pflanzen-und-pflanzlichen-zubereitungen.pdf">http://www.bfr.bund.de/cm/350/risikobewertung-von-pflanzen-und-pflanzlichen-zubereitungen.pdf</a>	contains cytotoxic saponins and alkaloids. Harmala alkaloids may intercalate DNA and are particularly active after exposure to sunlight, photosensitivity accompanied by pronounced swelling of lips and ears (Wink/Wyk)	Furostanol and spirostanol saponins, beta-carboline alkaloids (e.g. harmala)	<b>WHO:</b> 3–6 g drug/day, no administration to children under the age of 12
individually or mixed with other barks designated as catuaba			
very toxic Ib (Wink/Wyk), mescaline contained in the drug is subject to the provisions of Annex I of the Narcotic Drugs Act (BtMG)	psychotropic, hallucinogenic, ingestion of higher doses causes gastrointestinal complaints, drop in blood pressure, bradycardia, respiratory depression, vasodilation, paralysis (Wink/Wyk)	Alkaloids (e.g. mescaline)	
<b>WHO monograph:</b> traditional use			<b>WHO:</b> 240–480 mg extract/day



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Trifolium pratense L.</b> , syn. <i>Trifolium purpureum</i> GILIB. non LOISEL	Leaf		Not NFS					×
<b>Trigonella caerulea (L.) SER. var. caerulea</b> , syn. <i>Trigonella melilotus-caerulea</i> (L.) A. et GR.	Herb	× S						
<b>Trigonella foenum-graecum L.</b> , syn. <i>Buceras foenum-graecum</i> (L.) ALL.	Seed	× S		×	×		×	
<b>Triticum aestivum L.</b> , syn. <i>Triticum cereale</i> SCHRANK, <i>Triticum sativum</i> LAM.	Fruit	×						
<b>Triticum aestivum ssp. spelta L.</b>	Fruit	×						
<b>Tropaeolum majus L.</b> , syn. <i>Tropaeolum elatum</i> SALISB.	Herb	×			×			
<b>Turnera diffusa WILLD. et SCHULTES</b> ( <i>Turnera microphylla</i> DESV.) and <i>Turnera aphrodisiaca</i> (LESTER f.) WARD, [ <i>Turnera diffusa</i> WILLD. var. <i>aphrodisiaca</i> (WARD) URBAN]	Leaf	×			×			
<b>Tussilago farfara L.</b>	Leaf			×		×		
<b>Tussilago farfara L.</b>	Flower, root					×		
<b>Uncaria tomentosa (WILLD.) DC.</b> , syn. <i>Nauclea cinchoneae</i> DC.	Bark		Not NFS	×			×	
<b>Uncaria tomentosa (WILLD.) DC.</b> , syn. <i>Nauclea cinchoneae</i> DC.	Root		Not NFS					×

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
	slight nausea and urticaria observed in very rare cases, concerning risks of isoflavones isolated from red clover s. BfR statement: <a href="http://www.bfr.bund.de/cm/343/isolierte_isoflavone_sind_nicht_ohne_risiko.pdf">http://www.bfr.bund.de/cm/343/isolierte_isoflavone_sind_nicht_ohne_risiko.pdf</a>		
<b>Positive monograph, indications:</b> lack of appetite, <b>WHO monograph:</b> as an adjunct for the management of hypercholesterolaemia, and hyperglycaemia in cases of diabetes mellitus. Prevention and treatment of mountain sickness, loss of appetite, Treatment of pain, and weakness and oedema of the legs, traditional use, <b>ESCOP monograph:</b> adjuvant therapy in diabetes mellitus, anorexia, as an adjunct to a low fat diet in the treatment of mild to moderate hypercholesterolaemia, <b>HMPC monograph:</b> traditional use, <b>standard marketing authorisation:</b> 2319.99.99			<b>Commission E, WHO:</b> 6 g drug/day
slightly toxic (+) (Roth/Daunderer)			
<b>Neutral monograph:</b> mildly toxic III (Wink/Wyk)		Eucalyptol (= 1,8-cineol), arbutin	
<b>Positive monograph, indications:</b> acute catarrhs of the respiratory tract accompanied by cough and hoarseness, acute, mild inflammations of the oral and pharyngeal mucosa, BfArM graduated plan of 5 June 1992 concerning medicinal products containing pyrrolizidine alkaloids	contains pyrrolizidine alkaloids with hepatotoxic, carcinogenic, partly also mutagenic and teratogenic properties (Frohne/Pfänder)	Pyrrolizidine alkaloids	
<b>Negative monograph:</b> due to risks	contains pyrrolizidine alkaloids with hepatotoxic, carcinogenic, partly also mutagenic and teratogenic properties (Frohne/Pfänder)	Pyrrolizidine alkaloids	
WHO monograph, indications: symptomatic treatment of arthritis, rheumatism and gastric ulcers, traditional use, <b>HMPC monograph:</b> in progress			<b>WHO:</b> 20–350 mg extract/day, no administration to children under the age of 12
	Side effects: constipation, increase in uric acid, cardiovascular complaints (Frohne, Schilcher)	pentacyclic alkaloids	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Urginea maritima (L) BAKER</b> , syn. Scilla maritima L., Drimia maritima (L.) STEARN., Ornithogalum maritimum (L.) LAM., Stellaris scilla MOENCH.	Bulb			×		×		
<b>Urtica dioica L.</b> , syn. Urtica major KANITZ, Urtica urens maxima BLACKW.	Root		Not NFS	×	× (whole plant)		×	
<b>Urtica dioica L.</b> , syn. Urtica major KANITZ, Urtica urens maxima BLACKW.	Fruit	× T, S			×			
<b>Urtica dioica L.</b> , syn. Urtica major KANITZ, Urtica urens maxima BLACKW.	Herb, leaf	×		×	×		×	
<b>Urtica urens L. syn. Urtica minor FUCHS</b> , Urtica minor MOENCH, Urtica urens minima DOD.	Herb, leaf	×		×	×		×	
<b>Urtica urens L. syn. Urtica minor FUCHS</b> , Urtica minor MOENCH, Urtica urens minima DOD.	Root		Not NFS	×	×		×	
<b>Vaccinium macrocarpon AITON</b>	Fruit	×		×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> mild forms of cardiac insufficiency, also when accompanied by renal insufficiency, Scilla glycosides prescription-only, sea onion itself pharmacy-only, highly toxic ++ (Roth/Daunderer), very toxic Ib (Wink/Wyk)	Nausea, vomiting, gastric complaints, diarrhoea, irregular pulse, arrhythmia, hypertension, coma, cardiac arrest, contraindications and interactions reported, narrow therapeutic range of cardioactive glycosides (Wink/Wyk, Roth/Daunderer)	cardioactive glycosides	<b>Commission E:</b> 0.1–0.5 g/day, standardised sea onion powder, equivalent preparations
<b>Positive monograph, indications:</b> micturition difficulties resulting from prostatic adenoma (stage I–II), <b>WHO monograph:</b> symptomatic treatment of lower urinary tract disorders (nocturia, polyuria, urinary retention) resulting from BPH stages I and II, as defined by Alken, in cases where diagnosis of prostate cancer is negative, <b>ESCOPE monograph:</b> symptomatic treatment of micturition disorders (dysuria, pollakisuria, nocturia, urine retention) in benign prostatic hyperplasia (BPH) at stages I and II as defined by Alken or stages II and III as defined by Vahlensiek, <b>HMPC monograph:</b> traditional use	occasionally causes mild gastrointestinal complaints (Commission E monograph)		<b>ESCOPE, WHO:</b> 4–6 g drug/day, equivalent preparations, no administration to children under the age of 12
<b>Positive monograph, indications:</b> adjuvant treatment of rheumatic conditions, irrigation therapy of inflammatory diseases of the lower urinary tract, prevention and treatment of kidney gravel, <b>standard marketing authorisation:</b> 8599.99.99, <b>ESCOPE monograph:</b> adjuvant in the symptomatic treatment of arthritis, arthrosis and/or rheumatic conditions, <b>HMPC monograph:</b> traditional use	painful itching accompanied by urtication of skin areas that come in contact with stinging hairs (Wink/Wyk)		<b>Commission E, ESCOP:</b> 8–12 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> adjuvant treatment of rheumatic conditions, irrigation therapy of inflammatory diseases of the lower urinary tract, prevention and treatment of kidney gravel, <b>standard marketing authorisation:</b> 8599.99.99, <b>ESCOPE monograph:</b> adjuvant in the symptomatic treatment of arthritis, arthrosis and/or rheumatic conditions, <b>HMPC monograph:</b> traditional use	painful itching accompanied by urtication of skin areas that come in contact with stinging hairs (Wink/Wyk)		<b>Commission E, ESCOP:</b> 8–12 g drug/day, equivalent preparations
<b>Positive monograph, indications:</b> micturition difficulties resulting from prostatic adenoma (stage I–II), <b>WHO monograph:</b> symptomatic treatment of lower urinary tract disorders (nocturia, polyuria, urinary retention) resulting from BPH stages I and II, as defined by Alken, in cases where diagnosis of prostate cancer is negative, <b>ESCOPE monograph:</b> symptomatic treatment of micturition disorders (dysuria, pollakisuria, nocturia, urine retention) in benign prostatic hyperplasia (BPH) at stages I and II as defined by Alken or stages II and III as defined by Vahlensiek, <b>HMPC monograph:</b> traditional use	occasionally causes mild gastrointestinal complaints (Commission E monograph)		<b>Commission E:</b> 4–6 g drug/day, equivalent preparations <b>ESCOPE:</b> 4–6 g drug/day, equivalent preparations <b>WHO:</b> 4–6 g drug/day, no administration to children under the age of 12
<b>WHO monograph:</b> traditional use, <b>ESCOPE monograph:</b> prevention of urinary tract infections			<b>ESCOPE:</b> 300–750 ml juice, 200–500 mg dry extract, 2 times a day, equivalent preparations, no administration to children <b>WHO:</b> 400–450 mg drug

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Vaccinium myrtillus L.</b> , syn. Myrtillus niger GILIB., Myrtillus sylvatica BUBANI	Leaf	× T						
<b>Vaccinium myrtillus L.</b> , syn. Myrtillus niger GILIB., Myrtillus sylvatica BUBANI	Fruit	×		×			×	
<b>Vaccinium vitis-idaea L.</b> , syn. Myrtillus exigua BUBANI, Vaccinium rubrum DULAC, Vitis idaea punctata MOENCH, Vitis-idaea punctifolia S.F. GRAY	Leaf	× T						
<b>Vaccinium vitis-idaea L.</b> , syn. Myrtillus exigua BUBANI, Vaccinium rubrum DULAC, Vitis idaea punctata MOENCH, Vitis-idaea punctifolia S.F. GRAY	Fruit	×						
<b>Valeriana edulis NUTT. ex TORR. et GRAY ssp. Procera (H.B.K.)</b> F.G. MEYER, syn. Valeriana mexicana DC	Root					×		
<b>Valeriana officinalis L.</b>	Root	× F		×	×		×	
<b>Vanilla planifolia ANDR.</b> , syn. Vanilla fragrans (SALISB.) AMES., Myrobroma fragrans SALISB., Vanilla aromatica S.W.	Fruit	× S						
<b>Veratrum album L.</b> , syn. Helleborus albus GÜLDENST., Melanthium album THUNB.	Rhizome					×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Negative monograph:</b> due to risks, slightly toxic (+), <b>HMPC monograph:</b> in progress	Long-term use in very high doses (more than 20 g/day) causes chronic poisoning (Schilcher)		
<b>Positive monograph, indications:</b> non-specific, acute diarrhoea, local treatment of mild inflammations of the oral and pharyngeal mucosa, <b>standard marketing authorisation:</b> 1009.99.99, <b>WHO monograph:</b> use for the symptomatic treatment of dysmenorrhoea associated with premenstrual syndrome, circulatory disorders in patients with capillary leakage or peripheral vascular insufficiency and ophthalmic disorders, treatment of acute diarrhoea and local irritation or inflammation of the mucous membranes of the mouth and throat, <b>ESCOP monograph:</b> (Extracts): symptomatic treatment of problems related to varicose veins, such as painful and heavy legs, (dried fruit): supportive treatment of acute, non-specific diarrhoea, <b>HMPC monograph:</b> in progress			<b>Commission E:</b> 30 g drug/day, equivalent preparations <b>WHO:</b> 20–60 g drug/day
mildly toxic III (Wink/Wyk)	contains 5–8 % valepotriates, valepotriates are suspected to have an alkylating, cytotoxic and mutagenic effect (Hager)	Valepotriates	
<b>Positive monograph, indications:</b> agitation, nervous sleep disturbances, <b>standard marketing authorisation:</b> 6199.99.99 (root), 6099.99.99 (tincture), <b>WHO monograph:</b> mild sedative and sleep-promoting agent, used in the treatment of states of nervous excitation and anxiety-induced sleep disturbances, <b>ESCOP monograph:</b> relief of temporary mild nervous tension and/or difficulty in falling asleep, <b>HMPC monograph:</b> relief of mild nervous tension and sleep disorders, traditional use, hardly toxic (+) (Roth/Daunderer), mildly toxic III (Wink/Wyk), used to produce spirits	sedative properties, ingestion of higher doses causes headache, agitation, sleep disturbances, arrhythmia, central paralysis, cardiac arrest, contains 0.1–2 % valepotriates (Wichtl)	Valepotriates	<b>Commission E, WHO:</b> 2–3 g drug, several times a day, equivalent preparations, no administration to children under the age of 12 <b>ESCOP:</b> 1–3 g drug/day, no administration to children under the age of 12 <b>HMPC:</b> 2–3 g drug, up to 4 times a day, equivalent preparations, no administration to children under the age of 12
poisonous plant, extremely toxic Ia (Wink/Wyk), highly toxic ++ (Roth/Daunderer)	Hypersalivation, sneezing, burning bitter taste in the mouth, vomiting, bloody diarrhoea, bradycardia, drop in blood pressure, vertigo, headache, tremor, hallucinations, pain, itching, anaesthesia, myoplegia, death by cardiac or respiratory arrest (Wink/Wyk)	steroidal alkaloids (protoveratrine A and protoveratrine B)	

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Verbascum spp.</b>	Flower	× T		×	×		×	
<b>Verbascum spp.</b>	Leaf		Not NFS					×
<b>Veronica officinalis L.</b>	Herb	× T, S						
<b>Viburnum lantana L.</b>	all plant parts					×		
<b>Viburnum opulus L.</b> , syn. <i>Opulus glandulosus</i> MÖNCH, <i>Opulus vulgaris</i> BORKH., <i>Viburnum lobatum</i> LAM.	all plant parts					×		
<b>Vinca minor L.</b> , syn. <i>Pervinca minor</i> (L.) SCOPOLI, <i>Vinca ellipticifolia</i> STOKES	Herb			×		×		
<b>Viola odorata L.</b>	Flower	× C						
<b>Viola odorata L.</b>	Herb, rhizome		Not NFS					×
<b>Viola tricolor L.</b> , syn. <i>Viola tricolor</i> L. ssp. <i>tricolor</i> , <i>Viola tricolor</i> L. ssp. <i>vulgaris</i> (KOCH) OBORNY.	Herb	× C		×			×	
<b>Viscum album L.</b> , syn. <i>Viscum stellatum</i> D. DON.	Fruit					×		
<b>Viscum album L.</b> , syn. <i>Viscum stellatum</i> D. DON.	Herb					×		

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> catarrhs of the respiratory tract, <b>HMPC monograph:</b> traditional use, <b>standard marketing authorisation:</b> 2449.99,99			<b>Commission E:</b> 3–4 g drug/day, equivalent preparations
<b>Neutral monograph</b>			
toxic + (Roth/Daunderer), mildly toxic III (Wink/Wyk)	Nausea, clouded consciousness, vomiting, diarrhoea, digestive tract inflammations, cardiac arrhythmia, cramps, dyspnoea, kidney damage (Wink/Wyk, Roth/Daunderer)	Viburnin, oxalates	
toxic + (Roth/Daunderer), mildly toxic III (Wink/Wyk)	Nausea, clouded consciousness, vomiting, diarrhoea, digestive tract inflammations, cardiac arrhythmia, cramps, dyspnoea, kidney damage (Wink/Wyk, Roth/Daunderer)	Viburnin, oxalates	
<b>Negative monograph:</b> due to risks, toxic + (Roth/Daunderer), toxic II (Wink/Wyk), substance of concern (AMK), BfArM graduated plan of 20 July 1987 concerning medicinal products containing lesser periwinkle	strong drop in blood pressure, may be accompanied by cardiac complaints, circulatory distress and dyspnoea, gastrointestinal complaints observed in individual cases, temporary redness of skin (Roth/Daunderer), changes in blood picture such as leucopenia, lymphopenia, drop in $\alpha 1$ -, $\alpha 2$ - and $\gamma$ -globulin levels demonstrated in animal experiments (Schilcher)	Indole alkaloids (e.g. vincamine)	
<b>Neutral monograph</b>			
<b>Neutral monograph</b>			
<b>Positive monograph:</b> for external use only, <b>ESCOP monograph</b> (internal and external use): skin disorders such as exzema, seborrhoea, impetigo and acne, as well as cradle cap and nappy rash of infants, <b>HMPC monograph:</b> traditional use			<b>ESCOP:</b> 1.5–4 g, 3 times a day
<b>Negative monograph:</b> due to risks, slightly toxic to toxic + (Roth/Daunderer), toxic II (Wink/Wyk)	Retching, raging thirst, tenesmus, bloody stool, convulsions, gastric complaints, nausea, vomiting, diarrhoea (Wink/Wyk)	Viscotoxins, lectins	
<b>Positive monograph:</b> homeopathic or anthroposophic medicinal product for parenteral use only, <b>HMPC assessment report:</b> slightly toxic to toxic (Roth/Daunderer), toxic (Wink/Wyk)	Shivering, hyperthermia, headache, anginal complaints, orthostatic circulatory distress, allergic reactions (Commission E, Roth/Daunderer)	Viscotoxins, lectins	



Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Vitex agnus-castus L.</b> , syn. <i>Agnus-castus vulgaris</i> CARR., <i>Vitex verticillata</i> LAM.	Fruit		Not NFS	×			×	
<b>Vitis vinifera L.</b>	Leaf	×		×			×	
<b>Vitis vinifera L.</b>	Fruit	×						
<b>Voacanga africana STAPF. and Voacanga thuarsii Roem-Schu</b>	all plant parts					×		
<b>Wisteria spp.</b> , e.g. <i>Wisteria sinensis</i> (SIMS) SWEET	all plant parts					×		
<b>Withania somnifera (L.) DUN.</b> , syn. <i>Physalis somnifera</i> L.	Root	×		×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<p><b>Positive monograph, indications:</b> menstrual cycle irregularities, premenstrual symptoms, mastalgia, <b>WHO monograph:</b> symptomatic treatment of gynaecological disorders including corpus luteum insufficiency and hyperprolactinaemia, premenstrual syndrome, menstrual irregularities, cyclic mastalgia and also to treat hormonally-induced acne, treatment of endometrial hyperplasia and secondary amenorrhoea, endocrine-dependent dermatoses (dermatitis symmetrica dysmenorrhoea (Matzenauer-Polland syndrome)) acne vulgaris, eczema, acne rosacea), hypermenorrhoea, infertility due to hyperprolactinaemia and luteal phase defect. Used to treat fibroid cysts and infertility, to stop miscarriages due to progesterone insufficiency, to help expel the placenta after birth and also as a digestive aid, sedative, anti-infective and for the treatment of hot flushes, <b>ESCOPE monograph:</b> premenstrual syndrome (PMS) including symptoms such as mastodynia or mastalgia, menstrual cycle disorders such as polymenorrhoea, oligomenorrhoea or amenorrhoea, <b>HMPC monograph:</b> treatment of premenstrual syndrome, traditional use, slightly toxic (Roth/Daunderer)</p>	<p>Ingestion of high doses causes dizziness, vertigo, soporific effect (Roth/Daunderer), occasionally itching and urticaria, contraindicated during pregnancy and lactation (Commission E monograph)</p>		<p><b>Commission E, WHO:</b> 30–40 mg drug/day as water-alcohol extract, no administration to children under the age of 12  <b>ESCOPE:</b> equivalent to 30–40 mg (240 mg) drug/day  <b>HMPC:</b> 180 mg drug/day, equivalent preparations, no administration to children and adolescents under the age of 18</p>
<p><b>ESCOPE monograph:</b> (aqueous dry extract): treatment of symptoms of chronic venous insufficiency (CVI) at stages I–II as defined by Widmer, (other preparations): symptomatic treatment of problems related to varicosis such as painful and heavy legs, <b>HMPC monograph:</b> traditional use</p>			<p><b>ESCOPE:</b> 10 g drug in 250 ml water per day</p>
<p>contains psychotropic alkaloids, alkaloids contained in the drug toxic Ib to very toxic II (Wink/Wyk)</p>	<p>Indole alkaloids are cell and nerve poison, psychotropic effect, supraventricular tachycardia, Adam-Stokes syndrome, ventricular fibrillation, drop in blood pressure, cerebral cramps, coma, cardiac arrest (Wink/Wyk)</p>	<p>Indole alkaloids (e.g. voacangine, voacamine)</p>	
<p>toxic II (Wink/Wyk), toxic + (Roth/Daunderer)</p>	<p>gastric complaints accompanied by vomiting, diarrhoea, circulatory distress, facial pallor and drowsiness, headache, vertigo and circulatory collapse (Wink/Wyk) (Roth/Daunderer)</p>	<p>Wistarin, lectins</p>	
<p>mildly toxic III (Wink/Wyk), <b>WHO monograph:</b> as an antistress agent to improve reaction time, tonic to increase energy, improve overall health and prevent disease in athletes and the elderly, <b>HMPC monograph:</b> final public statement, s. BfR statement: <a href="http://www.bfr.bund.de/cm/350/risikobewertung-von-pflanzen-und-pflanzlichen-zubereitungen.pdf">http://www.bfr.bund.de/cm/350/risikobewertung-von-pflanzen-und-pflanzlichen-zubereitungen.pdf</a></p>	<p>Nausea, vomiting, diarrhoea (WHO monograph)</p>	<p>steroidal lactones (withanolides), alkaloids</p>	<p><b>WHO:</b> 3–6 g drug/day or 250 mg, 2 times a day (depending on the indication)</p>

Stock plant (Latin)	Plant part	F	NF	MP	trad. MP	List A	List B	List C
<b>Xysmalobium undulatum (L.) R. BR.</b> , syn. <i>Asclepias undulata</i> L., <i>Xysmalobium amplifolium</i> WEIM., <i>Xysmalobium dispar</i> N. E. BR., <i>Xysmalobium lapathifolium</i> DECNE.	Root			×		×		
<b>Yucca filamentosa</b> L., syn. <i>Yucca angustifolia</i> hort. non PURSH, <i>Yucca smalliana</i> FERN.	all plant parts		Not NFS					×
<b>Zea mays</b> L.	Style	× T		×			×	
<b>Zea mays</b> L.	Seed	×						
<b>Zingiber officinale</b> ROSC., syn. <i>Amomum zingiber</i> L.	Rhizome	×		×			×	

Remarks	Risks	Critical plant substances	Pharmacologically effective dose
<b>Positive monograph, indications:</b> non-specific, acute forms of diarrhoea, licensed medicinal product, medicinal plant, very toxic Ib (Wink/Wyk), highly toxic ++ (Roth/Daunderer)	Since besides tannins the uzara root contains cardioactive glycosides, the specified dosage must be strictly observed. For this reason, only standardised ready-to-use medicinal products should be administered (Schilcher). The effect of high doses on the heart is similar to that of digitalis (Commission E monograph)	Glycosides with cardenolide structure	<b>Commission E:</b> preparations equivalent to 1 g drug or 75 mg total glycosides, daily dose equivalent to 4–90 mg total glycosides, calculated as uzarin
<b>WHO monograph:</b> supportive treatment of chronic nephritis, treatment of cholangitis, hepatitis and cholecystitis, and of acute and chronic cystitis and urethritis. Also used in the treatment of heart disease (as a diuretic), hypertension, rheumatism and diabetes mellitus		Carvacrol	<b>WHO:</b> 4–8 g/day
<b>Positive monograph, indications:</b> digestive problems, prevention of symptoms of travel sickness, <b>WHO monograph:</b> prophylaxis of nausea and vomiting associated with motion sickness, postoperative nausea, pernicious vomiting in pregnancy, and seasickness, <b>ESCOPE monograph:</b> prophylaxis of the nausea and vomiting of motion sickness, and as a postoperative antiemetic for minor day-case surgical procedures, <b>HMPC monograph:</b> prevention of nausea and vomiting in motion sickness, traditional use	irritating to mucous membranes (Roth/Daunderer), contraindications: vomiting in pregnancy (Commission E monograph)		<b>Commission E:</b> 2–4 g drug/day, equivalent preparations <b>ESCOPE, WHO:</b> 0.5–2 g drug/day, no administration to children under the age of 6 <b>HMPC:</b> 1–2 g drug, 1 hour before start of journey, no administration to children and adolescents under the age of 18

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## Legal basis

Regulation (EC) No. 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of foods safety

Regulation (EC) No. 258/97 of the European Parliament and of the Council of 27 January 1997 concerning novel foods and novel food ingredients

Regulation (EC) No. 1925/2006 of the European Parliament and of the Council of 20 December 2006 on the addition of vitamins and minerals and certain other substances to food

Regulation (EU) No. 609/2013 of the European Parliament and of the Council of 12 June 2013 on food intended for infants and young children, food for special medical purposes, and total diet replacement for weight control and repealing Council Directive 92/52/EEC, Commission Directives 96/8/EC, 1999/21/EC, 2006/125/EC and 2006/141/EC, Directive 2009/39/EC of the European Parliament and of the Council and Commission Regulations (EC) No. 41/2009 and (EC) No. 953/2009

Commission Regulation (EC) No. 953/2009 of 13 October 2009 on substances that may be added for specific nutritional purposes in foods for particular nutritional uses

Regulation (EC) No. 1334/2008 of the European Parliament and of the Council of 16 December 2008 on flavourings and certain food ingredients with flavouring properties for use in and on foods and amending Council Regulation (EEC) No. 1601/91, Regulations (EC) No. 2232/96 and (EC) No. 110/2008 and Directive 2000/13/EC

Directive 2002/46/EC of the European Parliament and of the Council of 10 June 2002 on the approximation of the laws of the Member States relating to food supplements

Ordinance on Food Supplements of 24 May 2004 (BAnz<sup>1</sup> I p. 1011), last amended by Article 8 of the Regulation of

13 December 2011 (BAnz I p. 2720) (Ordinance on Food Supplements [NemV])

Food and Feed Code in the version published on 3 June 2013 (BAnz I p. 1426), amended by Article 4 Section 20 of the Law of 7 August 2013 (BAnz I p. 3154) (Foodstuffs, Consumer Goods and Feed Code [Food and Feed Code – LFGB])

Directive 2001/83/EC of the European Parliament and of the Council of 6 November 2001 on the Community code relating to medicinal products for human use

Medicinal Products Act in the version published on 12 December 2005 (BAnz I p. 3394), amended by Article 4 Section 11 of the Law of 7 August 2013 (BAnz I p. 3154) (Act on the Trade in Medicinal Products [Medicinal Products Act – AMG])

Ordinance on the Prescription of Medicinal Products of 21 December 2005 (BAnz I p. 3632), last amended by Article 1 of the Regulation of 19 February 2013 (BAnz I p. 312) (Ordinance on the Prescription of Medicinal Products [AMVV])

Ordinance on Pharmacy-Only and OTC Drugs of 24 November 1988 (BAnz I p. 2150), last amended by Article 1 of the Regulation of 21 February 2011 (BAnz I p. 314) (Ordinance on Pharmacy-Only and OTC Drugs [AMVerkRV])

Ordinance on Standard Marketing Authorisations of 3 December 1982 (BAnz I p. 1601), last amended by Article 1 of the Regulation of 19 October 2006 (BAnz I p. 2287) (Ordinance on Standard Marketing Authorisations [StandZV])

Single Convention of 1961 on Narcotic Drugs of 30 March 1961 (BAnz 1973 II p. 1354) (SuchtstÜbk)

Law of 30 August 1976 approving the Convention on Psychotropic Substances of 21 February 1971 (BAnz 1976 II p. 1477) (PsychotrStÜbkG)

<sup>1</sup> BAnz = Bundesanzeiger (Federal Law Gazette)

Narcotic Drugs Act in the version published on 1 March 1994 (BAnz I p. 358), amended by Article 4 Section 7 of the Law of 7 August 2013 (BAnz I p. 3154) (Act on the Trade in Narcotic Drugs [Narcotic Drugs Act – BtMG])

Regulation (EC) No. 273/2004 of the European Parliament and of the Council of 11 February 2004 on drug precursors

Council Regulation (EC) No. 111/2005 of 22 December 2004 laying down rules for the monitoring of trade be-

tween the Community and third countries in drug precursors

Precursors Control Act of 11 March 2008 (BAnz I p. 306), amended by Article 4 Section 9 of the Law of 7 August 2013 (BAnz I p. 3154) (Act on the Monitoring of the Trade in Precursors that can be misused for the Illicit Manufacture of Narcotic Drugs [Precursors Control Act – GÜG])

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<sup>2</sup> Drug Commission of the German Medical Association

<sup>3</sup> Drug Commission of German Pharmacists

<sup>4</sup> Federal Institute for Drugs and Medical Devices

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<sup>6</sup> Poison Control Centre, Bonn



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 Aconitum napellus (Blauer Eisenhut): BAnz Nr. 193a, 15 Okt 1987.  
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 Agni casti fructus (Keuschlammfrüchte oder Mönchspfefferfrüchte): BAnz Nr. 226, 2 Dec 1992.  
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 Ammeos visnagae fructus (Ammi-visnaga-Früchte): BAnz Nr. 71, 15 Apr 1994.  
 Anethi fructus (Dillfrüchte): BAnz Nr. 193a, 15 Okt 1987 and BAnz Nr. 50, 13 Mar 1990 (corrected).  
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<sup>7</sup> BAnz = Bundesanzeiger (Federal Law Gazette); Nr. = Number (No.)

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Foeniculi fructus (Fenchel): BAnz Nr. 74, 19 Apr 1991.  
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Fragariae folium (Erdbeerblätter): BAnz Nr. 22a, 1 Feb 1990.  
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Galeopsidis herba (Hohlzahnkraut): BAnz Nr. 76, 23 Apr 1987.  
Galii odorati herba (Waldmeisterkraut): BAnz Nr. 193a, 15 Okt 1987.  
Gelsemii rhizoma (Gelsemiumwurzelstock): BAnz Nr. 178, 21 Sept 1991.  
Gentianae radix (Enzianwurzel): BAnz Nr. 223, 30 Nov 1985 and BAnz Nr. 50, 13 Mar 1990 (corrected).  
Ginkgo folium (Ginkgo-biloba-Blätter): BAnz Nr. 133, 19 July 1994.  
Ginseng radix (Ginsengwurzel): BAnz Nr. 11, 17 Jan 1991.  
Graminis flos (Heublumen): BAnz Nr. 85, 5 May 1988.  
Graminis rhizoma (Queckenwurzelstock): BAnz Nr. 22a, 1 Feb 1990.  
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Malvae folium (Malvenblätter): BAnz Nr. 43, 2 Mar 1989.  
Manna: BAnz Nr. 22a, 1 Feb 1990.  
Marrubii herba (Andornkraut): BAnz Nr. 22a, 1 Feb 1990.  
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Meliloti herba (Steinklee kraut): BAnz Nr. 50, 13 Mar 1986 and BAnz Nr. 50, 13 Mar 1990 (corrected).  
Melissae folium (Melissenblätter): BAnz Nr. 228, 5 Dec 1984 and BAnz Nr. 50, 13 Mar 1990 (corrected).  
Menthae piperitae folium (Pfefferminzblätter): BAnz Nr. 223, 30 Nov 1985 and BAnz Nr. 50, 13 Mar 1990 and BAnz Nr. 164, 1 Sept 1990 (corrected).  
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Myristica fragans (Muskatnussbaum): BAnz Nr. 173, 18 Sept 1986.  
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Orthosiphonis folium (Orthosiphonblätter): BAnz Nr. 50, 13 Mar 1986 and BAnz Nr. 50, 13 Mar 1990 (corrected).  
Paeonia (Pfingstrose): BAnz Nr. 85, 5 May 1988.  
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Petroselini herba/-radix (Petersilienkraut/-wurzel): BAnz Nr. 43, 2 Mar 1989.  
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Piperis methystici rhizoma (Kava-Kava-Wurzelstock): BAnz Nr. 101, 1 June 1990.  
Plantaginis lanceolatae herba (Spitzwegerichkraut): BAnz Nr. 223, 30 Nov 1985.  
Plantaginis ovatae semen (Indische Flohsamen): BAnz Nr. 22a, 1 Feb 1990 and BAnz Nr. 74, 19 Apr 1991 (corrected).  
Plantaginis ovatae testa (Indische Flohsamenschalen): BAnz Nr. 22a, 1 Feb 1990 and BAnz Nr. 74, 19 Apr 1991 (corrected).  
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 Pulsatillae herba (Küchenschellenkraut): BAnz Nr. 223, 30 Nov 1985.  
 Quercus cortex (Eichenrinde): BAnz Nr. 22a, 1 Feb 1990.  
 Raphani sativi radix (Rettich): BAnz Nr. 177a, 24 Sept 1986.  
 Ratanhiae radix (Ratanhiawurzel): BAnz Nr. 43, 2 Mar 1989.  
 Rauwolfiae radix (Rauwolfiawurzel): BAnz Nr. 173, 18 Sept 1986.  
 Rhamni cathartici fructus (Kreuzdornbeeren): BAnz Nr. 221, 25 Nov 1993.  
 Rhamni purshianae cortex (Amer.Faulbaumrinde): BAnz Nr. 133, 21 July 1993.  
 Rhei radix (Rhabarberwurzel): BAnz Nr. 133, 21 July 1993.  
 Rhododendri ferruginei folium (Rostrote Alpenrosenblätter): BAnz Nr. 164, 1 Sept 1990.  
 Rhoeados flos (Klatschmohnblüten): BAnz Nr. 85, 5 May 1988.  
 Rosae flos (Rosenblüten): BAnz Nr. 164, 1 Sept 1990.  
 Rosae pseudofructus cum fructibus (Hagebutten): BAnz Nr. 164, 1 Sept 1990.  
 Rosmarini folium (Rosmarinblätter): BAnz Nr.223, 30 Nov 1985 and BAnz Nr.221, 28 Nov 1986 and BAnz Nr. 50, 13 Mar 1990.  
 Rubiae tinctorum radix (Krappwurzel): BAnz Nr. 162, 29 Aug 1992.  
 Rubi fruticosi folium (Brombeerblätter): BAnz Nr. 22a, 1 Feb 1990.  
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 Rubi idaei folium (Himbeerblätter): BAnz Nr. 193a, 15 Okt 1987.  
 Rusci aculeati rhizoma (Mäusedornwurzelstock): BAnz Nr. 127, 12 July 1991.  
 Ruta graveolens (Raute): BAnz Nr. 43, 2 Mar 1989.  
 Sabal fructus (Sägepalmenfrüchte): BAnz Nr. 43, 2 Mar 1989 and BAnz Nr. 22a, 1 Feb 1990 and BAnz Nr. 11, 17.01.1991 (corrected).  
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## List of Substances of the Competent Federal Government and Federal State Authorities

Plants and plant preparations are an important part of a balanced diet. Apart from using them as fruit, vegetables or cereals we can also enjoy them as ingredients in the form of herbs or spices or enjoy them in teas. More and more exotic plants are also available whose use as food in Germany was not known up to now.

Supermarkets and drugstores also sell an increasing number of products which supposedly benefit health and contain preparations which were previously used in Germany above all in pharmaceutical products.

The present category "Plants and plant parts" of the List of Substances of the Competent Federal Government and Federal State Authorities was provided to facilitate the classification and evaluation of plants and plant parts regarding their use as food or food ingredients. In addition to classification under formal legal aspects the list also provides information on the possible risks involved with certain uses. The list of substances is intended as a guideline for authorities and those placing products on the market.

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