European Food Safety Authority

EFSA Journal 2012;10(5):2663

SCIENTIFIC REPORT OF EFSA

Compendium of botanicals reported to contain naturally occuring substances of possible concern for human health when used in food and food supplements[1]

European Food Safety Authority[2, 3]

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ABSTRACT

In April 2009, EFSA published on its website a Compendium of botanicals reported to contain toxic, addictive, psychotropic or other substances of concern. The purpose of the Compendium is to assist risk assessors responsible for the evaluation of specific ingredients in food supplements, in more easily identifying the compound(s) of concern on which to focus the assessment. The Scientific Committee worked on a second version of that Compendium between January 2010 and February 2012, considering botanicals that appear on a negative list or subject to restricted use (e.g. max. level or certain parts allowed only) in at least one European Member State. Two annexes have been added compared to the first version; the first one lists botanicals for which not enough information on possible substances of concern could be found, or for which the information present could not be verified. The second one lists botanicals for which, although some data were available, the Scientific Committee could not identify substances of concern, or other reasons for the inclusion in the compendium. This new "Compendium of botanicals reported to contain naturally occuring substances of possible concern for human health" replaces the first version published in 2009; it lists in alphabetical order botanicals without any judgment on whether they are suitable or not suitable for food applications in Europe; it has no legal or regulatory force pertaining to the legal classification of products or substances.

KEY WORDS

Compendium, botanicals, food supplements, hazard identification, compounds of concern, adverse effects

[1] On request from EFSA, Question No EFSA-Q-2010-00154, approved on 17 April 2012.

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[3] Acknowledgement: EFSA wishes to thank the members of the Working Group Compendium: Robert Anton, Ulla Beckman Sundh, Luc Delmulle, Maria Teresa Nogueira, Kirsten Pilegaard, Mauro Serafini and Vittorio Silano (Chair) for the preparatory work on this scientific output, and EFSA staff Bernard Bottex for the support provided to this scientific output.

Suggested citation: European Food Safety Authority; Compendium of botanicals reported to contain naturally occuring substances of possible concern for human health when used in food and food supplements. EFSA Journal 2012;10(5):2663. [60 pp.] doi:10.2903/j.efsa.2012.2663. Available online: www.efsa.europa.eu/efsajournal

SUMMARY

Since August 2005, the Scientific Committee (SC) of EFSA has been developing a compendium (in table format) of compounds present in botanicals, that can be of concern for human health. This work has been undertaken in cooperation with the Advisory Forum Representatives of the European Member States. A first version of the Compendium entitled "Compendium of botanicals reported to contain toxic, addictive, psychotropic or other substances of possible health concern" was published on the EFSA website in April 2009. At that time, the SC underlined that the compendium of botanicals is a living document and should be updated on a regular basis by EFSA.

As a follow up, the SC considered botanicals appearing on a negative list or subject to restricted use (e.g. max. level or certain parts allowed only) in at least one European Member State. A literature search was performed to get information on compound(s) and/or possible health effects that would have motivated the insertion of the botanicals in the above-mentioned lists. In cases where not enough information on possible substances of concern could be found, or for which the information present could not be verified, the botanical species have been transferred to an attached "insufficient information" list (Annex A). In cases where some data were available, but the Scientific Committee could not identify substances of concern, or other reasons for the inclusion in the compendium, the botanical species were then transferred to another attached list (Annex B).

The resulting "Compendium of botanicals reported to contain naturally occuring substances of possible concern for human health" replaces the previous version published on the EFSA website in 2009. The Compendium is intended to help with the safety assessment of botanicals and botanical preparations intended for use as food supplements, by facilitating hazard identification. The Compendium aims at flagging plants or part of plants or compounds of possible concern for human health naturally present in the listed botanicals and that therefore require specific attention while assessing the safety of products containing such botanical(s). It is underlined that the presence of a substance of concern in a given botanical does not necessarily mean that this substance will also be present in the botanical preparation and, if present, that it is at a dosage causing a health concern. The absence of a given botanical species in this Compendium cannot be interpreted as this species is devoid of compounds hazardous for human health. In the same way, not mentioning a specific part of plant does not imply absence of substance(s) of concern in this part. The compendium has no legal or regulatory force pertaining to the legal classification of products or substances.

TABLE OF CONTENTS

BACKGROUND AS PROVIDED BY EFSA

In September 2009, the Scientific Committee of EFSA published a guidance document for the safety assessment of botanicals and botanical preparations intended for use as ingredients in food supplements. The opinion specifies what data are needed to carry out such safety assessments. It also suggests a two-tiered scientific approach depending on the existing level of knowledge on a given botanical and the substance(s) it contains. Moreover, working together with EU Member States, EFSA has also established a large database by compiling the available literature data and other information on a large number of botanicals and botanical preparations which have been reported to contain substances that may be of health concern when used in food or food supplements.

The Compendium comprises around 900 botanical entries, identifying for each of them the scientific name, the most common synonyms, the plant part containing compound(s) of concern, the chemical(s) of concern, specific remarks and references of relevance for a safety assessment.

The purpose of the Compendium is to assist risk assessors responsible for the evaluation of specific ingredients in food supplements, in more easily identifying the compound(s) of concern on which to focus the assessment, making then use of the above-mentioned guidance document to assess whether the considered botanical preparation is safe.

The Scientific Committee and Advisory Forum of EFSA, as well as the representatives of the stakeholders and Member States Competent Authorities who participated in the workshop organised in Athens on 24 November 2009 to debate such issues expressed their appreciation for the results achieved so far by EFSA. They underlined the importance of developing further the Compendium to include more botanical entries and regularly updating the provided information with most recent data. An additional recommendation made to EFSA was to incorporate in the Compendium information on botanicals and botanical preparations that have no history of use in the European Union but that are reported to have a history of traditional use in third countries.

TERMS OF REFERENCE AS PROVIDED BY EFSA

The Scientific Committee is requested by the European Food Safety Authority to carry out a bi-annual review of the Compendium of botanicals reported to contain toxic, addictive, psychotropic or other substances of concern. To this end, the Scientific Committee is requested to:

- Include in the Compendium the missing botanical species containing compounds of possible concern for human health and currently being used as ingredients in food supplements in the European Union;
- Update, where necessary, the information on botanical species already included in the Compendium;
- Develop and test a practical approach to identify, classify and include in the Compendium botanicals and botanical preparations that have no history of use in the European Union but could enter the European market at some point because of having such history of traditional use in ultra-peripheric regions of the European Union, i.e. overseas territories of the European Member States, or in third countries.

1. Preamble

In June 2004, the Scientific Committee (SC) of EFSA published a discussion paper on botanicals and botanical preparations widely used in food supplements and related products. Concerns about quality and safety issues were expressed, as well as the need for a better characterisation of the range of products on the market and for harmonising risk assessment and consumer information approaches. The discussion paper was brought to the attention of the members of the Advisory Forum, who confirmed the importance of the issues addressed by the paper for their countries. EFSA therefore mandated its Scientific Committee in August 2005 to develop guidance for the safety assessment of botanicals and botanical preparations, as well as a compendium (in table format) of compounds present in botanicals, that can be of concern for human health. A first version of the guidance document and the compendium were published on the EFSA website in June 2008.

As from May 2008, work was undertaken by the EFSA Scientific Committee (SC), in cooperation with the Advisory Forum Representatives of the European Member States, to develop further the compendium, based on a compilation of lists of botanicals made by Member States competent authorities, or international organisations such as the Council of Europe (see the "sources of information" section of this document). When information was available, the Scientific Committee identified and characterised the compound(s) of possible concern for human health. The "compendium of botanicals reported to contain toxic, addictive, psychotropic or other substances of possible health concern" was published on the EFSA website in April 2009 (EFSA Journal 2009; 7(9):281). The SC underlined that the compendium of botanicals is a living document and should be updated on a regular basis by EFSA.

As a follow up, the SC extended its work to the analysis of official positive and negative lists available in European Member States. The SC used in particular the overview prepared by the Association of the European Self Medication Industry (AESGP, 2007) and focussed its work on botanicals appearing on a negative list or subject to restricted use (e.g. max. level or certain parts allowed only) in at least one European Member State. For new entries, i.e. not listed yet in the EFSA compendium, a literature search was performed to get information on compound(s) and/or possible health effects that would have motivated the insertion of the botanicals in the above-mentioned lists. Due to some limitations in data accessibility, e.g. availability of full articles, language issues, users of the compendium should check the completeness and relevance of these data for their assessment. Different sources like textbooks, peer-reviewed scientific articles and different databases were checked to find the most recent data. In cases where not enough information on possible substances of concern or adverse effects could be found, or for which the information present could not be verified, the botanical species have been transferred to an attached "insufficient information" list (Annex A). In cases where some data were available, but the Scientific Committee could not identify substances of concern, or other reasons for the inclusion in the compendium, the botanical species were then transferred to another attached list (Annex B). Considering the risk assessment approach described in the guidance for the safety assessment of botanicals and botanical preparations, it is underlined that Annex B cannot be considered as a list of "safe botanicals" for use in food supplements, since the Compendium identifies possible hazards in a non-exhaustive way and no risk assessment was performed. Both the compendium and Annex B are of particular use for Tier 1 of the safety assessment framework for specific botanical preparations, as described in the guidance adopted by the Scientific Committee in 2006[4]. Botanicals mentioned in Annex A would then be candidates for a direct evaluation under Tier 2, following provision of additional data needed for the assessment. The search for information from literature for the newly added botanical species ended in October 2011. It should be underlined that the working group could not update the information for most of the botanical species listed in the first version of the compendium, although new data may have become available since 2008.

[4] See http://www.efsa.europa.eu/en/efsajournal/pub/1249.htm

The present "Compendium of botanicals reported to contain naturally occuring substances of possible concern for human health" replaces the previous version published on the EFSA website in 2009.

2. Legal disclaimer

This compendium lists in alphabetical order botanicals without any judgment on whether they are suitable or not suitable for food applications in Europe. The compendium is part of a preparatory work undertaken by EFSA to harmonise the methodology for assessing the safety of botanicals and botanical preparations used in food. The compendium has no legal or regulatory force and may not be used as support or evidence in any disagreement or dispute pertaining to the legal classification of products or substances.

3. Purpose of the Compendium

The Compendium is intended to help with the safety assessment of botanicals and botanical preparations intended for use as food supplements, by facilitating hazard identification. The Compendium aims at flagging plants or part of plants or compounds of possible concern for human health naturally present in the listed botanicals and that therefore require specific attention while assessing the safety of products containing such botanical(s). It is underlined that the presence of a substance of concern in a given botanical does not necessarily mean that this substance will also be present in the botanical preparation and, if present, that it is at a dosage causing a health concern. This depends largely on the plant part used, the preparation method and the conditions of use. For some of the compounds flagged in the compendium, health-based guidance values (e.g. ADIs) have been established, but are not mentioned in this compendium. This compendium does not address possible synergies or antagonisms between botanical substances, nor possible interactions with other products that would need to be taken into account when assessing safety, as described in the EFSA guidance for the safety assessment of botanicals and botanical preparations.

4. Structure of the Compendium

The Compendium contains specific information organised in 6 columns.

In the first column the scientific name can be found which is based primarily on the taxonomy database of Kew taken as reference[5]. If not found in the Kew database, the ARSGRIN is used[6]. Commonly used synonyms are also mentioned into brackets. The whole genus is mentioned in this column when evidence is available that several species of the genus contain the same group of molecules of concern. In such case, the botanical species considered in the national lists are then brought under the appropriate spp.

Some European Member States considered fungi in their lists of plants, although they belong to another kingdom than botanicals. It was decided to extend the scope of the compendium so that it covers also fungi. The Index Fungorum (www.indexfungorum.org) was used as the main source of information for scientific names and families.

In the second column the family name is given. In many cases, botanicals from a given family contain similar groups of compounds. Therefore, knowing the family name may provide indications of the

[5] See http://apps.kew.org/wcsp/prepareChecklist.do;jsessionid=671510C7F22D4F19BEC4567F8810F73D?checklist=selected_families%40%4017928062010151959O

[6] See http://www.ars-grin.gov/cgi-bin/npgs/html/taxgenform.pl

possible presence of similar compounds in other species not included in the compendium. "The Plant List" database (www.theplantlist.org) was used as the main source of information. When the scientific name of the botanical was not an officially accepted one ("unresolved"), the ARSGRIN database was consulted.

The third column contains the plant parts in which the compounds of concern were reported to be present.

The fourth column lists the main compounds of concern and the chemical class to which they belong. When information on the amount present is available, this information is also mentioned. This column is left blank in cases no substances of concern could be identified in spite of available information on adverse effects. It is not the intention of the compendium to list all biologically active substances present in a given botanical; as indicated in the title , the Compendium focuses on substances of concern and adverse effects reported in the literature.

The fifth column deals with information concerning adverse health effect(s) found in the literature but that cannot be associated to the compound(s) of concern listed in the fourth column. In some cases, information on composition is also provided.

The last column contains selected reference(s) retrieved from literature searches for the data given, and/or standard reference text books providing monographs or more general scientific information for the botanicals considered.

The absence of a given botanical species in this Compendium cannot be interpreted as this species is devoid of compounds hazardous for human health. In the same way, not mentioning a specific part of plant does not imply absence of substance(s) of concern in this part. The main reasons for a botanical species not to appear in the compendium are the following:

- It did not appear in any of the national lists considered.
- Where no or insufficient data were available, the botanical was then transferred to Annex A.
- Where data were available and no indication of the presence of substances of concern or adverse effects could be found; the botanical was then transferred to Annex B.

5. Recommendations

The Scientific Committee underlines that the Compendium is a living document and should be updated on a regular basis by EFSA. The Compendium is therefore open for additional contributions and comments.

The Scientific Committee recommends as a follow-up activity that a systematic literature review is performed for the botanical species listed in annexes A and B.

Sources of information used to compile the list of botanical species to review

Country	Reference
Austria	List of Botanicals not admitted or restricted in food in Austria; (Codex Unterkommission Nahrungsergänzungsmittel) 9/7/2005
Belgium	Decree of 29 August 1997 on the manufacturing and placing on the market of foodstuffs which consist of plants or to which plants are added. List 1 - Plants that cannot be used in or as foodstuffs List 2 - Edible mushrooms List 3 - Plants that can be used in food supplements
Bulgaria	Decree on food supplements - Annex 4
Croatia	Regulation on foods to meet special nutritional requirements - Annex VIII
Czech Republic	Regulation on the requirements for food supplements and the addition of nutrients to foodstuff - Annex IV
Czech Republic	Recommendations of herbals which should only be used in food supplements under certain restrictions - State Institute of Drug Control
Denmark	Danish list concerning toxicological evaluation of plants in food supplements; The list contains plants considered as unacceptable, plants with a restriction on daily use (max. level), and plants that are evaluated at a daily dose ("Drogelisten" (2000) and later update March 2011)
Denmark	The departmental order of the Danish Ministry of Health no. 698 (31. August 1993) List of euphoriants. (Latest update 11. April 2007)
Estonia	Decree 59/2005 on establishing a list of plants for pharmaceutical use - Positive and negative lists of plants which may or may not be used in food supplements
Finland	Decision 1179/2006 on a list of medicines - Annex 2 negative list of herbal ingredients which cannot be used in food supplements
France	French Pharmacopoeia (10^{th} edition): List A of medicinal plants with a traditional use and List B of medicinal plants with a traditional use but whose possible undesirable effects exceed expected beneficial therapeutical effect.
Hungary	Horacsek M. 2005. Food Supplements and special-purpose foods. Komplementer Medicina. Vol 1-2, pp. 32-37 - List of herbal ingredients whose use in food supplements is permitted
Iceland	Medicines Control Agency - List of hebal ingredients A) for food use, B) for medicinal use, C) needing a case-by-case assessment, N) a natural medicine
Italy	Italian Ministry of Health - Plants not suitable for use in food supplement manufacturing - Positive list of herbal substances which may be used in the manufacture of foodstuffs
Latvia	Regulation on the labelling of food supplements - Annex II list of herbals whose use is prohibited in food supplements - Annex III list of herbals whose use is restricted to certain levels and parts of plants
Netherlands	Dutch Regulation implementing the Law 19 January 2001 on Goods and identifying pyrrolizidine alkaloids containing plants (for which a maximum limit of 1 µg/kg or per litre is imposed) (E1) and plants not to be used in herboristic products (E2)
Norway	Regulation 1565/1999 on medicinal product classification. Herbal substances are classified as H) general food use, L) medicine, LR) prescription only medicine
Poland	Office for Registration of medicinal products, medicinal devices and biocidal products - two lists of herbals which may or may not be used in food supplements
Romania	Ordinance 244/2005 on herbals and partially processed herbals used in food supplements - contains a list of plants unsuitable for human consumption, and a list of plants which may be used in food supplements
Slovenia	Rules for the classification of herbals Nr. 133/03 - Contains a list of herbals classified as H) can be used in foodstuffs, Z) for the prevention and treatment of disease, ZR) prescription needed, ND, prohibited because of their toxic potential
Spain	Spanish Regulation (Ministerio de Sanidad y Consumo Orden SCO/ 190/2004) concerning plants for which public sale is forbidden or limited because of toxicity
Sweden	National Food Administration - List of plants considered as not suitable in foods
United Kingdom	Medicines and Healthcare Products Regulatory Agency - Indicative list of herbals which have a reported medicinal, food or cosmetic use.

EU/International Organisation	Reference
AESGP	The Regulatory Framework for Food Supplements in Europe
Council of Europe	Plants assessed as flavourings by the Council of Europe in 2000 and 2004 belonging to Category 3 or 4 (restrictions recommended for use) (H1 and H2 respectively) or as Category 5 (restrictions recommended and further data required) (H3) or Category 6 (considered not appropriate for human consumption) (H4)
Council of Europe	Active principles (constituents of toxicological concern) contained in natural sources of flavourings. Council of Europe, 2004
EMEA/EMA	Plants containing toxic substances (CPMP / EMEA,1992)
EMEA/EMA	Plants assessed as medicinal products by the EMEA/HMPC since its inception, and previously by the Working Party on Herbal Medicinal Products between 1998 and 2004
EMEA/EMA	Final Public Statement on the use of herbal medicinal products containing estragole, Committee on Herbal Medicinal Products (HMPC), London 23 November 2005
EMEA/EMA	Final Public Statement on the use of herbal medicinal products containing methyleugenol, Committee on Herbal Medicinal Products (HMPC), London 23 November 2005
EMEA/EMA	Final Public Statement on the risk associated with the use of herbal products containing Aristolochia species, Committee on Herbal Medicinal Products (HMPC), London 23 November 2005
EMEA/EMA	Final Public Statement on the use of herbal medicinal products containing pulegone and menthofuran, Committee on Herbal Medicinal Products (HMPC), London 23 November 2005
EMEA/EMA	Final Public Statement on the use of herbal medicinal products containing asarone, Committee on Herbal Medicinal Products (HMPC), London 23 November 2005
ESCOP	Plants assessed as medicinal products by ESCOP (2003)
EuroFIR-NETTOX	Pilegaard K, Eriksen FD, Soerensen M, Gry J. (2007) EuroFIR-NETTOX Plant List. European Food Information Resource Consortium (EuroFIR). ISBN 0 907 667 570
WHO	Plants assessed as medicinal products by WHO in 1999 (Vol. I), 2002 (Vol. 2) and 2005 (Vol. 3)

COMPENDIUM OF BOTANICALS REPORTED TO CONTAIN NATURALLY OCCURING SUBSTANCES OF POSSIBLE CONCERN FOR HUMAN HEALTH WHEN USED IN FOOD AND FOOD SUPPLEMENTS

This compendium lists in alphabetical order botanicals without any judgment on whether these are suitable or not suitable for food applications in Europe. This compendium is part of a preliminary work undertaken by EFSA to harmonise the methodology across its panels for assessing the safety of botanicals and botanical preparations used in food and food supplements. Without prejudice to the existing legal framework, such compendium has no legal status and may not be used as support or evidence in any disagreement or dispute pertaining to the legal classification of products or substances. This compendium is a living document and is therefore open for additional contributions and comments.

Botanical name	Family	parts of plants of possible concern	Chemical of concern	Remarks on toxic/adverse effect(s) not known to be related to the identified chemical(s) of concern	Specific References
***Abrus precatorius* L.**	Fabaceae (Leguminosae)	Seed	Glycoproteins (lectins): e.g. abrin		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques. Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Acacia* spp.**	Fabaceae (Leguminosae)	Bark, leaf and seed	Genus in which species may contain dimethyltryptamine derivatives and cyanogenic glycosides (e.g. prunasin, sambunigrin, acacipetalin)		Seigler D.S. and Ebinger J.E. 1987. Cyanogenic Glycosides in Ant-Acacias of Mexico and Central America. Southwest. Nat. 32(4), 499-503.
***Achillea abrotanoides* Vis.**	Asteraceae (Compositae)	Aerial part	Essential oil: bicyclic monoterpenes: beta-thujone (16.8%), pinocarvone (15,6%), camphor (14%), and monoterpene etheroxide: 1,8-cineole (11,3%)		Bicchi C. et al. 1988. On the composition of Achillea abrotanoides (Vis.) Vis. essential oil. Flavour Frag. J. 3(3), 101-104
***Achillea fragrantissima* Sch.Bip.**	Asteraceae (Compositae)	Aerial part	Essential oil: bicyclic monoterpenes: thujones		Elgamal M.H.A. et al. 1991. Constituents of Achillea fragrantissima. Fitoterapia. 62(4), 362
***Achillea millefolium* L.**	Asteraceae (Compositae)	Aerial part	Essential oil from fresh plant : bicyclic monoterpenes: alpha-thujone (0.28%), beta-thujone (1.60%), camphor (2.93%) and monoterpene etheroxide: 1,8-cineole (2.24%). Essential oil from dried plant : alpha-thujone (0.40%), beta-thujone (3.21%), camphor (4.43%), 1,8-cineole (4.54%). Essential oil from flower: alpha-thujone (1.02%), beta-thujone (0.59%), camphor (17.8%), 1,8-cineole (3.70-9.6%). Essential oil from leaf : alpha-thujone (0.50%), beta-thujone (0.25%), camphor (16.80%), 1,8-cineole (6.09%).		Council of Europe. 2000. Natural Sources of Flavourings, Rep No.1, ISBN 978-92-871-4324-2
***Acokanthera* spp.**	Apocynaceae	Whole plant	Genus in which species may contain cardenolide glycosides: e.g. ouabain		Kokwaro JO. 1976. Medicinal plants of East Africa. East Africa Literature Bureau, General Printers Ltd. Nairobi, Kenya, Omino EA and Kokwaro JO. 1993. Ethnobotany of Apocynaceae species in Kenya. J. Ethnopharmacol. 40(3), 167-180.
***Aconitum* spp.**	Ranunculaceae	Whole plant	Genus in which species may contain diterpene alkaloids: e.g. aconitine, hypaconitine, mesaconitine.		Frohne D., Pfänder H.J. and Anton R. 2009 Plantes à risques, Ed. Tec et Doc-Lavoisier. ISBN :978-2-7430-0907-1
***Acorus calamus* L.**	Acoraceae	Leaf and rhizome	Phenylpropanoids: e.g. methylchavicol in rhizome (1%) and in unspecified quantities in other parts. Essential oil from the rhizome: phenylpropanoids: e.g. beta-asarone (Z-isoasarone).		Duke, J.A. 1992. Handbook of Phytochemical Constituents of GRAS Herbs and. Other Economic Plants. CRC Press, Inc., Boca Raton, FL.. Nico Vermeulen:"The Complete Encyclopedia of Container Plants" Rebo International, Netherlands, 1998. ISBN 90-366-1584-4
Acorus calamus* L. *var. calamus	Acoraceae	Leaf and rhizome	Triploid plant: phenylpropanoids: e.g. beta-asarone (50-65% in the essential oil from the leaf, 9-19% in the essential oil from the rhizome).		EMEA HMPC. 2005. Public statement on the use of herbal medicinal products containing asarone. EMEA/HMPC/139215/2005
***Acorus calamus* L. *var.angustatus* Bess**	Acoraceae	Leaf and rhizome	Tetraploid plant: phenylpropanoids: e.g. beta-asarone (85-95% in the essential oil from the fresh rhizome, 4.4-8.3% in the dried rhizome)		EMEA HMPC. 2005. Public statement on the use of herbal medicinal products containing asarone. EMEA/HMPC/139215/2005
***Acorus gramineus* Sol.**	Acoraceae	Leaf and rhizome	Essential oil from the rhizome: (0.5-0.9%) with phenylpropanoids: cis- and trans- isoasarones, methyleugenol, cis-methyleugenol and safrole; calciumoxalate raphides		EMEA HMPC. 2005. Public statement on the use of herbal medicinal products containing asarone. EMEA/HMPC/139215/2005
***Actaea spicata* L.**	Ranunculaceae	Whole plant	Benzylisoquinoline alkaloids: e.g. magnoflorine, corytuberine		Hegnauer R. 1992. Chemotaxonomie der Pflanzen. Vol. 10. Birkhauser Verlag. ISBN 3-7643-2578X; Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3.
***Adenia* spp.**	Passifloraceae	Root and seed	Genus in which species may contain lectins		Pelosi, E et al. 2005 Ribosome-inactivating proteins and other lectins from Adenia (Passifloraceae). Toxicon, 46(6), 658-663. Barbieri L. et al. 1984. Volkensin, the toxin of Adenia volkensii (kilyambiti plant). FEBS Letters,171, (2), 277-279
***Adenium* spp.**	Apocynaceae	Root and stem (latex), seed	Genus in which species may contain cardenolide glycosides: e.g. echujine		Schmelzer GH. and Fakim AG. 2008. Medicinal plants 1. Plant resources of tropical Africa 11 (1). PROTA Foundation/ Backhuys Publishers/CTA Wageningen, Netherlands,
Adhatoda vasica Nees. ***See Justicia adhatoda* L.**					
***Adonis* spp.**	Ranunculaceae	Whole plant	Genus in which species may contain cardenolide glycosides: e.g. adonitoxin		Frohne D., Pfänder H.J. et Anton R.2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1 Bruneton J. 2005. Plantes toxiques, 3ème édition, Ed. Tec et Doc-Lavoisier, ISBN : 2-7430-086-7
***Aegle marmelos* (L.) Corrêa**	Rutaceae	Leaf	Quinoline alkaloids: e.g. aegeline, skimmianine.	Ethanolic extract of leaf shows dose-dependent decrease of testosterone levels, spermatogenesis and fertility in rats. A dry aqueous extract given perorally to mice in doses of 1 g/kg body weight (N=7) for 15 days reduced the serum levels of the thyroid hormone T3 but not T4 compared to control mice receiving vehicle.	Chauhan A. et al. 2007. Suppression of fertility in male albino rats following the administration of 50% ethanolic extract of *Aegle marmelos*. Contraception. 76, 474-481. Chauhan A. et al. 2008. Reversible changes in the antifertility induced by *Aegle marmelos* in male albino rats. Syst. Biol. Reprod. Med. 54, 240-246. Kar A. et al. 2002. Relative efficacy of three medicinal plant extracts in the alteration of thyroid hormone concentrations in male mice. J. Ethnopharmacol. 81, 281-285 . Yadav NP. and Chanotia, CS. 2009. Phytochemical and pharmacological profile of leaves of Aegle marmelos (Linn). Pharma Review. 7(42), 144-149.
***Aethusa cynapium* L.**	Apiaceae (Umbelliferae)	Aerial part	Polyacetylene derivatives: e.g. aethusine (= cynapine), aethusianol.	poisonous potential is questionable as no toxicity is found in mice and guinea pigs. Probably toxic information comes from confusion with Conium poisoning or plants infected with the rust fungus *Puccinia aethusae* with consequent production of larger amounts of the toxins	Frohne D., Pfänder H. J. and Alford I.,2005 Poisonous plant. Blackwell, ISBN: 1-874545-94-4
***Aframomum angustifolium* (Sonn.) K.Schum.** *(Amomum angustifolium* Sonn.*)*	Zingiberaceae	Seed	Essential oil: monoterpene etheroxide: 1,8-cineole (4%)		Bruneton J. (1996). Plantes toxiques - Vegetaux dangereux pour l'homme et les animaux. Tec&Doc ISBN 2-7430-169-0
***Aframomum melegueta* K.Schum.** *(Amomum melegueta* Rosc.*)*	Zingiberaceae	Fruit and seed	Piperidine alkaloids: e.g. piperine	Ingestion of 0.35 g seeds by human beings resulted in blurred and double vision. Following administration by gavage of an aqueous extract of the fruits, male rats showed increased sexual arousal.	Igwe SA et al. 1999 Ocular toxicity of Aframomum melegueta (alligator pepper) on healthy Igbos of Nigeria. J Ethnopharmacol 65: 203-206. Kamtchouing P et al. 2002. Effect of *Aframomum melegueta* and *Piper guineense* on sexual behaviour of male rats. *Behav. Pharmacol.* 13, 243-247. Lachman-White,DA., Adams,CD. and Trotz,UO. 1992. A guide to the medicinal plants of Coastal Guyana. Commonwealth Science Council. Technical Publications. Series 225. London, UK.
***Agapanthus* spp.**	Amaryllidaceae	Leaf and rhizome		Reported toxicity of rhizomes to livestock; related toxic substances not identified. Sticky acrid sap of leaf inducing ulceration of the mouth of the animals.	Fuller TC and McClintock E. 1986. Poisonous plants of California. Univ. California Press, Berkeley, Calif., USA. Van Wyk BE, Van Oudtshoorn B and Gericke N. 1997. Medicinal plants of South Africa. Briza, Pretoria.

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***Agastache* spp.**	Lamiaceae (Labiatae)	Whole plant	Genus in which species may contain in their essential oil phenylpropanoids: e.g. methylchavicol and/or methyleugenol and/or monoterpenes: e.g. pulegone	*A. rugosa*: 83%-96% methyleugenol and 5 chemotypes T1: methylchavicol, T2: methyleugenol, T3: methyleugenol and limonene, T4: menthone, T5: menthone and pulegone; *A. foeniculum*: 43%-74% methylchavicol	Charles DJ et al. 1991. Characterisation of essential oil of Agastache species. J Agr Food Chem. 39(11), 1946-1949.
Agathophyllum aromaticum Willd. **See *Ravensara aromatica* Sonn.**					
***Agathosma cerefolium* Bartl. & Wendl.**	Rutaceae	Leaf	Essential oil: 2% (summer) - 5% (winter) with 50% phenylpropanoids: e.g. methylchavicol and anethole.		Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3.
***Agrostemma githago* L.**	Caryophyllaceae	Seed	Triterpenoid saponins: e.g. githagin (7%), agrostemmic acid		Government of Canada - Canadian Biodiversity Information Facility. www.cbif.gc.ca
***Ailanthus altissima* (Mill.) Swingle**	Simaroubaceae	Whole plant	Indolomonoterpenic alkaloids: e.g. canthine-6-one and beta-carboline derivatives		Crespi-Perellino N et al. 1986. Occurrence of indol alkaloids in *Ailanthus altissima* cell cultures, J. Nat. Prod. 49(6), 1010-1014
***Albizia julibrissin* Durazz.**	Leguminosae (Fabaceae)	Seed		Unknown neurotoxin in the seed	Grant G et al.1991. A survey of the nutritional and haemagglutination properties of several tropical seeds. Livestock research for rural development. 3(3), 33-55
***Aleurites* spp.**	Euphorbiaceae	Whole plant	Genus in which species may contain saponins and diterpene derivatives: e.g.phorbol esters		Frohne D., Pfänder H.J. et Anton R. « Plantes à risques », Ed. Tec et Doc-Lavoisier (2009), ISBN :978-2-7430-0907-1
***Alisma plantago-aquatica* L.**	Alismataceae	Whole plant		Toxicity associated with all plant parts; compound(s) are unknown	Roth L, Daunderer M and Kormann K. 1994.Giftpflanzen – Pflanzengifte. Nikol Verlagsgesellschaft mbH & Co. KG, Hamburg, ISBN 3-933203-31-7
***Alkanna* spp.**	Boraginaceae	Root	Genus in which species may contain unsaturated pyrrolizidine alkaloids		Hammouda FM et al. 1992. Pyrrolizidine alkaloids from alkanna orientalis (L.) Boiss. Quatar Univ. Sci. J. 12, 80-82.
***Allamanda cathartica* L.**	Apocynaceae	Whole plant	Iridoid lactones: e.g. allamandin	Purgative effect (latex)	Akah PA et al. 1992. Gastrointestinal effect of Allamanda cathartica leaf extracts. Int. J. Pharmacogn. 30(3), 213-217
***Aloe* spp.**	Asparagaceae (Agavaceae)	Leaf	Genus in which species may contain hydroxyanthracene derivatives: C-glycosides of 1,8-dihydroxy anthrones: e.g. aloins	Aloins are present only in the juice obtained from the pericycle cells and adjacent leaf parenchyma.	Delmulle L and Demeyer K. 2010. Anthraquinones in plants. Source, safety and applications in gastrointestinal health. Nottingham University Press. ISBN: 978-1-897676-32-5
***Alpinia galanga* (L.) Willd.**	Zingiberaceae	Rhizome	Essential oil: phenylpropanoids: e.g. methyleugenol in unspecified quantities		Kaur A et al. 2010. Antileishmanial phenylpropanoids from Alpinia galanga (Linn.) Willd. Indian J. Exp. Biol. 48(3), 314-322.
***Alpinia officinarum* Hance**	Zingiberaceae	Rhizome	Essential oil: monoterpene etheroxide: 1,8-cineole (65%)		PDR for Herbal Medicines, 2000 II edition Medical Economics Company ISBN 1-56363-361-2 Nuraniya R et al. 2008. Analysis of essential oil from Alpinia officinarum Hance by GC/MS. Xinjiang Yike Daxue Xuebao. 31(4), 441-442.
***Alstonia* spp.**	Apocynaceae	Bark and leaf	Genus in which species may contain monoterpenoid indole alkaloids: e.g. alstonine, alstonidine, picrinine.		Ghedira K et al. 1988. Alkaloids of Alstonia angustifolia. Phytochemistry. 27(12), 3955-3962 Keawpradub N and Houghton PJ. 1997. Indole alkaloids from Alstonia macrophylla. Phytochemistry, 46(4), 757-762 Xiang-Hai C et al. 2007. Unique Monoterpenoid Indole Alkaloids from Alstonia scholaris. Org. Lett. 9(9), 1817–1820. PDR for Herbal Medicines,2000 II ed., Medical Economics Company ISBN 1-56363-361-2 Toh-Seok K and Yeun-Mun C. 2004. New indole alkaloids from Alstonia macrophylla. J. Nat. Prod. 67(4), 547-552.
***Amaryllis* spp.**	Amaryllidaceae	Bulb	Genus in which species may contain isoquinoline alkaloids: e.g. lycorine, ambelline, caranine.		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques. Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Ammi majus* L.**	Apiaceae (Umbelliferae)	Fruit and leaf	Furanocoumarins: e.g. 5-methoxypsoralen.		Glew WB. 1979. Determination of 8-methoxypsoralen in serum, aqueous, and lens: relation to long-wave ultraviolet phototoxicity in experimental and clinical photochemotherapy. Trans Am Ophthalmol Soc. 77, 464–514
***Ammi visnaga* Lam.**	Apiaceae (Umbelliferae)	Aerial part	Furochromones: e.g. khellin, visnagine.		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8. Martelli P et al. 1984. Rapid separation and quantitative determination of khellin and visnagin in Ammi visnaga (L.) Lam. fruits by high-performance liquid chromatography. J Chromatogr. 301, 297-302.
***Amygdalus communis* L.** *(Prunus amygdalus* Batsch, *P. dulcis* (Mill.) D.A.Webb.*)*	Rosaceae	Seed	Cyanogenic glycosides: e.g. prunasin corresponding to 300-3400 mg HCN/kg		Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Anabasis aphylla* L.**	Amaranthaceae (Chenopodiaceae)	Aerial part	Pyridine alkaloids: e.g. anabasine, N-methylanabasine, anabasamine and isonicoteine.		Du H et al. 2008. Alkaloids from Anabasis aphylla L. J. Asian Nat. Prod. Res. 10(11-12),1093-1095
***Anacardium occidentale* L.**	Anacardiaceae	Leaf and pericarp	Alcenylphenols: e.g. anacardic acids, cardanol.		Tedong L et al. 2007. Acute and subschronic toxicity of *Anacardium occidentale* Linn (Anacardiaceae) leaves hexane extract in mice. Afr. J. Trad. Complement. Altern. Med. 4(2), 140-147.
Anacyclus officinarum Hayne **See *Anacyclus pyrethrum* (L.) Lag.**					
***Anacyclus pyrethrum* (L.) Lag.** (*Anacyclus officinarum* Hayne)	Compositae (Asteraceae)	Root	Alkylamides: e.g.pellitorine	Seeds caused miscarriages in pregnant albino rats when fed for 10 days after copulation at a daily dose of 175 mg/kg bw. Skeletal and visceral malformations were commonly observed in the fetuses	Atta-ur R. 2000. Bioactive natural products (Part B), Part 2. Elsevier Science BV. ISBN 978-0-444-50469-2. Sharma et al. 2009. Evaluation of anabolic, aphrodisiac and reproductive toxicity of *A. pyrethrum* DC in male rats. Sci. Pharm. 77:97-110
***Anadenanthera* spp.**	Leguminosae (Fabaceae)	Bark and seed	Genus in which species may contain indolamines derived from tryptamines: e.g. bufotenine and beta-carbolines		Ott J. 2001. Pharmañopo-psychonautics: human intranasal, sublingual, intrarectal, pulmonary and oral pharmacology of bufotenine. J Psychoactive Drugs. 33(3), 273-281
***Anagallis arvensis* L.**	Primulaceae	Whole plant	Tetracyclic triterpene saponins: e.g. anagalline and oxygenated tetracyclic triterpenes: e.g. arvenins, cucurbitacines E, B, D and I.		Roth L, Daunderer M and Kormann K. 1984. Giftpflanzen - Pflanzengifte. Vorkommen Wirkung Therapie. ecomed. ISBN 3-609-64810-4 Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier. ISBN :978-2-7430-0907-1
***Anagyris foetida* L.**	Leguminosae (Fabaceae)	Leaf	Quinolizidine alkaloids: e.g. cytisine and anagyrine		Innocenti G. et al. 2006. Cytotoxic costituents from *Anagyris foetida* leaves. Fitoterapia. 77 (7-8), 595-597

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***Anamirta paniculata* Colebr.** *(A. cocculus* (L.) Wight & Arn.*)*	Menispermaceae	Fruit and seed	Sesquiterpene lactones: e.g. picrotoxin, picrotoxinin.		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Anchusa* spp.**	Boraginaceae	Flower and leaf	Genus in which species may contain unsaturated pyrrolizidine alkaloids: e.g. lycopsamine		Siciliano T. et al., 2005. Pyrrolizidine alkaloids from Anchusa strigosa and their antifeedant activity. Phytochemistry. 66(13), 1593-1600; Broch-Due AI. et al. 1980. Alkaloids of *Anchusa officinalis* L. Identification of the pyrrolizidine alkaloid lycopsamine. Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry, B34(1), 75-7.
Andira araroba Aguiar ***See Vataireopsis araroba* (Aguiar) Ducke**					
***Andira inermis* (W.Wright) Kunth**	Leguminosae (Fabaceae)	Bark	Isoquinoline alkaloids: e.g. berberine Isoflavonoids derivatives, e.g. biochanin-A, calycosin and genistein		Duke JA, Bogenschutz-Godwin MJ and Ottesen AR. 2009. Duke's Handbook of Medicinal Plants of Latin America. CRC Press Taylor & Francis. ISBN 13: 978-1-4200-4316-7
***Andrographis paniculata* (Burm.f.) Nees** (*Justicia paniculata* Burm. f.)	Acanthaceae	Aerial part	Diterpene lactones and derivatives from dried aerial part: e.g. a*ndrographolide (2.8-4.4%), dehydroandrographolide (1.4-2.1%), neoandrographolide (1.4-1.9%) and deoxyandrographolide-19-beta D glucoside (0.7-1.8%)*	Abortifacient effect reported in studies with rabbits and mice (WHO 2002).	Akbarsha MA and Murugaian P. 2000. Aspects of the male reproductive toxicity/male antifertility property of andrographolide in albino rats: effect on the testis and the cauda epididymidal spermatozoa. Phytoter. Res. 14, 432-435. Akbarsha MA *et al.* 1990. Anti-fertility effect of *Andrographis paniculata* (Nees) in male albino rats. Indian J. Exp. Biol. 28, 421-426. Patarapanich C et al. 2007. HPLC determination of active diterpene lactones from *Andrographis paniculata* Nees planted in various seasons and regions in Thailand. Thai. J. Pharm. Sci. 31, 91-99. World Health Organization. 2002. WHO monographs on selected medicinal plants. Geneva. ISBN 92 4 154537 2.
***Andromeda* spp.**	Ericaceae	Flower, fruit and leaf	Genus in which species may contain diterpenes: e.g. grayanotoxin (andromedotoxin)		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
Andropogon citratus DC. **See *Cymbopogon citratus* (DC.) Stapf**					
***Anemone* spp.**	Ranunculaceae	Aerial part	Genus in which species may contain lactones: e.g. protoanemonins	protoanemonin only present in fresh herb	Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Anethum graveolens* L.**	Apiaceae (Umbelliferae)	Whole plant	Essential oil: phenylpropanoids: e.g. methylchavicol		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Angelica* spp.**	Apiaceae (Umbelliferae)	Fruit and root	Genus in which species may contain furanocoumarins: e.g. archangelin, prangolarin, oxipeucedanin hydrate, ostsothol and osthol.		Peter KV. 2004. The Handbook of Herb and Spices vol. 2 CRC Press. ISBN 0849312175 Søborg I., Andersson C., Gry J. 1996. Furocoumarins in Plant Food – exposure, biological properties, risk assessment and recommendations. TemaNord 1996:600. Ed. Nordic Council of Ministers, Copenhagen, ISBN 92 9120 943 0. Available at: http://www.norden.org/sv/publikationer/publikationer/1996-600/at_download/publicationfile
Anhalonium lewinii Hennings **See *Lophophora williamsii* (Salm-Dyck) J.M.Coult.**					
***Annona* spp.**	Annonaceae	Whole plant	Genus in which species may contain acetogenines in the seed: e.g. annonacin, isoquinoline alkaloids in the bark, leaf, fruit and stem: e.g. annoretine, and monoterpene etheroxide in the fruit: 1,8-cineole	*A. muricata*: total alkaloids 0.65 g/kg in leaf, 19.7 g/kg in root bark, 2.5 g/kg in stem bark: 0.6 g/kg. Bark is rich in cyanogenic glycosides, leaves contain small amounts and fruits only traces. The fruit pulp (from e.g. *A. cherimola* Mill., *A. glabra* L., *A. muricata* L., *A. reticulata* L. and *A. squamosa* L.) is consumed as food.	Caparros-Lefebvre D. and Elbaz A. 1999. Possible relation of atypical parkinsonism in the French West Indies with consumption of tropical plants: a case-control study. Lancet. 354, 281-283. Hasrat J.A. et al. 1997. Isoquinoline derivatives isolated from the fruit of *Annona muricata* as 5-HTergic 5-HT1A receptor agonists in rats: unexploited antidepressive (lead) products. J. Pharm. Pharmacol. 49(11), 1145-1149. Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2. Liaw C. et al. 2004. Nine new cytotoxic monotetrahydrofuran Annonaceous acetogenins from *Annona montana*. Planta Medica, 70(10), 948-959. Pilegaard K., Eriksen F.D., Soerensen M., Gry J. (2007) EuroFIR-NETTOX plant list. European Food Information Resource Consortium (EuroFIR). ISBN: 0 907 667 570.
***Anthoxanthum odoratum* L.**	Poaceae (Gramineae)	Aerial part	Coumarins: e.g. coumarin (5% of the dried plant)		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2
***Antiaris toxicaria* (Pers.) Lesch.**	Moraceae	Bark and leaf	Cardenolide glycosides: e.g. antiarins, toxicariosids B and C; furanocoumarins		Carter CA et al. 1997. Toxicarioside A. A new cardenolide isolated from *Antiaris toxicaria* latex-derived dart poison. Assignment of the tH- and tsC-NMR shifts for an antiargenin aglycone. Tetrahedron 53(50), 16959-16968.
***Apocynum* spp.**	Apocynaceae	Whole plant	Genus in which species may contain cardenolide glycosides and aglycones: e.g. cymarin, strophantidin.		EMEA. Committee for veterinary medicinal products. 1999. Apocynum cannabinum summary report. EMEA/MRL/596/99-Final American Herbal Products Association. 1997. Botanical safety handbook. Edited by Mc Guffin M, Hobbs C, Upton R and Goldberg A. ISBN 0-8493-1675-8
***Aquilegia vulgaris* L.**	Ranunculaceae	Whole plant	Cyanogenic glycosides		Hegnauer R. 1990. Chemotaxonomie der Pflanzen. Birkhauser Verlag. ISBN 3-7643-2578X. Frohne D., Pfander H.J. And Anton R.. 2009. Plantes a risques. Tec & Doc ed. ISBN 978-2-7430-0907-1
***Arctostaphylos uva-ursi* (L.) Spreng.**	Ericaceae	Leaf	Quinone glycosides: e.g. arbutin (5% -15%), methylarbutin (up to 4%)		British Herbal Compendium. 1993. Vol. 1: A handbook of scientific information on widely used plant drugs. Editor: P. Bradley. ISBN 978-0903032094
***Areca catechu* L.**	Arecaceae (Palmae)	Seed	Piperidine alkaloids: e.g. arecoline, arecaidine .		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Argemone mexicana* L.**	Papaveraceae	Whole plant	Isoquinoline alkaloids: e.g. protopine, allocryptopine, sanguinarine		Verma SK et al. 2001. *Argemone mexicana* poisoning: autopsy findings of two cases. Forens Sci. Internat. 115, 135-141
***Argyranthemum frutescens* (L.) Sch.Bip.** *(Chrysanthemum frutescens* L.)	Compositae (Asteraceae)	Aerial part	Acetylenic compounds: e.g. frutescinol isovalerate		Badisa RB et al. 2004. Pharmacological activities of some Argyranthemum species growing in the Canary highlands. Phytotherapy. Res. 18, 763-767

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***Argyreia* spp.**	Convolvulaceae	Seed	Genus in which species may contain ergoline alkaloids	There is still discussion whether the ergoline alkaloids found are due to biochemical synthesis in the plant or due to fungal production	Steiner U. et al. 2006. Molecular characterisation of a seed transmitted claviciptaceous fungus occuring on dicotyledoneous plants (Convolvulaceae). Planta. 224(3),533-544.
***Arisaema* spp.**	Araceae	Whole plant	Genus in which species may contain calcium oxalate raphides and some species saponin glycosides: e.g. aronin		Yifan Y. 2002. Chinese herbal medicines: comparison and characteristics. Churchill-Linvingstone, London. ISBN 0-44307-166-7
***Aristolochia* spp.**	Aristolochiaceae	Whole plant	Genus in which species may contain nitric phenanthrenic derivatives: e.g. aristolochic acids, aristolactams		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Arnica chamissonis* Less.**	Compositae (Asteraceae)	Whole plant	Sesquiterpene lactones (1.5%) and their esters: e.g. helenalin, arnifolines, chamissonolides	Helenalin reported to be the causative agent for oral toxicity	Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7
***Arnica montana* L.**	Compositae (Asteraceae)	Whole plant	Sesquiterpene lactones and esters (0.2-0.5%) e.g.: helenalin and derivatives	Helenalin reported to be the causative agent for oral toxicity	Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7 EMEA CVMP. 1999. Arnica montana - Summary report. EMEA/MRL/647/99-FINAL
***Artemisia abrotanum* L.**	Compositae (Asteraceae)	Aerial part	Essential oil: bicyclic monoterpenes: e.g. alpha-thujone; monoterpene etheroxide: 1,8-cineole; phenylpropanoids: e.g. methyleugenol. Essential oil from leaf (1.4%): bicyclic monoterpenes: e.g. thujones (up to 70%); monoterpene etheroxide: 1,8-cineole (up to 60%).		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2 Tunon H. et al. 2006 Arthropod repellency, especially tick (Ixodes ricinus), exerted by extract from Artemisia abrotanum and essential oil from flowers of Dianthus caryophyllum Fitoterapia, 77, (4), 257-261 Bergendorff O. and Sterner O. 1995 Spasmolitic Flavonols from Artemisia abrotanum. Planta medica, 61 (4), 370-01 Hurabielle M . et al. 1982. Presence de Davanone et de deux autres sesquiterpenes a noyan dans l'huille essentielle d'Artemisia abrotanum L. Planta medica, 45 (1), 55-56
***Artemisia absinthium* L.** *(Absinthium officinale* Brot., *Artemisia vulgare* Lam.*)*	Compositae (Asteraceae)	Aerial part	Essential oil of (Z)-epoxy-ocimene chemotype: bicyclic monoterpenes: e.g. alpha-thujone (up to 0.30%), beta-thujone (up to 7.78%), camphor (0.19-9.30%). Essential oil of sabinyl acetate chemotype: alpha-thujone (0.12-0.2%), beta-thujone (0.58-0.71%), camphor (up to 0.31%). Essential oil of chrysantenyl acetate chemotype: alpha-thujone (1.32%), beta-thujone (18.72%), camphor (0.18%). Essential oil of beta-thujone chemotype: alpha-thujone (0.53-2.76%), beta-thujone (17.5-59.9%), camphor (0.10-0.16%). Essential oil of beta-thujone/epoxy ocimene mixed chemotypes: alpha-thujone (0.7-1.68%), beta-thujone (20.9-40.6%). Essential oil of cis-chrysanthenol chemotype: alpha-thujone 2.55-21.6%, beta-thujone (3.75-25.9%).		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2 Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf
***Artemisia afra* Willd.**	Compositae (Asteraceae)	Aerial part	Essential oil: bicyclic monoterpenes: e.g. alpha-thujone (52.9%), beta-thujone (15.07%),camphor (5.72%) and monoterpene etheroxide: 1,8-cineole (10.66%).		Duke's Phytochemical and Ethnobotanical Databases: www.ars-grin.gov/duke/ ; Watt, J.M., & Breyer-Brandwijk, M.G.1962 Medicinal and poisonous plants of Southern and Eastern Africa, E. & S. Livingstone Ltd., Edinburgh and London 0CLC NUMBER 1279138 van Wyk, B-E., van Oudtshoorn, B. and Gericke, N. 1997. Medicinal plants of South Africa, Briza, Pretoria, ISBN 1875093095
***Artemisia annua* L.**	Compositae (Asteraceae)	Leaf	Essential oil: bicyclic monoterpenes: e.g. camphor (2.58%-37.50%).	Contains sesquiterpene lactones: e.g. artemisinin (cardinane-type sesquiterpene lactone endoperoxide) and derivatives. Recommendation of WHO not to use artemisinin-containing herbs to avoid possible resistance of Plasmodium sp. (causing malaria)	Zhengwen Y et al. 2010. Preliminary study of quality standards of essential oil in cultured Artemisia annua. Zhongguo Yaoxue Zazhi (Beijing, China). 45(2), 98-101.
***Artemisia cina* Berg**	Compositae (Asteraceae)	Flower bud	Essential oil (10-20ml/kg): sesquiterpene lactones (2-3%): e.g. santonin and eudesmanolide derivatives; etheroxyde monoterpene: 1,8-cineole.		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Medicinal and aromatic plants - Industrial profiles. 2002. Edited by Dr. Roland Hartman. Volume 18. Edited by Colin W. Wright. Taylor and Francis. ISBN: 0-415-27212-2
***Artemisia eriantha* Ten.**	Compositae (Asteraceae)	Aerial part	Essential oil: bicyclic monoterpenes: e.g. thujones (up to 90%).		Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf
***Artemisia frigida* Willd.**	Compositae (Asteraceae)	Aerial part	Essential oil: bicyclic monoterpenes: e.g. beta-thujone (5%).		Lopes-Lutza D. et al. 2008 Screening of chemical composition, antimicrobial and antioxidant activities of Artemisia essential oils. Phytochemistry 69(8), 1732-1738
***Artemisia genipi* Stechm.**	Compositae (Asteraceae)	Aerial part	Essential oil: monoterpene etheroxide: 1,8-cineole; bicyclic monoterpenes: e.g. alpha (26%)- and beta (6.8%)-thujones.		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2. Bicchi C et al. 1982. On the composition of the essential oils of Artemisia genipi Weber and Artemisia umbelliformis Lam. Zeitschrift für Lebensmittel-Untersuchung und -Forschung. 175(3), 182-185.

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***Artemisia herba-alba* Asso**	Compositae (Asteraceae)	Aerial part	Essential oil of beta-thujone chemotype (Morocco): bicyclic monoterpenes: e.g. alpha-thujone (0.5-17.0%), beta-thujone (43.4-94%), camphor (2.5-15%); monoterpene etheroxide: 1,8-cineole (1.8-5.8%). Essential oil of alpha-thujone chemotype (Morocco): alpha-thujone (36.8-82%), beta-thujone ((6.0-16.2%), camphor (11.0-19%); Essential oil camphor chemotype (Morocco): alpha-thujone (2.5-25%), beta-thujone (0.5-7.5%), camphor (40-70%), 1,8-cineole (2.6-15%) Essential oil chrysanthenone chemotype (Morocco): alpha-thujone (2.9%), beta-thujone (6.0%), camphor (7.2%), 1,8-cineole (3.0%) Essential oil davanone chemotype (Morocco): alpha-thujone (0.4-5.8%), beta-thujone (0.2-5.0%), camphor (up to 11%), 1,8-cineole (3-12%) Essential oil 1,8-cineole+alpha-thujone chemotype (Israel): alpha-thujone (27%), beta-thujone (0.5%), camphor (3%), 1,8-cineole (50%) Essential oil 1,8-cineole+beta-thujone chemotype (Israel): alpha-thujone (4.2%), beta-thujone (12.4%), camphor (9%), 1,8-cineole (13%) Essential oil 1,8-cineole+camphor chemotype (Israel): alpha-thujone (1.4%), beta-thujone (0.7%), camphor (25%), 1,8-cineole (38%) Essential oil chrysanthenol chemotype (Israel): camphor (0.1%), 1,8-cineole (4.8%) Essential oil 1,8-cineole+camphor chemotype (Spain): camphor (15%), 1,8-cineole (13.3%)		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2 Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf
***Artemisia maritima* L.** (*Seriphidium maritimum* (L.) Poljakov.)	Compositae (Asteraceae)	Flower bud	Essential oil: monoterpene etheroxide: 1,8-cineole (41.1%); bicyclic monoterpenes: e.g. L-(-)-camphor (20.3%), beta-thujone (1.1%); sesquiterpene lactones: e.g. santonin and eudesmanolide derivatives.		Shah AJ et al. 2011. Studies on the chemical composition and possible mechanisms underlying the antispasmodic and bronchodilatory activities of the essential oil of Artemisia maritima L. Arch. Pharm. Res. 34, 1227-1238.
***Artemisia mutellina* Vill.** *(A. umbelliformis* Lam.*)*	Compositae (Asteraceae)	Aerial part	Essential oil: bicyclic monoterpenes: e.g. alpha-thujone (57.7%), beta-thujone (8.6%)		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2 Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf
***Artemisia pallens* DC.**	Compositae (Asteraceae)	Aerial part	Essential oil: monoterpene etheroxide: 1,8-cineole; phenylpropanoids: e.g. methyleugenol.		Gulati and Khan. 1980. Essential oil of *Artemisia pallens*. Indian Perfum. 24, 101-109 Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2 Isidorov VA. 2001. Gas chromatographic analysis of essential oils with preliminary partition of components. Phytochem. Analysis 12, 87-90.
***Artemisia pontica* L.**	Compositae (Asteraceae)	Aerial part	Essential oil: bicyclic monoterpenes: e.g. alpha-thujone (13.5-30%), beta-thujone (3.3-4.2%); monoterpene etheroxide: 1,8-cineole (12-23%)		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2 Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf
Artemisia umbelliformis L. **See *A. mutellina* Vill.**					
***Artemisia vallesiaca* All.** *(A. vallesiana* Lam., *Seriphidium vallesiacum (*All.*) Sojak, S. vallesianum (*Lam.) Y.R.Ling)	Compositae (Asteraceae)	Aerial part	Essential oil: bicyclic monoterpene: e.g. camphor (33.3%); monoterpene etheroxide: 1,8-cineole (17%), phenylpropanoids: e.g. methylchavicol.		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2
***Artemisia vulgaris* L.**	Compositae (Asteraceae)	Aerial part	Essential oil: bicyclic monoterpenes: e.g. alpha-thujone (56.3%), beta-thujone (7.5%), camphor (20%); monoterpene etheroxide: 1,8-cineole (26.8%).		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2 Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf
***Arum* spp.**	Araceae	Whole plant	Genus in which species may contain oxalate raphides, glycosidic saponins (e.g. aronin), lignans, neo-lignans.		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Arundo donax* L.**	Poaceae (Gramineae)	Rhizome	Indole alkaloids: e.g. donasine		Gia AL et al. 2008. A new indole alkaloid from *Arundo donax* L. J. Asian Nat. Prod. Res. 10, 105-109.
***Asarum* spp.**	Aristolochiaceae	Whole plant	Genus in which species may contain nitric phenanthrenic derivatives: e.g. aristolochic acids, aristolactams, and phenylpropanoids: e.g. asarones, methyleugenol		Schaneberg BT et al. 2002. Determination of aristolochic acid I and II in North American species of *Asarum* and *Aristolochia*. Pharmazie. 57(10), 686–689. PMID 12426949. EMEA Committee on Herbal Medicinal Products. 2005. Public statement on the use of herbal medicinal products containing asarone. EMEA/HMPC/139215/2005 Dan Y et al. 2010. Activities of essential oils from *Asarum heterotropoides* var. *mandshuricum* against five phytopathogens. Crop Protection. 29(3), 295-299
***Asclepias syriaca* L.**	Apocynaceae (Asclepiadaceae)	Rhizome	Cardenolide glycosides from latex: e.g. asclepin		Salyi G et al. 1987. A. syriaca poisoning of cattle. Magy. Allatorv. Lapja. 42(1), 56-58
***Asclepias tuberosa* L.**	Apocynaceae (Asclepiadaceae)	Rhizome	Cardenolide glycosides from latex: e.g. asclepin		Abe F and Yamauchi T. 2000. An androstane bi-oside and 3'-thiazolidinone derivatives of double-linked cardenolide glycosides from the roots of Asclepias tuberosa. Chem. Pharm. Bull. 48(7), 991-993.
Asclepias vincetoxicum L. **See *Vincetoxicum nigrum* Moench.**					
***Asimina triloba* (L.) Dun.**	Annonaceae	Seed	Acetogenins: e.g. asimin, asiminacin, asiminecin		Zhao GX et al. 1993. Biologically active acetogenins from stem bark of *Asimina triloba*. Phytochemistry. 33(5), 1065-1073. Geng-Xian Z et al. 1994. Asimin, asimacin, and asiminecin: novel highly cytotoxic asimicin isomers from *Asimina triloba*. J. Med. Chem. 37(13), 1971-1976
***Aspidosperma quebracho-blanco* Schltdl.**	Apocynaceae (Asclepiadaceae)	Bark and wood	Indole alkaloids from bark (0.3-1.5%): e.g. aspidospermine (30%), quebrachine (yohimbine) (10%), deacetylaspidospermine (5%), aspidospermatin (3%), aspidospermatidine (3%), 1-methylaspidospermatidine (0.5%), quebrachimine, quebrachitine.		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-7.

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***Aspidosperma tomentosum* Mart.**	Apocynaceae (Asclepiadaceae)	Bark and wood	Indole alkaloids: e.g. aspidospermine, quebrachine (yohimbine).		Gilberta B. et al. 1965 Alkaloid studies: The alkaloids of twelve aspidosperma species. Tetrahedron. 21(5), 1141-1166
***Astragalus* spp.**	Leguminosae (Fabaceae)	Whole plant	Genus in which species may contain polyhydroxyindolizidine alkaloids: e.g. swainsonine, and may concentrate selenium	Swainsonine has been found in e.g. *A. lentiginosus* and *A. lusitanicus,* but discussion is ongoing as to whether swainsonine is endogenously produced, or by the endophyte *Embellisia* spp. *A. trigonus* DC. and *A. gummifera* Labill. have a toxic effect on the central nervous system of livestock, leading to death. *A. lentiginosus* and *A. mollissimus* have a toxic effect during pregnancy leading to abortion and abnormalities in fetus cardiac function. Selenium concentrated by e.g. *A. bisulcatus*	Molyneux RJ. and James LF. 1982. Loco Intoxication: Indolizidine Alkaloids of Spotted Locoweed (Astragalus lentiginosus). Science. 216(4542), 190-191 Baker DC et al. 1987. Selenosis in developing pigs fed selenium from various sources. J. Anim. Sci. 65(suppl 1) 351 Braun K et al. 2003. Production of swainsonine by fungal endophytes of locoweed. Mycol. Res. 107: 980-988. Ralphs H. et al. 2008. Relationships between the endophyte Embellisia spp. and the toxic alkaloid swainsonine in major locoweed species (Astragalus and Oxytropis). J. Chem. Ecol. 34:32-38
***Athyrium filix-femina* (L.) Roth**	Woodsiaceae	Root and shoot		Thiaminase from fresh shoots	Schofield JJ. 2000. Discovering wild plants - Alaska, W. Canada and the Northwest. Alaska Northwest books. ISBN 088240-355-9
***Atractylis gummifera* L.**	Compositae (Asteraceae)	Root	Diterpene glycosides derived from kaurene: e.g. atractyloside, carboxyatractyloside, wedeloside		Georgiou ML. 1988. Hepatotoxicity due to *A. gummifera* L. *Clin. Toxicol. 26*(7), 487-493 Daniele C et al. 2005. Atractylis gummifera L. poisoning: and ethnopharmacological review. J. Ethnopharmacol. 97(2), 175-181.
***Atropa* spp.**	Solanaceae	Whole plant	Genus in which species may contain tropane alkaloids: e.g. hyoscyamine, atropine, scopolamine.	The fresh plant contains L-hyoscyamine, the dried plant atropine (racemic mixture).	Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Aucuba japonica* Thunb.**	Garryaceae	Fruit		Causes fever and vomiting	Leveau AM et al. 1979. Sur la toxicité des fruits de l'A. japonica, Plant. Méd. Phytothér. 13(3), 199-204
***Azadirachta indica* A.Juss.** *(Melia azadirachta* L.)	Meliaceae	Leaf and seed		The aqueous extract from the leaf, neem oil from the kernel, neem cake (the solid residue following the expulsion of the kernel oil) have all caused reduced fertility or caused infertility (e.g. by retarding spermatogenesis) in studies with male rats, mice, rabbits and guinea pigs. Oral administration of neem oil to female rats caused infertility or had abortive effect. Female contraceptive tablets from neem extracts are extensively used in India.	Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques. Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1 Kurose K and Yatagai M. 2005. Components of the essential oils of *Azadirachta indica* A. Juss, *Azadirachta siamensis* Velton, and *Azadirachta excelsa* (Jack) Jacobs and their comparison. J. Wood Sci. 51(2), 185-188. Moravati M et al. 2008. Sterility and abortive effects of the commercial neem (*Azadirachta indica* A. Juss.) extract NeemAzal-T/S on female rat (*Rattus norvegicus*). Turk. J. Zool. 32: 155-162.
***Bambusa bambos* (L.) Voss** (*Bambusa arundinacea* (Retz.) Willd.)	Poaceae (Gramineae)	Shoot	Cyanogenic glycosides and derivatives: e.g. taxiphyllin		Hegnauer R. 1963. Chemotaxonomie der Pflanzen. Birkhauser Verlag Berlin. Vol. 2.
***Bambusa vulgaris* Wendl.**	Poaceae (Gramineae)	Shoot	Cyanogenic glycosides and derivatives: e.g. taxiphyllin (immature shoot tips: 8000 mg HCN/kg)		Nartey F. 1980. Toxicological aspects of cyanogenesis in tropical foodstuffs in Toxicology in the Tropics. Editors R.L. Smith and E.A. Bababumni, Taylor & Francis Ltd, London, 53-73.
***Banisteriopsis caapi* (Spruce ex Griseb.) Morton**	Malpighiaceae	Whole plant	Indole alkaloids (0.11-0.83%): e.g. harmine, harmaline.		Freeland CS et al. 1999. Behavioral profile of constituants in ayahusca, an Amazonian psychoactive plant mixture. Drug Alcohol Depend. 54, 183-184 Callaway JC et al. 2005. Phytochemical analyses of Banisteriopsis caapi and Psychotria viridis. J. Psychoactive Drugs 37(2), 145–150
***Baptisia* spp.**	Leguminosae (Fabaceae)	Aerial part	Genus in which species may contain quinolizidine alkaloids: e.g. cytisine, N-methylcytisine and anagyrine		Crammer MF and Turner BL. 1967. Systematic significance of lupine alkaloids with particular reference to Baptisia (Leguminosae). Evolution. 21, 508-517
***Barosma betulina* (Bergius) Bartl & H.L.Wendl.** *(Agathosma betulina* (Bergius) Pillans)	Rutaceae	Leaf	Essential oil: monoterpene ketone: e.g. (S)-(-)-pulegone (3% - some chemotypes up to 70%).		Lis-Balchin M et al. 2001. Buchu (Agathosma betulina and A. crenulata, Rutaceae) essential oils: their pharmacological action on guinea pig ileum and antimicrobial activity on microorganisms. J. Pharm. Pharmacol. 53(4), 579-582. Gordon, W.P. et al. 1982. Hepatotoxicity and pulmonary toxicity of pennyroyal oil and its constituent terpenes in the mouse. Toxicol. Appl. Pharmacol. 65, 413-424; EC Scientific Committee on Food. 2002. Opinion of the Scientific Committee on Food on pulegone and menthofuran. SCF/CS/FLAV/FLAVOUR/3 ADD2
***Belamcanda punctata* Moench** *(B. chinensis* (L.) DC.)	Iridaceae	Root	1,4-benzoquinone derivatives: e.g. belamcandaquinones A and B Methylated isoflavones: e.g. tectorigenin, irigenin, belamcanidin		Yamaki, M.et al. 1990. Isoflavones of Belamcanda chinensis. Planta Medica 56(3): 335. Fukuyama, Y.et al. 1993. Belamcandaquinones A and B, novel dimeric 1,4-benzoquinone derivates possessing cyclooxygenase inhibitory activity. Tetrahedron Letters 34(47): 7633-7636
***Berberis vulgaris* L.**	Berberidaceae	Root	Isoquinoline alkaloids: e.g. berberine (0.5 - 6%), palmatine, jatrorrhizine, and bisbenzyltetrahydro-isoquinoline alkaloids: e.g. berbamine, oxyacanthine, isotetrandrine.		Suau R et al. 1998. Isoquinoline alkaloids from Berberis vulgaris subsp. australis. Phytochemistry. 49(8), 2545-2549 Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Boerhavia diffusa* L.**	Nyctaginaceae	Whole plant	Alkaloids: punarnavine Rotenoids: e.g. boeravinones		Wichtl M. and Anton R. 2003. Plantes thérapeutiques. Ed. Tec et Doc-Lavoisier, ISBN : 2-7430-0631-5 (2ème édition) Manu KA et al. 2009, Anti-metastatic potential of Punarnavine, an alkaloid from Boerhavia diffusa Linn. Immunobiology. 2009;214(4):245-255. Ahmed-Belkacem A et al. Nonprenylated rotenoids, a new class of potent breast cancer resistance protein inhibitors. J Med Chem. 2007, 50(8):1933-1938.
***Borago* spp.**	Boraginaceae	Aerial part	Genus in which species may contain unsaturated pyrrolizidine alkaloids: e.g. lycopsamine, 7-acetyl-lycopsamine, amabiline, supinine.		Chojkier M. 2003. Hepatic sinusoidal obstruction syndrome: toxicity of pyrrolizidine alkaloids, Hepatol. 39, 437-446 Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Boswellia frereana* Birdw.**	Burseraceae	Bark	Essential oil from the gum resin: bicyclic monoterpenes: e.g. beta-thujone and phenylpropanoids: e.g. methyleugenol		Hamm S et al. 2005. A chemical investigation by headspace SPME and GC-MS of volatile and semi-volatile terpenes in various olibanum samples. Phytochemistry. 66(12),1499-1514.

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***Boswellia serrata* Roxb.**	Burseraceae	Bark	Essential oil from the gum resin: phenylpropanoids (up to 11%): e.g. methylchavicol.		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8. Wichtl M. and Anton R. 2003. Plantes thérapeutiques. Ed. Tec et Doc-Lavoisier, ISBN : 2-7430-0631-5 (2ème édition) Hamm S. et al. 2005, A chemical investigation by headspace SPME and GC-MS of volatile and semi-volatile terpenes in various olibanum samples. Phytochemistry. 66(12):1499-1514
***Brachyglottis* spp.**	Compositae (Asteraceae)	Leaf	Genus in which species may contain unsaturated pyrrolizidine alkaloids: e.g. senecionine.		Mortimer PH and White EP. 1967. Hepatotoxic substance in *Brachyglottis repanda*. Nature 214, 1255 - 1256
***Bragantia* spp.**	Aristolochiaceae	Root	Genus in which species may contain isoquinoline alkaloids: e.g. chakranine, and nitric phenanthrenic derivatives: e.g. aristolochic acids,	*Bragantia* sometimes falsified with *Aristolochia* *Health Canada advises consumers not to use the products containing aristolochic acid. Ottawa: Health Canada; 2004 July 26. www.hc-sc.gc.ca /english/protection/warnings/2004/2004_43.htm*	Kamat VN et al. 1958, Studies on Indian medicinal plants. I. Characterization of chakranine, an alkaloid isolated from Bragantia wallichii R. Br. (n. o. Aristolochiaceae). Indian J Med Res. 1958 May;46(3):418-25. Guo L. et al. 2010, A novel pre-column fluorescent derivatization method for the sensitive determination of aristolochic acids in medicinal herbs by high-performance liquid chromatography with fluorescence detection. J Pharm Biomed Anal. 21;53(1):37-42
***Brassica nigra* (L.) W.D.J.Koch**	Brassicaceae (Cruciferae)	Aerial part	Glucosinolates (especially in the seed): e.g. sinigroside (= allylglucosinolate) (1-2%), allylisothiocyanate and derivatives: e.g. gluconapine, gluconasturtiine, gluco-isoberberine.		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Halkier, BA and Gershenzon, J. 2006. Biology and Biochemistry of Glucosinolates. Annual Review of Plant Biology. 57, 303-333
***Brayera anthelmintica* Kunth.** *(Hagenia abyssinica* J.F.Gmel.)	Rosaceae	Flower	Phloroglucinol derivatives: kosotoxin, protokosin, kosin (α-,β-)	Visual deficits and retinotoxicity observed in humans	Low et al. 1985, Visual deficits and retinotoxicity caused by the naturally occuring anthelmintics, Embelia ribes and Hagenia abyssinica. Toxicol. Appl.Pharm. 81(2): 220-230. Singh IP and Bharate SB. 2006. Phloroglucinol compounds of natural origin. Nat. Prod. Rep, 23, 558-591.
***Brucea javanica* (L.) Merr.**	Simaroubaceae	Bark	Quassinoids (nortritepenoids): e.g. bruceantine.		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Brugmansia* spp.**	Solanaceae	Aerial part	Genus in which species may contain tropane alkaloids: e.g. scopolamine.		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Brunfelsia* spp.**	Solanaceae	Root	Genus in which species may contain indole alkaloids (beta-carboline derivatives): e.g. harmine, tetrahydroharmine, harmaline, manacine, manaceine; dimethyltryptamine derivatives and amidines: e.g. pyrrole-3-carboxamidine.		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Bryonia* spp.**	Cucurbitaceae	Whole plant	Genus in which species may contain oxygenated tetracyclic triterpene derivatives: e.g. cucurbitacines		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Butea superba* Roxb.**	Leguminosae (Fabaceae)	Root		Oral dosing with dried tuber powder for 90 days reduced testosterone levels in male rats dosed with 10, 150 and 200 mg/kg b.w. Effects on luteinizing hormone level found in male orchidectomized rats and ovariectomized female rats.	Cherdshewasart W et al. 2008. Androgen disruption and toxicity tests of Butea superba Roxb. A traditional herb used for treatment of erectile dysfunction, in male rats. Maturitas 60, 131-137. Cherdshewasart W et al. 2010. Mutagenic and antimutagenic effects of the traditional herb used for treating erectile dysfunction, Butea superba Roxb. Biosci Biotechnol Biochem 74, 923-927. Malaivijitnond S et al. 2009. Androgenic activity of the Thai traditional male potency herb, Butea superba Roxb., in female rats. J Ethnopharmacol 121, 123-129. Malaivijitnond S et al. 2010. Luteinizing hormone reduction by the male potency herb, Butea superba Roxb. Braz. J. Med. Biol. Res. 43, 843-852.
***Buxus sempervirens* L.**	Buxaceae	Whole plant	Steroidal alkaloids with amine groups: e.g. buxine, cyclobuxine, buxamine, and triterpenoidal alkaloids: e.g. diacetylbuxadine, demethylcyclomikuranine.		Atta-ur R et al. 1999. New steroidal alkaloids from the roots of *Buxus sempervirens*. J. Nat. Prod. 62(5), 665-669. Ata A et al. 2002. New triterpenoidal alkaloids from *Buxus sempervirens*. Z. Naturforsch. 57c, 21-28
***Caladium* spp.**	Araceae	Whole plant	Genus in which species may contain calcium oxalates		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
Calamintha ascendens Jord. **See *Clinopodium menthifolium* ssp. *ascendens* (Jord.) Govaerts**					
***Calea zacatechichi* Schltdl.**	Compositae (Asteraceae)	Leaf	Sesquiterpene germacranolides: e.g. caleicine, junenol esters		Mayagoitia L et al. 1986. Psychopharmacologic analysis of an alleged oneirogenic plant: *Calea zacatechichi*. J. Ethnopharmacol. 18(3), 229-243.
***Calendula officinalis* L.**	Compositae (Asteraceae)	Flower		Hydro-alcoholic extract (1g/kg during 30 days in the rat): increase of urea and transaminases. Hydro-alcoholic extract did not affect male fertility nor had toxic effects in early and middle periods of pregnancy. However, the extract caused maternal toxicity when administered during the fetal period of pregnancy.	Silva EJ and Gonçalves ES. 2007. Toxicological studies on hydroalcohol extract of Calendula officinalis L. Phytother. Res. 21, 332-336. Silva EJ et al. 2009. Reproductive assessment of hydroalcohol extract of Calendula officinalis L. in Wistar rats. Phytother Res. 23(10), 1392-1398
***Calla palustris* L.**	Araceae	Whole plant	Calcium oxalate raphides		Lampe KF and McCann MA. 1985. AMA Handbook of poisonous and injurious plants. American Medical Assoc. Chicago, Ill. USA.
***Callitris quadrivalvis* Vent.** *(Tetraclinis articulata* (Vahl) Mast.)	Cupressaceae	Wood	Essential oil from the stem (0.25-0.8%): bicyclic monoterpenes: e.g. thujones (less than 1%), camphor (19%).		Barrero AF et al. 2005. Chemical composition of the essential oils of leaves and wood Tetraclinis articulata (Vahl) Masters. Journal of Essential Oil Research.
***Calotropis* spp.**	Apocynaceae	Whole plant	Genus in which species may contain cardenolide glycosides and steroidal components: e.g. pregnanone		Wang ZN et al. 2008. A new cytotoxic pregnanone from *Calotropis gigantea*. Molecules 13(12), 3033-3039
***Caltha palustris* L.**	Ranunculaceae	Whole plant	Lactones: e.g. protoanemonin	Protoanemonin only present in the fresh herb	Bruni A et al, 1986. Protoanemonin detection in *C. palustris*. J. Nat. Prod. *49* (6), 1172-1173
***Calycanthus floridus* L.**	Calycanthaceae	Bark	Bisbenzylisoquinoline alkaloids: e.g. calycanthine		Akhlaghi H. 2008. Chemical composition of the essential oil from stems of Calycanthus floridus L. var. oblongifolius from Iran. Chem. Nat. Compd. 44(5), 661-662.
***Calystegia sepium* R.Br.**	Convolvulaceae	Whole plant	Polyhydroxy-nortropanes alkaloids: e.g. calystegines (5-316 mg/kg in the dried plant); jalapine like cardiac glycosides (mainly in the root)		Sholl Y et al. 2001. Calystegines in Calystegia sepium derive from the tropane alkaloid pathway. Phytochemistry, 58(6), 883-889 Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8

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Botanical name	Family	parts of plants of possible concern	Chemical of concern	Remarks on toxic/adverse effect(s) not known to be related to the identified chemical(s) of concern	Specific References
***Camellia sasanqua* Thunb.**	Theaceae	Seed	Sasanqua triterpenoid saponins		Shen J et al. 2008. Evidence of gastro-intestinal system as an active and toxic target of Sasanqua saponins extract. Exp. Toxicol. Pathol. 60(1) 43-49
***Camellia sinensis* (L.) Kuntze** (*Thea sinensis* L.)	Theaceae	Leaf	Methylated xanthine derivatives: caffeine (2-4%), theophylline (traces) and catechins: e.g. epigallocatechingallate (5-12%)	Reported cases of hepatotoxicity (green tea)	Bonkovsky HL. 2006. Hepatotoxicity associated with supplements containing Chinese green tea (*Camellia sinensis*). Ann Intern Med. 144(1), 68-71. Erratum: Ann Intern Med. 2006 Mar 7, 144(5):380 EFSA Scientific Cooperation (ESCO) Working Group on Botanicals and Botanical Preparations. 2009. Advice on the EFSA guidance document for the safety assessment of botanicals and botanical preparations intended for use as food supplements, based on real case studies on request of EFSA. EFSA Journal 7(9):280.
***Cananga odorata* (Lam.) Hook.f. & Thoms.**	Annonaceae	Aerial part	Essential oil: phenylpropanoids: e.g. safrole, isosafrole		Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3. SCF. 2001. Opinion on the safety of the presence of safrole (1-allyl-3,4-methylene dioxy benzene) in flavourings and other food ingredients with flavouring properties; available at: http://ec.europa.eu/food/fs/sc/scf/out116_n.pdf.
***Canarium indicum* L.** (*Canarium commune* L.)	Burseraceae	Bark of the trunk		Nangai nuts (*Canarium indicum* L.) may not be placed on the Community market as a novel food or novel food ingredient under Regulation (EC) No 258/97 (decision of 19 December 2000). *C. luzoricum* reported to contain elemicin (0,5-8%) in essential oil from the oleoresin. Information not confirmed for *C. indicum*.	Canarium luzonicum (Miq.) A. Gray or Manila elemi : oleoresin gives rise to essential oil which contains elemicine (0,5-8%), elemol (1-15%) (norme NF ISO 10624-1998). Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Cannabis* spp.**	Cannabaceae	Flowering top (female)	Genus in which species may contain cannabinoids (terpenophenolics): e.g. tetrahydrocannabinol.		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques. Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1 Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Capsella bursa-pastoris* (L.) Medik.**	Brassicaceae (Cruciferae)	Aerial part	Phenylethylamines: e.g. tyramine; oxalates		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Caragana arborescens* Lam.**	Leguminosae (Fabaceae)	Seed	Lectins		Bloch R et al. 1999. Purification and characterization of two lectins from Caragana arborescens seeds. Morfologia. 116 (4), 48-51
Carapichea ipecacuanha (Brot.) L.Andersson **See *Cephaelis* spp.**					
***Cardiospermum halicacabum* L.**	Sapindaceae	Leaf and seed	Cyanogenic glycosides from the leaf	Traces of alkaloids in the seed, although no information is available on their nature.	EMEA Commitee for Veterinary Medicinal Products. 1999. Cardiospermum halicacabum - Summary report. EMEA/MRL/664/99-Final Ragupathy S et al. 2007. Exploring ethnobiological classifications for novel alternative medicine: a case study of Cardiospermum halicacabum L. (Modakathon, balloon vine) as a traditional herb for treating rheumatoid arthritis. Ethnobotany, 19, 1-16
***Carum carvi* L.**	Apiaceae (Umbelliferae)	Fruit	Essential oil: monoterpene ketone: e.g. (S)-(+)-carvone (50-65%)		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2.
Caryophyllus aromaticus L. **See *Syzygium aromaticum* (L.) Merr. & L.M.Perry**					
***Caryota* spp.**	Arecaceae (Palmae)	Whole plant	Genus in which species may contain cyanogenic glycosides in the leaf and oxalate raphides		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Casimiroa edulis* Llave & Lex.**	Rutaceae	Leaf and seed	Imidazole alkaloids: e.g. casimiroedine		Polya GM. 2003. Biochemical targets of plant bioactive compounds. CRC Press.
***Cassia* spp.**	Leguminosae (Fabaceae)	Aerial part	Genus in which species may contain hydroxyanthracene glycosides and derivatives (1,8-dihydroxyanthaquinones).		Delmulle L and Demeyer K. 2010. Anthraquinones in plants. Source, safety and applications in gastrointestinal health. Nottingham University Press. ISBN: 978-1-897676-32-5
***Castanea sativa* Mill.**	Fagaceae	Aerial part		Hydrolysable tannins, e.g. ellagitannins used at high doses and over a long period may have a negative impact on liver	Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Catha edulis* (Vahl) Forssk. ex Endl.**	Celastraceae	Leaf	Phenethylamines: e.g. (-)-cathinone (fresh and young leaf) , norpseudoephedrine (cathine) and norephedrine (dried and/or old leaf)		Al-Mamary M et al. 2002. Investigation into the toxicological effects of *Catha edulis* leaves: a short term study in animals. Phytother. Res. 16(2), 127-132.
***Catharanthus* spp.**	Apocynaceae	Whole plant	Genus in which species may contain indole alkaloids: e.g. vindoline, catharanthine (mono-indoles), vinblastine, vincristine, leurosidine (bis-indoles), ajmalicine, akuammine (dihydro-indoles)		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Caulophyllum thalictroides* (L.) Michx.** (*Leontice thalictroides* L.)	Berberidaceae	Whole plant	Quinolizidine alkaloids: e.g. cytisine, baptifoline and N-methylcytisine in leaf and fruit		Rao RB et al, 2002. Nicotinic toxicity from tincture of blue cohosh (*C. thalictroides*) used as an abortifacient , Vet. Hum. Toxicol. 44(4), 221-222 Frohne D. and Pfänder HJ. 1997. Giftpflanzen. Ein Handbuch für Apotheker, Ärzte, Toxikologen und Biologen. Wissenschaftliche Verlagsgesellschaft mbH. ISBN 3-8047-1466-8.
***Cedrus* spp.**	Pinaceae	Aerial part	Genus in which species may contain bicyclic monoterpenes: e.g. thujones in the essential oil		Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf
***Cephaelis* spp.**	Rubiaceae	Root	Genus in which species may contain isoquinoline monoterpene alkaloids (2.0 - 3.5%): e.g. emetine, cepheline, psychotrine, emetamine, and glycoproteins: e.g. ipecoside.		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Cestrum* spp.**	Solanaceae	Whole plant	Genus in which species may contain diterpene glycosides: e.g. parquine, carboxyparquine, and steroid glycosides: e.g. 1,25-dihydroxycholecalciferol, solasodine.		Durand R et al. 1999. Intoxication in cattle from *C. diurnum*. Vet. Hum. Toxicol. 41(1), 26-27
***Cetraria islandica* (L.) Ach.**	Parmeliaceae	Lichen	Dibenzofurane derivatives: e.g. usnic acid	*C. islandica* reported to concentrate heavy metals	Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Wichtl M. and Anton R. 2003. Plantes thérapeutiques. Ed. Tec et Doc-Lavoisier, ISBN : 2-7430-0631-5 (2ème édition) Airaksinen MM et al. 1986 Toxicity of Iceland lichen and reindeer lichen. Arch. Toxicol. Suppl. 9:406-408
***Chaenomeles speciosa* Nakai**	Rosaceae	Seed	Cyanogenic glycosides		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1

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***Chamaelirium luteum* (L.) A.Gray**	Melanthiaceae	Whole plant	Steroidal saponins: e.g. chamaelirin (glucoside of diosgenin), helosides A and B; calcium oxalate		Challinor VL et al. 2011 Structure and absolute configuration of helosides A and B, new saponins from Chamaelirium luteum. J. Nat. Prod. 74(7):1557-1560. Matovic NJ et al. 2011 The truth about false unicorn (Chamaelirium luteum): total synthesis of 23R,24S-chiograsterol B defines the structure and stereochemistry of the major saponins from this medicinal herb. Chemistry. 17(27):7578-7591 Pengelly A et al. 2011. Appalachian plant monographs: Chamaelirium luteum (L.) Gray. False Unicorn root. Retrieved from http://www.frostburg.edu/aces/appalachian-plants/
***Cheiranthus cheiri* L.**	Brassicaceae (Cruciferae)	Aerial part	Cardenolides: e.g. cheirotoxin (strophantidin derivative)		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques. Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1 Lei ZH et al. 2002 Cardiac glycosides from Erysimum cheiranthoides. Chem Pharm Bull (Tokyo).50(6):861-862
***Chelidonium majus* L.** *(Chelidonium umbelliferum* Stokes*)*	Papaveraceae	Whole plant	Benzophenanthridine alkaloids (2% in root): e.g. chelidonine, chelerythrine, sanguinarine, protopine; and protoberberine derivatives: e.g. berberine, stylopine, coptisine.		Gu Y. et al.2010 Simultaneous determination of seven main alkaloids of Chelidonium majus L. by ultra-performance LC with photodiode-array detection. J. Sep. Sci. 33(8), 1004-1009. Moro PA et al. 2009, Hepatitis from Greater celandine (Chelidonium majus L.): review of literature and report of a new case. J. Ethnopharmacol. 124(2), 328-332
***Chenopodium album* L.**	Amaranthaceae (Chenopodiaceae)	Leaf	Essential oil : peroxygenated monoterpene: ascaridole (45%)		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Chenopodium ambrosioides* L. *var. anthelminticum* (L.) A.Gray** *(Chenopodium ambrosoides* L.*)*	Amaranthaceae (Chenopodiaceae)	Aerial part	Essential oil: peroxygenated monoterpene: ascaridole		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Chondodendron* spp.**	Menispermaceae	Whole plant	Genus in which species may contain quaternary bis-ammonium isoquinoline alkaloids: e.g. (+)- tubocurarine, and tertiary alkaloids: e.g. (-)-curine, (+)- isochondrodendrine, (+)-chondrocurine, and tertiary bisbenzylisoquinoline: e.g. limacine, limacusine.		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
Chrysanthemum cinerarilfolium (Trevir.) Vis. ***See Tanacetum cinerarifolium* (Trevir.) Sch.Bip.**					
***Chrysanthemum indicum* L.**	Compositae (Asteraceae)	Flower	Essential oil: monoterpene etheroxide: 1,8-cineole and bicyclic monoterpene: camphor.		Shunying Z et al. 2005. Chemical composition and antimicrobial activity of the essential oils of Chrysanthemum indicum. J. Ethnopharmacol. 96(1-2), 151-158
Chrysanthemum leucanthemum L. ***See Leucanthemum vulgare* Lam.**					
Chrysanthemum vulgare (L.) Bernh. ***See Tanacetum vulgare* L.**					
***Cicuta* spp.**	Apiaceae (Umbelliferae)	Whole plant	Genus in which species may contain polyines: e.g. (-)-cicutoxin		Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7
***Cimicifuga racemosa* (L.) Nutt.** *(Cimicifuga serpentaria* Pursh, *Actaea racemosa* L.*)*	Ranunculaceae	Whole plant		Herb under scrutiny for hepatotoxicity	Barnes J. Anderson L. A; Phillipson J. David 2007. Herbal Medicines Third edition ISBN 978 0 85369 623 0. EMA HMPC 2010. Assessment report on Cimicifuga racemosa (L.) Nutt., rhizome. EMA/HMPC/3968/2008
***Cinchona* spp.**	Rubiaceae	Bark	Genus in which species may contain quinoline alkaloids: e.g. quinine, quinidine, cinchonine, cinchonidine.		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Cinnamomum camphora* (L.) J.Presl.**	Lauraceae	Wood	Bicyclic monoterpene: camphor; monoterpene etheroxide: 1,8-cineole; phenylpropanoid: safrole		Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3.
***Cinnamomum cassia* (Nees) Blume** *(Cinnamomum aromaticum* Nees*)*	Lauraceae	Aerial part	Essential oil from the bark (20ml/kg): coumarin (1.5-4.0 g/kg) Essential oil from the leaf and young stem: coumarin (1.5-4%)		Teuscher E., Anton R. and Lobstein A. 2005. Plantes aromatiques, Ed. Tec et Doc-Lavoisier, ISBN : 2-7430-0720-6 Abraham K. et al 2011, Relative bioavailability of coumarin from cinnamon and cinnamon-containing foods compared to isolated coumarin: a four-way crossover study in human volunteers. Mol. Nutr. Food Res. 55(4):644-653. Woehrlin F. et al. 2010 Quantification of flavoring constituents in cinnamon: high variation of coumarin in cassia bark from the German retail market and in authentic samples from indonesia. J. Agric. Food Chem. 58(19):10568-10575
***Cinnamomum platyphyllum* (Diels) C.K. Allen**	Lauraceae	Aerial part	Reported to contain the phenylpropanoid methyleugenol in unspecified quantities		EMEA Committee on Herbal Medicinal Products. 2005. Public Statement on the use of herbal medicinal products containing methyleugenol. Doc.ref. EMEA/HPMC/138363/2005.
***Cinnamomum rigidissimum* H.T.Chang**	Lauraceae	Wood	Essential oil: phenylpropanoids: e.g. safrole (61.72%), methyleugenol (28.62%)		EMEA Committee on Herbal Medicinal Products. 2005. Public Statement on the use of herbal medicinal products containing methyleugenol. Doc.ref. EMEA/HPMC/138363/2005. ESCOP (2003) Monographs, 2nd ed. Thieme, New York.
***Cinnamomum septentrione* Hand.-Mazz.**	Lauraceae	Unspecified	Phenylpropanoids: e.g. methyleugenol		EMEA Committee on Herbal Medicinal Products. 2005. Public Statement on the use of herbal medicinal products containing methyleugenol. Doc.ref. EMEA/HPMC/138363/2005. ESCOP (2003) Monographs, 2nd ed. Thieme, New York.
***Cinnamomum verum* J.Presl.** *(Cinnamomum zeylanicum* Blume, *C. zeylanicum* Nees*)*	Lauraceae	Aerial part	Essential oil from the bark (0.6-1.3%): monoterpene etheroxide: 1,8-cineole (< 3%), bicyclic monoterpenes: e.g. camphor (traces); phenylpropanoids: e.g. cinnamaldehyde (32%) and safrole (<0.5%), methyleugenol (traces); coumarin (<0.5%), Essential oil from the leaf: 1,8-cineole (<1%), safrole (< 3%), coumarin (<1%), methyleugenol (0.01%)		Teuscher E., Anton R. and Lobstein A. 2005. Plantes aromatiques, Ed. Tec et Doc-Lavoisier Natural Sources of Flavourings Report No. 3. 2008. Ed. Council of Europe Publishing. ISBN 978-92-871-6422-3
***Cissampelos pareira* L.** *(Cocculus orbiculatus* DC.*)*	Menispermaceae	Root and stem	Isoquinoline alkaloids: e.g. hayatine, hayatidine; tropoloisoquinoline alkaloids: e.g. pareirubrine A and B Bisbenzylisoquinoline alkaloids in the stem: e.g. coccuorbiculatine A, 10-hydroxyisotrilobine.		Bafna, A et al. 2009. Antioxidant and immunomodulatory activity of the alkaloidal fraction of Cissampelos pareira Linn. Sci Pharm. 78(1),21-31 Amresh, G et al. 2008. Toxicological screening of traditional medicine Laghupatha (Cissampelos pareira) in experimental animals. J Ethnopharmacol. 116(3),454-60. Ganguly, M et al. 2007. Antifertility activity of the methanolic leaf extract of Cissampelos pareira in female albino mice. J Ethnopharmacol. 111(3),688-691

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***Cistus ladanifer* L.** *(C. viscosus* Stokes, *C. grandiflorus* Pour., *C. landanosma* Hoffmanns., *C. ladaniferus* L., *Ladanium officinarum* Spach*)*	Cistaceae	Leaf and twig	Essential oil: bicyclic monoterpenes: e.g. alpha-thujone (0.8%); monoterpene etheroxide: 1,8-cineole (0.2%)		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-7
***Citrullus colocynthis* (L.) Schrad.** *(Cucumis colocynthis* L.*)*	Cucurbitaceae	Fruit	Oxygenated tetracyclic triterpenes: e.g. cucurbitacines.	Inflammation of gastrointestinal tract with bloody diarreoa described, toxic compounds not known. Cucurbitacines in plant material: low content in young leaves, 1-3 g/kg in old leaves and stems .	Barceloux DG. 2008. Medical toxicology of natural substances: foods,fungi, medicinal herbs, plants and venomous animals. John Wiley & sons, Hoboken, New Jersey. ISBN-10: 0-471-72761-X Gry J., Søborg I. and Andersson H.C. 2006. Cucurbitacins in plant food. Tema Nord, 556. Nordic Council of Ministers. ISBN: 92-893-1381-1.
***Citrus aurantium* L.** *(C. aurantium* L. *ssp. amara* Engl., *C. aurantium* L. *ssp. sinensis* L., *C. aurantium* L. *ssp. aurantium* L, *C. aurantium var. dulcis* *Citrus aurantium var. Bergamia)*	Rutaceae	Aerial part	Essential oil: furanocoumarins: e.g. 5-methoxypsoralen (0.15-0.87%). Unripe whole fruit: hydroxyphenylethylamine: synephrine (2.28 mg/g) Pericarp: synephrine (3.27 mg/g).		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-7 EFSA ESCO Working Group on Botanical Preparations. 2009. Advice on the EFSA guidance document for the safety assessment of botanicals and botanical preparations intended for use as food supplements, based on real case studies. The EFSA Journal. 7(9), 280. Teuscher E., Anton R. and Lobstein A. 2005. Plantes aromatiques, Ed. Tec et Doc-Lavoisier, ISBN : 2-7430-0720-6
***Citrus limon* (L.) Burm.f** *(Citrus medica var. limon* L., *Citrus limonum* Risso*)*	Rutaceae	Fruit, leaf, peel and pulp	Peel: Phellopterin, 5- and 8-geranoxypsoralen. Essential oil from the peel: furocoumarins (psoralen, 5-methoxypsoralen (bergapten) 4-87 mg/kg, 8-methoxypsoralen (xanthotoxin), 5,8-dimethoxypsoralen (isopimpellin), imperatorin, oxypeucedanin 26-728 mg/kg.		Wichtl M. and Anton R. 2003. Plantes thérapeutiques (Tradition, pratique officinale, science et thérapeutique), Ed. Tec & Doc, Lavoisier, Paris, 2ème édition, 692 pages, ISBN: 2-7430-0631-5 Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2 Benincasa M.et al. 1990. Analysis of lemon and bergamot essential oils by HPLC with microbore columns. Chromatographia 30(5/6):271-6 Wagstaff D.J. 1991. Dietary exposure to furocoumarins. Regulat Toxic Pharmacol. 14:261-272 Kulkarni TR et al. 2005. Study of anti-fertility effect of lemon seeds (*Citrus limonum*) in female albino mice. Indian J. Physiol. Pharmacol. 49(3), 305-312
***Citrus paradisi* Macfad.** *(Citrus paradisi* Macf., *Citrus grandis (*L.*)* Osbeck *var. racemosa (*Roem.) B.C.Stone, *Citrus decumana* (L.))	Rutaceae	Fruit, leaf, peel and pulp	Essential oil from the peel: furocoumarines: e.g. psoralen, 5-hydroxypsoralen (bergaptol), 5-methoxypsoralen (0.0005-0.013%), 5-geranylpsoralen (bergamottin)	so called "grape-fruit seed extract" has been known to contain e.g. quarternary ammonium compounds (e.g. benzethonium chloride)	IOFI (International Organization of Flavour Industries) cited in TemaNord 1996:600. Schultz H.et al.1992. Charakterisierung von Grapefruitöl und Saft durch HPLC. Z Lebensm Unters Forsch 195.254-258. StanleyW.L et al.1971 Citrus coumarins J Agric Food Chem 19(6):1106-1110. Wagstaff D.J. 1991. Dietary exposure to furocoumarins. Regulat Toxic Pharmacol. 14:261-272
***Citrus reticulata* Blanco** *(Citrus nobilis* Andr. non Lour.)	Rutaceae	Bark and fruit	Essential oil: furocoumarins: e.g. 8-methoxypsoralen		Benincasa M. et al. 1990. Analysis of lemon and bergamot essential oils by HPLC with microbore columns. Chromatographia 30(5/6), 271-276. Zhou XM et al. 2012. Preventive effects of Citrus reticulata essential oil on bleomycin-induced pulmonary fibrosis in rats and the mechanism. Zhong Xi Yi Jie He Xue Bao.10(2),200-209 Xue F et al. 2012.Subacute toxicity assessment of carotenoids extracted from citrus peel (Nanfengmiju, Citrus reticulata Blanco) in rats. Regul Toxicol Pharmacol. 62(1),16-22.
***Claviceps* spp.**	Clavicipitaceae	Sclerotium	Genus in which species may contain ergot alkaloids derived from lysergic acid: e.g. ergometrine, ergotamine and ergotoxines		Fantegrossi, W.E.et al. 2008. The behavioral pharmacology of hallucinogens, Biochem. Pharmacol., 75, 17-33 Anton, R. et al. 2000. Du Claviceps purpurea à l'ergot : l'ergot de seigle, son apparition et sa toxicité", Industries des Céréales, 119, 28-30. Eadie, M. J. 2003. Convulsive ergotism: epidemics of the serotonin syndrome? Lancet Neurol, 2, 429-434.
***Clematis* spp.**	Ranunculaceae	Whole plant	Genus in which species may contain lactones: e.g. protoanemonins and ranunculin (precursor) in the fresh herb	Adulteration with aristolochic acids containing species reported in the literature Clematis species are not known to contain aristolochic acid, however species *C. armandi* and *C.montana* may be described by the same Chinese Pin Yin name as an Aristolochia species. Protoanemonin only present in fresh herb.	Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Clerodendrum infortunatum* L.**	Lamiaceae (Labiatae)	Root	Macrocyclic spermidinic alkaloids and clerodane-type diterpenes	Triterpenic saponins	Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Clinopodium menthifolium* ssp. *ascendens* (Jord.) Govaerts** *(Calamintha ascendens* Jord.*)*	*Lamiaceae (Labiatae)*	Aerial part	Essential oil: monoterpene ketones: pulegone and derivatives : cis-isopulegone (75,2%), pulegone (6,9%), neo-isopulegone (6%), trans-isopulegone (4,5%)		Castilho P et al. 2007. Composition and antimicrobial activity of the essential oil of Clinopodium ascendens (Jordan) Sampaio from Madeira. Flavour and fragrance journal. 22(2),139-144
***Clivia miniata* Regel**	Amaryllidaceae	Unspecified	Isoquinoline alkaloids: e.g. lycorine.		Ieven M. A. et al. 1982. Isolation of alkaloids from C. miniata Regel J. Nat. Prod. 45 (5), 564-573 Sewram V et al. 2001. Supercritical fluid extraction and analysis of compounds from Clivia miniata for uterotonic activity. Planta Med. 67(5), 451-455
***Clusia rosea* Jacq.**	Clusiaceae (Guttiferae)	Unspecified	Polyisoprenylated benzophenones, e.g. nemorosone		Cuesta-Rubio O et al. 2002. Polyisoprenylated benzophenones in cuban propolis; biological activity of nemorosone. Z Naturforsch C. 57(3-4), 372-378. Díaz-Carballo D et al. 2003. Novel antitumoral compound isolated from Clusia rosea. Int J Clin Pharmacol Ther. 41(12), 622-623
***Cnidoscolus* spp.**	Euphorbiaceae	Whole plant	Genus in which species may contain cyanogenic glycosides (linamarin) ranging from 0,8 to 15 µg HCN equivalent / gram fresh weight.	Roots eaten as potatoes and leaves eaten as salad for two species: *C. chayamansa* McVaugh and *C. aconitifolius* (P. Mill.) I.M. Johnston	Kuti JO et al. 2004. Antioxidant capacity and phenolic content in leaf extracts of tree spinach (Cnidoscolus spp.). J Agric Food Chem. 52(1):117-121 Cordeior RS et al. 1983. The presence of histamine in Cnidosculus oligandrus (Euphorbiaceae). An Acad Bras Cienc. 55(1), 123-128. Loarca-Piña G et al. 2010. Antioxidant, antimutagenic, and antidiabetic activities of edible leaves from Cnidoscolus chayamansa Mc. Vaugh. J Food Sci. 75(2), 68-72
***Cocculus* spp.**	Menispermaceae	Fruit	Genus in which species (e.g. *C. orbiculatus*, *C. trilobus*) may contain different alkaloids among which bisbenzyltetrahydroisoquinoline alkaloids: e.g. tetrandrine		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8

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***Codonopsis pilosula* (Franch.) Nannf.**	Campanulaceae	Root		Saponin triterpenyl esters	Wakana D et al. 2011. Three new triterpenyl esters, codonopilates A-C, isolated from Codonopsis pilosula . J Nat Med. 65(1),18-23
***Coffea arabica* L.** *(Coffea vulgaris* Moench.*)*	Rubiaceae	Seed (bean)	Methylated xanthine derivative: caffeine Green coffee bean: 0.8 - 1.4% caffeine on dry basis		Andersson H.C.et al. 2004 . Intake of caffeine and other methylxanthines during pregnancy and risk for adverse effects in pregnant women and their foetuses, TemaNord 565. IARC. 1991. Monograph No 51, Coffee, tea, maté, methylxanthines and methyl-glyoxal Mazzafera P. et al.1992. Breeding for low seed caffeine content of coffee (Coffea L.) by interspecific hybridization. Euphytica 59:55-60. Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Clifford MN and Willson KC. 1985. Coffee, botany, biochemistry and production of beans and beverage. Croom Helm Ed. London.
***Coffea canephora* Pierre ex Froehner** *(Coffea robusta* Lind. ex De Wild)	Rubiaceae	Seed (bean)	Methylated xanthine derivative: caffeine Green coffee bean: 1.7-4.0% caffeine on dry basis	In general somewhat higher caffeine content (up to 50%) in Robusta coffee compared to Arabica.	Andersson H.C.et al. 2004. Intake of caffeine and other methylxanthines during pregnancy and risk for adverse effects in pregnant women and their foetuses, TemaNord 565. IARC 1991. Monograph No 51, Coffee, tea, maté, methylxanthines and methyl-glyoxal Mazzafera P. et al. 1992. Breeding for low seed caffeine content of coffee (Coffea L.) by interspecific hybridization. Euphytica 59:55-60. Council of Europe. 2007. Natural sources of flavourings. Report No. 2. Council of Europe Publishing. ISBN 978-92-871-6156-7 Clifford MN and Willson KC. 1985. Coffee, botany, biochemistry and production of beans and beverage. Croom Helm Ed. London.
***Cola acuminata* (P.Beauv.) Schott & Endl.** *(Cola pseudo-acuminata* Engl.*, Sterculia acuminata* P.Beauv.*)*	Malvaceae	Seed	Methylated xanthine derivatives: caffeine (2.4-2.6%), theobromine <0.1%.		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-7 Wichtl M. and Anton R. 2003. Plantes thérapeutiques (Tradition, pratique officinale, science et thérapeutique), Ed. Tec & Doc, Lavoisier, Paris, 2ème édition, 692 pages, ISBN : 2-7430-0631-5
***Cola nitida* (Vent.) Schott & Endl.** *(Cola acuminata (*P.Beauv.) Schott&Endl. *var. latifolia* K.Schum., *Cola vera* K.Schum.*)*	Malvaceae	Seed	Methylated xanthine derivatives: caffeine (1.5-3.5%) , theobromine 1%, theophylline.		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-7
***Colchicum* spp.**	Colchicaceae	Whole plant	Genus in which species may contain phenethylisoquinoline alkaloids: e.g. colchicine		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Coleus forskohlii* (Willd.) Briq.** *(Plectranthus barbatus* Andr.*)*	Lamiaceae (Labiatae)	Whole plant	Bicyclic diterpene with cyclic ether and lactone: forskoline.	Novel Food catalogue: food use other than food supplement use would fall under the NF Regulation	Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907 Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Colutea arborescens* L.**	Leguminosae (Fabaceae)	Leaf and seed	Quinolizidine alkaloids: e.g. cytisine Non-protein amino acid: L-canavanine (5%)		Roth L., Daunderer M. and Kormann K. 1984. Giftpflanzen - Pflanzengifte. Vorkommen Wirkung Therapie. ecomed. ISBN 3-609-64810-4 Frohne D., Pfänder H.J. et Anton R. « Plantes à risques », Ed. Tec et Doc-Lavoisier (2009), ISBN :978-2-7430-0907-1 Grosvenor PW et al. 1996. Colutequinone and colutehydroquinone, antifungal isoflavonoids from Colutea arborescens. Phytochemistry. 43(2):377-380
***Comarum palustre* L.**	Rosaceae	Root		High content of tannins; Intake of high doses of tannins may cause hepatotoxicity	Naumchik GN et al.1964. Study of tannins in Comarum palustre L., a bound form of tannins. Aptechn Delo. 13, 27-28.
***Combretum micranthum* G.Don.** *(C.altum, C.floribundum, C.parviflorum, C.raimbaultii)*	Combretaceae	Leaf		Presence of flavan-piperidine alkaloids. Novel Food catalogue: food use other than food supplement use would fall under the NF Regulation	Bassène E et al. 1986. African medicinal plants. Alkaloids of Combretum micranthum G. Don (Kinkeliba). Ann Pharm Fr. 44(3), 191-196. Ogan AU. 1972. The alkaloids in the leaves of Combretum micranthum. Studies on West African medicinal plants. VII. Planta Med. 21(2), 210-7. Welch CR. 2010. Chemistry and pharmacology of Kinkeliba (Combretum micranthum), a West-African medicinal plant. PhD Thesis. New Brunswick - University of New Jersey. available at: www.mss3.libraries.rutgers.edu/dlr/outputds.php?pid=rutgers-lib micranthum Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Commiphora mukul* Engl.**	Burseraceae	Oleo-gum-resin from the trunk	Essential oil (0.4%) with phenylpropanoids: e.g. methylchavicol in unspecified quantities. Terpenoids: e.g. myrcene, dimyrcene, polymyrcene		Delgado IF et al. 1993. Study on embryo-foetotoxicity of beta-myrcene in the rat. Food Chem Toxicol 31(1), 31-5. Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, 1269 pages, ISBN : 978-2-7430-1188-8. Hagers Handbuch der Pharmazeutischen Praxis 1998. Springer Verlag. ISBN 3-540-52688-9
***Commiphora myrrha* (Nees) Engl.**	Burseraceae	Oleo-gum-resin from the trunk	Volatile fraction: furanosesquiterpenes: e.g. curzerenone, methoxy-furanodiene, furanoelemenes, furano-germacranes	Volatile fraction present only in the freshly collected oleogum resin Hepato-nephropathy described	Omer SA et al. 1999. Effects on rats of Commiphora myrrha extract given by different routes of administration. Vet. Hum. Toxicol. 41(4), 193-6. Wichtl M. and Anton R. 2003. Plantes thérapeutiques (Tradition, pratique officinale, science et thérapeutique), Ed. Tec & Doc, Lavoisier, Paris, 2ème édition, 692 pages, ISBN : 2-7430-0631-5
***Conium maculatum* L.**	Apiaceae (Umbelliferae)	Whole plant	Piperidine alkaloids: coniine (3% in immature fruit; 1% in mature fruit). In the rest of the plant : γ-coniine (more active than coniine).		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1 Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3
***Convallaria majalis* L.**	Asparagaceae	Whole plant	Cardenolide glycosides (0.2-0.4% in dried leaf and 0.5% in flower and seed): e.g. convallatoxin and glucovalloside and convalloside in the seed.		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Convolvulus* spp.**	Convolvulaceae	Whole plant	Genus in which species may contain indole alkaloids (tryptamine derivatives): e.g. ergine, lysergol, clavines Genus in which species may contain tropane alkaloids: e.g. tropanol, pseudotropanol. Genus in which some species contain a resin (roots) with strong purgative effect: e.g. jalapine		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1 Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7

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***Copaifera officinalis* (Jacq.) L.**	Leguminosae (Fabaceae)	Bark		Presence of chemically not defined diterpenes in the bark oleoresin	Chen F, et al. 2009. Within-plant distribution and emission of sesquiterpenes from Copaifera officinalis. Plant Physiol Biochem. 47(11-12),1017-1023. Brito NM, et al. 2010.The effect of copaiba balsam on Walker 256 carcinoma inoculated into the vagina and uterine cervix of female rats. Acta Cir Bras.25(2), 176-180
***Coptis* spp.**	Ranunculaceae	Whole plant	Genus in which species may contain isoquinoline alkaloids: e.g. berberine, stylopine, coptisine		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1 Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7
***Corchorus olitorius* L.**	Malvaceae	Seed	Cardenolide glycosides: erysimoside, olitoriside, corchorosides A and B, coroloside, helveticoside, cannogenol, periplogenin, digitoxigenin, glucoevatromonoside, deglucocoroloside, evatromonoside.		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Hagers Handbuch der Pharmazeutischen Praxis, Springer Verlag, 1998. ISBN: 3-540-52688-9 Nakamura T et al. 1998. Cardenolide glycosides from seeds of Corchorus olitorius. Phytochemistry. 49(7):2097-2101.
***Coriandrum sativum* L.**	Apiaceae (Umbelliferae)	Aerial part	Essential oil from the fruit: bicyclic monoterpene: camphor (3-9%)		Wichtl M. and Anton R. 2003. Plantes thérapeutiques (Tradition, pratique officinale, science et thérapeutique), Ed. Tec & Doc, Lavoisier, Paris, 2ème édition, 692 pages, ISBN : 2-7430-0631-5 Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Hagers Handbuch der Pharmazeutischen Praxis, Springer Verlag, 1998. ISBN: 3-540-52688-9 Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf
***Coriaria myrtifolia* L.**	Coriariaceae	Aerial part	Sesquiterpene lactones: e.g. coriamyrtin, coriarin, coriamyrtin.	High concentration of coriamyrtin in berries	Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1 Hagers Handbuch der Pharmazeutischen Praxis, Springer Verlag, 1998. ISBN: 3-540-52688-9 de Haro L et al. 2005. Poisoning by Coriaria myrtifolia Linnaeus: a new case report and review of the literature. Toxicon. 46(6):600-603
***Coriaria thymifolia* Humb. & Bonpl.**	Coriariaceae	Aerial part	Sesquiterpene lactones: e.g. coriamyrtin, coriatine, pseudotutine, tutine.		Duke J.A. 1985. Handbook of medicinal herbs. CRC Press, Inc. ISBN 0-8493-3630-9.
***Coronilla scorpioides* Koch.**	Leguminosae (Fabaceae)	Whole plant	Cardenolides: e.g. hyrcanoside and the aglycone hyrcanogenine.		Hagers Handbuch der Pharmazeutischen Praxis, Springer Verlag, 1998. ISBN: 3-540-52688-9 Strizhova-Salovani. 1957. Pharmacology of Coronilla scorpioides, a new cardiac drug. Farmakol Toksikol. (3), 59-63. Komissarenko NF et al.1969. On the chemotaxonomic characterization of Coronilla scorpioides and C. repanda. Planta Med.17(2), 170-177
***Coronilla varia* L.**	Leguminosae (Fabaceae)	Whole plant	Seed: cardenolide, e.g. hyrcanoside and deglucohyrcanoside Other plant parts (except seeds): 3-nitropropanoic acid derivatives		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1 Gold K et al. 1991. Studies on the distribution of a naturally occurring nitroaliphatic acid in crownvetch (Coronilla varia, Fabaceae). Econ. Botany 45(3), 334-338
***Corydalis* spp.**	Papaveraceae	Whole plant	Genus in which species may contain isoquinoline alkaloids: 6% of dry weight in tuber: e.g. bulbocapnine, corydaline, corydine, coptisine, palmatine, N-methyllaudanindine, allocryptopine, protopine, corycavidine, glaucine, corydine, bulbocapnine, corydaline, corypalmine, tetrahydropalmatine, canadine, thalictrivacine.		Zhong-Ze Ma et al. 2008. Isoquinoline alkaloids isolated from Corydalis yanhusuo and their binding affinities at the dopamine D1 receptor. Molecules 13(9), 2303-2312 Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Corynanthe* spp.**	Rubiaceae	Bark	Genus in which species may contain yohimbane alkaloids: e.g. corynanthine, yohimbine (= quebrachine)		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Cotoneaster* spp.**	Rosaceae	Whole plant	Genus in which species may contain cyanogenic glycosides: prunasin from the bark ; amygdalin and prunasin from the fruit (amygdalin, prunasin).		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Coumarouna oppositifolia* Taub.** (*Taralea oppositifolia* Aubl.)	Leguminosae (Fabaceae)	Seed	Coumarin		Hagers Handbuch der Pharmazeutischen Praxis, Springer Verlag, 1998. ISBN: 3-540-52688-9
***Crateva nurvala* Buch.-Ham.** (Crateva lophosperma Kuz.)	Capparaceae	Bark	Triterpenes (lupane type): e.g. lupeol	Antifertility activity (decrease of the implantation) when administered orally to rats.	Bhaskar VH and al. 2009. Evaluation of the anti-fertility activity of stem bark of Crataeva nurvala buch. Afr J Biotech 8, 6453-6456. Sharma B.B. et al. 1983. Antifertility Screening of Plants. Part I. Effect of Ten Indigenous Plants on Early Pregnancy in Albino Rats. Pharm Biol 21 (4), 183-187
***Crinum asiaticum* L.**	Amaryllidaceae	Bulb	Isoquinoline alkaloids (Amaryllidaceae alkaloids): e.g. pratorimine, lycorine, crinidine, crinamine		Fennell C.W and van Staden J. 2001. Crinum species in traditional and modern medicine. J. Ethnopharmacol 78(1), 15-26
***Crithmum maritimum* L.**	Apiaceae (Umbelliferae)	Leaf	Essential oil: phenylpropanoids: e.g. methylchavicol (3,4%)		Gastaldo P. 1987. Compendio della Flora Officinale Italiana Padova. Ed. Piccin. ISBN 8829905992, 9788829905997 Özcan M. et al. 2006. Constituents of the Essential Oil of Sea Fennel (Crithmum maritimum L.) Growing Wild in Turkey. J. Medicinal Food. 9(1), 128-130
***Crotalaria* spp.**	Leguminosae (Fabaceae)	Aerial part	Genus in which species may contain unsaturated pyrrolizidine alkaloids		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1 Asres K. et al. 2004. Patterns of pyrrolizidine alkaloids in 12 Ethiopian Crotalaria species. Biochemical Systematics and Ecology, 32(10), 915-930.
***Croton* spp.**	Euphorbiaceae	Whole plant	Genus in which species may contain diterpene esters (phorbol-esters), isoquinoline alkaloids (aporphine, morphinane, proaporphine type alkaloids) and lectins: e.g. crotin		Hagers Handbuch der Pharmazeutischen Praxis, Springer Verlag, 1998. ISBN 3-540-52688-9
***Cryptostegia* spp.**	Apocynaceae	Whole plant	Genus in which species may contain cardenolide glycosides e.g.: oleandrigenin 3-rhamnoside and aglycones: e.g. oleandrigenin. gitoxigenin, 16-anhydrogitoxigenin, 16-propionylgitoxigenin.		Duke J.A. 1985. Handbook of medicinal herbs. CRC Press, Inc. ISBN 0-8493-3630-9 Cook D.R. et al. 1990. Suspected Cryptostegia grandiflora (ruber wine) poisoning in horses. Austr. Vet. J. 67 (9) 344

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Botanical name	Family	parts of plants of possible concern	Chemical of concern	Remarks on toxic/adverse effect(s) not known to be related to the identified chemical(s) of concern	Specific References
***Cucumis sativus* L.**	Cucurbitaceae	Whole plant	Possible occurence of the oxygenated tetracyclic triterpenes: cucurbitacin C in leaf and fruit and of cucurbitacins C and B in root.		Van Keulen HA. 1981. Fluorodensitometric estimation of cucurbitacin-C in leaves of Cucumis sativus L.. Plant Foods for Human Nutrition (Formerly Qualitas Plantarum), 31(2), 129-137
***Cucurbita maxima* Duch.**	Cucurbitaceae	Whole plant	Possible occurrence of oxygenated tetracyclic triterpenes: cucurbitacins B and C.		Rehm S.et al. 1957. Bitter principles of the cucurbitaceae. VIII.—cucurbitacins in seedlings—occurrence, biochemistry and genetical aspects. J. Sci. Food. Agr. 8(12), 687 - 691
***Cucurbita pepo* L.**	Cucurbitaceae	Fruit	Possible occurrence of oxygenated tetracyclic triterpenes: cucurbitacins.	Fruits of cultivated squash and other pumpkins have been cultured to be "free of cucurbitacins", and are assumed to contain a supressor gene or a mutation responsible for absence of cucurbitacins. However, back-mutations occur randomly which may lead to plants with toxic and bitter fruits.	Tema Nord 2006:556, Cucurbitacins in plant food, Nordic Council of Ministers. ISBN 92-893-1381-1
***Cuminum cyminum* L.**	Apiaceae (Umbelliferae)	Fruit	Essential oil from fruit: phenylpropanoids: e.g. methylchavicol (30ppm) and monoterpenes: monoterpene etheroxide: 1,8-cineole (0.2-0.4%).		Council of Europe. 2007. Natural sources of flavourings. Report No. 2. Council of Europe Publishing. ISBN 978-92-871-6156-7.
***Curcuma kwangsiensis* S.G.Lee & C.F. Liang**	Zingiberaceae	Rhizome	Essential oil: monoterpene etheroxide: 1,8-cineole.		Zhu You-Ping. 1998. Chinese Materia medica. Chemistry, pharmacology and applications. CRC Press. ISBN-13: 978-9057022852
***Curcuma longa* L.** *(Curcuma domestica* Val., *Curcuma domestic* Loir., *Amomum curcuma* Jacq.*)*	Zingiberaceae	Rhizome	Essential oil: monoterpene etheroxide: 1,8-cineole and bicyclic monoterpenes: e.g. camphor		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2. Zhu You-Ping. 1998. Chinese Materia medica. Chemistry, pharmacology and applications. CRC Press. ISBN-13: 978-9057022852
***Curcuma phaeocaulis* Valeton**	Zingiberaceae	Rhizome	Essential oil: bicyclic monoterpenes: e.g. camphor (10-16%)		Zhu You-Ping. 1998. Chinese Materia medica. Chemistry, pharmacology and applications. CRC Press. ISBN-13: 978-9057022852
***Curcuma wenyujin* Y.H.Chen & C.Ling**	Zingiberaceae	Rhizome			Zhu You-Ping. 1998. Chinese Materia medica. Chemistry, pharmacology and applications. CRC Press. ISBN-13: 978-9057022852. Li S. et al. 2011. Chemical Composition and Product Quality Control of Turmeric (Curcuma longa L.) Pharmaceutical Crops, 2: 28-54
***Curcuma xanthorrhiza* Roxb.**	Zingiberaceae	Rhizome	Essential oil (3-12%): monoterpenes: monoterpene etheroxide: 1,8-cineole (up to 40%), bicyclic monoterpenes: camphor (1%);		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, 1269 pages, ISBN : 978-2-7430-1188-8; Hagers Handbuch der Pharmazeutischen Praxis 1998. Springer Verlag. ISBN 3-540-52688-9
***Cyathula officinalis* Kuan**	Amaranthaceae (Chenopodiaceae)	Root	Coumarins: e.g. scoparone (6,7 dimethoxycoumarin)	The saponins (hederagenin- and gypsogmin -type saponins) are thought to stimulate uterus contraction and can lead to abortion, however scoparone is probably the causative agent.	Chandhoke N. 1979. Scoparone: effect on reproductive processes in rats. Indian J. Exp. Biol. 17, 740-742. Ren MT et al. 2009. Rapid analysis of constituents of Radix Cyathulae using hydrophilic interaction-reverse phase LC-MS. Journal of Separation Science. 32(22), 3988 - 3995 Zhu You-Ping. 1998. Chinese Materia medica. Chemistry, pharmacology and applications. CRC Press. ISBN-13: 978-9057022852
***Cycas* spp.**	Cycadaceae	Leaf, pollen, seed	Genus in which species may contain the amine oxide: cycasin		Eizirik DL and Kisby GE. 1995. Cycad toxin-induced damage of rodent and human pancreatic beta-cells. Biochem. Pharmacol. 50(3), 355-365. Salama M and Arias-Carrión O . 2011. Natural toxins implicated in the development of Parkinson's disease. Therapeutic Advances in Neurological Disorders. 4(6), 361-373
***Cyclamen europaeum* L.** *(C. purpurascens* Mill.*)*	Primulaceae	Tuber	Triterpene saponins: e.g. cyclamine		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Cymbopogon citratus* (DC.) Stapf** *(Andropogon citratus* DC.*)*	Poaceae (Gramineae)	Aerial part	Essential oil (0.2%-0.4%): bicyclic monoterpenes: alpha-thujone (up to 0.1%) and monoterpene etheroxide: 1,8-cineole (traces)		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2.
***Cymbopogon martini* (Roxb.) Will.Watson**	Poaceae (Gramineae)	Aerial part	Essential oil: phenylpropanoids: e.g. methylchavicol (traces)		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2.
***Cymbopogon nardus (* L.) Hook.f.**	Poaceae (Gramineae)	Aerial part	Essential oil: phenylpropanoids: e.g. methyleugenol (51-204 ppm).		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2.
Cynanchum vincetoxicum (L.) Pers. ***See Vincetoxicum hirundinaria* Medik.**					
***Cynodon dactylon* (L.) Pers.**	Poaceae (Gramineae)	Aerial part	Cyanogenic glycosides		O'Reagain PJ. 1993. Plant structure and the acceptability of different grasses to sheep. J Range Manage 46: 232-236.
***Cynoglossum* spp.**	Boraginaceae	Whole plant	Genus in which species may contain unsaturated pyrrolizidine alkaloids		Van Dam N et al. 1995. Distribution, biosynthesis and turnover of pyrrolizidine alkaloids in Cynoglossum officinale. Phytochemistry, 39(2), 287-292
***Cyperus rotundus* L.**	Cyperaceae	Rhizome	Sesquiterpene pyridine alkaloids: rotundines A-C (0.21%-0.24%); bufadienolide glycosides (0.62%-0,74%)		Rehman AB. 2007. Pharmacological studies on traditional medicine (Cyperus rotundus) used in Pakistan. Thesis. Department of pharmacology. University of Karachi. Jeong S. J et al. 2000. Rotundines A-C, three novel sesquiterpene alkaloids from Cyperus rotundus. J. Nat. Prod. 63: 673-675.
***Cypripedium calceolus* L.**	Orchidaceae	Root	Quinones e.g. cypripedin a non-terpenoid phenanthraquinone		Schmalle H and Hausen BM, 1979. A new sensitizing quinone from lady slipper (Cypripedium calceolus). Naturwissenschaften. 66(10), 527-528. Barnes J, Anderson LA, Phillipson JD. 2007. Herbal medicines (3rd ed). London: Pharmaceutical Press. ISBN 978-0-85369-642-1
***Cytisus* spp.**	Leguminosae (Fabaceae)	Whole plant	Genus in which species may contain quinolizidine alkaloids: e.g. cytisine		Hagers Handbuch der Pharmazeutischen Praxis 1998. Springer Verlag. ISBN 3-540-52688-9
***Dalechampia scandens* L.**	Euphorbiaceae	Leaf and stem	Diterpenes; cyanogenic glycosides; lectins	Presence of histamine	José S. Flores JS et al. 2001. Plantas de la flora Yucatanense que provocan alguna toxicidad en el humano. Rev Biomed 12: 86-96. Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Daphne* spp.**	Thymelaeaceae	Whole plant	Genus in which species may contain diterpene esters: e.g. daphnane derivatives		Hagers Handbuch der Pharmazeutischen Praxis 1998. Springer Verlag. ISBN 3-540-52688-9
***Datura* spp.**	Solanaceae	Whole plant	Genus in which species may contain tropane alkaloids: e.g. atropine, scopolamine	The fresh plant contains hyoscyamine, twice more active than atropine (racemic mixture)	Hagers Handbuch der Pharmazeutischen Praxis 1998. Springer Verlag. ISBN 3-540-52688-9 Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8

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***Daucus carota* L.**	Apiaceae (Umbelliferae)	Fruit	Essential oil: phenylpropanoids: e.g. methylisoeugenol, methyleugenol, elemicine, beta asarone		Saad HEA et al. 1995. Essential oils of Daucus carota ssp. Maximus. Pharm Acta Helv 70, 79-84
***Delphinium* spp.**	Ranunculaceae	Whole plant	Genus in which species may contain diterpene alkaloids: e.g. ajacine, ajaconine, delcosine, methyllycaconitine		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Derris* spp.**	Leguminosae (Fabaceae)	Root	Genus in which species may contain rotenoids: e.g. rotenone		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 The Journal of Pesticide Action Network UK. Pesticides News 2001 (54) fact sheet 20-21
***Desmodium* spp.**	Leguminosae (Fabaceae)	Whole plant	Genus in which species may contain tryptamine derivatives: e.g. 5-methoxy-dimethyltryptamine and 5-hydroxy-dimethyltryptamine (bufotenine)		Trout K. 1997. Trout's notes on the genus Desmodium, (Chemistry, Ethnomedicine, Pharmacology, Synonyms and Miscellany). Copyright ©1997 by Trout & Friends & 2002 by Trout's Notes/ Mydriatic Productions. Adapted for webviewing March 2004
***Dianthus caryophyllus* L.**	Caryophyllaceae	Aerial part	Triterpene saponins		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Dicentra spectabilis* (L.) Lem.**	Papaveraceae	Whole plant	Isoquinoline alkaloids: from epigeal parts (0.17%) and from the root (0.25%) e.g.: dihydrosanguinarine, sanguinarine, scoulerine, cheilanthifoline, corydine, and protopine		Israilov IA et al. 1984. Alkaloids of Dicentra. Chem Nat Prod 20 (1): 74-76
***Dichondra repens* J.R.Forst. & G. Forst.**	Convolvulaceae	Whole plant	Coumarins: e.g. scopoletin		Obidoa O and Obasi SC. 1991. Coumarin compounds in cassava diets: 2 health implications of scopoletin in gari. Plant Foods for Human Nutrition 41: 283-289
***Dictamnus albus* L.**	Rutaceae	Whole plant	Furanocoumarins (psoralens) from leaf : e.g. bergapten, xanthotoxin, auraptene; Furoquinoline alkaloids from leaf: e.g. haplopine, robustine, dictamnine, and gamma-fagarine; Essential oil from leaf: phenylpropanoids: e.g. methylchavicol and trans-anethole ; Furoquinoline alkaloids from root (0.04%-0.09%): e.g. dictamnine (0.003%), gamma fagarine (0.002%),... Essential oil from root : sesquiterpene lactones: e.g. fraxinellon (1.2%) ; Furoquinoline alkaloids from root bark: e.g. dictamnine (0.29%), gamma fagarine (0.014%)		Möller H. 1978. Phototoxicity of Dictamnus alba. Contact Dermatitis 4: 264-269. Başer KHC et al. 1994. The essential oil composition of Dictamnus albus from Turkey. Planta Med 60: 481-482. Mizuta M, Kanamori H. 1985. Mutagenic activities of dictamnine and gamma-fagarine from dictamni radicis cortex (Rutaceae). Mutat. Res. 144: 221-225. Prakash A.O. et al. 1986. Evaluation of some indigenous plants for anti-implantation activity in rats. Probe 25: 151-155.
***Dictamnus dasycarpus* Turcz.**	Rutaceae	Whole plant	Furoquinoline alkaloids from root: e.g. dictamnine, trigonelline, skimmianine (B-fagarine), γ-fagarine, dasycarpamine, platydesmine; Furanocoumarins from aerial part: e.g. psoralen, bergapten, xanthotoxin		But PPH. (Ed.) 1997. Northeast Asia. International collation of traditional and folk medicine. A project of Unesco. World Sc. Pub. ISBN: 981023130X.
***Dieffenbachia* spp.**	Araceae	Whole plant	Genus in which species may contain oxalate raphides, proteolytic enzymes and cyanogenic glycosides		Kuballa B. et al. 1981. Study of *Dieffenbachia* induced oedema in mice and rats hindpaw: respective role of oxalate needles and trypsin-like protease. Toxicol. Appl. Pharmacol. 58: 444-451
***Digitalis* spp.**	Plantaginaceae	Whole plant	Genus in which species may contain cardenolides (digitalis glycosides): e.g. digoxin		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Dioscorea* spp.**	Dioscoreaceae	Tuber	Genus in which species may contain pyrridinal alkaloids: e.g. dioscorine	Cultivated species for food use are exempt of alkaloids.	Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Diploclisia* spp.**	Menispermaceae	Whole plant	Genus in which species may contain isoquinoline alkaloids (aporphine-type alkaloids): e.g reticuline, asimilobine, acutumine		Cordell GA (Ed.). 2000. Chemistry and Biology, Volume 54 (Alkaloids). Academic Press. ISBN 0-12-469554
***Diplopterys cabrerana* (Cuatrec.) B.Gates**	Malpighiaceae	Whole plant	Tryptamine alkaloids: e.g. dimethyltryptamine, harmane derivatives		Books Llc. 2010. Psychedelic Tryptamine Carriers: Psilocybe Cubensis, Ayahuasca, Psilocybin Mushrooms, Mimosa Tenuiflora, Harmal, List of Psilocybin Mushrooms. General Books LLC. ISBN 1155908902, 9781155908908.
***Dipteryx odorata* (Aubl.) Willd.**	Leguminosae (Fabaceae)	Seed	Pentane/dichlormethane extract: coumarin 3.6 g/kg, camphor >1 mg/kg. Methanol extract: coumarin 23-25 g/kg. Tonka bean absolute: coumarin 390-510 g/kg.		Council of Europe. 2007. Natural sources of flavourings. Report No. 2. Council of Europe Publishing. ISBN 978-92-871-6156-7.
***Dracontium* spp.**	Araceae	Whole plant	Genus in which species may contain calcium oxalate raphides		Ocampo R. and Balick MJ. 2009. Plants of Semillas Sagradas: An Ethnomedicinal Garden in Costa Rica. Edited by Ruth Goldstein and Katherine Herrera. Finca Luna Nueva Extractos de Costa Rica, S.A.Rafael. ISBN: 978-0-615-27415-7
***Drosera anglica* Huds.**	Droseraceae	Aerial part	Naphtoquinone derivatives: e.g. plumbagin		Bajaj YPS (Ed). 1993. Biotechnology in agriculture and forestry 24, Medicinal and aromatic plants V. Springer Verlag. ISBN 3-540-56008-4
***Drosera intermedia* Hayne**	Droseraceae	Aerial part	Naphtoquinone derivatives: e.g. plumbagin		Bajaj YPS (Ed). 1993. Biotechnology in agriculture and forestry 24, Medicinal and aromatic plants V. Springer Verlag. ISBN 3-540-56008-4
***Drosera rotundifolia* L.**	Droseraceae	Aerial part	Naphtoquinone derivatives: e.g. plumbagin		Bajaj YPS (Ed). 1993. Biotechnology in agriculture and forestry 24, Medicinal and aromatic plants V. Springer Verlag. ISBN 3-540-56008-4
***Dryobalanops aromatica* C.F.Gaertn.**	Dipterocarpaceae	Stem	Bicyclic monoterpene alcohol: e.g. borneol and bicyclic monoterpene ketone: e.g. camphor		Siegel E and Wason S. 1986. Camphor toxicity. Pediatr Clin N Am, 33: 375-379
***Dryopteris* spp.**	Dryopteridaceae	Whole plant	Genus in which species may contain filicine which is a mixture of different acylphloroglucinols (e.g. aspidin, albaspidin). Some species may also contain the norsesquiterpene ptaquiloside		Klaus Mehltreter (Edt) 2010. Fern ecology. Cambridge University Press. ISBN: 9780521728201.
***Duboisia* spp.**	Solanaceae	Whole plant	Genus in which species may contain tropane alkaloids: e.g. atropine, scopolamine…	The fresh plant contains hyoscyamine, twice more active than atropine (racemic mixture)	Pearn J. 1981. Clinical hyoscine poisoning with alkaloids of the native corkwood, Duboisia. Med. J. Aust. 2 (8): 422-423
***Dysphania ambrosioides* (L.) Mosyakin & Clemants** (*Chenopodium ambrosioides* L.)	Amaranthaceae (Chenopodiaceae)	Leaf and seed	Essential oil from leaf (0.7%) and from unripe seed (2.5%): peroxygenated monoterpenes: e.g. ascaridole (from 10% to 70% depending on the origin) and phenylpropanoids: e.g. safrole.		Kliks MM. 1985. Studies on the traditional herbal anthelmintic chenopodium ambrosioides L.: Ethnopharmacological evaluation and clinical field trials. Soc Sci Med, 21: 879-886 http://www.food-info.net/uk/index.htm Federation Proceedings 1948. Federation of American Societies for Experimental Biology. 7: 252
***Dysphania anthelmintica* (L.) Mosyakin & Clemants** (*Chenopodium anthelminticum* L.; *C. ambrosioides* L. var. *anthelminticum* (L.) A. Gray)	Amaranthaceae (Chenopodiaceae)	Leaf and seed	Essential oil: peroxygenated monoterpene: ascaridole and phenylpropanoids: e.g. safrole		Federation Proceedings 1948. Federation of American Societies for Experimental Biology. 7: 252
***Ecballium elaterium* (L.) A.Rich.**	Cucurbitaceae	Aerial part	Oxygenated tetracyclic triterpenes: cucurbitacines (from fruit: 3.84%, from stem :1.34%, from leaf: 0.34%)		Cucurbit Genetics Cooperative Report 26:66-69 (2003). Maryland USA. ISSN 1064-5594
***Echinops ritro* L.**	Compositae (Asteraceae)	Seed	Quinoline alkaloids (0.5%): e.g. echinopsine		Turova AD. et al. 1957. Pharmacology of the new alkaloid Echinopsine. Pharmacol. Toxicol. 20, 236-240. Di Cosmo F. et al. 1982. Photo-induced fungicidal activity elicited by naturally occurring thiophene derivatives. J Pestic Sci 13: 589-594.

COMPENDIUM OF BOTANICALS REPORTED TO CONTAIN NATURALLY OCCURING SUBSTANCES OF POSSIBLE CONCERN FOR HUMAN HEALTH WHEN USED IN FOOD AND FOOD SUPPLEMENTS

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***Echinops sphaerocephalus* L.**	Compositae (Asteraceae)	Seed	Quinoline alkaloids: e.g echinopsine		Turova AD. et al. 1957. Pharmacology of the new alkaloid Echinopsine. Pharmacol. Toxicol. 20, 236-240. Di Cosmo F. et al. 1982. Photo-induced fungicidal activity elicited by naturally occurring thiophene derivatives. J Pestic Sci 13: 589-594.
***Echium* spp.**	Boraginaceae	Whole plant	Genus in which species may contain unsaturated pyrrolizidine alkaloids		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1. Eyad Safi Ibrahim. 2007. Thesis. Isolation and characterization of pyrrolizidine alkaloids from Echium glomeratum Poir (Boraginaceae). The Faculty of Graduate Studies. Jordan University of Science and Technology.
***Elettaria cardamomum* (L.) Maton.**	Zingiberaceae	Fruit	Essential oil : phenylpropanoids: e.g. methyleugenol (0.1%) and monoterpene etheroxide: 1,8-cineole (up to 51.3%)		Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf
Embelia spp.	Primulaceae	Fruit	Genus in which species may contain the benzoquinone embelin		Prakash AO et al. 1992. Antiimplantation mechanism of action of Embelin in rats. Phytother Res 6:29-33; Gupta RS et al. 1989. Antispermatogenic effect of embelin, a plant benzoquinone on male albino rats in rats in vivo and in vitro. Contraception, 39: 307-320
***Ephedra* spp.**	Ephedraceae	Aerial part	Genus in which species may contain phenylethylamine alkaloids: e.g. ephedrine, pseudoephedrine,		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Epilobium* spp.**	Onagraceae	Aerial part		Genus in which some species may contain macrocyclic ellagitannins: oenothein A and oenothein B, considered responsible for the activity-decrease of aromatase and 5-alpha-reductase present in prostate cells. Other compounds like flavonoids and sterols may contribute to the effect.	Ducrey B et al. Inhibition of 5 alpha-reductase and aromatase by the ellagitannins oenothein A and oenothein B from Epilobium species. Planta Med. 63(2):111-4. Vitalone A et al. 2003. Extracts of various species of Epilobium inhibit proliferation of human prostate cells. Pharmacology. 69(2):79-87. Hiermann A, Bucar F. 1997. Studies of Epilobium angustifolium extracts on growth of accessory sexual organs in rats. J Ethnopharmacol 55: 179-183.
***Epimedium grandiflorum* C.Morren.**	Berberidaceae	Whole plant	Flavonol glycoside: icariin	Listed as Novel Food in the NF Catalogue	Mizuno M et al. 1989. Seasonal fluctuation of flavonol glycosides in Epimedium species. Yakugaku Zasshi 109(4), 271-272. Koga S et al. 1991. Studies on Epimedium Species: Flavonol glycosides and isozymes. Biochemical Systematics and Ecology 19(4), 315-318
***Epimedium sagittatum* (Siebold & Zucc.) Maxim.**	Berberidaceae	Whole plant	Flavonol glycoside: icariin (in fresh leaf: 0.013%)		Mizuno M et al. 1989. Seasonal fluctuation of flavonol glycosides in Epimedium species. Yakugaku Zasshi 109(4):271-272. Koga S et al. 1991. Studies on Epimedium Species: Flavonol glycosides and isozymes. Biochemical Systematics and Ecology 19 (4): 315-318
***Equisetum palustre* L.**	Equisetaceae	Aerial part	Piperidine alkaloids: e.g. palustrine (0.01-0.3%)	Reported toxicity on livestock	Roth L., Daunderer M. and Kormann K. 1984. Giftpflanzen - Pflanzengifte. Vorkommen Wirkung Therapie. ecomed. ISBN 3-609-64810-4
***Eranthis hyemalis* (L.) Salisb.**	Ranunculaceae	Root	Chromenone glycosides: e.g. eranthin		Kopp B. et al. 2004. 4H-Chromenone Glycosides from *Eranthis hyemalis* (L.) Salisbury. Helv Chim Acta 74: 611-616
***Erechtites* spp.**	Compositae (Asteraceae)	Whole plant	Genus in which species may contain unsaturated pyrrolizidine alkaloids: e.g. senecionine, seneciphylline		Gupta RC.(Ed). 2007. Veterinary toxicology. Basic and Clinical principles. Elsevier Inc. ISBN 978-0-12-370467-2
***Eriobotrya japonica* (Thunb.) Lindl.**	Rosaceae	Leaf and seed	Cyanogenic glycoside: amygdalin (0.06%)		Hasegawa T. 2005. Estimation of Cyanogenic Glycosides and Their Degradation Products in Eriobotrya japonica Seeds under Various Storage and Processing Methods. Bulletin of the Public Health Laboratory of Chiba Prefecture, 28: 5-10. Zhuang YF. 2002. Determine the quantity of amygdaloside in Eriobotrya japonica leaf by HPLC. Strait Pharmaceutical Journal. 14(5), 64-65
***Eryngium campestre* L.**	Apiaceae (Umbelliferae)	Aerial part	Essential oil from fresh herb (0.09%): furanocoumarins: e.g. bergapten (0.014% in fruit). Polyines from falcarinontype: e.g. falcarinon, falcarinolon		Guarrera PM. 2003. Folk medicine and minor nourishment in the folk traditions of Central Italy (Marche, Abruzzo and Latium). Fitoterapia 74: 515-544. Kartal M. et al. 2006. Triterpene Saponins from *Eryngium campestre*. J. Nat. Prod. 69: 1105-1108.
***Erythrina* spp.**	Leguminosae (Fabaceae)	Aerial part	Genus in which species may contain benzyltetrahydroisoquinoline alkaloids: e.g. erythraline, erysodine		Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, 618 pages, ISBN : 2-7430-0806-7
***Erythrophleum suaveolens* (Guill. & Perr.) Brenan**	Leguminosae (Fabaceae)	Bark and seed	Diterpenoid amides: e.g. cassaine		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Erythroxylum* spp.**	Erythroxylaceae	Whole plant	Genus in which species may contain tropane alkaloids: e.g. cocaine	Cocaine found in 14 species (there are about 50-60 species)	Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Eschscholzia californica* Cham.**	Papaveraceae	Aerial part		Isoquinoline alkaloids (0.29 to 0.38% of dry herb) with as main alkaloid californidine (0.19% - 0.23%)	Gafner S et al. 2006. Alkaloids from *Eschscholzia californica* and their capacity to inhibit binding of [^{3}H]8-Hydroxy-2-(di-N-propylamino)tetralin to 5-HT$_{1A}$ receptors in vitro. *J. Nat. Prod., 69, 432-435.* Proença da Cunha A. et al. 2003. Plantas e Produtos Vegetais em Fitoterapia. Fundação Calouste Gulbenkian, Lisboa. ISBN: 978-972-31-1010-4 Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Eucalyptus* spp.**	Myrtaceae	Leaf	Genus in which species may contain monoterpene etheroxide: 1,8-cineole		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Euonymus atropurpureus* Jacq.**	Celastraceae	Whole plant	Cardiotonic glycosides (digitalis-like) in fruit (seed) e.g.: euonoside, euobioside, euomonoside; sesquiterpene alkaloids (0.1%): e.g. evonine, evozine, evorine		Melero P. et al. 2000. A Short Review on Cardiotonic Steroids and their Aminoguanidine Analogues. Molecules 5: 51-81
***Euonymus europaeus* L.**	Celastraceae	Whole plant	Cardiotonic glycosides (digitalis-like)in fruit (seed) e.g.: eounoside, euobioside, euomonoside; sesquiterpene alkaloids (0.1%): e.g. evonine, evozine, evorine		Melero P. et al. 2000. A Short Review on Cardiotonic Steroids and Their Aminoguanidine Analogues. Molecules 5: 51-82 Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Eupatorium* spp.**	Compositae (Asteraceae)	Whole plant	Genus in which species may contain unsaturated pyrrolizidine alkaloids: e.g. supinine, rinderine		Riet-Correa F. 2011. Poisoning by Plants, Mycotoxins and Related Toxins. CABI, 2011. ISBN 184593833X, 9781845938338
***Euphorbia* spp.**	Euphorbiaceae	Whole plant	Genus in which species may contain diterpene-esters (phorbol esters) in the latex e.g. tigliane, ingenane and daphnane types	These compounds are found in two families: Euphorbiaceae & Thymeleaceae. Some of these esters are cocarcinogenic agents.	Rizk AF, Havranek, T and Jirousek R. 1990. Poisonous plant contamination of edible plants. CRC Press. ISBN 0849363691 Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1

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***Eurycoma longifolia* Jack**	Simaroubaceae	Root	Nortriterpenoids: quassinoids : e.g. eurycomanone, eurycomalacton, eurycomanol; indole alkaloids: beta carboline alkaloids and indolomonoterpenic alkaloids: e.g. canthin-6-one		Wahab NA et al. 2010. The effect of Eurycoma longifolia Jack on spermatogenesis in estrogen-treated rats. Clinics 65(1): 93-8. Shuid AN et al. 2010. The anti-osteoporotic effect of Eurycoma longifolia in aged orchidectomised rat model. The aging male. Early Online, 1-5.
***Evernia prunastri* (L.) Ach.**	Parmeliaceae	Lichen	Essential oil: bicyclic monoterpenes: e.g. alpha and beta thujones (about 10%), camphor		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2.
***Evodia ruticarpa* (A.Juss.) Benth.** *(Evodia rutaecarpa* (A.Juss.) Hook.f. ex Benth.)	Rutaceae	Fruit	Indolo-pyrido-quinazoline alkaloids: e.g. evodiamine, rutecarpine		Shoji N. et al. 1986. Isolation of evodiamine, a powerful cardiotonic principle, from Evodia rutaecarpa Bentham (Rutaceae). J Pharm Sci. 75(6): 612-3
***Excoecaria agallocha* L.**	Euphorbiaceae	Whole plant	Diterpene esters (labdane type): e.g. excoecarins	Contact with plant can cause temporarily blindness. Used in fertility regulations and having uterotonic activity	Konoshi T. et al. 2003. Seco-labdane type diterpenes from Excoecaria agallocha. Phytochemistry 64 (4): 835-840
***Fagus sylvatica* L.**	Fagaceae	Fruit and wood	Fruit: oxalates (2,95%)	Wood dust possibly mutagenic activity.	Nelson E. et al. 1993. Genotoxic effects of subacute treatments with wood dust extracts on the nasal epithelium of rats: assessment by the micronucleus and 32P-postlabelling. Arch toxicol, 67 (8): 586-589
***Ferula assa-foetida* L.**	Apiaceae (Umbelliferae)	Root		Oleo gum resin: sesquiterpene coumarins: e.g. asacoumarin A, B. One case of methaemoglobinaemia described in an infant.	Kajimoto T et al. 1989. Sesquiterpenoid and disulphide derivatives from Ferula assa–foetida. Phytochemistry 28: 1761–1763. Tisserand, R. and Balacs, T., 1995. Essential oil safety. A Guide for Health Care Professionals. Churchill Livingstone. Edinburgh. ISBN: 0443052603. Kelly KJ et al. 1984. Methemoglobinemia in an infant treated with the folk remedy glycerited asafoetida . Pediatrics 73: 717-719 .
***Ferula hermonis* Boiss.**	Apiaceae (Umbelliferae)	Root and seed	Daucane sesquiterpene esters from root resin: ferutinin (ferutinol p-hydroxybenzoate), teferdin (ferutinol benzoate) and the sesquiterpene alcohol ferutinol (jaeschkeanadiol)	Reproductive toxicity and infertility effect of Ferula hormonis in mice Oil extract from the seeds administered acutely in rats enhances erectile function; chronic administration induces toxic effects (decreased body weight, hepatomegaly and atrophic testis)	Merza H Homady et al.2002. Reproductive toxicity and infertility effect of Ferula hormonis extracts in mice. Theriogenology 57 (9): 2247-2256. El-Thaher TS et al. 2001. Ferula harmonis "zallouh" and enhancing erectile function in rats: efficacy and toxicity study. Int J Impot Res 13: 247–251. Hilan C. et al. 2007. Evaluation of the antibacterial activities of Ferula hermonis (Boiss.). Lebanese Science Journal. 8 (2): 135-150
Ficaria ranunculoides Roth **See *Ranunculus ficaria* L.**					
***Ficus carica* L.**	Moraceae	Whole plant	Furanocoumarins from latex: e.g. psoralen and bergapten		Tisserand, R. and Balacs, T., 1995. Essential oil safety. A Guide for Health Care Professionals. Churchill Livingstone. Edinburgh. ISBN: 0443052603. Hagers Handbuch der Pharmazeutischen Praxis 1998. Springer Verlag. ISBN 3-540-52688-9
***Foeniculum vulgare* Mill.** (*Foeniculum vulgare* Mill. ssp. *piperitum* (Ucria) Coutinho)	Apiaceae (Umbelliferae)	Aerial part	Essential oil from the aerial part: phenylpropanoids, e.g. trans-anethole, methylchavicol (2.3-4.9%) Essential oil from the unripe seed: methylchavicol (11.9-56.1%) Essential oil from ripe seed: methylchavicol (61.8%)		Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3. Garcia-Jimenez N et al. 2000. Chemical composition of Fennel oil, Foeniculum vulgare Miller, from Spain. Journal of Essential Oil Research. 12(2), 159-162.
Foeniculum vulgare* Mill. ssp. *vulgare* var. *vulgare	Apiaceae (Umbelliferae)	Fruit	Essential oil from the aerial part: phenylpropanoids, e.g. trans-anethole, methylchavicol Essential oil from the seed: methylchavicol (3.5-12%).		Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf
***Foeniculum vulgare* Mill. ssp. *vulgare* var. *dulce* (Mill.) Batt. & Trab.**	Apiaceae (Umbelliferae)	Fruit	Essential oil from the seed: phenylpropane derivative, e.g. trans-anethole, methylchavicol (1.5-8.1%).		Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3. Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings
***Fritillaria* spp.**	Liliaceae	Bulb	Genus in which species may contain steroidal and isosteroidal alkaloids: e.g. peimissine, verticine, verticinone, imperialine, isoverticine, ebeiedine		LI P. et al. 2001. Determination of isosteroidal alkaloids and glucosides in Fritellaria by HPLC-ELSDJournal of chromatography. 909 (2): 207-214
***Fumaria officinalis* L.**	Papaveraceae	Aerial part	Benzylisoquinoline alkaloids (protoberberines): e.g. protopine (38%), sinactine, cryptopine, fumaritine and sanguinarine		Gorbunov N.P. et al. 1977. Preparation and the arrhythmic activity of the total alkaloids of Fumaria officinalis L. Pharm. Chem. 11(5), 640-642
***Galanthus* spp.**	Amaryllidaceae	Aerial part	Genus in which species may contain isoquinoline alkaloids (Amaryllidaceae alkaloids): e .g. galanthamine, lycorine		Sidjimova B. et al. 2003. Galanthamine distribution in Bulgarian Galanthus spp. Pharmazie 58(12), 935-936.
***Galega officinalis* L.**	Leguminosae (Fabaceae)	Aerial part	Guanidine derivatives: e.g. galegine (in herb 0.1%-0-3%; in seed up to 0.5%), peganine		Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, 618 pages, ISBN : 2-7430-0806-7. Rasekh, H.R. et al. 2008. Acute and subchronic oral toxicity of Galega officinalis in rats. J. Ethnopharmacol 116 (1): 21-26.
***Galipea officinalis* Hancock** *(Cusparia officinalis* (Hancock) Engl.)	Rutaceae	Bark and wood	Tetrahydroquinoline alkaloids (40%): e.g. angustureine, galipeine, cuspareine, galipinine and quinoline alkaloids: e.g. galipine and furoquinoline alkaloids: e.g. maculosidine		Jacquemond-Collet I. et al. 2001. Identification of the alkaloids of Galipea officinalis by gas chromatography-mass spectrometry. Phytochem Anal 12: 312-319. Rakotoson J.H. et al. 1998. Alkaloids from Galipea officinalis. Planta medica 64(8), 762-763.
***Galium odoratum* (L.) Scop.** *(Asperula odorata* L.*)*	Rubiaceae	Aerial part	Coumarin (0.7-1.7% in dried herb)	Coumarin in dried herb: 1.06% in April/May, 0.44-0.93% in August	Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2. Tisserand, R. and Balacs, T., 1995. Essential oil safety. A Guide for Health Care Professionals. Churchill Livingstone. Edinburgh. ISBN: 0443052603
Garcinia cambogia Desr. **See *Garcinia gummi-gutta* (L.) Roxb.**					
***Garcinia gummi-gutta* (L.) Roxb.** *(Garcinia cambogia* Desr.)	Clusiaceae (Guttiferae)	Whole plant	(-) Hydroxycitric acid (HCA) from fruit. Gum resin from bark		Saito M et al. 2005. High dose of *Garcinia cambogia* is effective in suppressing fat accumulation in developing male Zucker obese rat, but highly toxic to the testis. Food Chem Tox 43: 411-419.
***Garcinia hanburyi* Hook.f.**	Clusiaceae (Guttiferae)	Whole plant	Bark gum resin: polyprenylated xanthones: e.g. gambogic acid, isogambogenin, isomorellinol; (-) Hydroxycitric acid (HCA) from fruit.		Braun H, Frohne D. 1987. Heilpflanzen-Lexikon für Ärzte und Apotheker. 5. Auflage. Stuttgart, Gustav Fischer Verlag. ISBN 3437110713, 9783437110719. Asano J. et al. 1996. Cytotoxic xanthones from Garcinia hanburyi. Phytochemistry 41(3), 815-820.
***Garcinia indica* (Thou.) Choisy**	Clusiaceae (Guttiferae)	Fruit rind and leaf	(-) Hydroxycitric acid (leaf: 4.1-4.6%; fruit rind: 10.3-12.7%)		Jayaprakasha G.K. and Sakariah K.K. 2002. Determination of organic acids in leaves and rinds of Garcinia indica (Desr.) by LC. J Pharmaceut Biomed 28 (2): 379-384

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***Garcinia morella* Desr.**	Clusiaceae (Guttiferae)	Whole plant	Bark gum resin (gamboge): tetraprenylated xanthones: morellic acid, isomorellic acid, alpha- and beta-guttiferins and derivatives.... Seed coat: morellin, beta- and alpha-guttiferin		Santhanam K. and Rao P.L. 1968. Antibiotic principles of *Garcina morella*: Part XII - Characterization of beta- and alpha-guttiferins as cathartic principles of gamboge and seed coat of *G. morella.* Indian J. Exp. Biol. 6, 158-159. Khare C.P. 2007. Indian Medicinal Plants. Springer Verlag. ISBN: 978-0-387-70637-5. Tomlinson B *et al.* 2000. Toxicity of complementary therapies: an eastern perspective. J. Clin. Pharmacol. 40, 451-456.
***Gaultheria fragrantissima* Wall.**	Ericaceae	Leaf	Essential oil from leaf (0.7-0.8%): salicylic acid derivatives: methylsalicylate (99.6%).		Baruah A.K.S. and Bhagat S.D. 1976. Oil of Indian wintergreen. Indian J. Pharmacy. 38. 56-57.
***Gaultheria procumbens* L.**	Ericaceae	Whole plant	Essential oil from leaf: methyl salicylate (98%)		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, 1269 pages, ISBN: 978-2-7430-1188-8. Tisserand R. and Balacs T. 1995. Essential oil safety. A Guide for Health Care Professionals. Churchill Livingstone. Edinburgh. ISBN: 0443052603
***Geissospermum vellosii* Allem.**	Apocynaceae	Bark	Indole and beta-carboline alkaloids: e.g. geissospermine, flavopereirine, vellosine, geissoschizoline (and derivatives, geissoschizoline N4-oxide and 1,2-dehydrogeissoschizoline), pausperadine		Mbeunkui F. et al. 2011 Isolation and structural elucidation of indole alkaloids from *Geissospermum vellosii* by mass spectrometry. J. Chromatogr. B. Analyt. Technol. Biomed Life Sci. 2011 Dec 26. [Epub ahead of print] Bemis D.L. et al. 2009 beta-carboline alkaloid-enriched extract from the amazonian rain forest tree pao pereira suppresses prostate cancer cells. J. Soc. Integr. Oncol. 7(2), 59-65. Araújo JQ et al. 2011 Docking of the alkaloid geissospermine into acetylcholinesterase: a natural scaffold targeting the treatment of Alzheimer's disease. J. Mol. Model. 17(6), 1401-1412
***Gelsemium* spp.**	Gelsemiaceae	Whole plant	Genus in which species may contain indol- and oxindolalkaloids: e.g. gelsemine, sempervirine		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques. Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1.
***Genista tinctoria* L.**	Leguminosae (Fabaceae)	Aerial part	Quinolizidine alkaloids: e.g. anagyrine, cytisine (0.7-0.8%), sparteine, lupanine, lupinine		Gazaliev A.M. et al. 1991. Isolation, analysis, biosynthesis, and modification of the alkaloid cytisine. Chem. Nat. Compd. 27(3), 259-269. Wink, M. 1986. Acquired toxicity - the advantages of specializing on alkaloid-rich lupins to *Macrosiphon albifrons* (Aphidae). Naturwissenschaften 73, 210-212.
***Ginkgo biloba* L.**	Ginkgoaceae	Leaf and seed (ovule)	Alkylphenols from leaf: ginkgolic acids: e.g. bilabol, cardanols, cardols and ginkgol, ginkgotoxin.	Leaf: Sesquiterpene lactones: bilobalide... Diterpene lactones: 0.06-0.23% ginkgolides. Ovule: human intoxication reported in Japan with some lethal outcomes. Canned and boiled seeds contain only 1% of the content in fresh seeds. Also roasted seeds contain gingotoxin. Symptoms of intoxication with the seeds: vomiting, seizures and unconsciousness	EMEA. Committee for Veterinary Medicinal Products. 1999. *Gingko biloba*. Leistner E. and Drewke C. 2010. *Ginkgo biloba* and ginkgotoxin. J. Nat. Prod. 73, 86-92. Mahadevan S. and Park Y. 2008. Multifaceted therapeutic benefits of *Ginkgo biloba* L.: chemistry, efficacy, safety and uses. J. Food Sci. 73(1), R14-R19. Miwa H. *et al.* 2001. Generalized convulsions after consuming a large amount of Gingko nuts. Epilepsia. 42(2), 280-281. WHO. 1999. WHO monographs on selected medicinal plants. Volume 1. World Health Organization. ISBN 92 4 154517 8.
***Glaucium corniculatum* (L.) Rudolph *ssp. refractum* (Nab) Cullen**	Papavaraceae	Aerial part	Isoquinoline alkaloids : e.g. predicentrine, glaufidine, dehydrocorydine, (+)-norbracteoline, thalicmidine, bulbocapnine (1.2%), dicentrine (0.7%), protopine (0.42%), corydine (<0.1%), glaucine (<0.1%), α-allocryptopine (<0.1%).		Kintsurashvili L.G. and Vachnadze V.Y. 2000. Alkaloids of *Glaucium corniculatum* and *G. flavum* growing in Georgia. Chem. Nat. Compd. 36(2), 225-226. Shafiee A. et al. 1985. Alkaloids of Papaveraceae, XII. Alkaloids of *Glaucium corniculatum* subspecies *refractum*. J. Nat. Prod. 48(5), 855-856. Shamma M. and Guinaudeau H. 1985. Aporphinoid alkaloids. Nat. Prod. Rep. 2, 227-233.
***Glaucium flavum* Crantz**	Papavaraceae	Whole plant	Isoquinoline alkaloids (aporphine alkaloids): e.g. glaucine (from under detection level to over 3.6%)		Dargan P.I. et al. 2008. Detection of the pharmaceutical agent glaucine as a recreational drug. Eur. J. Clin. Pharmacol. 64, 553-554. Peled B. et al.1988. Alkaloid content in various chemoecotypes of *Glaucium flavum* from Israel. Phytochemistry. 27(4), 1021-1024. Petitto V. et al. 2010. Alkaloids from *Glaucinum flavum* from Sardinia. Nat. Prod. Research. 24(11), 1033-1035.
***Glechoma hederacea* L.**	Lamiaceae (Labiatae)	Aerial part	Pyrrolidine alkaloids linked with a tropane-like skeleton: e.g. hederacines A and B . Essential oil from flowering aerial part : monoterpene etheroxide: 1,8-cineole (1.9 - 4.6%).	The plant has been reported to cause illness and death in horses and cattle. The potential toxic constituents have not been identified.	Cooper M.R. and Johnson A.W. 1998, Poisonous plants and fungi in Britain. Animal and human poisoning. The Stationery Office. ISBN 0-11-242981-5. Kumarasamy Y. et al. 2003. Isolation, structure elucidation and biological activity of hederacine A and B, two unique alkaloids from *Glechoma hederacea*. Tetrahedron 59, 6403-6407. Mockutė D. et al. 2005. Chemical composition of essential oils of *Glechoma hederacea* L. growing wild in Vilnius district. Chemija. 16(3-4), 47-50. Radulovic N. et al. 2010. Volatile constituents of *Glechoma hirsurta* Waldst. & Kit. and *Glechoma hederacea* L. (Lamiaceae) Bull. Chem. Soc. Ethiop. 24(1), 67-76.
***Globularia alypum* L.**	Plantaginaceae	Leaf and root		Increased embryo resorption observed in pregnant rats after intragastric administration of 800 mg/kg of an ethanolic extract of the dried leaves from day 1-6 of pregnancy.	Elbetiha A. et al. 2000. Fetotoxic potentials of *Globularia arabica* and *Globularia alypum* (Globulariaceae) in rats. J. Ethnopharmacol. 72, 215-219.
***Gloriosa* spp.**	Colchicaceae	Whole plant	Genus in which species may contain tropolone alkaloids: e.g. colchicine	*Gloriosa superba* L. (*G. simplex* L.): colchicine in flower (1.05-1.18%), leaf (0.87-2.36%) and tuber (0.66-0.92%)	Ntahomvukiye D. et al. 1984. Quantitative determination of colchicine in *Gloriosa-simplex* Liliaceae of Rwanda Central Africa. Plantes Medicinales et Phytotherapie. 18(1), 24-27.

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***Glycine max* (L.) Merr.**	Leguminosae (Fabaceae)	Seed	Soybean agglutinin (N-acetylgalactosamine-specific lectin), proteinase inhibitors and other toxic proteins. Total Isoflavones 945-4208 µg/g a.o. 67-516 µg/g daidzin, 91-1079 µg/g genistin, 12-177 µg/g glycitin, 217-768 µg/g malonyldaidzin, 43-158 µg/g malonylglycitin, 64-2446 malonylgenistin, 4.3-265 µg/g genistein.		Becker-Ritt A.B. *et al.* 2004. Antinutritional and/or toxic factors in soybean *(Glycine max* (L) Merril) seeds: comparison of different cultivars adapted to the southern region of Brazil. J. Sci. Food Agric. 84, 263-270. BfR (Federal Institute or Risk Assessment). 2007. Isolated isoflavones are not without risk. http://www.bfr.bund.de/cm/349/isolated_isoflavones_are_not_without_risk.pdf. Manchón N. *et al.* 2010. Fast analysis of isoflavones by high-performance liquid chromatography using a column packed with fused-core particles. Talanta 82, 1986-1994. Patisaul H.B. and Jefferson W. 2010. The pros and cons of phytoestrogens. Front. Neuroendocrin. 31, 400-419. Sun J.M. *et al.* 2011. Rapid HPLC method for determination of 12 isoflavone components in soybean seeds. Agric. Sci. China 10(1), 70-77.
***Glycyrrhiza glabra* L.**	Leguminosae (Fabaceae)	Root	Phenylpropanoids: e.g. methylchavicol in unspecified quantities Triterpene saponins with glycyrrhizin (potassium and calcium salts of glycyrrhizic acids) as major components.		EMEA HMPC. 2005. Public statement on the use of herbal medicinal products containing estragole. EMEA/HMPC/137212/2005 Scientific Committee on Food (SCF). 2003. Opinion of the Scientific Committee on Food on Glycyrrhizinic acid and its ammonium salt SCF/CS/ADD/EDUL/225 Final 10 April 2003. Wichtl M. 2002. Teedrogen und Phytopharmaka. Ein Handbuch für die Praxis auf wissenschaftlicher Grundlage. Wissenschaftliche Verlagsgesellschaft mbH. ISBN 3-8047-1854-X. WHO. 1999. WHO monographs on selected medicinal plants. Volume 1. World Health Organization. ISBN 92 4 154517 8.
***Glycyrrhiza uralensis* Fisch. ex DC.**	Leguminosae (Fabaceae)	Root	Triterpene saponins with glycyrrhizin (potassium and calcium salts of glycyrrhizic acids) as major components .		Scientific Committee on Food (SCF). 2003. Opinion of the Scientific Committee on Food on Glycyrrhizinic acid and its ammonium salt SCF/CS/ADD/EDUL/225 Final 10 April 2003.
***Gmelina arborea* Roxb.**	Lamiaceae (Labiatae)	Leaf		An aqueous extract of the leaves was tested for genotoxicity in the micronucleus test. P.o. doses of 0, 286 and 667 mg/kg/b.w. of the extract was given to mice. A significant (P< 0.01) increase in % micronuclei was seen with both doses indicating a mutagenic potential of the leaves.	Kulkarni Y. and Veeranjaneyulu A. 2010. Toxicological studies on aqueous extract of *Gmelina arborea* in rodents. Pharm. Biol. 48(12), 1413-1420. Sahu R. et al. (2010) *In vivo* rodent micronucleus assay of *Gmelina arborea* Roxb (Gambhari) extract. J. Adv. Pharm. Tech. Res. 1, 22-29.
***Gossypium* spp.**	Malvaceae	Root bark and seed	Genus in which species may contain gossypol, a triterpenoid aldehyde		Percy R.G. et al. 1996. Seed gossypol variation within *Gossypium barbadense* L. cotton. Crop. Sci. 36, 193-197. Waites G.M.H. et al. 1998. Gossypol: reasons for its failure to be accepted as a safe, reversible male antifertility drug. Int. J. Androl. 21, 8-12
***Gratiola officinalis* L.**	Plantaginaceae	Whole plant	Oxygenated tetracyclic triterpenes: e.g. cucurbitacin I-glucoside, cucurbitacin E-glucoside, gratioside.		Kaya G.I. and Melzig M.F. 2008. Quantitative determination of cucurbitacin E and cucurbitacin I in homoeopathic mother tincture of *Gratiola officinalis* by HPLC. Pharmazie 63(12), 851-853. Sturm S. and Stuppner H. 2000. Analysis of cucurbitacins in medicinal plants by high-pressure liquid chromatography-mass spectrometry. Phytochem. Anal. 11, 121-127.
***Grewia* spp.**	Malvaceae	Bark, flower and shoot	Genus in which species may contain harmane alkaloids (beta-carbolines)	Alkaloids present in *Grewia tilaefolia, Grewia hirsuta, Grewia asiatica, Grewia tenax* . In G. *bicolor:* harman, 6-methoxyharman, 6-hydroxyharman.	Jaspers M.W.J.M. et al. 1986. Investigation of *Grewia bicolor* Juss. J. Ethnopharmacol. 17, 205-211.
***Griffonia simplicifolia* (M.Vahl x DC.) Baill.**	Leguminosae (Fabaceae)	Seed	5-Hydroxytryptophan derivatives: 20.83% on a fresh weight basis		Lemaire P.A. and Adosraku R.K. 2002. An HPLC method for the direct assay of the serotonin precursor, 5-Hydroxytrophan, in seeds of *Griffonia simplicifolia.* Phytochem. Analysis. 13, 333-337.
***Grindelia squarrosa* (Pursh) Dunal**	Compositae (Asteraceae)	Aerial part		One study reported sheep mortality after grazing G. squarrosa. Further study showed that the plant concentrates selenium from the soil, up to toxic levels.	Lodge R.W. 1963. Plant poisonous to livestock. Can. Vet. J. 4(12), 314-316. Spallholz J.E. 1994. On the nature of selenium toxicity and carcinostatic activity. Free Radical Bio. Med. 17(1), 45-64.
***Guaiacum officinale* L.**	Zygophyllaceae	Bark	Resin (gum) from the bark: 15% petroleum ether soluble compounds: lignans (-)-guajaretic acid, meso-dihydroguajaretic acid and meso-nordihydroguajaretic acid. 70% ether soluble compounds: other lignans such as dehydrogjajaretic acid, guaiacin, isoguaiacin, furoguajacin,alpha-guajaconic acid and its 4'-methyl ether, various tetrahydrofurans		Arteaga S. et al. (2005) *Larrea tridentata* (Creosote bush), an abundant plant of Mexican and US-American deserts and its metabolite nordihydroguaiaretic acid. J Ethnopharmacol. 98, 231-239. Council of Europe. 2008. Natural sources of flavourings. Report no 3. ISBN 978-92-871-6422-3. WHO 1974. Food Additives Series 5.
***Guarea* spp.**	Meliaceae	Seed		Genus in which seed and fruit of some species may contain undefined hallucinogenic alkaloids The bark decoctions reported to have an abortifacient and emetic effect.	Camacho M.D.R. et al. 2001. Terpenoids from *Guarea rhophalocarpa.* Phytochemistry 56, 203-201. Bussmann RW. and Sharon D. 2009. Naming a phantom – the quest to find the identity of Ulluchu, an unidentified ceremonial plant of the Moche culture in Northern Peru. Journal of Ethnobiology and Ethnomedicine. 5(8) (www.ethnobiomed.com/content/5/1/8)
***Guatteria gaumeri* Greenm.**	Annonaceae	Bark	Phenylpropanoids: e.g. alpha-asarone		Chamorro et al. 1993. [Pharmacology and toxicology of *Guatteria gaumeri* and alpha-asarone]. Rev. Invest. Clin., 45(6), 597-604.
***Gymnosporia senegalensis* (Lam.) Loes.** *(Maytenus senegalensis* (Lam.) Exell)	Celastraceae	Root bark		Genotoxic effect seen with a dichloromethan extract (lipidic fraction) of the root bark that induced micronuclei in human white blood cells. Toxic effects with the extract in Comet assay.	Verschaeve L. and van Staden J. 2008. Mutagenic and antimutagenic properties of extracts from South African traditional medicinal plants. J Ethnopharmacol. 19, 527-587.
***Gynocardia odorata* R.Br.**	Achariaceae	Leaf and seed	Cyanogenic glycosides: e.g. gynocardin		Webber B.L. and Miller R.E. 2008. Gynocardin from *Baileyoxylon lanceolatum* and a revision of cyanogenic glycosides in Achariaceae. Biochem. Syst. Ecol. 36, 545–553.
Hagenia abyssinica J.F.Gmel. **See *Brayera anthelmintica* Kunth.**					
***Hamamelis virginiana* L.**	Hamamelidaceae	Bark and leaf	Essential oil from the fresh leaf: (0.01 - 0.05%): phenylpropanoid: e.g. safrole (content max 0.2% of the volatile oil).	Leaf and bark up to 10% tannins. Hydrolysable tannins used at high doses and over a long period may have a negative impact on liver	Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2. SCF. Opinion on the safety of the presence of safrole (1-allyl-3,4-methylene dioxy benzene) in flavourings and other food ingredients with flavouring properties; available at: http://ec.europa.eu/food/fs/sc/scf/out116_n.pdf. WHO. 2002. WHO monographs on selected medicinal plants. Volume 2. World Health Organization. ISBN 92 4 154537 2.

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***Handroanthus heptaphyllus* (Vell.) Mattos** (*Tabebuia heptaphylla* (Vell.) Toledo, *Tabebuia ipe* (K.Schum.) Standl.), *Tecoma ipe* K.Schum.)	Bignoniaceae	Wood	Naphtoquinones, e.g. lapachenol (lapachonone), lapachol. Lignans	Lapachol induced dose-dependently a clastogenic effect *in vivo* in rats in the micronucleus and chromosome aberration assays.	Felicio A.C. et al. 2002. Fetal growth in rats treated with lapachol. Contraception 66, 289-293. Guerra M.O. et al. 1999. Intercepetive effect of lapachol in rats. Contraception. 60, 305-307. Guerra M.O. et al. 2001. Toxicology of lapachol in rats: embryolethality. Rev. Bras. Biol. 61(1), 171-174. Maistro E.L. et al. 2010. Lapachol induces clastogenic effects in rats. Planta Medica 76(9), 858-862. Schmeda-Hirschmann G. and Papastergiou F. 2003. Naphthoquinone derivatives and lignans from the Paraguayan crude drug "Tayí pytá" (*Tabebuia heptaphylla*, Bignoniaceae). Z. Naturforsch. 58c, 495-501.
***Harungana madagascariensis* Lam. ex Poir.** (*Haronga madagascariensis* (Lam. ex Poir.) Choisy)	Hypericaceae	Root	Prenylated polyphenolic anthranoids: e.g. harunmadagascarins A and B		Ndjakou L. et al. 2006. Anti-plasmodial activity of some constituents of the root bark of *H. madagascariensis* LAM. Chem. Pharm. Bull. 55(3), 464.
***Hebanthe eriantha* (Poir.) Pedersen** (*Pfaffia paniculata* (Mart.) Kuntze, *Gomphrena paniculata* (Mart.) Moq., *H. paniculata* Mart.)	Amaranthaceae (Chenopodiaceae)	Root		Increased levels of progesterone and estradiol-17β were found in female mice and increased testosterone level was found in male mices receiving drinking water with 5 g powdered root/100 ml drinking water.	Nishimoto N. et al. 1984. Pfaffosides and nortriterpenoid saponins from *Pfaffia paniculata*. Phytochemistry 23(1), 139-142. Oshima M. and Gu Y. 2003. *Pfaffia paniculata*-induced changes in plasma estradiol-17β, progesterone and testosterone levels in mice. J. Reprod. Dev. 49(2), 175-180.
***Hedeoma pulegioides* (L.) Pers.**	Lamiaceae (Labiatae)	Aerial part	Essential oil: monocyclic monoterpene ketone: e.g. pulegone 30-80%, bicyclic monoterpenes: e.g. menthofuran and monoterpene etheroxide: 1,8-cineole.		Council of Europe. 2007. Natural sources of flavourings. Report No. 2. Council of Europe Publishing. ISBN 978-92-871-6156-7. Tisserand, R. and Balacs, T., 1995. Essential oil safety. A Guide for Health Care Professionals. Churchill Livingstone. Edinburgh. ISBN: 0443052603
***Hedera helix* L.**	Araliaceae	Aerial part	Leaf: triterpenoid saponins (2.5%-5.7%): e.g. alpha-hederin,	Intoxication caused by the fruits ('berries') .	Cooper M.R. and Johnson A.W. 1998, Poisonous plants and fungi in Britain. Animal and human poisoning. The Stationery Office. ISBN 0-11-242981-5. Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Hedychium flavum* Roxb.**	Zingiberaceae	Rhizome	Essential oil from rhizomes: monoterpenes: e.g. 1,8-cineole (up to 42%)		Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf
***Heimia* spp.**	Lythraceae	Leaf	Genus in which species may contain biphenylquinolizidine lactone alkaloids: e.g. dehydrodecodine, heimidine, and phenylquinolizidine ester alkaloids: e.g. abresoline,	Alkaloids present in: *Heimia salicifolia* , *H. myrtifolia* , and *H. montana*	Rother A. 1990. Alkaloids of Heimia montana. Phytochemistry. 29(5), 1683-1686. Rumalla C.S. et al. 2008. Alkaloids from *Heimia salicifolia* . Phytochemistry. 69, 1756-1762.
***Helichrysum gymnocephalum* Humbert**	Compositae (Asteraceae)	Aerial part	Essential oil: monoterpene etheroxide: 1,8-cineole (60 to 68%)		Cavalli J.F. et al. 2001. Constituents of the essential oil of six *Helichrysum* species from Madagascar. Flavour Fragr. J. 16, 253-256. Möllenbeck S. et al. 1997. Chemical composition and analyses of enantiomers of essential oils from Madagascar. Flavour Fragr. J.,12, 63-69.
***Helichrysum italicum* (Roth) Guss.**	Compositae (Asteraceae)	Aerial part	Essential oil from flower: monoterpene etheroxide: 1,8-cineole (0.3 to 1%)		Idaomar M. et al. 2002. Genotoxicity and antigenotoxicity of some essential oils evaluated by wing spot test of *Drosophila melanogaster* . Mut. Res. 513, 61-68. Bianchini A et al. 2003. A comparative study of volatile constituents of two *Helichrysum italicum* (Roth) Guss. Don Fil subspecies growing in Corsica (France), Tuscany and Sardinia (Italy). Flavour Fragr. J. 18, 487-491
***Heliotropium* spp.**	Boraginaceae	Whole plant	Genus in which species may contain unsaturated pyrrolizidine alkaloids: e.g. heliotrine, cynoglossine		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Helleborus* spp.**	Ranunculaceae	Aerial part	Genus in which species may contain cardiac glycosides: bufadienolides: e.g. hellebrin		Database: Plants poisonous to livestock, Cornell University (www. Ansci. Cornell.edu/plants/christmas rose) Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7
***Hepatica nobilis* Schreb.** (*Anemone hepatica* L.)	Ranunculaceae	Aerial part	Unsaturated lactone : protoanemonin	Protoanemonin only present in fresh herb	Cooper M.R. and Johnson A.W. 1998, Poisonous plants and fungi in Britain. Animal and human poisoning. The Stationery Office. ISBN 0-11-242981-5. Frohne D. and Pfänder HJ. 1997. Giftpflanzen. Ein Handbuch für Apotheker, Ärzte, Toxikologen und Biologen. Wissenschaftliche Verlagsgesellschaft mbH. ISBN 3-8047-1466-8.
***Heracleum mantegazzianum* Sommier & Levier**	Apiaceae (Umbelliferae)	Whole plant	Furocoumarins (1.3%): e.g. bergapten, isopimpinellin, imperatorin		Pira E. et al. 1989. *Heracleum mantegazzianum* growth phases and furocoumarin content. Contact Dermatitis. 21, 300-303.
***Heracleum sphondylium* L.**	Apiaceae (Umbelliferae)	Whole plant	Furocoumarins: e.g. bergapten, isopimpinellin, imperatorin		Bicchi C. et al. Chemical diversity of the contents from the secretory structures of *Heracleum sphondylium* ssp. *sphondylium* . Phytochemistry 29(6), 1883-1887. Cooper M.R. and Johnson A.W. 1998, Poisonous plants and fungi in Britain. Animal and human poisoning. The Stationery Office. ISBN 0-11-242981-5.
***Herniaria glabra* L.**	Caryophyllaceae	Whole plant		Herb: 3-9% triterpene saponins. A lyophylised aqueous extract of the whole plant (not specified if aerial) were p.o. administered to group of Wistar rats (5 males and 5 females/group) in doses of 0, 1, 2, 4 g/kg bw. day for 90 days. Suppression on body weight gain between dosed group and controls after 90 days (> 20% in all dosed groups vs. controls). Histopathological study of liver and kidneys only revealed toxic effects in the highest dosed group. Oral LD50 of an aqueous extract in mice was 8.5 g/kg bw. (Rhiouani *et al.* 2008).	Rhiouani H. 2008. Acute and sub-chronic toxicity of an aqueous extract of the leaves of Herniaria glabra in rodents. J. Etnopharmacol. 118, 378-386. Wichtl M. 2002. Teedrogen und Phytopharmaka. Ein Handbuch für die Praxis auf wissenschaftlicher Grundlage. Wissenschaftliche Verlagsgesellschaft mbH. ISBN 3-8047-1854-X.
***Hibiscus sabdariffa* L.**	Malvaceae	Calyx	Oxalic acid (0.55%)	Decreased epididymal sperm count observed in rats with an aqueous extract of calices. Histological changes of the testicular structure. Orally dosing of an hydro-alcoholic extract of the calyces to rats showed increased levels of some enzymes that may indicate liver injury. Water and alcoholic extracts of the calyces in doses of 300 or 2000 mg/kg body weight/day orally to rats for 90 days caused up to 80% death in some groups. Compounds responsible for the adverse effects are not identified.	Al Shoosh.1993. Chemical Composition of some Roselle *(Hibiscus sabdariffa)* genotypes. Thesis 1993. University of Khartoum. Akaindahunsi A.A. and Olaleye M.T. 2003. Toxicological investigation of aqueous-methanolic extract of the calyces of *Hibiscus sabdariffa*. J. Ethnopharmacol. 89, 161-164. Fakey T.O. et al. 2009. Toxic effects of oral administration of extracts of dried calyx of *Hibiscus sabdariffa* Linn. (Malvaceae). Phytother. Res. 23, 412-416. Orisakwe OE *et al.* 2004. Testicular effeccts of sub-chronic administration of *Hibiscus sabdariffa* calyx aqueous extract in rats. Reprod. Toxicol.18, 295-298.

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***Hippomane mancinella* L.**	Euphorbiaceae	Aerial part	Phorbolesters from leaf and sap; Indole alkaloid in fruit: possibly physostigmine,		Bandaranayake W.M. 2002. Bioactivities, bioactive compounds and chemical constituents of mangrove plants. Wetlands Ecology and Management. 10: 421-452.
***Holarrhena antidysenterica* Wall. ex A.DC.**	Apocynaceae	Bark, root and seed	Steroid alkaloids: e.g. conessine, isoconessimine, kurchessine,…		Bruneton J. 1999. Pharmacognosie, 3ème édition, Ed. Tec et Doc-Lavoisier. ISBN 2-7430-0315-4
***Hoodia gordonii* (Masson) Decne**	Apocynaceae	Whole plant	Oxypregnane steroidal glycosides: e.g. hoodigosides and hoodistanalosides A-B.	Listed as Novel Food in the NF Catalogue	Shukla YJ et al. 2009. Pregnane glycosides from Hoodia gordonii. Phytochem. 70(5), 675-683. Janssen H.G. et al. 2008. Quantification of appetite suppressing steroid glycosides from Hoodia gordonii in dried plant material, purified extracts and food products using HPLC-UV and HPLC–MS methods. Anal. Chim. Acta. 617, 200–207. Pawar R.S. et al. 2007. New calogenin glycosides from Hoodia gordonii. Steroids. 72, 881–891. Vermaak I. et al. 2011. *Hoodia gordonii*: an up-to-date review of a commercially important anti-obesity plant. Planta Medica. 77,1149–1160
***Hoslundia opposita* Vahl**	Lamiaceae (Labiatae)	Leaf	Essential oil from leaf: monoterpene ethereoxide: 1,8-cineole (72%). Essential oil from fruit: bicyclic monoterpene: camphor (69%)		Chagonda L.S. and Chalchat J.C. 2005. The essential oil of wild and cultivated *Hoslundia opposita* Vahl. from Zimbabwe. Flavour Fragr. J. 20(2), 193-195.
***Humulus lupulus* L.**	Cannabaceae	Inflorescence	Flavanone: 8-prenylnaringenin		Bruneton J. 1999. Pharmacognosie, 3ème édition, Ed. Tec et Doc-Lavoisier. ISBN 2-7430-0315-4.
***Huperzia selago* (L.) Schrank & Mart.** (*Lycopodium selago* L.)	Lycopodiaceae	Aerial part	Lycopodium alkaloids (lycodine class): e.g. huperzine A, huperzine B, N-methyl-huperzine B, huperzinine		Boloz A. *et al.* 2006. The determination of huperzine A in European Lycopodiaceae species by HPLC-UV-MS. Phytochem. Analysis. 17(5), 332-336. Felgenhauser N. *et al.* 2000. Intoxication with huperzine A, a potent anticholinesterase found in the fir club moss. Clin. Toxicol. 38(7), 803-808.
***Huperzia serrata* (Thunb.) Trevis** (*Lycopodium serratum* Thunb.)	Lycopodiaceae	Aerial part	Sesquiterpene alkaloids: e.g. huperzine A (approximately 0,007%) and huperzine B		Ma X. Gang D.R. 2004. The *Lycopodium* alkaloids. Nat. Prod. Rep. 21, 752-772.
Hura crepitans L.	Euphorbiaceae	Whole plant	Latex contains diterpenes (daphnane type): e.g. hippomane A (huratoxin) and hippomane B		Nelson L.S., Shih R.D., Balick M.J. 2007. Handbook of Poisonous and Injurious Plants Second Edition. Springer USA. ISBN-10: 0-387-31268-4.
***Hyacinthus orientalis* L.**	Asparagaceae	Flower	Reported to contain the phenylpropanoid methylchavicol in unspecified quantities		EMEA HMPC. 2005. Public statement on the use of herbal medicinal products containing estragole. EMEA/HMPC/137212/2005 Tisserand R. and Balacs T. 1995. Essential oil safety. A Guide for Health Care Professionals. Churchill Livingstone. ISBN: 0443052603.
***Hydnocarpus* spp.**	Achariaceae	Seed	Genus in which species may contain in their seed oil unsaturated cyclopentenyl acids mainly chaulmoogric acid, hydnocarpic acid, gorlic acid.	The seed oil is referred to as non-edible. Oral intake of the seed oil may cause e.g. nausea, diarrhoea, hypertension	Krist S et al. 2008. Volatile compounds and triacylglycerol composition of original fatty plant oils. Eur. J. Lipid Sci. Technol. 110: 127-140. Perkins GA *et. al.* 1927. Studies of chaulmoogra-group oils. Industrial and Engineering Chemistry August: 939-942. Roth L., Daunderer M. and Kormann K. 1984. Giftpflanzen - Pflanzengifte. Vorkommen Wirkung Therapie. ecomed. ISBN 3-609-64810-4
***Hydrastis canadensis* L.**	Ranunculaceae	Whole plant	Isoquinoline alkaloids: e.g. hydrastine, berberine		Bruneton J. 1999. Pharmacognosy. Phytochemistry. Medicinal Plants. 2nd ed. Ed. Intercept Ltd. ISBN 1-898298-63-7
***Hyoscyamus* spp.**	Solanaceae	Whole plant	Genus in which species may contain tropane alkaloids: e.g. atropine, hyoscyamine,…	The fresh plant contains hyoscyamine, twice more active than atropine (racemic mixture)	Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc. Lavoisier. Paris, 3ème édition. ISBN : 2-7430-0806-7
***Hypericum maculatum* Crantz**	Hypericaceae	Aerial part	Dianthrones and derivatives: e.g. hypericin (0.06-0.34%), pseudohypericin (0.25-1.45%)		Mártonfi *P et al.* 2006. Secondary metabolites variation in *Hypericum maculatum* and its relatives. Biochemical Systematcis and Ecology 34: 56-59.
***Hypericum perforatum* L.**	Hypericaceae	Aerial part	Dianthrones and derivatives: e.g. hypericin, pseudo-hypericin; prenylated phloroglucinol derivative: e.g. hyperforin; xanthone derivatives.		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition. ISBN : 978-2-7430-1188-8
***Hyptis suaveolens* (L.) Poit.**	Lamiaceae (Labiatae)	Aerial part	Essential oil: monoterpene etheroxide: 1,8-cineole (up to 44%). Also reported to contain methyleugenol in unspecified quantities	An aqueous crude extract of the leaves administered to rats for 28 days caused changes in histopatology and clinical chemistry suggestive of hepatotoxic and nephrotoxic effects.	EMEA HMPC. 2004. Final position paper on the use of herbal medicinal products containing methyleugenol. EMEA/HMPWP/337/03 Cavalcanti ESB et al. 2004. Larvicidal Activity of Essential Oils from Brazilian Plants against Aedes aegypti L.. Mem Inst Oswaldo Cruz, Rio de Janeiro, 99(5): 541-544. Oladele G.M. and Abatan M.O. 2003. Histopathological and serum biochemical changes following oral administration of aqueous crude extracts of Hyptis suaveolens, Urena lobata and Cleome viscosa in rats. Tropical Veterinarian 22(1), 9-15.
***Hyssopus officinalis* L.**	Lamiaceae (Labiatae)	Aerial part	Essential oil from aerial part: phenylpropanoids: e.g. methyleugenol (0.09-3.8%), methylchavicol (4.8%); monoterpenes: e.g. monoterpene etheroxide: 1,8-cineole; biclyclic monoterpenes: e.g. pinocamphone (40%), iso-pinocamphone (30%), thujones (traces)		Council of Europe. 2007. Natural sources of flavourings. Report No. 2. Council of Europe Publishing. ISBN 978-92-871-6156-7. Tisserand, R. and Balacs, T., 1995. Essential oil safety. A Guide for Health Care Professionals. Churchill Livingstone. Edinburgh. ISBN: 0443052603
***Iberis amara* L.**	Brassicaceae (Cruciferae)	Whole plant	Curcubitacins: e.g. curcubitacin E and I (0.2-0.4% in the seeds, 0.06% in flowers, 0.02% in the shoots and 0.006% in roots)		Reichling J & Saller R (2002) *Iberis amara* L. (Bittere Schleifenblume) Profil einer Heilpflanze. Forsch Komplementärmed Klass Naturheilkd 9: 21-33.
***Ilex aquifolium* L.**	Aquifoliaceae	Aerial part	Cyanogenic glucoside: e.g. menisdaurin in ripe fruits		Nahrstedt A. and Wray V. 1990. Structural revision of a putative cyanogenic glucoside from *Ilex aquifolium.* Phytochemistry, 29(12), 3934-3936. Vanaclocha B., Cañigueral S. 2003. Fitoterapia, Vademecum de Prescripción, Masson, 4ª Ed. ISBN: 8445812203, 9788445812204
***Ilex paraguariensis* A. St.-Hil.**	Aquifoliaceae	Leaf	Methylated xanthine derivatives: e.g. caffeine (0.2-2.0%), theobromine (0.1-0.2%), theophylline (0.05%)		Leung A.Y. and Foster S. 1996. Encyclopedia of common natural ingredients used in food, drugs and cosmetics. John Wiley & Sons, Inc. ISBN 0-471-50826-8.
***Ilex vomitoria* Ait.**	Aquifoliaceae	Fruit and leaf	Methylated xanthine derivatives: e.g. caffeine (0.3-0.9%), theobromine (0.03-0.31%)		Edwards AL, Bennett BC. 2005. Diversity of methylxanthine content in Ilex cassine L. and Ilex vomitoria Ait.: assessing sources of the North American stimulant Cassina. Economic Botany 59 (3); 275-285.
***Illicium anisatum* L.** (*I. religiosum* Siebold & Zucc.)	Schisandraceae	Bark and fruit	Essential oil: sesquiterpene lactones : e.g. anisatin (1205 mg/kg mean content in fruit), neoanisatin, pseudoanisatin and phenylpropanoids: e.g. methyleugenol (9.8%)		Johanns E.S. et al. 2002. An epidemic of epileptic seizures after consumption of herbal tea Ned. Tijdschr. Geneeskd. 146(17), 813-816. Lederer I. 2006. Combination of TLC and HPLC-MS/MS methods. Approach to a rational quality control of Chinese Star Anise. J. Agric. Food Chem. 54, 1970-1974.
***Illicium verum* Hook.f.**	Schisandraceae	Fruit	Essential oil (0.6-6%): phenylpropanoids: e.g. transanethole (75-90%), methylchavicol (0.34-5.04%), safrole (0.14%)		Council of Europe. 2000. Natural sources of flavourings. Report No. 1. Council of Europe Publishing. ISBN 978-92-871-4324-2. Tisserand, R. and Balacs, T., 1995. Essential oil safety. A Guide for Health Care Professionals. Churchill Livingstone. Edinburgh. ISBN: 0443052603.

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Botanical name	Family	parts of plants of possible concern	Chemical of concern	Remarks on toxic/adverse effect(s) not known to be related to the identified chemical(s) of concern	Specific References
***Ipomoea* spp.**	Convolvulaceae	Whole plant	Genus in which species may contain resins irritating for the gastrointestinal system. Genus in which species may contain indolizidine alkaloids and serotonin-hydroxycinnamic acid conjugates. Genus in which species may contain in the aerial parts pyrrolizidine alkaloids, e.g. ipangulines (platynecine). Genus in which species may contain in the seeds alkaloids derived from lysergic acid.		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, 1269 pages, ISBN: 978-2-7430-1188-8. Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1 Ikeda, K. et al. 2003. Alkaloids from the poisonous plant *Ipomoea carnea*: effects on intracellular lysosomal glycosidase activities in human lymphoblast cultures, J. Agric. Food Chem., 51, 7642-7646. Schumaher-Henrique, B et al. 2003. The Clinical, Biochemical, Haematological and Pathological Effects of Long-term Administration of Ipomoea carnea to Growing Goats, Vet. Res. Commun., 27, 311-319 Jenett-Siems et al., 1998. Pyrrolizidine alkaloids of Ipomoea hederifolia and related species. Phytochemistry, 47(8): 1551-1560. Göthberg, A et al. 2002. Accumulation of heavy metals in water spinach (Ipomoea aquatica) cultivated in the Bangkok region, Thailand. Environmental Toxicology and Chemistry, 21: 1934–1939
***Iris foetidissima* L.**	Iridaceae	Leaf and rhizome		Toxic principles not defined but probably present in the irritant resin. Symptoms after ingestion: vomiting, diarrhoea (sometimes with bleeding).	Cooper M.R. and Johnson A.W. 1998, Poisonous plants and fungi in Britain. Animal and human poisoning. The Stationery Office. ISBN 0-11-242981-5.
***Iris pseudoacorus* L.**	Iridaceae	Leaf and rhizome		Toxic principles not defined but probably present in the irritant resin. Symptoms after ingestion: vomiting, diarrhoea (sometimes with bleeding).	Cooper M.R. and Johnson A.W. 1998, Poisonous plants and fungi in Britain. Animal and human poisoning. The Stationery Office. ISBN 0-11-242981-5.
***Isatis tinctoria* L.**	Brassicaceae	Leaf	Quinoline alkaloids: e.g. tryptanthrin		Michael, J.P. 2005. Quinoline, quinazoline and acridone alkaloids. Nat. Prod. Rep. 22, 627-646
***Jateorhiza palmata* (Lam.) Miers**	Menispermaceae	Root	Isoquinoline alkaloids: e.g. berberine, jatrorrhizine, palmatine, bisjatrorrhizine		Sturm S. and Stuppner H. 1998. Analysis of isoquinoline alkaloids in medicinal plants by capillary electrophoresis – mass spectrometry. Electrophoresis. 19, 3026-3032.
***Jatropha curcas* L.**	Euphorbiaceae	Seed	Proteins: e.g. curcin		Abdu-Aguye I. et al. 1986. Acute toxicity studies with J. curcas L. Human. Toxicol. 5, 269-274.
***Joannesia princeps* Vell.**	Euphorbiaceae	Fruit and seed	Lignans: e.g. 3,3'-bisdemethylpinoresinol, americanol A, isoamericanol A and isoamericanin A Diterpenes: e.g. joannesialactone		Achenbach H. and Benirschke G. 1997. Joannesialactone and other compounds from *J. princeps*. Phytochemistry. 45(1), 149-157.
***Juglans regia* L.**	Juglandaceae	Fruit, husk and leaf	Naphthoquinones in fruit, husk and leaf: e.g. juglone	Juglone is found in 29.8% of the surface waxes of the fruit (pericarp) and 28.6% of the surface vaxes of the leaves.	Colaric M. *et al.* 2005. Phenolic acids, syringaldehyde, and juglone in fruits of different cultivars of *Juglans regia* L. J. Agric. Food Chem. 53, 6390-6396. Frohne D. and Pfänder HJ. 1997. Giftpflanzen. Ein Handbuch für Apotheker, Ärzte, Toxikologen und Biologen. Wissenschaftliche Verlagsgesellschaft mbH. ISBN: 3-8047-1466-8. Prasad R.B.N. and Gülz P.G. 1990. Surface waxes from leaves and fruits of walnut. Phytochemistry 29(7), 2097-2099. Paulsen M.T. and Ljungman M. 2005. The natural toxin juglone causes degradation of p53 and induces rapid H2AX phosphorylation and cell death in human fibroblasts. Toxicol. Appl. Pharmacol. 209(1), 1-9.
***Juniperus communis* L.**	Cupressaceae	Cone and leaf	Essential oil from leaf: bicyclic monoterpenes: e.g. beta-thujone (0.29%)	*J. communis* var. *communis* leaf essential oil contained from 0-0.4% α-thujone and from 0-0.4% β-thujone. Contraindications with severe renal disease. Based on the results of preclinical investigations it can be concluded that *Juniperus communis* extract has anti-fertility and abortifacients effects in rats Pregnant cows fed from gestational day 250 with leaves (4.5-5.5 kg leaves/day equivalent to 190-245 mg isocupressic acid) aborted 3-4 days after feeding.	Angioni A. *et al.* 2003. Chemical composition of the essential oils of *Juniperus* from ripe and unripe berries and leaves and their antimicrobial activity. J. Agric. Food Chem. 51, 3073-3078. Butkiene R. et al. 2009. Two chemotypes of essential oils produced by the same *Juniperus communis* L. growing wild in Lithuania. Chemija. 20(3), 195-201. Gardner E. (1998) Abortifacient effect of lodgepole pine *(Pinus contorta)* and common juniper (*Juniperus communis)* on cattle. Vet. Hum. Toxicol .40(5), 260-263. EMA HMPC. 2010. Assessment report on *Juniperus communis* L., aetheroleum. EMA/HMPC/12401/2010.
***Juniperus oxycedrus* L.**	Cupressaceae	Branch and wood	Wood oil (Cade oil): phenolic compounds: e.g. cresol, para-cresol in the non-volatile oil fraction	Unrectified oil is carcinogenic. Reported case of poisoning with fever, severe hypotension, renal failure and hepatotoxicity.	Koruk et al. 2005. Juniper tar poisoning. Clin. Toxicol. 1, 47-48. Tisserand, R. and Balacs, T., 1995. Essential oil safety. A Guide for Health Care Professionals. Churchill Livingstone. Edinburgh. ISBN: 0443052603
***Juniperus phoenicea* L.**	Cupressaceae	Cone and leaf	Leaf: lignans, e.g. deoxypodophyllotoxin, beta-peltatin A Cone: methylester derivatives of oxygenated diterpenic acids		Barrero, A.F. et al. 2004. Oxygenated diterpenes and other constituents from Moroccan Juniperus phoenicea and Juniperus thurifera var. africana. Phytochemistry. 65(17), 2507-2515. Cairnes D.A. et al. 1980. Plant anticancer agents. X. Lignans from *Juniperus phoenicea*. J. Nat. Prod. 43, 495-497. Sawi S.A.E. and Motawe H.M. 2008. Labdane, pimarane and abietane diterpenes from the fruits of *Juniperus phoenicea* l. grown in Egypt and their activities against human liver carcinoma. Canadian Journal of Pure and Applied Sciences 2(1), 115-122.
***Juniperus sabina* L.**	Cupressaceae	Whole plant	Essential oil: bicyclic monoterpenes : e.g. sabinyl acetate(20-53%) , sabinene (20-42%).	Essential oil from leaves and twigs is abortifacient.	Tisserand, R. and Balacs, T., 1995. Essential oil safety. A Guide for Health Care Professionals. Churchill Livingstone. Edinburgh. ISBN: 0443052603
***Juniperus thurifera* L.**	Cupressaceae	Cone and leaf	Leaf: lignans, e.g. deoxypodophyllotoxin, beta-peltatin A Cone: methylester derivatives of oxygenated diterpenic acids		Barrero A.F. et al. 2004. Oxygenated diterpenes and other constituents from Moroccan *Juniperus phoenicea* and *Juniperus thurifera* var. *africana*. Phytochemistry. 65(17), 2507-15.
***Juniperus virginiana* L.**	Cupressaceae	Cone and leaf	Leaf: lignans, e.g. deoxypodophyllotoxin, beta-peltatin A. Essential oil from the leaf: phenylpropanoids: e.g. methylchavicol, methyleugenol		Hagers Handbuch der Pharmazeutischen Praxis 1998. Springer Verlag. ISBN 3-540-52688-9
***Justicia adhatoda* L.** *(Adhatoda vasica* Nees*)*	Achanthaceae	Leaf	Quinoline alkaloids (leaf: 0.3-2.1% on dry weight basis): e.g. vasicine (1.8%)		Nath D. et al. 1992. Commonly used Indian abortifacient plants with special reference to their teratologic effects in rats. J. Ethnopharmacol 36, 147-154. Rajani M. and Pundarikakshudu K. 1996. A note on the seasonal variation of alkaloids in *Adhatoda vasica* Nees. Int. J. Pharmacognocy 34, 308-309.
***Kalanchoe pinnata* (Lam.) Pers.** (*Bryophyllum calycinum* Salib.)	Crassulaceae	Leaf	Bufadienolides: e.g. bryophyllin A and C		Supratman U. et al. 2000. New insecticidal bufadienolide, bryophyllin C, from *Kalanchoe pinnata*. Biosci. Biotechnol. Biochem. 64(6),1310–1312. Supratman U.F. et al. 2001. Anti-tumor promoting activity of bufadienolides from *Kalanchoe pinnata* and *K. daigremontiana x tubiflora.* Biosci. Biotechnol. Biochem. 65(4), 947–9. McKenzie R.A.et al. 1987. The toxicity to cattle and bufadienolide content of six *Bryophyllum* species Aust. Vet. J. 64(10), 298-301.

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***Kalmia latifolia* L.**	Ericaceae	Leaf	Hydroquinon: e.g. arbutin and diterpenes: e.g. andromedotoxin		Verlangieri A.J. et al. 1976. Acute toxicity of *Kalmia angustifolia*, (sheep laurel) extracts in the rat. Vet. Toxicol. 18, 122-124. Frohne D. and Pfänder H.J. 1997. Giftpflanzen. Ein Handbuch für Apotheker, Ärzte, Toxikologen und Biologen. Wissenschaftliche Verlagsgesellschaft mbH. ISBN 3-8047-1466-8.
***Krameria lappacea* (Dombey) Burdet & B.B.Simpson** (*Krameria triandra* Ruiz & Pav.)	Krameriaceae	Root		Root: 8-18% ratanhia-proanthocyanidins, root bark 18-42% ratanhia-proanthocyanidins.	Wichtl M (2002). Teedrogen und Phytopharmaka. Wissenschaftliche Verlagsgesellschaft mbH Hagers Handbuch der Pharmazeutischen Praxis 1998. Springer Verlag. ISBN 3-540-52688-9
***Laburnum anagyroides* Medik.** (*Laburnum vulgare* J.Presl., *Cytisus laburnum* L.)	Leguminosae (Fabaceae)	Whole plant	Quinolizidine alkaloids: e.g. cytisine		Hagers Handbuch der Pharmazeutischen Praxis 1998. Springer Verlag. ISBN 3-540-52688-9
***Lactuca virosa* L.**	Compositae (Asteraceae)	Whole plant		Sesquiterpenelactones: e.g. lactucin, lactucopicrin. The historical information on the presence of hyoscyamine-like alkaloids could not be confirmed by modern analytical research. The milky juice reported to be toxic.	Besharat S. et al. 2009. Wild lettuce (*Lactuca virosa*) toxicity. Brit. Med. J. Case Reports. doi 10.1136/bcr.06.2008.0134. Frohne D. and Pfänder H.J. 1997. Giftpflanzen. Ein Handbuch für Apotheker, Ärzte, Toxikologen und Biologen. Wissenschaftliche Verlagsgesellschaft mbH. ISBN 3-8047-1466-8.
***Larix decidua* Mill.**	Pinaceae	Aerial part	Essential oil from needle: monoterpene etheroxide: 1,8-cineole (0.01%). Essential oil from bark: monoterpene etheroxide: 1,8-cineole (2.09%)		Kubeczka K.H. and Schultze W. 1987. Biology and chemistry of conifer oils. Flavour Fragr. J. 2, 137-148.
***Larrea divaricata* Cav.**	Zygophyllaceae	Aerial part	Lignans: e.g. nordihydroguaiaretic acid (1.6% in leaf)		Valentine J.L. et al. 1984. Gas chromatographic determination of nordihydroguaiaretic acid in *Larrea divaricata*. Anal. Lett. 17, 1617-1626.
***Larrea tridentata* (Ses. & Moc. ex DC.) Cov.**	Zygophyllaceae	Aerial part	Lignans: e.g. nordihydroguaiaretic acid		Arteaga S. et al. 2005. *Larrea tridentata* (Creosote bush), an abundant plant of Mexican and US-American deserts and its metabolite nordihydroguaiaretic acid. J Ethnopharmacol. 98, 231-239. Sheikh N.M. et al. 1996. Chaparral-associated hepatotoxicity. Arch. Intern. Med. 157, 913-919.
***Lathyrus sativus* L.**	Leguminosae (Fabaceae)	Seed	Amino acids (0.02-2.5% in dry seeds): e.g. ß-N-oxalyl-α,ß-diaminopropionic acid (ß-ODAP), ß-N-oxalylamino-L-alanine (BOAA)		Cheeke P.R. (Ed.). 1989. Toxicants of plant origin. Volume III. Proteins and amino acids. CRC Press, Inc., ISBN: 0-8493-6692-4. Ludolph A.C. and Spencer P.S. 1996. Toxic models of upper motor neuron disease. Journal of the Neurological Sciences. 139 (Suppl), 53-59. Spencer P.S. et al. 1986. Lathyrism: evidence for role of the neuroexcitatory aminoacid BOAA. Lancet. November 8, 1066-1067. Yan Z.Y. et al. 2006. *Lathyrus sativus* (grass pea) and its neurotoxin ODAP. Phytochemistry. 67, 107-121.
***Laurus nobilis* L.**	Lauraceae	Fruit and leaf	Essential oil from leaf: phenylpropanoids: e.g. methyleugenol (1.7-11.8%) and monoterpene etheroxide: 1,8-cineole (34-53%)		Council of Europe. 2000. Natural Sources of Flavourings, Rep No.1, ISBN 978-92-871-4324-2
***Lavandula angustifolia* Mill.** (*L.officinalis* Chaix., *L.vera* DC.)	Lamiaceae (Labiatae)	Aerial part	Essential oil from aerial part: bicyclic monoterpenes: e.g. thujones, camphor (0.59%) and monoterpene etheroxide: 1,8-cineole (3.32-30%) Essential oil from fresh flower: bicyclic monoterpenes: e.g. camphor (13.32%) and monoterpene etheroxide: 1,8-cineole (5.81%)		Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN: 978-92-871-6422-3. Garcia-Vallejo M.C. et al. 1989. Essential oils of genus Lavandula in Spain, Proc. Int. Congr. Essential Oil Fragrances Flavours. 4, 15-26. Naef R. and Morris A.F. 1992. [Lavender-lavandin a comparison]. Revista Italiana Eppos (special edition), 364-377. Peter K.V. 2004. Handbook of Herbs and Spices vol 2, Woodhead Publishing Limited, ISBN: 1 85573 7213.
***Lavandula latifolia* Medik.** (*Lavandula spica* auct., non L.)	Lamiaceae (Labiatae)	Aerial part	Essential oil from aerial part: monoterpene etheroxide: 1,8-cineole (33%); bicyclic monoterpenes: e.g. camphor (5%) Essential oil from flower: monoterpene etheroxide:1,8-cineole (23-48%); bicyclic monoterpenes: e.g. camphor (11-18%). Essential oil from leaf: monoterpene etheroxide:1,8-cineole (47-55%); bicyclic monoterpenes: e.g. camphor (32-44%).		Munoz-Bertomeu J. et al. 2007. Essential oil variation within and among natural populations of *Lavandula latifolia* and its relation to their ecological areas. Biochem. Syst. Ecol. 35, 479-488.
***Lavandula stoechas* L.**	Lamiaceae (Labiatae)	Aerial part	Essential oil from leaf: bicyclic monoterpenes: e.g. fenchone (39-53%), camphor (6-24%) and monoterpene etheroxide: 1,8-cineole (4%) Essential oil from flower: bicyclic monoterpenes: e.g. fenchone (21-66%), camphor (up to 26%)		Angioni A. et al. 2006. Chemical composition, seasonal variability, and antifungal activety of *Lavandula stoechas* L. ssp. *stoechas* essential oils from stem/leaves and flowers. J. Agric. Food Chem. 54, 4364-4370. Kirmizibekmez H. et al. 2009. Chemical composition and antimicrobial activity of the essential oils of *Lavandula stoechas* L. ssp. *stoechas* growing wild in Turkey. Nat Prod Commun. 4(7),1001-6. Tzakou O. et al. 2009. Essential oil composition and enantiomeric distribution of fenchone and camphor of *Lavandula cariensis* and *L. stoechas* subsp. *stoechas* grown in Greece. Nat. Prod. Commun. 2009, 4(8), 1103-1106.
***Lawsonia inermis* L.** (*Lawsonia alba* Lam.)	Lythraceae	Leaf	Naphtoquinone: e.g. lawsone (dried leaf content 1-2%)		SCCNFP (2002): Opinion on the Scientific Committee on Cosmetic Products and Non-Food Products Intended for Consumers concerning *Lawsonia inermis*, henna (adopted by the SCCNFP during the 21st Plenary meeting of 17 September 2002.
***Ledum palustre* L.**	Ericaceae	Whole plant	Diterpenes: e.g. acetylandromedol		Frohne D. and Pfänder H.J. 1997. Giftpflanzen. Ein Handbuch für Apotheker, Ärzte, Toxikologen und Biologen. Wissenschaftliche Verlagsgesellschaft mbH. ISBN: 3-8047-1466-8.
***Leonurus cardiaca* L.**	Lamiaceae (Labiatae)	Aerial part	Pyrrolidine alkaloids: e.g. stachydrine (0.5-1.5%), and cyclic peptide: cycloleonurinine The fresh herb may contain up to 4 mg/g of labdane diterpenes (e.g. leosibiricin)		European Medicines Agency. 2010. Assessment report on *Leonurus cardica* L., herba. Draft. Newall C.A., Anderson L.A., Phillipson J.D. 1996. Herbal medicines: a guide for health care professionals. The Pharmaceutical Press. ISBN: 853692890.
***Leonurus japonicus* Houtt.** (*Leonurus heterophyllus* Sweet)	Lamiaceae (Labiatae)	Aerial part	Pyrrolidine alkaloids: e.g. stachydrine (0.1-0.2%) and and cyclic peptide: cycloleonurinine		Chao Z. et al. 2004. Determination of stachydrine and leonurine in Herba Leonuri by ion-pair reversed-phase high-performance liquid chromatography. Di Yi Jun Yi Da Xue Xue Bao. 24 (11), 1223-11226. Chen Z. et al. 2010. Development and validation of an UPLC-DAD-MS method for the determination of leonurine in Chinese motherwort (Leonurus japonicus). J. Chromatogr. Sci. 48(10), 802-6.
***Leonurus sibiricus* L.**	Lamiaceae (Labiatae)	Aerial part	Pyrrolidine alkaloids: e.g. stachydrine and and cyclic peptide: cycloleonurinine Labdane diterpenes: e.g. leosibericin		Hong S.S. 2001. [Isolation and quantitative analysis of leonurine from Leonuri herba]. Saengyak Hakhoechi. 32(4), 322-326.

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***Lepidium meyenii* Walp.** *(Lepidium peruvianum* Chacon*)*	Brassicaceae	Root	Imidazole alkaloids (0.0016-0.0123% in the dried root): e.g. lepidiline A, B and C		Cicero A.F.G. et al. 2001. *Lepidium meyenii* Walp. improves sexual behaviour in male rats independently from its action on spontaneous locomotor activity. J. Ethnopharmacol. 75, 225-229. Jin W. et al. 2007. Identification of *Lepidium meyenii* (Walp.) based on spectra and chromatographic characteristics of its principal functional ingredients. J. Sci. Food. Agric. 87, 2251-2258. McCollom M.M. et al. 2005. Analysis of macamides in samples of maca (*Lepidium meyenii)* by HPLC-UV-MS/MS. Phytochem. Analysis. 16, 463-469. Oshima et al. 2003. Identification of *Lepidium meyenii* (Walp.) based on spectra and chromatographic characteristics of its principal functional ingredients. J. Vet. Med. Sci. 65(10), 1145-1146. Zheng et al. 2000. Effect of a lipidic extract from *Lepidium meyenii* on sexual behavior in mice and rats. Urology. 55, 598-602.
***Leucanthemum vulgare* Lam.** *(Chrysanthemum leucanthemum* L.*)*	Compositae (Asteraceae)	Flower	Unsaturated pyrrolizidine alkaloids: e.g. platiphylline, senecionine		Sagareishivili T.G. 2000. Alkaloids of *Leucanthemum vulgare*. Chem. Nat. Compd. 36(3), 327.
***Leucojum vernum* L.**	Amaryllidaceae	Bulb and leaf	Isoquinoline alkaloids (Amaryllidaceae alkaloids): e.g. lycorine, homolyrorine, 2-O-acetyllycorine		Roth L., Daunderer M. and Kormann K. 1994. Giftpflanzen – Pflanzengifte. Nikol Verlagsgesellschaft mbH & Co. KG, Hamburg, ISBN 3-933203-31-7. Schlavik L. 2004. Alkaloids from *Leucojum vernum* and antivretroviral activity of amaryllidacea alkaloids. Planta Medica. 70, 871-873.
***Levisticum officinale* W.J.D.Koch**	Apiaceae (Umbelliferae)	Whole plant	Furocoumarins in root and seeds: e.g. iperatoerin (12.82 mg/kg), 5-methoxypsoralen (6.38 mg/kg), psoralen (3.8 mg/kg), 8-methoxypsoralen (0.5 mg/kg); Furocoumarin in leaf: e.g. 5-methoxypsoralen; In stem: monoterpenes: bicyclic monoterpenes: e.g. alpha and beta thujones, and monoterpene etheroxide: 1,8-cineole		Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3.
***Ligusticum sinense* Oliv.** (*Ligusticum chuanxiong* Qui, Zeng, Pan, Tang & Xu)	Apiaceae (Umbellifferae)	Root	Beta carboline alkaloids: e.g. perlolyrine Essential oil from the root: two progestins: 3,8-dihydro-diligustilide and riligustilde		Lim L.S.S.A 2007. Cell based bioassay for the isolation and characterization of novel phytoprogestogens from *Ligusticum chuanxiong* and the detection of xenoestrogens/androgens from Singapore's marine environment. Ph.D. thesis. National University of Singapore. Lim L.S. et al. 2006. Dynamics of progestogenic activity in serum following administration of *Ligusticum chuanxiong.* Life Sci. 79, 1274-1280. Zhang C *et al.* 2007. Analysis of the volatile compounds in *Ligusticum chuanxiong* Hort. using HS-SPME-GC-MS. J. Pharmaceut. Biomed. 44, 464-470.
***Ligustrum vulgare* L.**	Oleaceae	Bark, fruit and leaf	Secoiridoid glucosides (8,85% in ripe fruits)		Roth L., Daunderer M. and Kormann K. 1994. Giftpflanzen – Pflanzengifte. Nikol Verlagsgesellschaft mbH & Co. KG, Hamburg, ISBN 3-933203-31-7.
***Lilium brownii* F.E.Br. ex Miellez**	Liliaceae	Bulb	Bulb reported to contain steroidal saponins and steroidal alkaloids and a protein: e.g. lilin,		Mimaki Y. and Sashida Y. 1990. Steroidal saponins and alkaloids from the bulbs of *Lilium brownii* var. *colchesteri*. Chem. Pharm. Bull. 38, 3055-3059. Wang H. and Ng T.B. 2002. Isolation of lilin, a novel arginine - and glutamate-rich protein with potent antifungal and mitogenic activities from lily bulbs. Life. Sci. 70, 1075-1084.
***Linaria vulgaris* Mill.**	Plantaginaceae	Aerial part	Quinoline alkaloids: e.g. vasicine		Atal C.K. 1982. Chemistry and pharmacology of vasicine - a new oxytonic and abortifacient. J. Ethnopharmacol 6(1), 125-126. Hua H. et al. 2002. [A new pyrroloquinazoline alkaloid from *Linaria vulgaris].* Chem. Pharm. Bull. 50(10), 1393-1394.
***Linum usitatissimum* L.**	Linaceae	Seed	Cyanogenic glycosides: e.g. diglucosides linostatin and neolinostatin (2.6 resp. 3.5 mg/kg) and traces of linamarin monoglucoside. Lignan: pinoresinoldiglucosid		Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3. Haque M.R. and Bradbury J.H. 2002. Total cyanide determination of plants and foods using the picrate and acid hydrolysis methods. Food Chem. 77, 107-114. Niedzwiedz-Siegien I. 1998 Cyanogenic glucosides in *Linum usitatissimum.* Phytochemistry. 49, 59-63. Oamah B.D. et al. 1992. Cyanogenic compounds in flaxseed. J. Agric. Food Chem. 40, 1346-1348. Schilcher H. von and Wilkens-Sauter M. 1986 Quantitative Bestimmung cyanogener Glykoside in *Linum usitatissimum* mit Hilfe der HPLC. Fett Wiss. Technol. 88, 287-290.
***Lippia integrifolia* Hieron.**	Verbenaceae	Unspecified	Essential oil reported to contain methyleugenol in unspecified quantities		EMEA HMPC. 2004. Final position paper on the use of herbal medicinal products containing methyleugenol. EMEA/HMPWP/337/03
***Lippia junelliana* (Moldenke) Tronc.**	Verbenaceae	Leaf	Essential oil from leaf: phenylpropanoid: methyleugenol (0.1-2.9%)	Methyleugenol content in leaf essential oil varied from 0.1-2.9% in samples from 16 regions in Argentina	Juliani H.R. et al. 2002. Intraspecific variation in leaf oils of *Lippia junelliana* (Mold.) Tronc. Biochem. Syst. Ecol. 30, 163-170.
***Lippia laxibracteata* Herzog**	Verbenaceae	Unspecified	Essential oil reported to contain methyleugenol in unspecified quantities		EMEA HMPC. 2004. Final position paper on the use of herbal medicinal products containing methyleugenol. EMEA/HMPWP/337/03
***Lippia turbinata* Griseb.**	Verbenaceae	Aerial parts	Essential oil from aerial part: monoterpene etheroxide: 1,8-cineole (14.7%) Essential oil reported to contain methyleugenol in unspecified quantities		Duschatzky C. et al. [Composition of essential oils from *Lippia junelliana*, *Lippia integrifolia* and *Lippia turbinata* from San Luis Province (Argentina)]. Revista Columbiana de Quimica. 27(2), 9-16. EMEA HMPC. 2004. Final position paper on the use of herbal medicinal products containing methyleugenol. EMEA/HMPWP/337/03
***Liquidambar orientalis* Mill.**	Altingiaceae	Bark	Resin: 0.55% styrene. Essential oil from balsam: 70% styrene (vinylbenzene)	International Agency for Research on Cancer has evaluated that styrene is possible carcinogenic to humans (Group 2 B)	Fernandez X. et al. 2005. Chemical composition of the essential oils from Turkish and Honduras styrax. Flavour Fragr. J. 20, 70-73. International Agency for Research on Cancer. 2002. Styrene. IARC Summary & Evaluation 82.
***Liquidambar styraciflua* L.**	Altingiaceae	Bark	Essential oil from balsam: 31% styrene	International Agency for Research on Cancer has evaluated that styrene is possible carcinogenic to humans (Group 2 B)	Fernandez X. et al. 2005. Chemical composition of the essential oils from Turkish and Honduras styrax. Flavour Fragr. J. 20, 70-73. International Agency for Research on Cancer. 2002. Styrene. IARC Summary & Evaluation 82.

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***Lithospermum* spp.**	Boraginaceae	Whole plant	Genus in which species may contain unsaturated pyrrolizidine alkaloids: e.g. lithosenine, intermedine, lycopsamine		Mroczek T. et al. 2004. Screening for pyrrolizidine alkaloids in plant materials by electron ionization RP-HPLC-MS with thermabeam interface. Biomed. Chromatogr. 18, 745–751. Krenn L. et al. 1994. Pyrrolizidine alkaloids from *Lithospermum officinale*. Phytochemistry. 37(1), 275-277.
***Litsea cubeba* (Lour) Pers.**	Lauraceae	Bark and stem	Isoquinoline alkaloids (phenanthrene type): e.g. litebamine		Huang C.H. et al. 2008. Litebamine, a phenanthrene alkaloid from the wood of *Litsea cubeba* , inhibits rat smooth muscle cell adhesion and migration on collagen. European J. Pharmacol. 596, 25-31.
***Lobelia* spp.**	Campanulaceae	Whole plant	Genus in which species may contain piperidine alkaloids: e.g. lobeline		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Lolium temulentum* L.**	Poaceae	Seed		Reported toxicity (on livestock) but the nature of the involved substances has not been established.	Frohne D. and Pfänder HJ. 1997. Giftpflanzen. Ein Handbuch für Apotheker, Ärzte, Toxikologen und Biologen. Wissenschaftliche Verlagsgesellschaft mbH. ISBN 3-8047-1466-8. Cooper M.R. and Johnson A.W. 1998, Poisonous plants and fungi in Britain. Animal and human poisoning. The Stationery Office. ISBN 0-11-242981-5 Schardi C.L. et al. 2007 Loline alkaloids: Currencies of mutualism. Phytochemistry. 68(7), 980-996
***Lonchocarpus* spp.**	Leguminosae (Fabaceae)	Root	Genus in which species may contain rotenoids: e.g. rotenone		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, 1269 pages, ISBN: 978-2-7430-1188-8
***Lonicera* spp.**	Caprifoliaceae	Fruit	Genus in which species may contain triterpenoid saponins and traces of pyridinium alkaloid-coupled secoiridoids	Fruits from 8 Lonicera species tested in mice. Immature fruits more toxic than mature ones and pericarps more toxic than seeds when tested in mice. Vomiting, diarrhoea and lethargy have been reported in dogs.	Cooper M.R. and Johnson A.W. 1998, Poisonous plants and fungi in Britain. Animal and human poisoning. The Stationery Office. ISBN 0-11-242981-5. Leveau A.M. et al. 1977. The toxicity of fruits of various *Lonicera caprifoliaceae*. Plantes Medicinales et Phytotherapie. 11, 2, 94-105. Song W. et al. 2008. Pyridinium alkaloid-coupled secoiridoids from the flower buds of *Lonicera japonica*. J. Nat. Prod. 71, 922-925.
***Lophophora williamsii* (Salm-Dyck) J.M.Coult.** *(Echinocactus williamsii* Lem. ex Salm-Dyck, *Anhalonium lewinii* Hennings.*)*	Cactaceae	Whole plant	Phenylethylamine alkaloids: e.g. mescaline		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Luffa* spp.**	Cucurbitaceae	Aerial part	Genus in which species may contain oxygenated tetracyclic triterpenes (cucurbitacins) and ribosome-inactivating proteins: e.g. luffin a and b, luffaculin	Abortive effect reported in ruminants. Luffa species used by woman as a abortifacient. Adverse effect on gestation observed on laboratory animals.	Fernandes L.C.B. *et al.* 2010. *Luffa acutangula* Roxb. tea promotes developmental toxicity in rats. Journal of Animal and Veterinary Advances 9(8), 1255-1258. Lanini J. *et al.* 2009. Natural and therefore free at risks: adverse effects, poisonings and other problems related to medicinal herbs by "raizeros" in Diadema/SP. Rev. Bras. Farmacogn. 19,121-129. Medeiri M.G. and Takahashi C.S. 1987. Action of *Luffa operculata* (Cucurbitaceae) on the chromosomes of Wistar rats. Cytologia 52, 261-265.
***Lupinus* spp.**	Leguminosae (Fabaceae)	Seed	Genus in which species may contain quinolizidine alkaloids : e.g. anagyrine		Lee ST et al. 2007. Lupine induced "crooked calf disease" in Washington and Oregon: identification of the alkaloid profiles in *Lupinus sulfureus* , *Lupinus leucophyllus*, and *Lupinus sericeus*. J. Agric. Food Chem 55(26), 10649–10655. Pilegaard K. and Gry J. Alkaloids in edible lupin seeds. A toxicological review and recommendations. TemaNord 2008, 605. Nordic Council of Ministers. ISBN: 978-92-893-1802-0.
***Lycium* spp.**	Solanaceae	Whole plant	Genus in which species may contain tropane alkaloids and/or steroidal alkaloid glycosides.		Adams M. et al. 2006. HPLC-MC trace analysis of atropine in Lycium barbarum berries. Phytochem. Anal. 17, 279-283. Funyama S. et al. 1995. Kukoamine B, a spermine alkaloid from *Lycium chinense*. Phytochemistry 38, 1529-1531. Wang K et al. 2011. Two novel steroidal alkaloid glycosides from the seeds of Lycium barbarum. Chem. Biodivers. 8(12), 2277-2284
***Lycopodium clavatum* L.**	Lycopodiaceae	Whole plant	Lycopodium alkaloids (0.1-0.4%): e.g. lycopodine		Wichtl M. 2002. Teedrogen und Phytopharmaka. Ein Handbuch für die Praxis auf wissenschaftlicher Grundlage. Ed. Wissenschaftliche Verlagsgesellschaft mbH, ISBN: 3-8047-1854-X
***Lycopodium saururus* Lam.** *(Huperzia saurus* (Lam.) Trevis.*)*	Lycopodiaceae	Aerial part	Lycopodium alkaloids : e.g. sauroxine, lycodine, lycopodine, clavolonine	Depending on concentration, decocts of the plant has been the cause of severe adverse effects such as vomiting, diarrhea, convulsions and even death	Ciganda C., Laborde A. 2003. Herbal infusions used for induced abortion. J Toxicol Clin Toxicol. 41, 235-239. Ortega M.G. et al. 2004. Anticholinesterase activity in an alkaloid extract of *Huperzia saururus*. Phytomed. 11, 539-543 Ortega M.G. et al. 2006. Huperzia saurus, activity on synaptic transmission in the hippocampus. J Ethnopharm 104 (3), 374-378.
Lycopodium selago L. **See *Huperzia selago* (L.)Schrank & Mart.**					
***Lycopus* spp.**	Lamiaceae (Labiatae)	Leaf		Genus in which species may show antihormonal effect on thyroid hormones, possibly at the hypophyseal level. Other mechanisms may be involved.	Lee W.S. et al. 2006. Human ACAT-1 and ACAT-2 inhibitory activities of pentacyclic triterpenes from the leaves of Lycopus lucidus TURCZ. Biol Pharm Bull 29(2),382-384. Beer A.M. et al. 2008. Lycopus europaeus (Gypsywort): effects on the thyroidal parameters and symptoms associated with thyroid function. Phytomed. 15(1-2),16-22. Sorgens H. et al. 1982. Antihormonal effects of plant extracts. Planta Med 45(6),78-86. Auf'mkolk M. et al. 1984. Antihormonal effects of plant extracts: iodothyronine deiodinase of rat liver is inhibited by extracts and secondary metabolites of plants. Hom Metab Res. 16(4),188-92.

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***Lycoris* spp.**	Amaryllidaceae	Whole plant	Genus in which species may contain isoquinoline alkaloids (Amaryllidaceae alkaloids): e.g. lycorenine		Miyasaka K. and Hiramatsu Y. 1980. Pharmacological studies of lycorenine, an alkaloid of lycoris radiata herb.: II. Effects of blood pressure in rats and dogs and the mechanism of tachyphylaxis to the vasodepressor action of lycorenine in rats. Japan J Pharmacol. 30,655-664. Mu H.M. et al. 2010. Alkaloid accumulation in different parts and ages of Lycoris chinensis. Z Naturforsch C. 65(7-8),458-462. Jitsuno M. et al. 2011. Chemical constituents of Lycoris albiflora and their cytotoxic activities. Nat Prod Commun 6(2),187-192.
***Lyonia* spp.**	Ericaceae	Whole plant	Genus in which species may contain toxic diterpenes: e.g. andromedotoxin (acetylandromedol)		Frohne D., Pfänder H.J. et Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Magnolia* spp.**	Magnoliaceae	Whole plant	Genus in which species may contain lignans: e.g. honokiol, magnolol and benzylisoquinoline alkaloids: e.g. magnoflorine and quaternary ammonium: e.g. magnocurarine.	Because of the quarternary ammonium structure of the magnocurarine, absorption is unlikely.	Hardman R. (Ed). 2002. Medicinal and Aromatic Plants—Industrial Profiles. D. Sarker and Yuji Maruyama. Magnolia, the genus Magnolia. Taylor & Francis. ISBN 0-415-28494-5 Nagase H. et al. Inhibitory effect on magnolol and honokiol from Magnolia obovata on human fibrosarcoma HT-1080 invasiveness in vitro. 2001. Planta Med 67, 705-709. Cordell G.A. 2000. Alkaloids of the Menispermaceae. University of Illinois. ISBN 0099-9598/00
***Mahonia aquifolium* (Pursh) Nutt.**	Berberidaceae	Root and stem bark	Isoquinoline alkaloids: e.g. magnoflorine, isothebaine and isocorydine, berberine, oxyacanthine		Cernakova M. and Kostalova D. 2002. Antimicrobial activity of berberine - a constituent of Mahonia aquifolium. Folia Microbiol (Praha). 47(4), 375-378
***Maianthemum bifolium* (L.) F.W.Schmidt**	Asparagaceae (Liliaceae)	Fruit and leaf	Leaf: cardiac glycosides and coumarin Fruit: cyanogenic glycosides		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1 Roth L., Daunderer M. and Kormann K. 1984. Giftpflanzen - Pflanzengifte. Vorkommen Wirkung Therapie. ecomed. ISBN 3-609-64810-4
***Mallotus philippinensis* Müll.Arg.**	Euphorbiaceae	Fruit and root	Chalcones: e.g. rottlerin	A seed extract dose-dependently reduced serum levels of hormones (FSH, LH and estradiol) and number of ovulated eggs and corpora lutea in female rats	Klinger JT et al. 2007. Rottlerin causes pulmonary edema in vivo: a possible role for PKCdelta. J. Appl. Physiol. 103(6), 2084-2094 Thakur S.C.et al. 2005. An etheral extract of Kamala (*Mallotus phillipinensis*(Moll. Arg.) Lam.) induce adverse effects on reproductive parameters of female rats. Reprod Tox 20, 149-156.
***Mandragora officinarum* L.** *(M. autumnalis* Bertol., *M. acaulis* Gaertn., *M. vernalis* Bertol.*)*	Solanaceae	Whole plant	Root: 0.4% tropane alkaloids: e.g. scopolamine, L-hyoscyamine		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7
***Manihot esculenta* Crantz** *(Manihot utilissima* Pohl.*)*	Euphorbiaceae	Root	Cyanogenic glycosides from root: e.g. linamarin		Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf Padmaja G. 1995. Cyanide detoxification in cassava for food and feed uses. Crit Rev Food Sci Nutr. 35(4), 299-339.
***Marsdenia cundurango* Rchb.f.**	Apocynaceae (Asclepiadaceae)	Bark of stem	Bark: mixture of steroidal glycosides : condurango-glycosides (A…E); Essential oil: coumarin		Berger S. et al. 1988. Structural revision of pregnane ester glycosides from condurango cortex and new compounds. Phytochemistry 27(5), 1451-1458
***Meconopsis* spp.**	Papaveraceae	Whole plant	Genus in which species may contain isoquinoline alkaloids: e.g. mecambrine		Slavík J. Slavíková L. 2009. Alkaloids of Meconopsis cambrica (L.) VIG. and M. robusta HOOK. f. et THOMS. Collection of Czechoslovak Chemical Communications 61, 12, 1815-1822
***Medicago sativa* L.**	Leguminosae (Fabaceae)	Aerial part and seed	Pyrrolidine alkaloids in the seeds: e.g. stachydrine (0.18%), homostachydrine; and aromatic nitro-derivatives: e.g. trigonelline (0.36%)		Barnes J., Anderson L.A., Phillipson J.D. 2007. Herbal Medicines. 3rd ed. Ed. Pharmaceutical Press. ISBN 978-0-85369-623-0
***Melaleuca* spp.**	Myrtaceae	Leaf	Genus in which some species may contain the monoterpene etheroxide 1,8-cineole.		Bruneton J. 2009. Pharmacognosie. Phytochemie, Plantes médicinales. Ed. Tec & Doc, lavoisier, Paris, 4ème édition. ISBN: 978-2-7430-1188-8. Natural Sources of Flavourings Report No. 2. 2007. Ed. Council of Europe Publishing. ISBN 978-92-871-6156-7. Natural Sources of Flavourings Report No. 3. 2008. Ed. Council of Europe Publishing. ISBN 978-92-871-6422-3.
***Melia azedarach* L.**	Meliaceae	Aerial part	Nortriterpenoids: e.g. meliatoxins in the fruits.		Oelrichs P.B. et al. 1983. Toxic tetranortriterpenes of the fruits of M. azedarach. Phytochemistry 22 (2), 531-534. Del C. et al. 2002. Intoxicacao experimental pelas folhas de M. azedarach em bovines Pesqui. Vet. Brasil 22 (1), 19-24.
***Melilotus* spp.**	Leguminosae (Fabaceae)	Aerial part	Genus in which species may contain coumarin glycosides (e.g. melilotoside)	Coumarin may be formed from melilotoside upon drying, up to 0.4-0.9%. (E.g. 4mg/g of coumarin after drying flowering tops of *M. officinalis*). Improper drying may yield dihydroxycoumarol, a fungal metabolite from coumarin, which may give rise to hemostatic dysfunction.	Wichtl M. and Anton R. 2003. Plantes thérapeutiques (Tradition, pratique officinale, science et thérapeutique), Ed. Tec & Doc, Lavoisier, Paris, 2ème édition, ISBN : 2-7430-0631-5 Puschner B. et al. 1998. Sweet clover poisoning in dairy cattle in California. J Am Vet Med Assoc 15; 212(6):857-859. Martino E. et al. 2006. Microwave assisted extraction of coumarin and related compounds from *Melilotus officinalis* (L.) Pallas as an alternative to Soxhlet and ultrasound-assisted extraction. J Chromatog A., 1125, 147-151
***Melittis melissophyllum* L.**	Lamiaceae (Labiatae)	Aerial part	Coumarin (2,6-7,0 g/kg in fresh leaves and 0,3-2,5 g/kg in dry leaves)		De Vincenzi M. et al. 1997. Monographs on botanical flavouring substances used in food. Fitoterapia, 68, 50-1. Maggi F. et al. 2011. HPLC quantification of coumarin in bastard balm (*Melittis melissophyllum* L., Lamiaceae). Fitoterapia 82, 1215-1221.
***Menispermum canadense* L.**	Menispermaceae	Fruit and root	Isoquinoline alkaloids		Manske R.H. et al. 1965. Studies on the alkaloids of menispermaceous plants. CCXIX. Dauricine from Menispermum canadense L. Chem Pharm Bull. (Tokyo) 13 (12), 1476-7.
***Menispermum dauricum* DC.**	Menispermaceae	Aerial part	Bisbenzyltetrahydroisoquinoline alkaloids: e.g. dauricine.		Bruneton J. Pharmacognosy. Phytochemistry. Medicinal Plants. 2nd ed. 1999. Ed. Intercept Ltd. ISBN 1-898298-63-7
***Mentha canadensis* L.** *(M.arvensis* var. *piperascens* Malinv. ex Holmes*)*	Lamiaceae (Labiatae)	Aerial part	Essential oil: monocyclic monoterpene ketone: e.g. pulegone and bicyclic monoterpene: menthofuran		EMEA HMPC. 2005. Public statement on the use of herbal medicinal products containing pulegone and menthofuran. EMEA/HMPC/138386/2005
***Mentha piperita* L.**	Lamiaceae (Labiatae)	Aerial part	Essential oil: monoterpene etheroxide: 1,8-cineole (2.4-18.5%); monocyclic monoterpene ketones: e.g. pulegone (0.1-5.4%); bicyclic monoterpene: menthofuran (0.1-7.4%); and coumarin		Natural Sources of Flavourings Report No. 3. 2008. Ed. Council of Europe Publishing. ISBN 978-92-871-6422-3

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***Mentha pulegium* L.**	Lamiaceae (Labiatae)	Aerial part	Essential oil: monocyclic monoterpene ketones: e.g. pulegone (71.3-90%), bicyclic monoterpenes: menthofuran, thujones and monoterpene etheroxide: 1,8-cineole		Natural Sources of Flavourings Report No. 3. 2008. Ed. Council of Europe Publishing. ISBN 978-92-871-6422-3
***Mentha spicata* L.** *(Mentha viridis* (L.) L.)	Lamiaceae (Labiatae)	Aerial part	Essential oil: monocyclic monoterpene ketone: e.g. pulegone (1.7-1.9%) and monoterpene etheroxide: 1,8-cineole (6-6.8%) Essential oil chemotype carvone: 1,8-cineole (0.5%) Essential oil chemotype dihydrocarvyl acetate: 1,8-cineole (2.2%)		Natural Sources of Flavourings Report No. 3. 2008. Ed. Council of Europe Publishing. ISBN 978-92-871-6422-3
***Menyanthes trifoliata* L.**	Menyanthaceae	Leaf	Anthraquinones: e.g. emodin, aloe-emodin, chrysophanol; Coumarins: e.g. coumarin, scopoletin	Reports on monoterpene alkaloids gentianin and gantianidin may be artefacts. (CoE, 2007)	Capasso R. et al. 2000. Phytotherapy and quality of herbal medicines. *Fitoterapia* 71(S), 58-65 Natural Sources of Flavourings Report No. 2. 2007. Ed. Council of Europe Publishing. ISBN 978-92-871-6156-7.
***Mercurialis* spp.**	Euphorbiaceae	Whole plant	Genus in which species may contain cocarcinogenic diterpenes: e.g. ingenol esters		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
Mesembryanthemum spp.	Aizoaceae	Aerial part	Genus in which species may contain indole alkaloids: e.g. mesembrine, and oxalic acid	*Mesembryanthemum* spp are now named *Sceletium* spp. Mesembrine in *S. expansum*, *S. tortuosum* and *S. anatomicum*	Jacob R.H. et al. 1989. Acute oxalate toxicity of sheep associated with slender iceplant (M. nodiflorum), Aust. Vet. J. 66 (3), 91-92. Roth L., Daunderer M. and Kormann K. 1984. Giftpflanzen - Pflanzengifte. Vorkommen Wirkung Therapie. ecomed. ISBN 3-609-64810-4
***Michelia hedyosperma* Y.W.Law**	Magnoliaceae	Unspecified	Essential oil reported to contain the phenylpropanoid methyleugenol in unspecified quantities		EMEA HMPC. 2004. Final position paper on the use of herbal medicinal products containing methyleugenol. EMEA/HMPWP/337/03
***Millettia glabra* Adema**	Leguminosae (Fabaceae)	Root	Rotenoids: e.g. rotenone		Bruneton J. Pharmacognosy. Phytochemistry. Medicinal Plants. 2nd ed. 1999. Ed. Intercept Ltd. ISBN 1-898298-63-7
***Mimosa* spp.**	Leguminosae (Fabaceae)	Aerial part	Genus in which species may contain non-protein amino acids: e.g. mimosine and mimonosides	Teratogenic effect described for *M. tenuiflora* (Willd) Poir.	Medeiros R.T.M. et al. 2008. Teratogenicity of M*imosa tenuiflora* seeds to pregnant rats. Toxicon 51: 316-319. Jiang Y. et al. 1992. Effects of saponins from M. tenuiflora on lymphoma cells and lymphocytes, Phytother. Res. 6 (6), 310-313.
***Mitragyna speciosa* Korth.**	Rubiaceae	Whole plant	Indole-monoterpenic alkaloids in leaf: e.g. mitragynine (accounting for 2/3 of alkaloids present) and 7-hydroxymitragynine		Kumarnsit E. et al. 2006. Acute and long-term effects of alkaloid extracts of *Mitragynia speciosa* on food and water intake and body weight in rats. *Fitoterapia* 77, 339-345.
***Momordica charantia* L** (*M.chinensis, M.elegans,M.indica, M.operculata, M. sinensis*).	Cucurbitaceae	Aerial part	Cucurbitane triterpenoids: momordicosides and momordicines. Seeds: a lectin: momodin.	Some seed extracts showed antispermatogenic activity in rats.	Chang C-I. 2008. Cucurbitane-type triterpenoids from the stems of M*omordica charantia. J Nat Prod. 71, 1327-1330.* Fatope M.O. 1990. New cucurbitane triterpenoids from *Momordica charantia. J Nat Prod. 53, 1491-1497.* Naseem M.Z. et al. 1998 Antispermatogenic and androgenic activities of M*omordica charantia* (Karela) in albino rats. J Etnopharmacol 61, 9-16.
Monascus purpureus	Monascaceae	Microfungi	May produce citrinin (mycotoxin)		Bennett JW and Klich M. 2003. Mycotoxins. Clinical Microbiology Reviews. 16(3), 497-516.
***Mondia whitei* (Hook.f.) Skeels**	Apocynaceae	Whole plant	Root: chlorinated coumarinolignan: 5-chloropropacin and phenols: 2-hydroxy-4-methoxybenzaldehyde (=p-anisaldehyde)	Root given orally had androgenic effect on male rats.	Pedersen M.E. et al. 2008. Effects of South African traditional medicine in animal models for depression. J Ethnopharmacol. 119: 542-548. Patnam R. et al. 2005. A chlorinated coumarinolignan from the African medicinal plant, Mondia whitei. Phytochemistry. 66:683-686. Kubo I. and Kinst-Hori I. 1999. 2-Hydroxy-4-methoxybenzaldehyde: a potent tyrosinase inhibitor from African medicinal plants. Planta Med, 1999, 65(1):19-22 Watcho P et al. 2004. Androgenic effects of the aqueous extract of the roots of Mondia whitei in rats. Asian J Androl, 6(3), 269-72
***Montanoa tomentosa* Cerv.**	Compositae (Asteraceae)	Whole plant	Oxepane diterpenoids in leaf: e.g. zoapatanol and montanol and kaurenoic acids		Cheeke P.R. 1989. Toxicants of plant origin. Volume IV. Phenolics. CRC Press Inc. ISBN 0-8493-6693-2. Landgren B.M. et al. 1979. Clinical effect of orally administerede extracts of *Montanoa tomentosa* in early human pregnancy. 135, 480-484. Roblez-Zepeda R.E. et al.2009. *Montanoa tomentosa* glandular trichomes containing kaurenoic acids chemical profile and distribution. Fitoterapia 80, 12-17.
***Moringa oleifera* Lam.**	Moringaceae	Root and wood	Alkaloiids (benzylamines) in root bark (0.1%): e.g. moringine (synonym of benzylamine) and moringinine.	Antifertility effects of aqueous extract of roots have been reported	Shukla S. et al. 1988. Antifertility profile of the aqueous extract of *Moringa oleifera* roots J Ethnopharmacol. 22 (1), 51-62. Dangi SY et al. 2002. Antihypertensive activity of the total alkaloids from the leaves of Moringa oleifera. Pharm. Biol. 40(2), 144-148 Ffiú-Soltész Z. et al. 2010. Chronic benzylamine administration in the drinking water improves glucose tolerance, reduces body weight gain and circulating cholesterol in high-fat diet-fed mice. Pharmacol Res 61(4), 355-363.
***Mucuna pruriens* (L.) DC.**	Leguminosae	Whole plant	Seeds: amino acids: L-dopamine (3.6-8.4%). Indole alkaloids (tryptamine derivatives): e.g. N,N-dimethyltryptamine, bufotenine, 5-methoxy-N,N-dimethyltryptamine.		Infante M.E. et al. 1990. Outbreak of acute toxic psychosis attributed to *Mucuna pruriens*. Lancet 336, 1125. Misra L. and Wagner H. 2004. Alkaloidal constituents of *Mucuna pruriens* seeds. Phytochemistry. 65, 2565-2567.
***Myoporum laetum* G.Forst.**	Scrophulariaceae	Leaf	Essential oil: furanoid sesquiterpene ketones: ngaione		Raponso J.B. et al. 1998. Experimental intoxication by *Myoporum laetum* in sheep. Vet Human Tox 40:132-135.
***Myosotis* spp.**	Boraginaceae	Aerial part	Genus in which species may contain unsaturated pyrrolizidine alkaloids.		Bruneton J. Pharmacognosy. Phytochemistry. Medicinal Plants. 2nd ed. 1999. Ed. Intercept Ltd. ISBN 1-898298-63-7 Resch J.F. et al. 1982. Biologically active pyrrolizidine alkaloids from the true forget-me-not, Myosotis scoreioidis. J Nat Prod. 5(3),358-62
***Myristica fragrans* Houtt.** *(M. moscata* Thunb., *M. officinalis* L.*)*	Myristicaceae	Mace and seed	Essential oil from seed: phenylpropanoids: e.g. elimicin (up to 7.5%), myristicin (1.3% in the seed and 2.7% in mace), safrole		Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf EC SCF. 2001. Opinion of the EC Scientific Committee on Food on the safety of the presence of saafrole in flavourings and other food ingredients with flavouring properties, http://europe.eu.int/comm/food/fs/sc/scf/index_en.html

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***Myrrhis odorata* (L.) Scop.**	Apiaceae (Umbelliferae)	Whole plant	Essential oil from fruit: phenylpropanoids: e.g. trans-anethole (76-85%), methyleugenol, methylchavicol (1.2-1.7%). Essential oil from leaf: e.g. trans-anethole (82-85%).		Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf Natural Sources of Flavourings Report No. 2. 2007. Ed. Council of Europe Publishing. ISBN 978-92-871-6156-7
***Myrtus communis* L.**	Myrtaceae	Aerial part	Essential oil: phenylpropanoids: methylchavicol (58-88 ppm), methyleugenol (0.2%-6%)		Teuscher E., Anton R. et Lobstein A. 2005. Plantes aromatiques (Epices, aromates, condiments et huiles essentielles), Ed. Tec et Doc-Lavoisier. ISBN : 2-7430-0720-6.
***Narcissus* spp.**	Amaryllidaceae	Whole plant	Genus in which species may contain isoquinoline alkaloids (Amaryllidaceae alkaloids): e.g. lycorine, galanthamine, homolycorine, haemanthamine...		Bruneton J. Pharmacognosy. Phytochemistry. Medicinal Plants. 2nd ed. 1999. Ed. Intercept Ltd. ISBN 1-898298-63-7
***Nepeta cataria* L.**	Lamiaceae (Labiatae)	Aerial part	Essential oil : bicyclic monoterpenes: e.g. camphor		Natural Sources of Flavourings Report No. 1. 2000. Ed. Council of Europe Publishing. ISBN 92-871-4324-2.
***Nerium* spp.**	Apocynaceae	Whole plant	Genus in which species may contain cardenolide glycosides: e.g. stropeside, oleandrin, …		Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, 618 pages, ISBN : 2-7430-0806-7
***Nicotiana* spp.**	Solanaceae	Whole plant	Genus in which species may contain pyridine alkaloids: e.g. nicotine and anabasine	In *Nicotiana glauca,* 99% of the alkaloids is anabasine	PDR for Herbal Medicines. 2004 Thomson ed. ISBN: 1-56363-5125-7 Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, 618 pages, ISBN: 2-7430-0806-7
***Nierembergia aristata* D.Don**	Solanaceae	Whole plant	Cardenolides: e.g. 17-epi-11 alpha-hydroxy-6.7-dehydrostrophanthidin-3-O-beta-boivinopyranoside, 6,7-dehydrostrophanthidin-3-O-beta-boivinopyranoside, 6,7-dehydrostrophanthidin-3-O-beta-oleandropyranoside		Gil R.R. et al. 1995. Cardenolides from Nierembergia aristata. J Nat Prod. 58(6), 848-56
***Nierembergia veitchii* Berkeley ex Hook.**	Solanaceae	Whole plant		Calcinogenic glycosides (1,25-dihydroxycholecalciferol) (16400 IU/kg)	Riet-Correa F. et al. 1993. Enzootic calcinosis in sheep , experimental reproduction with N. veitchii. Presq. Vet. Bras. 13 (1-2), 21-24.
***Nigella damascena* L.**	Ranunculaceae	seed	Proto-alkaloid: e.g. damascenine (=nigelline)		Moretti A. et al. 2004. Essential Oils of *Nigella sativa* L. and *Nigella damascena* L. Seed. J Ess Oil Res. May/Jun. http://findarticles.com/p/articles/mi_qa4091/is_200405/ai_n9452023/?tag=content;col1
***Nigella sativa* L.**	Ranunculaceae	Seed	Isoquinoline alkaloids: e.g. nigellimine	Essential oil of seeds (0,5%-1,5%): thymoquinone (3,8 %)	Moretti A. et al. 2004. Essential Oils of Nigella sativa L. and Nigella damascena L. Seed. J Ess Oil Res. May/Jun. http://findarticles.com/p/articles/mi_qa4091/is_200405/ai_n9452023/?tag=content;col1 Khader et al. 2009. In vitro toxicological properties of thymoquinone. Food Chem Toxicol. 47, 129-133.
***Nuphar lutea* (L.) Sibth. & Sm.**	Nymphaeaceae	Root	Sesquiterpene alkaloids: e.g. nupharine, nupharidine, desoxynupharidine		Iwanow A. et al. 1986. Sulphoxides of thiobinupharidine thiohemiaminals from Nuphar lutea. Phytochemistry 25: 2227–2231. Oliver-Bever B. 1986. Medicinal plants in tropical West Africa. Cambridge University Press. ISBN 052126815X, 9780521268158 Airaksinen M.M. et al. 1986. Toxicity of plant material used as emergency food during famines in Finland. J Ethnopharmacol. 18 (3),273-96.
***Nymphaea alba* L.** *(Castalia alba (L.)Wood., Castalia speciosa* Salisb.*)*	Nymphaeaceae	Flower and rhizome	Sesquiterpene alkaloids: e.g. quinolizidine structure: deoxynupharidine, nupharolidine, nupharcristine and piperidine structure: e.g. nuphamine and dimeric sulfur containing sesquiterpene alkaloids: e.g. thiobinupharidine and derivatives		Chopra. R. N., Nayar. S. L. and Chopra. I. C. 1986. Glossary of Indian Medicinal Plants (Including the Supplement). Council of Scientific and Industrial Research, New Delhi. Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Nymphaea lotus* L.**	Nymphaeaceae	Flower and rhizome	Sesquiterpene alkaloids: e.g. nupharine, nymphaeine,		Oliver-Bever B. 1986. Medicinal plants in tropical West Africa. Cambridge University Press. ISBN 052126815X, 9780521268158. Sowemimo A.A et al. 2007. Constituents of Nymphaea lotus Linn. Nig. J. Nat. Prod. and Med. 11: 1-2.
***Nymphaea odorata* Ait.**	Nymphaeaceae	Rhizome	Sesquiterpene alkaloids: e.g. nupharine, nymphaeine,	Tannins: 15% . Hydrolysable tannins used at high doses over long periods may have a negative impact on liver function.	Oladimeji H.O. et al. 2008. Larvicidal and anti-Microbial Potentials of Nymphaea odorata. J. Pharmacol Toxicol. 3 (5): 357-362
***Ochrosia* spp.**	Apocynaceae	Aerial part	Genus in which species may contain indole alkaloids: e.g. ellipticine,...		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Ocimum basilicum* L.**	Lamiaceae (Labiatae)	Aerial part	Essential oil from leaf and flowering top: phenylpropanoids: e.g. methylchavicol (20-50%), methyleugenol (2%), safrole; monoterpenes: monoterpene etheroxide: 1,8-cineole (7.7- 10%) and bicyclic monoterpenes: e.g. camphor (1%), alpha- and beta-thujones		Natural Sources of Flavourings Report No. 3. 2008. Ed. Council of Europe Publishing. ISBN 978-92-871-6422-3
***Ocimum canum* Sims.**	Lamiaceae (Labiatae)	Aerial part	Essential oil : phenylpropanoids: e.g. methylchavicol (52%)		Nascimento J.C. et al. 2011. Chemical composition and antimicrobial activity of essential oils of Ocimum canum Sims. and Ocimum selloi Benth. An Acad Bras Cienc. 83(3),787-799.
***Ocimum gratissimum* L.**	Lamiaceae (Labiatae)	Aerial part	Essential oil from the bud: phenylpropanoids: e.g. methylchavicol, methyleugenol (9.835ppm)		Simon J.E. et al. 1990. Basil: A source of essential oils. p. 484-489. In: J. Janick and J.E. Simon (eds.), Advances in new crops. Timber Press, Portland, OR. ISBN 0-88192-166-1
***Ocimum micranthum* Willd.**	Lamiaceae (Labiatae)	Aerial part	Essential oil: phenylpropanoids: e.g. elemicin (16-19%) Reported to contain the phenylropanoid methyleugenol in unspecified quantities		de Vasconcelos S. Et al. 2004. Essential Oil Composition of the Leaves of *Ocimum micranthum* Willd. J EssOil Res. May/Jun. //findarticles.com/p/articles/mi_qa4091/is_200405/ai_n9452016/?tag=content;col1 Sacchetti G. Et al. 2004. Composition and functional properties of the essential oil of amazonian basil, Ocimum micranthum Willd., Labiatae in comparison with commercial essential oils. J Agric Food Chem. 52(11):3486-3491. EMEA HMPC. 2004. Final position paper on the use of herbal medicinal products containing methyleugenol. EMEA/HMPWP/337/03
***Ocimum nudicaule* Benth.**	Lamiaceae (Labiatae)	Aerial part	Essential oil: phenylpropanoids: e.g. methylchavicol (98%)		EMEA/HMPWP/338/03.2004. Final position paper on the use of herbal medicinal products containing estragole. Available at: http://www.emea.europa.eu/docs/en_GB/document_library/Position_statement/2009/12/WC500018033.pdf

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***Ocimum selloi* Benth.**	Lamiaceae (Labiatae)	Aerial part	Essential oil (51,1%): phenylpropanoids: e.g. methylchavicol (94.95% in essential oil from the leaf), 92.54% in essential oil from flower)		Martini M.G. Et al. 2011. Chemical composition and antimicrobial activities of the essential oils from Ocimum selloi and Hesperozygis myrtoides. Nat Prod Commun. 6(7), 1027-1030. Nascimento J.C. et al. 2011. Chemical composition and antimicrobial activity of essential oils of Ocimum canum Sims. and Ocimum selloi Benth. An Acad Bras Cienc. 83(3),787-799.
***Ocimum suave* Willd.**	Lamiaceae (Labiatae)	Aerial part	Essential oil (2%): phenylpropanoids: methyleugenol (65.49%- 66.18 in leaf and flower oil, 2.240ppm in bud)		EMEA/HMPC/138363/2005. 2005. Public statement on the use of herbal medicinal products containing methyleugenol. Available at: http://www.ema.europa.eu/docs/en_GB/document_library/Scientific_guideline/2010/04/WC500089961.pdf
***Ocimum tenuiflorum* L.** *(Ocimum sanctum* L.*)*	Lamiaceae (Labiatae)	Whole plant	Essential oil : phenypropanoids: methylchavicol (39.950 ppm in leaf), methyleugenol (15-100 ppm in plant and 50ppm in leaf)		EFSA Scientific Cooperation (ESCO) Working Group on Botanicals and Botanical Preparations; Advice on the EFSA guidance document for the safety assessment of botanicals and botanical preparations intended for use as food supplements, based on real case studies on request of EFSA. EFSA Journal 2009; 7(9):280
***Ocotea odorifera* (Vell.) Rohwer** (*Ocotea pretiosa* (Nees) Mez.)	Lauraceae	Wood	Essential oil: phenylpropanoids: e.g. methyleugenol (0.1-78%), safrole		EMEA/HMPC/138363/2005. 2005. Public statement on the use of herbal medicinal products containing methyleugenol. Available at: http://www.ema.europa.eu/docs/en_GB/document_library/Scientific_guideline/2010/04/WC500089961.pdf Pereira E.F. et al. 1989. Anti-inflammatory properties of new bioisosteres of indomethacin synthesized from safrole which are sulindac analogues. Braz J Med Biol Res. 22(11), 1415-9.
***Oenanthe aquatica* (L.) Poir.**	Apiaceae (Umbelliferae)	Fruit and root	Polyacetylene derivatives: e.g. oenanthotoxin. In fruit: phenylpropanoids: e.g. myristicin		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1 Cooper M.R. and Johnson A.W. 1998. Poisonous plants and fungi in Britain. Animal and human poisoning. The Stationery Office. ISBN 0-11-242981-5. Vincieri F.F.et al. 1976. Composition of the Oenanthe aquatica essential oil. Planta Med 29, 101-112
***Oenanthe crocata* L.**	Apiaceae (Umbelliferae)	Whole plant	Polyacetylene derivatives: e.g. oenanthotoxin , l-oenanthenol and 14-desoxi-oenanthoxin		Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7 Jens Jacob J. 2009. Wirbeltierforschung in der Kulturlandschaft - Grundlagen und Anwendung. Julius Kühn-Institut Bundesforschungsinstitut für Kulturpfl anzen. Arno Brynda GmbH, Berlin. ISBN 978-3-930037-58-2. Schep L.J. et al. 2009. Poisoning due to water hemlock. Clin Tox 47, 270-278.
***Oldenlandia* spp.**	Rubiaceae	Aerial part	Sulphur-rich cyclotides: e.g. kalata B1		Gran L. et al. 2008. Cyclic peptides from *Oldenlandia affinis* DC. Molecular and biological properties. Chem & Biodiversity. 5:2014-2022. Gran L. et al. 2000. Oldenlandia affinis (R&S) DC. A plant containing uteroactive peptides used in african traditional medicine. Journal Ethnopharmacol. 70(3):197-203 Craik D.J. et al. 2010. Cyclotides: macrocyclic peptides with applications in drug design and agriculture. Cell Mol Life Sci. 67:9-16; Dörnenburg H. 2010. Cyclotide synthesis and supply: From plant to bioprocess. Biopolymers. 94(5), 602-10.
***Operculina macrocarpa* (L.) Urb.** *(Ipomoeaa operculata* (Gomes) Mart., *Merremia macrocarpa* (L.) Roberty)	Convolvulaceae	Root	Glycoresin (10%): e.g. operculinic acid C		Ono M. et al. 2009. Components of ether-insoluble resin glycoside (rhamnoconvolvulin) from rhizoma jalapae braziliensis. Chem. Pharm. Bull (Tokyo). 57(3), 262-268
***Operculina turpethum* (L.) S.Manso** *(Ipomoea turpethum* (L.) R.Br.)	Convolvulaceae	Root	Glycoresin (4%): e.g. turpethin		Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7
***Opopanax* spp.**	Apiaceae (Umbelliferae)	Whole plant	Genus in which species may contain furanocoumarins		Appendino G. et al. 2004. Coumarins from *Opopanax chironium*. New dihydrofuranocoumarins and differential induction of apoptosis by imperatorin and heraclenin. J Nat Prod. 67(4),532-536.
***Origanum majorana* L.**	Lamiaceae (Labiatae)	Aerial part	Essential oil: bicyclic monoterpenes: e.g. camphor (2%) and phenylpropanoids: e.g. methylchavicol (96-550 ppm).		Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf
***Origanum vulgare* L.**	Lamiaceae (Labiatae)	Aerial part	Essential oil: bicyclic monoterpene: beta-thujone (0-0.6%), monoterpene etheroxide: 1,8-cineole (0-6.5%)		Verma R.S. et al. 2010. Chemical diversity in Indian oregano (Origanum vulgare L.). Chemistry and Biodiversity. 7, 2054-2064.
***Ornithogalum* spp.**	Asparagaceae	Whole plant	Genus in which species may contain cardenolides: e.g. sarmentoloside		Ghannamy U.et al. 1987. Cardenolides from *O. boucheanum*. Planta med. 53(2), 172-178. Frohne D. and Pfänder HJ. 1997. Giftpflanzen. Ein Handbuch für Apotheker, Ärzte, Toxikologen und Biologen. Wissenschaftliche Verlagsgesellschaft mbH. ISBN 3-8047-1466-8. Roth L., Daunderer M. and Kormann K. 1984. Giftpflanzen - Pflanzengifte. Vorkommen Wirkung Therapie. ecomed. ISBN 3-609-64810-4
***Orobanche* spp.**	Orobanchaceae	Whole plant		Parasitic plant using sap from host plant. If toxic compounds are present in the host, they may also be found in Orobranche.	Medicinal and Aromatic Plants XII. Nagata, Toshiyuki; Ebizuka, Yutaka (Eds.) , Springer Verlag 2002. ISBN: 978-3-540-41686-9
***Oxalis* spp.**	Oxalidaceae	Aerial part	Genus in which species may contain oxalates		PDR for Herbal Medicines. 2004 Thomson ed. ISBN: 1-56363-5125-7
***Packera aurea* (L.) Á.Löve & D.Löve** (*Senecio aureus* L.)	Compositae (Asteraceae)	Aerial part	Unsaturated pyrrolizidine alkaloids: e.g. senecionine,		Röder E. et al. 1983. Pyrrolizidine alkaloide aus Senecio aureus. Planta Med. 49 (9), 57-59.
***Papaver* spp.**	Papaveraceae	Whole plant	Genus in which species may contain isoquinoline alkaloids (morphinanes): e.g. morphine, codeine, rhoeadine		Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Paris quadrifolia* L.**	Melanthiaceae	Whole plant	Steroid and spirostanic saponins: e.g. pennogenin tetraglycoside		Cooper M.R. and Johnson A.W. 1998, Poisonous plants and fungi in Britain. Animal and human poisoning. The Stationery Office. ISBN 0-11-242981-5. Frohne D., Pfänder H.J. and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1

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***Parthenocissus quinquefolia* (L.) Planch.**	Vitaceae	Leaf	Calciumoxalate raphides (up to 2%)	Cases have been reported of illness or death resulting after berries or juice from leaves of Virginia creeper were ingested. Modern reports view these cases as circumstantial.	Fuller, T. C., McClintock, E. 1986. Poisonous plants of California. Univ. California Press, Berkeley, Calif., USA. ISBN: 0-520-05569-1
***Paullinia cupana* Kunth**	Sapindaceae	Seed	Methylated xanthine derivatives: e.g. caffeine (3.0-4.8% dry weight), Essential oil: phenylpropanoids: e.g. methylchavicol, anethole		Andersson H.C., Hallström H., Kihlman B.A. 2004. Intake of caffeine and other methylxanthines during pregnancy and risk for adverse effects in pregnant women and their foetuses. TemaNord 2004:565, Nordic Council of Ministers, ISBN 92-893-1098-7. Natural Sources of Flavourings Report No. 2. 2007. Ed. Council of Europe Publishing. ISBN 978-92-871-6156-7. Crozier A., Ashihara H., Tomás-Barbéran F. 2012. Teas, cocoa and coffee. Plant secondary metabolites and health. Blackwell Publishing Ltd. ISBN-13: 978-1-4443-3441-8, ISBN-10: 1-4443-3441-7.
***Pausinystalia johimbe* (K.Schum.) Pierre ex Beille** *(Corynanthe johimbe* K.Schum.*)*	Rubiaceae	Whole plant	Indole alkaloids (yohimbanes) in bark: e.g. yohimbine (=corynine, quebrachine), alpha-yohimbine (=corynanthidine, isoyohimbine), beta-yohimbine, delta-yohimbine (=(-)-ajmalicine), corynanthine, corynantheine, dihydrocorynantheine, allo-yohimbine (=dihydroyohimbine), pseudo-yohimbine and tetrahydromethylcoynantheine.		Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, 618 pages, ISBN : 2-7430-0806-7
***Pedilanthus* spp.**	Euphorbiaceae	Whole plant	Genus in which species may contain cytotoxic diterpenes : e.g. oxygenated jatrophane diterpenes, phorbolesters,…		Mongkolvisut W. and Sutthivaiyakit S. 2007. Antimalarial and antituberculous poly-O-acylated jatrophane diterpenoids from *Pedilanthus tithymaloides*. J Nat Prod. 70(9), 1434-1438.
***Peganum harmala* L.**	Nitrariaceae	Whole plant	Indole alkaloids (beta-carbolines): e.g. harmine, harmaline; and quinoline alkaloids: e.g. vasicine, vasicinone		Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7 Massoud M. et al. 2002. Toxicity of *Peganum harmala*; review and a case report. Iranian J Pharm Therap. 1, 1-4.
***Pelargonium sidoides* DC.**	Geraniaceae	Leaf	Essential oil: phenylpropanoids: e.g. methyleugenol (4.3%) and elemicin (3.6%)		Kaiser O. et al. 1998. Composition of the essential oils of Pelargonium sidoides DC. and Pelargonium reniforme Curt. Flavour Frag. J. 13 (3), 209-213.
***Perilla fructescens* Britton**	Lamiaceae (Labiatae)	Leaf and seed	The phenylpropanoid chemotype contains myristicin	Plant must be properly dried to avoid the appearance of the toxic perilla keton.	Koezuka Y. et al. 1985. An intestinal propulsion promoting substance from *Perilla frutescens* and its mechanism of action. Planta Med. 6:480-482. Seto T.A. and Keup W. 1969. Effects of alkylmethoxybenzene and alkylmethylenedioxybenzene essential oils on pentobarbital and ethanol sleeping time. Arch. Int. Pharmacodyn. 180:323-240.
***Persea americana* Mill** *(Persea drymifolia* Schltdl. & Cham)	Lauraceae	Leaf	Essential oil: phenylpropanoids: e.g. methyleugenol (3-85%)		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Petasites* spp.**	Compositae (Asteraceae)	Whole plant	Genus in which species may contain unsaturated pyrrolizidine alkaloids		Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, 618 pages, ISBN : 2-7430-0806-7
***Petroselinum crispum* (Mill.) A.W.Hill**	Apiaceae (Umbelliferae)	Whole plant	Furocoumarins in leaf: e.g. psoralen (3.2-10.5%), bergapten (6.4-14.7%), 8-methoxypsoralen (0.53-5.3%), isopimpinellin (1.6-8.0%); Parsley leaf oil: phenylpropanoids: e.g. myristicin (1.5-14%), apiole (0.9-8.1%) Common parsley seed oil: phenylpropanoids: e.g. myristicin (2.4-37%), elemicin (8.8%), apiole (11-67%) Italian parsley seed oil: phenylpropanoids: e.g. myristicin (0.7-40%), elemicin (0-2%), apiole (30-68%) Curly parsley seed oil: phenylpropanoids: myristicin (45-62%), elemicin (0-12.2%), apiole (0-7.2%)	Fruit has been used to induce abortion.	PDR for Herbal Medicines. 2004 Thomson ed. ISBN: 1-56363-5125-7 Natural Sources of Flavourings Report No. 2. 2007. Ed. Council of Europe Publishing. ISBN 978-92-871-6156-7
***Petunia violacea* Lindl.**	Solanaceae	Unspecified		Reported hallucinogenic properties. Compounds not defined	Butler EG. Et al. 1981. Petunia violacea: hallucinogen or not? J. Ethnopharmacol. 4(1),111-114.
***Peucedanum ostruthium* (L.) W.Koch.**	Apiaceae (Umbelliferae)	Whole plant	Furocoumarins in root: e.g. pucedanin, imperatorin, oxypeucedanin		Schinkovitz A et al. 2003. Ostruthin: An antimycobacterial coumarin from the roots of *Peucedanum ostruthium*. Planta Med. 69(4), 369-71. Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3
***Peumus boldus* Molina**	Monimiaceae	Leaf	Isoquinoline alkaloids: e.g. boldine, ... Essential oil: phenylpropanoids: e.g. methyleugenol (1.19%)		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 del Vallea J.M. et al. 2005. Extraction of boldo (Peumus boldus M.) leaves with supercritical CO2 and hot pressurized water. Food Res Int. 38(2), 203-213.
***Phaseolus lunatus* L.**	Leguminosae (Fabaceae)	Seed	Cyanogenic glycoside: linamarin (100 to 3000 mg HCN/kg of seed). Lectins		Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf Sparvoli F., et al. 2001. Lectin and lectin-related proteins in Lima bean (*Phaseolus lunatus* L.) seeds: biochemical and evolutionary studies. Plant Molecular Biology 45: 587–597.
***Phaseolus vulgaris* L.**	Leguminosae (Fabaceae)	Seed	Cyanogenic glycoside: linamarin (20 mg/kg). Lectins		Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf Nasi A., et al. 2009. Proteomic approaches to study structure, functions and toxicity of legume seeds lectins. Perspectives for the assessment of food quality and safety. J Proteomics 72: 527-538.
***Phellodendron amurense* Rupr.**	Rutaceae	Bark	Isoquinoline alkaloids: e.g. berberine (major alkaloid, up to 8%), palmitine		Chen M.L. et al. 2010. Chemical and biological differentiation of Cortex Phellodendri Chinensis and Cortex Phellodendri Amurensis. Planta Med. 76(14):1530-5
***Philodendron* spp.**	Araceae	Whole plant	Genus in which species may contain oxalate raphides		Petersen D.D. 2011. Common plant toxicology: a comparison of national and southwest Ohio data trends on plant poisonings in the 21st century. Toxicol Appl Pharmacol. 254(2):148-53.

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***Physalis alkekengi* L.**	Solanaceae	Fruit, root	Tropane alkaloids in root (0.09-0.1%): e.g. 3-alpha-tigloyloxytropane, phygrine, cuscohygrine	Anti-estrogen activity of fruit.	Basey K. and Woolley J.G. 1973. Alkaloids of Physalis alkekengi. Phytochem Rep 12, 2557-2559. Basey K. et al. 1992. Phygrine, an alkaloid from Physalis alkekengi species. Phytochem. 31, 4173-4176. Montaserti A. et al. 2007. Anti-fertility effects of physalis alkekengi alcoholic extract in female rat. Iranian J Reprod Med 5, 13-16. Vessal M. et al. 1991. Effects of an aqueous extract of Physalis alkekengi fruit on estrus cycle, reproduction and uterine creatine kinase BB-isoenzyme in rats. J Ethnopharmacol 34, 69-78.
***Physostigma venenosum* Balf.**	Leguminosae (Fabaceae)	Seed	Indole alkaloids: e.g. physostigmine (eserine)		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Phytolacca* spp.**	Phytolaccaceae	Root, seed	Genus in which species may contain triterpenoid saponins: e.g. phytolaccatoxin and mitogenic lectins		Cooper M.R. and Johnson A.W. 1998, Poisonous plants and fungi in Britain. Animal and human poisoning. The Stationery Office. ISBN 0-11-242981-5. Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Picramnia antidesma* Sw.**	Picramniaceae	Unspecified	Anthraquinone derivatives: e.g. aloe emodin, aloe emodin anthrone and substituted hydroxyanthracenes: e.g. picramnioside A, B, C		Hernández-Medel M.R. Pereda-Miranda R. 2002. Cytotoxic anthraquinone derivatives from Picramnia antidesma. Planta Med. 68(6):556-8.
***Pieris formosa* (Wall.) D.Don.**	Ericaceae	Whole plant	Diterpenoids: grayanotoxines		Hollands R.D. et al.1986. P. formosanum poisoning in the goat. Vet. Rec. 118 (14), 407-408. Zhang E.L. et al. 2001. Study on the mechanism of action of P. formosanum, Ind. Vet. J. 78 (12), 1098-1101.
***Pieris japonica* (Thunb.) D.Don.ex G.Don.**	Ericaceae	Whole plant	Diterpenoids: grayanotoxines		Cooper M.R. and Johnson A.W. 1998, Poisonous plants and fungi in Britain. Animal and human poisoning. The Stationery Office. ISBN 0-11-242981-5.
***Pilocarpus* spp.**	Rutaceae	Whole plant	Genus in which species may contain imidazole alkaloids: e.g. pilocarpine, pilocarpidine, pilosine,...	*Pilocarpus jaborandi* Holmes known for its high pilocarpine content	Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, 618 pages, ISBN : 2-7430-0806-7
***Pimenta racemosa* (Mill.) J.W.Moore**	Myrtaceae	Leaf	Essential oil: phenylpropanoids: methylchavicol (30- 10.745 ppm), methyleugenol (4.31-14.65 ppm)		EMEA/HMPWP/338/03.2004. Final position paper on the use of herbal medicinal products containing estragole. Available at: http://www.emea.europa.eu/docs/en_GB/document_library/Position_statement/2009/12/WC500018033.pdf
***Pimpinella anisum* L.**	Apiaceae (Umbelliferae)	Seed	Furocoumarins in traces. Essential oil: phenylpropanoids: e.g. methylchavicol (1-5%).		Council of Europe. 2007. Natural sources of flavourings. Report No. 2. Council of Europe Publishing. ISBN 978-92-871-6156-7 Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf
***Pimpinella major* (L.) Huds.**	Apiaceae (Umbelliferae)	Root	Furocoumarins: e.g. pimpinellin, sphondin		Bohn I. et al. 1989. The essential root oil of *Pimpinella major*. Planta Med. 55(5), 489-90.
***Pimpinella saxifraga* L.**	Apiaceae (Umbelliferae)	Whole plant	Furocoumarins in root (0.025%): e.g. angelicin, pimpinellin, sphondin, imperatoin, bergapten, isobergapten, isopimpinellin, peucedanin, scopoletin, umbelliferon, umbelliprenin, xanthotoxin		Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3
***Pinellia ternata (*Thunb.) Breitenb.** *(P. tuberifera* Ten.*)*	Araceae	Whole plant	Phenethylamine: L-ephedrine (0.0072% in tuber)		Han M-H., Yang X-W. 2006. Phytochemical Study of the Rhizome of *Pinellia ternata* and Quantification of Phenylpropanoids in commercial *Pinellia* Tuber by RP-LC J Chrom. 64,11-12
***Piper aduncum* L.**	Piperaceae	Aerial part	Essential oil: phenylpropanoids: e.g. dill-apiole (35-90%)	Formerly used as an abortifacient	de Almeida R.R. et al. 2009. Chemical variation in Piper aduncum and biological properties of its dillapiole-rich essential oil. Chem Biodiv. 6, 1427 - 1434. Rali et al. 2007. Volatile chemical constituents of Piper aduncum L and Piper gibbilimbum C. DC (Piperaceae) from Papua New Guinea. Molecules. 12(3),389-94.
***Piper betle* L.**	Piperaceae	Whole plant	Essential oil from the leaf (8%): phenylpropanoids: methylchavicol (1.02 - 4.0%), methyleugenol (4.1%)		Prakash B. et al. 2010. Efficacy of chemically characterized Piper betle L. essential oil against fungal and aflatoxin contamination of some edible commodities and its antioxidant activity. Int J Food Microbiol. 142(1-2), 14-19. Chakraborty J.B. et al. 2011. Hydroxychavicol, a Piper betle leaf component, induces apoptosis of CML cells through mitochondrial reactive oxygen species-dependent JNK and endothelial nitric oxide synthase activation and overrides imatinib resistance. Cancer Sci. EPub. EMEA/HMPWP/338/03.2004. Final position paper on the use of herbal medicinal products containing estragole. Available at: http://www.emea.europa.eu/docs/en_GB/document_library/Position_statement/2009/12/WC500018033.pdf
***Piper hispidum* Swingle** (*Piper asperifolium* Rich., *Piper asperifolium* Ruiz & Pav.)	Piperaceae	Leaf and stem	Butenolides: e.g. 9,10-methylenedioxy-5,6-Z-fadyenolide, 5,6-Z-fadyenolide, piperolide	Estrogen agonistic effects reported for leaf extracts	Michel J.L. et al. 2010. Estrogenic and serotonergic butenolides from the leaves of *Piper hispidum* Swingle (Piperaceae). J Ethnopharmacol. 129, 220-226.
***Piper methysticum* G.Forst.**	Piperaceae	Whole plant	Kavalactones (kava pyrones, 5-12%): chief components include (+)-kavain, dihydrokavain, (+)-methysticin, dihydromethysticin, yangonin, desmethoxy-yangonin	Hepatotoxicity has been reported.	Nerurkar P.V. *et al.* 2004. In vitro toxicity of kava alkaloid, pipermethystine, in HepG2 cells compared to kavalactones. *Toxicological Sciences* 79 (1), 106–111. PDR for Herbal Medicines. 2004 Thomson ed. ISBN: 1-56363-5125-7 Barnes J., Anderson L.A., Phillipson J.D. 2007. Herbal Medicines. 3rd ed. Ed. Pharmaceutical Press. ISBN 978-0-85369-623-0 Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
Piptadenia peregrina Benth **See *Anadenanthera* spp.**					
***Piscidia piscipula* (L.) Sarg.** *(P. erythrina* L.*)*	Leguminosae (Fabaceae)	Root	Rotenoids : e.g. rotenone, millettone, isomillettone		PDR for Herbal Medicines. 2004 Thomson ed. ISBN: 1-56363-5125-7
***Pluchea sagittalis* (Lam.) Cabrera**	Compositae (Asteraceae)	Aerial part	Essential oil: monoterpene etheroxide:1,8-cineole and bicyclic monoterpenes: e.g. camphor Reported to contain methyleugenol in unspecified quantities.		Burger ME. et al. 2000. Action of the extracts of Pluchea sagittalis on the absorptive characteristics of the gatrointestinal tract. Braz. Arch. Biol. Tech. 43(1), 95-99 EMEA HMPC. 2004. Final position paper on the use of herbal medicinal products containing methyleugenol. EMEA/HMPWP/337/03

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***Podophyllum* spp.**	Berberidaceae	Rhizome	Genus in which species may contain the resin podophyllin (3-6%) composed of cyclolignans, e.g. podophyllotoxin (20%), alpha and beta peltatins and their derivatives.		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Sultan P. et al. 2008. Assessment of diversity in Podophyllum hexandrum by genetic and phytochemical markers. Scientia Horticulturae. 115(4), 398-408. Barnes J., Anderson L.A., Phillipson J.D. 2007. Herbal Medicines. 3rd ed. Ed. Pharmaceutical Press. ISBN 978-0-85369-623-0 Rosenstein G. et al. 1976. Podophyllum - a dangerous laxative. Pediatrics. 57: 419-421.
***Polygala* spp.**	Polygalaceae	Rhizome		Genus in which species may contain triterpene saponins. Long term use may induce irritation of gastrointestinal tract.	Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Barnes J., Anderson L.A., Phillipson J.D. 2007. Herbal Medicines. 3rd ed. Ed. Pharmaceutical Press. ISBN 978-0-85369-623-0
***Polygonatum* spp.**	Asparagaceae	Whole plant		Genus in which species may contain steroidal saponins. Species formerly thought to contain cardiac glycosides. However recent studies could not confirm their presence.	Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Polygonum multiflorum* Thunb.**	Polygonaceae	Root	Anthraquinones : e.g. emodin, chrysophanol		Australian Government:CMEC 58, Complementary Medicines Evaluation Committee; Extracted Ratified Minutes Fifty-eighth Meeting 18 August 2006 Yu J. et al. 2011. Hepatoxicity of major constituents and extractions of Radix Polygoni Multiflori and Radix Polygoni Multiflori Praeparata. J Ethnopharmacol. 137(3),1291-9.
Polypodium filix-mas L. **See *Dryopteris filix-mas* (L.) Schott.**					
***Poncirus trifoliata* (L.) Raf.**	Rutaceae	Fruit	Acridone alkaloids: e.g. 5-hydroxy-norachronycine		Wu T-S. et al. 1986. The first isolation of an acridone alkaloid from *Poncirus trifoliata*. J Nat Prod. 49(6), 1154-1155.
***Populus nigra* L.**	Salicaceae	Bark and bud		Buds : benzoylsalicin Bark: salicylalcohol glycoside: salicin (2.4%), salicortin and their benzoyl derivatives: e.g. populin, tremulodin	Barnes J., Anderson L.A., Phillipson J.D. 2007. Herbal Medicines. 3rd ed. Ed. Pharmaceutical Press. ISBN 978-0-85369-623-0
***Populus tremula* L.**	Salicaceae	Bark and bud		Buds : benzoylsalicin Bark: salicylalcohol glycoside: salicin (2.4%), salicortin and their benzoyl derivatives: e.g. populin, tremulodin	Barnes J., Anderson L.A., Phillipson J.D. 2007. Herbal Medicines. 3rd ed. Ed. Pharmaceutical Press. ISBN 978-0-85369-623-0
***Potentilla erecta* (L.) Raeusch.**	Rosaceae	Whole plant		Rich in tannins (15 to 20%). Hydrolysable tannins used at high doses over long periods may have a negative impact on liver function.	Council of Europe. 2007. Natural sources of flavourings. Report No. 2. Council of Europe Publishing. ISBN 978-92-871-6156-7 American Herbal Products Association. 1997. Botanical Safety Handbook. Mc Guffin M (Ed). ISBN: 0-8493-1675-8
***Potentilla reptans* L.**	Rosaceae	Whole plant		Tannins from 6 to 12%. Hydrolysable tannins used at high doses over long periods may have a negative impact on liver function.	PDR for Herbal Medicines. 2004 Thomson ed. ISBN: 1-56363-5125-7
***Prunella vulgaris* L.**	Lamiaceae (Labiatae)	Flowerhead		Antioestrogenic activity but compounds not identified	Collins N.H. et al. 2009. Characterization of antiestrogenic activity of the Chinese herb, *Prunella vulgaris*, using *in vitro* and *in vivo* (Mouse Xenograft) models. Biol Reprod. 80(2):375-383. (Erratum in: Biol Reprod. 2009 Jun;80(6):1306).
***Prunus* spp.**	Rosaceae	Fruit, leaf and seed	Genus in which species may contain cyanogenic glycosides: e.g. amygdalin, prunasin	Teratogenic effects of *Prunus serotina* (leaves and bark) have been reported in swine	Natural sources of flavourings (Rep No 3), Council of Europe, (2008) PDR for Herbal Medicines. 2004 Thomson ed. ISBN: 1-56363-5125-7 Frohne. D. and Pfänder. J. A Colour Atlas of Poisonous Plants. Wolfe 1984 ISBN 0723408394 Selby L.A. et al.1971. Outbreak of swine malformation associated with the wild black cherry,Prunus. Arch Environ Health.22(4), 496-501. Fitzgerald T.D. 2008. Larvae of the fall webworm, Hyphatera cunea, inhibit cyanogenesis in Prunus. J Exp Biol. 211, 671-677. Zhou J. et al. 2002. Investigation of the microheterogeneity and aglycone specificity conferring residues of black cherry prunasin hydrolases. Plant Physiol. 129(3), 1253-1264
***Pseudocaryophyllus guili* (Speg.) Burret**	Myrtaceae	Fruit and leaf	Phenylpropanoids: e.g. methyleugenol (5%)		De Fenik I.J.S. et al.1972. Essential oil of Pseudocaryophillus guili. An Acad Bras Cien. 44(suppl.),175-180.
***Psoralea* spp.**	Leguminosae (Fabaceae)	Fruit and seed	Genus in which species may contain furanocoumarines: e.g. psoralen		Frohne D., Pfänder H.J. and Anton R. 2009. « Plantes à risques », Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Psychotria viridis* Ruiz. et Pav.**	Rubiaceae	Whole plant	Indole alkaloids (tryptamine derivatives) : e.g. N,N-dimethyltryptamine		Reyna Pinedo V. et al.1994. Isolation of the alkaloid N,N-dimethyltryptamine from chracuna (*Psychotria viridis* R.& P. Bol Soc Quim Peru. 60(1), 21-23. Blackledge R. et al. 2003. *Psychotria viridis*-a botanical source of dimethyltryptamine (DMT).Microgram Journal. 1(1-2),18-22.
***Pteridium aquilinum* (L.) Kuhn.**	Dennstaedtiaceae (Hypolepidaceae)	Whole plant	Norsesquiterpene glucosides : e.g. ptaquiloside. Presence of thiaminase and cyanogenic glycoside: prunasin	The biotransformation of the carcinogenic ptaquilosides gives rise to the neurotoxic ptaquiloside B	Frohne D., Pfänder H.J. and Anton R. 2009. « Plantes à risques », Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Pueraria candollei* Benth. var. *mirifica* (Airy Shaw & Suvat.) Niyomdham** (*Pueraria mirifica* Airy Shaw & Suvat.)	Leguminosae (Fabaceae)	Tuber	Isoflavones: miroestrol, deoximiroestrol, daidzein, genistein, …	Extracts of P. mirifica induced higher frequencies of micronuclei Novel Food Catalogue: not authorised for food or food supplement use	Saenphet K. et al.2005. Mutagenicity of *Pueraria mirifica* Airy Shaw & Suvatabandhu and antimutagenicity of Thunbergia laurifolia Linn. Southeast Asian J Trop Med Public Health.36 (Suppl 4),238-241. Jaroenporn S. et al. 2007. Assessment of fertility and reproductive toxicity in adult female mice after long-term exposure to *Pueraria mirifica* herb. J Reprod Dev. 53(5), 995-1005.
Pueraria mirifica Airy Shaw & Suvat. **See *Pueraria candollei* Benth. var. *mirifica* (Airy Shaw & Suvat.) Niyomdham**					
***Pulmonaria officinalis* L.**	Boraginaceae	Root	Possible presence of pyrrolizidine alkaloids		Frohne D., Pfänder H.J. and Anton R. 2009. « Plantes à risques », Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1 Lüthy J. et al. 1984. Pyrrolizidine alkaloids in medicinal plants of *Boraginaceae: Borago officinalis* L. and *Pulmonaria officinalis* L. Pharm Acta Helv.59(9-10):242-6.
***Pulsatilla pratensis* Mill.**	Ranunculaceae	Aerial part	Unsaturated lactone : protoanemonin	Protoanemonin only present in fresh herb	Frohne D., Pfänder H.J. and Anton R. 2009. « Plantes à risques », Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1

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***Pulsatilla vulgaris* Mill.** *(Anemona pulsatilla* L.*)*	Ranunculaceae	Aerial part	Unsaturated lactone : protoanemonin	Protoanemonin only present in fresh herb	Frohne D., Pfänder H.J. and Anton R. 2009. « Plantes à risques », Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Punica granatum* L.**	Lythraceae (Punicaceae)	Fruit, root cortex and tree bark	Piperidine alkaloids (0.5-0.7%): e.g. pelletierine, iso-pelletierine, methylisopelletierine and tropane alkaloids: e.g. pseudopelletierine	The fruit hydroalcoholic extract is genotoxic *in vitro* and *in vivo*.	Sánchez-Lamar A. et al. 2008. Assessment of the genotoxic risk of *Punica granatum* L. (Punicaceae) whole fruit extracts. J Ethnopharmacol. 12;115(3),416-422. Malik, A. et al 2005, Pomegranate, Punica granatum and its potential for chemoprevention and chemotherapy of prostate cancer, Proc. Natl. Acad. Sci, USA, 102, 14813-14818 Schmidt A et al. 2005. Investigation of a betainic alkaloid from Punica granatum. Nat Prod Res. (5), 541-546
***Putranjiva roxburghii* Wall.**	Putranjivaceae	Leaf and seed	Seed: proteic trypsin inhibitor	Leaf extract of Putranjiva roxburghii at 0.5, 1.0 or 2.0 g/kg body weight/day given orally for seven days to mice induced mitosis-disruptive chromosomal changes in bone marrow cells.	Awasthy K.S.et al.2000. Cytogenetic toxicity of leaf extract of *Putranjiva roxburghii*, a medicinal plant. J Toxicol Sci.25(3),177-180. Chaudhary N.S. et al. 2008. Purification and characterization of a trypsin inhibitor from *Putranjiva roxburghii* seeds. Phytochemistry. 69(11), 2120-2126.
***Pyrularia pubera* Michx.**	Santalaceae	Fruit and seed	Polypeptides: e.g. purothionin, viscotoxin, phoratoxin, crambim and thionin		Russell AB. et al. 1997. Poisonous Plants of North Carolina. North Carolina State University. Osorio e Castro VR. et al. 2001. Binding to and hemolysis of human erythrocytes by pyrularia thionin and Naja naja kaouthia cardiotoxin: inhibition by prothrombin. J Nat Toxins.10(3), 255-268.
***Quassia* spp.**	Simaroubaceae	Wood	Genus in which species may contain quassinoids (nortriterpenoids): e.g. quassin and/or indole alkaloids: e.g. beta-carboline, canthin-6-one	Reproductive toxicity in animals	Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3 Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Woo G.H. et al. 2007. Promoting potential of a Jamaica quassia extract in a rat medium-term hepatocarcinogenesis bioassay. Food Chem Toxicol. 45(7),1160-1164. Parveen S. et al. 2003. A comprehensive evaluation of the reproductive toxicity of *Quassia amara* in male rats. Reprod Toxicol. 17(1),45-50.
***Quercus* spp.**	Fagaceae	Bark, fruit and leaf		Genus in which species may contain high levels of tannins. Hydrolysable tannins used at high doses over long periods may have a negative impact on liver function. Inhibits trypsin-like proteases and alpha-amylases. Animal intoxication in a number of different countries and with different *Quercus* species	Frohne.D.S., Pfander H.J. and Anton R. 2009 Plantes à risques. Lavoisier ISBN 978-2-7430-0907-1 Medvedkov A.A. and Ivanshov A.V.1996. Seasonal dynamics of the content of proteins inhibiting trypsin-like proteases in the leaves of common oak (Quercus petraea Liebl. Ukr Biokhim Zh.68(6), 44-50. Zajacz A. et al. 2007. Aleppo tannin: structural analysis and salivary amylase inhibition. Carbohydr. Res. 342(5), 717-723 Perez V. et al. 2011. Oak leaf (Quercus pyrenaica) poisoning in cattle. Res. Vet. Sci. 91(2), 269-277
***Quillaja saponaria* Molina**	Quillajaceae (Rosaceae)	Bark	Calciumoxalate (11%) Triterpenoid saponins (quillaia saponins)		FAO/WHO JECFA. 2005. Quillaia extracts Type 1 and Type 2. Chemical and technical assessment 65th JECFA. Hu K. et al. 2010. Nanoparticulate *Quillaja* saponin induces apoptosis in human leukemia cell lines with a high therapeutic index. Int J Nanomedicine. 5,51-62.
***Ranunculus* spp.**	Ranunculaceae	Whole plant	Genus in which species may contain an unsaturated lactone : protoanemonin	Protoanemonin only present in fresh herb. In *Ranunculus ternatus* Thunb., two new indolopyridoquinazoline alkaloidal glycosides. In the root of *Ranunculus repens* L., two potent inhibitors of urease activity have been identified.	Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1 Zhang L. et al. 2007. Two new indolopyridoquinazoline alkaloidal glycosides from *Ranunculus ternatus*. Chem Pharm Bull (Tokyo). 55(8):1267-1269. Khan W. N. et al. 2006. New natural urease inhibitors from *Ranunculus repens*. J Enzyme Inhib Med Chem. 21(1):17-19.
***Rauvolfia* spp.**	Apocynaceae (Rubiaceae)	Whole plant	Genus in which species may contain indole alkaloids: e.g. reserpine, serpentine, yohimbine, ajmalicine		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Ravensara aromatica* Sonn.** *(Agathophyllum aromaticum* Willd.*)*	Lauraceae	Leaf	Essential oil: phenylpropanoids: e.g. methylchavicol (79.7%), methyleugenol (8.5%)		Ramanoelina P. A. R. et al. 2006. Chemical composition of R*avensara aromatica* Sonn. Leaf essential oils from Madagascar. Journal of Essential Oil Research. 18 (2),215-217
***Rhamnus* spp.**	Rhamnaceae	Bark and fruit	Genus in which species may contain hydroxyanthracene derivatives.	The fruits of *Rhamnus humboldtiana* Willd.ex Schult. contain neurotoxic substances (mainly diastereoisomers of some anthracenic dimeric derivatives or of anthracenes linked to a naphtalenic derivative).	Delmulle L and Demeyer K. 2010. Anthraquinones in plants. Source, safety and applications in gastrointestinal health. Nottingham University Press. ISBN: 978-1-897676-32-5
***Rheum* spp.**	Polygonaceae	Whole plant	Genus in which species may contain oxalates and hydroxyanthracene derivatives		Delmulle L and Demeyer K. 2010. Anthraquinones in plants. Source, safety and applications in gastrointestinal health. Nottingham University Press. ISBN: 978-1-897676-32-5 Frohne D., Pfänder H.J. and Anton R. 2009. « Plantes à risques », Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Rhododendron* spp.**	Ericaceae	Flower and leaf	Genus in which species may contain diterpenes: grayanotoxins: e.g. andromedotoxin		Frohne D., Pfänder H.J. and Anton R. 2009. « Plantes à risques », Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Rhodomyrtus* spp.**	Myrtaceae	Fruit		*R. macrocarpa* berries reported to cause permanent blindness in children but may be due to fungal toxins	Hazards in the wet tropics N°31 November 1995. Wet Tropics Management Authority - Queensland Department of Environment and Heritage. http://www.derm.qld.gov.au/register/p00820bc.pdf Trippett S. 1957. Toxic constituents of the Australian finger cherry, Rhodomyrtus macrocarpa benth. J. Chem. Soc., 1957, 414-419
***Rhus* spp.**	Anacardiaceae	Aerial part	Genus in which species may contain urushiols	Fresh fruits may contain high level of tannins. Hydrolysable tannins used at high doses over long periods may have a negative impact on liver function.	Frohne, Pfander and Anton, 2009 Frohne D., Pfänder H.J. and Anton R. 2009. « Plantes à risques », Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Rhynchosia* spp.**	Leguminosae (Fabaceae)	Root		*R. volubilis* Lour: Water and ethylacetate extracts from the root have negative impact on rats and mice pregnancy and reproduction	Wang J. G. et al. 2007. Comparison of the anti-fertility effects of four extracts from the roots of Rhynchosia volubilis Lour. Zhonghua Nan Ke Xue. 13(10),871-5.
***Ricinus communis* L.**	Euphorbiaceae	Seed	Toxalbumin: ricin		EFSA Panel on Contaminants in the Food Chain (CONTAM). 2008. Scientific opinion on ricin (from *Ricinus communis*) as undesirable substances in animal feed. The EFSA Journal. 726, 1-38

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***Rivea corymbosa* (L.) Hallier.f.**	Convolvulaceae	Aerial part and seed	Indole alkaloids (lysergic acid derivatives): e.g. lysergamide (ergine)		Taber W.A. and Heacock R.A.1962. Location of ergot alkaloid and fungi in the seed of *Rivea corymbosa* (L.) Hall.f., "oloiuqui". Can J Microbiol.8, 137-143. Frohne D., Pfänder H. J. et Anton R. «Plantes à risques », Ed. Tec et Doc-Lavoisier (2009), ISBN :978-2-7430-0907-1
***Robinia pseudoacacia* L.**	Leguminosae (Fabaceae)	Whole plant	Toxalbumins: robin (1,6% in bark), phasin		Hui A. et al. 2004. A rare ingestion of the Black Locust tree. J Toxicol Clin Toxicol.42 (1):93-95.
***Roemeria hybrida* (L.) DC.**	Papaveraceae	Whole plant	Beta carboline alkaloids: e.g. roecarboline, norroecarboline, roeharmine		Gozler B. and Shamma M. 1990. Four Beta Carboline Alkaloids from *Roemeria-hybrida* . J Nat Prod (Lloydia) 53, 740-3 Gozler B. 1990 Labrandine a New Pentacyclic Proaporphine Alkaloid from *Roemeria hybrida* . Heterocycles (Tokyo) 31, 149-152
***Rohdea japonica* (Thunb.) Roth**	Asparagaceae (Liliaceae)	Whole plant	Cardenolides: e.g. rhodexin A		Masuda T. et al. 2003. Cytotoxic screening of medicinal and edible plants in Okinawa, Japan, and identification of the main toxic constituent of *Rhodea japonica* (Omoto). Biosci Biotech Bioch.67(6):1401-1404.
***Rosmarinus officinalis* L.**	Lamiaceae (Labiatae)	Aerial part	Essential oil from the herb: bicyclic monoterpenes: e.g. camphor and monoterpene etheroxide: 1,8-cineole (13 to 31%) Essential oil from the leaf: monoterpene etheroxide: 1,8-cineole (11.2-47%) and bicyclic monoterpenes: e.g. camphor (13-31%) and monocyclic monoterpene ketone: pulegone (0.98%)		Council of Europe, 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Natural sources of flavourings (Rep No 3), Council of Europe, (2008)
***Rubia cordifolia* L.**	Rubiaceae	Root	1,3-Dihydroxy-2-hydroxymethyl-9,10-anthraquinone: lucidin		Westendorf J. et al. 1988.The genotoxicity of lucidin, a natural component of *Rubia tinctorum* L., and lucidinethylether, a component of ethanolic *Rubia* extracts. Cell. Biol. Toxicol. 4(2), 225-239
***Rubia tinctorum* L.**	Rubiaceae	Root	1,3-Dihydroxy-2-hydroxymethyl-9,10-anthraquinone: lucidin		Rubiae tinctorum radix / Krappwurzel BAnz. Nr.162 vom 29.08.1992. Monographien der E-Kommission. Bundesanzeiger Verlagsgesellschaft, Köln.
***Rubus idaeus* L.**	Rosaceae	Leaf		Oral administration to rats since the start of the gestation until parturation showed an increase of the gestation length. Female offspring (F1) showed precocious puberty age and a significant proportion of their offspring (F2) were growth restricted.	Johnson J. R. et al. 2009. Effect of maternal raspberry leaf consumption in rats on pregnancy outcome and the fertility of the female offspring. Reprod. Sci. DOI: 10,1177/1933719109332823
***Rumex* spp.**	Polygonaceae	Whole plant	Genus in which species may contain hydroxyanthracene derivatives and oxalates		Frohne D., Pfänder H.J. and Anton R. 2009. « Plantes à risques », Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Ruscus aculeatus* L.**	Asparagaceae	Rhizome		Contains steroidal saponins: e.g; ruscogenin, neoruscogenin.	Frohne, Pfander and Anton, 2009 Frohne D., Pfänder H.J. and Anton R. 2009. « Plantes à risques », Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Ruta* spp.**	Rutaceae	Whole plant	Genus in which species may contain furoquinoline alkaloids: e.g. dictamnine and furocoumarins: e.g. bergapten	Essential oil of the aerial part of Ruta graveolens shows abortifacient properties (probably due to the presence of methylnonylketone)	Frohne D., Pfänder H.J. and Anton R. 2009. « Plantes à risques », Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Salacia reticulata* Wight**	Celastraceae	Root		Adverse effect on pregnancy	Ratnasooriya W. D. et al. 2003. Adverse pregnancy outcome in rats following exposure to a *Salacia reticulata* (Celastraceae) root extract. Braz J Med Biol Res.36(7),931-935.
***Salix* spp.**	Salicaceae	Bark, bud, inflorescence and leaf	Genus in which species contain high concentrations of tannins (up to 20%) and the amentum may contain phytoestrogens	Salicylic glycosides (salicin, salicortin, saligenin, salireposide, picein, triandrin and tremulacin) in concentration from 0.04 to 12.06%. Salix intake possibly associated with Reyes syndrome. May induce or increase pre-natal jaundice	Kenstaviciene P. et al. 2009. Application of high-performance liquid chromatography for research of salicin in bark of different varieties of *Salix* . Medicina (Kaunas). 45(8), 644-51 Pugliese A., et al. 2008. Reye's and Reye's-like syndromes. Cell Biochem Funct 26: 741–746 Sangiorgi, E., Minelli, E.,Crescini. G. and Garzanti, S. (2007) Fitoterapia. Ed. Casa Editrice Ambrosiana. ISBN: 978-8808-18266-1
***Salvia divinorum* Epling et Jativa**	Lamiaceae (Labiatae)	Whole plant	Neoclerodane diterpene: e.g. salvinorin A		Babu K. M. et al. 2008. Opioid receptors and legal highs: *Salvia divinorum* and Kratom. Clin Toxicol (Phila).46(2), 146-52. Grundmann O. et al. 2007. *Salvia divinorum* and salvinorin A: an update on pharmacology and analytical methodology. Planta Med.73 (10):1039-46. (Erratum in Planta Med. 2007 Aug;73(10), 1139).
***Salvia fruticosa* Mill.**	Lamiaceae (Labiatae)	Leaf		Ingestion of aqueous and ethanolic extracts of Salvia fruticosa leaves by female and male rats (between 200 and 800 mg/kg) resulted in adverse effects on fertility of male and female rats	Elbetieha, A. et al. 1998. Reproductive toxicity potentials of Salvia fructicosa (Labiatae) in rats. J. Ethnopharmacol. 61, 67-74.
***Salvia lavandulifolia* Vahl** (*Salvia officinalis* ssp. *lavandulifolia* (Vahl) Gams)	Lamiaceae (Labiatae)	Aerial part	Essential oil: monoterpene etheroxide: 1,8-cineole (11.8- 41.2%) and bicyclic monoterpenes: e.g. camphor (10-39%).		Council of Europe. 2007. Natural sources of flavourings. Report No. 2. Council of Europe Publishing. ISBN 978-92-871-6156-7
***Salvia officinalis* L.**	Lamiaceae (Labiatae)	Aerial part	Essential oil from leaf: bicyclic monoterpenes: e.g.alpha-thujone (12-65%), beta-thujone (1.2-35.6%) (total thujone content 30-60%), camphor (4.4-30%) and monoterpene etheroxide: 1,8-cineole (8-22.5%); phenylpropanoids: e.g. methylchavicol		Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3 Raal et al. 2007. Composition of the essential oil of *Salvia officinalis* L. from various European countries. Nat Prod Res. 21(5):406-11.
***Salvia sclarea* L.**	Lamiaceae (Labiatae)	Aerial part	Essential oil from the herb: monoterpene etheroxide: 1,8-cineole (3.23%) and bicyclic monoterpenes: e.g. camphor (1%). Essential oil from the flower: 1,8-cineole (traces), camphor.		Council of Europe. 2007. Natural sources of flavourings. Report No. 2. Council of Europe Publishing. ISBN 978-92-871-6156-7 Kuzma L. et al. 2009. Chemical composition and biological activities of essential oil from *Salvia sclarea* plants regenerated in vitro. Molecules. 14, 1338-1447
***Sambucus canadensis* L.**	Adoxaceae (Caprifoliaceae)	Whole plant	Possible presence of cyanogenic glycosides ((S)-sambunigrin)	Branches, unripe berries or seeds of a number of different *Sambucus* species are characterised by the presence of substances able to induce gatrointestinal disorders	Buhrmester R. A. et al. 2000. Sambunigrin and cyanogenic variability in populations of *Sambucus canadensis* L. (Caprifoliaceae). Biochl Syst Ecol. 28(7), 689-695. Frohne D., Pfänder H.J. and Anton R. 2009. « Plantes à risques », Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Sambucus ebulus* L.**	Adoxaceae (Caprifoliaceae)	Whole plant	Cyanogenic glycoside: S-sambunigrin	Ethylacetate extract showing high toxicity in mice Presence of lectins in branches. Branches, unripe berries or seeds of a number of different Sambucus species are characterised by the presence of substances able to induce gastrointestinal disorders	Citores L. et al. 1998. Presence of polyme-rized and free forms of the non-toxic type 2 ribosome-inactivating protein ebulin and a structurally related new homodimeric lectin in fruits of *Sambucus ebulus* L. Planta. 204 (3), 310-319. Ebrahimzadeh M. A. et al. 2007. Separation of active and toxic portions in *Sambucus ebulus*. Pak J Biol Sci.10(22):4171-4173.

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***Sambucus nigra* L.**	Adoxaceae (Caprifoliaceae)	Whole plant	Cyanogenic glycoside: S-sambunigrin (3 to 17 mg HCN /100 g fresh weight in leaf and 3 mg HCN / 100g of fruit)	Presence of lectins in branches. Branches, unripe berries or seeds of a number of different Sambucus species are characterised by the presence of substances able to induce gastrointestinal disorders	Sangiorgi, E., Minelli, E.,Crescini. G. and Garzanti, S. (2007) Fitoterapia. (ed. Casa Editrice Ambrosiana). ISBN: 978-8808-18266-1 Frohne D., Pfänder H.J. and Anton R. 2009. « Plantes à risques », Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1 EMEA HMPC. 2007. Sambucus nigra L., flos - Assessment report for the development of community monographs and for inclusion of herbal substance(s), preparation(s) or combinations thereof in the list. EMEA/HMPC/283170/2007/Corr.
***Sanguinaria canadensis* L.**	Papaveraceae	Rhizome and root	Benzylisoquinoline alkaloids (protoberberines) : e.g. sanguinarine, chelerethrine, berberine, protopine		Frohne D., Pfänder H.J. et Anton R. « Plantes à risques », Ed. Tec et Doc-Lavoisier (2009), ISBN :978-2-7430-0907-1
***Sanicula europaea* L.**	Apiaceae (Umbelliferae)	Leaf		Triterpenoid saponins: saniculoside R-1, saniculoside N	Schöpke T. et al. 1998. Saniculoside R-1: a new triterpenoid saponin from *Sanicula europaea*. Planta Med.64(1):83-85. Arda et al. 1997. Saniculoside N from *Sanicula europaea* L. J Nat Prod.60(11):1170-1173.
***Sansevieria* spp.**	Asparagaceae (Agavaceae)	Leaf		Genus in which species may contain steroidal saponins	Mimaki Y. et al. 1996. Steroidal saponins from *Sansevieria trifasciata*. Phytochemistry. 43(6), 1325-1331
***Saponaria officinalis* L.**	Caryophyllaceae	Whole plant		Triterpenoid saponins: saponarioside A and B (major) and others. These saponins are also called sapotoxins as they are among the most irritating saponins.	Girbes T. and Ferreras J.M. 2004. Description, distribution, activity and phylogenetic relationship of ribosome inactivating proteins in plants,funghi & bacteria.Mini Rev Chem. 4(5),461-476 Flavell D. J.1998. Saporin immunotoxins. Curr Top Microbiol Imunol.234, 57-61. Kolke K et al. 1999. New triterpenoid saponins and sapogenins from *Saponaria officinalis*. J. Nat. Prod.62(12), 1655-1659
***Sassafras* spp.**	Lauraceae	Whole plant	Genus in which species may contain in their essential oil phenylpropanoids: e.g. safrole, isosafrole, methyleugenol		Teuscher E., Anton R. et Lobstein A. « Plantes aromatiques », Ed. Tec et Doc-Lavoisier (2005), ISBN : 2-7430-0720-6 Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3
***Satureja montana* L.**	Lamiaceae (Labiatae)	Aerial part	Essential oil: monoterpene etheroxide: 1,8-cineole (0.59%) and bicyclic monoterpenes: e.g. camphor (0.21%) and phenylpropanoids: e.g. methyleugenol (25 -415 ppm).		Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3
***Sauropus androgynus* (L.) Merr.**	Phyllanthaceae	Leaf	Benzylisoquinoline alkaloids: e.g. papaverine (0.5%)	In Taiwan, lung problems seen with high intake of leaves.	Kao C.H. et al. 1999. Using 99mTc-DTPA radioaerosol inhalation lung scintigraphies to detect the lung injury induced by consuming *Sauropus androgynus* vegetable and comparison with conventional pulmonary function tests. Respiration. 66, 46-51
***Saussurea* spp.**	Compositae (Asteraceae)	Whole plant		*Saussurea lappa* reported to be mutagenic (Ames test)	PDR for Herbal Medicines. 2004 Thomson ed. ISBN: 1-56363-5125-7 Riazuddin S. et al. 1987. Mutagenicity testing of some medicinal herbs. Environ. Mol. Mutagen. 10(2), 141-148
Sceletium spp. **See *Mesembryanthemum* spp.**					
***Schefflera* spp.**	Araliaceae	Aerial part	Genus in which species may contain calcium oxalate raphides		Frohne D., Pfänder H.J. et Anton R. « Plantes à risques », Ed. Tec et Doc-Lavoisier (2009), ISBN :978-2-7430-0907-1
***Schinus terebinthifolius* Raddi**	Anacardiaceae	Bark and stem		Stem bark decoction showing mutagenic properties (Ames test)	de Carvalho M.C. et al. 2003. Evaluation of mutagenic activity in an extract of pepper tree stem bark (Schinus terebinthifolius Raddi). Environ Mol Mutagen.42(3),185-91.
***Schoenocaulon officinale* Gray** *(Sabadilla officinarum* Brandt et Ratzeb.*)*	Melanthiaceae (Liliaceae)	Seed	Steroidal alkaloids: e.g. veratrine (mixture of cevadine, veratridine)		Nelson L. S., Shih R. D. and Balick M. J. 2007. Handbook of poisonous and injurious plants. 2nd edition. Springer. ISBN: 0-387-31268-4
***Scindapsus* spp.**	Araceae	Aerial part	Genus in which species may contain oxalate raphides and inflammatory protein derivatives		Nelson L. S., Shih R. D. and Balick M. J. 2007. Handbook of poisonous and injurious plants. 2nd edition. Springer. ISBN: 0-387-31268-4
***Scopolia* spp.**	Solanaceae	Whole plant	Genus in which species may contain tropane alkaloids: e.g. hyoscyamine, atropine, scopolamine, and tetrahydroxy-nortropane alkaloids: calystegines.	The fresh plant contains hyoscyamine, twice more active than atropine (racemic mixture)	Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7 Cheng, S.W. et al. 2002. Anticholinergic Poisoning from a large dose of Scopolia Extract, Vet. Hum. Toxicol. 44, 222-223 Asano N. et al. 1996. Calystegine B4, a novel trehalase inhibitor from Scopolia japonica. Carbohydr Res.293(2):195-204
***Scutellaria baicalensis* Georgi**	Lamiaceae	Leaf and stem		O-methylated flavone: wogonin; long term administration of 120 mg of wogonin per kg to rats resulted in heart injury	Qi et al. 2009. Toxicological studies of wogonin in experimental animals. Phytother.Res.,23(3), 417-422
***Sedum acre* L.**	Crassulaceae	Flower and leaf	Alpha substituted piperidine alkaloids : e.g. sedacrine		Frohne D., Pfänder H.J. and Anton R. 2009. « Plantes à risques », Ed. Tec et Doc-Lavoisier, ISBN :978-2-7430-0907-1
***Semecarpus anacardium* L.f.**	Anacardiaceae	Fruit	Phenolic acids: e.g. anacardic acid, urushiol III		Kesava Rao K. V. et al. 1979. Toxicological study of *Semecarpus anacardium* nut extract. Indian J Physiol Pharmacol.23(2):115-120.
***Senecio* spp.**	Compositae (Asteraceae)	Whole plant	Genus in which species may contain unsaturated pyrrolizidine alkaloids: e.g. senecionine, riddelliine		International Agency for Research in Cancer (IARC)(2002) Senecio species and riddelliine. Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7
***Serenoa repens* (W.Bartram) Small**	Arecaceae	Fruit		Lipido-sterolic fraction: reported anti-androgenic and anti-estrogenic activity.	Sangiorgi, E., Minelli, E.,Crescini. G. and Garzanti, S. (2007) Fitoterapia. (ed. Casa Editrice Ambrosiana. ISBN: 978-8808-18266-1 Firenzuoli,F. (2009) Fitoterapia.Quarta Edizione. (editore Elsevier S.r.l- Milano).ISBN 978-88-214-2981-1. Pages 349-352. Tacklind J, MacDonald R, Rutks I, Wilt TJ. Serenoa repens for benign prostatic hyperplasia. Cochrane Database of Systematic Reviews 2009, Issue 2. Art. No.: CD001423. DOI: 10.1002/14651858.CD001423.pub2
***Sesbania* spp.**	Leguminosae (Fabaceae)	Whole plant	Genus in which species may contain toxic amino acids: e.g. L-canavanine	Sesbanimide A (glutarimide derivative) causing diarrhea and CNS depression	Frohne D., Pfänder H.J. et Anton R. « Plantes à risques », Ed. Tec et Doc-Lavoisier (2009), ISBN :978-2-7430-0907-1
***Sida acuta* Burm.f.**	Malvaceae	Whole plant	Phenylethylamines: e.g. ephedrine (0.006% in dried root, 0.04% in aerial part)		Khatoon S. et al. 2005. HPTLC method for chemical standardization of Sida species and estimation of the alkaloid ephedrine. Journal of Planar Chromatography 18, 364-367.

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***Sida cordifolia* L.**	Malvaceae	Whole plant	Polyhydroxyindolizidine alkaloids and derivatives: e.g. swainsonine Indoloquinoline alkaloids: e.g. cryptolepine. Phenylethylamines: e.g. ephedrine (0.007% in dried root, 0.112% in aerial part) and pseudoephedrine		Matsui T.A. et al. 2007. The plant alkaloid cryptolepine induces p21WAF1/CIP1 and cell cycle arrest in a human osteosarcoma cell line. Int J Oncol.31(4),915-922. Marchei E. et al. 2006. A rapid and simple procedure for the determination of ephedrine alkaloids in dietary supplements by gas chromatography-mass spectrometry. J Pharm Biomed.41(5),1633-1641. Khatoon S. et al. 2005. HPTLC method for chemical standardization of Sida species and estimation of the alkaloid ephedrine. Journal of Planar Chromatography 18, 364-367.
***Sida rhombifolia* L.**	Malvaceae	Whole plant	Phenethylamines, e.g. ephedrine (0.031% in dried root, 0.017% in aerial part), quinazolines and carboxylated tryptamines		Matsui T.A. et al. 2007. The plant alkaloid cryptolepine induces p21WAF1/CIP1 and cell cycle arrest in a human osteosarcoma cell line. Int J Oncol. 31(4),915-922. Marchei E. et al. 2006. A rapid and simple procedure for the determination of ephedrine alkaloids in dietary supplements by gas chromatography-mass spectrometry. J Pharm Biomed. 41(5):1633-1641. Prakash A. et al. 1981. Alkaloid constituent of Sida acuta, S. humilis, S. rhombifolia and S. spinosa. Planta Med. 43(4), 384-388 Khatoon S. et al. 2005. HPTLC method for chemical standardization of Sida species and estimation of the alkaloid ephedrine. Journal of Planar Chromatography 18, 364-367.
***Sinomenium acutum* (Thunb.) Rehder & E.H.Wilson**	Menispermaceae	Whole plant	Isoquinoline alkaloids (morphinanes): sinomenine	Convulsive central excitation at high doses in animals.	Yamasaki H. 1976. Pharmacology of sinomenine, an anti-rheumatic alkaloid from *Sinomenium acutum*. Acta Med Okayama. 30(1), 1-20.
***Smilax aspera* L.**	Smilacaceae (Liliaceae)	Root		Presence of steroidal saponins: e.g. curilin G, asparagoside E, asparoside B that are poorly absorbed	Belhouchet Z. et al. 2008. Steroidal saponins from the roots of Smilax aspera subsp. mauritanica. Chem. Pharm.Bull (Tokyo). 56(9), 1324-1327
***Smilax officinalis* Kunth** (*Smilax tonduzii* Apt., *Smilax vanilliodora* Apt.)	Smilacaceae (Liliaceae)	Root		Steroidal saponins: sarsaporin,parallin, sarsasapogenin, neotigogenin that are poorly absorbed	British Herbal Pharmcopeia, Edition1983 Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Bernardo R. R. et al. 1996. Steroidal saponins from *Smilax officinalis*. Phytochemistry. 43(2) , 465-469.
***Solandra* spp.**	Solanaceae	Whole plant	Genus in which species may contain tropane alkaloids: e.g. L-hyoscyamine, scopolamine	The fresh plant contains hyoscyamine, twice more active than atropine (racemic mixture)	Wiart Ch. 2006. Medicinal plants of the Asia-Pacific. World Scientific Publishing Co. Pte. Ltd. ISBN 981-256-341-S
***Solanum* spp.**	Solanaceae	Whole plant	Genus in which species may contain glycosidic steroidal alkaloids: e.g. solanidine, tomatidine,...		Keeler R. F. et al. 1990. Spirosolane-containing *Solanum* species and induction of congenital craniofacial malformations. Toxicon.28(8), 873-874. Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Solenostemma argel* (Delile) Hayne**	Apocynaceae	Leaf and stem	Leaf: pregnane ester glycosides: e.g. stemmosides a & b	Latex known to induce purgative effect	Plaza A. et al. 2005. New unusual pregnane glycosides with antiproliferative activity from Selenostemma argel. Steroids. 70(9), 594-603 Arafa L. Hamed. 2001. New steroids from Solenostemma argel leaves. Fitoterapia. 72(7), 747-755 Hassan HA. et al. 2001. Pregnane derivatives from Solenostemma argel. Phytochemistry. 57, 507-511
***Sophora japonica* L.** (*Styphnolobium japonicum* (L.) Schott.)	Leguminosae (Fabaceae)	Fruit and seed	Seed: quinolizidine alkaloids: e.g. cytisine, N-methyl cytisine, matrine, sophorine	Fruit: abortifacient effect reported.	Evans WC. (2009) Trease and Evans Pharmacognosy. Elsevier. ISBN: 978-0-7020-2933-2 Hempen CH. and Fischer T. 2009, A Materia Medica for Chinese Medicine. Churchill Livingstone. Elsevier. ISBN: 978-0443-10094-9 PDR for Herbal Medicines. 2004 Thomson ed. ISBN: 1-56363-5125-7
***Sophora secundiflora* (Ortega) Lag. ex DC.**	Leguminosae (Fabaceae)	Seed	Quinolizidine alkaloids: e.g. cytisine (0,25%), N-methylcytisine, anagyrine, epi-lupinine, delta-5-dehydrolupanine		Hatfield et al. 1977. An investigation of *Sophora secundiflora* seeds (Mescalbeans). Lloydia. 40(4), 374-383. Izadoost et al. 1976. Structure and toxicity of alkaloids and amino acids of *Sophora secundiflora*. J Pharm Sci. 65(3), 352-354.
***Sophora tonkinensis* Gagnepain**	Leguminosae (Fabaceae)	Root	Quinolizidine alkaloids: e.g. cytisine, methylcytisine, tonkinensines A and B		Ding PL. Et al. 2005. Determination of quinolizidine alkaloids in Sophora tonkinensis by HPCE. Phytochem. Analysis. 16(4), 257-263
***Spartium junceum* L.**	Leguminosae (Fabaceae)	Whole plant	Quinolizidine alkaloids: e.g. cytisine, sparteine		Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7
Spathiphyllum spp.	Araceae	Whole plant	Genus in which species may contain calcium oxalate raphides and proteolytic enzymes		Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7
***Spigelia* spp.**	Loganiaceae	Aerial part	Genus in which species may contain actinidine-type monoterpene alkaloids and diterpene alkaloids (ryanodines: e.g. spiganthine, spigeline)		Morais S.M. et al. 2002. Chemical investigation of Spigelia anthelmiaL. used in Brazilian folk medicine as anthelmintic. Rev. Bras. Farmacogn., 12, supl., 81-82. Hubner H. et al. 2001. Minor constituents of Spigelia anthelmia and their cardiac activities. Phytochemistry 57, 285-296. Achenbach H. et al. 1995. Spiganthine, the cardioactive principle of Spigelia anthelmia. J Nat Prod. 58(7),1092-1096.
***Sprekelia* spp.**	Amaryllidaceae	Bulb	Genus in which species may contain isoquinoline alkaloids (Amaryllidaceae alkaloids): e.g. lycorine, pseudolycorine, ismine		Hohmann J. et al. 2002 Antiproliferative Amaryllidaceae alkaloids isolated from the bulbs of Sprekelia formosissima and Hymenocallis festalis. Planta Med. 68, 454-457. Roth, Daunderer, Kormann; Giftpflanzen Pflanzengifte, Comed Verlagsgesellschaft, 4th ed. 1994. ISBN 3-609-61810-4
***Steganotaenia araliacea* Hochst.**	Apiaceae (Umbelliferae)	Bark and stem	Lignans: e.g. steganacin, dibenzocyclooctadiene lactone, 10-demethoxystegane, steganone, prestegane B.		Agunu A. et al. 2005. Diuretic activity of the stem-bark extracts of Steganotaenia araliacea hochst [Apiaceae]. J. Ethnopharmacol. 96(3), 471-475. Evans WC. (2009) Trease and Evans Pharmacognosy. Elsevier. ISBN: 978-0-7020-2933-2 Meragelman K.M. et al. 2001. 10-Demethoxystegane, a new lignan from Steganotaenia araliacea. J Nat Prod. 64 (11) , 1480–1482.

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***Stephania* spp.**	Menispermaceae	Root	Genus in which species may contain bisbenzyltetrahydroisoquinoline alkaloids: e.g. tetrandrine, fangchinoline, and/or hasubanan alkaloids, e.g. runanine and cepharanthine.		Zhi-Da M. et al. 1985. Alkaloids of Stephania sinica. Phytochemistry, 24(12), 3084-3085. Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7
***Sternbergia* spp.**	Amaryllidaceae	Whole plant	Genus in which species may contain isoquinoline alkaloids (Amaryllidaceae alkaloids): e.g. lycorine, galanthamine, sternbergine, hippamine, ...		Unver N. et al. 2005. Antimicrobial activity of Sternbergia sicula and Sternbergia lutea. Fitoterapia 76, 226–229. Evidente A. 1986. Isolation and structural characterization of lutessine, a new alkaloid from bulbs of Sternbergia lutea. J Nat Prod. 49, 90–94. Pabuççuoglu V. et al. 1989. Four New Crinine-Type Alkaloids from Sternbergia Species. J. Nat. Prod., 52 (4), 785–791. Kaya GI et al. 2010. HPLC - DAD analysis of lycorine in Amaryllidaceae species. Nat Prod Commun. 5(6), 873-6.
***Stillingia sylvatica* L.**	Euphorbiaceae	Root	diterpenes, cyanogenic glycosides	Fresh root: caustic latex	American Herbal Products Association. 1997. Botanical Safety Handbook. Mc Guffin M (Ed). ISBN: 0-8493-1675-8
***Streblus asper* (Retz.) Lour.** (*Trophis aspera* Retz.)	Moraceae	Root bark	Cardiac glycosides: e.g. asperosid, strebloside, mansonin.		Rastogi S. et al.. 2006, Streblus asper Lour. (Shakhotaka): a review of ist chemical pharmacological and ethnomedicinal properties. Advance Access publication. 11, 216-221
***Strophanthus* spp.**	Apocynaceae	Seed	Genus in which species may contain cardenolide glycosides: e.g. oubaine and aglycones: e.g. strophanthidin		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Strychnos* spp.**	Loganiaceae	Fruit and seed	Genus in which species may contain indole alkaloids (e.g. strychnine) and/or bisbenzylisoquinoline alkaloids (e.g. tubocurarine)		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
Styphnolobium japonicum (L.) Schott. **See *Sophora japonica* L.**					
***Symphoricarpus albus* S.F.Blake**	Caprifoliaceae	Fruit		Reported gastrointestinal irritating effect. Substance not defined	Roth, Daunderer, Kormann; Giftpflanzen Pflanzengifte, Comed Verlagsgesellschaft, 4th ed. 1994. ISBN 3-609-61810-4
***Symphytum* spp.**	Boraginaceae	Whole plant	Genus in which species may contain unsaturated pyrrolizidine alkaloids		Wichtl M. and Anton R. 2003. Plantes thérapeutiques (Tradition, pratique officinale, science et thérapeutique), Ed. Tec & Doc, Lavoisier, Paris, 2ème édition, 692 pages, ISBN : 2-7430-0631-5
***Syzygium aromaticum* (L.) Merr. & L.M.Perry** (*Caryophyllus aromaticus* L., *Eugenia caryophyllata* Thunb. (nom. illeg.) Mansfeld)	Myrtaceae	Flower bud (clove)	Essential oil: phenylpropanoids: e.g. methylchavicol (59.3%), methyleugenol (310-340 ppm)		Teuscher E., Anton R. et Lobstein A. 2005. Plantes aromatiques (Epices, aromates, condiments et huiles essentielles), Ed. Tec et Doc-Lavoisier. ISBN : 2-7430-0720-6
***Tabebuia* spp.**	Bignoniaceae	Bark	Genus in which species may contain naphtoquinones : e.g. lapachol and beta-lapachone		Etkin N.L. 1986. Plants in indigenous medicine & diet: biobehavioral approaches. Volume 1. Routledge. ISBN: 0913178020, 9780913178027
Tabebuia heptaphylla (Vell.) Toledo **See *Handroanthus heptaphyllus* (Vell.) Mattos**					
Tabebuia ipe (K.Schum.) Standl. **See *Handroanthus heptaphyllus* (Vell.) Mattos**					
***Tabernanthe iboga* Baill.**	Apocynaceae	Whole plant	Indole alkaloids: e.g. ibogaine,		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Tagetes* spp.**	Compositae (Asteraceae)	Whole plant	Genus in which the essential oil of some species may contain the phenylpropanoid methylchavicol		Roth, Daunderer, Kormann; Giftpflanzen Pflanzengifte, Comed Verlagsgesellschaft, 4th ed. 1994. ISBN 3-609-61810-4
Tamus communis L. **See *Dioscorea* spp.**					
***Tanacetum balsamita* L.**	Compositae (Asteraceae)	Aerial part	Essential oil from the aerial parts at full flowering stage: monocyclic monoterpene ketone: carvone (51%); bicyclic monoterpenes: beta-thujone (20.8%), alpha-thujone (3.2%); monoterpene etheroxide: 1,8-cineole (4.4%)		Jaimand, K.; Rezaee, M.B. 2005. Chemical constituents of essential oils from Tanacetum balsamita L. ssp. balsamitoides (Schultz-Bip.) Grierson. from Iran. Journal of Essential Oil Research, 17(5), 565-566. Yousefzadi M. et al. 2009. Cytotoxicity, antimicrobial activity and composition of essential oil from Tanacetum balsamita L. subsp. balsamita. Nat. Prod. Commun. 4(1):119-122.
***Tanacetum cinerariifolium* (Trevir.) Sch.Bip.** (*Chrysanthemum cinerariifolium* (Trevir). Vis., *C. cinerariaefolium* (Trevir). Vis., *Tanacetum cinerariaefolium* (Trevir.) Sch.Bip.)	Compositae (Asteraceae)	Aerial part	Leaf : monoterpenes: pyrethrins		Matsuda K. et al. 2005. Biosynthesis of pyrethrin I in seedlings of Chrysanthemum cinerariaefolium. Phytochemistry 66(13), 1529-1535.
***Tanacetum parthenium* (L.) Sch.Bip.** (*Chrysanthemum parthenium* (L.) Bernh.)	Compositae (Asteraceae)	Aerial part	Sesquiterpene lactone: parthenolide Essential oil: bicyclic monoterpenes: e.g. camphor (42-64%)		Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf Heptinstall S. et al. 1992. Parthenolide content and bioactivity of feverfew (Tanacetum parthenium (L.) Schultz-Bip.). Estimation of commercial and authenticated feverfew products. J Pharm Pharmacol. 44(5):391-395.
***Tanacetum vulgare* L.** (*Chrysanthemum vulgare* (L.) Bernh.)	Compositae (Asteraceae)	Aerial part	Essential oil (0.12-0.18%): bicyclic monoterpenes: camphor (up to 90%), thujones (up to 80%) and monoterpene etheroxide: 1,8-cineole.		Holopainen M. et al. 1987. A study on tansy chemotypes. Planta Medica, 53 (3), 284-287. Council of Europe. 2005. Active principles (constituents of chemical concern) contained in natural sources of flavourings. Ed. Council of Europe Publishing. http://www.coe.int/t/e/social_cohesion/soc-sp/public_health/Flavouring_substances/Active%20principles.pdf)
***Taxus* spp.**	Taxaceae	Whole plant except aril	Genus in which species may contain diterpenic pseudoalkaloids (taxoids): e.g. taxine, taxol, cephalomannine		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8

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***Tephrosia* spp.**	Leguminosae (Fabaceae)	Whole plant	Genus in which species may contain rotenoids: e.g. rotenone		Irvine JE. and Frey RH. 1959. Source materials for rotenone, occurence of rotenoids in some species of the genus Tephrosia. J. Agri. Food Chem. 7(2), 106-107. Suliman HB. et al. 1982. The toxic effects of Tephrosia apollinea on goats. Journal of Comparative Pathology, 92 (2), 309-315.
***Teucrium* spp.**	Lamiaceae (Labiatae)	Aerial part	Genus in which species may contain furanoneoclerodane diterpenoids: e.g. teucrins		Mostefa-Kara et al. 1992. Fatal hepatitis after herbal tea. Lancet 340, 674 Fau D. et al. 1997. Diterpenoids from germander, an herbal medicine, induce apoptosis in isolated rat hepatocytes. Gastroenterology, 113(4): 1334-1346 Rodriguez M.C., et al. 1984. Isoteuflidin, a neo-clerodane diterpenoid from *Teucrium chamaedrys*, and revised structures of teucrins F and G. Phytochemistry 23: 1465-1469.
***Thapsia* spp.**	Apiaceae (Umbelliferae)	Fruit	Genus in which the essential oil of some species may contain the phenylpropanoid methyleugenol		EMEA HMPC. 2005. Public statement on the use of herbal medicinal products containing methyleugenol. EMEA/HMPC/138363/2005. Avato P. et al. 1998. Effect of Thapsia Essential Oils on Bile Composition in Rats. Pharmaceutical Biology (Formerly International Journal of Pharmacognosy), 36 (5), 335-340. Avato P. et al. 1996. Essential oils from fruits of three types of Thapsia villosa. Phytochemistry, 43(3), 609-612.
***Thermopsis lanceolata* R.Br.**	Leguminosae (Fabaceae)	Flower and seed	Quinolizidine alkaloids: e.g. cytisine, thermopsine, anagyrine,		Panter KE. and Keeler RF. 1993. Quinolozidine and piperidine alkaloid teratogens from poisonous plants and their mechanism of action in animals. Vet. Clin. North Am. Food Anim. Pract. 9(1), 33-40. Keeler RF. and Baker DC. 1990. Myopathy in cattle induced by alkaloid extracts from Thermopsis montana, Laburnum anagyroides and a Lupinus sp. J. Comp. Pathol. 103(2), 169-182. Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7 Viogradova V. et al. An investigation of the alkaloids of thermopsis lanceoloata. Chemistry of Natural Compounds. 7(4), 440-442.
***Thevetia* spp.**	Apocynaceae	Whole plant	Genus in which species may contain cardiac glycosides and their aglycones: e.g. thevetoside,…		Roth, Daunderer, Kormann; Giftpflanzen Pflanzengifte, Comed Verlagsgesellschaft, 4th ed. 1994. ISBN 3-609-61810-4 Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7
***Thuja* ssp.**	Cupressaceae	Whole plant	Genus in which the essential oil of some species may contain the bicyclic monoterpenes thujones		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Thymus* spp.**	Lamiaceae (Labiatae)	Aerial part	Genus in which the essential oil of the species contain a variety of constituents including the monoterpene etheroxide 1,8-cineole	Many species show different chemotypes.	Teuscher E., Anton R. et Lobstein A. 2005. Plantes aromatiques (Epices, aromates, condiments et huiles essentielles), Ed. Tec et Doc-Lavoisier. ISBN : 2-7430-0720-6
***Tribulus terrestris* L.**	Zygophyllaceae	Whole plant	β-carboline alkaloids (40-80 mg/kg dry matter), e.g. harmane and norharmane. Lithogenic steroidal saponins: e.g. protodioscin Mycotoxin: sporidesmin	Central Nervous System toxicity observed in sheep. Hepatotoxicity observed in male rats after oral administration of the fruit. Reported effect on testosterone levels and prostate weight following administration of a fruit extract with high protodioscin level to castrated male rats	Bourke C.A. et al. 1992. Locomotor effects in sheep of alkaloids identified in Australian *Tribulus terrestris* . Aust. Vet. J. 69, 163-165. Dinchev D. et al. 2008. Distribution of steroidal saponins in *Tribulus terrestris* from different geographical regions. Phytochemistry. 69, 176-186. Gauthaman K. et al. 2002. Aphrodisiac properties of Tribulus terrestris extract (protodioscin) in normal and castrated rats. Life. Sci. 71, 1385-1396. Paula-Lopes TRV et al. 2006. Hepatotoxicity of medicinal plants. XXXIII. Action of Tribulus terrestris L. in rats. Rev Bras Pl Med 8, 4: 150-156. Kellerman TS et al. 1980. Photosensitivity in South Africa. II. The experimental production of the ovine hepatogenous photosensitivity disease geeldikkop (Tribulosis ovis) by the simultaneous ingestion of Tribulus terrestris plants and cultures of Pithomyces chartarum containing the mycotoxin sporidesmin. Onderstepoort J Vet Res. 47(4):231-61.
***Trichocereus* spp.**	Cactaceae	Whole plant	Genus in which species may contain phenylethylamine alkaloids: e.g. mescaline, …		Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Trichodesma incanum* Bunge**	Boraginaceae	Aerial part	Unsaturated pyrrolizidine alkaloid: trichodesmine		Copper RA et al. 1996. Preparative separation of pyrrolizidine alkaloids by high-speed counter-current chromatography. J Chromatogr A., 732(1), 43-50.
***Trichosanthes kirilowii* Maxim.**	Cucurbitaceae	Root	Polypeptide: trichosanthin		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Maraganore JM. Et al. 1987. Purification and characterisation of Thricosanthin. J. Biol. Chem. 262(24), 11628-11633
***Trollius europaeus* L.**	Ranunculaceae	Whole plant	Unsaturated lactone : protoanemonin	Protoanemonin only present in fresh plant	Jürgens A. and Dötterl S. 2004. Chemical composition of anther volatiles in Ranunculaceae: genera-specific profiles in Anemone, Aquilegia, Caltha, Pulsatilla, Ranunculus, and Trollius species. American Journal of Botany, 91, 1969-1980.
Trophis aspera Retz. **See *Streblus asper* (Retz.) Lour.**					
***Tulipa* spp.**	Liliaceae	Whole part	Phytoalexins: e.g. tulipalin	Intake of the bulbs have given rise to acute symptoms in humans like sweating, increased salivation, difficult breeding and vomiting. Feeding of large amounts of tulip bulbs to cows resulted in 14/50 deaths within 6 weeks.	Russell AB. et al. 1997. Poisonous Plants of North Carolina. North Carolina State University. www.ces.ncsu.edu/depts/hort/consumer/poison/poison.htm Cooper M.R. and Johnson A.W. 1998, Poisonous plants and fungi in Britain. Animal and human poisoning. The Stationery Office. ISBN 0-11-242981-5 Wolf P et al. 2003. Animal nutrition for veterinarians - actual cases: tulip bulbs with leaves (*Tulipa gesneriana)* - an unusual and high risk plant for ruminant feeding. Dtsch. Tierartzl. Wochenschr. 110, 302-305.
***Turbina corymbosa* (L.) Raf.** *(Ipomoea burmanni* Choisy)	Convolvulaceae	Leaf and seed	Indole alkaloids (ergoline alkaloids, lysergic acid derivatives). Dried leaf: 0.016-0.027 ergoline alkaloids (ergin and erginin). Dried stem: 0.010-0.012 ergoline alkaloids (ergine and erginine).		Hagers Handbuch der Pharmazeutischen Praxis, Springer Verlag, 1998. ISBN: 3-540-52688-9

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***Tussilago* spp.**	Compositae (Asteraceae)	Whole plant	Genus in which species may contain unsaturated pyrrolizidine alkaloids		Hagers Handbuch der Pharmazeutischen Praxis, Springer Verlag, 1998. ISBN: 3-540-52688-9 Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1 Lebada R. et al. 2000. Quantitative analysis of the pyrrolizidine alkaloids senkirkine and senecionine in Tussilago farfara L. by capillary electrophoresis. Phytochemical Analysis 11 (6), 366–369.
Tylophora asthmatica Wight. & Arn. ***See Tylophora indica* Merr.**					
***Tylophora indica* Merr.** *(T. asthmatica* Wight. & Arn., *Cynanchum indicum* Burm.f.*)*	Apocynaceae	Leaf and root	Indolizidine alkaloids: e.g. tylophorine, tylocebrine, tylophorinine		Daniel M. 2005. Medicinal Plants: Chemistry & Properties. Oxford & IBH Publishing Company Pvt. Ltd. ISBN 8120416899, 9788120416895. Singha A. et al. 2011. Tylophora asthmatica Wight & Arn. - Review. Nature of Pharmaceutical Technology, 1(1), 1-4.
***Urginea* spp.**	Asparagaceae	Bulb	Genus in which species may contain bufadienolide glycosides and their aglycones: e.g.glucoscillarine, scillarine, scillarenine,…		Hagers Handbuch der Pharmazeutischen Praxis, Springer Verlag, 1998. ISBN: 3-540-52688-9 EMEA CVMP, 1999. Urginea maritima - summary report. EMEA/MRL/603/99.
***Usnea* spp.**	Parmeliaceae	Lichen	Genus in which species may contain the dibenzofuran usnic acid		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Hsu LM et al. 2005. 'Fat burner' herb, usnic acid, induced acute hepatitis in a family. J Gastroenterol Hepatol. 20(7),1138-1139. Sanchez W. et al. 2006. Severe hepatotoxicity associated with use of a dietary supplement containing usnic acid. Mayo Clin Proc. 81(4),541-4. Guo L. et al. 2008. Review of usnic acid and Usnea barbata toxicity. J Environ Sci Health C (formerly Environ Carcinog Ecotoxicol Rev), 26(4),317-38
***Vanillosmopsis arborea* (Gardner) Baker** *(Eremanthus arboreus* (Gardner) MacLeish*)*	Asteraceae	Leaf and wood bark	Essential oil from wood bark: phenylpropanoids: methylchavicol (3.6 %), methyleugenol (5.9%), elemicin (2.7%) Essential oil from leaf: phenylpropanoid: safrole (0.74%).		Hagers Handbuch der Pharmazeutischen Praxis, Springer Verlag, 1998. ISBN: 3-540-52688-9 Santos NKA. 2011. Chemical characterization and synergistic antibiotic activity of volatile compounds from the essential oil of Vanillosmopsis arborea. Med. Chem. Res. 20(5), 637-641.
***Vataireopsis araroba* (Aguiar) Ducke** *(Andira araroba* Aguiar*)*	Leguminosae (Fabaceae)	Wood	Hydroxyanthracene: chrysarobin (1,8-hydroxy-3-methylanthranol)		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Veratrum* spp.**	Melanthiaceae	Whole plant	Genus in which species may contain steroid alkaloids: e.g. protoveratrines, and alkamine esters such as jervine derivatives (furanopiperidine) e.g. cyclopamine.		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Vinca* spp.**	Apocynaceae	Whole plant	Genus in which species may contain indole alkaloids: e.g. vincamine		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Vincetoxicum hirundinaria* Medik.** *(V. officinale* Moench, *Cynanchum vincetoxicum* (L.) Pers.*)*	Apocynaceae	Whole plant	Isoquinoline alkaloids: e.g. asclepiadine (vincetoxin analogs). Root: vincetoxine analogs: heterosides of oxasteroids (hirundicoside B, C and D, Cyanatratoside C and E). Aerial part: phenanthroindolizidine alkaloids (10 beta-antofine N-oxide; 10 beta,13 alpha,14 beta-hydroxyantofine N-oxide; 10 beta,13alpha-secoantofine N-oxide, also 13alpha-secoantofine, 13alpha-6-O-desmethylsecoantofine).		Staerk D. et al. 2002. In Vitro Cytotoxic Activity of Phenanthroindolizidine Alkaloids from Cynanchum vincetoxicum and Tylophora tanakae against Drug-Sensitive and Multidrug-Resistant Cancer Cells. J. Nat. Prod. 65, 1299-1302 Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Frohne D, Pfänder HJ and Anton R. 2009. Plantes à risques, Ed. Tec et Doc-Lavoisier, ISBN: 978-2-7430-0907-1
***Vincetoxicum nigrum* Moench.** *(Asclepias vincetoxicum* L.*)*	Apocynaceae	Whole plant	Phenanthroindolizidine alkaloids: e.g. (-)-antofine		Gibson DM et al. 2011. Phytotoxicity of antofine from invasive swallow-worts. J. Chem. Ecol. 37(8), 871-9
***Viscum album* L.**	Santalaceae	Whole plant	Peptides: viscotoxins (I, II, III) and glycoproteins: viscum lectins		Hagers Handbuch der Pharmazeutischen Praxis, Springer Verlag, 1998. ISBN: 3-540-52688-9 Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3 Bruneton J. 2005. Plantes toxiques (Végétaux dangereux pour l'homme et les animaux), Ed. Tec & Doc, Lavoisier, Paris, 3ème édition, ISBN : 2-7430-0806-7
***Vitex agnus-castus* L.**	Lamiaceae (Labiatae)	Aerial part	The yield of essential oil in dried plant material is 0.76% from unripe fruits, 0.72% from ripe fruits, 0.56% from aerial parts. Essential oil from fruit: monoterpene etheroxide: 1,8-cineole (16-18%) and bicyclic monoterpenes: e.g. sabinene (7-17%) Essential oil from leaf: monoterpenes: e.g. 1,8-cineole,(22-33%) and sabinene (2-18%), Essential oil from flower: monoterpenes: e.g. 1,8-cineole (13.5%) and sabinene (5.7%)	Signs of liver toxicity were observed in two new repeat-dose toxicity studies on extracts of the fruit. Administration of powdered seeds resulted in a slight reduction in the number of foetuses when administered to pregnant rats in doses of 1 or 2 mg/kg from days 1-10 of pregnancy. A lactation inhibiting effect (decrease of prolactin) was seen in lactating female rats dosed with a *Vitex agnus-castus* preparation. *In vitro* studies with cells from rat pituitaries showed that an extract had a dose-dependent lowering effect of prolactin.	EMA. 2010. Community herbal monograph on Vitex agnus-castus L., fructus. www.ema.europa.eu Lal R. et al. 1985. Antifertility and oxytoxic activity of *Vitex agnus-castus* seeds in female albino rats. Bulletin of Postgraduate Institute of Medical Education and Research. Chandigarh 19, 44-47 Stojkovic D. et al. 2011. Chemical composition and antimicrobial activity of *Vitex agnus-castus* L. fruits and leaves essential oils. Food Chem. 128, 1017-1022. Winterhoff et al. 1991. Die Hemmung der Laktation bei Ratten als indirekter Beweis für die Senkung von Prolaktin durch *Agnus castus.* Z. Phytotherapie 12; 175-179. Zoghbi M.D.G.B. et al. 1999. The essential oil of *Vitex agnus-castus* growing in the Amazon region. Flavour. Frag. J. 14, 211-213.
***Voacanga* spp.**	Apocynaceae	Bark and root	Genus in which species may contain indole alkaloids : e.g. coronaridine, voacangine, conopharyngine,		Juliani HR. et al eds. 2009. African Natural Plant Products: New Discoveries and Challenges in Chemistry and Quality. Vol 1021. American Chemical Society. ISBN: 9780841269873. Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Wikstroemia* spp.**	Thymelaeaceae	Whole plant	Genus in which species may contain diterpenes: daphnane orthoesters : e.g. huratoxine, simplexine		Council of Europe. 2008. Natural sources of flavourings. Report No. 3. Council of Europe Publishing. ISBN 978-92-871-6422-3.
***Wisteria floribunda* (Willd.) DC.**	Leguminosae (Fabaceae)	Whole plant	Lectins		Sakai S. et al. 1997. A Self-Adjusting Carbohydrate Ligand for GalNac Specific Lectins. Tetrahedron Letters, 38(47), 8145-8148.
***Wisteria sinensis* (Sims) DC.**	Leguminosae (Fabaceae)	Whole plant	Lectins		Nasi A. et al. 2009. Proteomic approaches to study structure, functions and toxicity of legume seeds lectins. Perspectives for the assessment of food quality and safety. Journal of Proteomics, 72, 527-538.

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***Withania somnifera* (L.) Dunal**	Solanaceae	Whole plant	In leaf: steroidal lactones: withanolides in root: piperidine alkaloids: anaferine, anahygrine and various alkaloids including withanine, somniferine, somnine, tropine		Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 Kulkarni SK, Dhir A. 2008. Withania somnifera: an Indian ginseng. Prog Neuropsychopharmacol Biol Psychiatry, 32(5):1093-105. Misra L.N. 2008. Selective reactivity of 2-mercaptoethanol with 5beta,6beta-epoxide in steroids from Withania somnifera. Steroids, 73(3), 245-251.
***Xanthium* spp.**	Compositae (Asteraceae)	Flowering top	Genus in which species may contain diterpenes: e.g. carboxyatractyloside	Toxicosis usually associated with the consumption of the seedlings in the cotyledon stage which contain a high concentration of carboxyatractyloside. Seeds also known to contain the toxin	Witte ST. et al. 1990 Cocklebur toxicosis in cattle associated with the consumption of mature Xanthium strumarium. J. Vet. Diagn. Invest. 2(4), 263-267
***Xysmalobium undulatum* (L.) R.Br.**	Apocynaceae	Root	Cardenolides (sophoroside types): e.g. uzarin, xysmalorin,		Ghorbani M. 1997. Phytochemical reinvestigation of Xysmalobium undulatum roots (Uzara). Planta Medica 63(4), 343-346.
***Yucca filamentosa* L.**	Asparagaceae	Whole plant	Steroid saponins: e.g. sarsasapogenin , tigogenin (1,4% in leaves)		Dragalin I.P. and Kintia P.K. 1975. Steroidal saponins of Yucca filamentosa: Yuccoside C and protoyuccoside C. Phytochemistry 14 (8), 1817-1820. Kintya PK. 1972. Steroid saponins III. Glycosides A and B from Yucca filamentosa. Chemistry of Natural Compounds, 8(5), 584-586.
***Zanthoxylum alatum* Roxb.**	Rutaceae	Bark and seed	Furocoumarins: e.g. bergapten, umbelliferone, Benzo(c)phenanthridine alkaloids: e.g. chelerythrine and derivatives		Akhtar N. 2009. Chemical constituents from the seeds of Zanthoxylum alatum. Journal of Asian Natural Products Research, 11(1), 91-95.
***Zanthoxylum americanum* Mill.**	Rutaceae	Bark and seed	Benzylisoquinoline alkaloids: e.g. magnoflorine; benzo(c)phenanthridine alkaloids: e.g. chelerythrine,	Lignans: asarinin and sesamin	Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 American Herbal Products Association. 1997. Botanical Safety Handbook. Mc Guffin M (Ed). ISBN: 0-8493-1675-8
***Zanthoxylum clava-herculis* L.**	Rutaceae	Bark and seed	Benzylisoquinoline alkaloids: e.g. magnoflorine; benzo(c)phenanthridine alkaloids: e.g. chelerythrine,	Lignans: asarinin and sesamin	Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8 American Herbal Products Association. 1997. Botanical Safety Handbook. Mc Guffin M (Ed). ISBN: 0-8493-1675-8
***Zigadenus* spp.**	Melanthiaceae	Whole plant	Genus in which species may contain steroid alkaloids: e.g. zygadenine, zygacine		Makeiff D. 1997. Determination of Zygacine in Zigadenus venenosus (Death Camas) by Image Analysis on Thin Layer Chromatography. J. Agric. Food Chem., 45 (4), 1209–1211. Moerman D.E. 1996. An analysis of the food plants and drug plants of native North America. Journal of Ethnopharmacology 52, 1-22.
***Zingiber officinale* Roscoe**	Zingiberaceae	Rhizome		An increased percentage of resorbed implantations were found in both dosed groups of pregnant rats receiving an infusion made from 20 g/l or 50 g/l freshly grated ginger compared to a control group (P <0.05). No signs of maternal toxicity were observed, neither were any gross morphological malformations in the treated foetuses.	EMA. 2011. Assessment report on Zingiber officinale Roscoe, rhizoma. www.ema.europa.eu Wilkinson JM. 2000. Effect of ginger tea on the fetal development of Sprague-Dawley rats. Reprod. Toxicol. 14, 507-512.
			FUNGI		
***Amanita* spp.**	Amanitaceae	Fruiting body	Genus in which species may contain tryptamines: e.g. bufotenine; cyclic peptides: e.g. phallotoxins and amatoxins; isoxazole alkaloids: e.g. ibotenic acid and quaternary ammonium alkaloids: e.g. muscarine.		Evans W. 2009. Pharmacognosy. 16th edition. Saunders Ltd. ISBN: 978-0-7020-2933-2
***Boletus satanas* Lenz**	Boletaceae	Fruiting body	Monomeric glycoprotein: bolesatine.		Ennamany R et al. 1995. Mode of action of bolesatine, a cytotoxic glycoprotein from Boletus satanas Lenz. Mechanistic approaches. Toxicology, 100(1-3), 51-55 Kretz O et al. 1992. Properties of bolesatine, a translational inhibitor from Boletus satanas Lenz. Amino-terminal sequence determination and inhibition of rat mitochondrial protein synthesis. Toxicology Letters, 64-65, 763-766. Ennamany R et al. 1994. Effect of bolesatine, a glycoprotein from Boletus satanas, on rat thymus in vivo.Toxicology, 89(2), 113-118
***Clitocybe* spp.**	Tricholomataceae	Fruiting body	Genus in which species may contain muscarine (*C. dealbata, C. rivolusa…*), some ricine-like lectins and clitocybins (indolinone)		Ian R. Hall et al. 2003. Edible and poisonous mushrooms of the world. Timber Press USA; ISBN 0-88192-586-1 Genest K, et al. 1968. Muscarine in Clitocybe species. J Pharm Sci. 57(2):331-3. Svajger U et al. 2011. CNL, a ricin B-like lectin from mushroom Clitocybe nebularis, induces maturation and activation of dendritic cells via the toll-like receptor 4 pathway. Immunology. 134(4), 409-18
***Conocybe* spp.**	Bolbitiaceae	Fruiting body	Genus in which species may contain indole alkaloids (tryptamine derivatives): e.g. psilocin, psilocybin…	Some species are known to contain proproteins such as phalloidin inducing gastrointestinal disorders and anxiety	Hall IR et al. 2003. Edible and poisonous mushrooms of the world. Timber Press USA; ISBN 0-88192-586-1 Luo H. et al. 2009. Processing of the phalloidin proprotein by prolyl oligopeptidase from the mushroom Conocybe albipes. J Biol Chem. 284(27), 18070-18077 Bruneton J. 2009. Pharmacognosie, (Phytochimie, Plantes médicinales), Ed. Tec & Doc, Lavoisier, Paris, 4ème édition, ISBN: 978-2-7430-1188-8
***Copelandia* spp.**	Agaricomycetidae	Fruiting body	Genus in which species may contain indole alkaloids (tryptamine derivatives): e.g. psilocin, psilocybin		Merlin MD, et al. 1993. Species identification and chemical analysis of psychoactive fungi in the Hawaiian islands. J Ethnopharmacol. 40(1), 21-40. Hall IR. 2003. Edible and Poisonous Mushrooms of the World. Timber Press. p. 103. ISBN 0881925861 Heim R, et al. 1966. On a group poisoning with psilocybian syndrome caused in France by a Copelandia, C R Acad Sci Hebd Seances Acad Sci D. 262(4), 519-523. Gonmori K, et al.2009. Acute encephalopathy caused by cyanogenic fungi in 2004, and magic mushroom regulation in Japan. Chudoku Kenkyu, 22(1), 61-69.
***Cortinarius orellanus* Fr.**	Cortinariaceae	Fruiting body	Pyridine N-oxide alkaloids: e.g. orellanine and derivatives Bipyridine alkaloids		Duvic C et al. 2003. Acute renal failure following ingestion of Cortinarius orellanus in 12 patients. Initial presentation and progress over a period of 13 years]. Presse Med. 32(6), 249-253 Oubrahim H et al. 1997. Novel methods for identification and quantification of the mushroom nephrotoxin orellanine. Thin-layer chromatography and electrophoresis screening of mushrooms with electron spin resonance determination of the toxin. J. Chromatogr .758(1),145-157 Judge BS et al. 2010. Ingestion of a newly described North American mushroom species from Michigan resulting in chronic renal failure: Cortinarius orellanus. Clin Toxicol (Phila) 48(6),545-549

COMPENDIUM OF BOTANICALS REPORTED TO CONTAIN NATURALLY OCCURING SUBSTANCES OF POSSIBLE CONCERN FOR HUMAN HEALTH WHEN USED IN FOOD AND FOOD SUPPLEMENTS

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Botanical name	Family	parts of plants of possible concern	Chemical of concern	Remarks on toxic/adverse effect(s) not known to be related to the identified chemical(s) of concern	Specific References
***Cortinarius rubellus* Cooke** (*Cortinarius speciosissimus* Kühner & Romagn.)	Cortinariaceae	Fruiting body	Pyridine N-oxide alkaloids: e.g. orellanine and derivatives Bipyridine alkaloids		Koller GE et al. 2002. The presence of orellanine in spores and basidiocarp from Cortinarius orellanus and Cortinarius rubellus. Mycologia.94(5),752-756.
Cortinarius speciosissimus Kühner & Romagn. **See *Cortinarius rubellus* Cooke**					
***Galerina marginata* (Batsch) Kühner**	Galerinaceae	Fruiting body and mycelium	Bicyclic octapeptide derivatives: amatoxins (alpha-, beta- and gamma amanitins)		Enjalbert F. et al. 2004. Amatoxins in wood-rotting Galerina marginata. Mycologia 96(4): 720-729
***Gyromitra esculenta* (Pers.) Fr.**	Discinaceae	Fruiting body	Hydrazones: gyromitrin (acetaldehyde N-methyl-N-formylhydrazone) approximately 50 mg/kg fresh weight.		Andersson C. et al. 1995. Hydrazones in the false morel. TemaNord. 561. Nordic Council of Ministers. ISBN 92 9120 681 4.
***Helvella* spp.**	Helvellaceae	Fruiting body		Intoxication may be caused by Helvella species. The species are often confused with *Gyromitra* species, the latter being known to contain toxic hydrazones (gyromitrin).	Beug M.W. et al. Thirty-plus years of mushroom poisoning: summary of the approximately 2,000 reports in the NAMA case registry. McIlvainea 16(2), 47-68. http://namyco.org/images/pdf_files/Poisonings30year.pdf
***Inocybe* spp.**	Inocybaceae	Fruiting body	Genus in which species may contain indole alkaloids (tryptamine derivatives): e.g. psilocin, psilocybin, and quaternary amine: e.g. muscarine		Lurie Y. et al. 2009. Mushroom poisoning from species of genus *Inocybe* (fiber head mushroom): a case series with exact species identified. Chem. Toxicol. 47, 562-565. Stijve T. 1982. The occurrence of muscarine and muscimol in various fungi. Coolia 25(4), 94-100.
***Lactarius torminosus* (Schaeff.) Gray**	Russulaceae	Fruiting body	Sesquiterpenoid unsaturated dialdehydes: e.g. velleral (0.16mg/g)	Velleral thought to be responsible for toxicity in humans. Sesquiterpene lactones e.g. blennin A and C, 15-hydroxyblennin A, andhydrolactororufin A, lactarorufin A. Mutagenic effect of extract in Ames test. The fruiting body is toxic when eaten raw. The mushroom is considered toxic in e.g. some parts of Europe but considered edible after blanching in e.g. Finland	Camaxine S. and Lupo A.T. 1984. Labile toxic compounds of the lactarii: the role of the lactiferous hyphae as a storage depot for precursors of pungent dialdehydes. Mycologia 76(2), 355-358. Knuutinen J. and von Wright A. 1982. The mutagenicity of Lactarius mushrooms. Mut. Res. 103, 115-118. Pyysalo H. et al. 1980. Application of gas chromatography to the analysis of sesquiterpene lactones from *Lactarius* (Russulaceae) mushrooms. J.Chromatogr. 190, 466-470. von Wright A et al. 1982. The mutagenicity of some edible mushrooms in the Ames test. Food Chem. Toxicol. 20, 265-267.
***Lepiota* spp.**	Agaricaceae	Fruiting body	Genus in which species may contain cyclopeptide toxins (amatoxins): e.g. amanitine A and B		Ramirez P. et al. 1993. Fulminant hepatic failure after *Lepiota* mushroom poisoning. J. Hepatol. 19, 51-54.
***Panaeolus* spp.**	Agaricomycetidae	Fruiting body	Genus in which species may contain indole alkaloids (tryptamine derivatives): e.g. psilocin, psilocybin		Andersson C., Kristinsson J., Gry J. 2008. Occurrence and use of hallucinogenic mushrooms containing psilocybin alkaloids. TemaNord 2008:606. ISBN: 978-92-893-1836-5.
***Pluteus* spp.**	Pluteaceae	Fruiting body	Genus in which species may contain indole alkaloids (tryptamine derivatives): e.g. psilocin, psilocybin		Andersson C., Kristinsson J., Gry J. 2008. Occurrence and use of hallucinogenic mushrooms containing psilocybin alkaloids. TemaNord 2008:606. ISBN: 978-92-893-1836-5.
***Psilocybe* spp.**	Strophariaceae	Fruiting body	Genus in which species may contain indole alkaloids (tryptamine derivatives): e.g. psilocin and psilocybin		Stříbrný J. et al. 2003. Levels of psilocybin and psilocin in various types of mushrooms. Soud Lek. 48(3), 45-49. Reingardiene D. et al. 2005. Hallucinogenic mushrooms. Medicina (Kaunas). 41(12), 1067-1070. Adamczyk A. et al. 2007. Hallucinogenic fungi (psilocybe). Part II. Identification of Psilocybe semilanceata by PCR. Arch Med Sadowej Kryminol. 57(3), 285-288.
***Stropharia* spp.**	Strophariaceae	Fruiting body	Genus in which species may contain indole alkaloids (tryptamine derivatives): e.g. psilocin, psilocybin		Evans WC. (2009) Trease and Evans Pharmacognosy. Elsevier. ISBN: 978-0-7020-2933-2
			ALGAE		
***Ascophyllum nodosum* (L.) Le Jolis**	Fucaceae	Thallus		Known to contain high levels of iodine (on average 482 µg/g dry weight)	Phaneuf D et al. 1999. Evaluation of the contamination of marine algae (seaweed) from the St. Lawrence River and likely to be consumed by humans. Environ. Res. Section A. 80, S175-S182.
***Fucus* spp.**	Fucaceae	Thallus		Genus in which species may contain different amounts of iodine Depending on growth conditions and environment, the algae may concentrate heavy metals (e.g. Pb, Cd)	Teas J. et al. 2004. Variability of Iodine Content in Common Commercially Available Edible Seaweeds. Thyroid 14(10), 836-841
***Macrocystis pyrifera* (L.) C.Ag.**	Marasmiaceae (Laminariaceae)	Thallus		May contain high levels of iodine. Depending on growth conditions and environment, the algae may concentrate heavy metals (e.g. Pb, Cd)	Bruneton J. 2009. Pharmacognosie. Phytochemie, Plantes médicinales. Ed. Tec & Doc, lavoisier, Paris, 4ème édition. ISBN: 978-2-7430-1188-8. Barnes J., Anderson L.A., Phillipson J.D. 2007. Herbal Medicines. 3rd ed. Ed. Pharmaceutical Press. ISBN 978-0-85369-623-0 Seki H., Auzuku A. 1998. Biosorption of heavy metal ions to brown algae, *Macrocystis pyrifera, Kjellmaniella crassiforia,* and *Undaria pinnatifida.* J Colloid and Interface Science 206, 297-301.

Botanicals appearing on a negative list or subject to restricted use in at least one European Member State but for which not enough information on possible substances of concern or adverse effect could be found, or for which the information present could not be verified.

Botanical name	Family	Part of plants indicated in the national list(s)
Acanthea virilis **Pharm. ex Wehmer**	Acanthaceae	
Aletris farinosa **L.**	Nartheciaceae	Root
Anemarrhena asphodeloides **Bunge**	Asparagaceae	Rhizome
Anemopaegma arvense **(Vell.) Stellfeld**	Bignoniaceae	Bark
Aniba parviflora **(Meisn.) Mez**	Lauraceae	
Anthyllis vulneraria **L.**	Leguminosae (Fabaceae)	
Aquilaria malaccensis **Lam.** (*Aquilaria agollocha* Roxb.)	Thymelaeaceae	Bark and leaf
Artemisia apiacea Hance **See *Artemisia carvifolia* Roxb.**		
Artemisia carvifolia **Roxb.** (*Artemisia caruifolia* Roxb., *Artemisia apiacea* Hance)	Compositae (Asteraceae)	Aerial part
Artemisia nitida **Bertol.**	Compositae (Asteraceae)	
Asplenium scolopendrium **L.**	Aspleniaceae	
Atractylodes macrocephala **Koidz.**	Compositae (Asteraceae)	Rhizome
Atractylodes ovata **DC.**	Compositae (Asteraceae)	Rhizome
Betula alleghaniensis **Britton**	Betulaceae	
Blepharis capensis **Pers.**	Acanthaceae	Leaf and root
Cachrys pabularia **(Lindl.) Herrnstadt & Heyn** *(Prangos pabularia* Lindl.)	Apiaceae (Umbelliferae)	Seed
Calendula arvensis **L.**	Compositae (Asteraceae)	Flower
Calystegia soldanella **R.Br.**	Convolvulaceae	Whole plant
Catalpa bignonioides **Walter**	Bignoniaceae	Bark and fruit
Ceanothus americanus **L.**	Rhamnaceae	Root bark
Cedrela toona Roxb. **See *Toona ciliata* M.Roem.**		Bark
Cedrus deodara **(D.Don) G.Don**	Pinaceae	Wood
Cedrus libani **A.Rich.**	Pinaceae	Aerial part
Chamaemelum mixtum **All.**	Compositae (Asteraceae)	Whole plant
Chlorocodon whitei **Hook.f.** *(Mondia whitei* (Hook.f.) Skeels)	Apocyanaceae	Root
Chrozophora tinctoria **(L.) A.Juss.**	Euphorbiaceae	Aerial part
Chrysanthemum sinense **Sweet** (Chrysanthemum morifolium Ramat., *Tanacetum morifolium* Kitam.)	Compositae (Asteraceae)	Flower
Chrysopogon zizanioides **(L.) Roberty**	Poaceae (Gramineae)	Root
Cineraria **spp.**	Compositae (Asteraceae)	Aerial part
Cinnamomum micranthum **(Hayata) Hayata**	Lauraceae	Wood
Citrus junos **(Makino) Tanaka**	Rutaceae	Fruit

Botanical name	Family	Part of plants indicated in the national list(s)
***Citrus medica* L.** (*C. medica* (L.) var. *macrocarpa* Risso; *C. medica* (L.) var. *vulgaris* Risso; *C.medica* L. var *cedrata* Risso)	Rutaceae	
***Cnidium dubium* (Schkuhr) Schmeil & Fitschen**	Apiaceae (Umbelifferae)	
***Cnidium officinale* Makino**	Apiaceae (Umbelifferae)	Rhizome
***Cola ballayi* Cornu ex Heckel**	Malvaceae	
***Comandra* spp.**	Santalaceae	
***Conioselinum univittatum* Kar. & Kir.**	Apiaceae (Umbelifferae)	
***Convolvulus scoparius* L.f.**	Convolvulaceae	
***Copaifera martii* Hayne**	Leguminosae (Fabaceae)	
***Dicoma anomala* Sond.**	Compositae (Asteraceae)	Root
***Dirca palustris* L.**	Thymelaeaceae	
***Dorema ammoniacum* D.Don.**	Apiaceae (Umbelifferae)	
***Eclipta prostrata* (L.) L.**	Compositae (Asteraceae)	Whole plant
***Erythroxylum catuaba* Raym.-Hamet**	Erythroxylaceae	
***Eupatorium perfoliatum* L.**	Compositae (Asteraceae)	Aerial part
***Eupatorium triplinerve* Vahl** (*Ayapana triplinervis* (Vahl) R.M.King & H.Rob.)	Compositae (Asteraceae)	Whole plant
***Ferula gummosa* Boiss.** (*F. galbaniflua* Boiss. & Bushe)	Apiaceae (Umbelliferae)	Aerial part
***Forestiera* spp.**	Oleaceae	
***Fortunella japonica* (Thunb.) Swingle** (*Citrus japonica* Thunb.)	Rutaceae	Bark
***Geranium maculatum* L.**	Geraniaceae	
***Gnaphalium uliginosum* L.**	Asteraceae (Compositae)	
***Grindelia camporum* Greene**	Asteraceae (Compositae)	
***Grindelia hirsutula* Hook. & Arn.**	Asteraceae (Compositae)	
***Guaiacum sanctum* L.**	Zygophyllaceae	
***Gymnema aurantiacum* Hook.f.**	Apocyanaceae	
Gymnema sylvestre (Retz.) Schult. **See *Marsdenia sylvestris* (Retz.) P.I.Forst**		
***Gypsophila paniculata* L.**	Caryophyllaceae	
***Haematoxylum campechianum* L.**	Leguminosae (Fabaceae)	Bark and wood
***Harrisonia abyssinica* Oliv.**	Rutaceae	Bark and root
***Helichrysum nudifolium* Less.**	Asteraceae (Compositae)	
***Herniaria hirsuta* L.**	Caryophyllaceae	Aerial part
***Homalomena* spp.**	Araceae	
***Hydrangea arborescens* L.**	Hydrangeaceae	Root
***Indigofera tinctoria* L.**	Leguminosae (Fabaceae)	Unspecified
***Ionidium ipecacuanha* Vent.**	Violaceae	Root
***Iris versicolor* L.**	Iridaceae	Rhizome
***Jacaranda caroba* (Vell.) DC.**	Bignoniaceae	
***Juniperus ashei* J.Buchholz**	Cupressaceae	

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Juniperus procera **Hochst. ex Endl.**	Cupressaceae	Wood
Kunzea ambigua **(Sm.) Druce**	Myrtaceae	
Lavandula burnati Briq. **See *Lavandula intermedia* nothossp. *intermedia***		
Lavandula heterophylla **Viv.** (*Lavandula hybrida* Ging.)	Lamiaceae (Labiatae)	
Lavandula hybrida Ging. **See *Lavandula heterophylla* Viv.**		
Lavandula intermedia **nothossp. *intermedia*** (*Lavandula x burnati* Briq.)	Lamiaceae (Labiatae)	
Lebeckia contaminata **(L.) Thunb.** (*Asphaltus contaminatus* (L.) Druce, *Spartium contaminatum* L.)	Leguminosae (Fabaceae)	
Leopoldia comosa **(L.) Parl.** *(Muscari comosum* (L.) Mill.)	Asparagaceae	Bulb
Leucophae spp. **See *Sideritis* spp**		
Ligusticum porteri **J.M.Coult. & Rose**	Apiaceae (Umbelifferae)	Root
Ligustrum lucidum **Aiton**	Oleaceae	Fruit
Linzia nigritana **(Oliv. & Hiern) C.Jeffrey** *(* *Vernonia nigritana* Oliv. & Hiern)	Asteraceae (Compositae)	
Liriope **spp.**	Asparagaceae	Fruit
Lomatium dissectum **(Nutt.) Mathias & Constance**	Apiaceae (Umbelifferae)	
Lysimachia vulgaris **L.**	Primulaceae	
Lythrum **spp.**	Lythraceae	Aerial part
Malpighia glabra **L.** *(Malpighia punicifolia* L.*)*	Malphigiaceae	Bark
Mangifera indica **L.**	Anacardiaceae	Bark
Marsdenia sylvestris (Retz.) P.I.Forst *(Gymnema sylvestre* (Retz.) R.Br., *Gymnema sylvestre* (Retz.) Schult.)	Apocynaceae	Leaf
Mentzelia cordifolia **Urb. & Gigl.**	Loasaceae	Aerial part
Mitchella repens **L.**	Rubiaceae	Fruit and leaf
Morella cerifera **(L.) Small.**	Myricaceae	
Moringa aptera **Gaertn.**	Moringaceae	Fruit
Moringa peregrina **(Forssk.) Fiori**	Moringaceae	
Muscari comosum (L.) Mill. **See *Leopoldia comosa* (L.) Parl.**		
Nardostachys grandiflora **DC.** *(N. jatamansi* DC.*)*	Caprifoliaceae	Root
Naregamia alata **Wight. & Arn.**	Meliaceae	Whole plant
Nectandra coto **Rusby**	Lauraceae	Bark
Nectandra puchury-major **Nees & Mart. ex Nees**	Lauraceae	Seed
Nectandra rodioei **Hook.**	Lauraceae	Bark
Nilgirianthus ciliatus **(Nees) Bremek.**	Acanthaceae	
Oenanthe phellandrium **Lam.**	Apiaceae (Umbelliferae)	Fruit

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Oplopanax elatus **(Nakai) Nakai**	Araliaceae	Bark, leaf and root.
Palicourea densiflora Mart. **See *Rudgea viburnoides* ssp. *viburnoides***		
Palicourea densiflora Wawra **See *Psychotria longipedunculata* (Gardner) Müll.**		
Parietaria judaica **L.**	Urticaceae	
Pelargonium graveolens **L'Hér.**	Geraniaceae	Aerial part
Phyllanthus fraternus **G.L.Webster**	Phyllanthaceae	Aerial part
Picea glauca **(Moench) Voss**	Pinaceae	
Picrorhiza kurrooa Benth. **See *Picrorhiza lindleyana* (Wall.) Steud.**		
Picrorhiza lindleyana **(Wall.) Steud.** (*Picrorhiza kurrooa* Benth.)	Scrophulariaceae	Rhizome and root
Polemonium caeruleum **L.**	Polemoniaceae	
Polemonium reptans **L.**	Polemoniaceae	
Polygonatum sibiricum **F.Delaroche**	Asparagaceae	Rhizome
Polygonatum tegundir	Species could not be identified	
Polygonum aviculare **L.**	Polygonaceae	Whole plant
Pseudowintera colorata **(Raoul) Dandy**	Winteraceae	Leaf
Psychotria longipedunculata **(Gardner) Müll.Arg.**	Rubiaceae	
Pterocarpus santalinus **L.f.**	Leguminosae (Fabaceae)	Bark and wood
Ptychopetalum olacoides **Benth.**	Olacaceae	Root
Ptychopetalum uncinatum **Anselmino**	Olacaceae	
Rhus toxicodendron L. **See *Toxicodendron pubescens* Mill.**		
Richardia scabra **L.**	Rubiaceae	
Rivina humilis **L.**	Phytolaccaceae	Whole plant
Rosa moschata **Herrm.**	Rosaceae	
Rosa rubiginosa **L.**	Rosaceae	
Rudgea viburnoides **ssp*. viburnoides***	Rubiaceae	
Salvia columbariae **Benth.**	Lamiaceae (Labiatae)	
Santalum austrocaledonicum **Vieill.**	Santalaceae	
***Santalum spicatum (*R.Br.) A.DC.**	Santalaceae	
Santolina chamaecyparissus **L.**	Asteraceae (Compositae)	
Saponaria rubra **Lam.**	Caryophyllaceae	Seed
Saraca indica **L.**	Leguminosae (Fabaceae)	Seed
Scrophularia umbrosa **Dumort.**	Scrophulariaceae	
Scutellaria lateriflora **L.**	Lamiaceae (Labiatae)	Aerial part
Sedum reflexum L . **See *Sedum rupestre* L.**		
Sedum rupestre **L.** (*Sedum reflexum* L.)	Crassulaceae	
Sedum telephium **L.** (*Hylotelephium telephium* (L.) H.Ohba.)	Crassulaceae	

Botanical name	Family	Part of plants indicated in the national list(s)
Sida spodochroma **F.Muell.**	Malvaceae	
Sideritis spp. (*Leucophae* spp.)	Lamiaceae (Labiatae)	
Smilax aristolochiifolia **Mill.** (*Smilax kerberi* F.W.Apt.)	Smilacaceae	Root
Smilax bona-nox **L.**	Smilacaceae	
Smilax cordata-ovata **Rich.**	Smilacaceae	
Smilax febrifuga Kunth **See *Smilax purhampuy* Ruiz**		
Smilax kerberi F.W.Apt. **See *Smilax aristolochiifolia* Mill.**		
Smilax longifolia **Rich.** (*Smilax papyracea* Duhamel)	Smilacaceae	
Smilax papyracea Duhamel **See *Smilax longifolia* Rich.**	Smilacaceae	
Smilax purhampuy **Ruiz** (*Smilax febrifuga* Kunth)	Smilacaceae	
Smilax tamnoides **L.**	Smilacaceae	
Solandra grandiflora **Sw.**	Solanaceae	
Solenostemma argel **Hayne**	Asclepiadaceae	Leaf
Soymida febrifuga **Juss.**	Meliaceae	Fruit
Stephanotis **spp.**	Apocyanaceae	
Stevia salicifolia **Cav.**	Asteraceae (Compositae)	
Tanacetum morifolium Kitam. **See *Chrysanthemum sinense* Sweet**		
Tecoma **spp.**	Bignoniaceae	
Toona ciliata **M.Roem.** (*Cedrela toona* Roxb.)	Meliaceae	
Torilis japonica **(Houtt.) DC.**	Apiaceae (Umbelifferae)	
Toxicodendron pubescens **Mill.** (*Rhus toxicodendron* L.)	Anacardiaceae	Whole plant
Toxicodendron radicans **(L.) Kuntze**	Anacardiaceae	Whole plant
Toxicodendron vernix **(L.) Kuntze**	Anacardiaceae	Whole plant
Veronicastrum virginicum **(L.) Farw.**	Plantagenaceae	
Vernonia nigritana Oliv. & Hiern **See *Linzia nigritana* (Oliv. & Hiern) C.Jeffrey**		
Vincetoxicum versicolor **(Bunge) Dechne** (*Cynanchum versicolor* Bunge)	Apocynaceae	
Vitex negundo **L.**	Lamiaceae (Labiatae)	
Vitex trifolia **L.**	Lamiaceae (Labiatae)	
Vladimiria souliei **(Franch.) Y.Ling**	Asteraceae (Compositae)	
Withania coagulans **(Stocks) Dunal**	Solanaceae	Whole plant
Ziziphus oenoplia **(L.) Mill.**	Rhamnaceae	
FUNGI		
Elaphomyces granulatus **Fr.**	Elaphomycetaceae	Fruiting body
Trametes versicolor **(L.) Lloyd**	Polyporaceae	Fruiting body
Volvaria **spp.**	Pluteaceae	Fruiting body

Annex B

Botanicals appearing on a negative list or subject to restricted use in at least one European Member State but for which the Scientific Committee, through the analysis of the data found, could not identify substances of concern, or other data for the inclusion in the compendium. A systematic literature search should be performed for these species

Botanical name	Family	part of plants indicated in the national list(s)
Abelmoschus moschatus **Medik.**	Malvaceae	
Abies alba **Mill.**	Pinaceae	Bud and cone
Abies balsamea **(L.) Mill.**	Pinaceae	Bud and cone
Abies sibirica **Ledeb.**	Pinaceae	Bud and cone
Abies spectabilis **(D.Don.) Mirb.**	Pinaceae	Bud and cone
Abutilon theophrasti **Medik.** (*Abutilon avicennae* Gaertn.)	Malvaceae	Fruit and seed
Achyrocline satureioides **(Lam.) DC.** (*A. saturejoides* (Lam.) DC.)	Asteraceae (Compositae)	
Adenophora stricta **Miq.**	Campanulaceae	
Adiantum capillus-veneris **L.**	Adiantaceae	
Aesculus hippocastanum **L.**	Sapindaceae	Bark and seed
Agrimonia odorata Mill. **See Agrimonia repens L.**		
Agrimonia eupatoria **L.**	Rosaceae	Aerial part
Agrimonia repens **L.** (*Agrimonia odorata* Mill.)	Rosaceae	
Agropyron repens (L.) P.Beauv. **See *Elymus repens* (L.) Gould**		
Akebia quinata **(Houtt.) Decne.**	Lardizabalaceae	Whole plant
Akebia trifoliata **(Thunb.) Koidz.**	Lardizabalaceae	Whole plant
Alchemilla alpina **L.**	Rosaceae	
Alchemilla arvensis (L.) Scop. **See *Aphanes arvensis* L.**		
Alchemilla vulgaris auct. pl. **See *Alchemilla xanthochlora* Rothm.**		Whole plant
Alchemilla xanthochlora **Rothm.** (*Alchemilla vulgaris* auct. pl.)	Rosaceae	Aerial part
Alnus glutinosa **(L.) Gaertn.**	Betulaceae	Bark and leaf
Aloysia citriodora **Palau** (*A. citrodora* Palau, *A. triphylla* (L'Hér.) Britton, *Lippia triphylla* (L'Hérit.) Kuntze, *L. citriodora* (Lam.) Kunth, *L. citrodora* Kunth)	Verbenaceae	
Althaea officinalis **L.**	Malvaceae	
Amyris balsamifera **L.**	Rutaceae	
Ananas comosus **(L.) Merr.** (*Ananas sativus* (Lindl.) Schult.f.)	Bromeliaceae	
Antennaria dioica **(L.) Gaertn.** (Gnaphalium dioicum L.)	Asteraceae (Compositae)	
Anthemis nobilis L. **See *Chamaemelum nobile* (L.) All.**		
Aphanes arvensis **L.** (*Alchemilla arvensis* (L.) Scop.)	Rosaceae	Aerial part
Aralia racemosa **L.**	Araliaceae	Rhizome and root
Arbutus unedo **L.**	Ericaceae	Leaf

Botanical name	Family	part of plants indicated in the national list(s)
***Arctium lappa* L.** (*Arctium majus* Bernh.)	Asteraceae (Compositae)	
***Avena sativa* L.**	Poaceae (Gramineae)	
***Baccharis coridifolia* DC.**	Asteraceae (Compositae)	Flower and seed
***Bacopa monnieri* (L.) Pennell** (*Bacopa monniera* (L.) Wettst.)	Plantaginaceae	Leaf
***Betula nigra* L.**	Betulaceae	Leaf
***Betula pendula* Roth.**	Betulaceae	Leaf
***Betula pubescens* Ehrh.**	Betulaceae	Leaf
***Bidens tripartita L*.**	Asteraceae (Compositae)	Aerial part
***Bistorta officinalis* Delabre** (*Polygonum bistorta* L.)	Polygonaceae	Rhizome
***Bupleurum falcatum* L.**	Apiaceae (Umbelliferae)	Root
***Callitris introtropica* R.T.Baker & H.G.Sm.**	Cupressaceae	
***Calophyllum inophyllum* L.**	Calophyllaceae	Fruit and resin from the trunk
***Carex arenaria* L.**	Cyperaceae	
***Carlina acaulis* L.**	Asteraceae (Compositae)	Root
***Catalpa bignonioides* Walter** (C. syringifolia Sims)	Bignoniaceae	leaf, pod and seed
***Catoferia spicata* (Benth.) Benth.** (*Orthosiphon spicatus* Benth.)	Lamiaceae (Labiatae)	
***Cedrus atlantica* (Endl.) Carrière**	Pinaceae	Bud and wood
***Centaurium erythraea* Raf.**	Gentianaceae	Flowering top
***Chamaemelum nobile* (L.) All.** (*Anthemis nobilis* L.)	Asteraceae (Compositae)	Whole plant
***Chelone glabra* L.**	Plantaginaceae	Leaf
***Cnicus benedictus* L.**	Asteraceae (Compositae)	Whole plant
***Collinsonia canadensis* L.**	Lamiaceae (Labiatae)	Leaf, root and shoot
***Conyza canadensis* (L.) Cronquist**	Asteraceae (Compositae)	Whole plant
***Coridothymus capitatus* (L.) Rchb.f.**	Lamiaceae (Labiatae)	Aerial part
***Cornus officinalis* Siebold & Zucc.**	Cornaceae	Fruit
***Corylus avellana* L.**	Betulaceae	Leaf and nut
***Corymbia citriodora* (Hook.) K.D.Hill. & L.A.S.Johnson**	Myrtaceae	Leaf
***Crataegus azarolus* L.**	Rosaceae	
***Crataegus laevigata* (Poiret) DC.**	Rosaceae	
***Crataegus monogyna* Jacq.**	Rosaceae	
***Crataegus nigra* Waldst. & Kit.**	Rosaceae	
***Crataegus pentagyna* Willd.**	Rosaceae	
Crataegus rhipidophylla* Gand. var. *rhipidophylla	Rosaceae	
***Cryptomeria japonica* (L.f.) D.Don.**	Taxodiaceae	Wood dust
***Cupressus sempervirens* L.**	Cupressaceae	Cone
***Cyanotis vaga* (Lour.) Schult. & Schult.f.**	Commelinaceae	Root
***Cydonia oblonga* P.Mill.**	Rosaceae	Seed
***Cynara cardunculus* L.**	Asteraceae (Compositae)	
***Cyperus scariosus* R.Br.**	Cyperaceae	Rhizome and root
Cystoseira canariensis Sauvageau (*C. humilis Schousboe ex Kützing*)	Sargassaceae	Thallus
***Dipterocarpus retusus* Blume**	Dipterocarpaceae	

Botanical name	Family	part of plants indicated in the national list(s)
Dittrichia graveolens **(L.) Greuter**	Asteraceae (Compositae)	Leaf
Echinacea angustifolia **DC.**	Asteraceae (Compositae)	
Echinacea pallida **(Nutt.) Nutt.**	Asteraceae (Compositae)	
Echinacea purpurea **(L.) Moench**	Asteraceae (Compositae)	
Eleutherococcus senticosus **(Rupr. & Maxim.) Maxim.**	Araliaceae	
Eleutherococcus sessiliflorus **(Rupr. & Maxim.) S.Y.Hu**	Araliaceae	
Elymus repens **(L.) Gould** (*Agropyron repens* (L.) P.Beauv., *Elytrigia repens* (L.) Nevski)	Poaceae (Gramineae)	
Elytrigia repens (L.) Nevski **See *Elymus repens* (L.) Gould**		
Ephedra nevadensis **Wats.**	Ephedraceae	
Equisetum arvense **L.**	Equisetaceae	Aerial part
Eriodictyon californicum **(Hook. & Arn.) Torr.**	Boraginaceae	Aerial part
Eucommia ulmoides **Oliv.**	Eucommiaceae	Bark and leaf
Euphorbia hirta **L.** (*Chamaesyce hirta* (L.) Millesp.)	Euphorbiaceae	Aerial part
Euphrasia officinalis **L.**	Orobanchaceae	
Filipendula ulmaria **(L.) Maxim.**	Rosaceae	Aerial part
Filipendula vulgaris **Moench**	Rosaceae	Aerial part
Fragaria vesca **L.**	Rosaceae	Aerial part
Fraxinus excelsior **L.**	Oleaceae	Bark
Galium verum **L.**	Rubiaceae	Aerial part
Gentiana cruciata **L.**	Gentianaceae	
Gentiana lutea **L.**	Gentianaceae	
Geranium robertianum **L.**	Geraniaceae	
Geum rivale **L.**	Rosaceae	Rhizome and root
Geum urbanum **L.**	Rosaceae	Rhizome and root
Gevuina avellana **Molina**	Proteaceae	
Globularia vulgaris **L.**	Plantaginaceae	Aerial part
Harpagophytum procumbens **Meisn.**	Pedaliaceae	Root
Harpagophytum zeyheri **Decne.**	Pedaliaceae	Root
Helichrysum arenarium **(L.) Moench**	Asteraceae (Compositae)	
Hieracium pilosella **L.** (*Pilosella officinarum* F.W.Schultz & Sch.Bip.)	Asteraceae (Compositae)	Aerial part
Hordeum vulgare **L.**	Poaceae (Gramineae)	Seed
Inula helenium **L.**	Asteraceae (Compositae)	Root
Ipomoea aquatica **Forssk.**	Convolvulaceae	
Iris germanica **L.**	Iridaceae	Rhizome and root
Iris pallida **Lam.**	Iridaceae	Rhizome and root
Jasminum officinale **L.**	Oleaceae	Flower
Lactuca serriola **L.**	Asteraceae (Compositae)	
Lamium album **L.**	Lamiaceae (Labiatae)	
Lespedeza capitata **Michx.**	Fabaceae (Leguminosae)	Aerial part
Leuzea carthamoides (Willd.) DC. **See *Rhaponticum carthamoides* (Willd.) Iljin**		
Lippia triphylla (L'Hérit.) Kuntze **See *Aloysia citrodora* Palau**		
Lobaria pulmonaria **(L.) Hoffm.**	Lobariaceae	Thallus

Botanical name	Family	part of plants indicated in the national list(s)
Lythrum salicaria **L.**	Lythraceae	Aerial part
Magnolia fargesii **(Finet &Gagnep.) W.C.Cheng** *(M. biondii* Pamp.*)*	Magnoliaceae	
Malva sylvestris **L.**	Malvaceae	Aerial part
Marrubium vulgare **L.**	Lamiaceae (Labiatae)	Aerial part
Matricaria recutita **L.** (*Chamomilla recutita* (L.) Rauschert)	Asteraceae (Compositae)	Flower
Melissa officinalis **L.**	Lamiaceae (Labiatae)	Aerial part
Myroxylon balsamum **(L.) Harms**	Fabaceae (Leguminosae)	Trunk balsam
Oenothera biennis **L.**	Onagraceae	Seed
Olea europaea **L.**	Oleaceae	Aerial part
Ononis spinosa **L.**	Fabaceae (Leguminosae)	Whole plant
Opuntia ficus-indica **(L.) Mill.**	Cactaceae	
Oroxylum indicum **(L.) Kurz**	Bignoniaceae	Fruit and seed
Orthosiphon aristatus (**Blume) Miq.**	Lamiaceae (Labiatae)	Aerial part
Orthosiphon spicatus Benth. **See *Catoferia spicata* (Benth.) Benth.**		
Paeonia lactiflora **Pall.**	Paeoniaceae	
Paeonia officinalis **L.**	Paeoniaceae	
Paeonia suffructicosa **Andr.**	Paeoniaceae	
Panax ginseng **C.A.Mey.**	Araliaceae	Root
Panax quinquefolius **L.**	Araliaceae	Root
Papaver rhoeas **L.**	Papaveraceae	Aerial part
Parthenium integrifolium **L.**	Asteraceae (Compositae)	
Passiflora edulis **Sims**	Passifloraceae	Whole plant
Passiflora incarnata **L.**	Passifloraceae	Whole plant
Pinus sylvestris **L.**	Pinaceae	Oleo-resin from the trunk
Plantago afra **L.**	Plantaginaceae	Leaf and seed
Plantago arenaria **Waldst. & Kit.**	Plantaginaceae	Leaf and seed
Plantago lanceolata **L.**	Plantaginaceae	Leaf and seed
Plantago major **L.**	Plantaginaceae	Leaf and seed
Plantago media **L.**	Plantaginaceae	Leaf and seed
Plantago ovata **Forssk.**	Plantaginaceae	Leaf and seed
Platycodon grandiflorus **(Jacq.) A.DC.**	Campanulaceae	
Pogostemon cablin **Benth.**	Lamiaceae (Labiatae)	
Polianthes tuberosa **L.**	Asparagaceae	Aerial part
Polygonum bistorta L. **See *Bistorta officinalis* Delabre**		
Polypodium vulgare **L.**	Polypodiaceae	Rhizome and root
Potentilla anserina **L.**	Rosaceae	Root
Primula elatior **(L.) Hill.**	Primulaceae	Whole plant
Primula veris **L.**	Primulaceae	Whole plant
Primula vulgaris **Huds.**	Primulaceae	
Prunus africana **(Hook.f.) Kalkman**	Rosaceae	
Prunus cerasus **L.**	Rosaceae	
Pseudotsuga menziesii **(Mirb.) Franco**	Pinaceae	
Pterocarpus marsupium **Roxb.**	Fabaceae (Leguminosae)	Bark and wood

Botanical name	Family	part of plants indicated in the national list(s)
Raphanus sativus var. niger **J.Kern** (*Raphanus sativus* L. convar. s*ativus* Radish group)	Brassicaceae	
Rhaponticum carthamoides **(Willd.) Iljin** (*Stemmacantha carthamoides* (Willd.) Dittrich, *Leuzea carthamoides* (Willd.) DC.)	Asteraceae (Compositae)	
Rhodiola rosea **L.**	Crassulaceae	
Ribes nigrum **L.**	Grossulariaceae	
Rosa canina **L.**	Rosaceae	
Rosa damascena **Mill.**	Rosaceae	Flower and leaf
Rubus fruticosus **L. s.l.**	Rosaceae	
Sanguisorba officinalis **L.**	Rosaceae	Root
Santalum album **L.**	Santalaceae	
Schinus molle **L.**	Anacardiaceae	Fruit and leaf
Schisandra chinensis **(Turcz.) Baill.**	Schisandraceae	Fruit
Schisandra sphenanthera **Rehd. et Wills.**	Schisandraceae	Fruit
Scrophularia nodosa **L.**	Scrophulariaceae	Whole plant
Selenicereus grandiflorus **Britton & Rose** (*Cactus grandiflorus* L.)	Cactaceae	Aerial part
Silybum marianum **(L.) Gaertn.**	Asteraceae (Compositae)	Flowering top and seed
Solidago canadensis **L.**	Asteraceae (Compositae)	
Solidago virgaurea **L.**	Asteraceae (Compositae)	
Sorbus aucuparia **L.**	Rosaceae	Fruit
Sorbus domestica **L.**	Rosaceae	Fruit
Spergularia rubra **(L.) J.Presl. & C.Presl.**	Caryophyllaceae	
Stachys officinalis **(L.) Trevis.**	Lamiaceae (Labiatae)	
Stellaria media **(L.) Vill.**	Caryophyllaceae	Whole plant
Stellaria dichotoma **L.**	Caryophyllaceae	Whole plant
Stemmacantha carthamoides (Willd.) Dittrich **See *Rhaponticum carthamoides* (Willd.) Iljin**		
Styrax benzoides **Craib.**	Styracaceae	Resin from the trunk
Swertia chirayita **(Roxb.) H.Karst.**	Gentianaceae	Whole plant
Tamarindus indica **L.**	Fabaceae (Leguminosae)	
Taraxacum officinale **F.H.Wigg., s.l.**	Asteraceae (Compositae)	
Terminalia arjuna **(Roxb.) Wight & Arn.**	Combretaceae	
Terminalia bellirica **(Gaertn.) Roxb.**	Combretaceae	
Tilia cordata **Mill.**	Malvaceae	
Tilia europaea **L.**	Malvaceae	
Tilia platyphyllos **Scop.**	Malvaceae	
Tilia tomentosa **Moench**	Malvaceae	
Trigonella foenum-graecum **L.**	Fabaceae (Leguminosae)	
Triticum aestivum **L. subsp. *aestivum***	Poaceae (Gramineae)	
Turnera diffusa **Schult.**	Passifloraceae	
Uncaria tomentosa **(Schult.) DC.**	Rubiaceae	Aerial part
Urtica dioica **L.**	Urticaceae	Aerial part
Vaccinium myrtillus **L.**	Ericaceae	Leaf
Vaccinium vitis-idaea **L.**	Ericaceae	Leaf
Valeriana procera **Kunth**	Caprifoliaceae	
Valeriana officinalis **L.**	Caprifoliaceae	
Valeriana repens **Host**	Caprifoliaceae	
Verbascum densiflorum **Bertol.**	Scrophulariaceae	
Verbascum phlomoides **L.**	Scrophulariaceae	
Verbena officinalis **L.**	Verbenaceae	

Botanical name	Family	part of plants indicated in the national list(s)
***Veronica officinalis* L.**	Plantaginaceae	
***Viburnum lantana* L.**	Caprifoliaceae	
***Viburnum opulus* L.**	Caprifoliaceae	
***Viburnum prunifolium* L.**	Caprifoliaceae	Bark
***Viola arvensis* Murray**	Violaceae	
***Viola odorata* L.**	Violaceae	Flower and leaf
***Viola tricolor* L.**	Violaceae	Flower and leaf
***Vitis vinifera* L.**	Vitaceae	Fruit, leaf and seed
***Ziziphus jujuba* Mill.**	Rhamnaceae	
FUNGI		
Cordyceps sinensis (Berk.) Sacc. **See *Ophiocordyceps sinensis* (Berk.) G.H.Sung, J.M.Sung, Hywel-Jones & Spatafora**		
***Ganoderma lucidum* (Curtis) P.Karst.**	Ganodermataceae	Fruiting body
***Ophiocordyceps sinensis* (Berk.) G.H.Sung, J.M.Sung, Hywel-Jones & Spatafora** (*Cordyceps sinensis* (Berk.) Sacc.)	Ophiocordycipitaceae	Mycelium
Poria cocos F.A.Wolf ***See Wolfiporia extensa* (Peck) Ginns.**		
Wolfiporia cocos (F.A. Wolf) Ryvarden & Gilb. **See *Wolfiporia extensa* (Peck) Ginns.**		
***Wolfiporia extensa* (Peck) Ginns.** (*Wolfiporia cocos* (F.A. Wolf) Ryvarden & Gilb., *Poria cocos* F.A.Wolf)	Polyporaceae	Fruiting body

ALGAE		
***Aphanizomenon flos-aquae* Bornet & Flauhault** (*Byssus flos-aquae* L.)	Nostocaceae	
***Spirulina maxima* (Setchell & Gardner) Geitler**	Pseudanabaenaceae	