

# MEDICINAL PLANTS

FINDING THE BEST SOLUTION FOR YOU

# 2GETHER

*ONE STEP AHEAD*



Oskar Tropitzsch

# Dear customer,

We are pleased to introduce you our catalogue for medicinal plants. You search – we offer, our customers appreciate our special service. We have a worldwide network of partners to search for your required product.

## You need – we deliver!

- Scouting
- List of Medicinal plants
- Contract Cultivation

A Harvest protocol will be sent with every order. Special documents and quality requirements are available on request.

Like:

- GACP-Confirmation
- ID-Certification
- Herbarium
- Low Temperature Adsorption Drying
- Full traceability

We are permanently improving our service and developing strategies with our customers to enhance our standards.

If you are interested please contact us: [phyto@cfmot.de](mailto:phyto@cfmot.de) or visit us at [www.cfmot.de](http://www.cfmot.de)

Kind regards,  
Your Cfm-Phyto Team



We are proud to announce that Cfm Oskar Tropitzsch GmbH is celebrating its 230th anniversary. More than two centuries of experience in the chemical and pharmaceutical market. We are happy to share this knowledge with you.



Cfm Oskar Tropitzsch GmbH is GDP certified (Good Distribution Practice) by the German authorities starting January 2018.

## Contact

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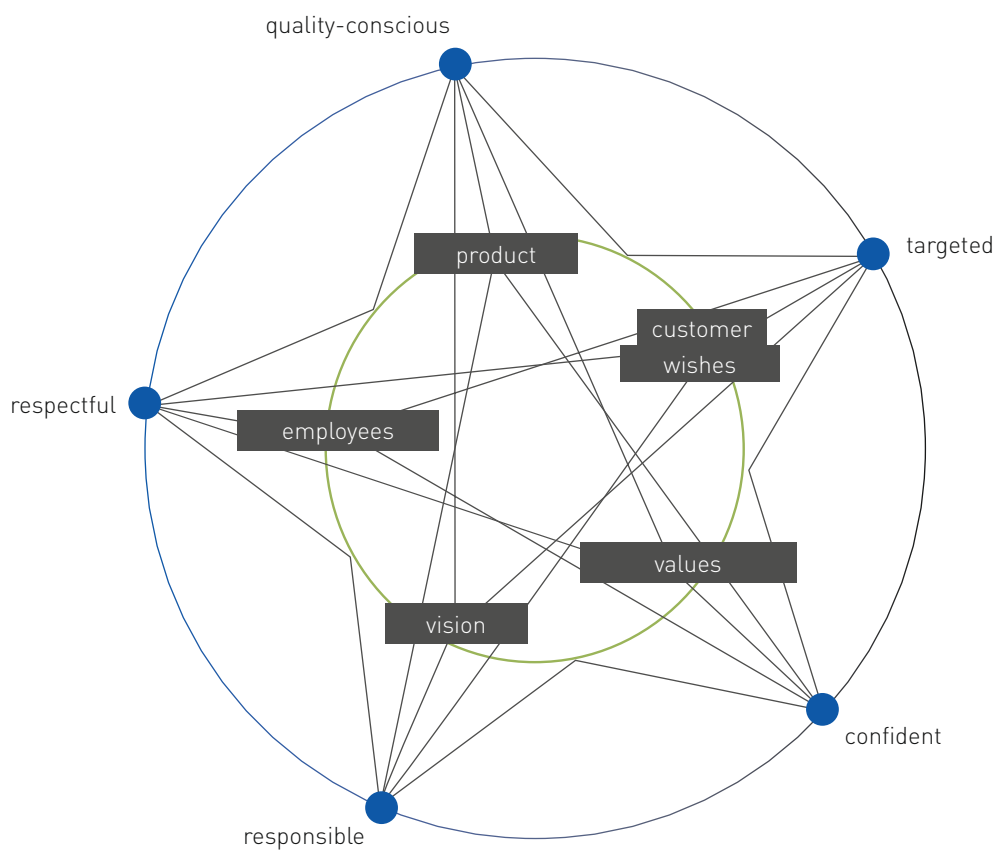
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## New Address:

After being located for more than 15 years in our office in Waldershofer Str., we moved to our new office and warehouse in Adalbert-Zoellner-Str. 1, also in Marktredwitz. The steadily growing number of employees and need for bigger storage options made this fantastic change possible and necessary.

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## Scouting

Since many plants are not commercially available, we search for the raw material in certain countries and check the possibilities for collection. We organize the wild collection directly without intermediate wholesalers. With our local partners, we investigate permissions, export and import modalities. Harvest and drying can be arranged according to your individual requirements.

Weather conditions, legal regulations and other circumstances can make it necessary to find a second source in another country.

The active ingredient profile can differ from country to country depending on weather and soil. We procure samples from different sources/countries and support you to find the perfect country or to improve cultivation conditions.



## Cultivation

Your project needs industrial quantities? Contract cultivation may be the choice for you. Medicinal plants demand intensive management; the different species require their own distinct conditions of cultivation. We have a network of farmers, plant breeders and biologists with a lot of experience in cultivation of plants.

Of course, you receive a detailed documentation about the whole farming process. Further, we have the possibility to optimize the content of ingredients. The drying process with a low temperature absorption dryer can stabilise the ingredients after the harvest.









## Nagoya Protocol

The Nagoya Protocol is a legally binding international agreement with the title: "The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (CBD)".

The Nagoya Protocol entered into force on 12. October 2014, with the aim to further substantiate the CBD's ABS obligations. ABS is the shortened form of "access and benefit sharing" and means the access to genetic resources and the fair and equitable sharing of benefits.

ABS Clearing-House is a website set up to provide information regarding the Nagoya Protocol and its regulations. There is the list of countries, that are part of the Nagoya Protocol with all relevant

information like their national focal points, national legislative, administrative or policy measures and national reports of the implementation of the Nagoya Protocol.

<https://absch.cbd.int/>

We support you in questions regarding the Nagoya Protocol. However, whether your project is under the regulation of the Protocol has to be defined by the end user.

**[Federal Agency for Nature Conservation (BfN): [www.abs.bfn.de](http://www.abs.bfn.de)]**



## Medicinal Plants - Herbs

Medicinal Plants have been used since ancient times to support healing. Although taxonomically not plants, mushrooms, lichen and algae are referred to as medicinal plants. Due to their active ingredients the plants are used as raw material for pharmaceuticals, cosmetics and recently also for functional food. Tea, coffee, tobacco and culinary herbs are all former medicinal plants that found their way into our daily life.

Secondary plant ingredients are a huge reservoir for potential new medicines. TCM, Ayurveda, the unknown flora of rainforests and also the European medicinal herbs have a long tradition with interesting ingredients for scientific research.

Plant material can be obtained mainly dried, but is also available in other forms, e.g. fresh, as an extract, decoctions and macerate. Active parts include leaves, flowers, fruits, bark, seeds and roots.



## Ardisia crenata

Belongs to the family of Primulaceae. It originates from Asia, but is an invasive species in some other countries, e.g. the United States. It is widely used as ornamental plant. Identified ingredients include the aglykon Ardisicrenogenin and several ardisicrenosides (saponins).

Several substances isolated from the root show cytotoxic activities in human cancer cell lines. *(Three new triterpenoid saponins from the roots of Ardisia crenata and their cytotoxic activities. Liu DL1,2, Zhang X3, Zhao Y1, Wang NL3, Yao XS3. Nat Prod Res. 2016 Mar 7:1-10. [Epub ahead of print])*

The leaves of the plant contain a substance known as FR900359. It is investigated to treat several diseases, e.g. Asthma. It prevents asthmatic contractions and spasms. *(Targeted inhibition of Gq signaling induces airway relaxation in mouse models of asthma. Matthey, M. Et al. (2017). Science Translational Medicine, 13. September 2017, DOI: 10.1126/scitranslmed.aag2288)*

### Ardisicrenosid A

Product code:	7501821
CAS#:	160824-52-2
Formula:	$C_{53}H_{88}O_{22}$
Mol. weight:	1077,27 g/mol

# A

8000000	<i>Abelmoschus moschatus</i>
8000001	<i>Abies alba</i>
8000003	<i>Abies nigra</i>
8000004	<i>Abrus precatorius</i>
8001042	<i>Abuta grandifolia</i>
8000005	<i>Acacia catechu</i>
8000006	<i>Acacia farnesiana</i>
8000007	<i>Acacia nilotica</i>
8000008	<i>Acacia senegal</i>
8000015	<i>Acalypha indica</i>
8000017	<i>Achillea millefolium</i>
8000018	<i>Acorus calamus</i>
8000930	<i>Adansonia digitata</i>
8000019	<i>Adhatoda vasica</i>
8000020	<i>Adiantum capillus-veneris</i>
8000021	<i>Aegle marmelos</i>
8000022	<i>Aegopodium podagraria</i>
8000023	<i>Aerva leucura</i>
8000024	<i>Aesculus glabra</i>
8000025	<i>Aesculus hippocastanum</i>
8000851	<i>Aesculus indica</i>
8000026	<i>Aframomum melegueta</i>
8000027	<i>Agaricus albus</i>
8000846	<i>Agathosma betulina</i>
8000028	<i>Agave americana</i>
8000029	<i>Agrimonia eupatoria</i>
8000030	<i>Agropyron repens</i>
8000031	<i>Ailanthus altissima</i>
8000032	<i>Ailanthus excelsa</i>
8000033	<i>Alangium lamarckii</i>

8000034	<i>Albizia anthelmintica</i>
8000035	<i>Albizia lebbek</i>
8000036	<i>Alchemilla alpina</i>
8000037	<i>Alchemilla arvensis</i>
8000038	<i>Alchemilla vulgaris</i>
8001043	<i>Alchornea castaneifolia</i>
8000039	<i>Aletris farinosa</i>
8000040	<i>Allium cepa</i>
8000041	<i>Allium sativum</i>
8000042	<i>Allium schoenoprasum</i>
8000043	<i>Allium ursinum</i>
8000044	<i>Alnus rubra</i>
8000045	<i>Aloe barbadensis</i>
8000937	<i>Aloe excelsa</i>
8001100	<i>Aloysia citrodora</i>
8000046	<i>Alpinia officinarum</i>
8000047	<i>Alstonia scholaris</i>
8000847	<i>Althaea officinalis</i>
8000048	<i>Amanita muscaria</i>
8001044	<i>Amaranthus caudatus</i>
8000991	<i>Ambrosia artemisiaefolia</i>
8000049	<i>Ammi majus</i>
8000050	<i>Ammi visnaga</i>
8001115	<i>Amomum aromaticum</i>
8000051	<i>Amorphophallus campanulatus</i>
8000052	<i>Amorphophallus konjac</i>
8000054	<i>Anacardium occidentale</i>
8000055	<i>Anacardium orientale</i>
8000056	<i>Anacyclus pyrethrum</i>
8001045	<i>Anadenanthera peregrina</i>
8000057	<i>Anagallis arvensis</i>
8000016	<i>Anamirta cocculus</i>

8000059	Anchietea salutaris	8000839	Asa foetida
8000062	Andrographis paniculata	8000095	Asarum canadense
8000063	Anethum graveolens	8000096	Asarum europaeum
8000064	Angelica anomala	8000097	Asclepias curassavica
8000065	Angelica archangelica	8000098	Asclepias tuberosa
8000066	Angelica chinensis	8000099	Asimina triloba
8000067	Angelica sinensis	8000100	Asparagus ascendens
8000068	Aniba canelilla	8000101	Asparagus officinalis
8000966	Annona muricata	8000102	Asparagus racemosus
8000069	Annona reticulata	8000103	Asperula odorata
8000070	Annona squamosa	8000967	Asphalatus contaminatus
8000071	Anthemis nobilis	8000104	Aspidosperma quebracho-blanco
8000075	Anthocleista schweinfurthii	8001034	Aspilia africana
8000072	Anthriscus cerefolium	8000105	Asteracantha longifolia
8000077	Apocynum androsaemifolium	8000107	Astragalus gummifer
8000078	Apocynum cannabinum	8000108	Astragalus membranaceus
8001021	Aralia continentalis	8000109	Atractylodes chinensis
8000079	Aralia racemosa	8000110	Atractylodes lancea
8000083	Arctium major	8000111	Atractylodes macrocephala
8001024	Ardisia crenata	8000980	Atractylodes japonica
8000964	Areca catechu	8000112	Atropa belladonna
8000085	Argemone mexicana	8000113	Aurelia aurita
8000087	Aristolochia brasiliensis	8000114	Avena sativa
8000088	Aristolochia indica	8000115	Averrhoa bilimbi
8000089	Aristolochia serpentaria	8000117	Azadirachta indica
8000842	Arnica montana		
8000090	Artemisia abrotanum		
8000091	Artemisia absinthium		
8000092	Artemisia annua		
8000093	Artemisia dracunculus		
8000094	Artemisia vulgaris		
8001046	Artocarpus altilis		

# B

8000862	Baccharis gaudichaudiana
8000118	Baccharis genistelloides
8000119	Baccharis trimera
8000818	Baccharis halimifolia
8000120	Bacopa monnieri
8000121	Ballota nigra
8000122	Balsamum toltutanum
8000123	Bambusa arundinacea
8000124	Banisteria caapi
8000125	Baptisia tinctoria
8000126	Barosma betulina
8000127	Barosma crenulata
8000128	Bauhinia forficata
8000129	Bauhinia purpurea
8000130	Bauhinia variegata
8000131	Bellis perennis
8000132	Berberis aquifolium
8000133	Berberis vulgaris
8000134	Betula pendula
8000002	Bidens alba
8000908	Bidens pilosa
8000135	Bignonia unguis-cati
8000138	Bixa orellana
8000141	Boerhaavia diffusa
8000142	Boerhaavia hirsuta
8000143	Boerhaavia repens
8000144	Borago officinalis
8000145	Boswellia carteri
8000146	Boswellia serrata
8000154	Bovista sp.

8000155	Brassica nigra
8000982	Brassica oleracea
8001047	Brosimum acutifolium
8001048	Brugmansia suaveolens
8000156	Brunfelsia uniflora
8001049	Brunfelsia grandiflora
8000157	Bryonia alba
8000158	Bryonia dioica
8000159	Bryophyllum calycinium
8000859	Buddleja asiatica
8000976	Bunium persicum
8000161	Bupleurum falcatum
8000060	Bursera simaruba
8000162	Butea monosperma
8000163	Butea superba



## Coffea arabica

Apart from that, caffeine has been used in pharmaceutical and cosmetic preparations since a long time due to its favorable effects on the skin. [*Evaluation of antioxidant and anti-inflammatory activity of green coffee beans methanolic extract in rat skin. Pergolizzi S, D'Angelo V, Aragona M, Dugo P, Cacciola F, Capillo G, Dugo G, Lauriano E. Nat Prod Res. 2018 Dec 3:1-7. doi: 10.1080/14786419.2018.1523161. [Epub ahead of print]*]

But not only the coffee beans have interesting ingredients, few studies focus on the leaves for medicinal purposes and the composition of secondary plant substances. [*Nutraceutical compounds: Echinoids, flavonoids, xanthones and caffeine identified and quantitated in the leaves of Coffea arabica trees from three regions of Brazil. de Almeida R, Trevisan M, Thomaziello R, Breuer A, Klika K, Ulrich C, Owen R. Food Res Int. 2019 Jan;115:493-503. doi: 10.1016/j.foodres.2018.10.006. Epub 2018 Oct 7.*]

The coffea arabica plant is still a challenging plant for pharmaceutical and nutraceutical research. [*An Insight into the Therapeutic Potential of Major Coffee Components. Islam M, Tabrez S, Jabir N, Ali M, Kamal M, da Silva Araujo L, De Oliveira Santos J, Da Mata A, De Aguiar R, de Carvalho Melo Cavalcante A. Curr Drug Metab. 2018;19(6):544-556. doi: 0.2174/1389200219666180302154551.*]

### Chlorogenic acid

Product code:	7500528
CAS#:	327-97-9
Formula:	$C_{16}H_{18}O_9$
Mol. weight:	354,31 g/mol



## C

8000165	Caesalpinia bonducella
8000166	Caesalpinia pulcherrima
8000167	Caladium seguinum
8000168	Calendula officinalis
8001050	Calliandra angustifolia
8000169	Calluna vulgaris
8000170	Calotropis gigantea
8000171	Calotropis procera
8000172	Caltha palustis
8000173	Calvatia gigantea
8000174	Camellia sinensis
8001051	Campsiandra angustifolia
8000175	Canarium commune
8000176	Canarium luzonicum
8000177	Canavalia ensiformis
8001027	Capparis spinosa
8000179	Capsella bursa-pastoris
8000180	Capsicum annum
8001109	Caralluma fimbriata
8000181	Cardiospermum halicacabum
8000182	Cardui benedicti
8000185	Carica papaya
8000186	Carissa carandas
8000187	Carissa edulis
8000188	Carthamus tinctorius
8000189	Carum carvi
8000190	Carya ovata
8000191	Cassia alata
8000192	Cassia angustifolia
8000193	Cassia fistula

8001018	Cassia grandis
8000194	Cassia occidentalis
8001052	Cassia reticulata
8000195	Cassia senna
8000196	Cassia tora
8000197	Castanea sativa
8000198	Castor equi
8000200	Catharanthus roseus
8000201	Caulophyllum thalictroides
8000202	Ceanothus americanus
8000203	Cecropia peltata
8000204	Centaurea cyanus
8000205	Centella asiatica
8000206	Cephalandra indica
8000207	Cerasus virginiana
8000208	Ceratonia siliqua
8000209	Chamaemelum nobile
8000212	Chelidonium majus
8000213	Chelone glabra
8000214	Chenopodium ambrosioides
8001053	Chenopodium pallidicaule
8001054	Chenopodium quinoa
8000215	Chionanthus virginicus
8000840	Chondrodendron tomentosum
8000217	Chondrus crispus
8000218	Chrysanthemum balsamita
8000219	Chrysanthemum marschallii
8000220	Cichorium intybus
8000221	Cimex lectularius
8000222	Cimicifuga foetida
8000223	Cimicifuga racemosa
8000224	Cinchona ledgeriana

8000225	<i>Cinchona succirubra</i>	8000252	<i>Convallaria majalis</i>
8000226	<i>Cineraria maritima</i>	8000253	<i>Convolvulus arvensis</i>
8000227	<i>Cinnamomum cassia</i>	8000254	<i>Convolvulus scammonia</i>
8000228	<i>Cinnamomum ceylanicum</i>	8000255	<i>Copaifera officinalis</i>
8001033	<i>Cissus sicyoides</i>	8000256	<i>Copaifera reticulata</i>
8000229	<i>Citrullus colocynthis</i>	8001057	<i>Copaifera paupera</i>
8000230	<i>Citrus aurantium</i>	8000257	<i>Coptis chinensis</i>
8001020	<i>Citrus depressa</i>	8001040	<i>Coptis japonica</i>
8001055	<i>Citrus jambhiri</i>	8000259	<i>Cordia latifolia</i>
8000231	<i>Citrus limon</i>	8000260	<i>Coriandrum sativum</i>
8000885	<i>Citrus medica</i>	8000262	<i>Cornus circinata</i>
8000232	<i>Citrus reticulata</i>	8000263	<i>Cornus florida</i>
8000233	<i>Citrus sinensis</i>	8000858	<i>Cornus mas</i>
8000234	<i>Citrus vulgaris</i>	8000264	<i>Corydalis ambigua</i>
8000235	<i>Clematis virginiana</i>	8000265	<i>Corydalis cava</i>
8000236	<i>Clematis vitalba</i>	8000999	<i>Corylus avellana</i>
8000237	<i>Clerodendron phlomoides</i>	8000266	<i>Corynanthe pachyceras</i>
8001056	<i>Clusia rosea</i>	8001058	<i>Couroupita guianensis</i>
8000239	<i>Cocculus indicus</i>	8000267	<i>Coutarea hexandra</i>
8001002	<i>Cochlearia officinalis</i>	8000268	<i>Crataegus oxyacantha</i>
8000241	<i>Cocos nucifera</i>	8000830	<i>Crataegus monogyna</i>
8000242	<i>Coffea arabica</i>	8001116	<i>Crotalaria juncea</i>
8000243	<i>Coix lacryma-jobi</i>	8001117	<i>Crotalaria tetragona</i>
8001111	<i>Cola acuminata</i>	8000271	<i>Croton campestris</i>
8000244	<i>Cola nitida</i>	8000272	<i>Croton eluteria</i>
8000245	<i>Colchicum autumnale</i>	8000273	<i>Croton lechleri</i>
8000246	<i>Coleus forskolii</i>	8000274	<i>Croton tiglium</i>
8000247	<i>Collinsonia canadensis</i>	8001059	<i>Croton urucurana</i>
8000248	<i>Colocasia esculenta</i>	8000275	<i>Cucumis melo</i>
8000249	<i>Commiphora molmol</i>	8000276	<i>Cucurbita maxima</i>
8000250	<i>Commiphora mukul</i>	8000277	<i>Cucurbita pepo</i>
8000251	<i>Conium maculatum</i>	8000278	<i>Cuminum cyminum</i>

8000279	<i>Curcuma amada</i>
8000280	<i>Curcuma domestica</i>
8000281	<i>Curcuma zanthorrhiza</i>
8000282	<i>Curcuma zedoaria</i>
8000283	<i>Cusparia officinalis</i>
8000968	<i>Cyclopia intermedia</i>
8000284	<i>Cydonia vulgaris</i>
8000285	<i>Cymbopogon citratus</i>
8000286	<i>Cymbopogon nardus</i>
8000288	<i>Cynara scolymus</i>
8001060	<i>Cyperus articulatus</i>
8000289	<i>Cyperus rotundus</i>
8000290	<i>Cytisus scoparius</i>

## D

8000993	<i>Dactylis glomerata</i>
8000291	<i>Datura metel</i>
8000292	<i>Datura stramonium</i>
8000293	<i>Daucus carota</i>
8000294	<i>Delphinium staphisagria</i>
8000296	<i>Derris elliptica</i>
8000297	<i>Derris pinnata</i>
8000876	<i>Desmodium adscendens</i>
8000298	<i>Digitalis purpurea</i>
8000299	<i>Dioscorea opposita</i>
8000300	<i>Dioscorea villosa</i>
8001061	<i>Dioscorea trifida</i>
8001062	<i>Diplopteryx cabrerana</i>
8000301	<i>Dipteryx odorata</i>
8000302	<i>Dolichos biflorus</i>
8000304	<i>Dorema ammoniacum</i>

8001063	<i>Dracontium loretense</i>
8000306	<i>Dracunculus vulgaris</i>
8000307	<i>Drimys winteri</i>
8000962	<i>Drosera rotundifolia</i>
8000308	<i>Dryopteris filix-mas</i>
8000309	<i>Duboisia myoporoides</i>

## E

8000310	<i>Echinacea angustifolia</i>
8000311	<i>Echinacea purpurea</i>
8000312	<i>Echinops spinosus</i>
8000313	<i>Eclipta alba</i>
8000957	<i>Eichhornia crassipes</i>
8000983	<i>Elaeagnus angustifolia</i>
8000969	<i>Elaeis guineensis</i>
8000314	<i>Elettaria cardamomum</i>
8000315	<i>Eleutherococcus senticosus</i>
8000316	<i>Embelia ribes</i>
8000320	<i>Epigaea repens</i>
8000321	<i>Epilobium angustifolium</i>
8000322	<i>Epilobium parviflorum</i>
8000323	<i>Epiphegus virginicus</i>
8000324	<i>Equisetum arvense</i>
8000325	<i>Equisetum hyemale</i>
8000326	<i>Erechtites hieracifolia</i>
8000327	<i>Erica vulgaris</i>
8000328	<i>Erigeron canadensis</i>
8000329	<i>Eriobothrya japonica</i>
8000330	<i>Eriodictyon californicum</i>
8000331	<i>Eryngium aquaticum</i>

8000332	<i>Eryngium yuccifolium</i>
8000333	<i>Eschscholtzia californica</i>
8000334	<i>Espeletia grandiflora</i>
8000335	<i>Eucalyptus globulus</i>
8000336	<i>Eucommia ulmoides</i>
8000337	<i>Eugenia caryophyllata</i>
8000339	<i>Eugenia jambosa</i>
8000340	<i>Euonymus atropurpureus</i>
8000341	<i>Eupatorium aromaticum</i>
8000342	<i>Eupatorium fortunei</i>
8000343	<i>Eupatorium perfoliatum</i>
8000836	<i>Eupatorium purpureum</i>
8001064	<i>Eupatorium triplinerve</i>
8000345	<i>Euphrasia officinalis</i>
8001065	<i>Euterpe oleracea</i>
8000074	<i>Evodia rutaecarpa</i>
8000346	<i>Evolvulus alsinoides</i>
8000347	<i>Exogonium purga</i>

## F

8000348	<i>Fabiana imbricata</i>
8001022	<i>Fagopyrum cymosum</i>
8000350	<i>Ferula sumbul</i>
8000994	<i>Festuca elatior</i>
8000351	<i>Ficaria verna</i>
8001066	<i>Ficus insipida</i>
8000352	<i>Ficus religiosa</i>
8000353	<i>Filipendula ulmaria</i>
8000354	<i>Foeniculum vulgare</i>
8000356	<i>Fragaria vesca</i>

8000357	<i>Fraxinus americana</i>
8000358	<i>Fraxinus excelsior</i>
8000359	<i>Fraxinus rhynchophylla</i>
8000360	<i>Fucus vesiculosus</i>
8001019	<i>Fumaria parviflora</i>
8000361	<i>Fumaria officinalis</i>

## G

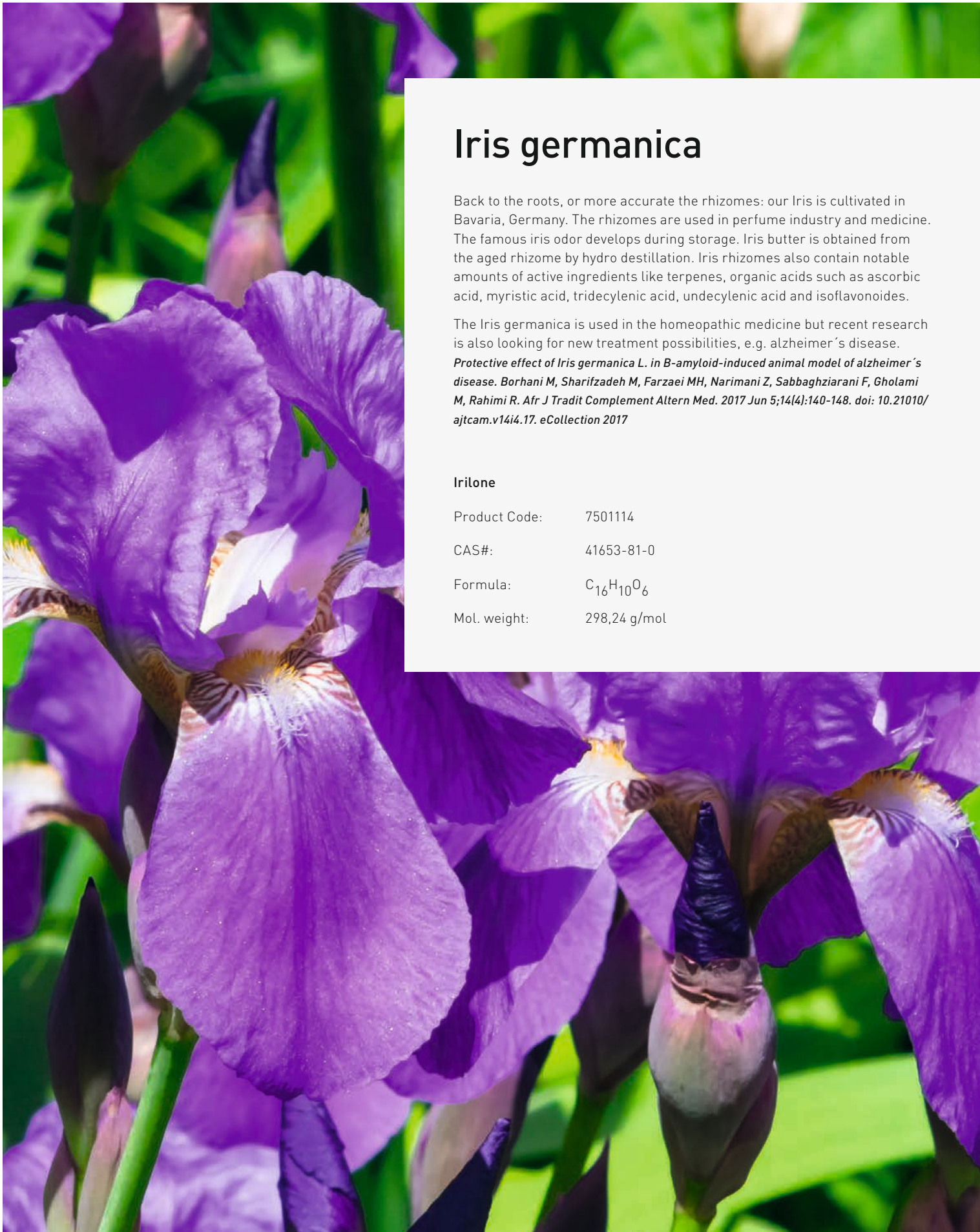
8000362	<i>Galega officinalis</i>
8000363	<i>Galeopsis segetum</i>
8000364	<i>Galium aparine</i>
8000365	<i>Galium odoratum</i>
8000366	<i>Galium verum</i>
8000367	<i>Galphimia glauca</i>
8001067	<i>Ganoderma lucidum</i>
8000368	<i>Garcinia cambogia</i>
8000369	<i>Garcinia cola</i>
8000370	<i>Garcinia morella</i>
8000942	<i>Garcinia huillensis</i>
8000371	<i>Gardenia jasminoides</i>
8000372	<i>Gaultheria procumbens</i>
8000373	<i>Geissospermum laeve</i>
8000375	<i>Gelsemium sempervirens</i>
8001068	<i>Genipa americana</i>
8000376	<i>Geranium maculatum</i>
8000377	<i>Geum urbanum</i>
8000378	<i>Ginkgo biloba</i>
8000379	<i>Glechoma hederacea</i>
8000380	<i>Glycine max</i>
8000974	<i>Glycosmis pentaphylla</i>

8000381 Glycyrrhiza glabra  
 8000382 Gmelina arborea  
 8000383 Gnaphalium polycephalum  
 8001000 Gnidia kraussiana  
 8000385 Gossypium herbaceum  
 8000386 Gratiola officinalis  
 8000387 Griffonia simplicifolia  
 8000388 Grindelia camporum  
 8000389 Grindelia robusta  
 8001007 Guaiacum officinale  
 8000392 Guarea trichiloides  
 8000393 Guatteria gaumeri  
 8000394 Gymnema sylvestre  
 8000958 Gynostemma pentaphyllum

## H

8000395 Haematoxylon campechianum  
 8000396 Hagenia abyssinica  
 8000397 Hamamelis virginiana  
 8000398 Haronga madagascariensis  
 8000399 Harpagophytum procumbens  
 8000936 Harpagophytum zeyherii  
 8000975 Harrisonia perforata  
 8000984 Harunganae madagascariensae  
 8000400 Hedeoma pulegioides  
 8000401 Hedera helix  
 8000402 Helianthus annuus  
 8000403 Helianthus tuberosus  
 8000404 Heliotropium indicum  
 8000405 Helonias dioica

8000407 Hemidesmus indicus  
 8000408 Herniaria glabra  
 8000943 Heteropyxis natalensis  
 8000409 Hibiscus abelmoschus  
 8000410 Hibiscus sabdariffa  
 8000411 Hieracium pilosella  
 8001039 Hippophae rhamnoides  
 8000412 Holarrhena antidysenterica  
 8000995 Holcus lanatus  
 8000413 Hoodia gordonii  
 8000883 Hoslundia opposita  
 8000414 Humulus lupulus  
 8000415 Hura brasiliensis  
 8000416 Hura crepitans  
 8000417 Hydnocarpus kurzii  
 8000418 Hydrangea arborescens  
 8000419 Hydrocotyle asiatica  
 8000420 Hyoscyamus niger  
 8000421 Hypericum perforatum  
 8001030 Hypoxis hemerocallidea  
 8000422 Hyssopus officinalis



## Iris germanica

Back to the roots, or more accurate the rhizomes: our Iris is cultivated in Bavaria, Germany. The rhizomes are used in perfume industry and medicine. The famous iris odor develops during storage. Iris butter is obtained from the aged rhizome by hydro distillation. Iris rhizomes also contain notable amounts of active ingredients like terpenes, organic acids such as ascorbic acid, myristic acid, tridecylenic acid, undecylenic acid and isoflavonoides.

The Iris germanica is used in the homeopathic medicine but recent research is also looking for new treatment possibilities, e.g. alzheimer's disease.

*Protective effect of Iris germanica L. in B-amyloid-induced animal model of alzheimer's disease. Borhani M, Sharifzadeh M, Farzaei MH, Narimani Z, Sabbaghziarani F, Gholami M, Rahimi R. Afr J Tradit Complement Altern Med. 2017 Jun 5;14(4):140-148. doi: 10.21010/ajtcam.v14i4.17. eCollection 2017*

### Irilone

Product Code: 7501114

CAS#: 41653-81-0

Formula:  $C_{16}H_{10}O_6$

Mol. weight: 298,24 g/mol

## I

8000423	Iberis amara
8000424	Ilex paraguariensis
8000425	Illicium verum
8000426	Indigofera tinctoria
8001069	Inonotus obliquus
8001102	Inula cappa
8000427	Inula helenium
8000988	Iris pallida
8001006	Iris pallida dalmatica
8001008	Iris germanica
8001009	Iris spec.
8000428	Isatis tinctoria

## J

8000429	Jacaranda procera
8000430	Jalapa ipomea
8000431	Jasminum officinalis
8001070	Jatropha gossypifolia
8000432	Jatropha curcas
8001071	Jatropha macrantha
8000433	Jatrorrhiza palmata
8001072	Jessenia bataua
8000434	Jonesia asoka
8000435	Juglans cinerea
8000436	Juglans nigra
8000437	Juglans regia
8000438	Juniperus communis
8000439	Juniperus sabina
8000440	Jussiaea suffruticosa
8000441	Justicia adhatoda

## K

8001013	Kadsura coccinea
8000442	Kalmia latifolia
8000444	Krameria triandra

## L

8000384	Lycium barbarum
8000446	Lactuca virosa
8001035	Lagerstroemia speciosa
8000447	Laminaria digitata
8000448	Laminaria hyperborea
8000449	Laminaria saccharina
8000450	Lamium album
8000451	Lantana camara
8001073	Laportea aestuans
8000453	Larix decidua
8000454	Larrea mexicana
8000455	Larrea tridentata
8000456	Lathyrus sativus
8000458	Laurus nobilis
8000459	Lavandula officinalis
8000460	Lawsonia inermis
8000461	Lemna minor
8000462	Leonurus cardiaca
8001036	Leonurus japonica
8001074	Lepidium peruvianum
8000463	Lepidium sativum
8000464	Leptandra virginica
8000465	Leptolobium elegans
8000466	Lespedeza capitata

8000467	<i>Leucaena glauca</i>
8000468	<i>Leucaena leucocephala</i>
8000469	<i>Levisticum officinale</i>
8000470	<i>Liatris spicata</i>
8000471	<i>Ligustrum lucidum</i>
8000849	<i>Linum usitatissimum</i>
8001075	<i>Lippia alba</i>
8000473	<i>Lippia citriodora</i>
8000939	<i>Lippia javanica</i>
8000945	<i>Lippia oatesii</i>
8000475	<i>Liriope muscari</i>
8000476	<i>Liriosma ovata</i>
8000477	<i>Litchi chinensis</i>
8000478	<i>Lobelia inflata</i>
8000996	<i>Lolium pratense</i>
8000479	<i>Lonicera japonica</i>
8000480	<i>Lophophytum leandri</i>
8000481	<i>Luffa cylindrica</i>
8000482	<i>Luffa echinata</i>
8000483	<i>Luffa operculata</i>
8000484	<i>Lupulinum moraceae</i>
8000841	<i>Lycopodium clavatum</i>
8000485	<i>Lycopus europaeus</i>
8000486	<i>Lycopus virginicus</i>



## Momordica balsamina

Also known as balsam apple or bitter melon is from the family Cucurbitaceae and native to tropical regions of Africa, Arabia, Asia and the Caribbean - it is invasive in America. This plant has a lot of medicinal and nutritional values and is used as a traditional folk medicine in many countries. It contains resins, alkaloids, flavonoids, glycosides, steroids, terpenes and saponins having various medicinal uses. Balsamin isolated from the seeds of *Momordica balsamina*, is a type I ribosome inactivating protein. It inhibits protein synthesis in cell free lysate and possesses N-glycosidase activity. Balsamin has also broad antiviral activity since it blocks influenza virus replication. These observations may open new therapeutic options for the treatment of viral infections.

*Inhibition of HIV-1 replication by balsamin, a ribosome inactivating protein of Momordica balsamina.* Kaur I, Puri M, Ahmed Z, Blanchet FP, Mangeat B, Pignet V. *PLoS One.* 2013 Sep 5;8(9):e73780. doi: 10.1371/journal.pone.0073780. eCollection 2013 *Momordica balsamina: a medicinal and nutraceutical plant for health care management.* Thakur GS, Bag M, Sanodiya BS, Bhadouriya P, Debnath M, Prasad GB, Bisen PS. *Curr Pharm Biotechnol.* 2009 Nov;10(7):667-82. Review.

### Balsamin

Product Code: 7501841  
CAS#: 61264-10-6  
Formula:  $C_{20}H_{26}O_6$   
Mol. weight: 362,42 g/mol



# M

8001038 *Magnolia officinalis*

8001076 *Malachra ruderalis*

8000489 *Malva sylvestris*

8000490 *Mangifera indica*

8000938 *Manihot esculenta*

8001077 *Mansoa alliaceae*

8000491 *Maranta arundinacea*

8000492 *Marrubium vulgare*

8000493 *Marsdenia cundurango*

8000494 *Matricaria chamomilla*

8001078 *Mauritia flexuosa*

8000496 *Maytenus ilicifolia*

8001079 *Maytenus macrocarpa*

8000497 *Maytenus senegalensis*

8000498 *Medicago sativa*

8000499 *Melaleuca alternifolia*

8000500 *Melia azadirachta*

8000501 *Melilotus officinalis*

8000502 *Melissa officinalis*

8000504 *Mentha piperita*

8000505 *Mentha pulegium*

8000506 *Mentha spicata*

8000508 *Mesua ferrea*

8000946 *Micromeria biflora*

8000512 *Mikania glomerata*

8000513 *Mikania guaco*

8000902 *Milicia excelsa*

8000514 *Mimosa pudica*

8000515 *Mimosa tenuiflora*

8000516 *Mirabilis jalapa*

8000517 *Mitchella repens*

8000518 *Momordica balsamina*

8000519 *Momordica charantia*

8000855 *Momordica grosvenori*

8000520 *Morinda citrifolia*

8000521 *Morinda lucida*

8000522 *Moringa oleifera*

8000986 *Morus alba*

8000524 *Mucuna pruriens*

8000525 *Muiria puama*

8000528 *Myosotis arvensis*

8001080 *Myrciaria dubia*

8000529 *Myrica cerifera*

8000530 *Myricaria germanica*

8000531 *Myristica fragrans*

8000532 *Myristica sebifera*

8000934 *Myrothamnus flabellifolius*

8000533 *Myroxylon balsamum*

8000535 *Myrtus communis*

# N

8000538	<i>Nelumbo nucifera</i>
8000539	<i>Nepeta cataria</i>
8000540	<i>Nerium oleander</i>
8000542	<i>Nigella damascena</i>
8000543	<i>Nigella sativa</i>
8000965	<i>Nuphar pumilum</i>
8000544	<i>Nyctanthes arbor-tristis</i>

# O

8000545	<i>Ocimum americana</i>
8000546	<i>Ocimum basilicum</i>
8000547	<i>Ocimum canum</i>
8000891	<i>Ocimum gratissimum</i>
8000548	<i>Ocimum sanctum</i>
8000549	<i>Oenanthe aquatica</i>
8000550	<i>Oenothera biennis</i>
8000551	<i>Okoubaka aubrevillei</i>
8000553	<i>Ononis spinosa</i>
8000554	<i>Origanum creticum</i>
8000555	<i>Origanum majorana</i>
8000556	<i>Origanum vulgare</i>
8000557	<i>Orthosiphon stamineus</i>
8000559	<i>Ostrya virginiana</i>
8000560	<i>Oxalis acetocella</i>

# P

8000561	<i>Paeonia lactifolia</i>
8000562	<i>Paeonia suffruticosa</i>
8000857	<i>Panax ginseng</i>
8000563	<i>Papaver rhoeas</i>
8000564	<i>Pareira brava</i>
8000992	<i>Parietaria officinalis</i>
8000086	<i>Paspalidium flavidum</i>
8000565	<i>Passiflora incarnata</i>
8001081	<i>Passiflora edulis</i>
8000566	<i>Paullinia cupana</i>
8000567	<i>Paullinia pinnata</i>
8000568	<i>Pausinystalia yohimba</i>
8000569	<i>Pelargonium odoratissimum</i>
8000570	<i>Penthorum sedoides</i>
8000861	<i>Periandra dulcis</i>
8000571	<i>Perilla frutescens</i>
8000572	<i>Petasites japonicus</i>
8000573	<i>Petasites officinalis</i>
8001010	<i>Petasites hybridus</i>
8001082	<i>Petiveria alliacea</i>
8000574	<i>Petiviera tetrandra</i>
8000575	<i>Petroselinum crispum</i>
8000576	<i>Petroselinum sativum</i>
8000577	<i>Peumus boldus</i>
8000578	<i>Phaseolus lunatus</i>
8000579	<i>Phellandrium aquaticum</i>
8000987	<i>Phleum pratense</i>
8001083	<i>Phthirusa adunca</i>
8000580	<i>Phyllanthus amarus</i>
8000581	<i>Phyllanthus emblica</i>

8000582	<i>Phyllanthus niruri</i>	8000609	<i>Plumeria acutifolia</i>
8001084	<i>Phyllanthus niruri</i>	8000997	<i>Poa pratensis</i>
8000583	<i>Physalis alkekengi</i>	8000610	<i>Podophyllum peltatum</i>
8001085	<i>Physalis peruviana</i>	8000860	<i>Polygala fallax</i>
8000584	<i>Physostigma venenosum</i>	8000611	<i>Polygala senega</i>
8000585	<i>Phytolacca americana</i>	8000612	<i>Polygala vulgaris</i>
8000586	<i>Phytolacca decandra</i>	8000613	<i>Polygonum aviculare</i>
8000587	<i>Pilocarpus jaborandi</i>	8000614	<i>Polygonum bistorta</i>
8000588	<i>Pilocarpus microphyllus</i>	8000615	<i>Polygonum cuspidatum</i>
8000589	<i>Pilocarpus pennatifolius</i>	8000616	<i>Polygonum multiflorum</i>
8000590	<i>Pimpinella anisum</i>	8000998	<i>Populus nigra</i>
8001003	<i>Pimpinella saxifraga</i>	8000617	<i>Populus alba</i>
8000591	<i>Pinus silvestris</i>	8000618	<i>Populus balsamifera</i>
8000592	<i>Pinus strobus</i>	8000619	<i>Populus candicans</i>
8000593	<i>Piper angustifolium</i>	8000620	<i>Populus tremuloides</i>
8000594	<i>Piper cubeba</i>	8000621	<i>Poria cocos</i>
8001086	<i>Piper hispidum</i>	8000622	<i>Portulaca oleracea</i>
8000595	<i>Piper longum</i>	8000623	<i>Portulaca pilosa</i>
8000596	<i>Piper methysticum</i>	8000624	<i>Potentilla erecta</i>
8000597	<i>Piper nigrum</i>	8000985	<i>Potentilla anserina</i>
8000598	<i>Piper umbellatum</i>	8000625	<i>Poterium spinosum</i>
8000599	<i>Piscidia erythrina</i>	8001088	<i>Pouteria lucuma</i>
8000600	<i>Pistacia lentiscus</i>	8000989	<i>Prunella vulgaris</i>
8000601	<i>Pistacia terebinthus</i>	8000627	<i>Prunus amygdalus</i>
8000602	<i>Pisum sativum</i>	8000628	<i>Prunus persica</i>
8001087	<i>Pithecellobium laetum</i>	8000629	<i>Prunus serotina</i>
8000603	<i>Plantago lanceolata</i>	8000630	<i>Prunus spinosa</i>
8000604	<i>Plantago major</i>	8000631	<i>Psidium guajava</i>
8000605	<i>Plantago ovata</i>	8000632	<i>Psoralea corylifera</i>
8000606	<i>Plantago psyllium</i>	8000633	<i>Pterocarpus marsupium</i>
8000607	<i>Platanus acerifolia</i>	8000634	<i>Ptychopetalum olacoides</i>
8000608	<i>Plumbago zeylanica</i>	8001108	<i>Pueraria thomsonii</i>

8000635	<i>Pueraria lobata</i>
8000637	<i>Pulmonaria officinalis</i>
8000853	<i>Pulsatilla pratensis</i>
8000638	<i>Punica granatum</i>
8000960	<i>Phytelephas macrocarpa</i>

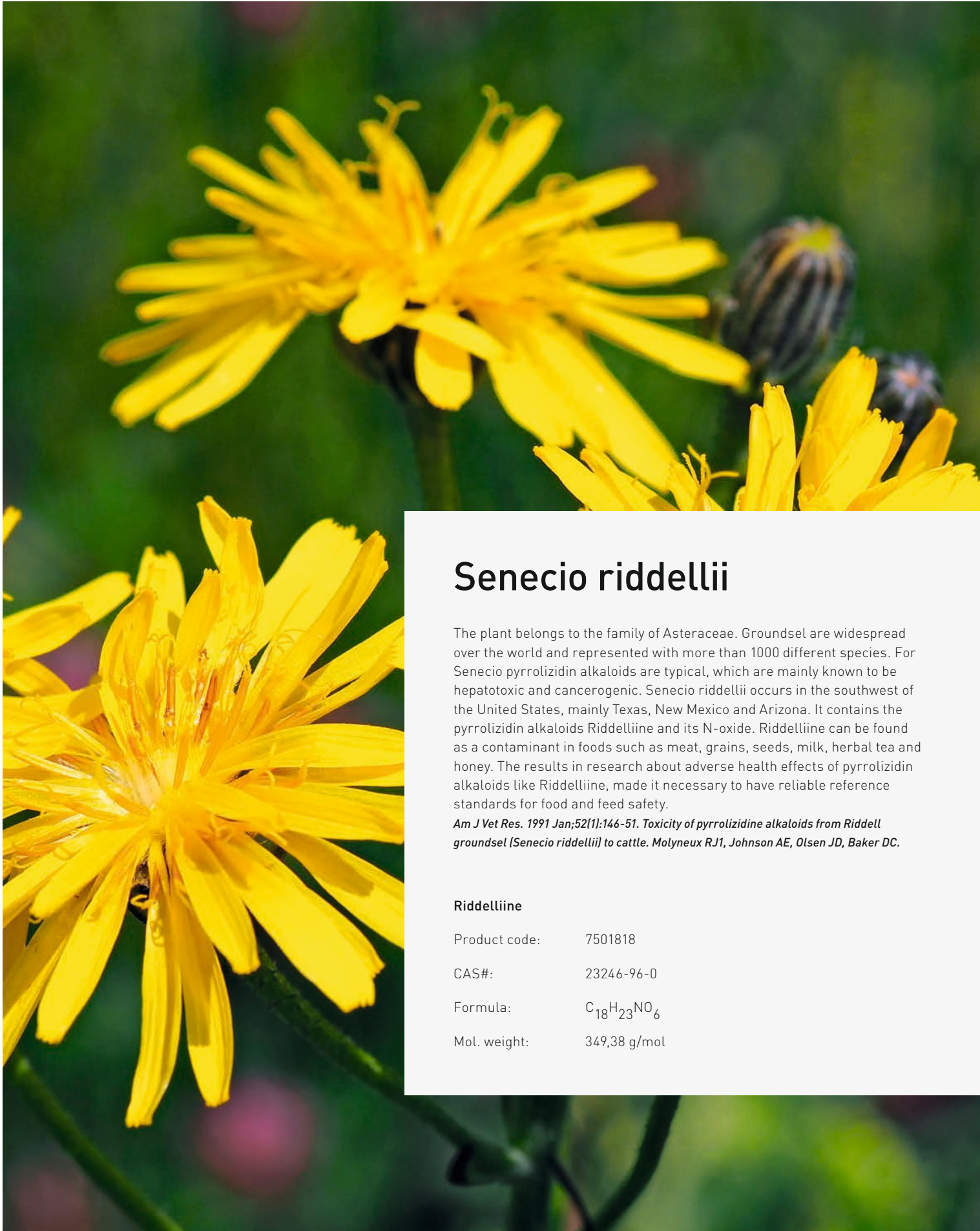
## Q

8000639	<i>Quassia amara</i>
8000640	<i>Quassia simarouba</i>
8000641	<i>Quercus alba</i>
8000642	<i>Quercus infectoria</i>
8000643	<i>Quercus robur</i>

## R

8000644	<i>Ranunculus bulbosus</i>
8000645	<i>Ranunculus ficaria</i>
8000646	<i>Rauvolfia vomitoria</i>
8001041	<i>Rehmannia glutinosa</i>
8001026	<i>Reineckia carnea</i>
8000647	<i>Rhamnus catharticus</i>
8000648	<i>Rhamnus frangula</i>
8000649	<i>Rhamnus purshiana</i>
8000650	<i>Rhaponticum carthamoides</i>
8000651	<i>Rheum officinale</i>
8000652	<i>Rheum palmatum</i>
8000835	<i>Rhodiola rosea</i>
8000653	<i>Rhododendron chrysanthum</i>
8000654	<i>Rhododendron ferrugineum</i>
8000655	<i>Rhus aromatica</i>
8001005	<i>Rhus copallina</i>

8000656	<i>Rhus toxicodendron</i>
8000657	<i>Rhus vernix</i>
8000658	<i>Ribes nigrum</i>
8000659	<i>Ricinus communis</i>
8000660	<i>Robinia pseudoacacia</i>
8000661	<i>Rosa canina</i>
8000662	<i>Rosa damascena</i>
8000663	<i>Rosmarinus officinalis</i>
8000664	<i>Rubia tinctorum</i>
8000665	<i>Rubus fruticosus</i>
8000666	<i>Rubus idaeus</i>
8000667	<i>Ruellia tuberosa</i>
8001023	<i>Rumex obtusifolius</i>
8000668	<i>Rumex acetosa</i>
8000669	<i>Rumex crispus</i>
8000670	<i>Ruscus aculeatus</i>
8000671	<i>Ruta graveolens</i>



## Senecio riddellii

The plant belongs to the family of Asteraceae. Groundsel are widespread over the world and represented with more than 1000 different species. For Senecio pyrrolizidin alkaloids are typical, which are mainly known to be hepatotoxic and cancerogenic. Senecio riddellii occurs in the southwest of the United States, mainly Texas, New Mexico and Arizona. It contains the pyrrolizidin alkaloids Riddelliine and its N-oxide. Riddelliine can be found as a contaminant in foods such as meat, grains, seeds, milk, herbal tea and honey. The results in research about adverse health effects of pyrrolizidin alkaloids like Riddelliine, made it necessary to have reliable reference standards for food and feed safety.

*Am J Vet Res. 1991 Jan;52(1):146-51. Toxicity of pyrrolizidine alkaloids from Riddell groundsel (Senecio riddellii) to cattle. Molyneux RJ1, Johnson AE, Olsen JD, Baker DC.*

### Riddelliine

Product code: 7501818

CAS#: 23246-96-0

Formula:  $C_{18}H_{23}NO_6$

Mol. weight: 349,38 g/mol

## S

8000013	<i>Schoenocaulon officinale</i>	8000990	<i>Sedum telephium</i>
8000672	<i>Sabal serulata</i>	8000699	<i>Semecarpus anacardium</i>
8000673	<i>Salacia reticulata</i>	8001025	<i>Senecio riddellii</i>
8000674	<i>Salix alba</i>	8001028	<i>Senecio longilobus</i>
8000675	<i>Salix nigra</i>	8000700	<i>Senecio aureus</i>
8000676	<i>Salix purpurea</i>	8000701	<i>Senecio fuchsii</i>
8000677	<i>Salvia officinalis</i>	8001112	<i>Senecio retrorsus</i>
8000678	<i>Sambucus nigra</i>	8000703	<i>Serenoa repens</i>
8000679	<i>Sanguinaria canadensis</i>	8000977	<i>Sida rhombifolia</i>
8000680	<i>Sanguisorba officinalis</i>	8000704	<i>Sigesbeckia orientalis</i>
8000681	<i>Sanicula europaea</i>	8000705	<i>Silybum marianum</i>
8000682	<i>Santalum album</i>	8000706	<i>Simabae officinalis</i>
8000683	<i>Sapindus saponaria</i>	8000707	<i>Sinapis alba</i>
8000684	<i>Sapindus trifoliatus</i>	8000708	<i>Sinapis nigra</i>
8000685	<i>Saponaria officinalis</i>	8001001	<i>Smilax medica</i>
8000686	<i>Sarothamnus scoparius</i>	8000709	<i>Smilax aristolochiaefolia</i>
8000687	<i>Sassafras officinale</i>	8000710	<i>Smilax china</i>
8000688	<i>Satureja hortensis</i>	8001089	<i>Smilax febrifuga</i>
8000689	<i>Satureja montana</i>	8000711	<i>Smilax ornata</i>
8000014	<i>Saururus chinensis</i>	8000712	<i>Solanum carolinense</i>
8000690	<i>Schinus molle</i>	8000714	<i>Solanum mammosum</i>
8000691	<i>Schisandra chinensis</i>	8001090	<i>Solanum sessiliflorum</i>
8001014	<i>Schisandra sphenanthera</i>	8000896	<i>Solanum torvum</i>
8000935	<i>Sclerocarya birrea</i>	8000843	<i>Solanum dulcamara</i>
8000692	<i>Scopolia carniolica</i>	8000715	<i>Solidago virgaurea</i>
8000694	<i>Scrophularia nodosa</i>	8000716	<i>Sophora japonica</i>
8000695	<i>Scutellaria baicalensis</i>	8000717	<i>Sorbus aucuparia</i>
8000696	<i>Scutellaria lateriflora</i>	8000718	<i>Spigelia anthelmia</i>
8000697	<i>Sedum acre</i>	8000719	<i>Spigelia marilandica</i>
8000698	<i>Sedum roseum</i>	8000720	<i>Spilanthes oleracea</i>
		8001091	<i>Spondias mombin</i>
		8000722	<i>Stachys betonica</i>

8000009	<i>Stachytarpheta cayennensis</i>
8000723	<i>Stellaria media</i>
8000724	<i>Stephania tetrandra</i>
8000725	<i>Sterculia urens</i>
8000726	<i>Stillingia sylvatica</i>
8000728	<i>Strophantus hispidus</i>
8000729	<i>Strophantus sarmentosus</i>
8000854	<i>Strophantus kombe</i>
8000730	<i>Strychnos ignatii</i>
8000959	<i>Strychnos nux-vomica</i>
8000731	<i>Styrax benzoin</i>
8000732	<i>Styrax tonkinense</i>
8001029	<i>Suaeda maritima</i>
8000734	<i>Sumbulus moschatus</i>
8001092	<i>Swartzia polyphylla</i>
8000735	<i>Sweetia elegans</i>
8000736	<i>Symphytum officinale</i>
8000737	<i>Symplocarpus foetidus</i>
8000738	<i>Syzygium aromaticum</i>
8000739	<i>Syzygium cumini</i>

# T

8000740	<i>Tabebuia avellanedae</i>
8001093	<i>Tabebuia serratifolia</i>
8001094	<i>Tagetes erecta</i>
8000741	<i>Tamarindus indica</i>
8000743	<i>Taraxacum officinale</i>
8000940	<i>Taxus baccata</i>
8000744	<i>Tephrosia hirta</i>
8000745	<i>Tephrosia purpurea</i>
8000746	<i>Terminalia arjuna</i>
8000747	<i>Terminalia bellirica</i>
8000748	<i>Terminalia catappa</i>
8000749	<i>Teucrium chamaedrys</i>
8000750	<i>Teucrium marum</i>
8000751	<i>Teucrium scorodonia</i>
8000752	<i>Thapsia aurea</i>
8000753	<i>Thapsia garganica</i>
8000754	<i>Theobroma cacao</i>
8000755	<i>Thevetia neriifolia</i>
8000756	<i>Thuja occidentalis</i>
8000757	<i>Thymus serpyllum</i>
8000758	<i>Thymus vulgaris</i>
8000759	<i>Tilia cordata</i>
8000760	<i>Tilia europaea</i>
8000761	<i>Tinospora cordifolia</i>
8001017	<i>Tithonia diversifolia</i>
8000762	<i>Toxicodendron quercifolium</i>
8000763	<i>Trachyspermum ammi</i>
8000764	<i>Tribulus terrestris</i>
8001095	<i>Trichocereus pachanoi</i>
8000765	<i>Trifolium pratense</i>



8000766	<i>Trifolium repens</i>
8000767	<i>Trigonella foenum-graecum</i>
8000768	<i>Trillium pendulum</i>
8000769	<i>Triosteum perfoliatum</i>
8001104	<i>Tripterygium wilfordii</i>
8000770	<i>Triticum repens</i>
8000771	<i>Triticum sativum</i>
8000772	<i>Tropaeolum maius</i>
8000773	<i>Tsuga canadensis</i>
8000774	<i>Turiones pini</i>
8000775	<i>Turnera diffusa</i>
8000776	<i>Tussilago farfara</i>
8000777	<i>Tylophora asthmatica</i>
8001096	<i>Tynanthus panurensis</i>
8000778	<i>Typha angustifolia</i>

## U

8000779	<i>Ulmus rubra</i>
8000780	<i>Uncaria tomentosa</i>
8001097	<i>Unonopsis floribunda</i>
8000781	<i>Urginea maritima</i>
8000782	<i>Urtica dioica</i>
8000783	<i>Urtica urens</i>
8000784	<i>Usnea barbata</i>
8000785	<i>Ustilago maidis</i>



## Vanilla plantifolia

Probably the most famous orchid and source of one of the most expensive spices in the world. Origin of the Vanilla orchid is Mexico, the region around Veracruz. Mainly due to the aromatic ingredient Vanillin, developed during fermentation of the seed vessel, it was already famous in Aztec times. They added Vanilla to their cocoa drink and it was also already known as perfume, spice and remedy. Nowadays the orchid is cultivated in tropical regions around the world, mostly in Madagascar and Réunion. However, in this regions the flowers have to be artificial pollenised, while in Mexico Kolibris and insects are the natural pollinators. The source of our Vanilla bean is rather unknown, since we procure it from Colombia.

Next to known effects like mood lifting, calmative and aphrodisiacal, the vanilla bean is also supposed to be antiseptic, antiinflammatory, fungicidal and bactericidal. Several recent publications discuss the effects of vanilla in cancer treatment. Evidence of vanillin binding to CAMKIV explains the anti-cancer mechanism in human hepatic carcinoma and neuroblastoma cells.

*Naz H, Tarique M, Khan P, Luqman S, Ahamad S, Islam A, Ahmad F, Hassan MI. Mol Cell Biochem. 2018 Jan;438(1-2):35-45. doi: 10.1007/s11010-017-3111-0. Epub 2017 Jul 25. PMID: 28744811 Suppression of cancer stem-like phenotypes in NCI-H460 lung cancer cells by vanillin through an Akt-dependent pathway. Srinual S, Chanvorachote P, Pongrakhananon V. Int J Oncol. 2017 Apr;50(4):1341-1351. doi: 10.3892/ijo.2017.3879. Epub 2017 Feb 17. PMID: 28259926*

### Vanillin

Product Code:	7501086
CAS#:	121-33-5
Formula:	$C_8H_8O_3$
Mol. weight:	152,15 g/mol

# V

8000786	<i>Vaccinium myrtillus</i>
8000787	<i>Valeriana officinalis</i>
8001031	<i>Vanilla planifolia</i>
8000838	<i>Veratrum album</i>
8000788	<i>Veratrum californicum</i>
8000789	<i>Veratrum viride</i>
8000790	<i>Verbascum thapsus</i>
8001106	<i>Verbascum densiflorum</i>
8001107	<i>Verbascum phlomoides</i>
8000791	<i>Verbena officinalis</i>
8000792	<i>Veronica beccabunga</i>
8000793	<i>Veronica officinalis</i>
8000795	<i>Vetiveria zizanioides</i>
8000796	<i>Viburnum opulus</i>
8000797	<i>Viburnum prunifolium</i>
8000798	<i>Vinca major</i>
8000799	<i>Vinca minor</i>
8000800	<i>Vinca rosea</i>
8000287	<i>Vincetoxicum hirundinaria</i>
8000801	<i>Viola odorata</i>
8000802	<i>Viola tricolor</i>
8000803	<i>Viscum album</i>
8000804	<i>Vitex agnus-castus</i>
8000805	<i>Vitex negundo</i>
8000806	<i>Vitis vinifera</i>

## W

8000807 *Wedelia calendulacea*

8001011 *Withania adpressa*

8000808 *Withania somnifera*

8000978 *Woodfordia fruticosa*

8000809 *Wyethia helenoides*

## X

8000810 *Xysmalobium undulatum*

## Y

8000811 *Yohimbe rubiaceae*

8000812 *Yucca filamentosa*

## Z

8001098 *Zamia ulei*

8000813 *Zanthoxylum clava-herculis*

8000814 *Zea mays*

8000815 *Zingiber officinale*

8000816 *Zizia aurea*

8000073 *Ziziphus spina-christi*

8000318 *Ziziphus jujuba*

8000931 *Ziziphus mauritiana*

8000817 *Ziziphus spinosa*

## Zingiber officinale

Ginger was elected medicinal plant of the year 2018. Its rhizome is used as spice for cooking and as a medicinal drug. It has a lot of ingredients like Shogaol, Borneol and Cineol. Traditional Chinese Medicine as well as Hildegard von Bingen and Paracelsus recommend the Rhizome as medicine. In China it is used in cold, muscle pain and rheumatism. In Europe it was used in the Middle Ages for treating gastro-intestinal diseases. Since the Rhizome has stimulating effects on gastric juice, saliva and bile, the European Scientific Cooperative on Phytotherapy (ESCOP) recommends it for use in gastro-intestinal diseases and nausea.

Gingerol is an interesting ingredient emerging for arthrosis treatment as shown in several publications. Preparations from the rhizome are medicinally known for their anti-inflammatory effects. But especially the gingerols have been a major focus of research related to the ability of pure compounds to inhibit the expression of Cyclooxygenase-2, which mediates inflammation, e.g. in arthrosis and rheumatism.

*Frye, Jennifer B.; Oyarzo, Janice N.; Timmermann, Barbara N. (2009). Journal of Natural Products. 72 (3): 403-7. Comparing the effects of ginger (Zingiber officinale) extract and ibuprofen on patients with osteoarthritis. M. Haghighi, A. Khalva, T. Toliat, S. Jallaei In: Arch Iran Med, Volume 8, 2005, S. 267-271.*

### 6-Gingerol

Product Code:	7500446
CAS#:	23513-14-6
Formula:	$C_{17}H_{26}O_4$
Mol. weight:	294,39 g/mol

# Terms and Conditions of Sale

All orders placed by a buyer are accepted and all contracts are made subject to the terms which shall prevail and be effective notwithstanding any variations or additions contained in any order or other document submitted by the buyer. no

modification of these terms shall be binding upon Cfm Oskar Tropitzsch GmbH unless made in writing by an authorised representative of Cfm Oskar Tropitzsch GmbH.

## Placing of Orders

Every order made by the buyer shall be deemed an offer by the buyer to purchase products from Cfm Oskar Tropitzsch GmbH and will not be binding on Cfm Oskar Tropitzsch GmbH until a duly authorised representative of Cfm Oskar Tropitzsch GmbH has accepted the offer made by the buyer. Cfm Oskar Tropitzsch GmbH may accept orders from commercial, educational or government organisations, but not from private individuals and Cfm Oskar Tropitzsch GmbH reserves the right to insist on a written order and/or references from the buyer before proceeding. There is no minimum order value. At the time of acceptance of an order Cfm Oskar Tropitzsch GmbH will either arrange prompt despatch from stock or the manufacture/acquisition of material to satisfy the order. In the event of the latter

Cfm Oskar Tropitzsch GmbH will indicate an estimated delivery date. In addition to all its other rights Cfm Oskar Tropitzsch GmbH reserves the right to refuse the subsequent cancellation of the order if Cfm Oskar Tropitzsch GmbH expects to deliver the product on or prior to the estimated delivery date. Time shall not be of the essence in respect of delivery of the products. If Cfm Oskar Tropitzsch GmbH is unable to deliver any products by reason of any circumstances beyond its reasonable control („Force Majeure“) then the period for delivery shall be extended by the time lost due to such Force Majeure. Details of Force Majeure will be forwarded by Cfm Oskar Tropitzsch GmbH to the buyer as soon as reasonably practicable.

## Prices, Quotations and Payments

Prices are subject to change. For the avoidance of doubt, the price advised by Cfm Oskar Tropitzsch GmbH at the time of the buyer placing the order shall supersede any previous price indications. The buyer must contact the local office of Cfm Oskar Tropitzsch GmbH before ordering if further information is required. Unless otherwise agreed by the buyer and Cfm Oskar Tropitzsch GmbH, the price shall be for delivery ex-works. In the event that the buyer requires delivery of the products otherwise than ex-works the buyer should contact the local office of Cfm Oskar Tropitzsch GmbH in order to detail its requirements. Cfm Oskar Tropitzsch GmbH shall, at its discretion, arrange the buyer's delivery requirements including, without limitation, transit insurance, the mode of transit (Cfm Oskar Tropitzsch GmbH reserves the right to vary the mode of transit if any regulations or other relevant considerations so require) and any special packaging requirements (including cylinders). For the avoidance of doubt all costs of delivery and packaging in accordance with the buyer's requests over and above that of delivery in standard packaging ex-works shall be for the buyer's account unless otherwise agreed by both parties. Incoterms 2010 shall apply. Any tax, duty or charge imposed by governmental authority or otherwise and any other applicable taxes, duties or charges shall be for the buyer's account. Cfm Oskar Tropitzsch GmbH may, on request and where possible, provide quotations for multiple packs or bulk quantities, and non-listed items. Irrespective of the type of request or means of response all quotations must be accepted by the buyer without condition and in writing before an order will be accepted by Cfm

Oskar Tropitzsch GmbH. Unless agreed in writing on different terms, quotations are valid for 30 days from the date thereof. Payment terms are net 30 days from invoice date unless otherwise agreed in writing. Cfm Oskar Tropitzsch GmbH reserves the right to request advance payment at its discretion. For overseas transactions the buyer shall pay all the banking charges of Cfm Oskar Tropitzsch GmbH. The buyer shall not be entitled to withhold or set-off payment for the products for any reason whatsoever. Failure to comply with the terms of payment of Cfm Oskar Tropitzsch GmbH shall constitute default without reminder. In these circumstances Cfm Oskar Tropitzsch GmbH may (without prejudice to any other of its rights under these terms) charge interest to accrue on a daily basis at the rate of 2% per month from the date upon which payment falls due to the actual date of payment (such interest shall be paid monthly). If the buyer shall fail to fulfil the payment terms in respect of any invoice of Cfm Oskar Tropitzsch GmbH Cfm Oskar Tropitzsch GmbH may demand payment of all outstanding balances from the buyer whether due or not and/or cancel all outstanding orders and/or decline to make further deliveries or provision of services except upon receipt of cash or satisfactory securities. Until payment by the buyer in full of the price and any other monies due to Cfm Oskar Tropitzsch GmbH in respect of all other products or services supplied or agreed to be supplied by Cfm Oskar Tropitzsch GmbH to the buyer (including but without limitation any costs of delivery) the property in the products shall remain vested in Cfm Oskar Tropitzsch GmbH.

## Shipping, Packaging and Returns

The buyer shall inspect goods immediately on receipt and inform Cfm Oskar Tropitzsch GmbH of any shortage or damage within five days. Quality problems must be notified within ten days of receipt. Goods must not be returned without prior written authorisation of Cfm Oskar Tropitzsch GmbH. Cfm Oskar Tropitzsch GmbH shall at its sole discretion replace the defective products (or parts thereof)

free of charge or refund the price (or proportionate price) to buyer. Opened or damaged containers cannot be returned by the buyer without the written prior agreement of Cfm Oskar Tropitzsch GmbH. In the case of agreed damaged containers which cannot be so returned, the buyer assumes responsibility for the safe disposal of such containers in accordance with all applicable laws.

## Product Quality, Specifications and Technical Information

Products are analysed in the Quality Control laboratories of Cfm Oskar Tropitzsch GmbH's production partners by methods and procedures which Cfm Oskar Tropitzsch GmbH considers appropriate. In the event of any dispute concerning reported discrepancies arising from the buyer's analytical results, determined by the buyer's own analytical procedures, Cfm Oskar Tropitzsch GmbH reserves the right to rely on the results of own analytical methods of Cfm Oskar Tropitzsch GmbH. Certificates of Analysis or Certificates of Conformity are available at the discretion of Cfm Oskar Tropitzsch GmbH for bulk orders but not normally for prepack orders. Cfm Oskar Tropitzsch GmbH reserves the right to make a charge

for such Certification. Specifications may change and reasonable variation from any value listed should not form the basis of a dispute. Any supply by Cfm Oskar Tropitzsch GmbH of bespoke or custom product for a buyer shall be to a specification agreed by both parties in writing. Technical information, provided orally, in writing, or by electronic means by or on behalf of Cfm Oskar Tropitzsch GmbH, including any descriptions, references, illustrations or diagrams in any Catalogue or brochure, is provided for guidance purposes only and is subject to change.

## Safety

All chemicals should be handled only by competent, suitably trained persons, familiar with laboratory procedures and potential chemical hazards. The burden of safe use of the products of Cfm Oskar Tropitzsch GmbH vests in the buyer. The buyer assumes all responsibility for warning his employees, and any persons who might reasonably be expected to come into contact with the products, of

all risks to person and property in any way connected with the products and for instructing them in their safe handling and use. The buyer also assumes the responsibility for the safe disposal of all products in accordance with all applicable laws.

## Uses, Warranties and Liabilities

All products of Cfm Oskar Tropitzsch GmbH are intended for laboratory research purposes and unless otherwise stated on product labels, in the catalogue and product information sheet of Cfm Oskar Tropitzsch GmbH or in other literature furnished to the buyer, are not to be used for any other purposes, including but not limited to use as or as components in drugs for human or animal use, medical devices, cosmetics, food additives, household chemicals, agricultural or horticultural products or pesticides. Cfm Oskar Tropitzsch GmbH offers no warranty regarding the fitness of any product for a particular purpose and shall not be responsible for any loss or damage whatsoever arising there from. No warranty or representation is given by Cfm Oskar Tropitzsch GmbH that the products do not infringe any letters patent, trademarks, registered designs or other industrial rights. The buyer further warrants to Cfm Oskar Tropitzsch GmbH that any use of the products in the United States of America shall not result in the products becoming adulterated or misbranded within the meaning of the Federal Food, Drug and Cosmetic Act (or such equivalent legislation in force in the buyer's jurisdiction) and shall not be materials which may not, under sections 404, 505 or 512 of the Act, be introduced into interstate commerce. The buyer acknowledges that, since the products of Cfm Oskar Tropitzsch GmbH are intended for research purposes, they may not be on the Toxic Substances Control Act 1976 („TSCA“) inventory. The buyer warrants that it shall ensure that the products are approved for use under the TSCA (or such other equivalent legislation in force in the buyer's jurisdiction), if applicable. The buyer shall be responsible for complying with any legislation or regulations governing the use of the products and their importation into the country of destination (for the avoidance of doubt to include, without limitation, the TSCA and all its amendments, all EINECS, ELINCS and NONS regulations). If any licence or consent of any government or other authority shall be required for the acquisition, carriage or use of the products by the buyer the buyer shall obtain the same at its own expense and if necessary produce evidence of the same to Cfm Oskar Tropitzsch GmbH on demand. Failure to do so shall not entitle the buyer to withhold or delay payment. Any additional expenses or charges incurred by Cfm Oskar Tropitzsch GmbH resulting from

such failure shall be for the buyer's account. Save for death or personal injury caused by negligence of Cfm Oskar Tropitzsch GmbH, sole obligation of Cfm Oskar Tropitzsch GmbH and buyer's exclusive remedy with respect to the products proved to the satisfaction of Cfm Oskar Tropitzsch GmbH to be defective or products incorrectly supplied shall be to accept the return of said products to Cfm Oskar Tropitzsch GmbH for refund of the actual purchase price paid by the buyer (or proportionate part thereof), or replacement of the defective product (or part thereof) with alternative product. Cfm Oskar Tropitzsch GmbH shall have no liability to the buyer under or arising directly or indirectly out of or otherwise in connection with the supply of products by Cfm Oskar Tropitzsch GmbH to the buyer and/or their re-sale or use by the buyer or for any product, process or services of the buyer which in any way comprises the product in contract tort (including negligence or breach of statutory duty) or otherwise for pure economic loss, loss of profit, business, reputation, depletion of brand, contracts, revenues or anticipated savings or for any special indirect or consequential damage or loss of any nature except as may otherwise be expressly provided for in these terms. All implied warranties, terms and representations in respect of the products (whether implied by statute or otherwise) are excluded to the fullest extent permitted by law. The buyer shall indemnify Cfm Oskar Tropitzsch GmbH for and against any and all losses, damages and expenses, including legal fees and other costs of defending any action, that Cfm Oskar Tropitzsch GmbH may sustain or incur as a result of any act or omission by the buyer, its officers, agents or employees, its successors or assignees, its customers or all other third parties, whether direct or indirect, in connection with the use of any product. For the avoidance of doubt and in the event that Cfm Oskar Tropitzsch GmbH supplies bespoke or custom product to the buyer's design or specification, this indemnity shall extend to include any claim by a third party that the manufacture of the product for the buyer or the use of the product by the buyer infringes the intellectual property rights of any third party.

## General

Cfm Oskar Tropitzsch GmbH shall be entitled to assign or sub-contract all or any of its rights and obligations hereunder. The buyer shall not be entitled to assign, transfer, sub-contract or otherwise delegate any of its rights or obligations hereunder. Any delay or forbearance by Cfm Oskar Tropitzsch GmbH in exercising any right or remedy under these terms shall not constitute a waiver of such right or remedy. If any provision of these terms is held by any competent

authority to be invalid or unenforceable in whole or in part the validity of the other provisions of these terms and the remainder of the provision in question shall not be affected. These terms shall be governed by German Law and the German Courts shall have exclusive jurisdiction for the hearing of any dispute between the parties save in relation to enforcement where the jurisdiction of the German Courts shall be non-exclusive.

## Cfm Oskar Tropitzsch GmbH

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### General Manager

Oskar Tropitzsch  
Steffen Tropitzsch

### Type of business ownership

Limited Company

### Tax identification number

9223/123/30192

### VAT-Id-No.

DE 815468415

### Registered at

Registergericht Hof HRB 5228



Oskar Tropitzsch  
*SINCE 1788*