



Nature | Science | Custom Made



**PES** phytoneering  
extract solutions  
member of Bionorica group

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**Phytoneering means,  
achieving the highest quality  
from seed to finished drug.**

**Our special extracts contribute  
to this high quality awareness  
and meet the highest research  
standards.**



A handwritten signature in blue ink, which appears to read "Michael A. Popp". The signature is fluid and cursive, written over a light blue background.

Pharmacist Prof. Dr. Michael A. Popp



# History



**1933**

**Founding of Bionorica** by Josef Popp in Nuremberg with the registration „Distribution of chemical-pharmaceutical preparations“.



**1945**

**Laying of the foundation stone for today's Bionorica company** through the naturopathic orientation of pharmacist Erna Popp and her brother Hans-Oskar Popp, Josef Popp's children.



**1989**

**Prof. Dr. Michael A. Popp** takes over the management of Bionorica GmbH at the age of 29. Prof. Popp begins intensive research in the areas of cultivation, analysis, pharmacology, toxicology and clinic and continues to expand these areas over the years.



**1995**

**Founding of the company Herbextract SL** for the development of special extracts, plant cultivation and extract production in Mallorca. Predecessor company of today's 100% subsidiaries Phytoneering Extract Solutions GmbH and Bionorica Extracts SL.

# Company portrait

With more than 90 years of experience in the manufacture of herbal medicinal products within our corporate group, we began early on to uncover the secrets of nature. We apply this knowledge to extract from medicinal plants precisely those valuable constituents that define the effectiveness of our extracts.

Using state-of-the-art technology and with the utmost care, we produce high-quality plant extracts of consistently reliable quality.



## Quality characteristics

All of our developments are based on plants that are cultivated and harvested sustainably and in accordance with the most stringent quality standards, fully complying with the guidelines of Good Agricultural and Collection Practice (**GACP**).

Our production processes consistently meet the requirements of Good Manufacturing Practice (**GMP**). A standard we successfully implement every day at our sites in Neumarkt and Consell, Mallorca.



DE-ÖKO-001



# Plant extracts for the highest demands



**Pharmaceutical**



**Food & beverages**  
**Dietary supplements**  
**Animal feed**



**Cosmetic & Flavour**

Discover our current product range on the following pages.

If you would like to receive an offer for one of our products or detailed information about our premium extracts, we will be happy to advise you.

## **Do you need a solution that is individually tailored to your needs?**

We will be happy to support you in implementing your ideas. Our experts check the feasibility of your ideas in our own laboratory and technical center.

**Please feel free to contact us.**

**PES Sales**

+49 (0) 9181 / 231 - 220

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# Custom-made and all from one source





### Passiflora incarnata L.

The **passionflower** belongs to the Passionflower plant family. It has its origins in the south-eastern part of the USA and South America.

**Possible areas of application:** *Relief from difficulty falling asleep, restlessness, irritability, nervousness and anxiety*

### Malva sylvestris L.

The **wild Mallow** belongs to the Mallow plant family. It originated in Asia and Southern Europe. Today it is widespread in Southern and Central Europe.

**Possible areas of application:** *Relief from cough, sore throat, skin diseases*



### Glycyrrhiza glabra L.



**Liquorice root** belongs to the butterfly flower family. It is native to Southeastern Europe and as far as China and is cultivated in many countries around the world.

**Possible areas of application:** *Support for stomach, intestinal and cold complaints, and as a flavouring*

### Rosmarinus officinalis L.

**Rosemary** belongs to the mint family. It has its origins in the Mediterranean region.

**Possible areas of application:** *Relief for digestive problems, upper abdominal complaints and to increase appetite*



### Equisetum arvense L.



The **horsetail** belongs to the horsetail family. It is found in permafrost areas and temperate regions of the northern hemisphere.

**Possible areas of application:** *Relief from urinary tract and bladder infections, water retention, skin diseases*

# Aqueous soft extract

Extractum aquosum spissum (Easp)



| Material description               | Parent plant   | conventional | organic * | native |
|------------------------------------|--|--------------|-----------|--------|
| <b>Easp Althaeae radix</b>         | Althaea officinalis L.<br>Marshmallow                    |              |           |        |
| <b>Easp Arnicae mont. flos</b>     | Arnica montana L.<br>Arnica                              |              |           |        |
| <b>Easp Betulae folia</b>          | Betula pendula Roth<br>Birch                             |              |           |        |
| <b>Easp Chamomillae flos BIO</b>   | Matricaria recutita L.<br>Chamomile                      |              |           |        |
| <b>Easp Equiseti herba</b>         | Equisetum arvense L.<br>Horsetail                        |              |           |        |
| <b>Easp Farfarae folia</b>         | Tussilago farfara L.<br>Coltsfoot                        |              |           |        |
| <b>Easp Ginseng radix</b>          | Panax Ginseng C. A. Meyer<br>Ginseng                     |              |           |        |
| <b>Easp Hyperici herba</b>         | Hypericum perforatum L.<br>John's Wort                   |              |           |        |
| <b>Easp Juniperi fruct.</b>        | Juniperus communis L.<br>Juniper                         |              |           |        |
| <b>Easp Lamii albi herba</b>       | Lamium album L.<br>Dead Nettle                           |              |           |        |
| <b>Easp Liquiritiae radix</b>      | Glycyrrhiza glabra L.<br>Liquorice                       |              |           |        |
| <b>Easp Malvae sylv. flos</b>      | Malva sylvestris L.<br>Wild Mallow                       |              |           |        |
| <b>Easp Menthae aquat. folia</b>   | Mentha aquatica L.<br>Water mint                         |              |           |        |
| <b>Easp Passiflorae inc. herba</b> | Passiflora incarnata L.<br>Passionflower                 |              |           |        |
| <b>Easp Pimpinellae radix</b>      | Pimpinella saxifraga<br>Pimpinella magna L.<br>Pimpernel |              |           |        |
| <b>Easp Pini folia</b>             | Picea abies (L.) Karsten<br>Spruce                       |              |           |        |
| <b>Easp Rosmarini folia</b>        | Rosmarinus officinalis L.<br>Rosemary                    |              |           |        |
| <b>Easp Salviae folia</b>          | Salvia officinalis L.<br>Common Sage                     |              |           |        |

\* Organic quality on request



### Taraxacum officinale F.H. Wigg

The **dandelion** belongs to the daisy family. It can be found worldwide, especially in temperate zones.

**Possible areas of application:** *Support for bloating, flatulence, loss of appetite and skin irritation*

### Sambucus nigra L.

The **elderberry** is a shrub or small tree up to eight meters high from the honeysuckle family. It is native to Europe as well as parts of Asia and North Africa.

**Possible areas of application:** *Promotes the metabolism, relieves cold symptoms, diuretic and for aromas*



### Echinacea pallida (Nutt.)



The **coneflower** belongs to the daisy family and is a striking flowering perennial that grows between 70 and 80 cm tall. It originated in North America.

**Possible areas of application:** *Support flu-like infections and serves as an immune stimulant*

### Veronica officinalis L.

The **common Gypsyweed** belongs to the plantain family. It can be found in almost all of Europe as far as the Near East. Possible areas of application:

**Possible areas of application:** *Relief for respiratory problems, digestive problems, rheumatism and gout*



### Melilotus officinalis L.



**Sweet clover** belongs to the legume family. It reaches heights between 30 and 100 cm and is native to Central Europe and Asia.

**Possible areas of application:** *Relief from venous complaints, swollen and tired legs, sprains and bruises*

# Aqueous soft extract



Extractum aquosum spissum (Easp)

| Material description                             | Parent Plant  | conventional | organic* | native |
|--|---|--------------|----------|--------|
| <b>Easp Coffeae</b>                              | Coffea arabica<br>Coffee                              |              |          |        |
| <b>Easp Liquiritiae radix (Glycerol)</b>         | Glycyrrhiza glabra L.<br>Licorice                     |              |          |        |
| <b>Easp Sambuci flos</b>                         | Sambucus nigra L.<br>Elderberry                       |              |          |        |
| <b>Easp Taraxaci herba cum radix</b>             | Taraxacum officinale<br>Weber<br>Common Dandelion     |              |          |        |
| <b>Easp Thymi herba</b>                          | Thymus vulgaris L.<br>Thymus zygis L.<br>Common Thyme |              |          |        |
| <b>Easp Trifolii fibrini</b>                     | Menyanthes trifoliata L.<br>Buckbean                  |              |          |        |
| <b>Easp Uncariae tomentosae (Glycerol)</b>       | Uncaria tomentosa<br>Cat's claw                       |              |          |        |
| <b>Easp Urticae folia (Glycerol)</b>             | Urticae dioica L.<br>Nettle                           |              |          |        |
| <b>Easp Veronicae herba</b>                      | Veronica officinalis L.<br>Gypsyweed                  |              |          |        |
| <b>Easp Withania somniferae radix (Glycerol)</b> | Withania somniferae L.<br>Ashwagandha                 |              |          |        |

\* Organic quality on request

# Ethanolic soft extract

Extractum spiritum spissum (Essp)



| Material description                     | Parent Plant  | conventional | organic * | native |
|--|---|--------------|-----------|--------|
| <b>Essp Artemisia abrotanum</b>          | Artemisia abrotanum<br>Lad`s love                                     |              |           |        |
| <b>Essp Castanae vescae</b>              | Castanea vesca G.<br>Chestnut   |              |           |        |
| <b>Essp Echinacea pall. radix</b>        | Echinacea pallida (Nutt.)<br>Pale purple coneflower                   |              |           |        |
| <b>Essp Hippocastani semen</b>           | Aesculus hippocastanum L.<br>Common horse chestnut                    |              |           |        |
| <b>Essp Hyperici herba</b>               | Hypericum perforatum L.<br>St. John`s Wort                            |              |           |        |
| <b>Essp Meliloti herba</b>               | Melilotus officinalis L.,<br>Melilotus altissimus Thuill.<br>Buckbean |              |           |        |
| <b>Essp Myrtille fructus</b>             | Vaccinium myrtillus L.<br>Blueberry                                   |              |           |        |
| <b>Essp Salviae folia</b>                | Salviae officinalis L.<br>Common sage                                 |              |           |        |
| <b>Essp Thymi herba</b>                  | Thymus vulgaris L.,<br>Thymus zygis L.<br>Common thyme                |              |           |        |
| <b>Essp Tormentillae rhizoma</b>         | Potentilla erecta (L.)<br>RAEUSCHEL,<br>Tormentil                     |              |           |        |
| <b>Essp Valerianae officinalis radix</b> | Valeriana officinalis L.s.l.<br>Valerian                              |              |           |        |

\* Organic quality on request



### Plantago lanceolata L.s.l.

The **ribwort** plantain belongs to the Plantain family. It originated in Europe and is now cultivated worldwide.

**Possible areas of application:** *Support for acute bronchitis, colds and coughs, inflammation of the mouth and throat*

### Arnica montana L.

**Arnica montana** is a plant belonging to the daisy family (Asteraceae), which grows in the European mid and high mountain regions.

**Possible areas of application:** *for bruises, sprains, and strains, to promote regeneration after intense exertion, e.g. for muscle soreness, muscle strains, before and after surgical procedures*



### Commiphora myrrha (Nees) Engl.

**Myrrh** is the gum resin of Commiphora trees and shrubs. Botanically, they belong to the balsam family and are native to East Africa.

**Possible areas of application:** *Relief for wounds and ulcers of the mucous membranes, support for oral hygiene*

### Echinacea angustifolia D.C.

The **narrow-leaved coneflower** belongs to the daisy family and is widespread in North America. It is now also cultivated in Europe.

**Possible areas of application:** *Strengthening of the immune system, relief from respiratory and urinary tract infections, superficial wound healing*



### Valeriana officinalis L.s.l.

**Valerian** is a plant from the honeysuckle family that originates from Europe and North America.

**Possible areas of application:** *Relief from difficulty falling asleep, anxiety and tension, and cramps in the gastrointestinal tract*

# Tincture

Tinctura (Ti)



| Material description             | Parent Plant   | conventional | organic * | native |
|----------------------------------|--|--------------|-----------|--------|
| <b>Ti Agni casti</b>             | Vitex agnus castus L.<br>Chaste tree                                       |              |           |        |
| <b>Ti Arnicae flos</b>           | Arnica montana L.<br>Arnica  |              |           |        |
| <b>UR Echinacea angustifolia</b> | Echinacea angustifolia D.C.<br>Narrow-leaved coneflower                    |              |           |        |
| <b>Ti Gentianae radix</b>        | Gentiana lutea L.<br>Yellow gentian  |              |           |        |
| <b>Ti Menthae piperitae</b>      | Menthae piperita L.<br>Peppermint  |              |           |        |
| <b>Ti Myrrhae</b>                | Commiphora myrrha<br>(Nees) Engl. /or other species of Commiphora<br>Myrrh |              |           |        |
| <b>Ti Valerianae radix</b>       | Valeriana officinalis L.s.l.<br>Valerian                                   |              |           |        |
| <b>Ti Visci albi herba</b>       | Viscum album L.<br>Mistletoe   |              |           |        |

# Fluid extract

Extractum fluidum (Ef)



| Material description                | Parent Plant   | conventional | organic * | native |
|-------------------------------------|--|--------------|-----------|--------|
| <b>Ef Angelicae radix</b>           | Angelica archangelica L.<br>Angelica                   |              |           |        |
| <b>Ef Artemisia abrotanum</b>       | Artemisia abrotanum herba<br>Lad`s love                |              |           |        |
| <b>Ef Plantaginis e. fol. fluid</b> | Plantago lanceolata L.s.l.<br>Ribwort plantain         |              |           |        |
| <b>Ef Salviae folia</b>             | Salvia officinalis L.<br>Common sage                   |              |           |        |
| <b>Ef Thymi herba</b>               | Thymus vulgaris L.,<br>Thymus zygis L.<br>Common thyme |              |           |        |

\* Organic quality on request



### Matricaria recutita L.

The **chamomile**, which belongs to the daisy family, is native to Southern and Eastern Europe and the Middle East. It can now also be found in the rest of Europe, North America and Australia.

**Possible areas of application:** *Support in wound healing, relief from inflammation, antispasmodic and anti-irritant effects*

### Urtica dioica L., Urtica urens L.

The **stinging nettle** belongs to the nettle family. It can be found worldwide, with the exception of the tropics and Arctic regions.

**Possible areas of application:** *Dehydrating effect in urinary tract infections*



### Cichorium intybus L.

The **common chicory** belongs to the daisy family. It originates from Europe, Western Asia and Northwest Africa. However, it can now also be found in Africa, North and South America.

**Possible areas of application:** *Relief from digestive problems*

### Salvia officinalis L.

The **common sage** is a subshrub from the mint family that can grow up to seventy centimetres tall. It is now cultivated in many countries as a spice and medicinal plant.

**Possible areas of application:** *Relief from digestive problems, inflammation of the mouth and throat*



### Althaea officinalis L.

The **true marshmallow** belongs to the mallow family. Its natural distribution extends from southern Russia and Kazakhstan to the Altai Mountains. In addition, it is native to southern Europe, the Balkans, and the Iberian Peninsula.

**Possible areas of application:** *acute respiratory diseases, inflammation of the mouth and throat, irritative cough, hoarseness*

# Aqueous dry extract



Extractum aquosum siccum (Easi)

| Material description                 | Parent plants  | conventional | organic* | native |
|--------------------------------------|--|--------------|----------|--------|
| <b>Easi Althaeae radix</b>           | Althaea officinalis L.<br>Marshmallow                                    |              |          |        |
| <b>Easi Chamomillae recutita BIO</b> | Matricaria recutita L.<br>Chamomile                                      |              |          |        |
| <b>Easi Chamomillae flos</b>         | Matricaria recutita L.<br>Chamomile                                      |              |          |        |
| <b>Easi Chicorii radix</b>           | Cichorium intybus L.<br>Common chicory                                   |              |          |        |
| <b>Easi Harpagophyti radix</b>       | Harpagophytum procumbens DC./ Harpagophytum zeyheri Decne<br>Devils claw |              |          |        |
| <b>Easi Lichen islandicus</b>        | Cetraria islandica L.<br>Icelandic moss                                  |              |          |        |
| <b>Easi Plantaginis folia</b>        | Plantago lanceolata L.s.l.<br>Ribwort plantain                           |              |          |        |
| <b>Easi Quercus cortex</b>           | Quercus robur L.,<br>Quercus petraea (Matt.) Liebl.<br>Common oak        |              |          |        |
| <b>Easi Salviae folia</b>            | Salvia officinalis L.<br>Common sage                                     |              |          |        |
| <b>Easi Taraxaci herba/radix</b>     | Taraxacum officinale F.H. Wigg<br>Dandelion                              |              |          |        |
| <b>Easi Urticae folia</b>            | Urtica dioica L.<br>Urtica urens L.<br>Stinging nettle                   |              |          |        |
| <b>Easi Verbasci flos</b>            | Verbascum thapsus L.<br>Common mullein                                   |              |          |        |
| <b>Easi Zingiberis rhizoma</b>       | Zingiber officinale Roscoe<br>Ginger                                     |              |          |        |
| <b>Dried gingertea organic</b>       | Zingiberis officinale Roscoe<br>Ginger                                   |              |          |        |

\* Organic quality on request



### Mentha aquatica L.

**Water mint** belongs to the mint family. It is widespread in Europe.

**Possible areas of application:** *Support for digestive problems, cramps and nausea, flatulence*

### Echinacea purpurea L. (Moench)

The **purple coneflower** belongs to the daisy family and is common in North America. It is now also cultivated in Europe.

**Possible areas of application:** *Strengthening the immune system, supporting respiratory and urinary tract infections*



### Cynara scolymus L.

The **artichoke** belongs to the basket flower family. It originates from North America. Today, the non-hardy plant is cultivated in the Mediterranean region and Central Europe.

**Possible areas of application:** *Promote fat digestion, lowering blood lipid levels, bile release*

### Hederae helix L.

**Ivy** belongs to the aralia family (Araliaceae). It is widespread in Europe, where it is primarily found in moist forests and riparian woodland. It is an evergreen climbing plant.

**Possible areas of application:** *inflammatory respiratory diseases, spasmodic and irritative cough: bronchitis, asthma*



### Prunus amygdalus Batsch.

The **almond tree** belongs to the rose family. Its origin is believed to be in Southwest Asia. Most almonds today come from California and Southern Europe.

**Possible areas of application:** *For use in skin and hair care*

# Ethanolic dry extract



Extractum spiritum siccum (Essi)

| Material description                 | Parent plant  | conventional | organic* | native |
|--------------------------------------|---|--------------|----------|--------|
| <b>Essi Echinacea purpurea radix</b> | Echinacea purpurea L. (Moench)<br>Purple coneflower |              |          |        |
| <b>Essi Foenugraeci semen</b>        | Trigonella foenum-graecum L.<br>Fenugreek           |              |          |        |
| <b>Essi Hederae folia</b>            | Hedera helix L.<br>Ivy                              |              |          |        |
| <b>Essi Rhodiola radix</b>           | Sedum rosea (L.) Scop.<br>Roseroot                  |              |          |        |

# Dried pressed juice (TP)



Succus exsiccatus

| Material description           | Parent plant  | conventional | organic* | native |
|--------------------------------|---|--------------|----------|--------|
| <b>TP Achillea millefolium</b> | Achillea millefolium L.<br>Common yarrow            |              |          |        |
| <b>TP Crataegi</b>             | Crataegus ssp.<br>Hawthorn                          |              |          |        |
| <b>TP Cynara scolymus</b>      | Cynara scolymus L.<br>Artichoke                     |              |          |        |
| <b>TP Echinacea purpurea</b>   | Echinacea purpurea L. (Moench)<br>Purple coneflower |              |          |        |

\* Organic quality on request

# Liquid extract

Extractum



| Material description                          | Parent plant  | conventional | organic* | native |
|---|---|--------------|----------|--------|
| <b>Extr. Chamomillae EtOH</b>                 | Chamomilla recutita L.<br>Chamomile   |              |          |        |
| <b>Extr. Krameria triandra</b>                | Krameria triandra Ruiz et Pav.<br>Ratanhia                                    |              |          |        |
| <b>Extr. Menthae aquat. folia</b>             | Mentha aquatica L.<br>Water mint  |              |          |        |
| <b>Extr. Myrrhae EtOH</b>                     | Commiphora myrrha (Nees)<br>Engl. /or other species of<br>Commiphora<br>Myrrh |              |          |        |
| <b>Extr. Prunus dulcis</b>                    | Prunus amygdalus Batsch.<br>Almond  |              |          |        |
| <b>Pr Konz. Melissaе herba<br/>(Glycerol)</b> | Melissa officinalis L.<br>Lemon balm  |              |          |        |

# Dilution

Dilution (Dil)



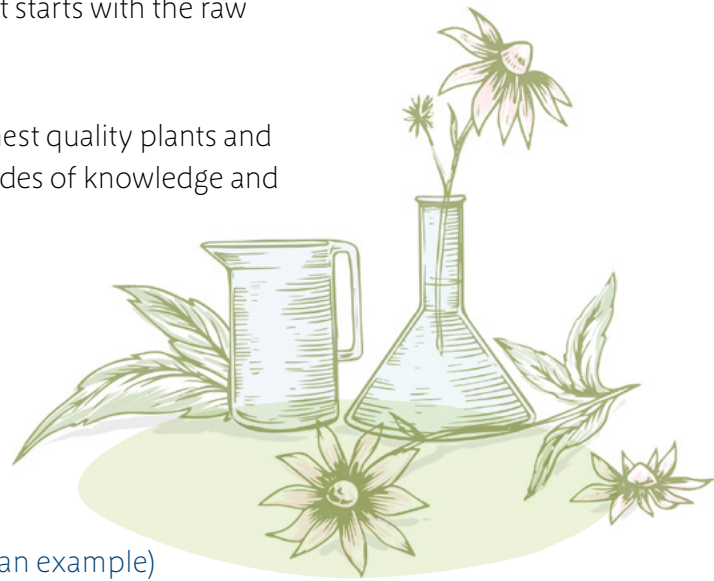
| Material description            | Stammpflanze                               | conventional | organic* | nativ |
|---------------------------------|--|--------------|----------|-------|
| <b>Dil. Ipecacuanhae D4 HAB</b> | Carapichea ipecacuanha<br>Ipecacuanha root |              |          |       |
| <b>Dil. Hyoscyamus D4 HAB</b>   | Hyoscyamus niger L.<br>Black henbane       |              |          |       |

\* Organic quality on request

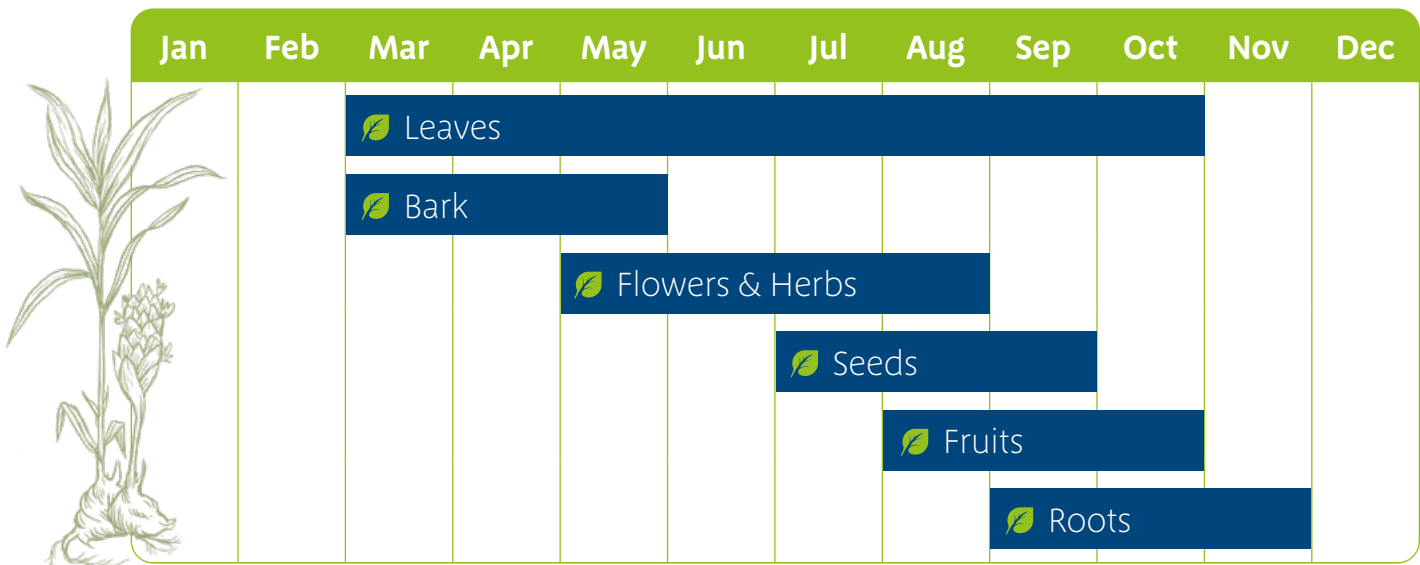
# For us, Phytoneering is the combination of nature and modern science

The outstandingly high quality of a plant-based product starts with the raw material.

For this reason we take special care to use only the highest quality plants and to process them into top-quality extracts with our decades of knowledge and technical know-how.



## Harvest plan (Using Europe as an example)



Leaves / Folium   Bark / Cortex   Flowers / Flos   Seeds / Semen   Herbs / Herba   Fruits / Fructus   Roots / Radix

# „We implement your ideas!“



**This is our guiding principle for tailor-made extracts according to your requirements.**

Our experience has grown through decades of working with phytopharmaceuticals and in-house production as well as numerous research projects on plant cultivation and special harvesting methods.

At **Phytoneering Extract Solutions GmbH**, as a wholly owned subsidiary of Bionorica SE, we have decades of knowledge in extract production and ingredient analysis.

Please feel free to contact us.

PES Sales

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