

# BULGARIAN TRIBULUS EXTRACT

## DRY HERBAL EXTRACT FROM BULGARIAN TRIBULUS TERRESTRIS

### CHARACTERISTICS AND STANDARDS OF VEMOHERB® PT EXTRACTS OF BULGARIAN TRIBULUS TERRESTRIS

Appearance	Amorphous powder
Colour	Light Brown to Brown
Taste & Odour	Specific to plants
Solubility	
- H <sub>2</sub> O	Soluble
- C <sub>2</sub> H <sub>5</sub> OH (50%)	Very small solubility
pH (10% solution)	3.0 to 5.0
Sulphated ash, %, not more than	10.0
Loss on drying, %, not more than	5.0
Furostanol saponins, determined as protodioscin, based on dry substance, %, not less than	60.0 or 45.0
Tannic compounds, determined as tannin, based on dry substance, %, not more than	10.0
Flavonoids, determined as rutin, based on dry substance, %, not more than	10.0
Heavy metals, mg/kg, not more than:	
- Lead (Pb)	3.0
- Cadmium (Cd)	1.0
- Mercury (Hg)	0.1
Microbiology:	
Total viable count, CFU/g, not more than	1.10 <sup>3</sup>
Mould, CFU/g, not more than	1.10 <sup>2</sup>
Yeast, CFU/g, not more than	1.10 <sup>2</sup>
E.coli, Salmonella spp., S. Aureus, CFU/g	Must not be detected
Content of extraction solvent residues	Must comply with Ph.Eur.
Excipients	None
Packaging	3 Polyethylene bags placed in a five layer carton box: 7.5 kg net per box
Storage	Store in dry and cool places, away from direct sunlight
Shelf life	36 months under the previously mentioned conditions in its original packaging

Manufactured and controlled according to the principles and requirements of EN ISO 9001-2015, HACCP, FSSC 22000:2011, GMP, GMP+, Halal, Kosher

### THE PLANT

*Tribulus terrestris* grows well in moderate and tropical climates and the plant is most commonly found in wild, dry and stony habitats. That is why it thrives in the warmer regions of Bulgaria and here it accumulates a specific bouquet of biologically active substances that are not present in *Tribulus* growing elsewhere in the world. Ever since ancient times, this herbaceous plant has been used to treat numerous health conditions due to the content of highly active ingredients (furostanol saponins, flavonoids and tannins).

### THE PROPRIETARY EXTRACT

The *Tribulus terrestris* extracts of Vemo 99 Ltd are obtained from the above-the-earth parts of the plant. Vemo 99 Ltd offers two **standards** of **genuine Bulgarian *Tribulus terrestris*** extract:

- **VemoHerb® PT** - dry extract standardized at **furostanol saponins** determined as **protodioscin** (min 45% or min 60%);
- **VemoHerb® TS** - dry extract standardized at **total saponins**, min 80%.

VemoHerb® PT is premium quality extract produced after over a dozen extractions from Bulgarian herbal material in extraction rate of 1:50. VemoHerb® PT is the superior standard that is the most effective and potent *Bulgarian Tribulus terrestris* extract currently on the market!

As we are striving to satisfy the various market needs and demands, we offer VemoHerb® TS standard, manufactured by our unique know-how technology, targeting the total saponins, present in the extract. VemoHerb® TS can be manufactured from above-the-earth parts of the herb, or from the fruits only. VemoHerb® TS, manufactured from the fruits, has a little priority in terms of potency, when compared to the extract, obtained from herba.

All VemoHerb® extracts are produced by **wild grown Bulgarian *Tribulus terrestris*** plants, which makes them fully organic and clean.

### BIOLOGICALLY ACTIVE SUBSTANCES

One of the secrets, in terms of potency, of VemoHerb® extracts is the signature combination of furostanol saponins, flavonoids and tannins, which is present in the *Bulgarian Tribulus terrestris* plant in exceptionally concentrated form. This determines the distinction in pharmacological and physiological properties with the priority of the Bulgarian herb, hence extract, over all similar products with other origin. That is why almost all studies that prove the benefits of the plant *Tribulus terrestris* are based on the Bulgarian *Tribulus*.

### MODE OF ACTION AND APPLICATIONS

VemoHerb® *Tribulus* extracts are **non-hormonal stimulating products of plant origin** and can be used for improving sexual performance and function, stimulating the natural testosterone production; keeping cortisol and estradiol levels within the optimal boundaries; for cardiac, kidneys and urinary tract protection; and providing anti-inflammatory, antitumor and antioxidants effects. VemoHerb® *Tribulus* extracts are very suitable for athletes in the preparatory, the active period, and in the period of recovery after physical exhaustion or recent diseases. Thus, the products are especially applicable for professionals and people who do sports for health and good shape.

# CICHORIUM EXTRACT

## DRY HERBAL EXTRACT FROM CICHORIUM INTYBUS

### CHARACTERISTICS AND STANDARDS

Appearance	Amorphous powder
Colour	Green-Brown to Brown
Taste & Odour	Specific to plants
Solubility	Small solubility in water and 50% ethanol
pH (0,1% solution)	4.0 to 7.0
Sulphated ash, %, not more than	10.0
Loss on drying, %, not more than	5.0
Heavy metals, sum determined as Lead, %, not more than	0.001
Cumarins, determined as esculin, based on dry substance, %, not less than	9.0
Flavonoids, determined as apigenin, based on dry substance, %, not less than	7.0
Tannic compounds, determined as tannin, based on dry substance, %, not less than	4.5
Microbiology	
Total viable count, CFU/g, not more than	10 <sup>3</sup>
Mould, CFU/g, not more than	10 <sup>2</sup>
Yeast, CFU/g, not more than	10 <sup>2</sup>
E.coli, Salmonella spp., S. Aureus, CFU/g	Must not be detected
Content of extraction solvent residues	Must comply with Ph.Eur.
Excipients	None
Packaging	Polyethylene bags placed in a five layer carton box: 10.0 kg net per box
Storage	Store at temperatures not higher than 25°C
Shelf life	36 months under the previous mentioned conditions in its original packaging

### THE PLANT

*Cichorium intybus* is a bushy perennial herb with blue or lavender flowers from the Asteraceae family. It is common in the low parts of the country, near roads, in dry meadows and as a weed in the wheat fields. The plant holds a wealth of polyphenols, organic acids, mineral acids, fructans, coumarin derivatives and other phytochemicals.

### THE PROPRIETARY EXTRACT

The herb for the production of our product is gathered in the period of flowering, it is dried and ground in compliance with all technical requirements, in order to preserve the active substances present in it. The extract is derived through water-alcohol extraction of the prepared plant material and a subsequent concentration of the intermediate liquid product. The concentrated liquid extract is dried to produce the finished product. The technology employed in the production guarantees complete extraction of the active substances present in the aerial parts of the herb.

### BIOLOGICALLY ACTIVE SUBSTANCES

The properties of the extract are due to the content of specific active ingredients extracted from the plant *Cichorium intybus*, containing the coumarin derivatives esculetin, 7-glucoside-esculetin (cichorin), esculin, scopoletin and umbelliferone, the flavonoids apigenin, luteolin, quercetin, kaempferol, anthocyanins, presented mainly by delphinidina derivatives and tannin compounds. The content of esculin and cichorin is predominant in the dried plant material and together with esculetin provide for the anti-inflammatory and anti-microbial properties of the extract.

### MODE OF ACTION AND APPLICATIONS

The flavonoids apigenin, quercetin and luteolin, present in the extract dilate the smallest capillary vessels, help oxygenate blood, stimulate the metabolism and positively influence the enzyme systems, involved in the detoxification of the body. A combination of coumarin and flavonoid derivatives forms a signature flavono-coumarin active complex that shows a distinct positive effect on the gall, renal and hepatic functions by supporting the discharge of bile acids and toxins from the body. The active complex also supports the reduction of glutathione and shows cardio-protective properties. The extract can be used by patients with cardio-vascular problems, in cases of gall, renal and hepatic conditions.

This product is manufactured and controlled according to principles and requirements of ISO 9001:2008, HACCP, FSSC 22000:2011, Halal, Kosher, GMP



# COTINUS EXTRACT

## DRY HERBAL EXTRACT FROM COTINUS COGGYRIA

### CHARACTERISTICS AND STANDARDS

Appearance	Amorphous powder
Colour	Light-Brown to Brown
Taste & Odour	Specific to plants
Solubility	Small solubility in water and moderate solubility in 50% ethanol
pH (0,1% solution)	3.8 to 5.0
Sulphated ash, %, not more than	10.0
Loss on drying, %, not more than	5.0
Heavy metals, sum determined as Lead, %, not more than	0.001
Total polyphenols, determined as catechin, based on dry substance, %, not less than	30.0
Flavonoids, based on dry substance, %, not less than, determined as apigenin, determined as quercetin	15.0 2.0
Tannic compounds, determined as tannin, based on dry substance, %, not less than	32.0
Microbiology	
Total viable count, CFU/g, not more than	10 <sup>3</sup>
Mould, CFU/g, not more than	10 <sup>2</sup>
Yeast, CFU/g, not more than	10 <sup>2</sup>
E.coli, Salmonella spp., S. Aureus, CFU/g	Must not be detected
Content of extraction solvent residues	Must comply with Ph.Eur.
Excipients	None
Packaging	2 Polyethylene bags placed in a five layer carton box: 10.0 kg net per box
Storage	Store at temperatures not higher than 25°C
Shelf life	36 months under the previously mentioned conditions in its original packaging

### THE PLANT

The cotinus plant can grow up to 12 m in height and has simple elliptical leaves up to 10 cm in diameter. The plant can be found in the southern mountain slopes on dry and stony soils. *Cotinus coggygia* is one of the 15 most commonly used plants in Bulgarian traditional medicine. Different preparations are used for the treatment of different wounds and cases of acne, mainly as an external means, although there is evidence for its implementation in cases of diarrhea and ulcers.

### THE PROPRIETARY EXTRACT

*Cotinus coggygia* extract is obtained from dry leaves. The extract is derived through water-alcohol extraction of the prepared plant material and a subsequent concentrating of the intermediate liquid product. The concentrated liquid extract is dried to produce the finished product. The technology employed in the production guarantees complete extraction of the active substances present in the used parts of the herb and thorough purification from unnecessary agents which may lower the beneficial effects of the extract.

### BIOLOGICALLY ACTIVE SUBSTANCES

The properties of the extract are due to the content of specific active ingredients extracted from the plant *Cotinus coggygia*, containing polyphenols, namely catechine, the flavonoids apigenin and quercetin, and tannins, among other active substances present in smaller amounts.

### MODE OF ACTION AND APPLICATIONS

In traditional medicine, a brew of *Cotinus coggygia* is used externally in treating festering wounds and catarrhs of various origin, and internally for mucosal health. The main active substances in the plant are polyphenols – tannins and flavonoids; they are heterogeneous chemical compound group that generally induces protein coagulation by binding irreversible to them. This property is observed in the astringent effects of the products based on the plant. Additionally the active compounds present in the plant show the ability to increase the resorption of certain vitamins in the body and help decrease cholesterol levels in the blood.

This product is manufactured and controlled according to principles and requirements of ISO 9001:2008, HACCP, FSSC 22000:2011, Halal, Kosher, GMP



# GERANIUM EXTRACT

## DRY HERBAL EXTRACT FROM GERANIUM SANGUINEUM

### CHARACTERISTICS AND STANDARDS

Appearance	Amorphous powder
Colour	Red-Brown to Brown
Taste & Odour	Specific to plants
Solubility	Very small solubility in water
pH (0.1% solution)	3.5 to 4.5
Sulphated ash, %, not more than	10.0
Loss on drying, %, not more than	5.0
Heavy metals, sum determined as Lead, %, not more than	0.002
Polyphenols, determined as catechin, based on dry substance, %	22.5 to 27.5
Tannic compounds, determined as tannin, based on dry substance, %, no less than	25.0
Anthocynidins, total, based on dry substance, %, not less than:	0.30
- malvidin chloride	0.10
- cyanidin chloride	0.20
Microbiology	
Total viable count, CFU/g, not more than	10 <sup>3</sup>
Mould, CFU/g, not more than	10 <sup>2</sup>
Yeast, CFU/g, not more than	10 <sup>2</sup>
E.coli, Salmonella spp., S. Aureus, CFU/g	Must not be detected
Content of extraction solvent residues	Must comply with Ph.Eur.
Excipients	None
Packaging	Polyethylene bags placed in a five layer carton box: 7.5 kg net per box
Storage	Store at temperatures not higher than 25°C
Shelf life	36 months under the previously mentioned conditions in its original packaging

### THE PLANT

*Geranium sanguineum* is a herbaceous perennial plant from the Geraniaceae family, with well developed roots. Freshly cut, the roots are pink while after several minutes, they become red. The stems are hairy and begin branching from their base. The leaves are digitate, deeply cut and give off a pleasant smell. This plant reaches on average 40 centimeters in height. The flowers are single, purple to red positioned on a long noded stem. The fruits when ripe break up into five segments, each containing a single seed. The typical habitat of this herb is grassland, sand dunes and open woodland on calcareous soils, including rocky slopes.

### THE PROPRIETARY EXTRACT

After washing, the *Geranium sanguineum* roots are dried on air or in dryers at a temperature of 40-45°C. The dried roots are red-brown on the outside and with red tinge on the inside. The extract is derived through water-alcohol extraction of the prepared plant material and a subsequent concentration of the intermediate liquid product. The concentrated liquid extract is dried to produce the finished product. The technology employed in the production guarantees complete extraction of the active substances present in the used parts of the herb.

### BIOLOGICALLY ACTIVE SUBSTANCES

The properties of the extract are due to the content of specific active ingredients extracted from the plant *Geranium sanguineum* containing tannins (pyrogallol, gallic acid), flavonoids, namely apigenin, quercetin, hyperoside and caemferol, and anthocyanins cyanidin chloride and malvidin chloride provide for the anti-oxidant and anti-microbial properties of the extract.

### MODE OF ACTION AND APPLICATIONS

In traditional medicine, a brew of *Geranium sanguineum* has been used as a styptic, in cases of anemia and cirrhosis. The properties of the *Geranium sanguineum* extract are determined by the herbal biologically active complex composed of tannins, flavonoids, anthocyanins and polyphenol acids, which stimulate the production of white blood cells and mainly lymphocytes – the main part of the human immune system. The biochemical affinity of the active substances to the viral cover (capsid), effects in binding to it and thus leads to the deactivation of the virus. The sufficient quantity of flavonoids in the extract, which are one of the most active natural antioxidants, flushes toxins formed during inflammation processes.

The latest studies on the properties of polyphenol complexes in the extract from roots of *Geranium sanguineum* show remarkable inhibition on the development of pathogenic viruses, bacteria, parasitic fungi and cancer cells.



# GINKGO EXTRACT

## DRY HERBAL EXTRACT FROM GINKGO BILOBA

### CHARACTERISTICS AND STANDARDS

Appearance	Amorphous powder
Colour	Light Brown to Yellow
Taste & Odour	Specific to plants
Sulphated ash, %, not more than	5.0
Loss on drying, %, not more than	5.0
Heavy metals, sum determined as Lead, %, not more than	0.001
Ginkgo flavone glycosides, based on dry substance, %, not less than	24.0
Content of lactones, calculated as sum bilobalides, lactones A, lactones B, lactones C, %, not less than	6.0
Content of ginkgolic acid, ppm, not more than	5.0
Microbiology	
Total viable count, CFU/g, not more than	10 <sup>3</sup>
Mould, CFU/g, not more than	10 <sup>2</sup>
Yeast, CFU/g, not more than	10 <sup>2</sup>
E.coli, Salmonella spp., S. Aureus, CFU/g	Must not be detected
Content of extraction solvent residues	Must comply with Ph.Eur.
Excipients	None
Packaging	2 Polyethylene bags placed in a five layer carton box: 10.0 kg net per box
Storage	Store at a temperature not higher than 25°C
Shelf life	36 months under the previously mentioned conditions in its original packaging

### THE PLANT

*Ginkgo biloba* – regarded as a living fossil, it is the last surviving member of its genus. Some fossils of the tree have been dated almost 250 million years old. The tree originated in Asia and was spread almost all over the world during the middle Jurassic. The plant was cultivated in the dawn of human civilization and has been a part of our culture, ever since. Different extracts and ointments of the tree are used to enhance cognitive functions and as an aphrodisiac.

### THE PROPRIETARY EXTRACT

The active substances are most concentrated in the leaves of the ginkgo tree in early fall when they are just turning yellow. The leaves are harvested, dried and ground in compliance with all technical requirements, in order to preserve the active substances in the dried herb. The extract is derived through water-alcohol extraction of the prepared plant material and a subsequent concentration of the intermediate liquid product. The concentrated liquid extract is dried to produce the finished product. The technology employed in the production guarantees complete extraction of the active substances present in the ginkgo leaves, while guaranteeing almost no presence of the toxic ginkgolic acid.

### BIOLOGICALLY ACTIVE SUBSTANCES

The properties of the extract are due to the content of specific active ingredients extracted from the leaves of *Ginkgo biloba*, containing ginkgo flavone glycosides – namely quercetin, kaempferol and isorhamnetin, the terpene lactones lactone A, B, C and bilobalide. The plant also contains small amounts of proanthocyanadins, glucose, rhamnose, organic acids, D-glucaric and ginkgolic acids.

### MODE OF ACTION AND APPLICATIONS

The ginkgo leaves extracts are known to herbalists since ancient times. Used as a brain tonic the extract aids concentration and improves memory. The extract also affects the circulatory system, by serving as a vasodilator it provides for increased oxygen supply to the brain while also supports the heart and lung. In addition to these effects, the extract is known to prevent nerve cell damage through its antioxidative properties. The extract also supports ones general wellbeing and helps preserve a good mood.

This product is manufactured and controlled according to principles and requirements of ISO 9001:2008, HACCP, FSSC 22000:2011, Halal, Kosher, GMP



# HYPERICUM EXTRACT

## DRY HERBAL EXTRACT FROM HYPERICUM PERFORATUM

### CHARACTERISTICS AND STANDARDS

Appearance	Amorphous powder
Colour	Dark Brown
Taste & Odour	Specific to plants
Sulphated ash, %, not more than	10.0
Loss on drying, %, not more than	5.0
Heavy metals, sum determined as Lead, %, not more than	0.001
Hypericin, based on dry substance, %, not less than	0.3
Microbiology	
Total viable count, CFU/g, not more than	10 <sup>3</sup>
Mould, CFU/g, not more than	10 <sup>2</sup>
Yeast, CFU/g, not more than	10 <sup>2</sup>
E.coli, Salmonella spp., S. Aureus, CFU/g	Must not be detected
Content of extraction solvent residues	Must comply with Ph.Eur.
Excipients	None
Packaging	2 Polyethylene bags placed in a five layer carton box: 10.0 kg net per box
Storage	Store at temperatures not higher than 25°C
Shelf life	36 months under the previously mentioned conditions in its original packaging

### THE PLANT

*Hypericum perforatum* is a perennial herbaceous plant, with a smooth stem with two longitudinal ribs. The plant usually reaches heights between 30 to 70 centimeters. The leaves are opposite, elliptical and without petioles, between 1 and 3 centimeters in length with scattered dots that appear translucent against light. The flowers are yellow, collected on the top of the stem in inflorescence – panicle. The plant blooms from May to September. Some of the traditional names of the plant are “Blood of Christ” and “Christ’s miracle maker”. Only the top 20 cm of the herb are collected in full bloom around Midsummer Day, after-bloomed flowers should not be collected.

### THE PROPRIETARY EXTRACT

*Hypericum perforatum* extract is obtained from the dried above-the-earth parts of the plant. The extract is derived through water-alcohol extraction of the prepared plant material and a subsequent concentration of the intermediate liquid product. The concentrated liquid extract is dried to produce the finished product. The technology employed in the production guarantees complete extraction of the active substances present in the used parts of the herb.

### BIOLOGICALLY ACTIVE SUBSTANCES

The properties of the extract are due to the content of specific active ingredients extracted from the plant *Hypericum perforatum* containing the condensed anthraquinone derivatives hypericin and pseudo-hyperitsin. The extract also contains the flavonoids hiperozid, rutin, quercitrin, isoquercitrin, quercetin and catechin-type tannins.

### MODE OF ACTION AND APPLICATIONS

The hypericin in *Hypericum perforatum* is a derivative of anthraquinone, which shows inhibitory effect on monoaminoxidase, takes part in the brain metabolism and influences the transmission of nerve impulses. This helps to regulate the serotonin levels in the central nervous system and improves in long term the mental condition. The hypericin itself possess higher anti-depressive properties when it is in combination with the other phyto chemicals – flavonoids, xanthogenate and tannic compounds. The dry extract from *Hypericum perforatum* finds application in mild to moderate depressions and nervous conditions.

This product is manufactured and controlled according to principles and requirements of ISO 9001:2008, HACCP, FSSC 22000:2011, Halal, Kosher, GMP



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# TANACETUM EXTRACT

## DRY HERBAL EXTRACT FROM TANACETUM VULGARE

### CHARACTERISTICS AND STANDARDS

Appearance	Amorphous powder
Colour	Green-Brown to Brown
Taste & Odour	Specific to plants
pH (0,1% solution)	4.0 to 6.5
Sulphated ash, %, not more than	10.0
Loss on drying, %, not more than	5.0
Heavy metals, sum determined as lead, %, not more than	0.001
Flavonoids, determined as apigenin, based on dry substance, %, not less than	18.0
Coumarins, determined as aesculin, based on dry substance, %, not less than	7.5
Tannic compounds, determined as tannin, based on dry substance, %, not less than	7.5
Microbiology	
Total viable count, CFU/g, not more than	10 <sup>3</sup>
Mould, CFU/g, not more than	10 <sup>2</sup>
Yeast, CFU/g, not more than	10 <sup>2</sup>
E.coli, Salmonella spp., S. Aureus, CFU/g	Must not be detected
Content of extraction solvent residues	Must comply with Ph.Eur.
Excipients	None
Packaging	2 Polyethylene bags placed in a five layer carton box: 10.0 kg net per box
Storage	Store at a temperature not higher than 25°C
Shelf life	36 months under the previously mentioned conditions in its original packaging

### THE PLANT

*Tanacetum vulgare* is a perennial herbaceous plant with erect smooth stems that can reach up to 150 cm in height. The flowers are orange-yellow gathered in large number (up to 100) in complex shield shaped flower clusters situated on the ends of the stem branches. The flower baskets are known to contain around 1.5% etheric oil with camphor-like, somewhat unpleasant odour and the bitter substance tanacetin. Tansy flowers from mid-to-late summer, when the topmost 20 centimes of the plant, including the flowers, are gathered for medicinal purposes.

### THE PROPRIETARY EXTRACT

*Tanacetum vulgare* extract is obtained from the dried flowers of the plant. The extract is derived through water-alcohol extraction of the prepared plant material and a subsequent concentration of the intermediate liquid product. The concentrated liquid extract is dried to produce the finished product. The technology employed in the production guarantees complete extraction of the active substances present in the flowers of the herb and thorough purification from unnecessary agents, which may lower the beneficial effects of the extract.

### BIOLOGICALLY ACTIVE SUBSTANCES

The properties of the extract are due to the content of specific active ingredients extracted from the plant *Tanacetum vulgare* containing flavonoids, namely apigenin, coumarins (aesculin), tannins (tannin) and terpene ketones.

### MODE OF ACTION AND APPLICATIONS

The flavonoids present in the dry extract from flowers of *Tanacetum vulgare* help strengthen the capillary vessels, help contain local inflammation, protects the gut from infections and enteritis. Together with the coumarin derivatives show spasmolytic properties. The tannic compounds help maintain a healthy gut microflora and support the development of microorganisms producing different growth factors. The terpene ketones help decrease gut tone and protect the intestines from parasites.

The dry extract from flowers of the *Tanacetum vulgare* plant can also be used as an additive in animal fodder for prophylactic and treatment purposes.

This product is manufactured and controlled according to principles and requirements of ISO 9001:2008, HACCP, FSSC 22000:2011, Halal, Kosher, GMP



# URTICA EXTRACT

## DRY HERBAL EXTRACT FROM URTICA DIOICA

### CHARACTERISTICS AND STANDARDS

Appearance	Amorphous powder
Colour	Brown to dark brown
Taste & Odour	Specific to plants
Solubility	
– Water	Practically insoluble
– Ethanol (50%)	Very small solubility
Sulphated ash, %, not more than	10.0
Loss on drying, %, not more than	5.0
Heavy metals, sum determined as Lead, %, not more than	0.001
Hydroxycoumarins, based on dry substance, %, not less than	
– determined as umbelliferon	1.0
– determined as scopoletin	5.0
Microbiology	
Total viable count, CFU/g, not more than	10 <sup>3</sup>
Mould, CFU/g, not more than	10 <sup>2</sup>
Yeast, CFU/g, not more than	10 <sup>2</sup>
E.coli, Salmonella spp., S. Aureus, CFU/g	Must not be detected
Content of extraction solvent residues	Must comply with Ph.Eur.
Excipients	None
Packaging	2 Polyethylene bags placed in a five layer carton box: 10.0 kg net per box
Storage	Store at a temperature not higher than 25°C
Shelf life	36 months under the previously mentioned conditions in its original packaging

### THE PLANT

Nettle is a dioecious perennial herbaceous plant that can reach a height of 200 cm (under optimal conditions), with long branched creeping rhizome. It is readily found in Europe and Asia, northern Africa, and western North America. The plant develops fast in the summer and dies down to the ground in winter. In the wild, the botanical distinction between the different *Urtica* species is difficult. An interesting fact about the common nettle is that all parts of the plant – leaves, roots, stems and seeds are used in the traditional medicine.

### THE PROPRIETARY EXTRACT

*Urtica dioica* extract is obtained from dried roots. The extract is derived through water-alcohol extraction of the prepared plant material and a subsequent concentration of the intermediate liquid product. The concentrated liquid extract is dried to produce the finished product. The technology employed in the production guarantees complete extraction of the active substances present in the used parts of the herb.

### BIOLOGICALLY ACTIVE SUBSTANCES

The properties of the extract are due to the content of specific active ingredients extracted from the plant *Urtica dioica* containing the phytosterols beta-sitosterol, sigma-sitosterol and kampe sitosterol, the imunostimulating polysaccharides glucans and gluco-galactourones, hydroxycoumarin derivatives scopoletin and umbelliferone, lignins, alkaloids and many others. The chemical bouquet is also complemented by many organic acids – cafeic, citric and others.

### MODE OF ACTION AND APPLICATIONS

The dry extract from roots of *Urtica dioica*, produced by VEMO 99 contains mainly the hydroxycoumarins scopoletin and umbelliferone. The synergistic effects of the active substances stimulate the production of testosterone and inhibit prostate hyperplasia. They show anti-inflammatory properties on the alveolus macrophages and diminish lung inflammation *in vivo*.

The extract decreases the risk of chronic prostatitis and adenoma, and also positively influences disturbances in urination. The product can be used as a means of prophylactics, on its own and in combination with other products.

This product is manufactured and controlled according to principles and requirements of ISO 9001:2008, HACCP, FSSC 22000:2011, Halal, Kosher, GMP

