

# Distinctive® Phytostem VitaFoods

Nutritional Supplements to Promote a Beautiful, Healthier You

## Lilac Dry 50N



In recent years, researchers have successfully developed active ingredients through *plant tissue culturing*. Many medicinal, nutritional and cosmetic active ingredients have been enhanced through this technology.

**Resources of Nature**, in partnership with global leaders in this field, can now selectively harvest cells from a plant, allowing the utilization of even the most rare plant species without harm. These cells are specially cultivated to generate cultures rich in plant stem cells and complex compounds. These specifically designed plant cell cultures act as nature-made liposomes and are fully compliant with the skin, perfect for delivering their contents of powerful antioxidants and cell regenerating molecules.

Up until recently, harvesting these highly active cells had been extremely difficult and expensive. Through advances in the most specialized processing technologies, they are now available in quantities feasible for commercialization for nutritional applications as "**Distinctive®Phytostem VitaFoods**".

Compared to standard botanical extraction methods, this highly sustainable, eco-friendly technology provides higher purity products with up to 1000 times the active molecule concentrations, and because of their highly controlled production techniques, Distinctive®Phytostem VitaFoods meet and exceed Certified Organic and Bio-Eco Cosmesis guidelines.



Recognized for its attractive and highly recognizable, sweet-smelling clusters of pink, purple or white flowers, the lilac is best known for its use in gardens throughout Europe and North America. The common lilac, also known as *Syringa vulgaris*, is a hardy deciduous shrub originating from southeastern Europe.

In addition to its popularity as ornamental plant, the lilac has been known throughout history for its medicinal properties; its leaves and fruit, tonic and used to control fever, disease and skin disorders. The extract of the lilac contains the defense molecule verbascoside (also known as acteoside). This highly studied phenylpropanoid functions to protect the plant against physical, environmental and microbial harm. Recent studies have revealed that verbascoside is highly effective in humans as a cellular protectant with great potential as a nutritional supplement and for topical skincare applications.

**Distinctive®Phytostem VitaFoods Lilac Dry** is a cell culture extract titrated in verbascoside. By selecting the highest verbascoside-producing cell strains from the lilac and carefully controlling the plant cell culture, we are able to produce this highly active molecule in much higher concentrations and with greater purity than by using standard extraction techniques.

- ◆ Free Radical Scavenging
- ◆ Anti-Inflammatory
- ◆ Sebum Control
- ◆ Anti-Aging
- ◆ Broad protection against dermatological disorders
- ◆ Protection against skin and hair oxidative stress
- ◆ Defined and standardized composition profile
- ◆ Safe and effective

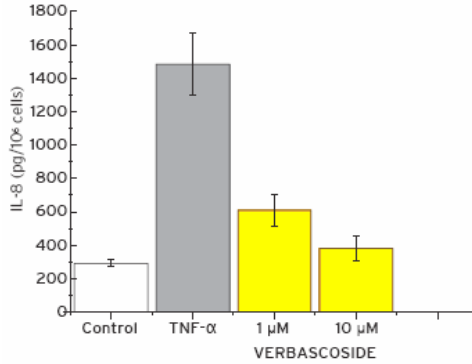
**Resources Of Nature, Inc.**

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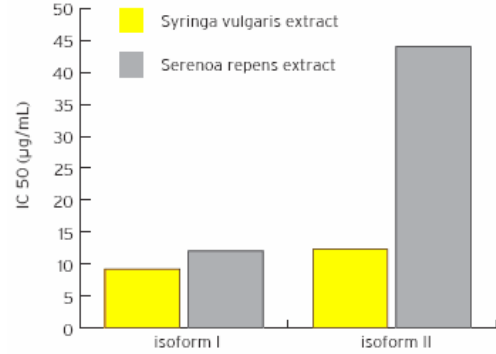
# Distinctive® Phytostem VitaFoods Lilac Dry 50N

## ANTI-INFLAMMATORY ACTIVITY (In-Vitro)



Verbascoside shows a strong anti-inflammatory activity since it induces a dose-dependent decrease of the expression of the pro-inflammatory chemokine IL-8 on primary cultures of human keratinocytes stimulated by TNF-α.

## SEBUM REGULATING ACTIVITY



Syringa vulgaris extract is effective against 5α-reductase, enzyme involved in sebum production. Syringa vulgaris extract inhibits 5α-reductase, especially type II, more efficiently than Serenoa repens alcoholic extract, a common benchmark for this type of activity.

## ANTIOXIDANT EFFICACY OF A DIETARY SUPPLEMENT IN SMOKERS - CLINICAL STUDY

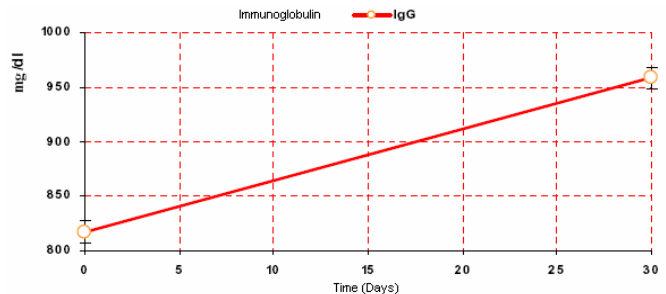
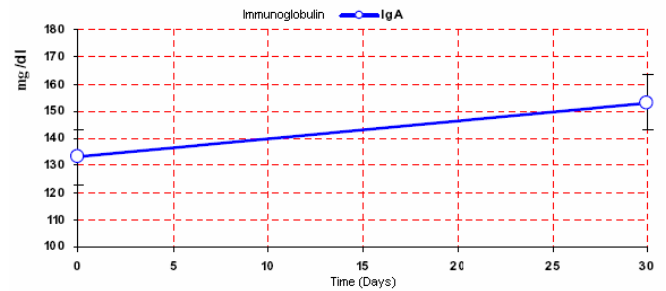
10 smoker subjects (aged 27-63 years old)

Treatment: 1 capsule a day for 30 days containing 5 mg of Distinctive Phytostem VitaFoods Lilac Dry 50N (2.5 mg of Verbascoside)

Evaluations:

- \* Immunoglobulin levels at 0 and 30 days (Haematic dosage of the IgA, IgE, IgG)
- \* Plasmatic lipoperoxidation at 0, 1 and 30 days
- \* Skin lipid peroxidation (tape stripping method) at 0 and 30 days

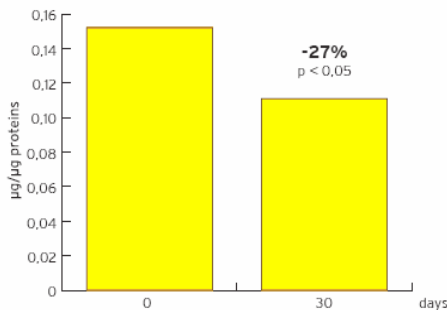
## CLINICAL STUDY- Immunoglobulin Assay



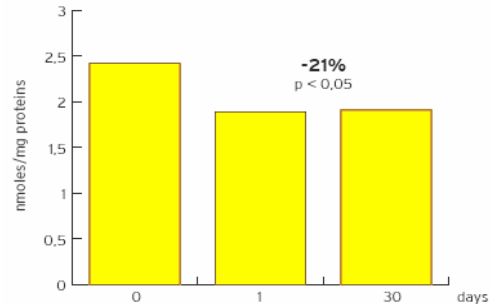
## CLINICAL STUDY- Immunoglobulin Assay Results

A statistically significant increase of the IgA and IgG levels by +15% and 19% respectively, after 30 days of treatment; no significant variations for the IgE levels.

## CLINICAL STUDY- Skin Lipid Peroxides



## CLINICAL STUDY- Plasmatic Lipid Peroxides



Distinctive® Phytostem VitaFoods Lilac significantly reduces both plasmatic and skin lipid peroxides levels after just 30 days of a once-a-day treatment.

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# Distinctive® Phytostem VitaFoods Lilac Dry 50N

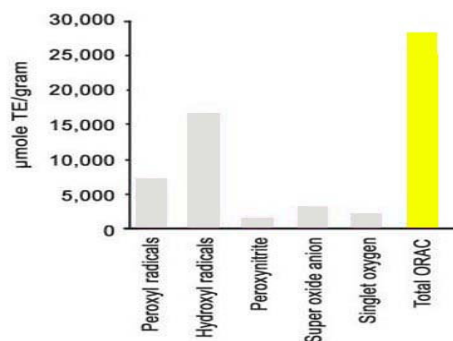
## COMPARISON OF ORAC VALUES IN FRUITS AND VEGETABLES (µmole TE/gram)

Acai fruit (freeze-dried OptiAcai) 1027	Apple, Red Delicious (no peel) 29	Grapes (Red) 13	Wild black raspberry 340	Red pepper 86
Acai fruit (fresh) 185	Apple, Gala 28	Grapes (green) 11	Wild blueberry 260	Prunes 80
Cranberry 95	Apple, Golden Delicious (with peel) 27	Mango 10	Elderberry 240	Beans, dry, mature (black) 70
Blueberry (low bush) 93	Apple, Fuji 26	Apple, Golden Delicious (no peel) 22	Wolfberry 220	Green beans 60
Plums (black) 73	Apple, Golden Delicious (no peel) 22	Applesauce 20	Red raspberry 160	<i>Acai spray-dried power</i> 60
Plums 62	Applesauce 20	Kiwifruit 9	Green pepper 150	Tomato 60
Blueberry (cultivated) 62	Avocado (Haas) 19	Bananas 9	Spinach 149	Carrot 50
Blackberry 53	Pears (green cultivars) 19	Pineapples 8	Beans, dry, mature (small red) 144	Dates 39
Raspberry 49	Pear (Red Anjou) 18	Nectarines 8	Beans, dry, mature (pinto) 130	Figs 34
Apple, Red Delicious (with peel) 43	Orange (Navel) 18	Peaches, canned in heavy syrup 4	Hawthorn 130	Raisins 30
Acai fruit, frozen 40	Peaches 18	Cantaloupe 3	Broccoli 125	Dates, Medjool 24
Apple, Granny Smith 39	Tangerines 16	Honeydew melons 2	Cranberry 120	
Strawberry 36	Grapefruit (Red) 16	Watermelon 1	Beets 100	
Cherries (sweet) 34	Apricot 13	Acai (freeze-dried OptiAcai) 1027	Cherry 90	

## ANTIOXIDANT EFFICACY

There are five predominant reactive species found in the body: peroxy radicals, hydroxyl radicals, peroxy nitrite, super oxide anion, and singlet oxygen. Total ORAC<sub>FN</sub> provides a measure of the total antioxidant power of a food/nutrition product against the five predominant reactive species.

Distinctive Phytostem VitaFoods Lilac quenches all free radical species to offer total protection anti-aging function. (Total ORAC<sub>FN</sub> 28,166 µmole TE/gram.)



## TYPICAL PROPERTIES

Composition

Appearance

Solubility

Preservatives

Aflatoxins

GMO

Pesticides

Microbiology

Packaging

Storage

Shelf Life

Syringa vulgaris (Oleaceae) cell culture extract titrated at 50% of verbascoside and maltodextrin

Amber-colored powder

Freely soluble in water (Eur. Ph. 5th Edition)

Absent

Absent

Absent

Absent

Total microbial count: Bacteria < 100 CFU/g

1 kg

Store the product in the original, well closed container, in a cool, dry area and protected from light

24 months

## RECOMMENDED DOSAGE

2-5mg/day

## SAFETY

Safety tested for both cosmetic and nutritional applications

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