

# JD Phyto-Or 1%™

Glowing Skin  
Through the Power of Phytoene

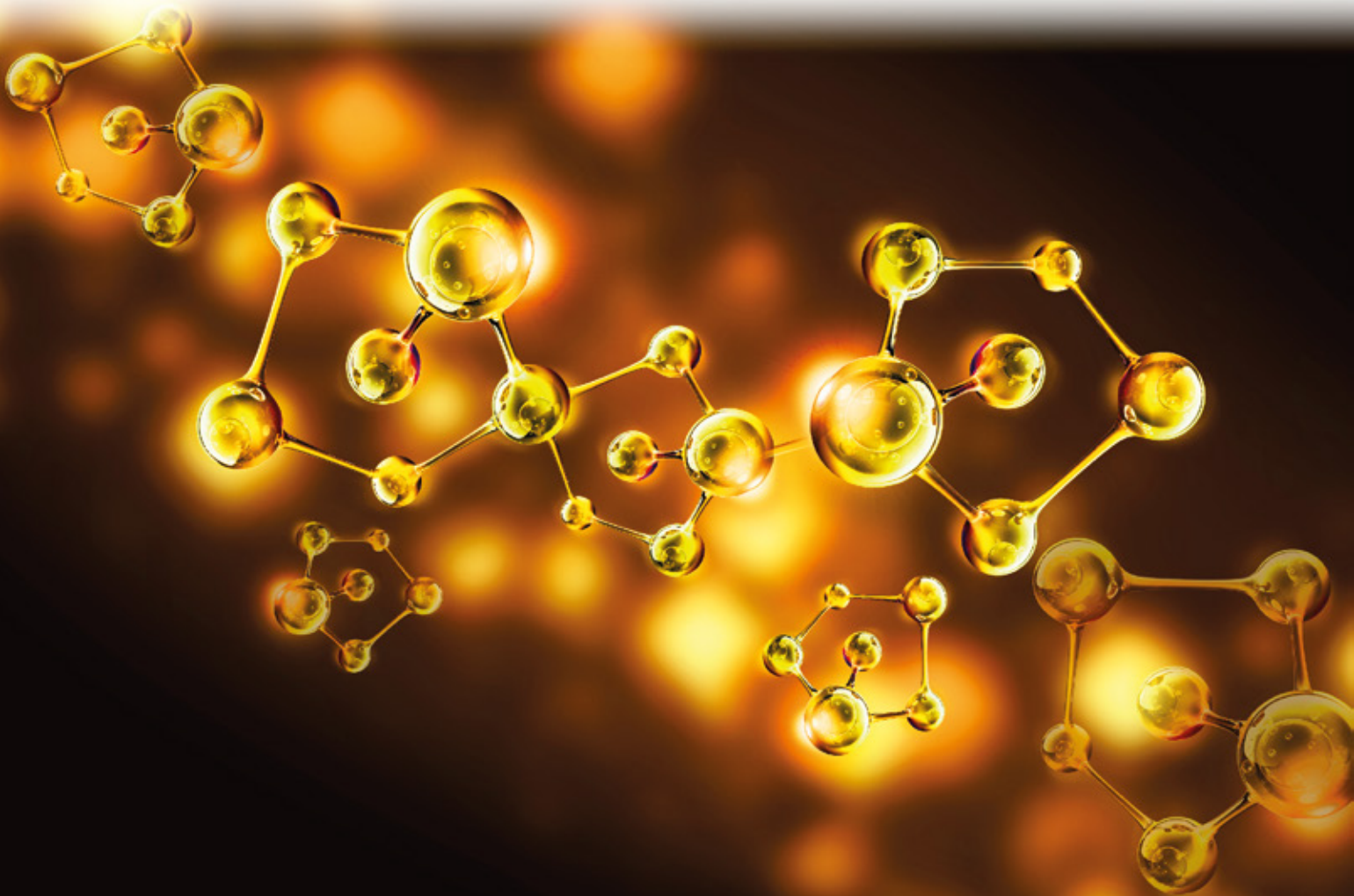


**JOJOBA DESERT**  
Leading The Next Generation

Natural active skin repair.  
Enhanced skin elasticity.  
Improved skin tone.

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JD Phyto-Or 1%™ is a novel anti-aging and high-performing active for glowing skin and hair, featuring both JD Jojoba oil and concentrated Phytoene.



## JD Phyto-Or 1%™'s active ingredient benefits

- Protects and maintains the natural hydro lipid skin barrier
- Evens skin tone and complexion
- Reduces wrinkles and enhances elasticity
- Provides a sophisticated resistance against extrinsic aging factors
- Protects the skin from ROS (reactive oxygen species) originated from pollution and UV radiation damages

## Empowering formulations with Phytoene

Phytoene is the primary precursor in the biosynthesis of all carotenoids. In its pure form, Phytoene is an active ingredient providing distinctive and excellent properties - preventing signs of aging, light absorption, reducing vulnerability to oxidation and preventing UV irradiation and pollution damages.

Until recently, it was rare to find Phytoene in its pure form. Due to its distinctive characteristic benefits, renowned supplier Lycored, utilized a process to isolate concentrated Phytoene from a Non-GMO fungi produced through a controlled fermentation pathway.

## The Jojoba Oil difference

To make the advantages of Phytoene accessible to consumers, JD collaborated with Lycored creating JD Phyto-Or 1%™.

JD Phyto-Or 1%™ contains JD Jojoba Oil as a best-in-class medium, providing additional benefits of hydration and sensory qualities, creating a sustainable and biodegradable ingredient that captures a wide range of benefits for the skin and hair.

## Claims

- Maintains the natural hydro lipid skin barrier
- Lightens skin tone
- Reduces skin redness for instant illumination
- Improves skin elasticity and enhances firmness
- Improves the skin smoothness
- Improves wrinkle conditions
- Attributes to skin wellness

## Technical information

<b>INCI Name:</b>	Simmondsia Chinensis (Jojoba) Seed Oil; Blakeslea Trispora Mycelium Extract/C30-45 Olefin
<b>CAS No:</b>	61789-91-1/90045-98-0; 13920-14-4 /222400-22-8
<b>Recommended Dose:</b>	1.5-2%
<b>Solubility:</b>	Oil soluble
<b>Appearance:</b>	Clear, low viscosity, yellow liquid
<b>Shelf Life:</b>	24 months
<b>Packaging:</b>	0.5 / 1 L bottle
<b>Applications:</b>	Skin brightening, Age well skincare, After sun care, Hair care, Color cosmetics

## Key benefits



Natural & biodegradable



Non-GMO



NI1- according to ISO 16128



Ophthalmological tolerance



Non-comedogenic



Safe to use for all skin types



Zero waste

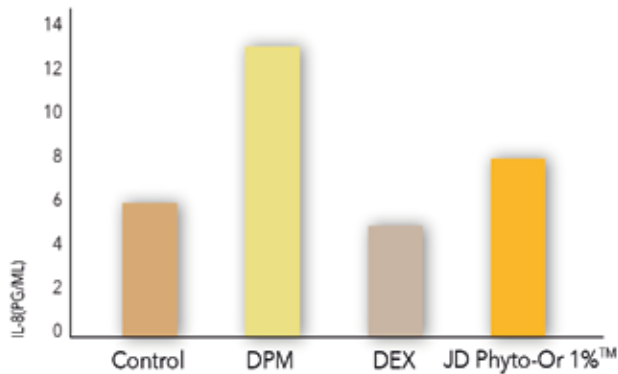


Dermatologically tested

## In vitro test

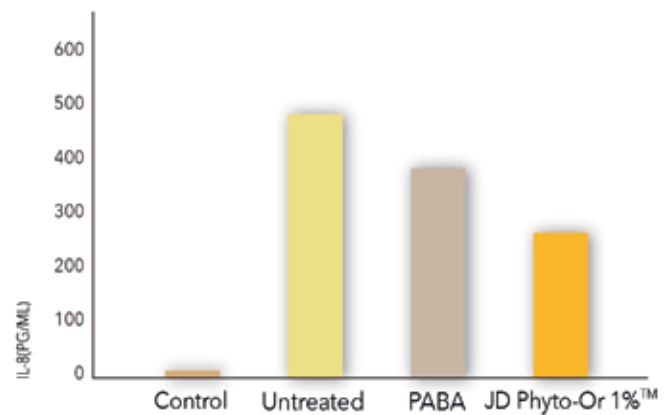
JD Phyto-Or 1%™ provides a natural shield to the skin, offering the ability to attenuate UVB and Pollution (DPM) induced inflammation process

### Anti-inflammatory activity related to Pollution



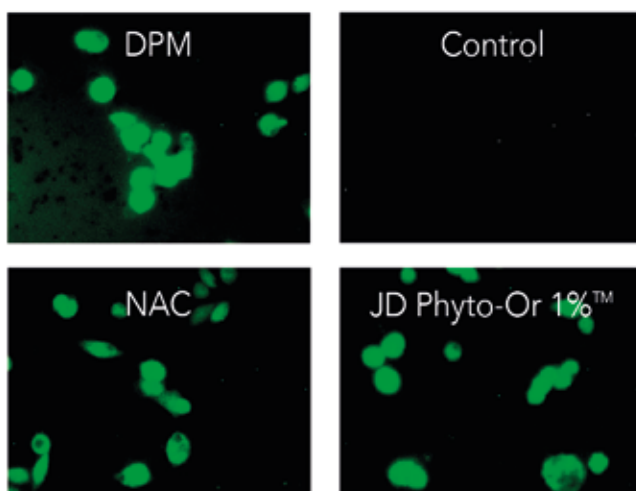
- **DPM** - Diesel particulate matter, **DEX** - Dexamethasone, anti-inflammatory drug, **JD Phyto-Or 1%™** - concentration 56 ppm.
- The study was carried out on HaCaT cells, concentration of Interleukin-8 was measured as an inflammation response.

### Activity related to UVB-induced inflammation

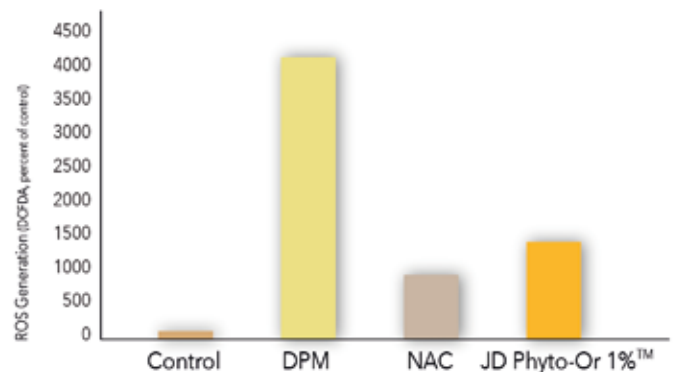


- **PABA** - 4-Aminobenzoic acid used in sunscreens as ultraviolet B (UVB) filters, **JD Phyto-Or 1%™** - concentration 56 ppm.
- The study was carried out on HaCaT cells, concentration of Interleukin-8 was measured as an inflammation response to UVB irr.

JD Phyto-Or 1%™ improves the human skin wellness by scavenging free radicals induced by pollution



### Pollution induced ROS formation



- **DPM** - Diesel particulate matter, **NAC** - N-Acetyl Cysteine, **JD Phyto-Or 1%™** - concentration 56 ppm.
- The study was carried out on HaCaT cells, and concentration of DCFDA was measured as an indicator of ROS presence.



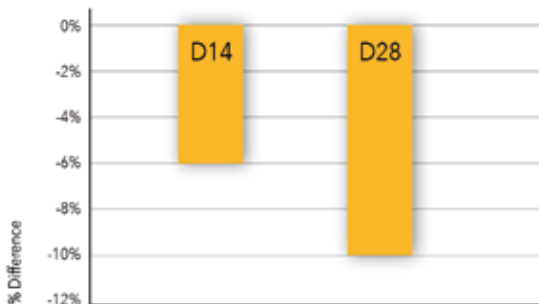
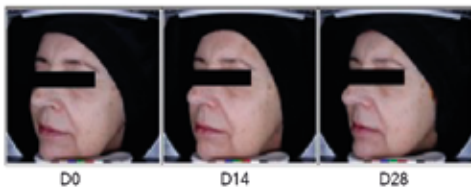
## Clinical studies

JD Phyto-Or 1%™ protects and maintains the natural hydro lipid skin barrier, evens skin tone and complexion, reduces wrinkles and enhances elasticity

JD Phyto-Or based formulation in 1.5% concentration. Clinical study with 33 female volunteers (av. age 50), 28 days of twice a day application.

### Skin tone brightening -10%

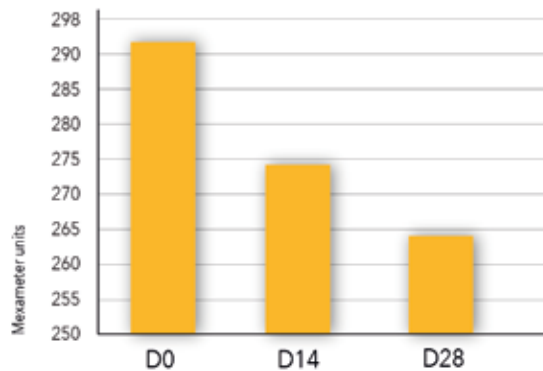
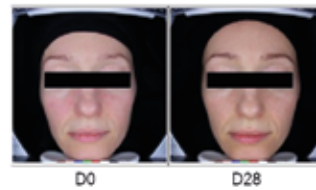
JD Phyto-Or 1%™ inhibits the formation of melanin pathways, decrease cytokines, and decreases ROS—resulting in brighter, homogeneous skin tone.



- Skin tone was measured using a Mexameter® MX 18 to evaluate Melanic index.

### Skin redness -9%

JD Phyto-Or 1%™ is incorporated into the hydro lipid layer, protects the skin against pollutants and solar UVB radiation and, thus, illuminates the skin and decreases the appearance of redness.



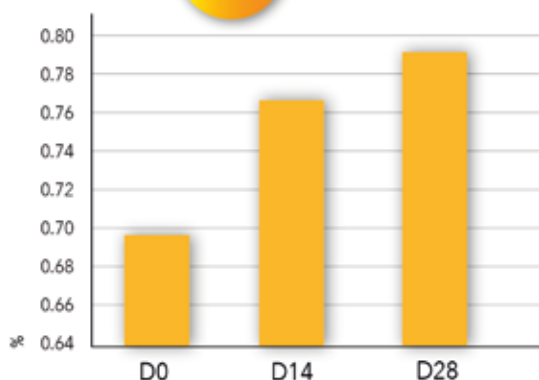
- Skin tone was measured using a Mexameter® MX 18 to evaluate Erythematic index.

### Skin firmness and elasticity

Since Carotenoids are shown to stimulate fibroblasts to synthesize collagen and elastin, the result is an increase in skin density, elasticity, smoothing and firmness.<sup>1</sup>

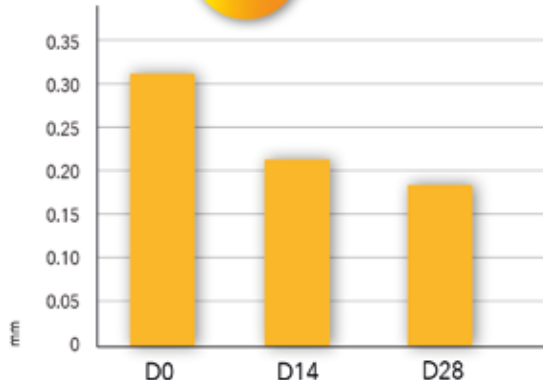
JD Phyto-Or 1%™ demonstrates strong effect for protection of the skin against further loss of firmness and premature wrinkles.

### Elasticity +14%



- Skin firmness and elasticity were measured using a Cutometer® MPA 580.

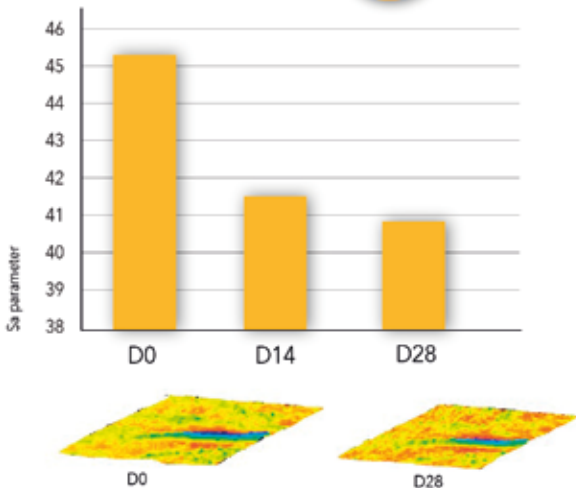
### Firmness +40%



<sup>1</sup>[(TP Anunciato and PA Filho de Rocha, Carotenoids and polyphenols in nutricosmetics, nutraceuticals and cosmeceuticals, J Cosm Derm, 11, 51-54 (2012)].

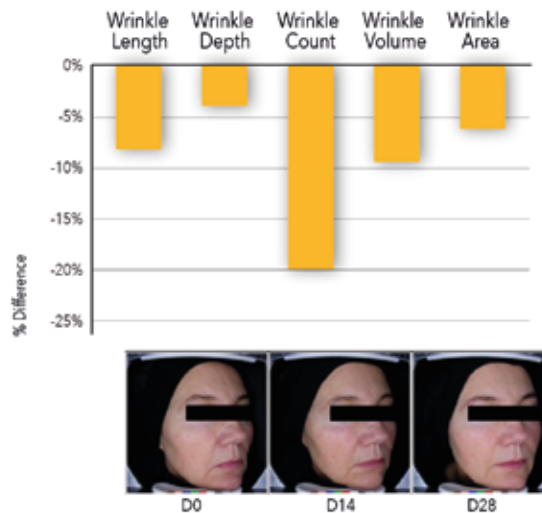
## Skin Smoothness

+10%



- Skin surface analysis (smoothness) and wrinkles analysis were measured using Primos 3D Lite.

## Wrinkle condition

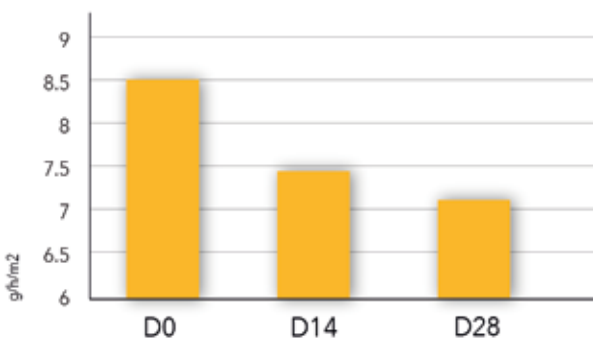


## Skin barrier function

JD Phyto-Or 1%™ mechanism showed the ability to reduce damage from pollutants, enhance the repair of the skin barrier, replenish the antioxidant reserve and reduce skin sensitivity.

### TEWL

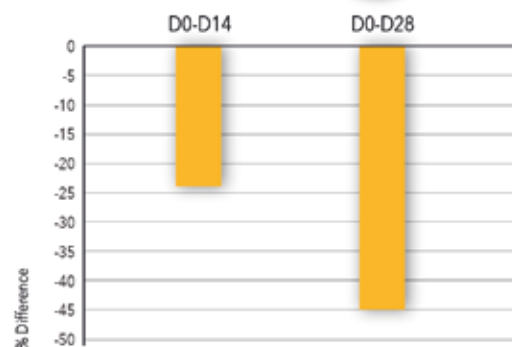
17%



- Skin hydration was measured using a Tewameter® to evaluate TEWL

### Soothing effect

45%

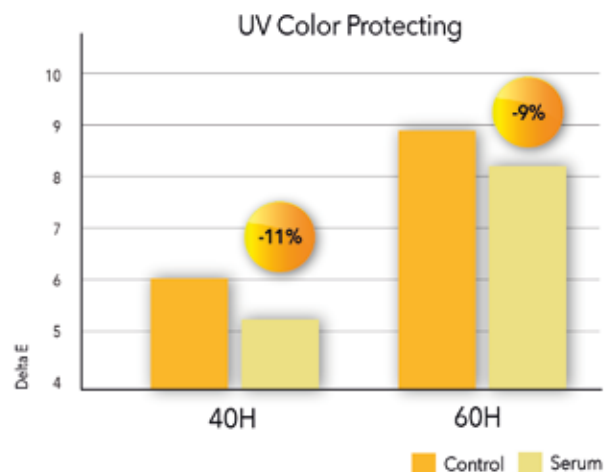


- The soothing effect was evaluated after the irritation with 10% Lactic Acid solution

## Hair appearance improvement - efficacy studies

Studies show that the active mechanism of JD Phyto-Or 1%™ absorbs UV light and quenches free radicals. JD Phyto-Or 1%™ protects the hair from damaging factors and reduces sun-generated hair color fading, thereby improving the hair's appearance.

- JD Phyto-Or based formulation in 1.5% concentration. 20H of accelerated UV exposure are equivalent to 80-100H of natural sunlight.
- Color change was measured using Hunter Lab UltraScan VIS spectrophotometer.



**Please note:** Analysis are made by an Independent ISO/IEC 17025:2005 certified laboratory, from samples taken from each batch being processed. Production in accordance with ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 and complies with the GMP for Medical Products (2008).

**Shelf Life:** 24 months from the production date when kept in original unopened container, away from direct sunlight and excessive heat or cold.

The information and data included herein, are provided to the current state of knowledge of Jojoba Desert (A.C.S) Ltd. (hereinafter "JD"), and are intended to provide general information about JD's products. It is the user's responsibility to determine the suitability and completeness of such information for the user's particular use (including performing any necessary confirmatory tests). Due to possible changes in Jojoba Desert's products and applicable national and international regulations and laws, the condition or composition of the said products may change. Users must obtain and follow latest versions of relevant safety data sheets before using or handling any of the JD products.

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