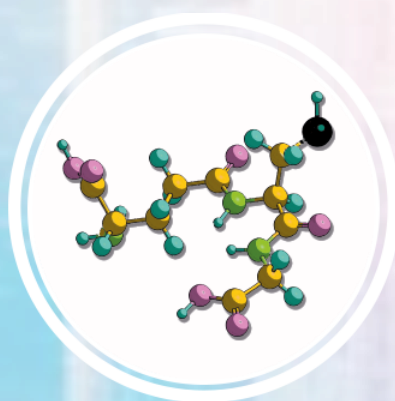


From Nature the Anti-Pollution Skin Defense System to  
Restore a Healthy Youthful Look

NIO-DERM SERIES

# NIO-GSH

NIOSOME TECHNOLOGY



Dermal Density +32

Skin Texture Improved +32%

## AN EFFECTIVE COMPLEX FOR POLLUTION DEFENSE

Glutathione plays a prominent role in maintaining redox balance. The decrease glutathione levels upon exposure to pollutants and UV light is the first step of chronic photo-oxidative stress.

Skin supplementation of glutathione is important for prevention of premature cutaneous aging. Unfortunately this precious tripeptide is poorly absorbed from skin.

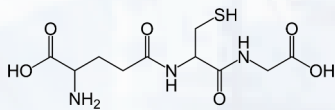
NIO-GSH is an effective anti-pollution system containing high level of reduced Glutathione into elastic niosomal vesicle in order to increase the skin bioavailability.

**NIO-GSH IS A SUPERIOR NATURAL ACTIVE SYSTEM DESIGNED TO SHIELD CUTANEOUS CELLS FROM PREMATURE AGING DUE TO DAMAGES INDUCED BY PHOTO-ACTIVATED POLLUTION**



## NIO-GSH NATURAL INGREDIENTS

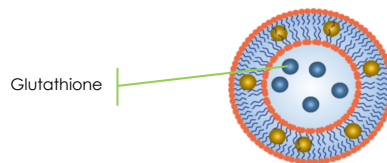
### GLUTATHIONE



- ◆ MAIN HUMAN-SYNTHESIZED ANTIOXIDANT
- ◆ IMMUNE ENHANCER
- ◆ POWERFUL DETOXIFIER

### NIO-GSH

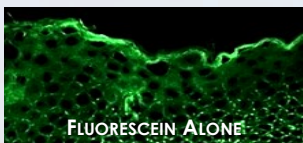
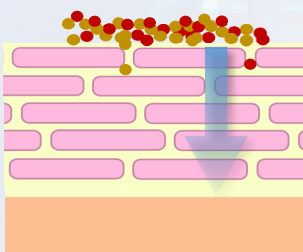
NATURAL INGREDIENTS ARE ENCAPSULATED INSIDE NIOSOME VESICLES



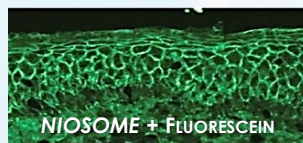
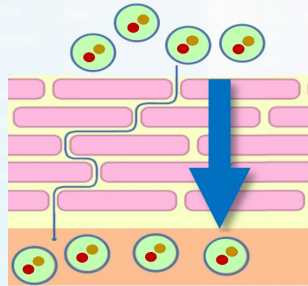
NIO-GSH is the effective anti-pollution ingredient based on the encapsulation of high level of reduced GSH into niosomal ultra-deformable vesicle in order to deliver the promised effects

## ULTRA-DEFORMABLE NIOSOME The Most Advanced Skin Delivery System

### CLASSIC ACTIVE INGREDIENTS

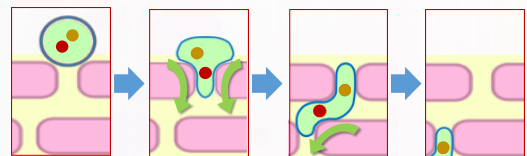


FLUORESCIN ALONE



NIOSOME + FLUORESCIN

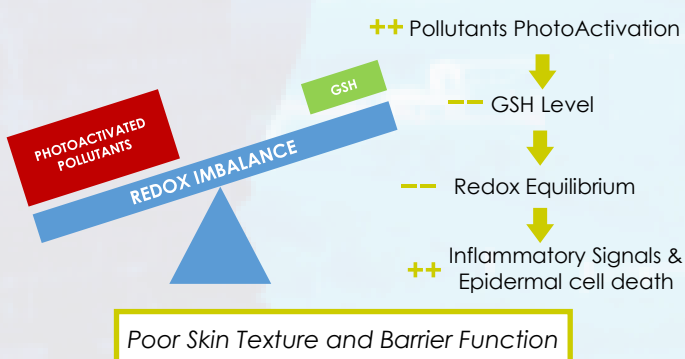
Ultra-Deformable Niosome are elastic vesicles able to squeeze through Stratum Corneum reaching living cells inside epidermis increasing the bioavailability of active ingredients



**NIOSOME DELIVER ACTIVE INGREDIENTS WHERE MUST BE REALLY EFFECTIVE**  
DRIVING THROUGH THE STRATUM CORNEUM

## NIO-GSH MODE OF ACTION

### STRESS FACTORS



### With NIO-GSH

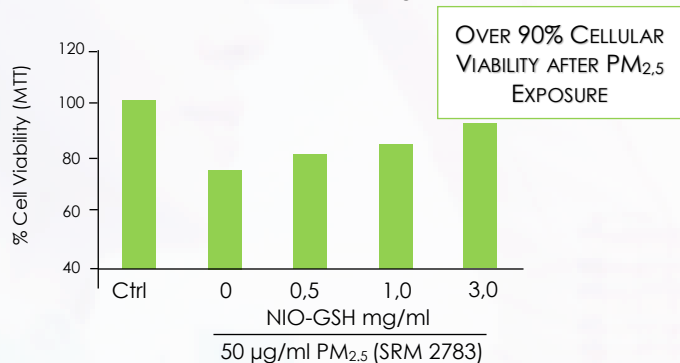




## IN VITRO EFFICACY

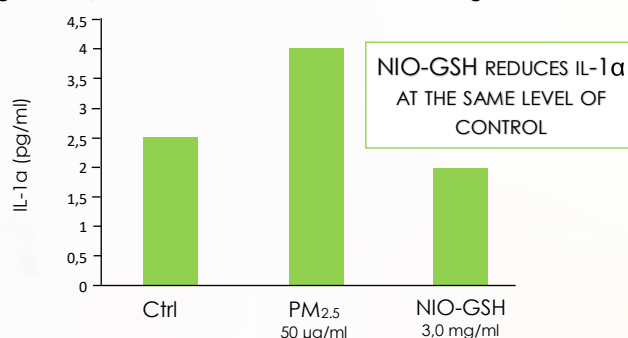
### NIO-GSH ON POLLUTION PROTECTION

Measurement of cell viability exposed on 50 µg/ml PM<sub>2.5</sub> for 24 hours and treated with 0-3 mg/ml NIO-GSH



### NIO-GSH ON INFLAMMATION CONTROL

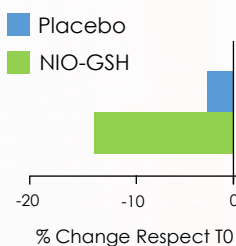
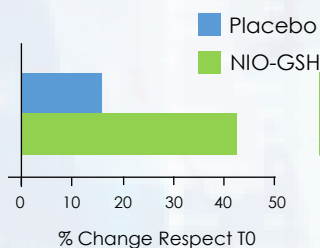
Measurement of IL-1α release with ELISA kit assay after exposure on 50 µg/ml PM<sub>2.5</sub> alone and in combination with 3 mg/ml NIO-GSH



## IN VIVO EFFICACY

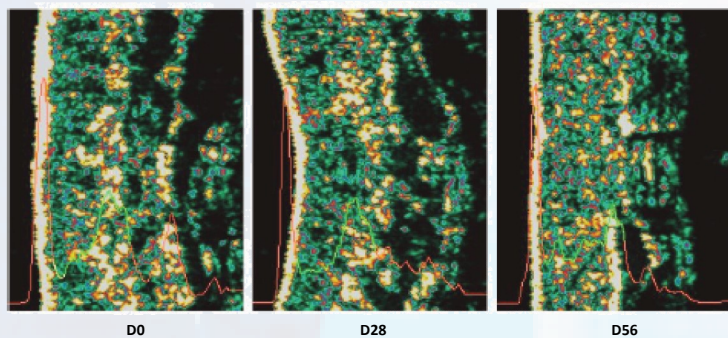
### NIO-GSH ON SKIN BARRIER

Measurement of Skin Hydration and TEWL using Dermalab Multiparameter combo applying placebo or 3% NIO-GSH for 28 days

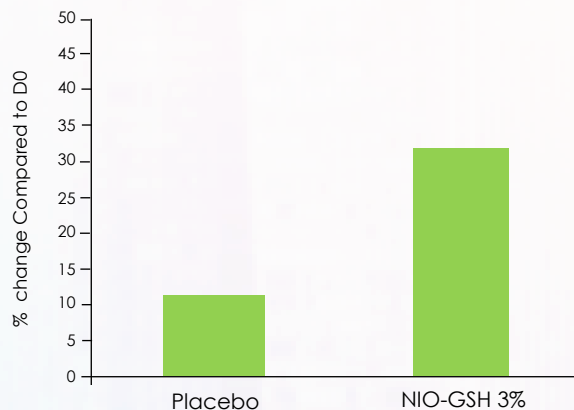


### NIO-GSH ON DERMAL DENSITY

Measurement of Dermal Density using Dermalab applying placebo or 3% NIO-GSH twice daily for 56 days

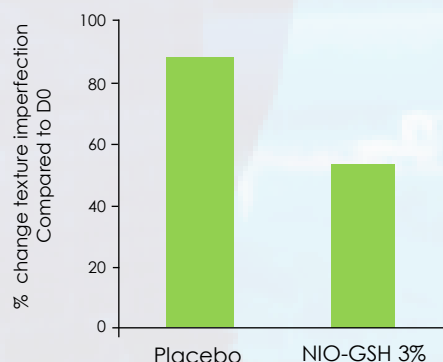


DERMAL DENSITY +32% IN 8 WEEKS



### NIO-GSH ON SKIN TEXTURE

Measurement of Skin Texture applying placebo or 3% NIO-GSH twice daily for 28 days



TEXTURE IMPROVED +32% IN 4 WEEKS

# NIO-GSH

## NIOSOME TECHNOLOGY

### FOR POLLUTION-INDUCED AGING

#### CLAIMS

- ANTI-POLLUTION
- ANTI-OXIDANT
- WHITENING
- REGENERATING

#### COSMETIC APPLICATION

- PROTECTING SKIN CARE
- ENERGIZING PREPARATIONS
- ANTI-STRESS PREPARATIONS
- DAY AND NIGHT CREAM

#### INCI NAME

Glutathione, Polyglyceryl-10 Oleate, Polyglyceryl-6 Laurate, Sorbitan Palmitate, Magnolol/Honokiol, Aqua/Water

#### SAFETY & TOXICITY

Reference COMMISSION REGULATION (EC) No 987/2008 of 8 October 2008 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH):

- non-irritating
- non-toxic

#### FORMULATION SUGGESTIONS

<b>Use Levels:</b>	1 - 3%
<b>pH range:</b>	3,5 - 8,5
<b>Incorporation:</b>	Dilute in water before blending. Do not heat above 50°C
<b>Origin:</b>	Biotechnological
<b>Application:</b>	Lotions, O/W and W/O emulsions, Gels
<b>Preservative:</b>	None
<b>Solubility:</b>	Dispersible in water
<b>Compliant regulation:</b>	US - EU - China - Japan
<b>Certification:</b>	COSMOS Pending



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