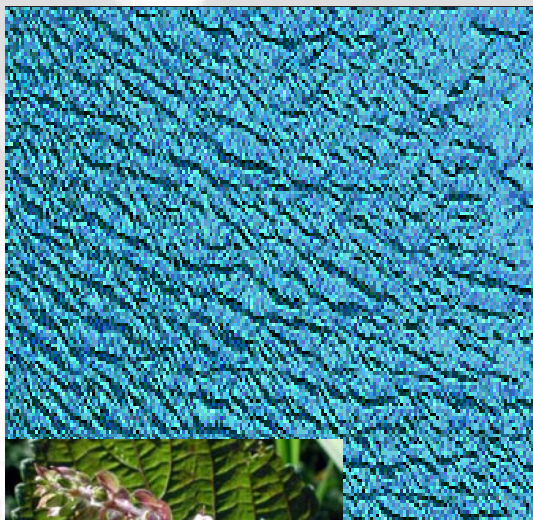


LAMINACTINE™

Unique anti-ageing microdispersion



A New Delivery System

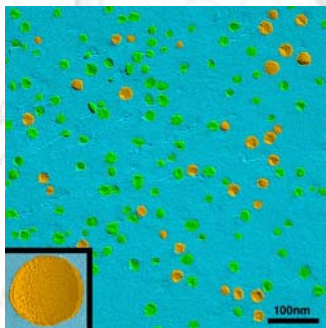
...for Anti-Ageing

A Transparent Microdispersion

Ultra-small vesicles & Microemulsion with lyso-lecithin

with Perilla Oil

Calming, repairing



to Rejuvenate your Skin

Collagen & Laminin booster, smoothing effect, wrinkles reducer

Lucas Meyer



LAMINACTINE™

LAMINACTINE™ is a patented transparent microdispersion comprising lyso-phospholipids and Perilla oil which stimulate collagen and laminin synthesis for skin regeneration

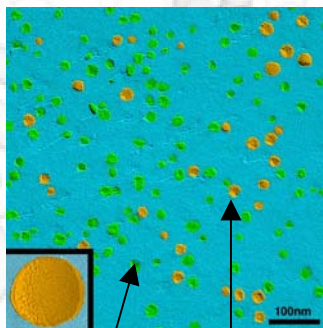
A New Delivery System

- **Vesicles & Microemulsion**
- **Ultra-small particles: 100 nm**
- **Exclusive lyso-phospholipids**
- **Transparency**
- **Natural ingredients**

...with Unique Benefits

- **Collagen gene expression: + 117-196%**
- **Smoothing effect: +36%**
- **Hydrating effect: +22%**
- **Perfect tolerance**

MICRODISPERSION DELIVERY SYSTEM



Solubilised oil droplets

Bilayer structure

Thanks to its phospholipids knowledge, Phares Pharmaceutical Research has developed a unique and natural system to increase the efficacy of active ingredients on the skin. It comprises **highly penetrative lyso-phospholipids** molecularly dispersed in hydrophilic medium.

They form with **Perilla seed oil** a mixed system of phospholipid vesicles and micro oil-globules characterized by very high stability and **ultra-small particles** below 100 nm.

The system is so finely dispersed that it is transparent !

Due to the unique combination of lyso-phospholipids, Perilla oil and ultra-small particles, LAMINACTINE™ has high affinity for skin and cell membranes. It is the most efficient method for providing natural **skin regenerating effect** !

™ Laminactine is a commercial name of Phares Pharmaceutical Research

LYSO-PHOSPHOLIPIDS

Lyso-phospholipids are derived from natural lecithin by the same enzymatic process in humans for digestion of triglycerides. One of the two fatty acids of phospholipids is split off giving more hydrophilic properties to the molecule. This naturally engineered molecule exhibits useful properties such as improving absorption, emulsifying/dispersing properties and most of all anti-irritant and calming effects.

Most recent studies demonstrate very strong effect in increasing collagen synthesis.

PERILLA OIL

Perilla is a Labiateae family member. It is cultivated in Asia and used as a traditional Chinese remedy.

The oil is directly extracted from the seeds by cold-pressing. It is very rich in polyunsaturated essential fatty acids and particularly in **alpha-linolenic acid**.

This vitamin-like molecule is an efficient cellular shield not only to **reduce wrinkles and loss of elasticity** but also to **reinforce cutaneous tissues**.

Essential fatty acids have a fundamental role in cellular membrane protection against destructive free radicals which cause ageing.

They constitute the essential elements required to **preserve skin youth**.



SPECIFICATIONS

<i>INCI name</i>	GLYCERIN (and) AQUA (and) LYSOLECITHIN (and) PERILLA FRUTESCENS (PERILLA) SEED OIL
<i>appearance</i>	transparent yellowish gel
<i>formulation</i>	cold process: use pure or pre-dispersed in water
<i>dosage</i>	2-5 %
<i>optimum pH</i>	5-7

TOLERANCE AND SAFETY

- **Cutaneous tolerance** (In vivo - Open study): LAMINACTINE™ applied pure and locally under occlusive patch for 48h to the skin of 10 adult volunteers is *non irritant*
- **Ocular tolerance** (In vitro – Diffusion of the pure product on agarose gel according to the protocol described in the Journal Officiel de la République Française du 30 décembre 1999): it can be classified *almost non irritant* to *slightly irritant*
- **Oral toxicity** (In vivo – on rate according to OECD guideline N° 423 of the 22/03/1996 and to the B.1 ter method of E.C directive N°96/54 of the 30/07/1996): *LD50 >2000 mg/kg* (pure product)
- **Mutagenicity** (In vitro – AMES test on bacteria *Salmonella typhimurium his* according to OECD guideline N° 471): *non mutagenic*
- **Sensitization** (In vivo – Repeated Insult Patch Test on 50 volunteers): *non sensitising*

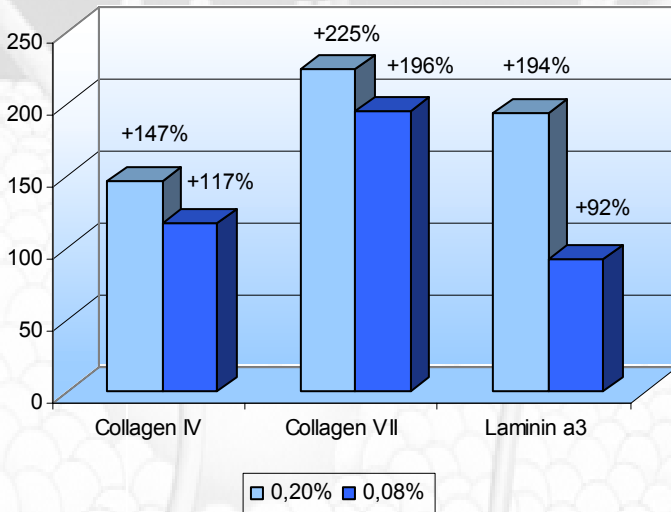
EFFECT ON COLLAGEN SYNTHESIS

Collagen expression: + 117-196%

Laminin expression: + 194%

In skin regeneration, lyso-phospholipids are shown to stimulate production of Laminin 5 (a glycoprotein) and thereby increase binding and exposition of certain types of Collagen in the Basement Membrane (BM) layer located at the dermo-epidermal junction.

*Gene expression of dermo-epidermal junction proteins **



The BM is involved in the repair and **regeneration of skin** damaged by UV exposure or aging, and provides anchoring fibrils containing collagen that keep **skin firm**.

According to in vitro studies*, lyso-phospholipids act directly on Laminin $\alpha 3$, Collagen IV and Collagen VII. Thus, it reinforces the dermo-epidermal junction and has a **major anti-ageing role**.

**Tested on normal epidermal keratinocytes cultures by quantitative PCR*

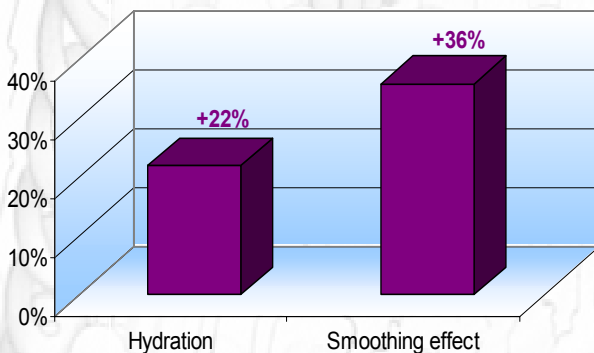
Results expressed as % of the untreated control

IN VIVO ANTI-AGEING EFFECTS

Smoothing effect: +36%

Hydration: +22%

*Hydration and smoothing effect of Laminactine versus Placebo **



Tested formulation: Laminactine™ (3%), Carbopol® 981 (0.8%), Water (Up to 100%). Formula neutralized by NaOH to pH 5.5

According to in vivo studies*, LAMINACTINE™ has **moisturizing effect** (+22%) compared to the Placebo. The cutaneous hydration rate is increased in all layers of the epidermis, particularly after 3 hours in the superior layers of the epidermis.

LAMINACTINE™ has also a **smoothing effect on microrelief** (+36%): by enhancing Collagen synthesis, median and deep wrinkles are reduced providing a very significant smoothing effect after 28 days.

** Tested on 10 human subjects*

Hydration: standardized application on forearms

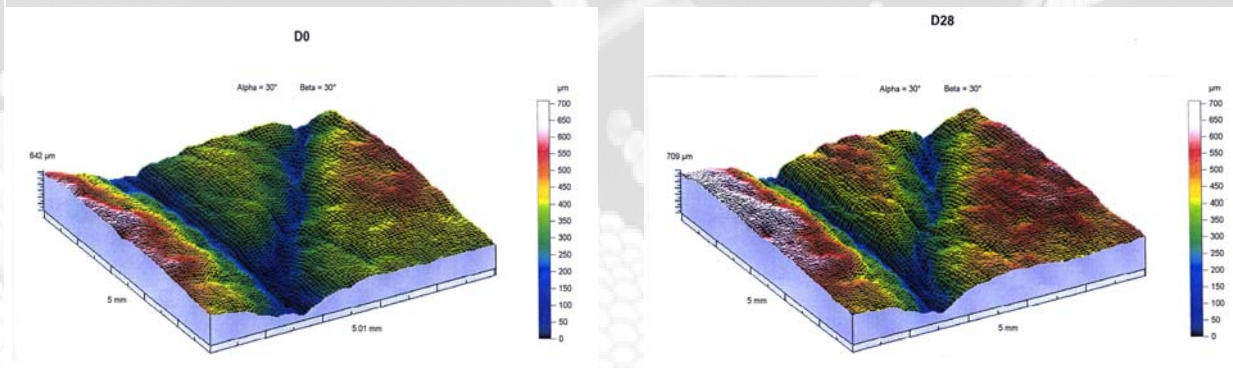
Smoothing and restructuring effects: comparison of skin replica on crow's foot between D28 and D0

Results expressed as % of variation versus Placebo

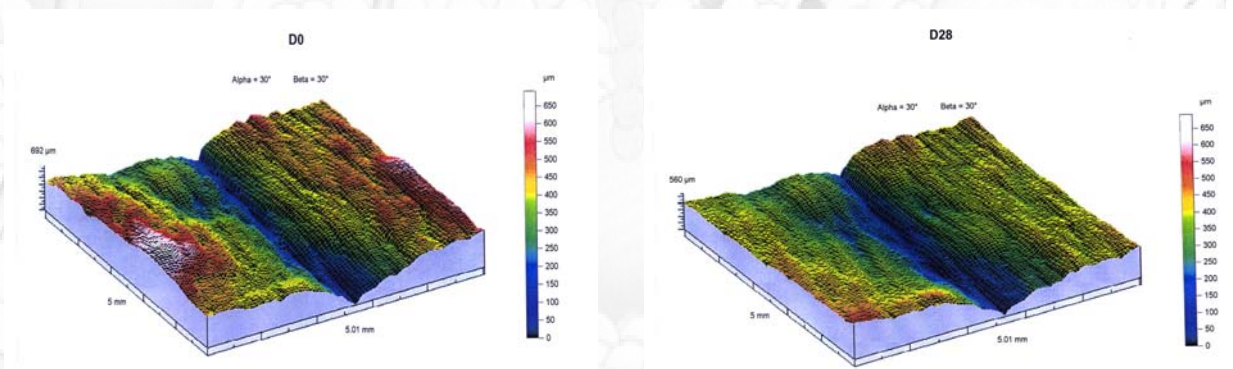
Smoothing effect: +36%

Hydration: +22%

Comparative profilometry analysis for the placebo



Comparative profilometry analysis for Laminactine



Analysis by laser profilometry shows the comparison between LAMINACTINE™ and the placebo after 28 days of twice-daily application.

Under the same conditions, it has been observed with LAMINACTINE™:

- a **smoothing effect (+36%)**: demonstrated by a decrease in microrelief surface variation and perception of depth and number of wrinkles and microrelief furrows
- an **attenuation of the wrinkles**: expressed by a decrease of the volume (-12%) and of the depth of the wrinkles (-9%)

So, LAMINACTINE™ has a specific **anti-ageing activity** on the skin microrelief and improves the aspect of the skin surface.

MINERAL WATER ANTI-AGEING CREAM
3.034.01

Ingredient	INCI name	%
A Mineral Water	Aqua	Up to 100%
Elestab CPN	Chlorphenesin	0.10
B Alphaflow 30	Hydrogenated Polyisobutene	5
Phytosqualane	Squalane	2.50
Crodamol W dist.	Stearyl Heptanoate	2.50
Cetiol SB45	Butyrospermum Parkii	3
Vit E Acetate	Tocopheryl Acetate	0.1
Phenonip	Phenoxyethanol (and) Paraben Esters	0.5
DC 345	Cyclopentasiloxane	3
HELIOGEL® *	Sodium Acrylates Copolymer (and) Hydrogenated Polyisobutene (and) Phospholipids (and) Polyglyceryl-10 Stearate (and) Helianthus Annuus (Sunflower) Seed Oil	2.5
C MAMAKU VITAL ESSENCE® *	Aqua (and) Cyatheaceae Extract	2
D LAMINACTINE™ *	See before	2
E FDC Red 4	CI 14700	Up to colour
FDC Yellow 5	CI 19140	Up to colour
F C-3847	Fragrance	0.3

pH : 6.0-6.5 - Viscosity : 15000-20000 mPa.s

MOISTURIZING GEL-CREAM
3.044.01

Ingredient	INCI name	%
A Demineralised Water	Aqua	Up to 100%
EDTA, 4 Na	EDTA	0.10
TRIMETHYLGLYCINE*	Betaine	3
Glycerin	Glycerin	2
Elestab CPN	Chlorphenesin	0.10
B Grape Seed Oil	Grape (Vitis Vinifera) Seed Oil	5
Phytosqualane	Squalane	5
Cetiol SB345	Butyrospermum Parkii	2
Vit E Acetate	Tocopheryl Acetate	0.1
Phenonip	Phenoxyethanol (and) Paraben Esters	0.5
HELIOGEL® *	Sodium Acrylates Copolymer (and) Hydrogenated Polyisobutene (and) Phospholipids (and) Polyglyceryl-10 Stearate (and) Helianthus Annuus (Sunflower) Seed Oil	1.5
C ISOCELL® LIFE *	Aqua (and) Lecithin (and) Glycerin (and) Butylene Glycol (and) Sodium Styrene/Acrylates Copolymer	2
D LAMINACTINE™ *	See before	2
E FDC Blue 1	CI 42090	Up to colour
DC Red 33	CI 17200	Up to colour
F C-3810	Fragrance	0.2

pH : 6.0-6.5 - Viscosity : 5000-6000 mPa.s

ANTI-AGEING TONER
3.059.07

Ingredient	INCI name	%
A Demineralised Water	Aqua	Up to 100%
B Butylene Glycol	Butylene Glycol	3
Phenonip	Phenoxyethanol (and) Paraben Esters	0.50
C TRIMETHYLGLYCINE*	Betaine	2
D LAMINACTINE™ *	See before	2
E Rosewater	Rosa Damascena Water	10
F FDC Red 4	CI 14700	Up to colour

pH : 5.5-6.0 - Viscosity : Not Applicable

* : distributed by Lucas Meyer Cosmetics

ANTI-AGEING NIGHT CREAM
3.062.02

Ingredient	INCI name	%
A Demineralised Water	Aqua	Up to 100%
EDTA, 4 Na	EDTA	0.20
Satiaxane CX91	Xanthan Gum	0.30
Glycerin	Glycerin	1.50
BIOPHILIC® H *	Hydrogenated Lecithin (and) C12-16 Alcohols (and) Palmitic Acid	4
B Isopropyl Palmitate	Isopropyl Palmitate	6
Cetiol A	Hexyl Laurate	4
Crodamol DA	Diisopropyl Adipate	3
DC 2501	Behenoxy Dimethicone	2
Euxyl K400	Phenoxyethanol (and) Methylbromoglutaronitrile	0.2
Lanette 16	Cetyl Alcohol	1
C PRO-LIPO® H*	Aqua (and) Glycerin (and) Alcohol (and) Phospholipids	5
Tocopherol	Tocopherol	0.1
D Demineralised Water	Aqua	10
E LAMINACTINE™ *	See before	2
Demineralised Water	Aqua	2
F C-3810	Fragrance	0.3

pH : 5.8-6.3 - Viscosity : 15000-20000 mPa.s

These suggestions and information on application technology have been compiled to the best of our knowledge and belief on the basis of data and publications currently available. We cannot however accept any liability.

We explicitly draw your attention to the fact that every manufacturer is itself responsible for compliance with all statutory regulations, including those in the field of patent legislation.

Lucas Meyer Cosmetics® - June 2003



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