ACTIVE INGREDIENTS

ADIPOFILL’IN™

BIO-CONTROLLED LIPOFILLING

L-ornithine Ionosome™
- Lipohormesis concept
- Decreases the appearance of nasogenian fold for a plumper and youthful look
**ADIPOFILL’IN™, A PATENTED L-ORNITHINE ENCAPSULATED IN AN IONOSOME™ DELIVERY SYSTEM, REVERSES AGE-RELATED LIPOATROPHY TO REDUCE THE APPEARANCE OF STRUCTURAL AGING AND PLUMP UP THE SKIN.**

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**FOCUS ON STRUCTURAL AGING**

Global face aging involves 3 types of aging processes:

- Cellular aging with a progressive dysfunction of cell metabolism.
- Cutaneous aging characterized by a loss of elasticity, appearance of wrinkles, dark spots, rosacea, etc.
- Structural aging due to lipoatrophy (loss of adipose tissue).

Subcutaneous adipose tissue is responsible for the plump aspect of the face. With age, this fat pad progressively melts due to a disturbance of adipocyte metabolism, resulting in the appearance of deep nasolabial folds, saggy jowls and hollowness under the eyes.

Plastic surgery is a well-known method of reduction for structural aging involving the use of lipofilling technology, whereby fat is autografted to restore the initial facial volume.

**Adipofill’in™**, a L-ornithine amino acid encapsulated in an Ionosome™, has been designed to mimic lipofilling results. Obtained by biotechnology from vegetable starch, L-ornithine can better target adipocytes driven by our proprietary delivery system for maximal and faster results.

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**ACTIVATION OF HIF-1α AND THE LIPOHORMESIS CONCEPT**

Lipohormesis is a beneficial response of adipose tissue to microstress exposure.

It has been recently described that various stresses in the adipose tissue are able to stimulate its expansion through the activation of Hypoxia Inducible Factor (HIF-1α), a transcription factor1,2.

An *in vitro* adipocyte genic expression study shows that Adipofill’in™ activates HIF-1α. Adipofill’in™ therefore reproduces the conditions of a lipohormesis phenomenon, leading to an adipose tissue growth.

Adipofill’in™ has a global action on:

- The activation of adipogenesis (transformation of pre-adipocytes into adipocytes).
- The activation of lipogenesis (fatty acids synthesis).
- The inhibition of lipolysis (breakdown of lipids into free fatty acids).

**Adipofill’in™** is able to increase fatty tissue volume for a lipofilling-like effect through a non-invasive method.

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References:

ENHANCING LIPID STORAGE

Test protocol
- Human adipocyte culture.
- Free fatty acids release quantification.
- Red oil staining and measurement of average diameter of adipocytes.

By activating HIF-1α, Adipofill’in™ inhibits lipolysis and the release of free fatty acids from adipocytes with a dose-dependent effect. This triglyceride storage increase (correlated with the red intensity) inflates adipocytes, leading to a bigger cell volume and diameter.

Adipofill’in™ induces adipocyte fat refilling.

REDUCING NASOGENIAN FOLD

Test protocol
- 20 volunteers (women 40 to 60 years old) with nasogenian folds.
- A cream containing 2% Adipofill’in™ or placebo was applied on split-face 2x/day for 2 months.
- Measurement of depth and roughness by profilometry.
- Evaluation of skin smoothness by a dermatologist.
- Self-assessment by the volunteers.

Through the innovative pathway of lipohormesis, Adipofill’in™ induces a face lipostructure for a facial rejuvenation.
PRODUCT DESCRIPTION

INCI NAME
Water (and) Propanediol (and)
Ornithine (and) Phospholipids
(and) Glycolipids

APPEARANCE
Off-white to light yellow
aqueous solution

FORMULATION
Add into the formula below
40°C

OPTIMUM pH
4.5-6.0

DOSSAGE
0.5-2%

APPLICATIONS
- Anti-aging care
- Anti-wrinkle skin care
- Breast and buttock volume enhancer
- Anti-aging treatment for hands
- Eye care
- Correcting care
- Men’s care

LA SPIRIT CREAM 12.199.01 C108

LA SPIRIT Cream 12.199.01 C108

FEATURES AND BENEFITS

<table>
<thead>
<tr>
<th>FEATURES</th>
<th>BENEFITS</th>
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<tr>
<td>Patented L-ornithine in an Ionosome™</td>
<td>Precise, targeted and controlled action</td>
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<tr>
<td>New mechanism of action for a complete anti-aging improvement</td>
<td>Activation of HIF-1α and lipohormesis</td>
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<td>Strong clinical results</td>
<td>Provides outstanding and fast results on nasogenian folds</td>
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LA SPIRIT Cream 12.199.01 C108

<table>
<thead>
<tr>
<th>INGREDIENT</th>
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<tr>
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<td>Dermofeel™ PA-12*</td>
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<td>Biophlic™ H</td>
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<td>D</td>
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pH: 5.0 - 5.5 - Viscosity (Rheo ELV 8, spindle 4, 6 rpm, 3 mn): > 100 000 mPa.s

* Distributed in France by Lucas Meyer Cosmetics.

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