

GATULINE® IN-TENSE



INSTANT
REMODELING

A perfect facial contour, firm body and reduced wrinkles are all signs of youthfulness that people want to maintain or restore.

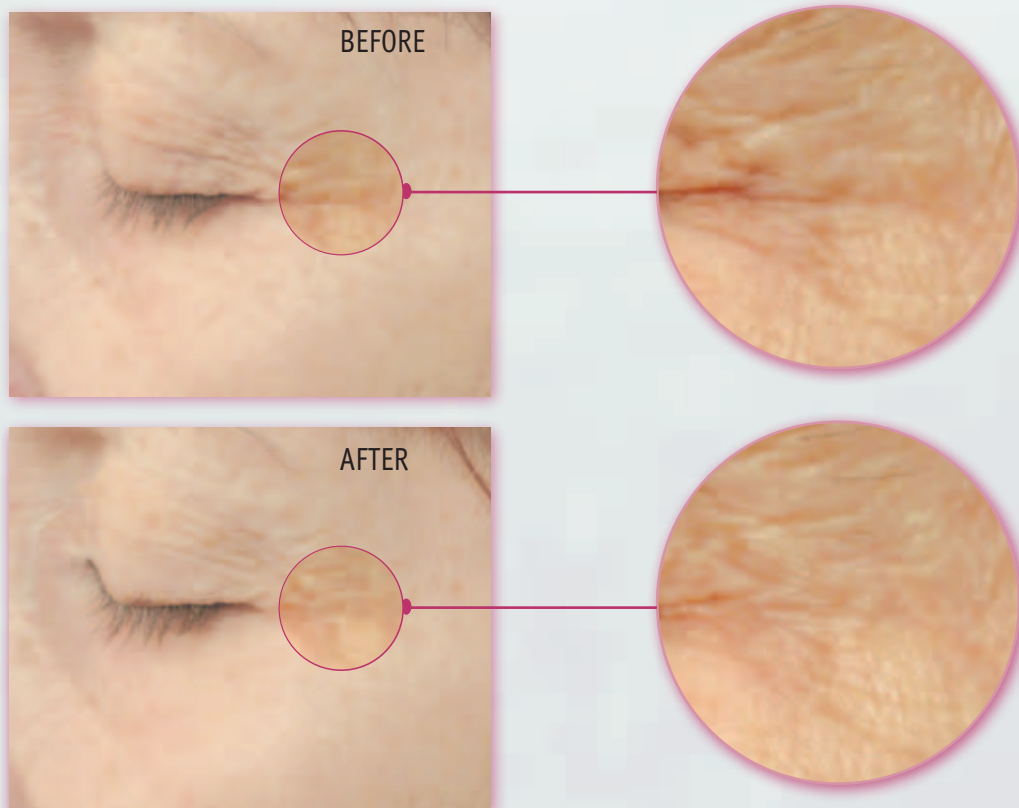
With age, the skin loses its elasticity and firmness. Cell turnover slows down, collagen production decreases. But above all, **the supporting tissue is disorganized**, leading to slackening skin and the appearance of increasingly deep wrinkles.

Today Gattefossé targets **cellular dynamism** to **reinforce the dermis architecture** and fight the signs of age.

GATULINE® IN-TENSE

Instant remodeling

A new, concentrated firming and wrinkle smoothing active ingredient, GATULINE® IN-TENSE acts on the **skin natural lifting** properties.



By stimulating the **fibroblast biomechanical functions**, GATULINE® IN-TENSE will **reorganize the dermis architecture**. The skin density and firmness are then rapidly enhanced, leading to a reduction in skin roughness.

Visibly active, the action of GATULINE® IN-TENSE is measurable from the first application.



EDIBLE PLANT ORIGIN

GATULINE® IN-TENSE is a concentrated oily extract from the upper part of the *Spilanthes acmella* plant (Asteraceae family), also called Paracress.

This plant, which mainly grows in subtropical regions, is widespread and appreciated for its flavour enhancement properties.

Its French name, "brède mafane", a cross between French and Madagascar Creole, means "hot grass". This name comes directly from its use as a condiment.



Gattefossé harvests the flower buds of Paracress used for GATULINE® IN-TENSE in South Africa.

This origin was specifically selected for the high content of active ingredients in its crops.

Its main components are **alkylamides**, known in traditional medicine for their analgesic and immuno-stimulating effects.

These amides have proved to be excellent reproducibility and activity markers of GATULINE® IN-TENSE. They are guaranteed with a minimum content of 0.5%.

A SUSTAINABLE ACTIVE INGREDIENT

When sourcing new plants, Gattefossé puts a strong focus on **protecting the environment**.

In the case of GATULINE® IN-TENSE, only the floral part of paracress is picked. The integrity of the plant is therefore maintained, allowing **long-term continual development**.

Thereby, the specific extraction process allows the **recycling** of plant residues, which are then used for compost in agriculture.

To boost and develop the local economy, Gattefossé has selected farmers supported by **BEE** (Black Economic Empowerment).

This program, launched by the South African government, aims to redress imbalances inherited from Apartheid, by giving minorities economic opportunities to which they did not hitherto have access.



SKIN FIRMNESS

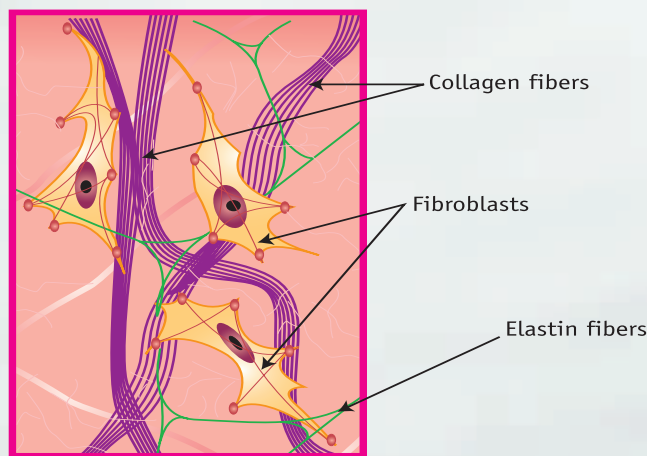
The **Extra Cellular Matrix (ECM)**, the supporting tissue for the skin, plays a major structural role on the **skin architecture**.

The ECM can be simply described as a "dermal gel" consisting of water, glycosaminoglycans (GAGs) and proteoglycans, in which bathe fibroblasts and protein fibers, mainly collagen and elastin.

Fibroblasts, key cells in the dermis, permanently interact with collagen fibers to create a genuine **three-dimensional network**.

Through their mobility and contractile properties, fibroblasts organize this supporting network by pulling on the collagen fibers.

This **cellular dynamism** reorganizes and **tightens this dermal web**, thus firming the skin.



With age, all the components of the ECM are diminished. Cellular dynamism, like all the interactions between cells and supporting fibers, is reduced.

The result is a disorganization of the collagen network. The skin loses its mechanical properties and reveals the signs of aging.

GATULINE® IN-TENSE has demonstrated powerful action to boost this cellular dynamism and thus reorganize and tighten this collagen fiber network.

IN VITRO EFFICACY

Collagen lattices

Tightening and firming activity has been tested on a **living artificial dermis model**. These lattices are composed of human fibroblasts interlinking in a network of collagen fibers as within the skin.

The effect of GATULINE® IN-TENSE on the **dynamic properties** of the fibroblasts is evaluated by **measuring the contraction surface** of the lattices.

Cytokine TGF β , known for its stimulating power on human fibroblasts, has been used as a positive control.



Like TGF β , GATULINE[®] IN-TENSE reduces the surface of equivalent dermis at all measured times (Fig. 1).

The contraction kinetics of the treated dermis is more rapid than in the control batch.

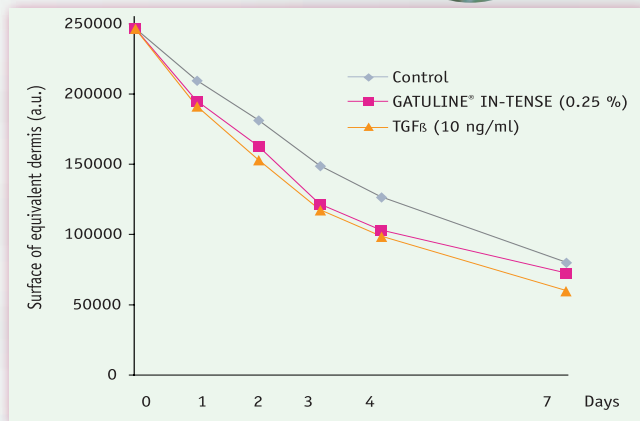


Fig. 1: Contraction kinetics of lattice over 7 days.

Efficacy is evaluated over 7 days.

But the results are **visible from the first day** with a quicker lattice contraction for the treated one in comparison with untreated lattices (Fig. 2).

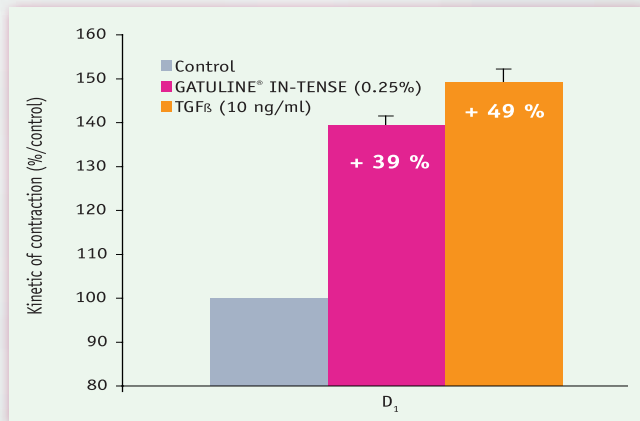


Fig. 2: Lattice contraction: speed at D₁.

These results highlight a clear **stimulation of the contractile power of the fibroblasts** in the presence of GATULINE[®] IN-TENSE, in a **dose-dependent** way, over the range of tested concentrations (Table 1).

	GATULINE [®] IN-TENSE			TGF β
	0.025%	0.125%	0.25%	10ng/ml
Stimulation % vs control	+ 2%	+ 7%	+ 12%	+ 16%

Table 1: Measure of the equivalent dermis surface at D₇.

This stimulation, obtained after direct addition of the active ingredient in the culture, indicates that GATULINE[®] IN-TENSE **acts on cell/collagen fiber interactions**.

These interactions guarantee better cohesion and therefore well structured dermal architecture.

The observed tightening and firming effect was then confirmed during a clinical study on 28 volunteers.

CLINICAL STUDY

The *in vivo* wrinkle smoothing activity of GATULINE® IN-TENSE was demonstrated on crow's feet of women aged 45 to 65.

Tests were conducted on two panels of 28 volunteers each, with twice-daily application for 28 days.

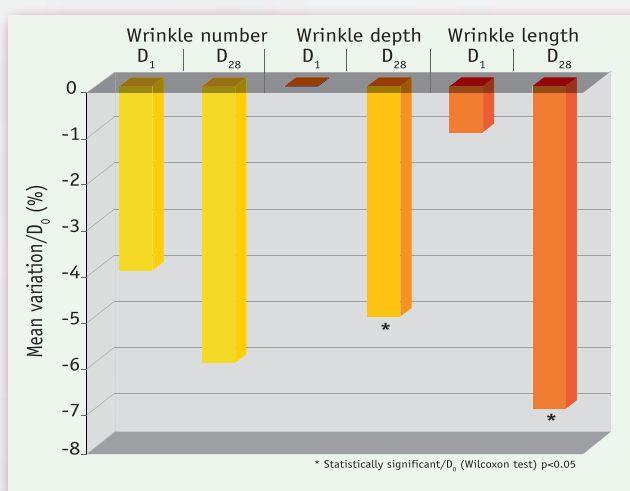
The first panel applied a placebo and the other panel tested a formulation containing 2% GATULINE® IN-TENSE.

Dermatological observations

The wrinkle smoothing effect of GATULINE® IN-TENSE was **visually** assessed by **Dermatologists** during the treatment.

Right from the first day, GATULINE® IN-TENSE gives perceptible results on the skin microrelief. These results are even clearer after 28 days of treatment.

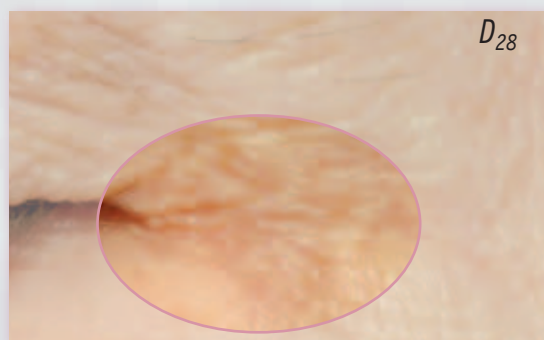
Fig. 3: Dermatological scoring at D_1 and D_{28}



A visible result

Before/after photos show the smoothing action of GATULINE® IN-TENSE, capable of **visibly reducing the wrinkled appearance of the skin**.

This action not only affects the microrelief but also the **deepest wrinkles**, the most marked ones on the face.



The laser profilometry technique is used to precisely quantify roughness variations at different measuring times.



An ultra-rapid action - results at D_1

From D_1 , the results measured by laser profilometry show an improvement in all parameters.

The comparison of results on 100% of the placebo panel and of the test panel shows that, from D_1 , there is 36% less wrinkled surface with GATULINE® IN-TENSE.

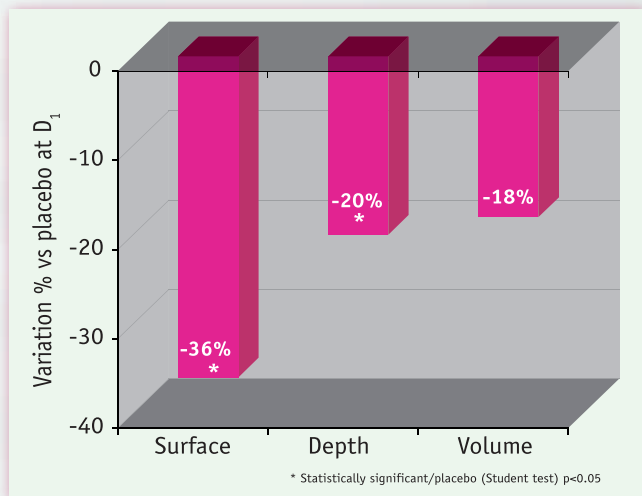


Fig. 4: Wrinkle smoothing effect at D_1 . Difference between placebo and GATULINE® IN-TENSE.

Up to 50% reduction in the wrinkled surface in 1 application...

At D_1 , most volunteers show a strong attenuation in wrinkle three-dimensional features.

Wrinkle surface may be reduced by **up to 51% on the first application***.

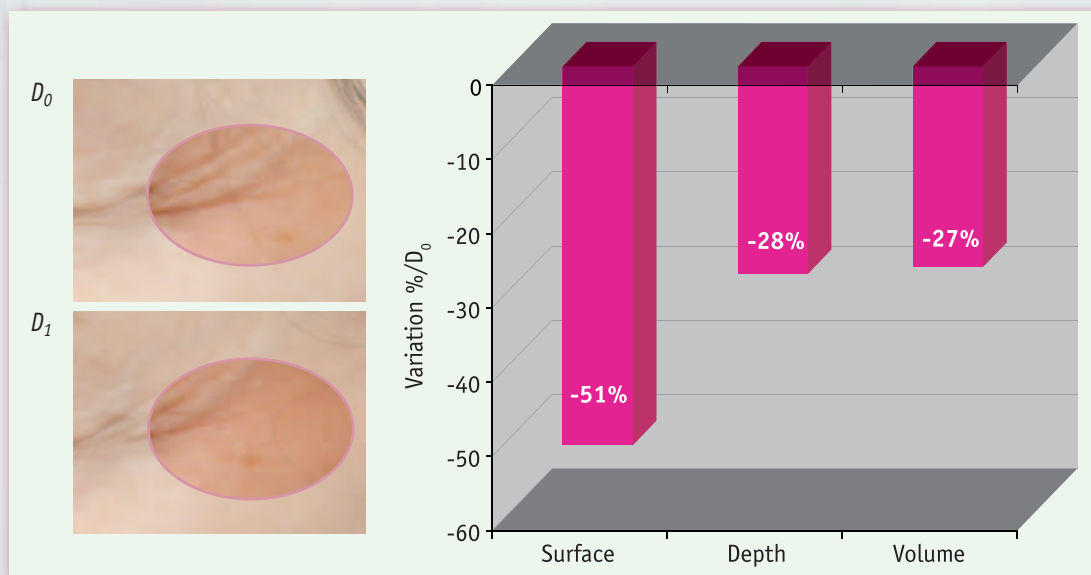


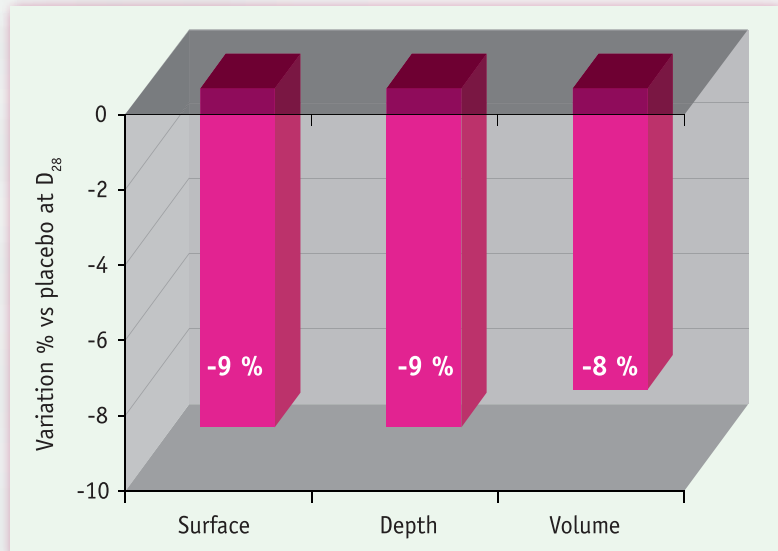
Fig. 5: Wrinkle smoothing effect at D_1 .*

*: Volunteer # 56

Durable action - results at D₂₈

After 28 days of treatment with GATULINE® IN-TENSE, the three criteria measured (wrinkled surface, depth and volume of wrinkles) show an average reduction of 10% (difference with the placebo - analysis on 100% of volunteers).

Fig. 6: Wrinkle smoothing effect at D₂₈. Difference between placebo and GATULINE® IN-TENSE.

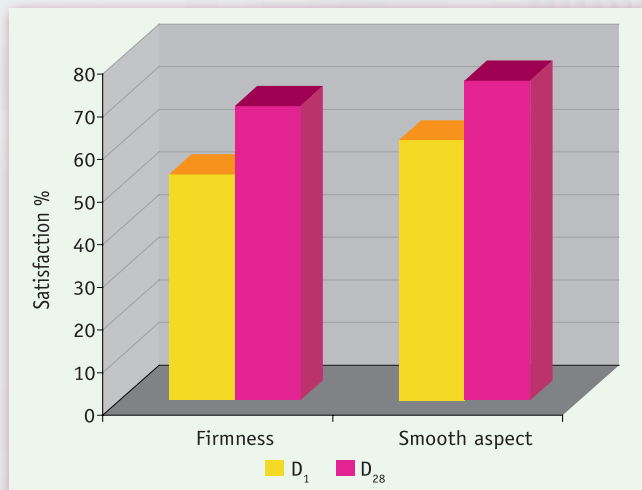


The panelists' opinion...

From the first application, 53% of volunteers found their skin was **firmer** and 61% said that their **features** had been **smoothed**.

And results are improved even more at D₂₈, a sign of GATULINE® IN-TENSE **long-lasting effect**.

Fig. 7: Self-assessment by volunteers of the efficacy of GATULINE® IN-TENSE.



- GATULINE® IN-TENSE is an extremely rapid and effective firming ingredient. Its action on the supporting tissue rapidly reorganizes collagen fibers and visibly smooths the skin.
- GATULINE® IN-TENSE helps to fade out all wrinkles and reduces the most obvious sign of aging, the creased appearance of the skin. ■



APPLICATIONS

GATULINE® IN-TENSE through its **stimulating action on cellular dynamism**, helps to **restructure the dermis architecture**.

This active ingredient helps to restore the characteristics of the young dermis and reinforce its support function to fight any loss of skin firmness.

Its powerful effect will be fully expressed in:



- **Anti-aging** lines
- **Facial contouring** products
- **Firming care.**

But it is also an ingredient of choice for body sculpting, or anti-stretch mark treatments.

Its **oily based nature** and the **resistance of alkylamides to heat** make this extract ideal for treatment make-up, re-plumping lipsticks and lifting foundations.

The recommended use level of GATULINE® IN-TENSE is 2%.

SPECIFICATIONS

Organoleptic characteristics:

Aspect..... pale yellow limpid oil

Odor faint and plant

Physico-chemical characteristics:

Total amide content 0.50 to 0.90%

Solubilities at 20 °C.....insoluble in water, soluble in oils

Transport and storage conditions:

Store at room temperature under nitrogen atmosphere. Prevent exposure to light.

Packing:

Industrial standard pack iron can 5 kg

Samples.....available

Regulatory:

INCI name **Caprylic/Capric Triglyceride (and) Spilanthes Acmella Flower Extract**

CAS n° 85409-09-02/90131-24-1

EINECS n° 287-075-5/290-335-0

Australia, Japan..... Approved for cosmetic use

FORMULA

FACIAL CONTOURING FLUID

MM 8439

INCI name	Trade name	%
I CETYL ALCOHOL (AND) GLYCERYL STEARATE (AND) PEG-75 STEARATE (AND) CETETH-20 (AND) STEARETH-20	EMULIUM® DELTA	3.00
CYCLOPENTASILOXANE (AND) CYCLOHEXASILOXANE		4.00
CAPRYLIC/CAPRIC TRIGLYCERIDE	LABRAFAC™ CC	3.00
PROPYLENE GLYCOL DIPELARGONATE	DPPG	4.00
TOCOPHERYL ACETATE		1.00
SIMMONDSIA CHINENSIS (JOJOBA) SEED OIL		1.50
II DEMINERALIZED WATER		70.85
CARBOMER		0.15
XANTHAN GUM		0.30
<i>PRESERVATIVE</i>		0.70
III SODIUM HYDROXIDE (10% SOL.)		0.30
CAPRYLIC/CAPRIC TRIGLYCERIDE (AND) SPILANTHES ACMELLA FLOWER EXTRACT	GATULINE® IN-TENSE	2.00
IV GLYCERIN		4.00
BUTYLENE GLYCOL		2.00
ALUMINIUM STARCH OCTENYL SUCCINATE		3.00
V <i>PERFUME</i>		0.20
		<u>100.00</u>

Disperse carbomer, then xanthan gum into water. Under stirring, add I heated to 75 °C to II heated to 75 °C. Maintain under rapid mixing (rotor stator 2500 rpm) for 3 min. Add the components of III. Cool under normal stirring and around 45 °C, add IV. Around 35 °C, add V. Complete cooling.

REMODELING MASK

JB 2253/C

INCI name	Trade name	%
I CANDELLILLA/JOJOBA/RICE BRAN POLYGLYCERYL-3 ESTERS (AND) GLYCERYL STEARATE (AND) CETEARYL ALCOHOL (AND) SODIUM STEAROYL LACTYLATE	EMULIUM® KAPPA	4.00
GLYCERYL STEARATE	GELEOL™	2.00
STEARYL ALCOHOL		3.00
CAPRYLIC/CAPRIC TRIGLYCERIDE	LABRAFAC™ CC	10.00
CRAMBE ABYSSINICA SEED OIL		5.00
BUTYROSPERMUM PARKII (SHEA BUTTER)		6.00
HYDROGENATED PALM KERNEL GLYCERIDES (AND) HYDROGENATED PALM GLYCERIDES	LIPOCIRE™ A	5.00
II PALMITATE SUCROSE		2.50
GLYCERIN		5.00
III DEMINERALIZED WATER		51.45
HYDROXYPROPYL GUAR		0.65
MICROCRYSTALLINE CELLULOSE (AND) CELLULOSE GUM		2.00
IV <i>PRESERVATIVE</i>		1.00
V <i>PERFUME</i>		0.40
CAPRYLIC/CAPRIC TRIGLYCERIDE (AND) SPILANTHES ACMELLA FLOWER EXTRACT	GATULINE® IN-TENSE	2.00
		<u>100.00</u>

Disperse palmitate sucrose into glycerin of phase II. Under stirring, disperse hydroxypropyl guar then microcrystalline cellulose into water of phase III. Add palmitate sucrose + glycerin to III. Heat phase I and phases II + III to 75 °C. Under rapid mixing (rotor stator 3500 rpm), add I to II + III. Maintain rapid mixing for about 10 min. Cool under planetary stirring and around 35 °C, add the ingredients of IV and V. Complete cooling.



FIRMING BODY LOTION

MM 8442/A

INCI name	Trade name	%
I DEMINERALIZED WATER		72.20
GLYCERIN		5.00
CARBOMER		0.10
ACRYLATES/ACRYLAMIDE COPOLYMER (AND) MINERAL OIL (AND) POLYSORBATE-85		0.20
II GLYCERYL STEARATE (AND) PROPYLENE GLYCOL STEARATE (AND) GLYCERYL ISOSTEARATE (AND) PROPYLENE GLYCOL ISOSTEARATE (AND) OLETH-25 (AND) CETETH-25	HYDROLACTOL™ 70 MOD	5.00
OCTYLDODECYL MYRISTATE	LABRAFAC™ CC	4.00
CAPRYLIC/CAPRIC TRIGLYCERIDE		1.50
CETEARYL ALCOHOL		3.00
DIMETHICONE		3.00
BUTYROSPERMUM PARKII (SHEA BUTTER)		1.00
BUTYLENE GLYCOL COCOATE	COCOATE BG	3.00
PRESERVATIVE		0.70
III CAPRYLIC/CAPRIC TRIGLYCERIDE (AND) SPILANTHES ACMELLA FLOWER EXTRACT	GATULINE® IN-TENSE	2.00
IV PERFUME		0.30
		<u>100.00</u>

Disperse carbomer, into water. Heat to 75 °C and add acrylates/acrylamide copolymer. Mix well until homogeneous. Under stirring, add II heated to 75°C to I heated to 75°C. Cool under stirring and at about 50°C, add III. Around 35°C, add IV. Complete cooling.

This information is presented in good faith, and we believe it is correct, but no warranty as to accuracy of results, or fitness for a particular use is given, nor is freedom from patent infringement to be inferred. It is offered solely for your consideration, investigation and verification.

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GATTEFOSSÉ is an independent, multinational company headquartered in France which creates, manufactures and distributes specialty products used as ingredients by the cosmetic and pharmaceutical industries.

Present in almost 50 countries worldwide, GATTEFOSSÉ enjoys a strong know-how and position in lipochemistry, biology and extraction from natural sources.

GATTEFOSSÉ offers the cosmetic industry a variety of high performance products classified as:

- **BASES & ADDITIVES:** emulsifiers, coemulsifiers, emollients, dispersers, solubilizers, thickeners...
- **TRADITIONAL PLANT EXTRACTS**
- **SUBSTANTIATED ACTIVE INGREDIENTS** from vegetable, mineral and marine origins.

