# CAFEISILANE C®

SLIMMING
ANTI CELLULITE
SKIN RESTRUCTURATION
FIRMING
NECK, DÉCOLLETÉ, BOTTOM AND HIPS TIGHTENER
EYE CONTOUR

EXSYMOL
MONACO

CAFEISILANE C®

# COSMETIC SLIMMING

*A successful and efficient diet relies on a balanced food intake and regular physical activity for optimal body tightening.*
*By analogy, cosmetic active ingredients target different mechanisms for body slimming:*
***Lipolysis:** release of fatty acids accumulated in adipocytes of the hypodermis.*
***Draining:** stimulation of the veino-lymphatic system, which "laziness" participates to cellulite appearance.*
***Skin restructuration:** recovery of skin elasticity that ensures body smooth curves.*

## XANTHINE BASES – RELIABLE ALLIES

Xanthine bases, among which caffeine and theophylline are the most representative, are regarded as the reference active ingredients for cosmetic slimming.
Xanthine bases have an almost instantaneous effect on lipolysis, by activating or inhibiting enzymes involved with lipolysis.
Disregarded their low bioavailability, they are the uncontested stars of slimming formulae.

## INTEREST OF THE ASSOCIATION BETWEEN THE SILANOL TECHNOLOGY AND CAFFEINE

*CAFEISILANE is part of the silanol family. As such, in addition to optimize caffeine bioavailability, it possesses skin restructuration abilities.*
*Organic silicium, core of the silanol technology, is an essential component of the skin.*
*Indeed, by interacting with structure and elastic proteins within the dermis such as collagen fibers, elastin and proteoglycans, the silicium insures skin organization and architecture.*
*A topic application of CAFEISILANE on the skin will therefore replenish the skin natural pool of organic silicium. The skin will be rejuvenated, better organized and structured. Ultimately, the skin will become visibly younger.*
*(Please refer to ALGISIUM C leaflet for any further details about the SILANOL TECHNOLOGY)*

## SILANOLS: 5 SLIMMING PROPERTIES

### Synergy for perfect targeting

Organic silicium specific affinity for the dermis offers SILANOL high bioavailability properties and ease caffeine penetration into the skin.

### Synergy for better slimming

CAFEISILANE gets advantage of organic silicium and caffeine properties to deliver a complementary slimming and firming activity.

### Skin restructuration to fight gravity-induced degradations

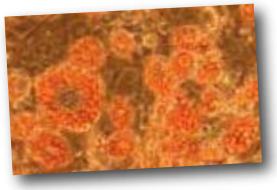
Adipocyte volumetric growth increases gravity constraints on the skin. The silanol technology restructuring effect optimizes skin elasticity for a decrease of gravity degradations.

### Hydration for better slimming

The silanol technology contributes to metabolic normalization and skin reorganization. Hydrated and organized skin takes a higher benefit of slimming active ingredients.

### Respect of cell metabolisms for long lasting effects

Silanols are lipolytic active ingredients which metabolism normalizing effect induces global anti-aging benefits. These properties contribute to long-lasting firming and slimming effects.



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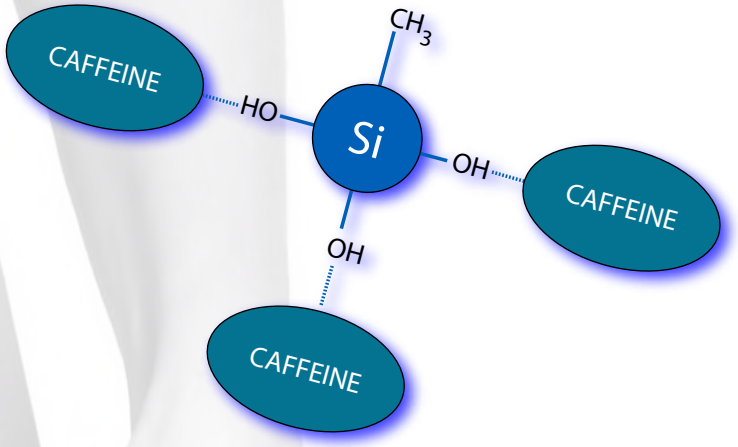


**INCI name :** SILOXANETRIOL ALGINATE (AND) CAFFEINE

***CAFEISILANE is a SILANOL that combines the restructuring and slimming properties of organic silicium and caffeine.***

## SKIN BENEFITS

Optimized caffeine bioavailability
Optimized caffeine lipolytic activity
Regulation of adipocyte volume
Optimized cell communication
Improved skin elasticity
Activated skin microcirculation

## COSMETIC APPLICATIONS

| Face | Body | Hair |
|---|---|---|
| Eye contour | Slimming | Caffeine supply |
| Restructuration | Anti-cellulite | Scalp restructuration |
| Firming | Firming | Hair quality |
| Anti-deep wrinkles | Hydration | improvements |
| Hydration | | |

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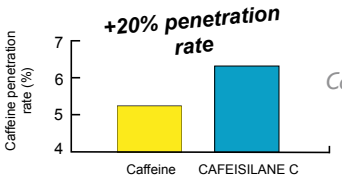
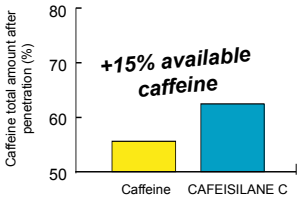
# REGULATION OF ADIPOCYTE VOLUME

## Caffeine vs. CAFEISILANE C

**Skin bioavailability studies provided the below results:**

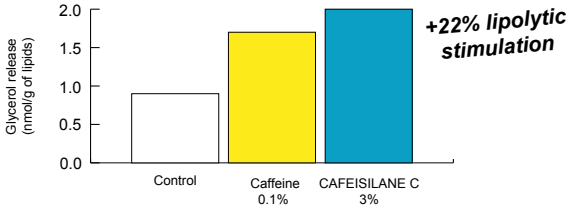



*Caffeine as a silanol spreads much faster in the skin.*




*Caffeine as a silanol penetrated more efficiently for higher and faster efficacy.*

**Caffeine optimized bioavailability as a silanol induces an increased lipolytic activity:**




*CAFEISILANE demonstrates its advantage in terms of lipolytic stimulation at equivalent concentration of caffeine.*

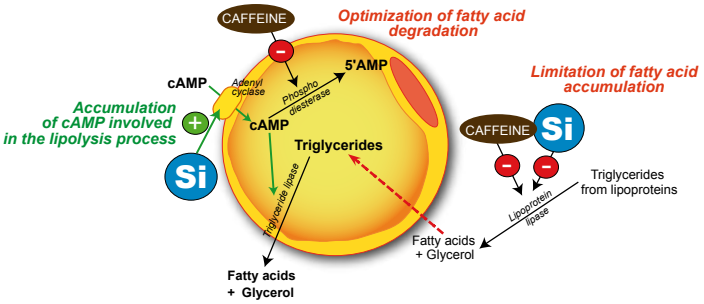
**Our further testing will demonstrate that CAFEISILANE offers global skin benefits in addition to a more efficient lipolytic activity.**

## Adipocyte metabolisms

**Adipocyte volume relies on different metabolisms:**

**Lipolysis** releases fat by converting triglycerides into fatty acids and glycerol. This reaction is catalyzed by the triglyceride lipase. This enzyme is activated by the rise of intracellular concentrations of cAMP.

**Lipogenesis** accumulates fatty acids converting these components as triglycerides in adipocytes. Lipoprotein lipase catalyses this reaction.




## Double regulation of adipocyte volume

**Lipolysis activation**

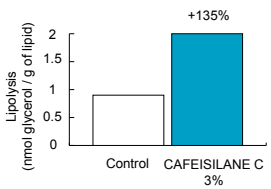
Caffeine and organic silicium optimize lipolysis by 2 complementary mechanisms.

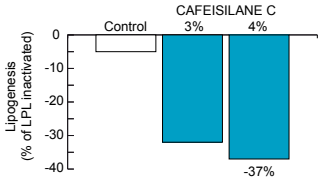
Caffeine maintains sufficient intracellular cAMP concentration

Silicium inhibits the enzyme responsible for the inactivation of cAMP into 5'AMP.

**Lipogenesis inhibition**

Most slimming active ingredients only target lipolysis activation. CAFEISILANE directly inhibits the lipoprotein lipase responsible for fatty acids accumulation in adipocytes.




At equivalent concentration, CAFEISLANE demonstrates its synergetic benefits, offering a much higher lipolysis activation and a strong lipogenesis inhibition.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# ANTI-CELLULITE AND SLIMMING EFFECT

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## Normalization of adipocyte metabolisms

Skin aging impairs compartment cross-communication. Adipocyte metabolisms are also concerned by this global skin disorganization.
Indeed, aging induces accumulation of localized fat stack.
Our studies demonstrated that SILANOL prepares the skin and favors the reestablishment of cross-communications between the different skin compartments and skin cells.
We observed 2 remarkable benefits relying on this metabolic normalization:

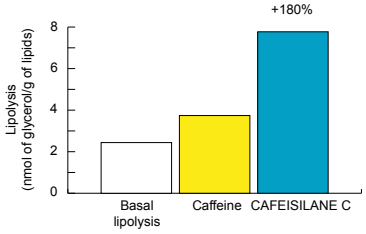
### Control of adipocyte differentiation

Hypertrophy and multiplication of mature adipocytes increase with skin aging.
This phenomenon is mainly due to the over-expression of genes controlling stem cell differentiation into adipocytes.
CAFEISILANE limits by 75% the over differentiation of adipocytes after key genes activity was reduce due to normalized metabolisms.

| | Early genes PPARγ and C/EBPα | Late genes SCD-1 and AP2 | Adipocyte differentiation |
|---|---|---|---|
| Si (50mg/L) (eq. CAFEISILANE 4%) | - | - | **-75%** |

### Control of adipocyte activity by cell communication

Keratinocytes (epidermis cells) release cytokines able to stimulate lipolysis.
While caffeine has no significative activity on keratinocyte activity, CAFEISILANE increased by 3 times keratinocyte's ability to support adipocyte activity.



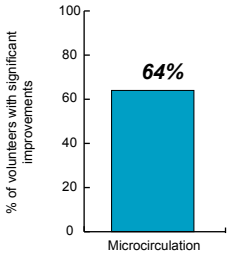

## Draining and anti-cellulite effect *(in vivo)*

Being a structural element of connective tissues (skin, bones, blood vessels…), organic silicium offers benefits on skin microcirculation.

Realized by a dermatologist, this in vivo assay was performed in order to evaluate organic silicium efficacy on microcirculation activation.

Microcirculation increases draining efficacy against cellulite, favors toxin elimination and prevents from the emergence of micro-edema responsible for orange peel.

*Treatment with 50mg/L of silicium (equivalent to 4% of CAFEISILANE C) on 43 volunteers.*



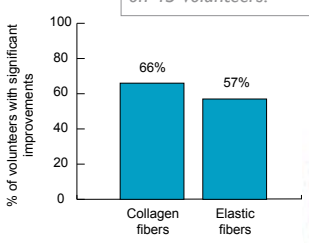

## Fighting skin slackening *(in vivo)*

CAFEISILANE fights undesirable consequences of cellulite: loss of elasticity and localized inflammation.

The synergy between organic silicium and caffeine therefore counteracts all the possible signs of gravity-induced skin premature aging.

-Sensitive skin of the face
-Eye contour
-Face, neck, décolleté and bottom contouring.

*Treatment with 50mg/L of silicium (equivalent to 4% of CAFEISILANE C) on 43 volunteers.*

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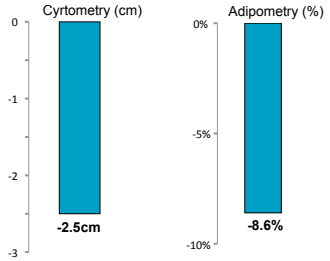
# COSMETIC BENEFITS

## *Tests on volunteers*

## Cosmetic slimming

### Short-term slimming efficacy

*Treatment with 3% of CAFEISILANE C (equivalent to 40mg/L of silicium) on 14 volunteers aged 25 to 43 for 4 weeks, under dermatologist control.*



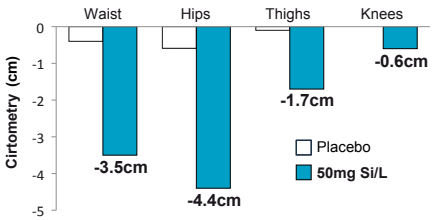

*Global volunteers satisfaction independent of the centimetric loss*

| Skin quality | Cellulite symptoms |
|---|---|
| ↑ General aspect of the skin | ↓ edema |
| ↑ Elasticity | ↓ Pinching pain |

**Clinical benefits:**
CAFEISILANE offers fast slimming based on the synergy between caffeine and organic silicium.
86% of the volunteers were satisfied with CAFEISILANE slimming and anti-cellulite properties.

### Long-term slimming efficacy

*Treatment with 50mg/L of silicium (equivalent to 4% of CAFEISILANE C) on 10 volunteers aged 25 to 43 for 10 week, under dermatologist control.*

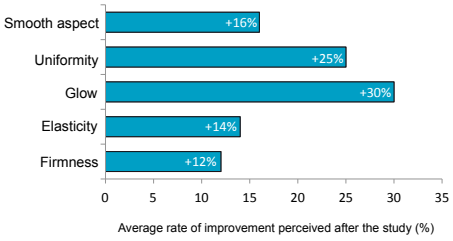



**Clinical benefits:**
SILANOLS induce a strong dermal and hypodermal restructuration. The centimetric loss comes along satisfaction of intense sculpting and firming effects.

## Skin quality improvements and anti-wrinkles benefits

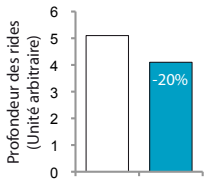
### Skin quality :

*Treatment with 50mg/L of silicium (equivalent to 4% of CAFEISILANE C) on 20 volunteers aged 35 to 55 for 4 week, under dermatologist control.*




### Anti-wrinkle :

*Treatment with 50mg/L of silicium (equivalent to 4% of CAFEISILANE C) on 20 volunteers aged 35 to 55 for 4 week, under dermatologist control.*





**Clinical benefits:**
SILANOLS restructuring benefits improved all the major signs concerned with skin premature aging, delivering a rejuvenation effect for 80% of the volunteers.

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# TECHNICAL CHARACTERISTICS

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## ANALYTICAL COMPOSITION

Methylsilanetriol..... 0.45%
dont silicium.....0.135%
Caféine.....4.00%
Acide polymannuronique.....0.35%
Eau (qsp).....100%

## PHYSICO-CHEMICAL CHARACTERISTICS

Liquide limpide à légérement opalescent
Incolore à jaune pâle
pH ≈ 5.5
Density at 20°C ≈ 1,0
Miscible dans l'eau à froid
Non miscible dans les fortes concentrations d'alcool.

## PRESERVATIVE SYSTEM

Nos systèmes de conservation sont variés et peuvent s'adapter à la demande. N'hésitez donc pas à nous contacter pour connaître les différentes versions proposées.

## TOLERANCE STUDIES

CAFEISILANE C n'a pas présenté de forme d'intolérance.
L'étude de tolérance a été réalisé par méthodes alternatives *in vitro* (culture cellulaire et épiderme reconstruit) ainsi que par méthodes *in vivo* (sur volontaires).

## FORMULATION

Dose d'utilisation conseillée : 3 to 6%.
CAFEISLANE C n'est pas sensible aux variations de température. Il est tout de même recommandé d'éviter de congeler le produit.
En cas d'apparition de petits cristaux de caféine, un bain marie (40°C) permet de resolubiliser la caféine en excès.

## AVAILABILITY

Bidons de 5 ou 30 kg.

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