

FUNCTIONAL INGREDIENTS

A senso-active experience



FUNCTIONAL PORTFOLIO

EMULSIFIERS

- Biophilic™ H MB
- Biophilic™ S MB
- Heliosoft™
- Heliofeel™ 22 MB
- Lysofix™ Liquid

GELLING AGENTS

- Siligel™
- Ecogel™
- Lecigel™
- Heliogel™

EMULMETIK™

- Emulmetik™ 100 J
- Emulmetik™ 320 IP

All Lecithin-based:

More than functional ingredients, they provide a multi-sensory experience and active properties!

LECITHINS

Part of Circular Economy

Complex mixture

Lecithins = **Phospholipids** (*Minimum 60%*) + Polar Lipids (*Glycolipids, etc*)

High-quality & Sustainable ingredients

- Sourced from the processing of Soybean & Sunflower oils: Valorisation of Food industry **by-products**
- 100% vegetable-derived (100% NOI)
- Readily biodegradable

Lecithins are a complex mixture, whose key element is their **phospholipid content**.



Soybean

By-products

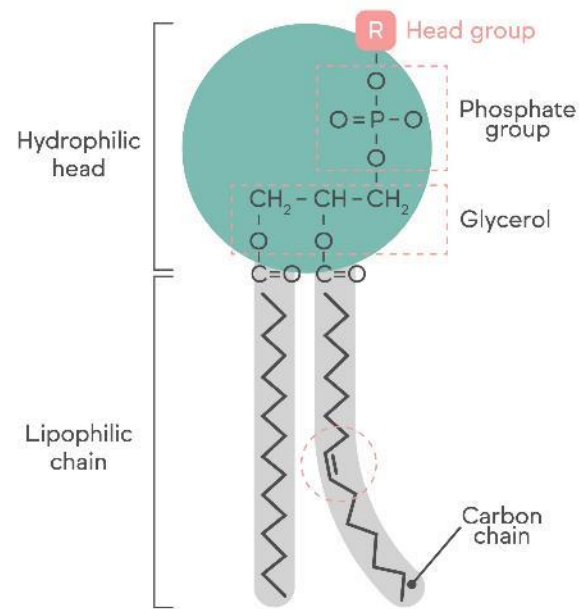


Sunflower

PHOSPHOLIPIDS

Unique structure

Amphiphilic molecules



Different types of Phospholipids

- Phosphatidylcholine **PC**
(Head group: Choline)
- Phosphatidylethanolamine **PE**
(Head group: Ethanolamine)
- Phosphatidylinositol **PI**
(Head group: Inositol)
- Phosphatic acid **PA** (No Head group)

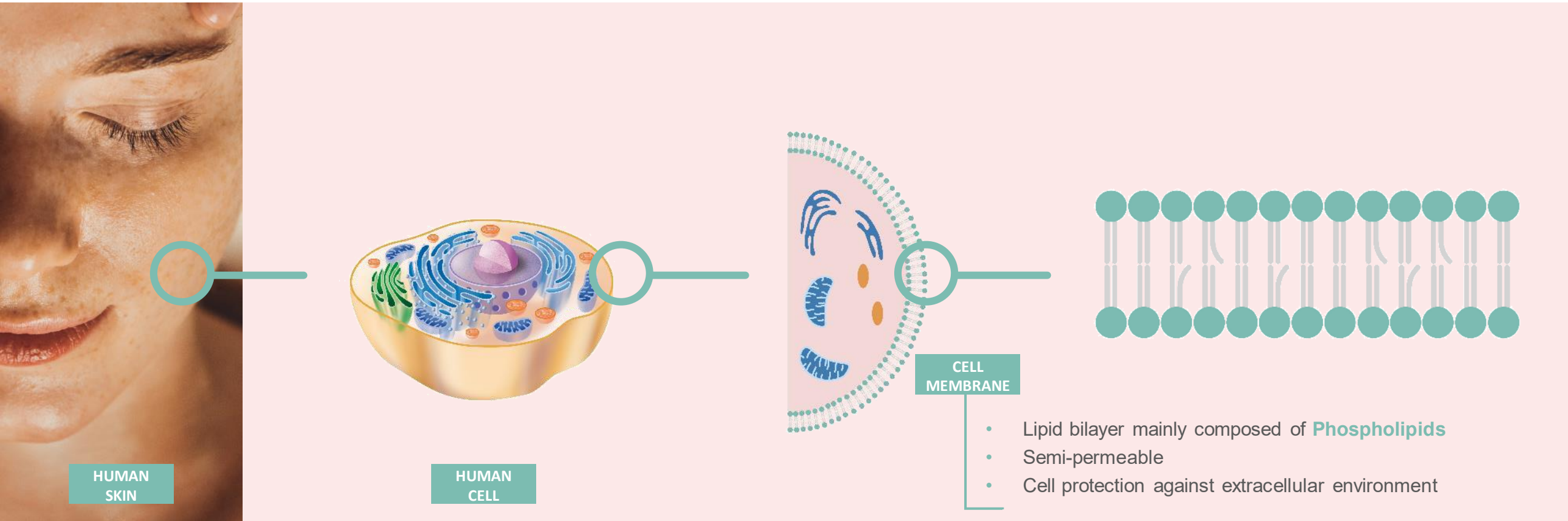
Phospholipids are **amphiphilic molecules** delivering **unique properties** thanks to their structure!

PHOSPHOLIPIDS

Biomimetic molecules
with unique properties

PHOSPHOLIPIDS

Skin-identical molecules



Phospholipids mimic the **skin's structure**, giving them a **perfect affinity** with it.

PHOSPHOLIPIDS

High-performance molecules

Multi-sensory experience

Unique signature
Happiness upon application

Activity

Skin Hydration
Skin Barrier Reinforcement
Bioavailability Booster

Functionality

Emulsifier
Wetting agent

Phospholipids not only mimic the skin's structure, but also deliver **disruptive performances!**

Multi-sensory experience

Unique signature
Happiness upon application

PHOSPHOLIPIDS

Unique signature

Multi-sensory
experience

Freshness
sensations

Second skin
effect

PHOSPHOLIPIDS'
TOUCH

Happiness upon
application

Physiological & Behavioral
measurements

Sensory
Softness
Non-greasy & Non-tacky

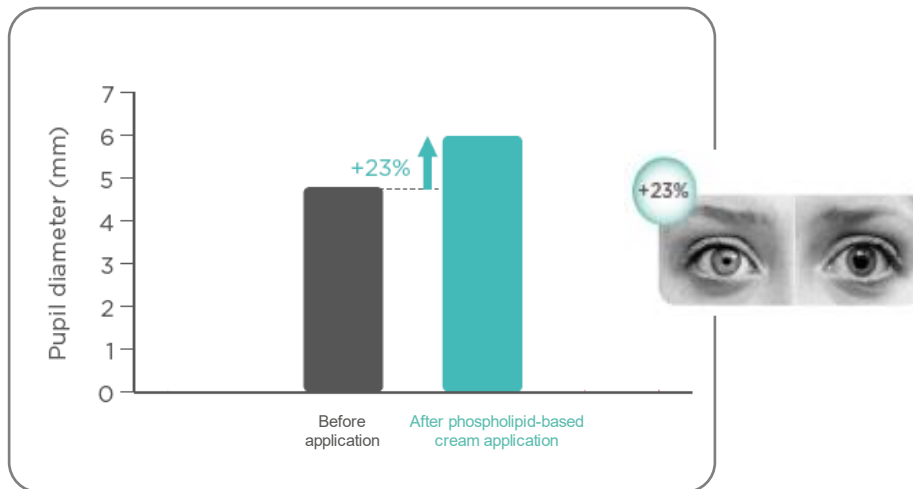


Phospholipids provide a unique signature named the **Phospholipids' Touch!**

PHOSPHOLIPIDS

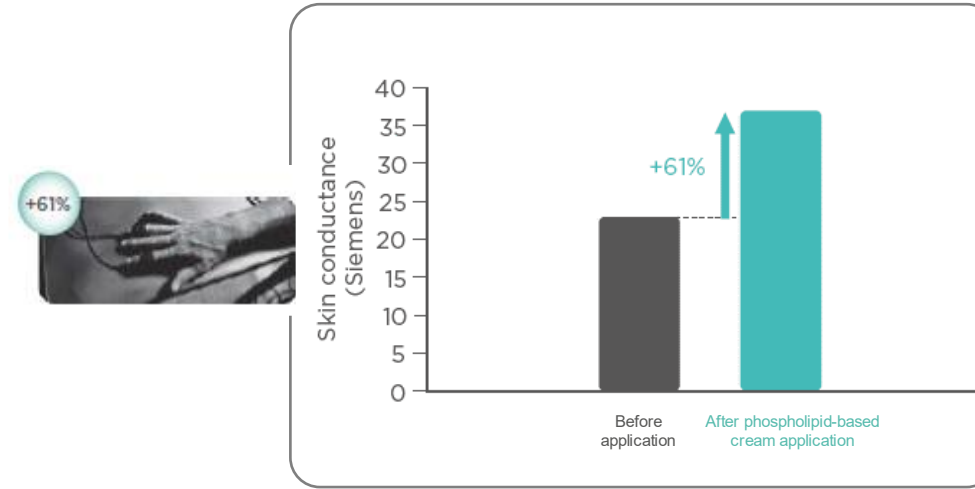
Happiness upon application (Physiological measurements)

Evolution of Pupil Dilation



Increase in pupil dilation
– High emotional arousal

Evolution of Skin Conductance



Increase in electrodermal response
– High intensity emotion

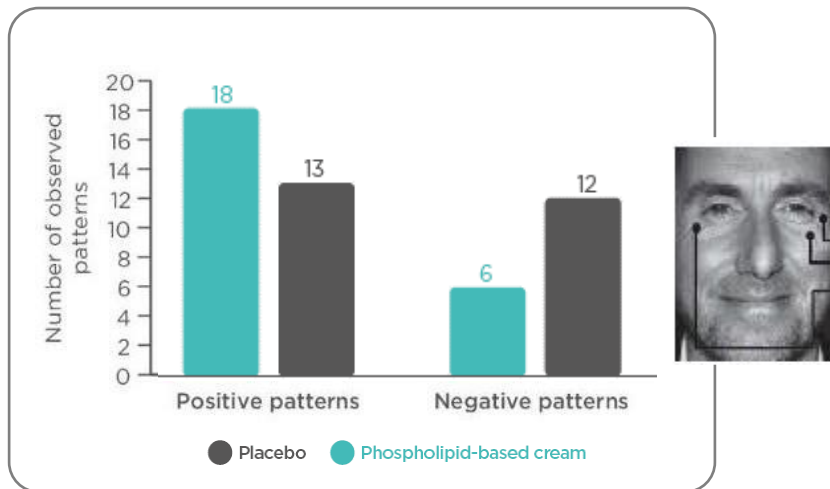
Phospholipids trigger intense emotions upon application!



PHOSPHOLIPIDS

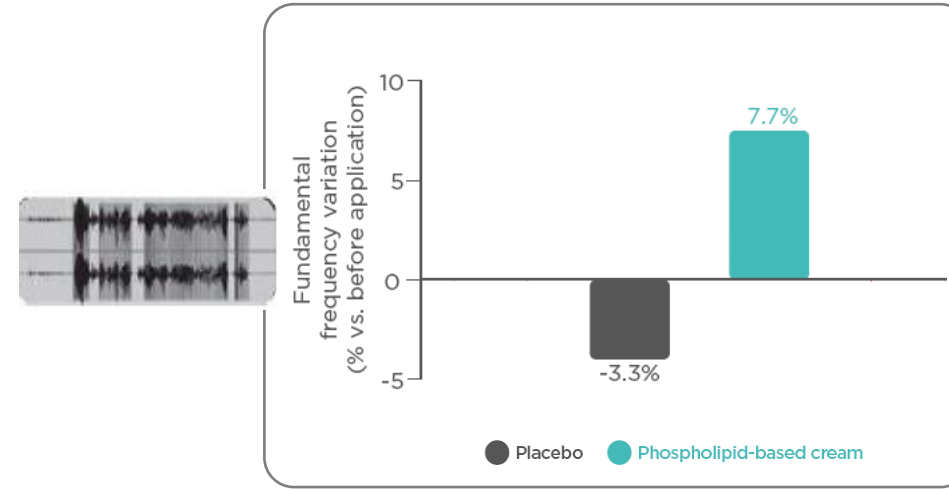
Happiness upon application (Behavioral measurements)

Facial Micro-expression Analysis



Happier facial micro-expressions
– Pleasant application

Evolution of the Voice Musicality



Higher vocal frequency
– Enjoyable experience

Phospholipids trigger **happiness** upon application, visible through **consumer behaviors**!



Activity

Skin Hydration
Skin Barrier Reinforcement
Bioavailability Booster



SKIN STRUCTURE

Skin Layers

- **Stratum Corneum**

Protective skin barrier (Dead cells forming a lipid cement)

- **Epidermis**

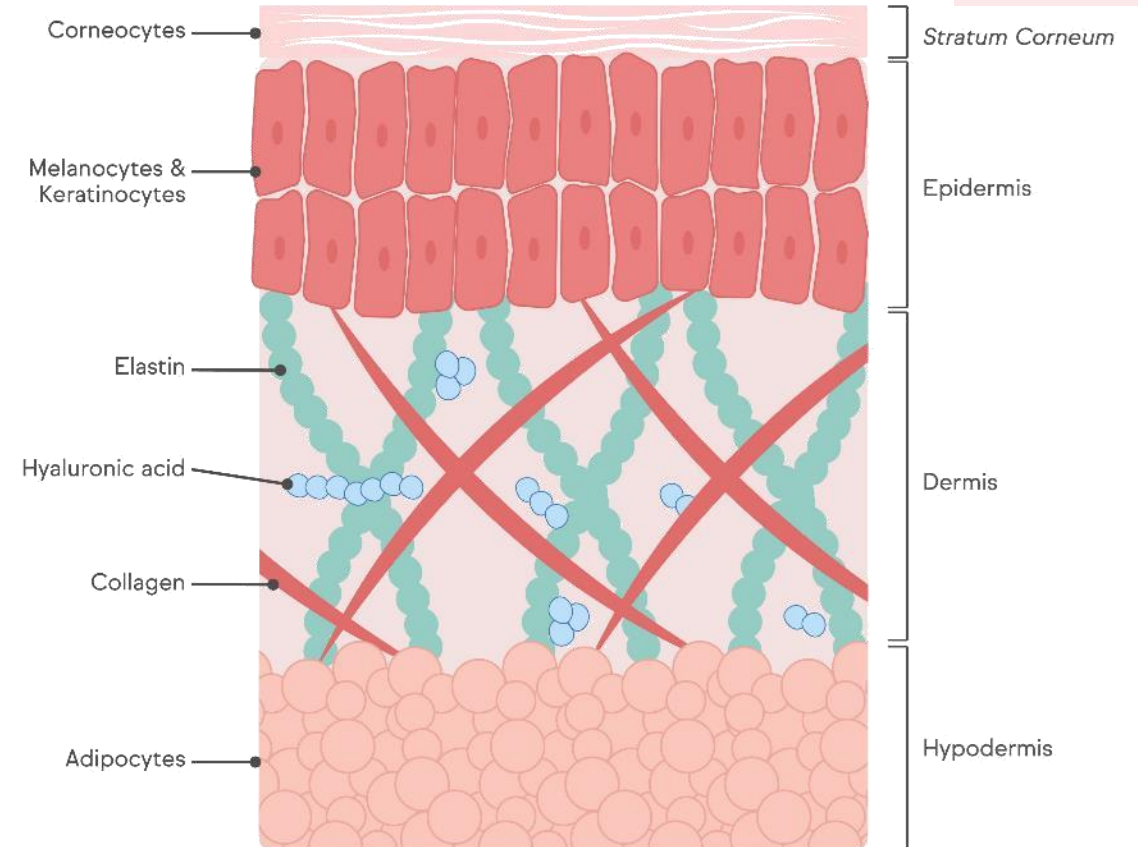
Hydrophilic top skin layer (Living cells)

- **Dermis**

Hydrophilic lower skin layer (Living cells & Proteins)

- **Hypodermis**

Subcutaneous lipophilic tissues (Living cells)



The **skin** is a **complex structure** with a protective **lipophilic skin barrier**.

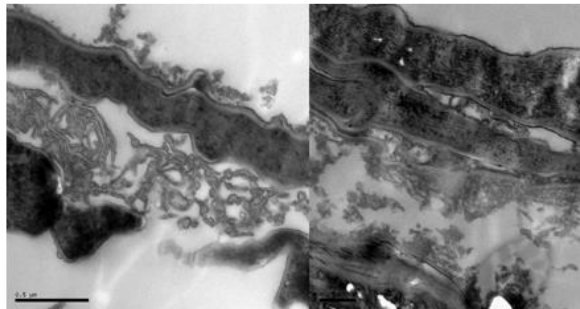
SKIN STRUCTURE

Stratum Corneum

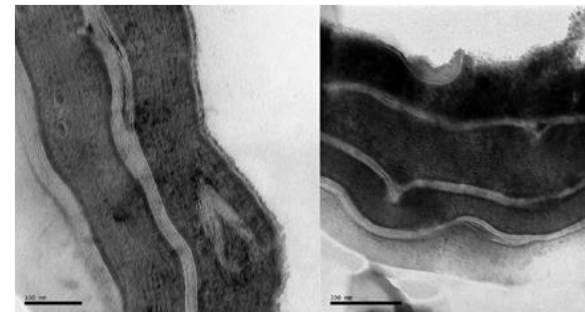
Stratum Corneum paradox

- Protective skin barrier: Needs to be **impermeable** to protect human body from **external aggressions** and **dehydration**
- Cellular matrix: Must allow **active molecules to pass through** and penetrate the skin to deliver their efficacy

Damaged *Stratum Corneum*



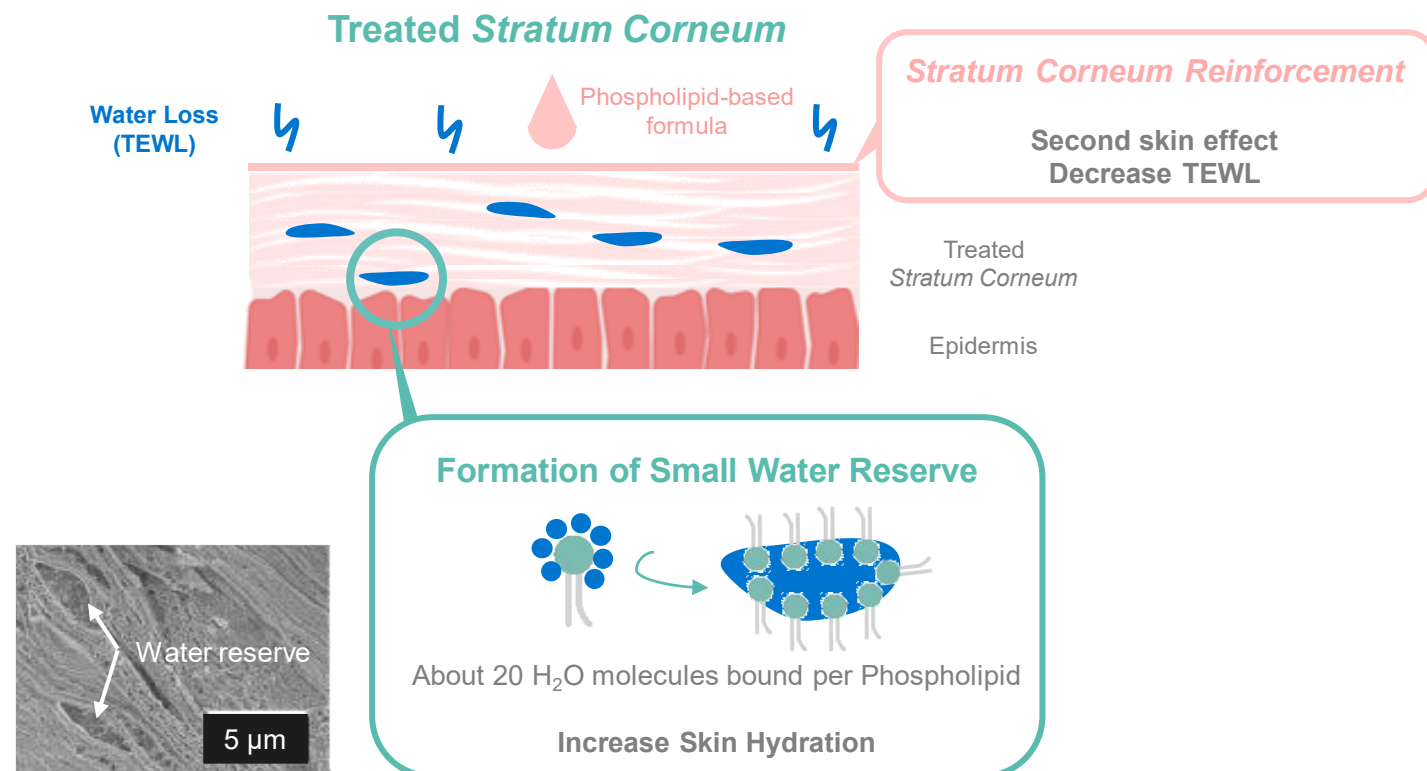
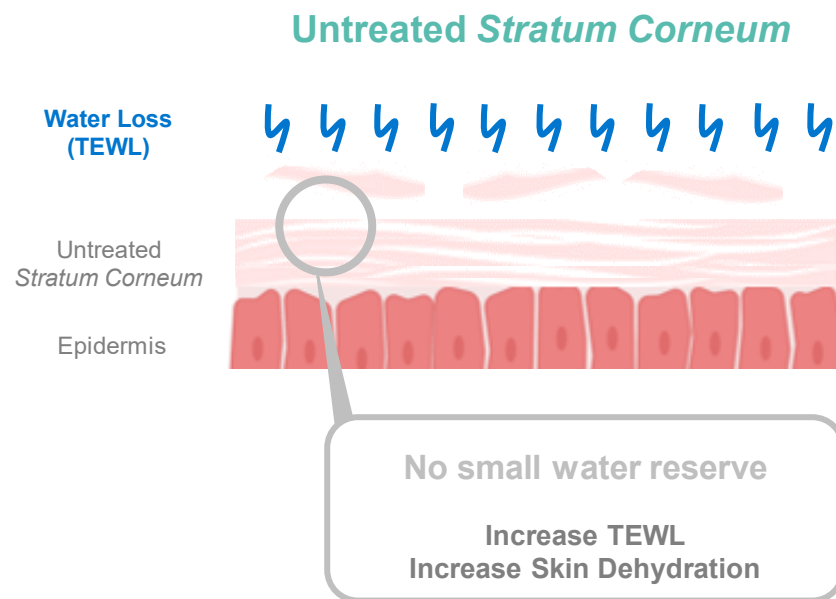
Healthy *Stratum Corneum*



Phospholipids are the **perfect solution** to solve the ***Stratum Corneum* paradox!**

PHOSPHOLIPIDS

Skin Hydration

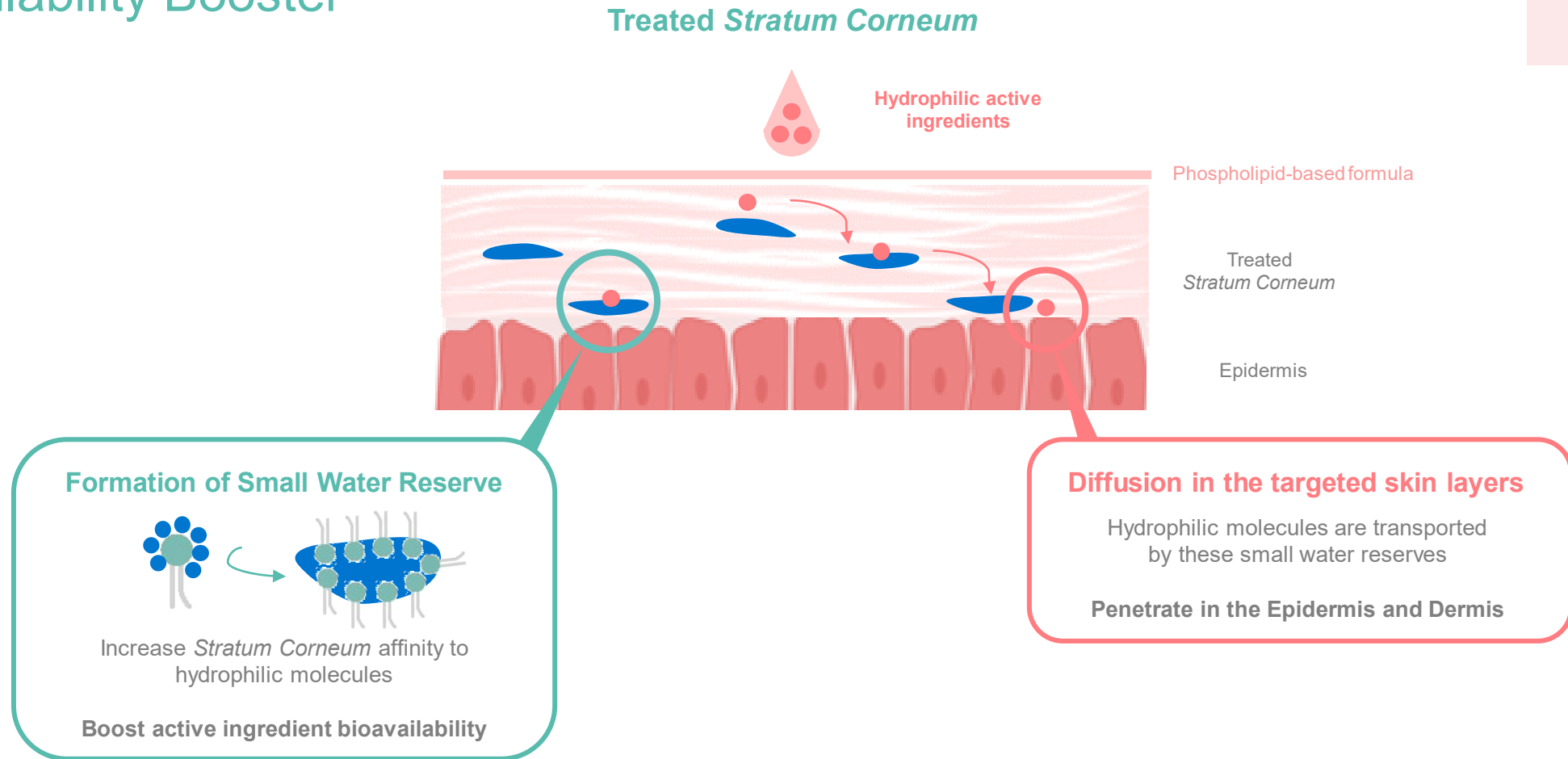


Phospholipids strengthen skin barrier and moisturize the skin, delivering 100% active formulas with cost-saving developments!

PHOSPHOLIPIDS

Bioavailability Booster

Activity
Bioavailability
booster



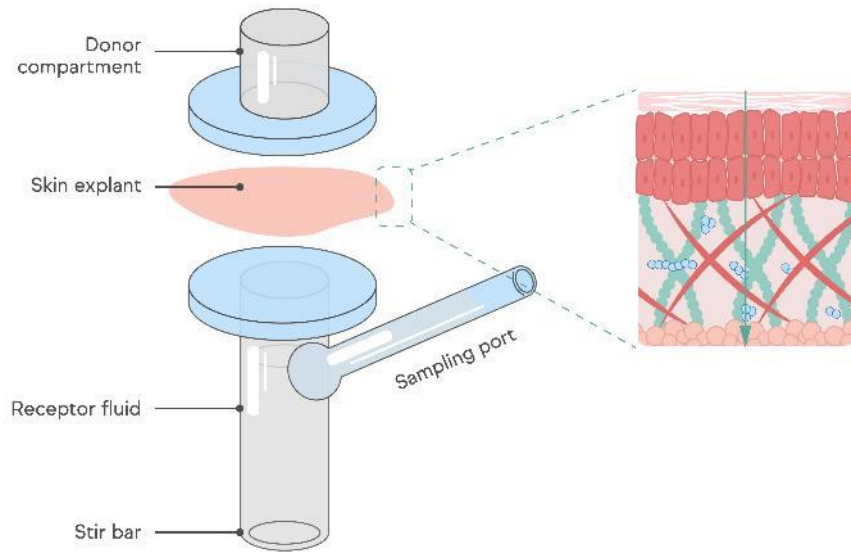
Phospholipids boost active ingredient bioavailability by increasing their penetration through protective skin barrier!

PHOSPHOLIPIDS

Bioavailability Booster

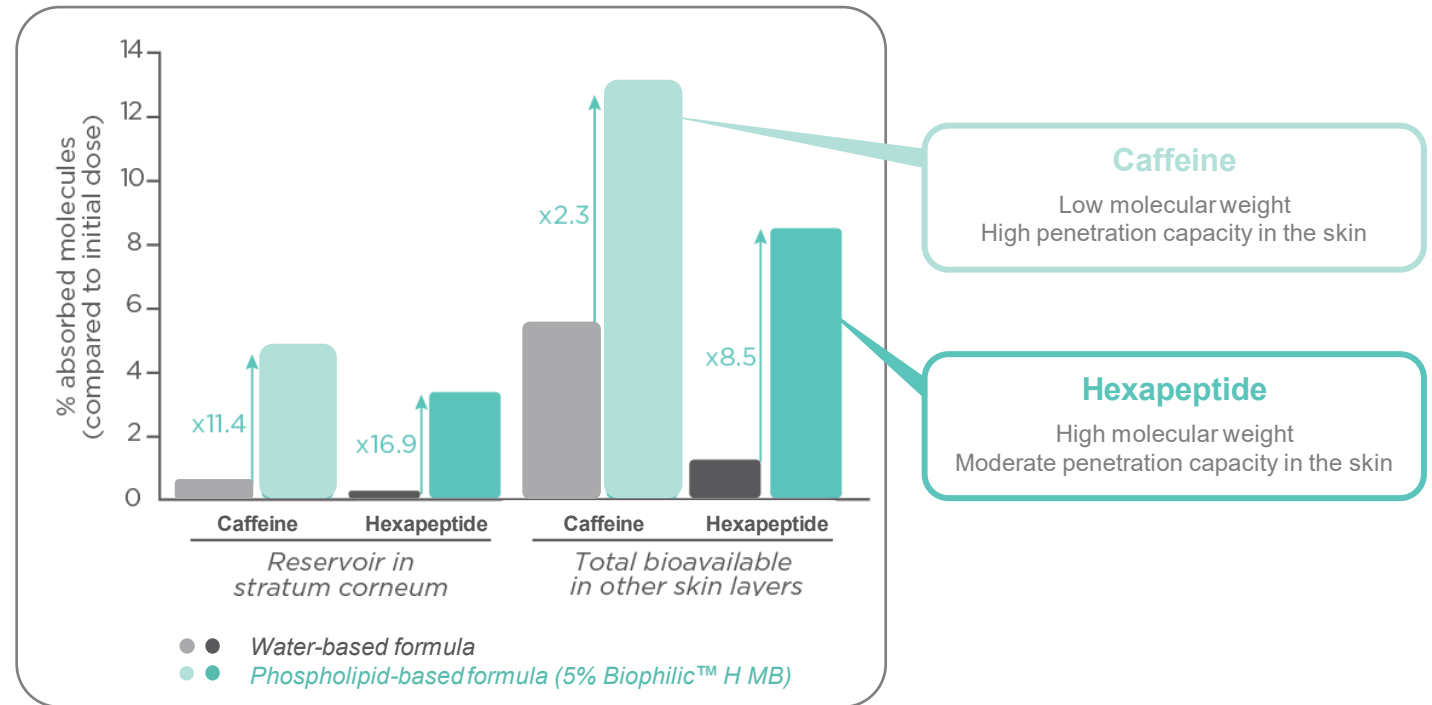
Activity
Bioavailability
booster

Franz™ cell method



Diffusion of active molecules after 24h

(Franz™ cell method)

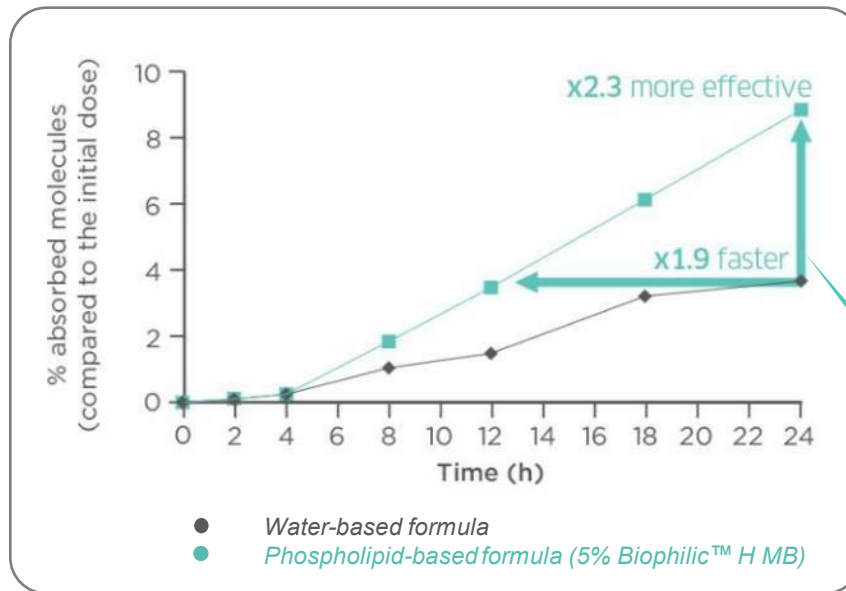


Phospholipids boost active ingredient bioavailability to ensure maximum effectiveness in targeted skin layers!

PHOSPHOLIPIDS

Bioavailability Booster

Diffusion of active molecule during 24h



Phospholipid-based ingredients provide:

- **More effective** results – Same efficacy with a lower active ingredient dosage
- **Faster** results – Faster efficacy with the same active ingredient dosage

Caffeine

Low molecular weight
High penetration capacity into the skin

Phospholipids boost active ingredient bioavailability to get better and faster skin benefits!



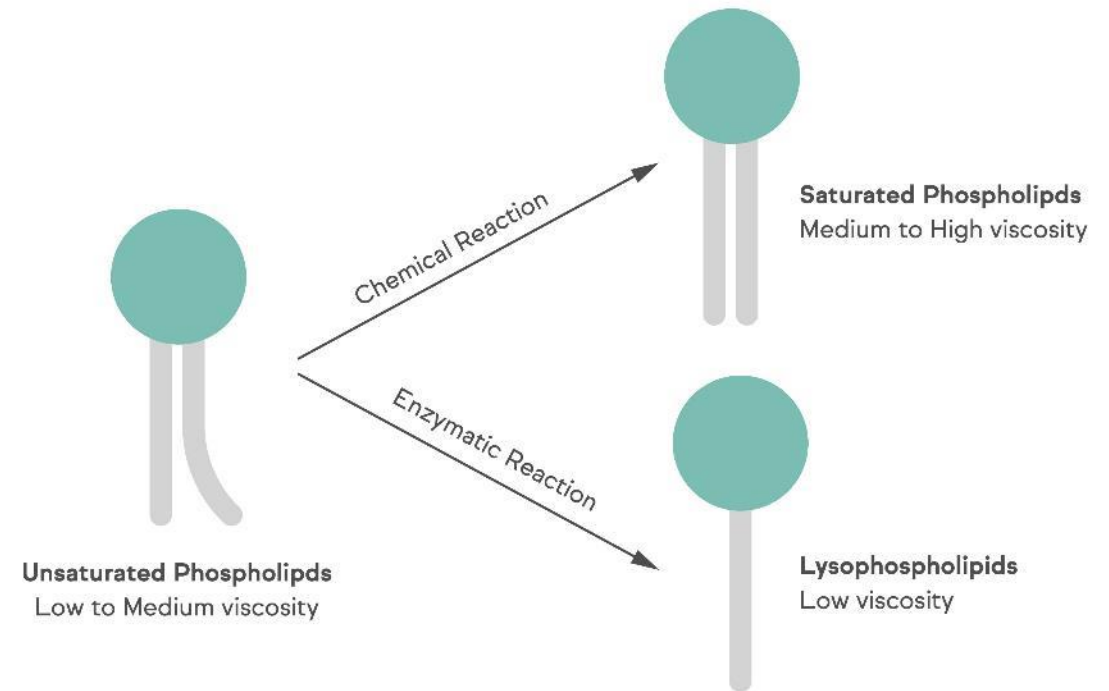
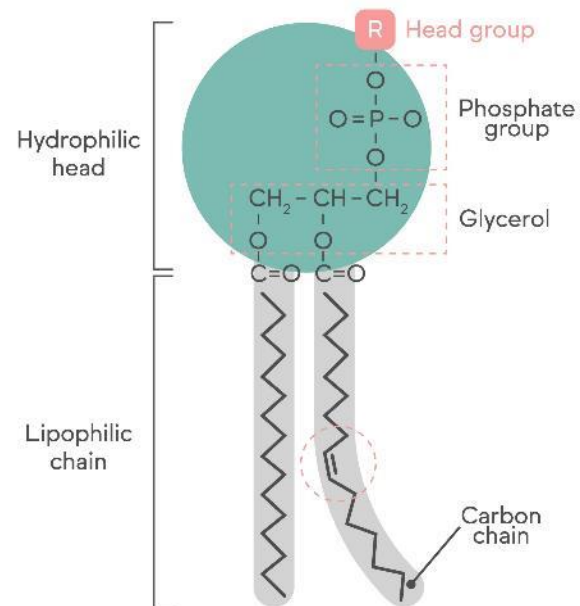
Functionality

Emulsifier
Wetting agent

PHOSPHOLIPIDS

High-performance molecules

Amphiphilic molecules

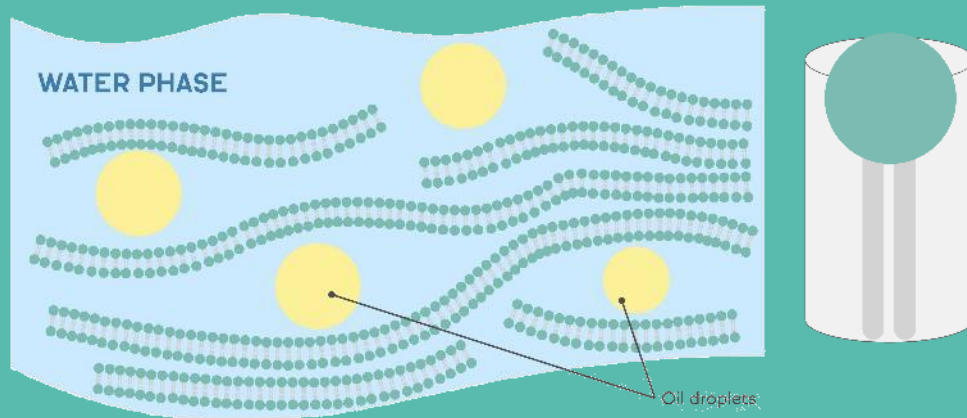


Phospholipids deliver **disruptive performances** thanks to their amphiphilic structures!

EMULSIFIER

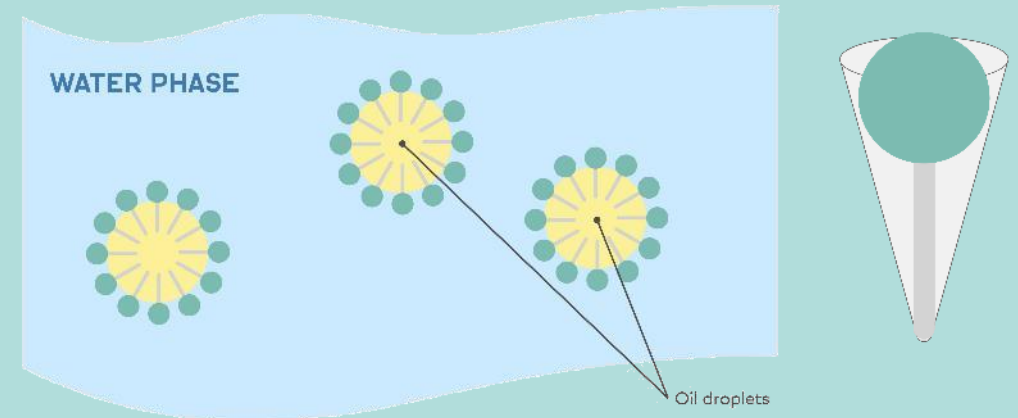
Lamellar Structure

- Phospholipids: 2 Lipophilic tails
- Cylinder-shaped



Micellar Structure

- Lysophospholipids: 1 Lipophilic tail
- Cone-shaped

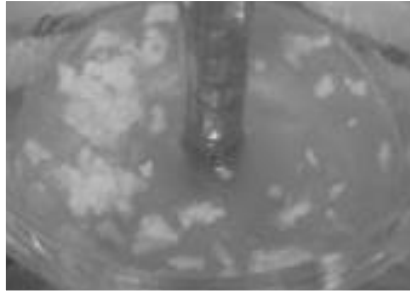


WETTING AGENT

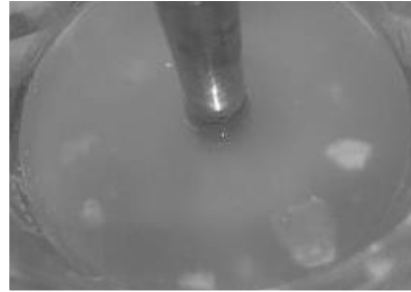
Powders

Powder dispersions – 2% gums into cold water

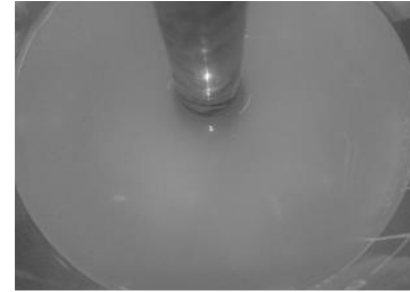
T = 3 min



T = 9 min

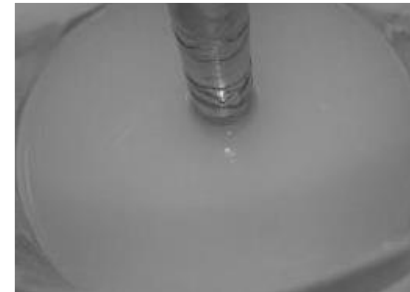


T = 15 min



Polysaccharides

*Polysaccharides
+ Phospholipids
(Siligel™)*



- **Poor wetting properties** – Lumps
- **Difficult to use** – Long wettability
- **Excellent wetting properties** – Homogeneous powder dispersion
- **Easy-to-use** – Time-saving

Thanks to their **wetting properties**, **Phospholipids** help to **easily disperse powders**!

WETTING AGENT

Pigments & UV filters

- **Excellent wetting properties** – Homogeneous pigment & UV filter dispersions without lumps
- **Easy-to-use** – Ease pigment and UV filter wettability (Less strength to disperse them)

Pigment dispersions – 20% pigments into oil



Control



0.5%
Polyglyceryl-3-
Diisostearate



0.5%
Biophilic™ S MB

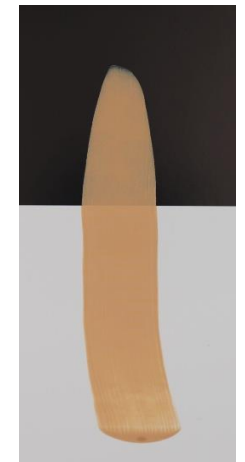
Liquid foundations – 20% pigments



0.5%
Xanthan Gum



2% Ecogel™



2% Siligel™

Phospholipid-based ingredients are **easy-to-use** and **excellent** pigment and UV filter **dispersants**!

PHOSPHOLIPIDS

More than natural ingredients

Sustainability



- By-products (Circular economy)
- Readily biodegradable

Biomimetics



- Lipid bilayer's components
- Skin-identical molecules
- High skin tolerance

Multi-sensory experience



- Softness
- Second skin effect
- Freshness
- Happiness

Activity



- Skin hydration
- Skin barrier reinforcement
- Bioavailability booster

Functionality



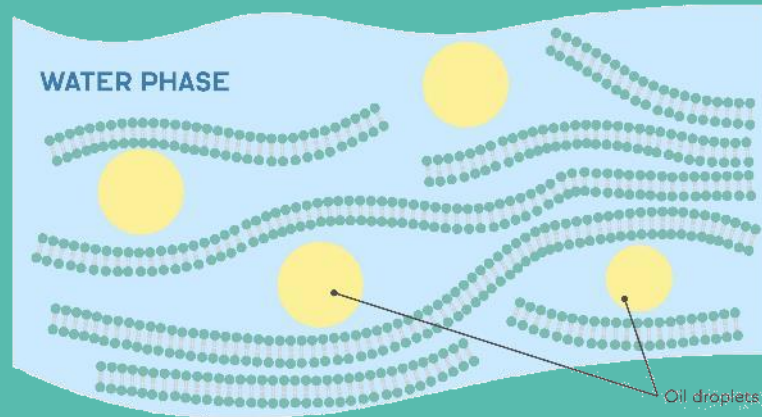
- Emulsifier
- Wetting agent

A close-up, profile view of three women of different ethnicities looking upwards. The woman in the foreground is Black, followed by a woman of Asian descent, and a third woman is partially visible behind her. A semi-transparent teal rectangle covers the left side of the image, containing the text 'FUNCTIONAL INGREDIENTS'.

FUNCTIONAL INGREDIENTS

EMULSIFIERS

Lamellar Structure

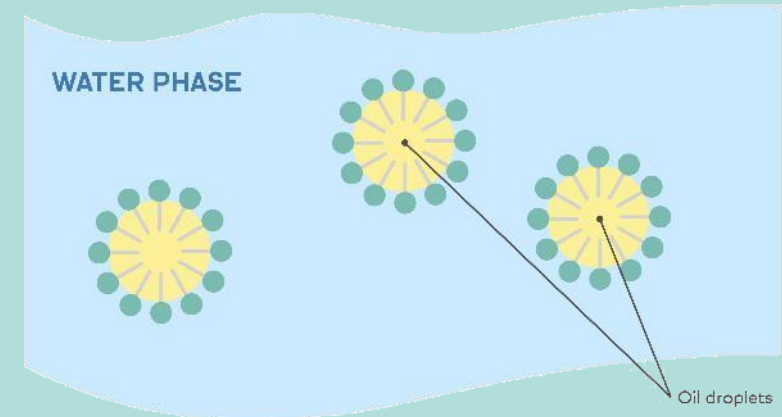


Biophilic™ H MB
Biophilic™ S MB
Heliosoft™

Combination of
Lamellar & Micellar
Structures

Heliofeel™ 22 MB

Micellar Structure

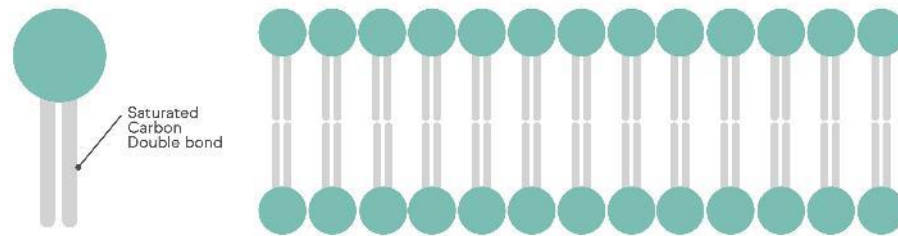


Lysofix™ Liquid

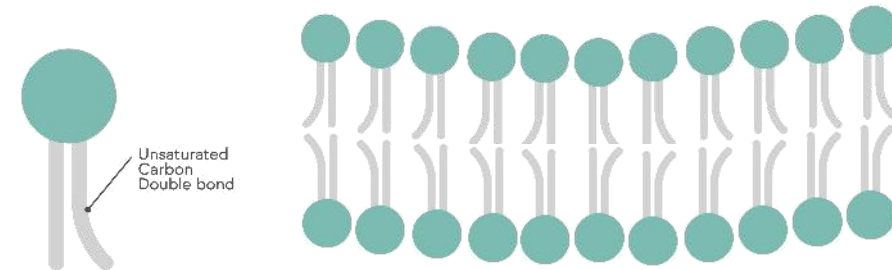
EMULSIFIERS

Lamellar structure

Saturated Phospholipids



Unsaturated Phospholipids



Hydrogenated Phospholipids

- Structure rigidity – Medium to High viscosity
- Non-oxidation sensitive – Slight color

Biophilic™ H MB

Phospholipids

- Structure mobility – Low to Medium viscosity
- Slightly sensitive to oxidation – Medium color

Biophilic™ S MB
Heliosoft™

Phospholipid-based emulsifiers create a **multiplicity of active textures!**

Multiplicity of active textures



FUNCTIONAL

Summary

BIOPHILIC™ H MB

The biomimetic emulsifier
with a cashmere touch

Dosage

1 - 6%

INCI

Hydrogenated
Lecithin (and)
C12-16 Alcohols
(and) Palmitic Acid

Optimum pH

5-7

Appearance

Beige pellets

Applications

O/W emulsifier: 2-6%
Co-emulsifier: >1%
Texture enhancer: >1%



FUNCTIONAL

Summary

BIOPHILIC™ H MB

The biomimetic emulsifier
with a cashmere touch

Textures

From fluid lotion to luxurious thick cream

Dosage

1 - 6%

Optimum pH

5-7

Emulsifying properties

Up to 30% of oil phase (4%)

Wetting properties

Powders, Pigments & UV filters

Easy-to-use

Compatible with pigments &
UV filters

Final viscosity reached at D+1

Applications

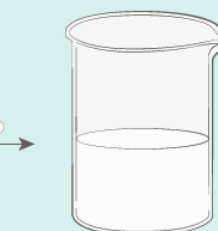
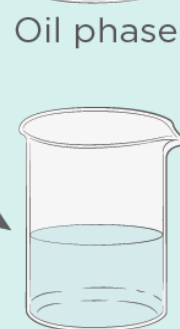


LUCAS MEYER
COSMETICS
by Clariant

P
R
O
C
E
S
S



BIOPHILIC™ H MB



Oil phase

Water phase

After emulsion

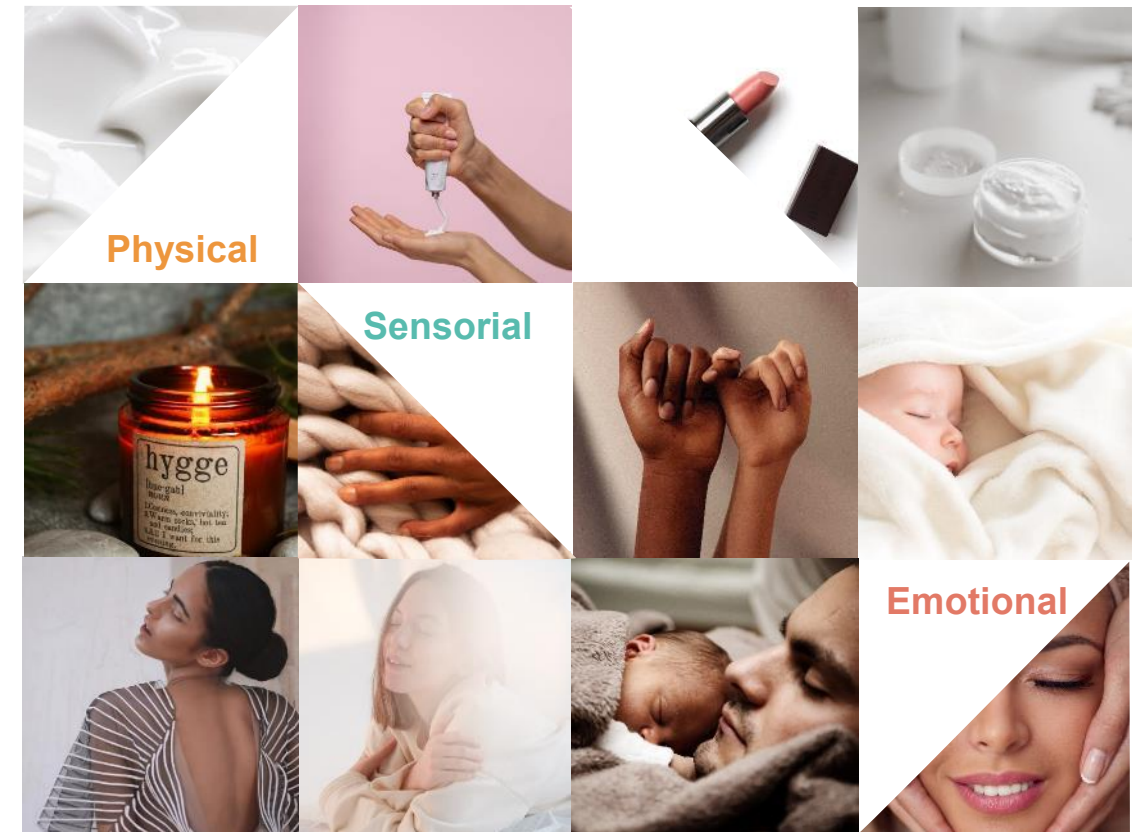
BIOPHILIC™ H MB

Sensory profile

Biophilic™ H MB provides a **cashmere touch** with the characteristic phospholipids' touch to formulas:

- Smooth spreadability
- **Quick penetration**
- **Rich after-feel** but non-tacky & non-greasy
- **Ultra-soft & comfortable** skin after-feel

insp^{era}l by LMC



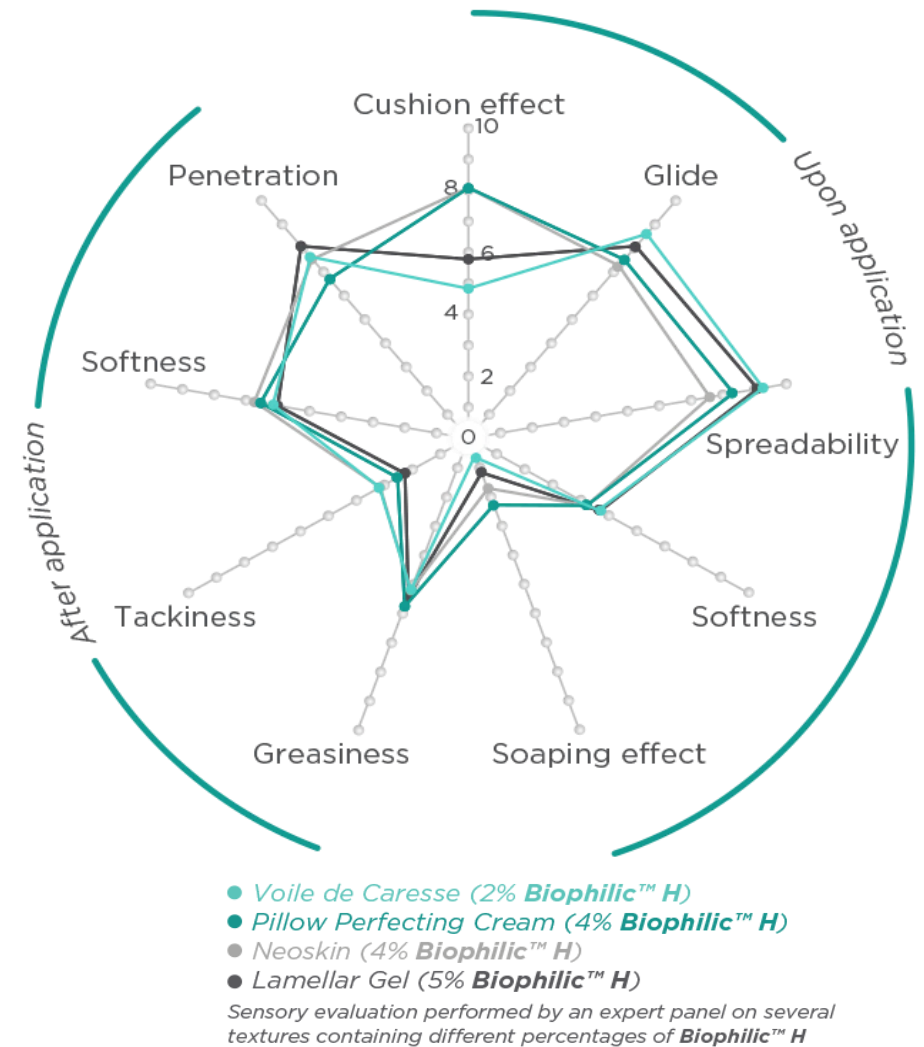
Biophilic™ H MB brings a **second skin effect** and a **cashmere touch** to all kinds of textures!

BIOPHILIC™ H MB

Unique sensory signature

Biophilic™ H MB provides a **unique sensory signature** to each formula characterized by:

- Cushion & shiny emulsions
- High glide and spreadability
- **Quick penetration**
- **Softness**
- **Rich after-feel** but non-tacky & non-greasy



Biophilic™ H MB brings its **unique sensory signature** to all kinds of formulas!

BIOPHILIC™ H MB

Well-being provider

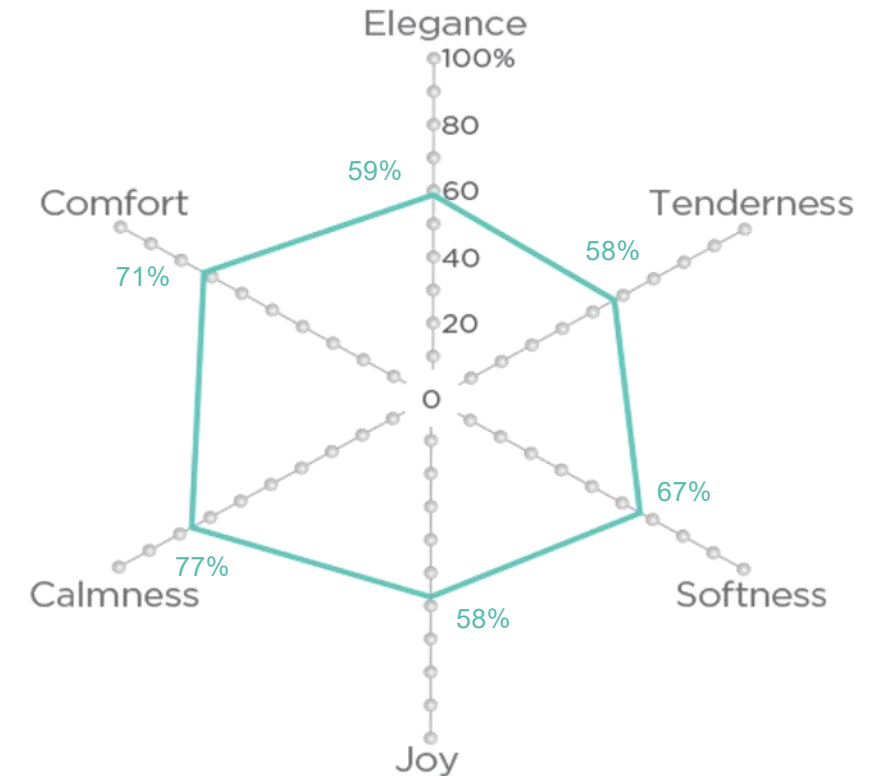
Worldwide sensory evaluation

- **252 women** (20 - 65 years old) in France, USA and China
- Application: Once on the face with the formula containing 4% Biophilic™ H MB
- Assessment: Evaluation of consumer emotions by visualizing a mood board on well-being From 1 (Not matching) to 7 (Matching)



Biophilic™ H MB delivers **consumer global wellness**, regardless of their region or generation:

- 3 different world regions:
Europe, North America and Asia
- 3 different generations:
Baby-boomers, Gen X and Gen Y



Biophilic™ H MB is a universal **well-being provider!**

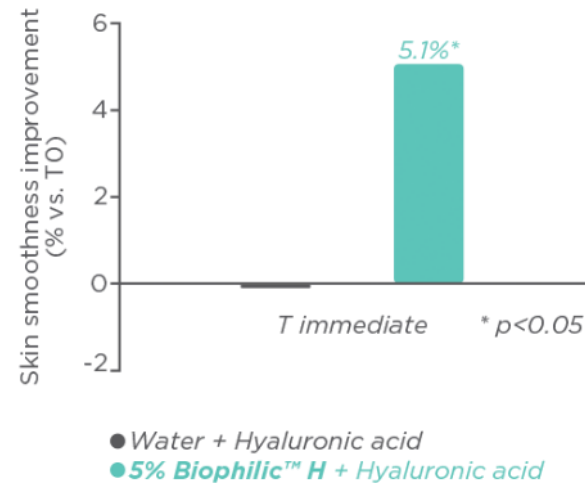
BIOPHILIC™ H MB

Skin complexion

In vivo test

- 23 Caucasian women with healthy skin (45 – 55 years old)
- Application: A single application of both formulas on split-face
- Evaluation by clinical study: Fringe projection on the crow's feet completed by image analysis

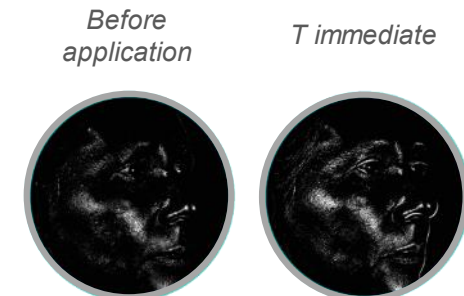
Immediate smoothing effect



83% of women
feels that their
skin is smoother
after senso-active
formula application

Immediate blurring effect

Placebo
Water + Hyaluronic acid



Senso-active formula
5% Biophilic™ H + Hyaluronic acid



Biophilic™ H MB immediately smoothes and blurs the skin, **improving global skin complexion!**

BIOPHILIC™ H MB

Bioavailability Booster - *In vivo*

In vivo test

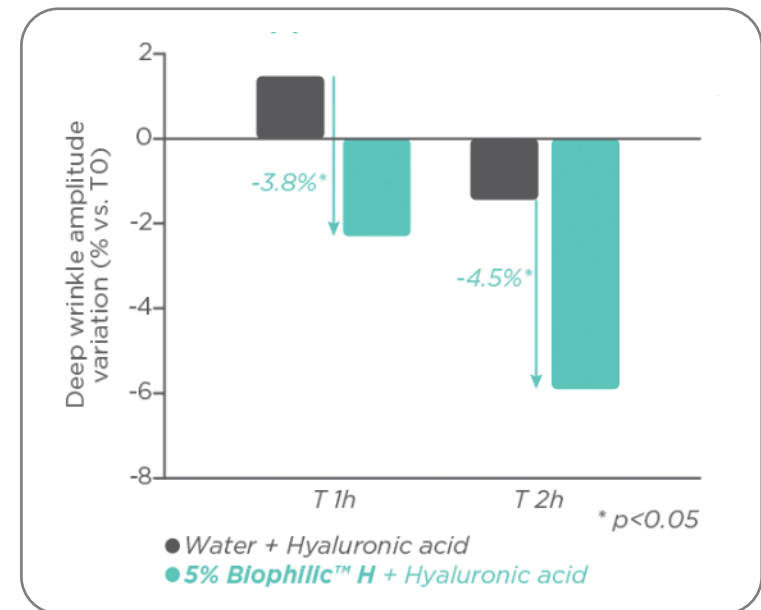
- 23 Caucasian women with healthy skin (45 – 55 years old)
- Application: A single application of both formulas on split-face
- Evaluation by clinical study: Fringe projection on the crow's feet completed by image analysis

Hyaluronic Acid, a well-known active ingredient, acts on:

Deep wrinkle appearance

In synergy with **Biophilic™ H MB**, Hyaluronic acid **reduce deep wrinkle appearance by 4.5% after 2h!**

Bioavailability Booster



Biophilic™ H MB boots the Hyaluronic Acid efficiency by reducing wrinkle appearance up to 2h!

BIOPHILIC™ H MB

The biomimetic emulsifier with a cashmere touch

TECHNICAL FEATURES

- O/W Lamellar emulsifier
- Emulsifies up to 30% of oil phase (4%)
- Excellent pigment wetting properties
- From fluid lotion to luxurious thick cream

ACTIVE PROPERTIES

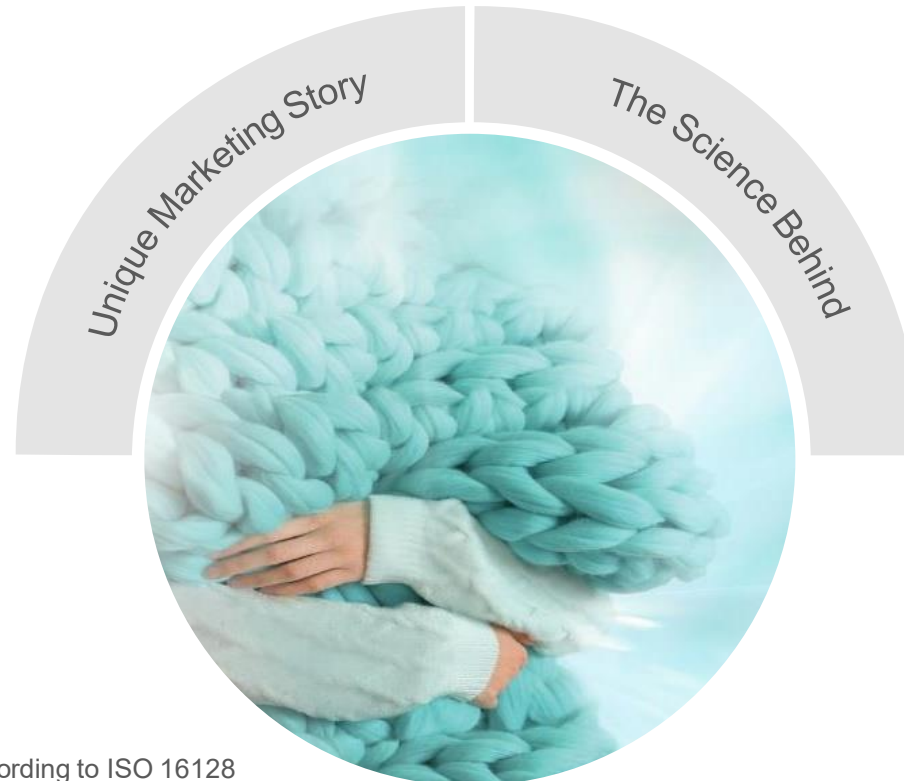
- Biomimetic lamellar structure: Strong active properties
- Skin hydration
- Active bioavailability booster - *In vivo* data

UNIQUE SENSORY

- Cashmere touch
- Rich and non-tacky skin feel
- Second skin effect: Soft skin after-feel
- Well-being emotions approved by worldwide consumers

ORIGIN

- 100% Natural Origin Content (NOC*)
- Origin: Soy & Palm
- Readily biodegradable
- RSPO certified & Nagoya compliant



MANUFACTURER BENEFITS

- Premium senso-active ingredient:
 - Emulsifier with luxurious consistency
 - High skin tolerance & Skin complexion
 - Provides global wellness
- 100% vegetable-based formulas



*according to ISO 16128

LUCAS MEYER
COSMETICS
by Clariant

FUNCTIONAL

Summary

BIOPHILIC™ S MB

The light and velvet
biomimetic emulsifier

Dosage

1 - 6%

INCI

Lecithin (and)
C12-16 Alcohols
(and) Palmitic Acid

Optimum pH

5-7

Appearance

Yellow pellets

Applications

O/W emulsifier: 2-6%
Co-emulsifier: >1%
Texture enhancer: >1%



FUNCTIONAL

Summary

BIOPHILIC™ S MB

The light and velvet
biomimetic emulsifier

Textures

From fluid lotion to supple cream

Dosage

1 - 6%

Optimum pH

5-7

Emulsifying properties

Up to 30% of oil phase (4%)

Wetting properties

Powders, Pigments & UV filters

Easy-to-use

Compatible with pigments &
UV filters

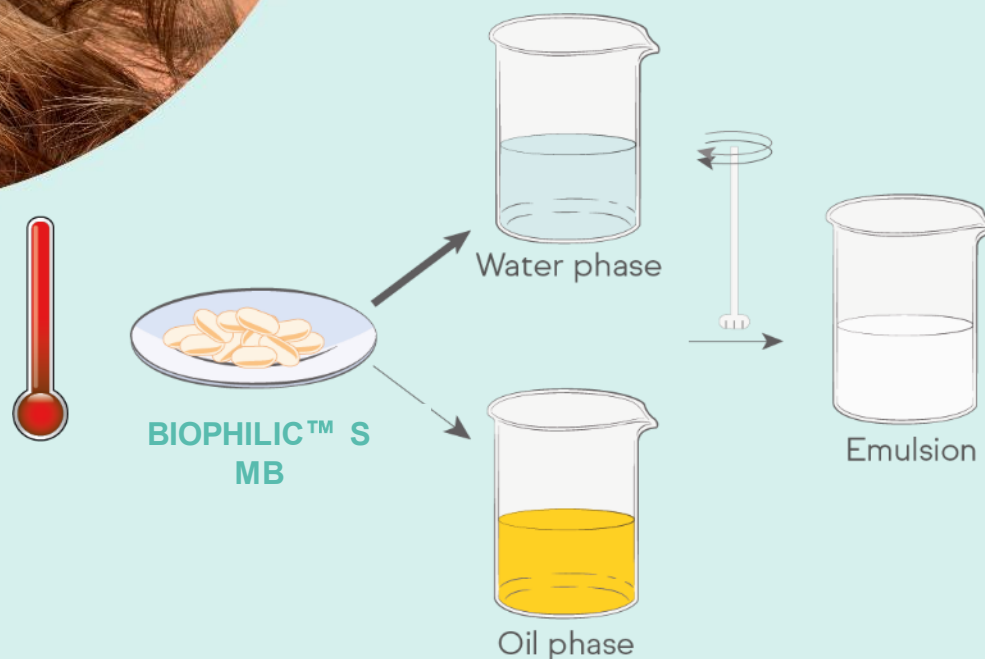
Final viscosity reached at D+1

Applications



LUCAS MEYER
COSMETICS
by Clariant

P
R
O
C
E
S
S



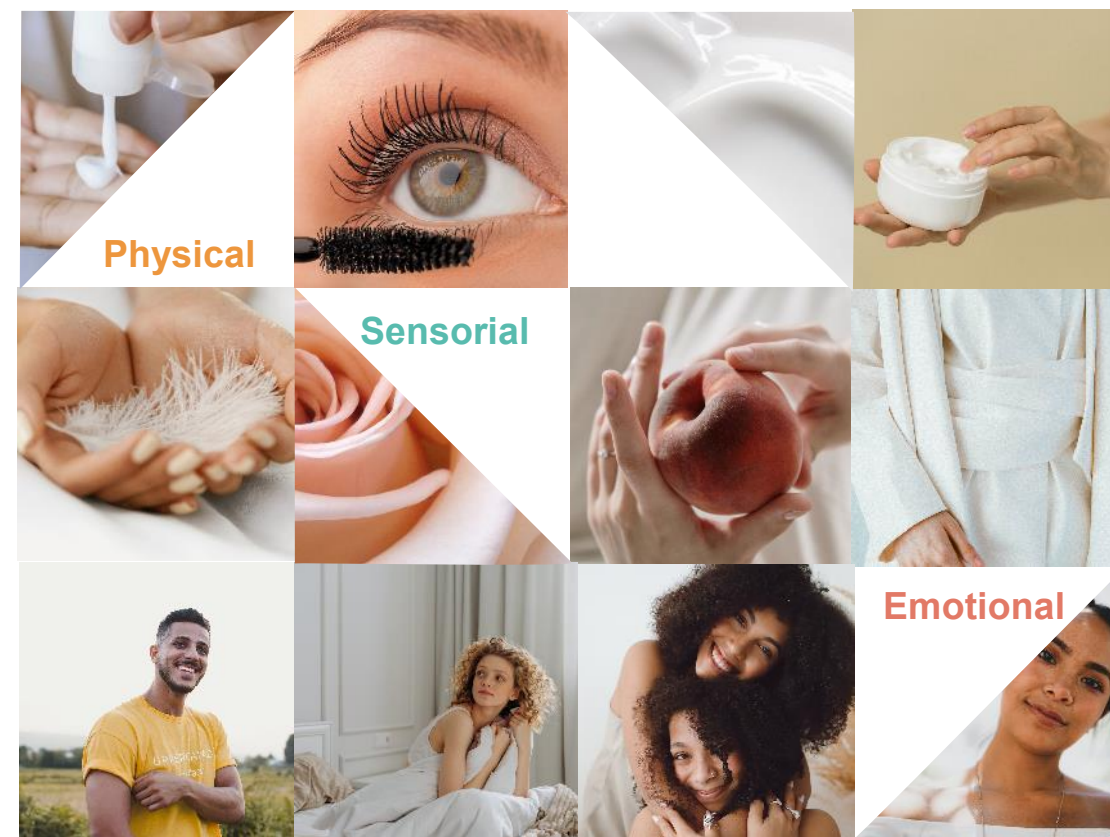
BIOPHILIC™ S MB

Sensory profile

Biophilic™ S MB provides a **velvet touch** with the characteristic phospholipids' touch to formulas:

- High glide and spreadability
- Freshness
- **Softness**
- **Rich after-feel** but non-tacky & non-greasy

insPera^l by LMC



Biophilic™ S MB brings a **velvet touch** with a **rich skin after-feel** to all kinds of formulas!



BIOPHILIC™ S MB

Hair appearance

Ex vivo tests

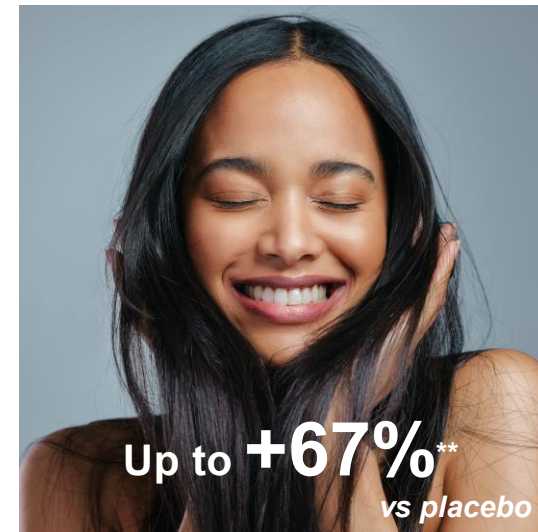
- **4 different hair types** according to the ex vivo tests (from straight to curly hair)
- Application: Solid shampoo containing **1% Biophilic™ S MB** vs placebo (rinse-off applications)



Hair fiber repair



Hair shine



Hair softness

Biophilic™ S MB provides a **flawless hair appearance** from straight to curly hair!



BIOPHILIC™ S MB

Hair manageability

Ex vivo tests

- 4 different hair types according to the ex vivo tests (from straight to curly hair)
- Application: Solid shampoo containing 1% Biophilic™ S MB vs placebo (rinse-off applications)



Easy wet combing



Volume control



Anti-frizz



Curl definition

Biophilic™ S MB empowers natural hair by providing a better hair manageability!



BIOPHILIC™ S MB

Curl definition

Hair Type 2b



Placebo



1%
Biophilic™ S MB

+47%***
vs
placebo

Hair Type 2c



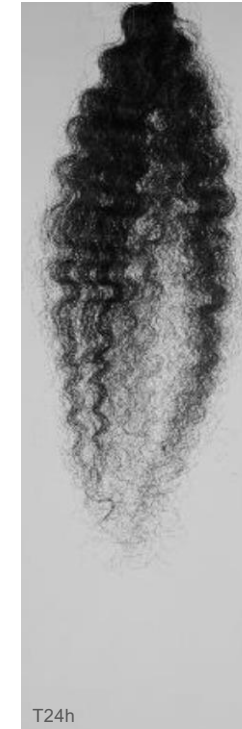
Placebo



1%
Biophilic™ S MB

+33%*
vs
placebo

Hair Type 3a



Placebo



1%
Biophilic™ S MB

+39%**
vs
placebo

Biophilic™ S MB improves curl definition on wavy and curly hair!



BIOPHILIC™ S MB

Color cosmetics

Pigment dispersions – 45% pigments into oil

Control



0.5%
Biophilic™ S MB



Lipsticks – 10% organic pigments



Control



0.5%
Biophilic™ S MB

Biophilic™ S MB is an efficient **wetting agent** as it facilitates pigment dispersions, conducting to a **more homogeneous color** in formula!

BIOPHILIC™ S MB

The light and velvet biomimetic emulsifier

TECHNICAL FEATURES

- O/W Lamellar emulsifier
- Emulsifies up to 30% of oil phase (4%)
- Excellent pigment wetting properties
- From fluid lotion to supple cream

ACTIVE PROPERTIES

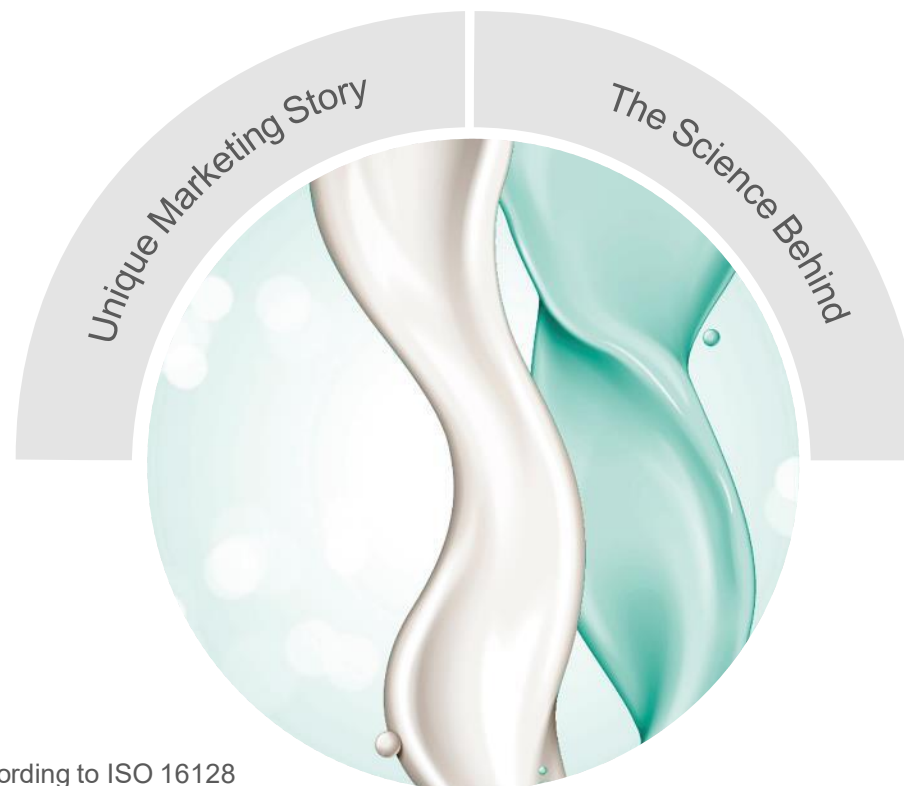
- Biomimetic lamellar structure: Strong active properties
- Skin hydration
- Active bioavailability booster

UNIQUE SENSORY

- Velvet touch
- Rich and non-tacky skin feel
- Second skin effect: Soft skin after-feel

ORIGIN

- 100% Natural Origin Content (NOC*)
- Origin: Soy & Palm
- Readily biodegradable
- RSPO certified & Nagoya compliant



MANUFACTURER BENEFITS

- Cost-effective multifunctional ingredient:
 - Emulsifier & Pigment wetting agent
 - High skin tolerance
 - Relevant for Hair Care
- 100% vegetable-based formulas



*according to ISO 16128

FUNCTIONAL

Summary

HELIOSOFT™

The mild and soft
lamellar emulsifier

Dosage

1 - 4%

INCI

Behenyl Alcohol (and)
Glyceryl Behenate
(and) Lecithin

Optimum pH

5-7

Appearance

Brown pellets

Applications

O/W emulsifier: 2-4%
Co-emulsifier: >1%
Texture enhancer: >1%



FUNCTIONAL

Summary

HELIOSOFT™

The mild and soft
lamellar emulsifier

Textures

From fluid lotion to thick cream

Dosage

1 - 4%

Optimum pH

5-7

Emulsifying properties

Up to 40% of oil phase (4%)

Wetting properties

Powders, Pigments & UV filters

Easy-to-use

Compatible with pigments &
UV filters

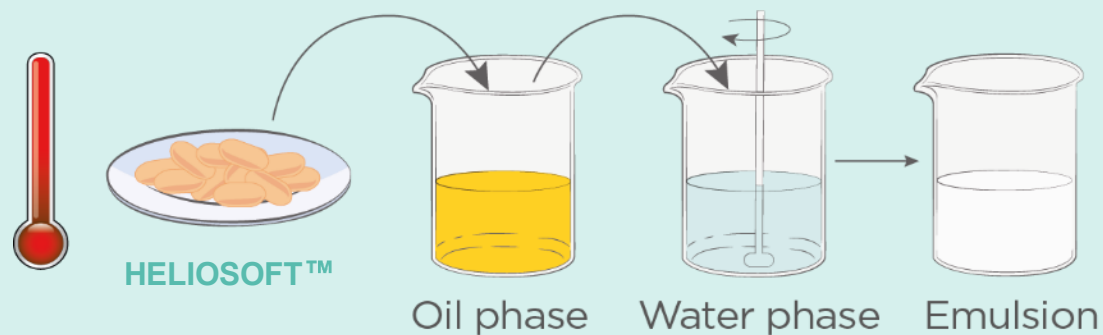
Final viscosity reached at D+1

Applications



LUCAS MEYER
COSMETICS
by Clariant

P
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S



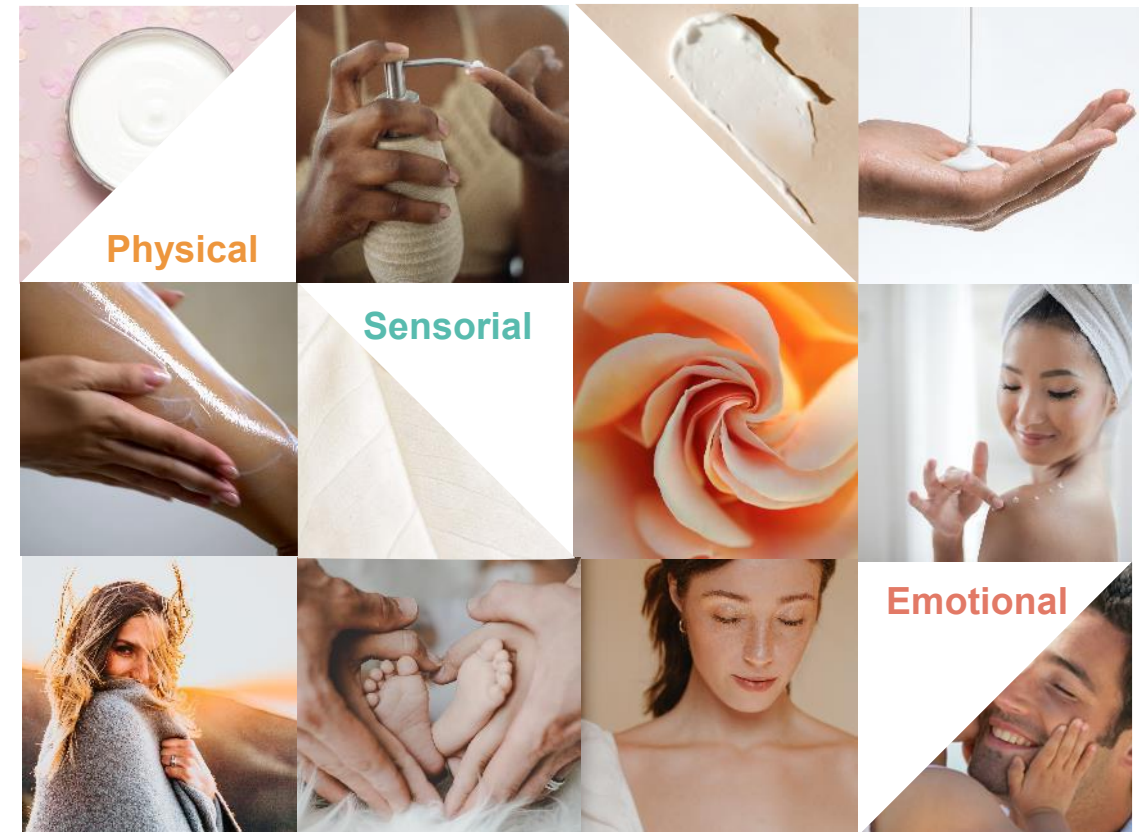
HELIOsoft™

Sensory profile

Heliosoft™ provides an **ultra-soft & unctuous touch** with the characteristic phospholipids' touch to formulas:

- Smooth spreadability
- **Quick penetration**
- Mild skin feel but non-tacky
- **Very-soft & cocooning skin after-feel**

insp^{er}al by LMC



Heliosoft™ brings an **ultra-soft & unctuous touch** with cocooning sensations to all kinds of formulas!

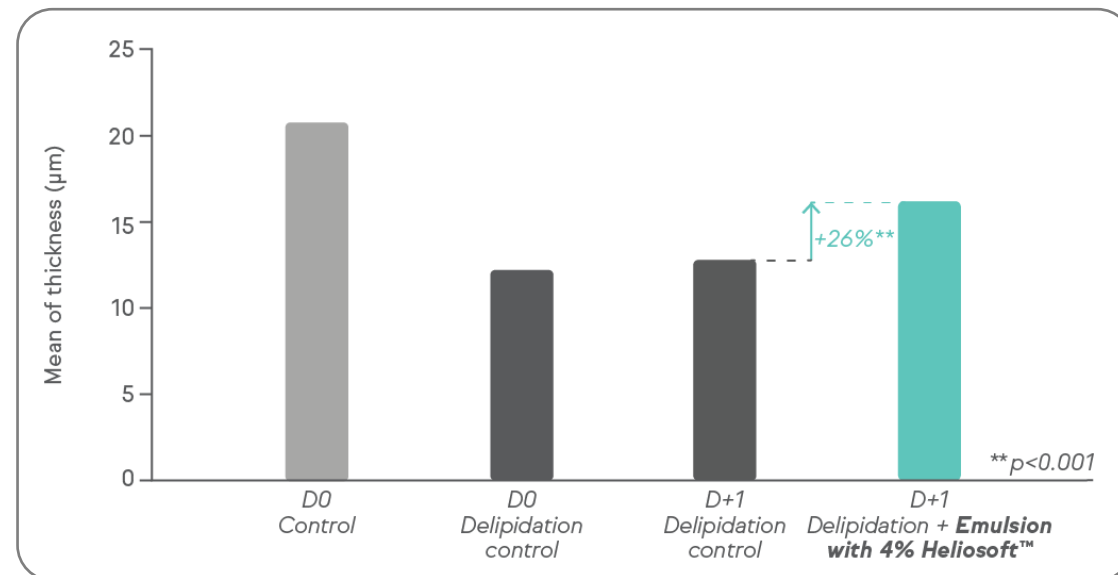
HELIOSOFT™

Damaged skin repair

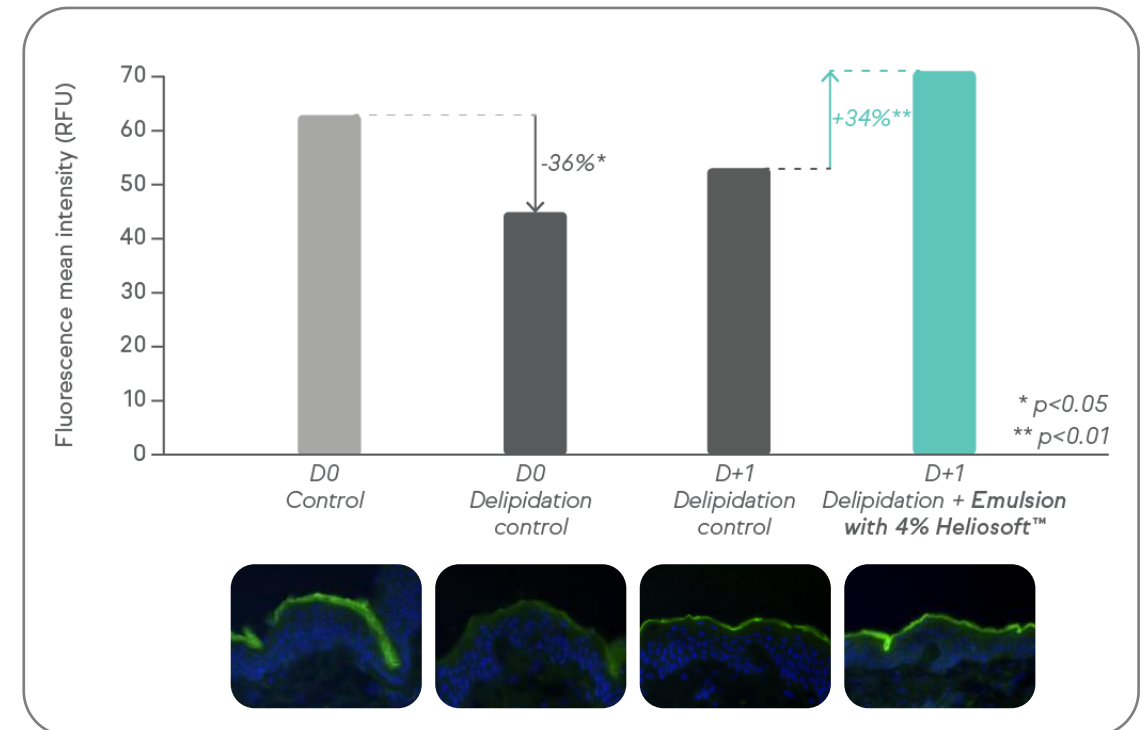
Ex vivo test

- Human skin explant (33-year-old Caucasian woman)
- De-lipidation (tape-strippings, ethanol and acetone) to mimic a damaged skin
- Application of an emulsion with 4% Heliosoft™

Stratum Corneum's thickness



Neutral lipid content in the *Stratum Corneum*



Heliosoft™ repairs damaged skin by increasing lipid content of the *Stratum Corneum* and its thickness after delipidation.

HELIOSOFT™

Sensitive skin

In vivo test

- 20 women with sensitive skin (33 – 69 years old)
- Application: Once a day on the face with a simple formula containing 2% Heliosoft™
- Evaluation after 28 days: **Self-assessment** and Dermatological control

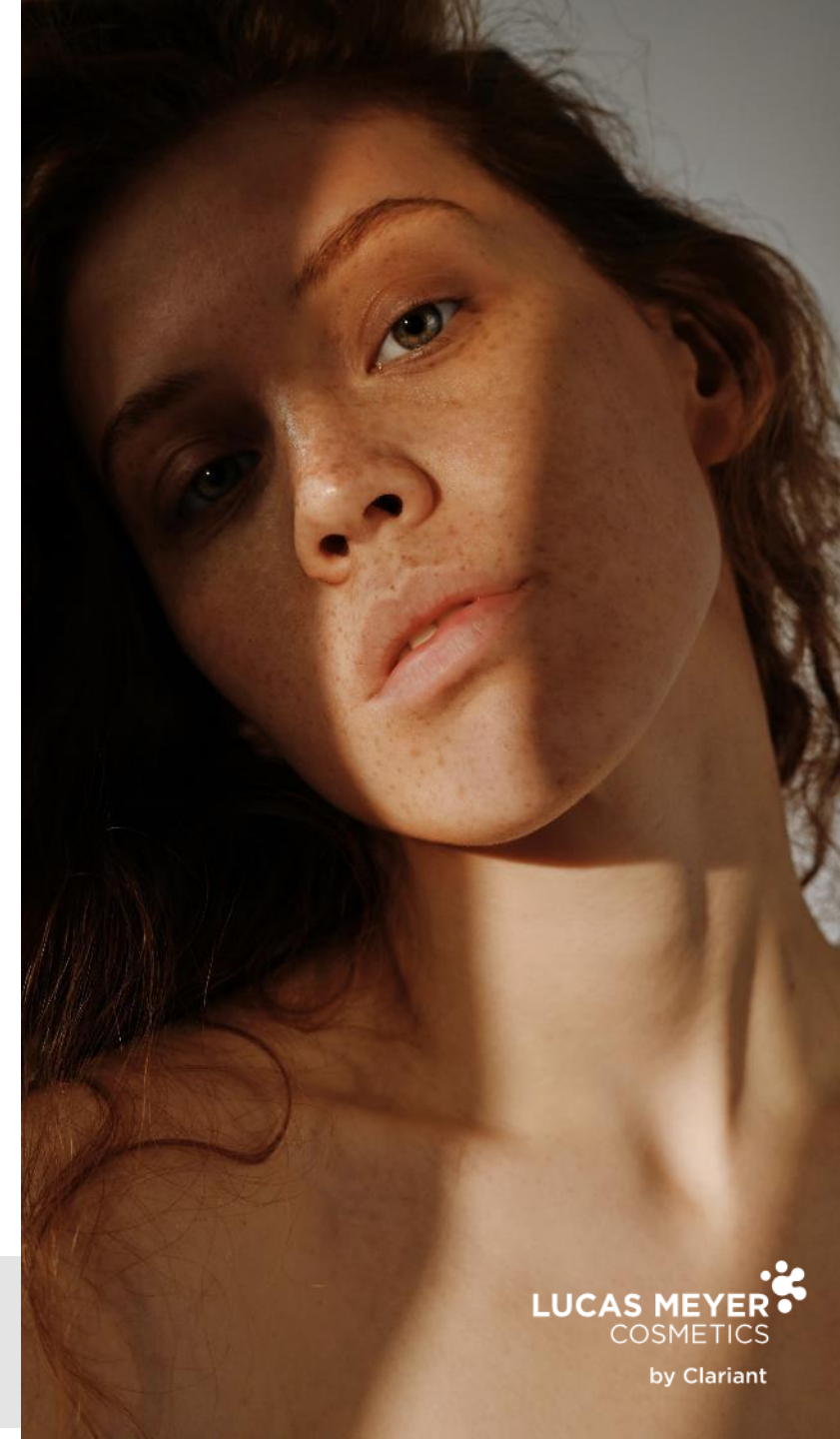
90% of women
claims that this
formula is
suitable for their
sensitive skin

90% of women
feels that their
skin is softened
after formula
application

According to
95% of women 'my
skin is hydrated,
nourished & soothed'

The formula
'improves the
comfort of my skin'
according to
85% of women

Heliosoft™ is suitable for **sensitive skin!**



HELIOSOFT™

The mild and soft lamellar emulsifier

TECHNICAL FEATURES

- O/W Lamellar emulsifier
- Emulsifies up to 40% of oil phase (4%)
- Excellent pigment wetting properties
- From light spray to thick cream

ACTIVE PROPERTIES

- Biomimetic lamellar structure: Strong active properties
- Skin hydration & repair
- Active bioavailability booster

UNIQUE SENSORY

- Ultra-soft & unctuous touch
- Mild and non-tacky skin feel
- Second skin effect: Very soft skin after-feel
- Suitable for sensitive skin

ORIGIN

- 100% Natural Origin Content (NOC*)
- Origin: Sunflower & Rapeseed
- Readily biodegradable
- Nagoya compliant



MANUFACTURER BENEFITS

- Ultra-sensory multifunctional ingredient
 - Emulsifier designed for sensitive skin
 - Cocooning sensations
 - Repairs damaged skin
- 100% vegetable-based formulas



*according to ISO 16128

FUNCTIONAL

Summary

HELIOFEEL™ 22 MB

The versatile emulsifier
with light skin feel

Dosage

1 - 6%

INCI

Glyceryl Stearate
Citrate (and)
Polyglyceryl-3 Stearate
(and) Hydrogenated
Lecithin

Optimum pH

4-8

Appearance

Yellow to brown
pellets

Applications

O/W emulsifier: 2-6%
Co-emulsifier: >1%
Texture enhancer: >1%



FUNCTIONAL

Summary

HELIOFEEL™ 22 MB

The versatile emulsifier
with light skin feel

Textures

From mist to luxurious butter

Dosage

1 - 6%

Optimum pH

4-8

Emulsifying properties

Up to 40% of oil phase (4%)

Wetting properties

Powders, Pigments & UV filters

Easy-to-use

Compatible with pigments &
UV filters

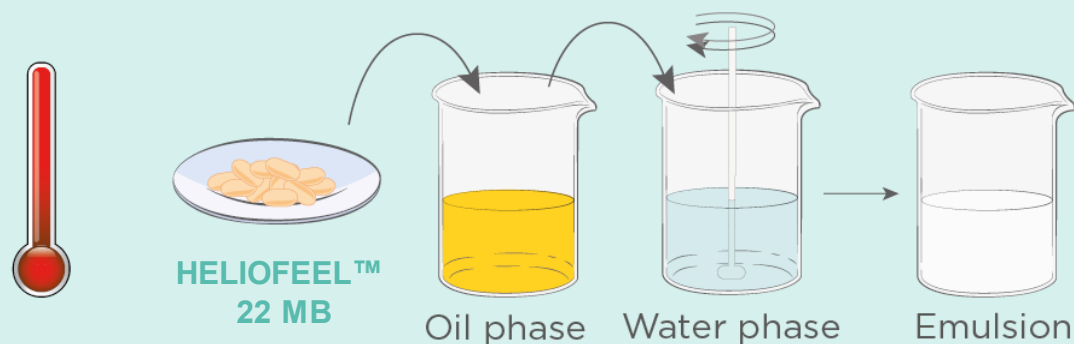
Final viscosity reached at D+1

Applications



LUCAS MEYER
COSMETICS
by Clariant

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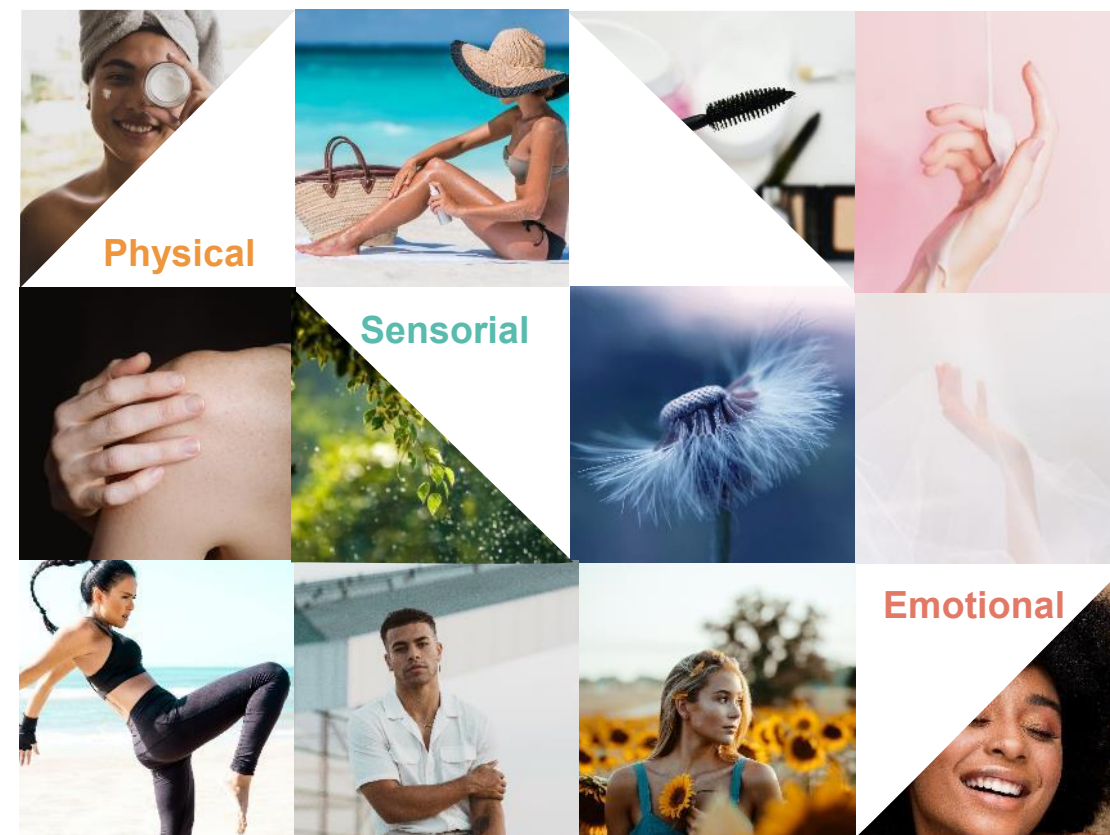
HELIOFEEL™ 22 MB

Sensory profile

Heliofeel™ 22 MB provides a **light and soft touch** with the characteristic phospholipids' touch to formulas:

- High spreadability
- **Quick penetration**
- Freshness
- **Softness**
- Non-tacky & non-greasy

insp^{era}l by LMC



Heliofeel™ 22 MB brings a **light sensory signature** to all kinds of formulas!



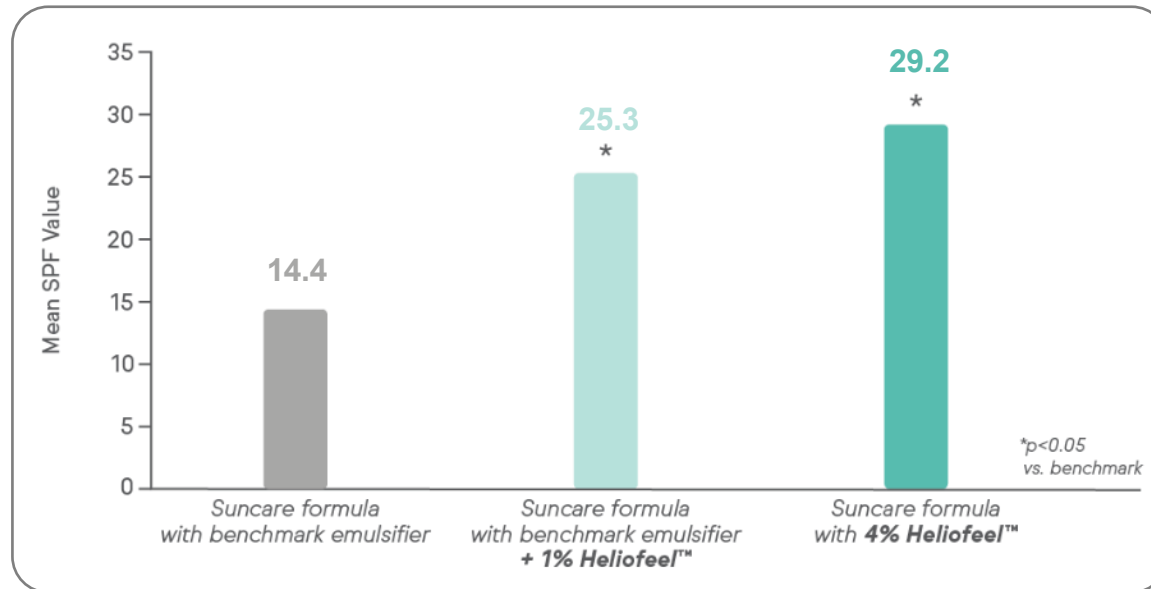
HELIOFEEL™ 22 MB

SPF Boosting & Water resistance

In vivo test

- 10 volunteers (18 – 69 years old)
- Application: 1.2 mg/cm² of the formula on the skin

SPF Boosting

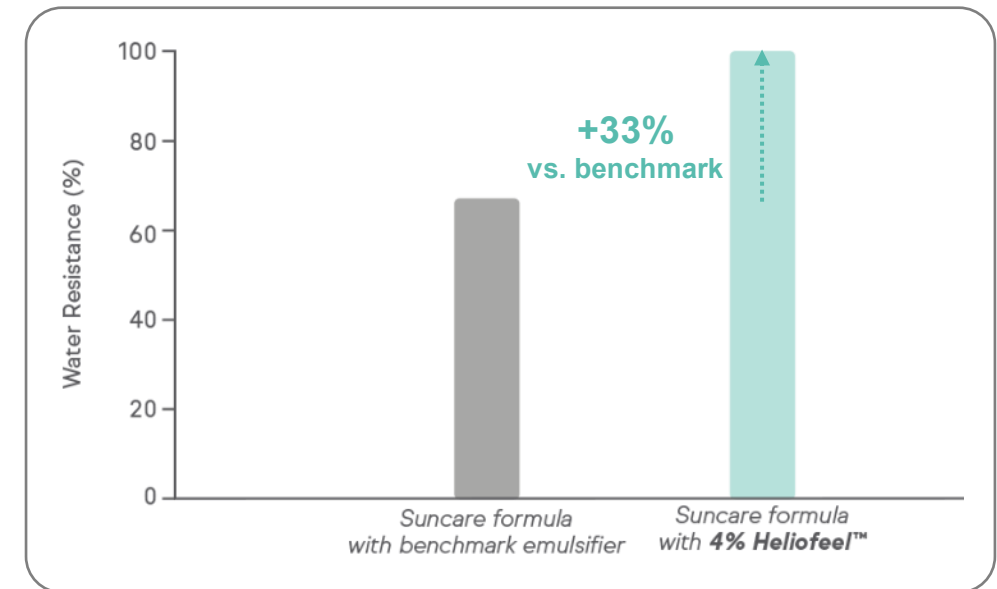


Formulas developed to achieve SPF 30 *in silico*, based on theoretical calculation

In vitro test

- Water bath for 20 min at 30°C, Dry for 15 min at 37°C
- Application: 1.2 mg/cm² of the formula on the skin

Water resistance

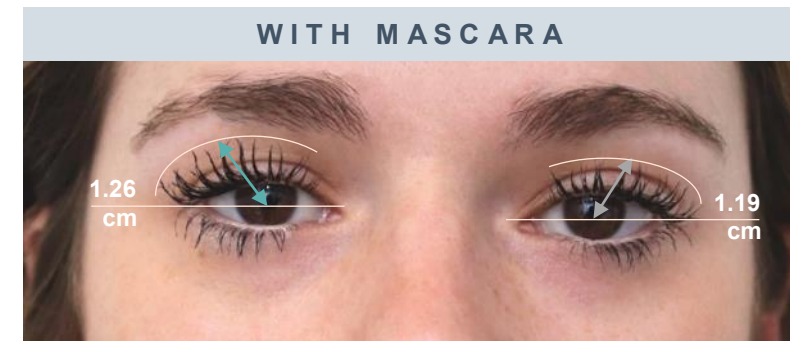


Heliofeel™ 22 MB provides **SPF boosting** and **water resistance** to sun care formulas!

HELIOFEEL™ 22 MB

Color cosmetics

	Heliofeel™ 22 MB	Glyceryl Stearate
Stability	● ● ●	● ● ●
Lengthening	● ● ●	● ●
Volume	● ● ●	● ●
Curving	● ● ●	● ●
Long lasting	● ● ●	● ●
Easy Removing	● ● ●	● ●



Mascara with
4% Heliofeel™ 22 MB

Natural Market Mascara

+35% look extension

+28% look extension

Heliofeel™ 22 MB delivers **better performances** than Glyceryl Stearate into **mascara** formulas!

HELIOFEEL™ 22 MB

High texture versatility



Heliofeel™ 22 MB creates a **multiplicity of textures** for all kinds of applications, thanks to its high **versatility!**

HELIOFEEL™ 22 MB

The versatile emulsifier with a light skin feel

TECHNICAL FEATURES

- O/W Lamellar & Micellar emulsifier
- Emulsifies up to 40% of oil phase (4%)
- Excellent pigment wetting properties
- From light spray to luxurious butter

ACTIVE PROPERTIES

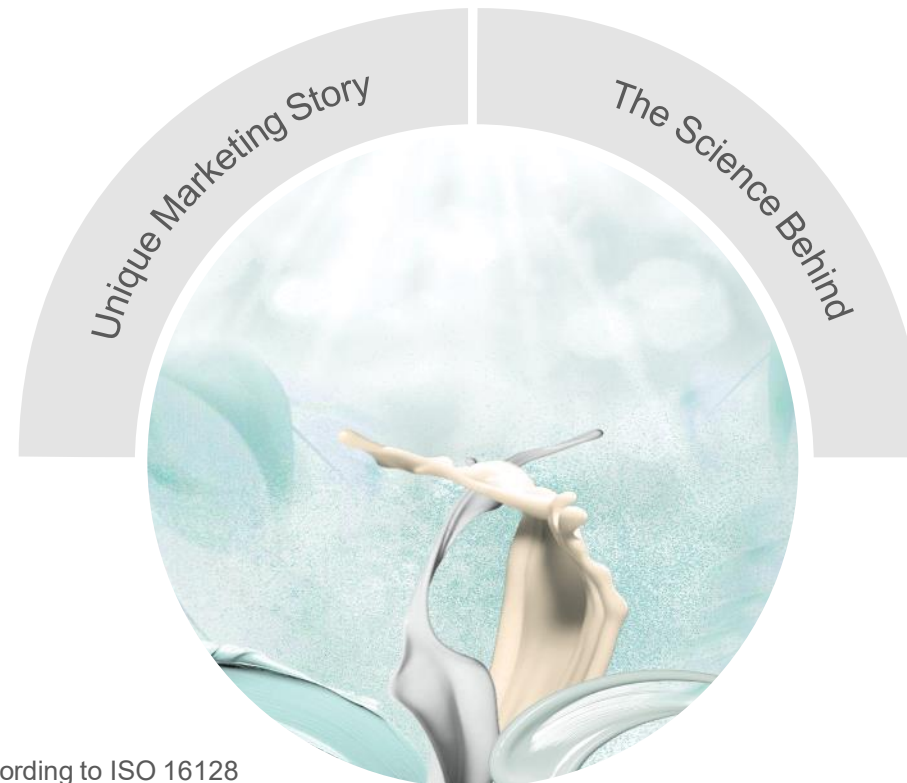
- Biomimetic lamellar structure: Strong active properties
- Skin hydration
- Active bioavailability booster

UNIQUE SENSORY

- Soft touch
- Light and non-tacky skin feel
- Second skin effect: Soft skin after-feel

ORIGIN

- 100% Natural Origin Content (NOC*)
- Origin: Sunflower & Palm
- Readily biodegradable
- RSPO certified & Nagoya compliant



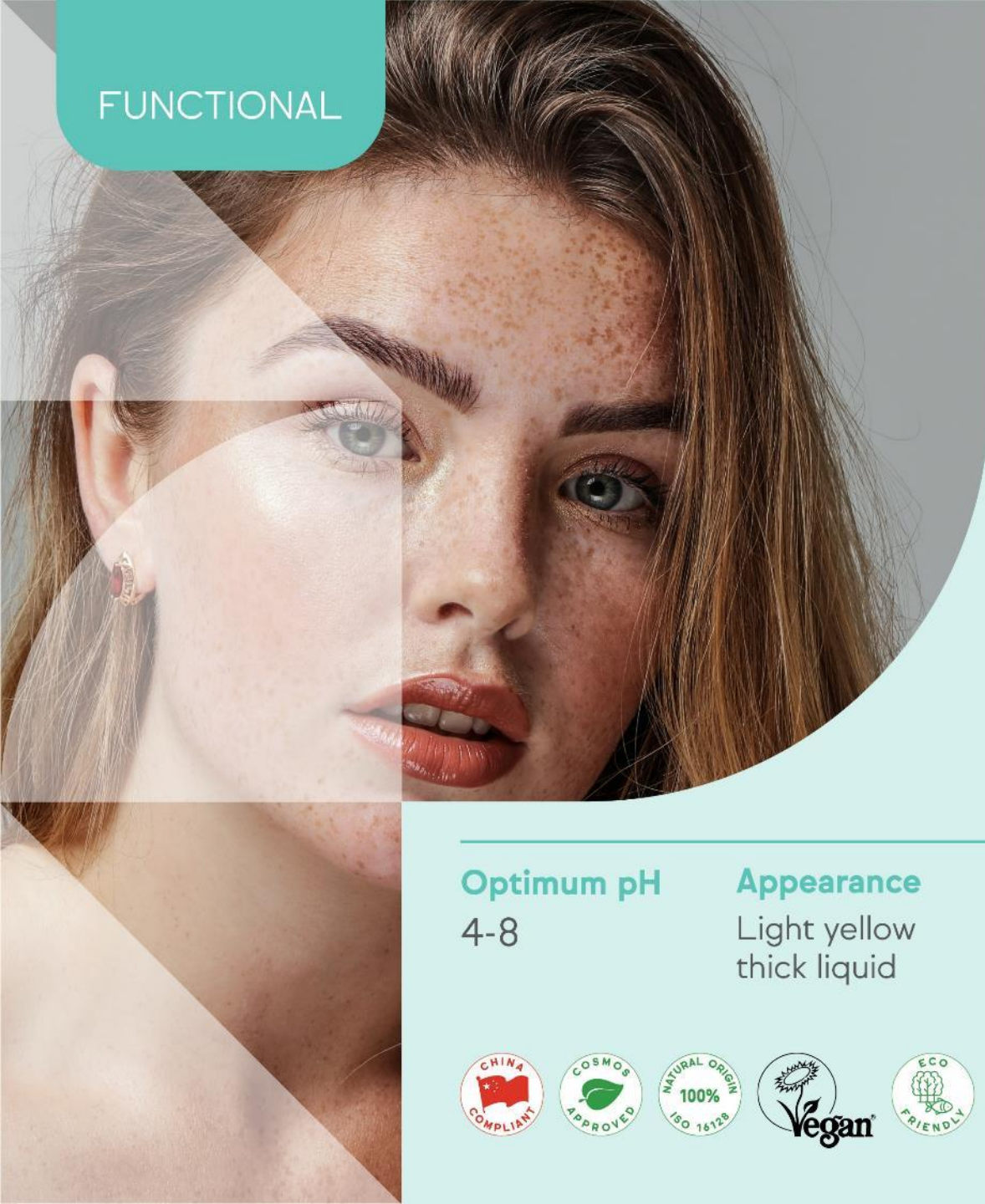
MANUFACTURER BENEFITS

- Multifunctional senso-active ingredient:
 - Emulsifier with high texture versatility
 - High skin tolerance
 - Relevant for Sun care
- 100% vegetable-based formulas



*according to ISO 16128

FUNCTIONAL



Summary

LYSOFIX™ LIQUID

The natural and elegant cold process emulsifier with a silky touch

Dosage

1 - 5%

INCI

Glycerin (and) Glycine Soja (Soybean) Seed Extract



Optimum pH

4-8

Appearance

Light yellow thick liquid

Applications

O/W emulsifier: 3-5%
Co-emulsifier: > 0.5%



FUNCTIONAL

Summary

LYSOFIX™ LIQUID

The natural and elegant cold process emulsifier with a silky touch

Textures

From mist to supple cream

Dosage

1 - 5%

Optimum pH

4-8

Emulsifying properties

Up to 60% of oil phase (5%)

Wetting properties

Powders, Pigments & UV filters

Very easy-to-use

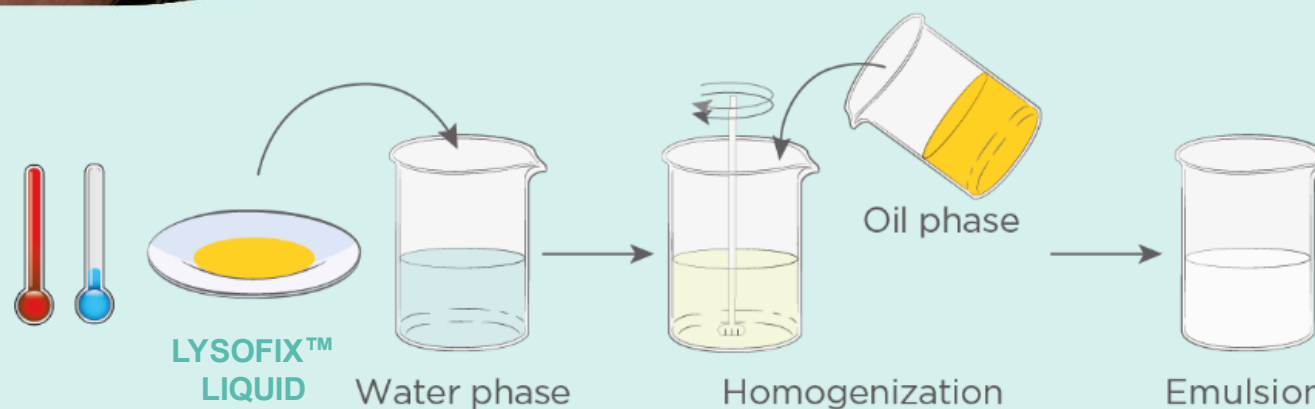
Compatible with pigments & UV filters

Applications



LUCAS MEYER
COSMETICS
by Clariant

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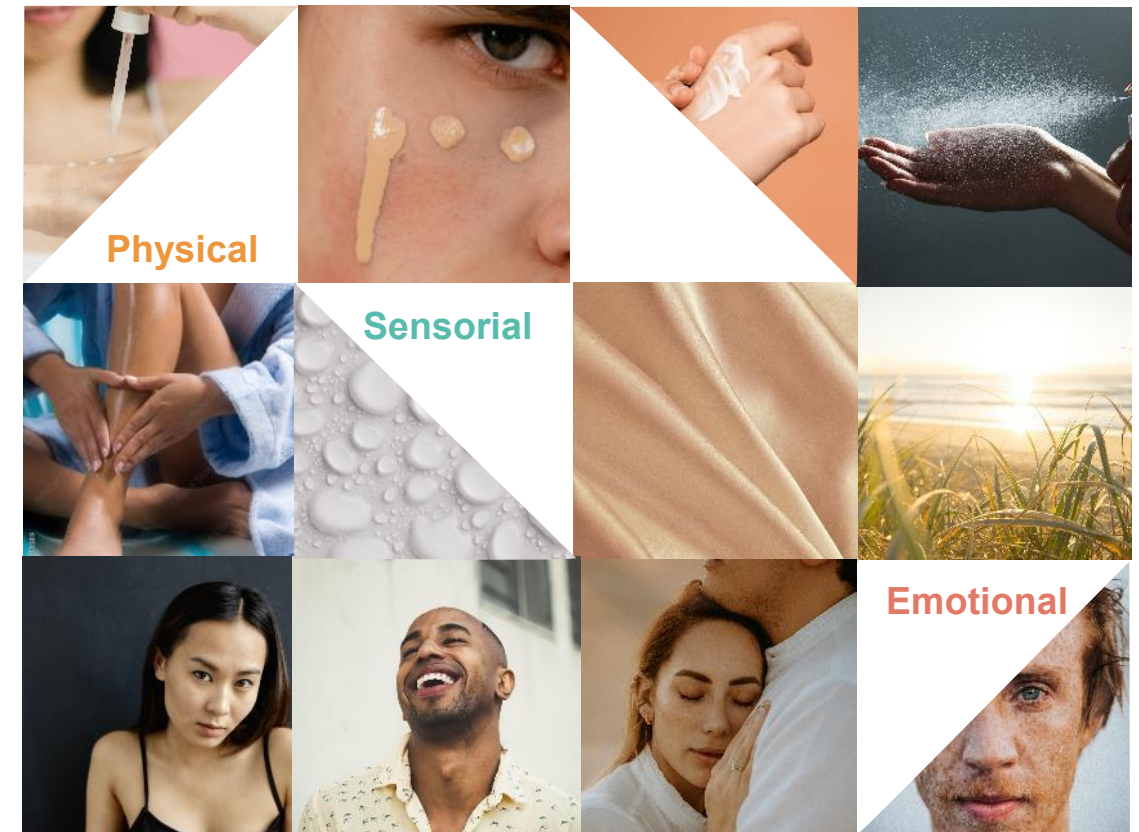
LYSOFIX™ LIQUID

Sensory profile

Lysofix™ Liquid provides a **silky touch** with a unique sensory profile characterized by:

- High glide and spreadability
- **Very-light & elegant skin feel**
- **Luxurious after-feel** but non-tacky

insPera^l by LMC



Lysofix™ Liquid brings a **silky and elegant touch** to all kinds of formulas!

LYSOFIX™ LIQUID

Skin Restructuring

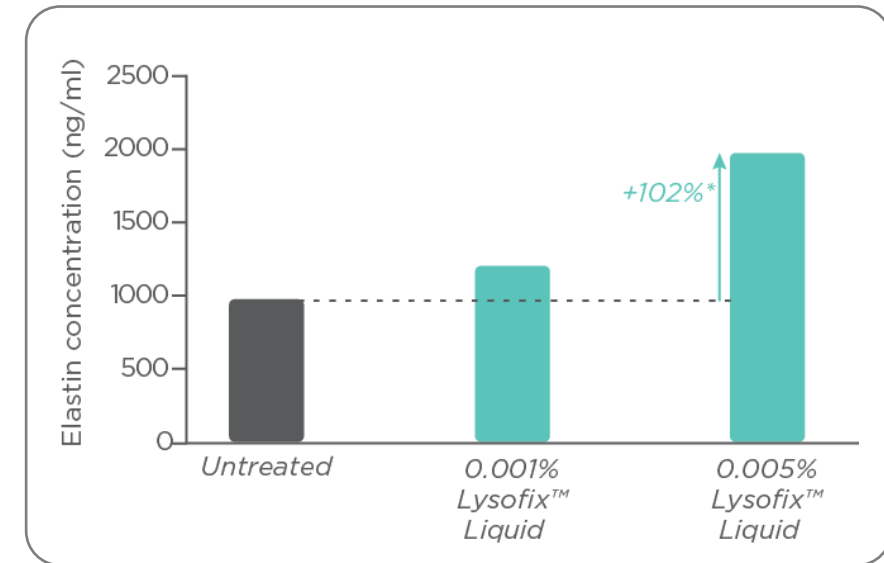
Ex vivo test

- Culture of human fibroblast to mimic NHDF
- Biomarkers: Type I C-peptide (Soluble elastin)
- Evaluation: Quantification of Elastin synthesis after 48h by ELISA

Thanks to its **Lysophosphatidic Acid** content, **Lysofix™ Liquid** restructures the skin by increasing Elastin cell production:

- A significant increase of 102% on elastin concentration!

Effects on Elastin production



Lysofix™ Liquid boosts **Elastin cell production** for healthier skin!

LYSOFIX™ LIQUID

Skin Soothing

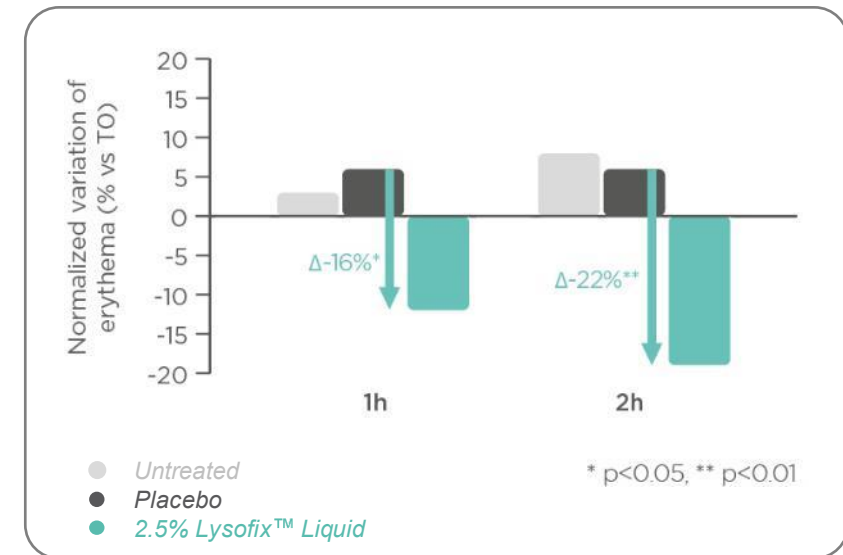
In vivo test

- 20 Caucasian volunteers (35 – 65 years old)
- Application: 2 mg/cm² of each formula on the back on skin redness
- Evaluation: Erythema index measurements by Mexameter® MX 18 at T0, T1h and T2h

Thanks to its **Lysophosphatidic Acid** content, **Lysofix™ Liquid** inhibits inflammation and acts as a **soothing** active ingredient on irritated skins:

- After 1h: A significant decrease of 16% on erythema index!
- After 2h: A significant decrease of 22% on erythema index!

Soothing effect



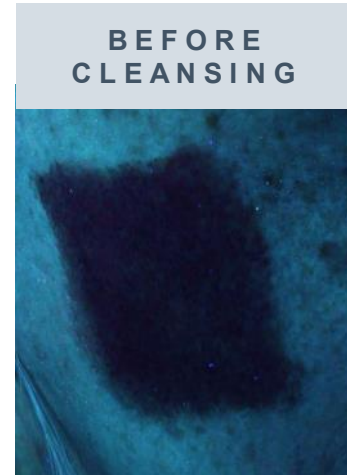
Lysofix™ Liquid reduces erythema appearance, as an **anti-redness** ingredient for **soothed skin!**

LYSOFIX™ LIQUID

Make-Up Removal

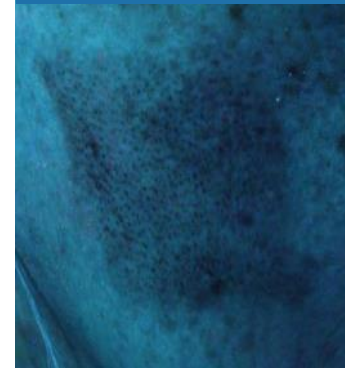
Cleansing Power

(In vivo test)

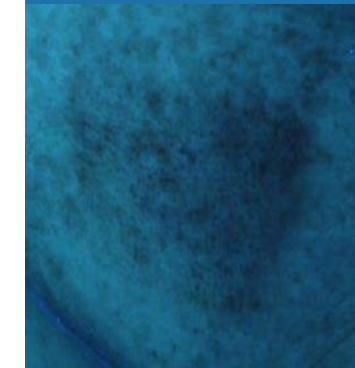


AFTER CLEANSING

74% of cleansing

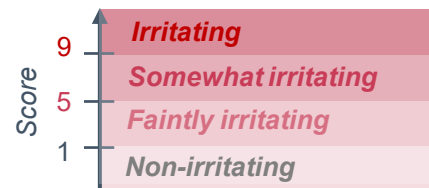


75% of cleansing



Irritation Potential

(In vitro test)



5

0.6% Disodium
Cocoamphodiacetate

1

0.4% Disodium
Cocoamphodiacetate
+ 1% Lysofix™ Liquid

Lysofix™ Liquid maintains the cleansing performances of surfactants while reducing their irritation potential!

LYSOFIX™ LIQUID

The natural and elegant cold process emulsifier with a silky touch

TECHNICAL FEATURES

- O/W Micellar emulsifier
- Emulsifies up to 60% of oil phase (5%)
- Excellent pigment wetting properties
- From light spray to supple cream
- Cold or Hot process

ACTIVE PROPERTIES

- Biomimetic lamellar structure: Strong active properties
- Skin hydration
- Active bioavailability booster

UNIQUE SENSORY

- Silky touch
- Light and non-tacky skin feel
- Second skin effect: Soft skin after-feel
- Anti-redness skin after cleansing

ORIGIN

- 100% Natural Origin Content (NOC*)
- Origin: Soy & Palm
- Readily biodegradable
- RSPO certified & Nagoya compliant



MANUFACTURER BENEFITS

- Luxurious senso-active ingredient:
 - Emulsifier with very light consistency
 - High skin tolerance & Well-aging
 - Restructures & Soothes the skin
- Very easy-to-use, Time & Energy-savings
- Saves your emulsion: The perfect partner for formulators



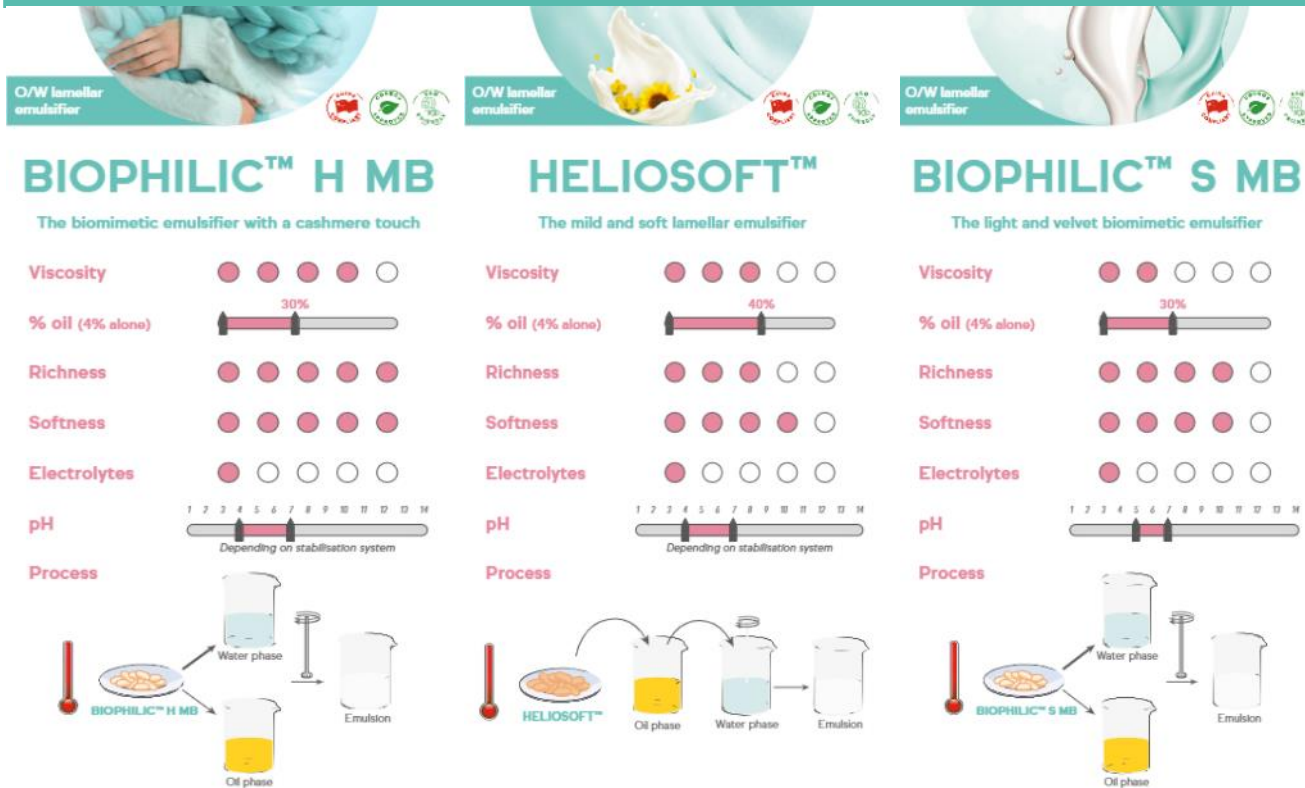
*according to ISO 16128

LUCAS MEYER
COSMETICS
by Clariant

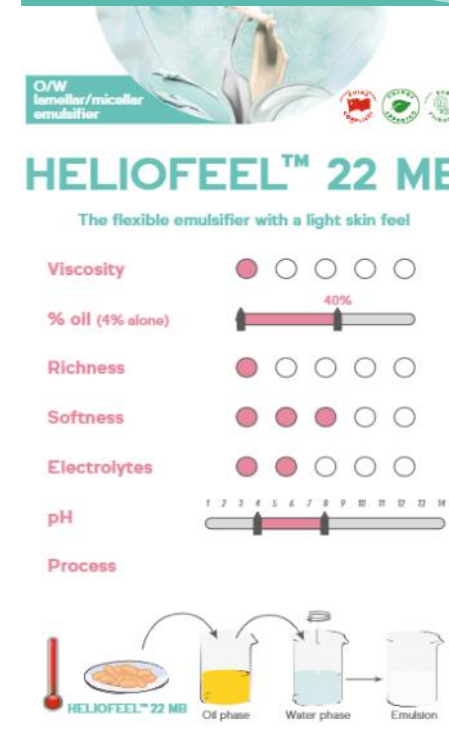
EMULSIFIERS

Multiplicity of active textures

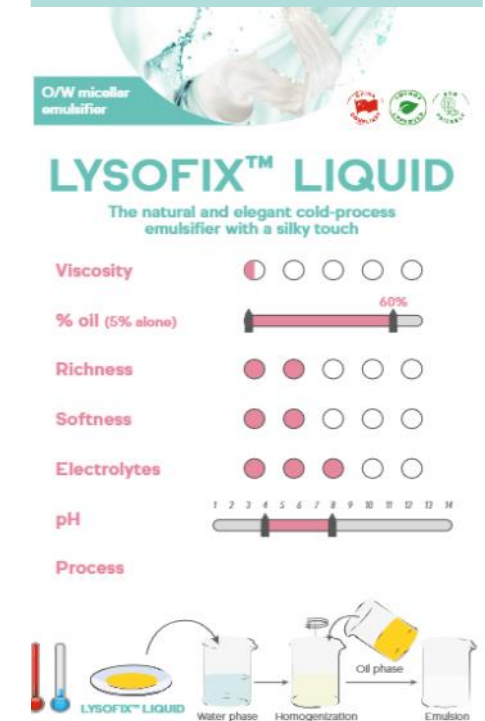
Lamellar Structure



Hybrid Structure



Micellar Structure



From fresh mist to luxurious butter!

GELLING AGENTS

- Siligel™
- Ecogel™
- Lecigel™
- Heliogel™

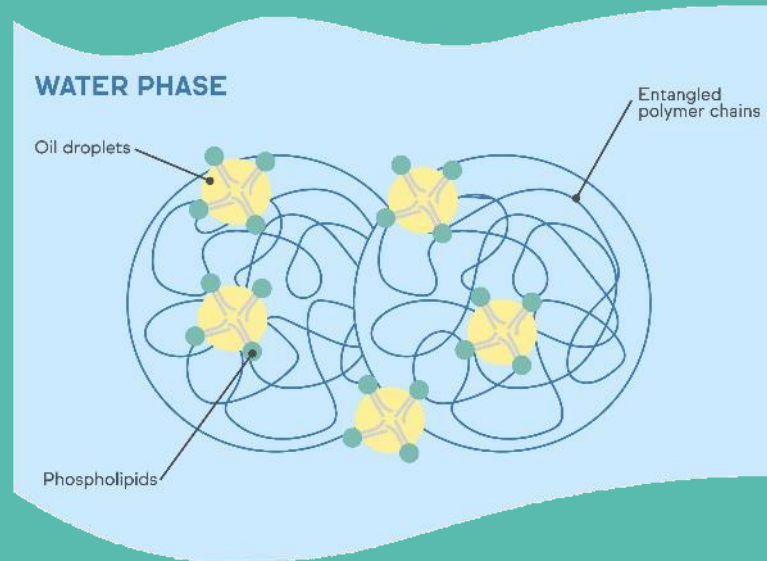
FUNCTIONAL PORTFOLIO

All Lecithin-based:

More than functional ingredients, they provide a multi-sensory experience and active properties!

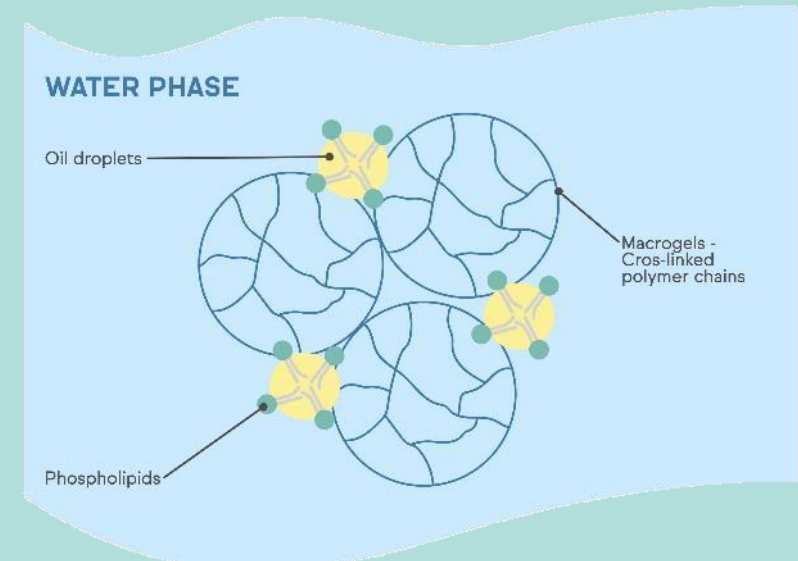
GELLING AGENTS

Entangled Structure



Siligel™
Ecogel™

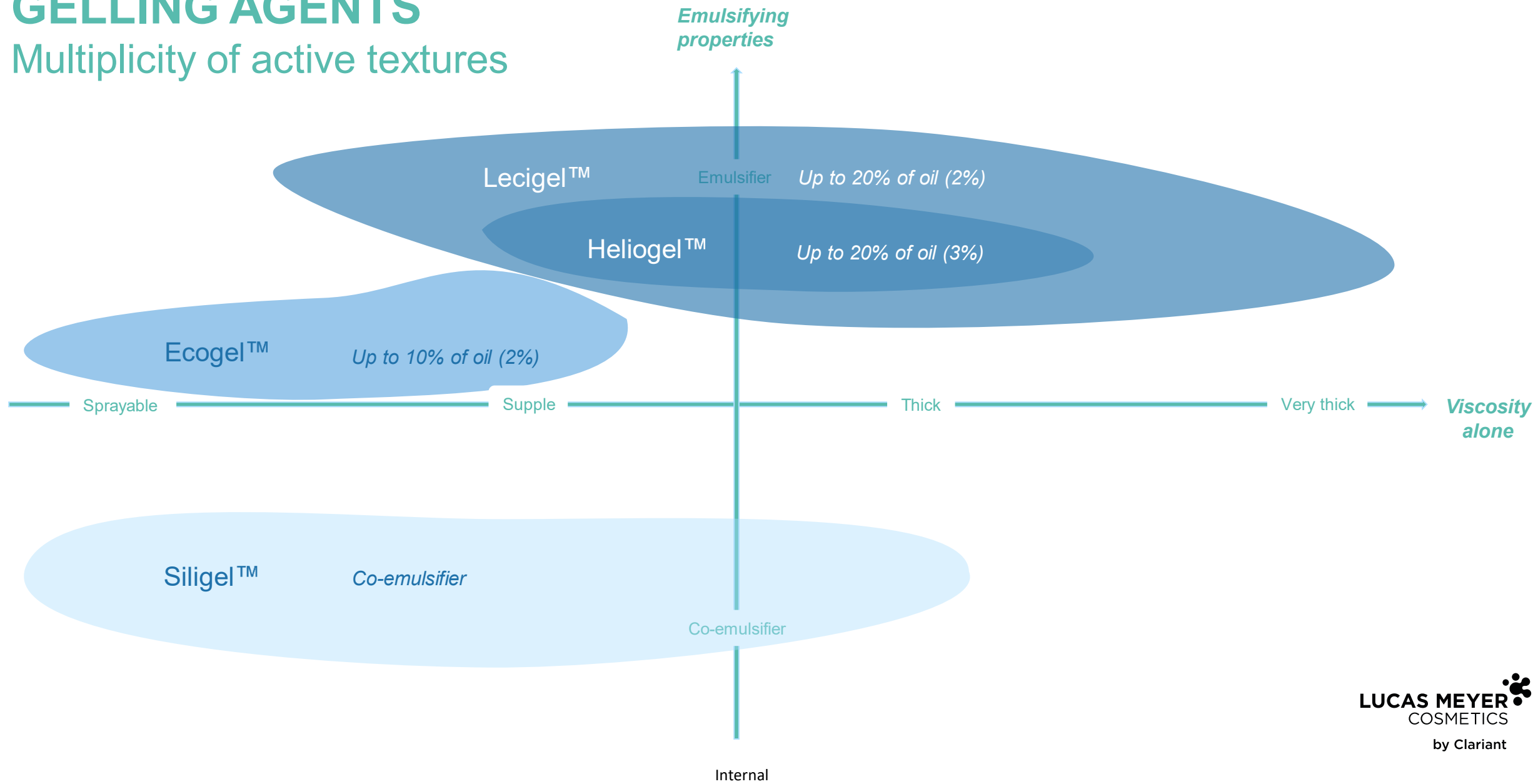
Congested Structure



Lecigel™
Heliogel™

GELLING AGENTS

Multiplicity of active textures



FUNCTIONAL

Summary

SILIGEL™

The foolproof gelling agent with amazing silicone-like skin feel

Dosage

0.3 - 2%

INCI

Xanthan Gum (and)
Lecithin (and)
Sclerotium Gum
(and) Pullulan

Optimum pH

2-10

Appearance

Beige powder

Applications

Gelling agent: 0.5-2%
Suspending agent: >1.2%
Co-emulsifier: >0.5%
Stabilizer: >0.5%
Skin feel enhancer: >0.3%



FUNCTIONAL

Summary

SILIGEL™

The foolproof gelling agent with amazing silicone-like skin feel

Textures

From sprayable to thick textures

Dosage

0.3 - 2%

Optimum pH

2-10

Co-emulsifying properties

Wetting properties

Powders, Pigments & UV filters

Very easy-to-use

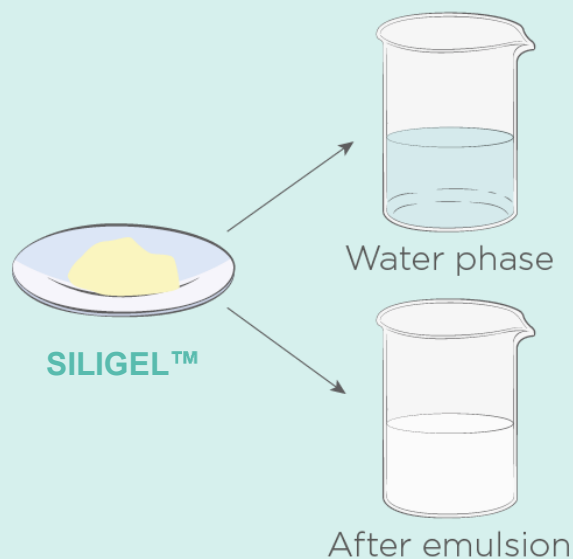
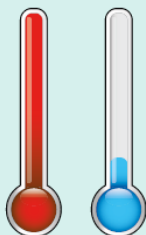
Non-shear sensitive
Excellent electrolyte resistance
No pre-dispersion or lumps

Applications



LUCAS MEYER
COSMETICS
by Clariant

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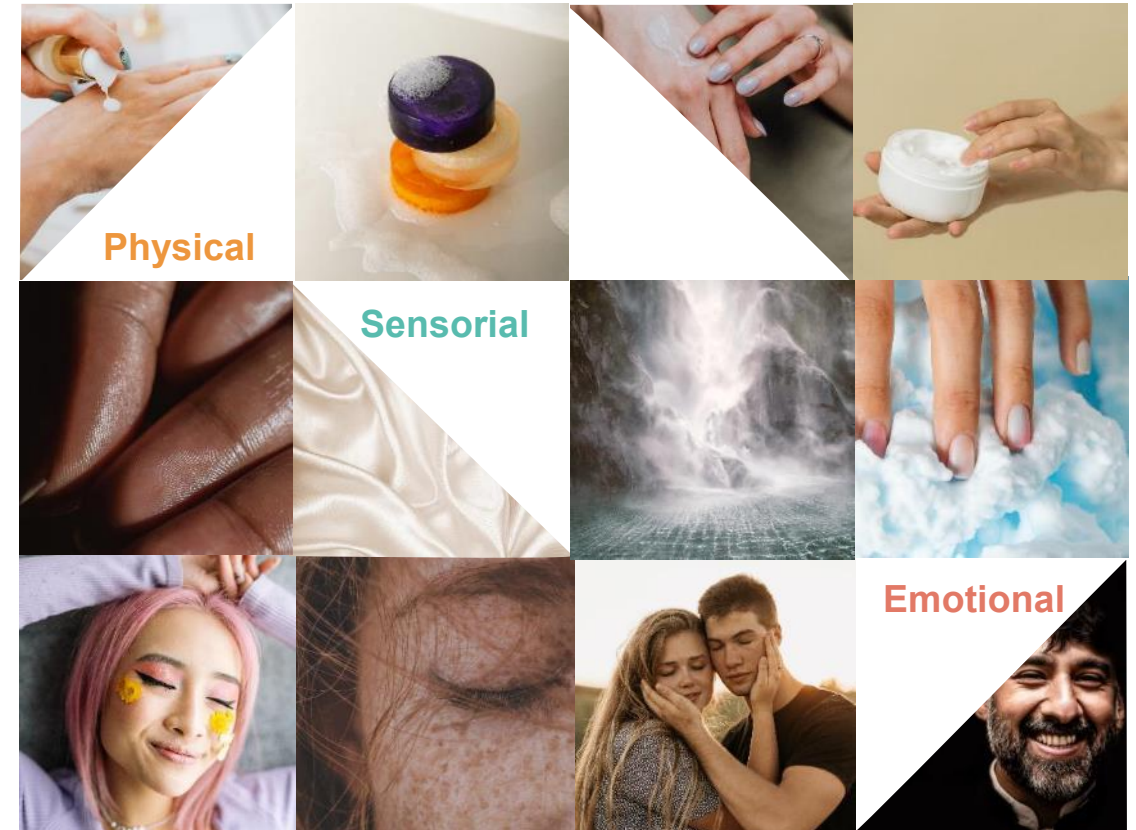
SILIGEL™

Sensory profile

Siligel™ offers an **amazing silicone-like touch** and a **very pleasant sensory** profile upon application:

- High glide & spreadability
- Freshness
- Non-tacky & Non-greasy
- **Slippery & soft skin after-feel**

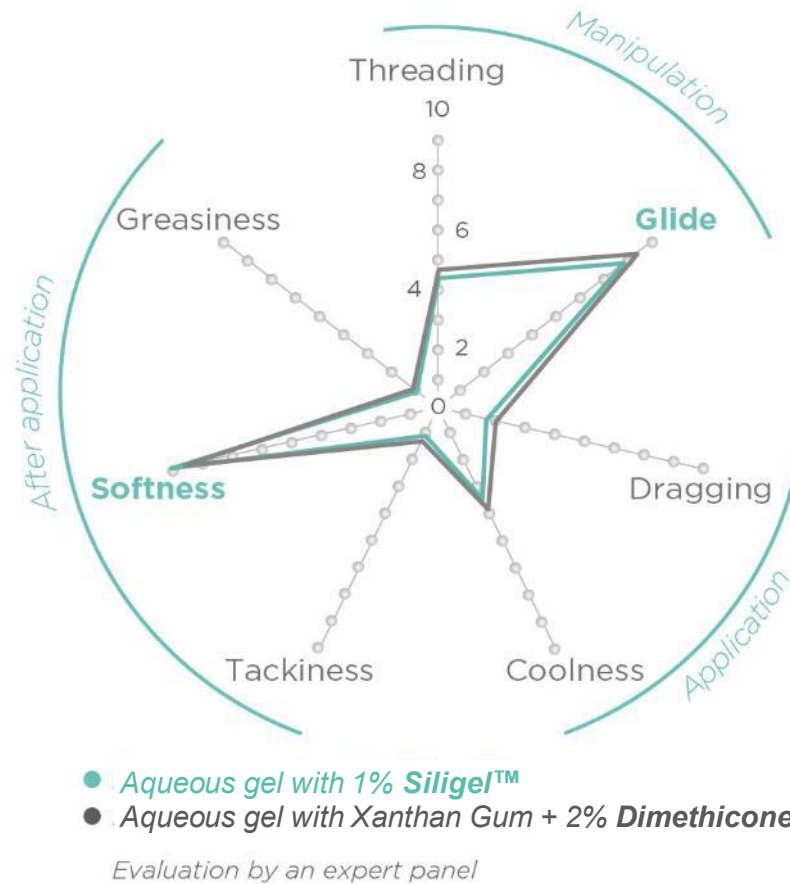
insp^{era}l by LMC



Siligel™ brings an **amazing silicone-like touch** to all kinds of formulas!

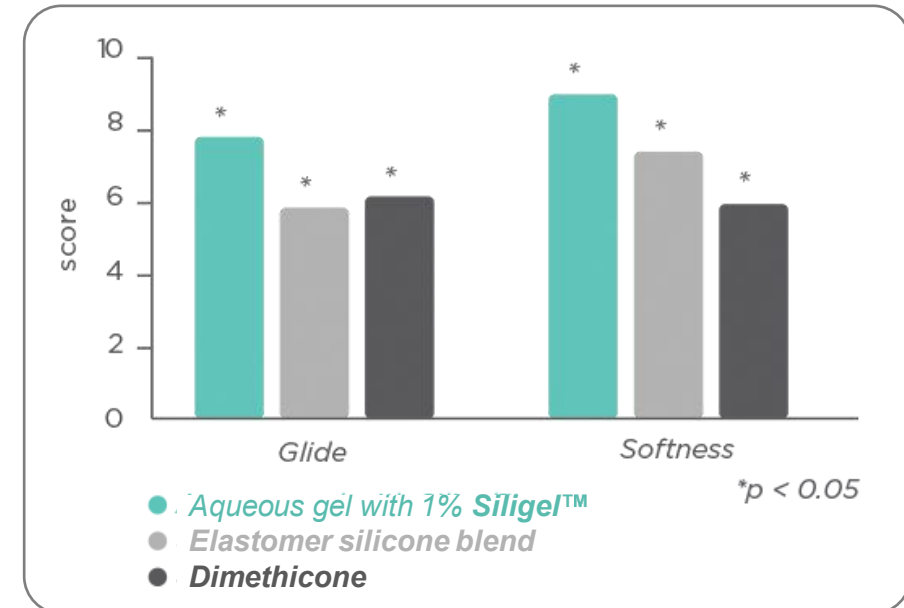
SILIGEL™

Silicone-like sensory



Siligel™ provides a **natural silicone-like sensory** without synthetic ingredients such as silicones:

Evaluation by an expert panel



Siligel™ achieves **better sensory** performances than pure **silicones** when added into water!



SILIGEL™

Wet combing

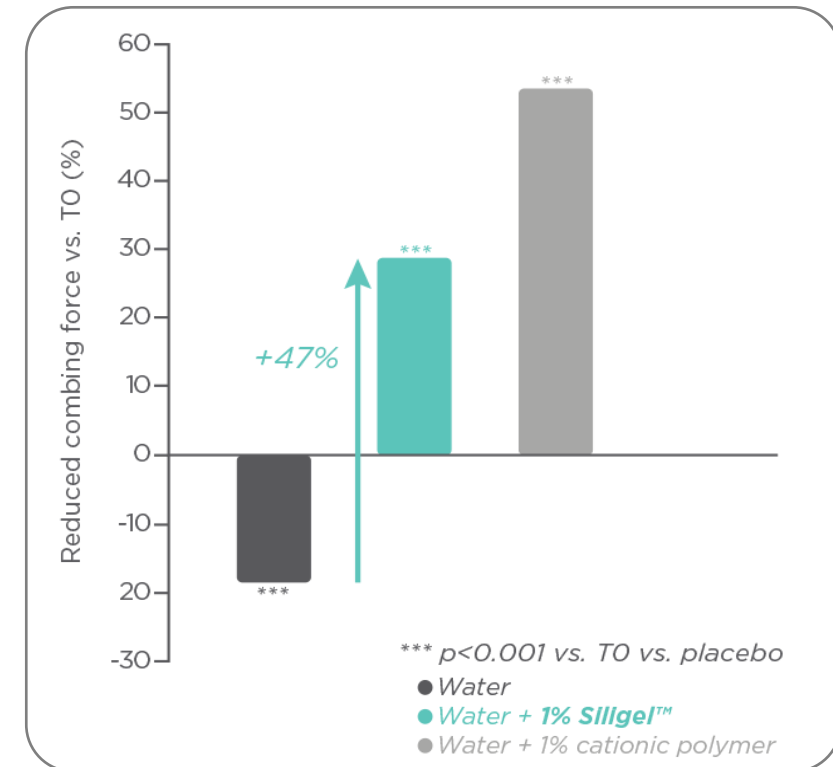
Ex vivo test

- 5 Natural hair strands per formula
- Application: 0.5mL/g of each formula on washed & wet hair strand
- Evaluation: Measurement of combing force before and after application (10 measurements per hair strand)

Thanks to its **film forming properties**,
Siligel™ improves combing and acts as a **conditioning agent**
 on wet hair:

- A significant decrease of **47%** on combing force!

Ease of wet combing



Siligel™ improves **wet combing** and acts as a **conditioning agent** by reducing combing force!



SILIGEL™

Hair fiber repair

Ex vivo test

- 5 Natural hair strands per formula
- Application: Once on washed & dried hair strand
- Evaluation: SEM image analysis Of hair fiber after hair dryer aggression & after application

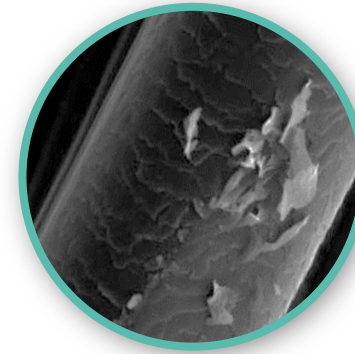
Thanks to its **film forming properties**,
Siligel™ smoothens the hair fiber while
protecting it from external aggression!

PEG-12 Dimethicone smoothens the hair
fiber, but the cuticle remains damaged!

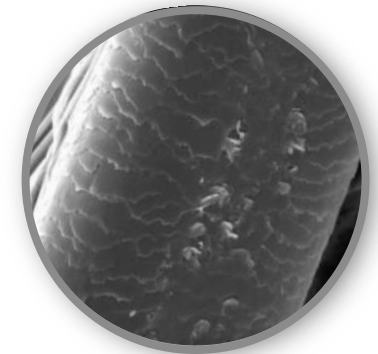
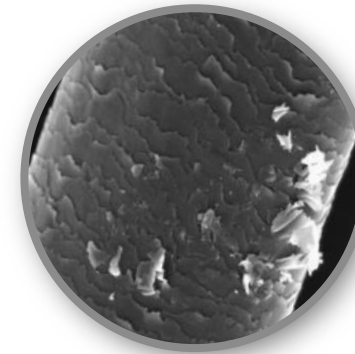
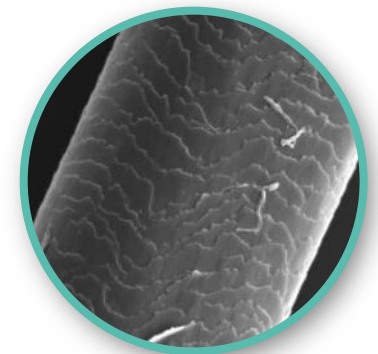
1% Siligel™

1% PEG-12
Dimethicone

*Before application
(After hair dryer aggression)*



After application

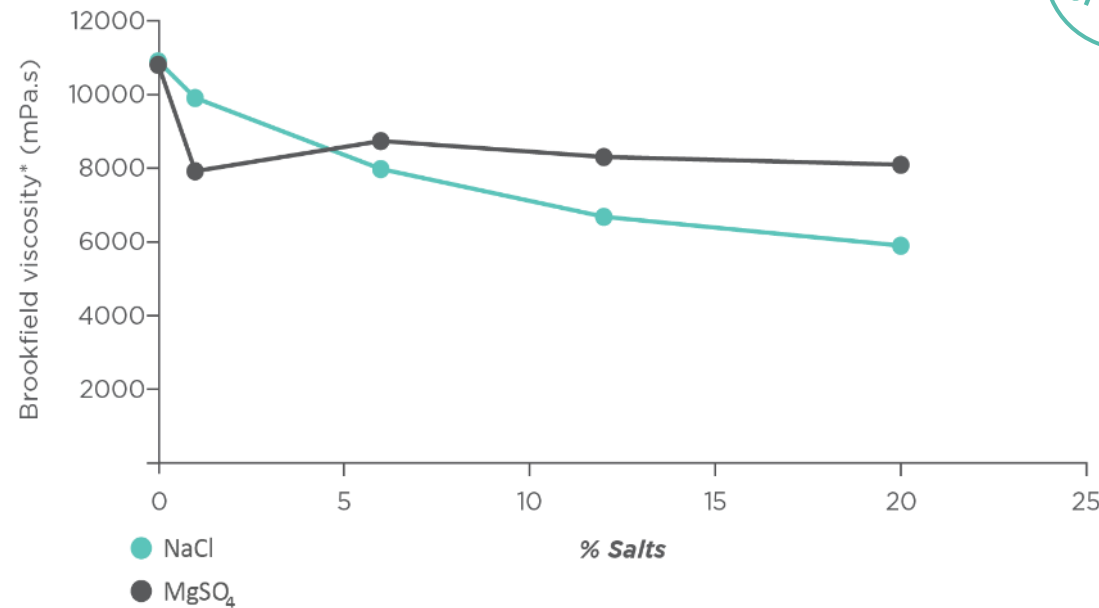


Siligel™ repairs and smoothens damaged hair fibers better than silicones!

SILIGEL™

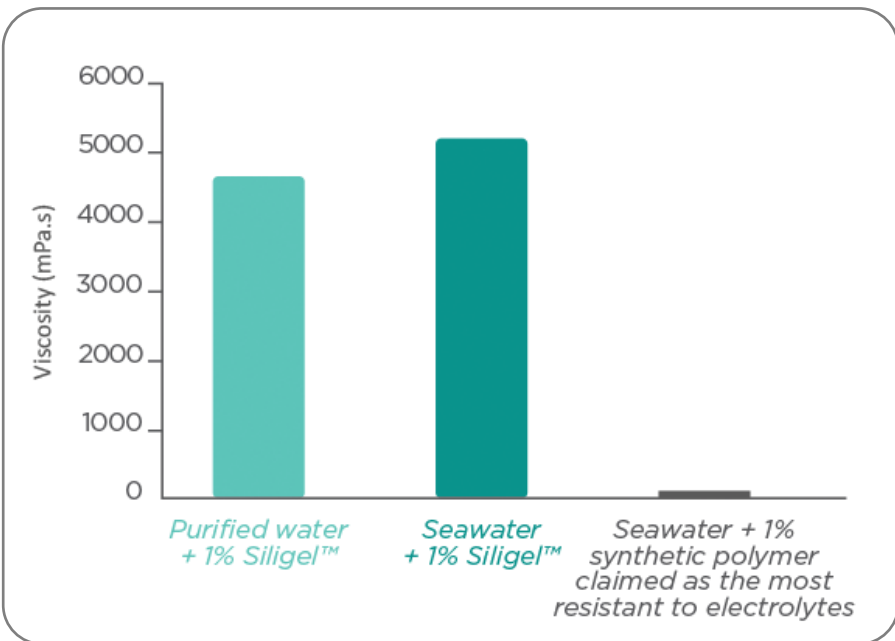
Electrolyte resistance

Resistance to Electrolytes

Up to
20%
of Salt

* Brookfield Viscosimeter, RV, Spindle 3, Speed 5 rpm, 25°C, D+1.
Gel deployed at 2% with a tooth propeller, maximum speed, 30 min.

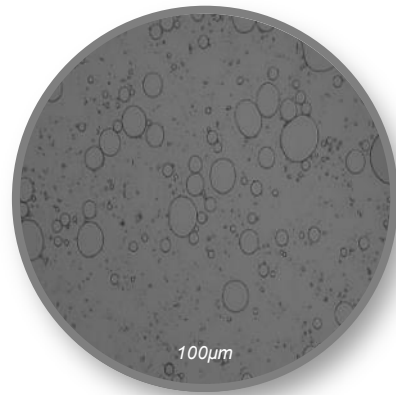
Resistance to Sea Water



Siligel™ offers an **excellent electrolyte resistance** and allows to create challenging formulas!

SILIGEL™

Perfect partner

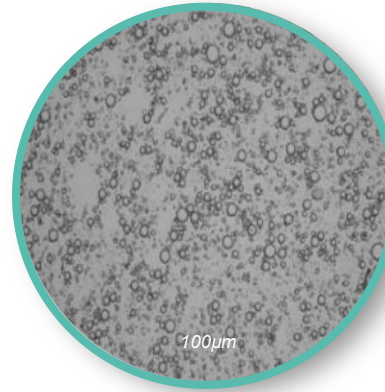


Creaming



Non stable

Control



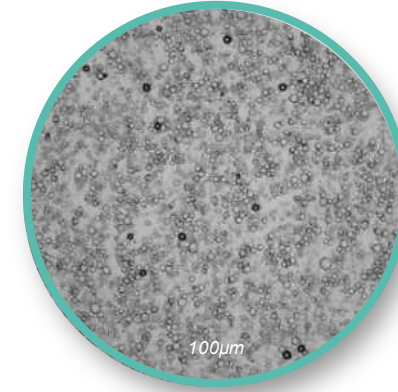
Homogenous



Stable

0.5% Siligel™

-70%
of oil droplet size



Homogenous



Stable

2% Siligel™

-90%
of oil droplet size

Siligel™ saves your emulsion by reducing oil droplet size, thanks to its **co-emulsifying** and **stabilizing** properties!

SILIGEL™

The foolproof gelling agent

TECHNICAL FEATURES

- Gelling agent
- Co-emulsifier
- Suspending & Stabilizing agent
- Extreme electrolyte resistance
- From sprayable to thick textures
- Cold or Hot process

ORIGIN

- 100% Natural Origin Content (NOC*)
- Origin: Soy, Wheat, Corn & Tapioca
- Readily biodegradable
- Nagoya compliant

ACTIVES PROPERTIES

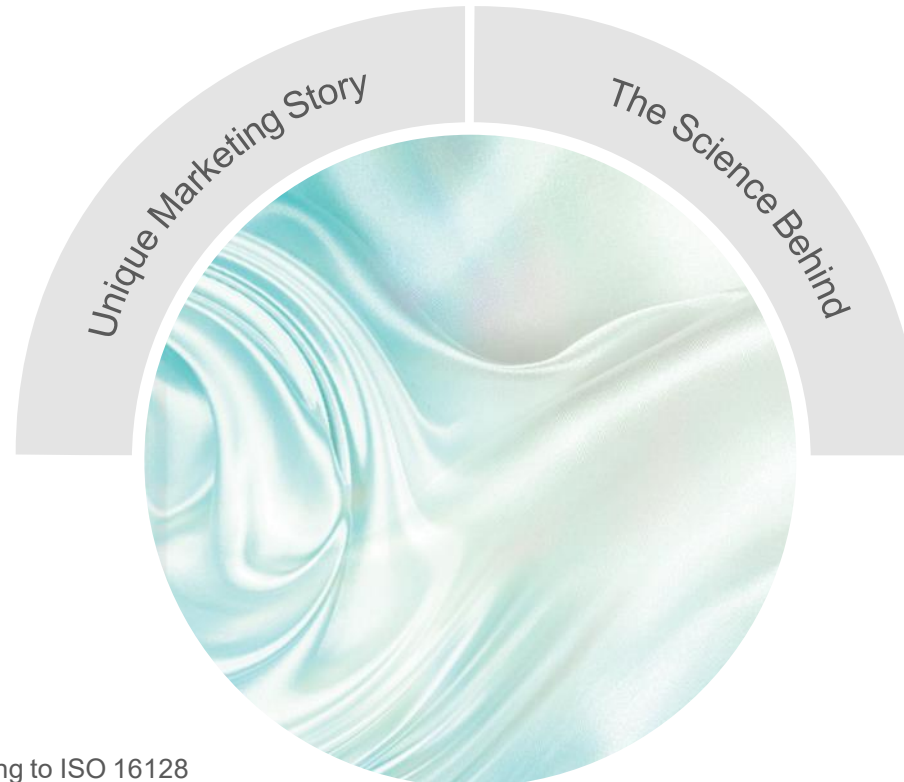
- Biomimetic lamellar structure: Strong active properties
- Skin hydration
- Active bioavailability booster

UNIQUE SENSORY

- Silicone-like touch
- Light and non-tacky skin feel
- Second skin effect: Very soft skin after-feel

MANUFACTURER BENEFITS

- The perfect partner for Skin & Hair care:
 - Ideal for challenging formulas
 - Silicone-like skin feel
 - Natural hair repair & easy combing
- Very easy-to-use, Time & Energy-savings
- 100% vegetable-based formulas



*according to ISO 16128

FUNCTIONAL



Summary

ECOGEL™

The natural silky
emulsi-gelling agent

Dosage

0.3 - 2%

INCI

Lysolecithin (and)
Sclerotium Gum (and)
Xanthan Gum (and)
Pullulan



Optimum pH

2-10

Appearance

Beige powder

Applications

Gelling agent: 1-2%

Emulsifier: >1.5%

Stabilizer: >0.5%

Skin feel enhancer: >0.3%



FUNCTIONAL

Summary

ECOGEL™

The natural silky
emulsi-gelling agent

Textures

From sprayable to supple textures

Dosage

0.3 - 2%

Optimum pH

2-10

Emulsifying properties

Up to 10% of oil phase (2%)

Wetting properties

Powders, Pigments & UV filters

Easy-to-use

Non-shear sensitive

High electrolyte resistance

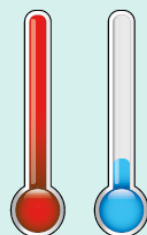
No pre-dispersion or lumps

Applications



LUCAS MEYER
COSMETICS
by Clariant

P
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E
S
S



ECOGEL™



Water phase

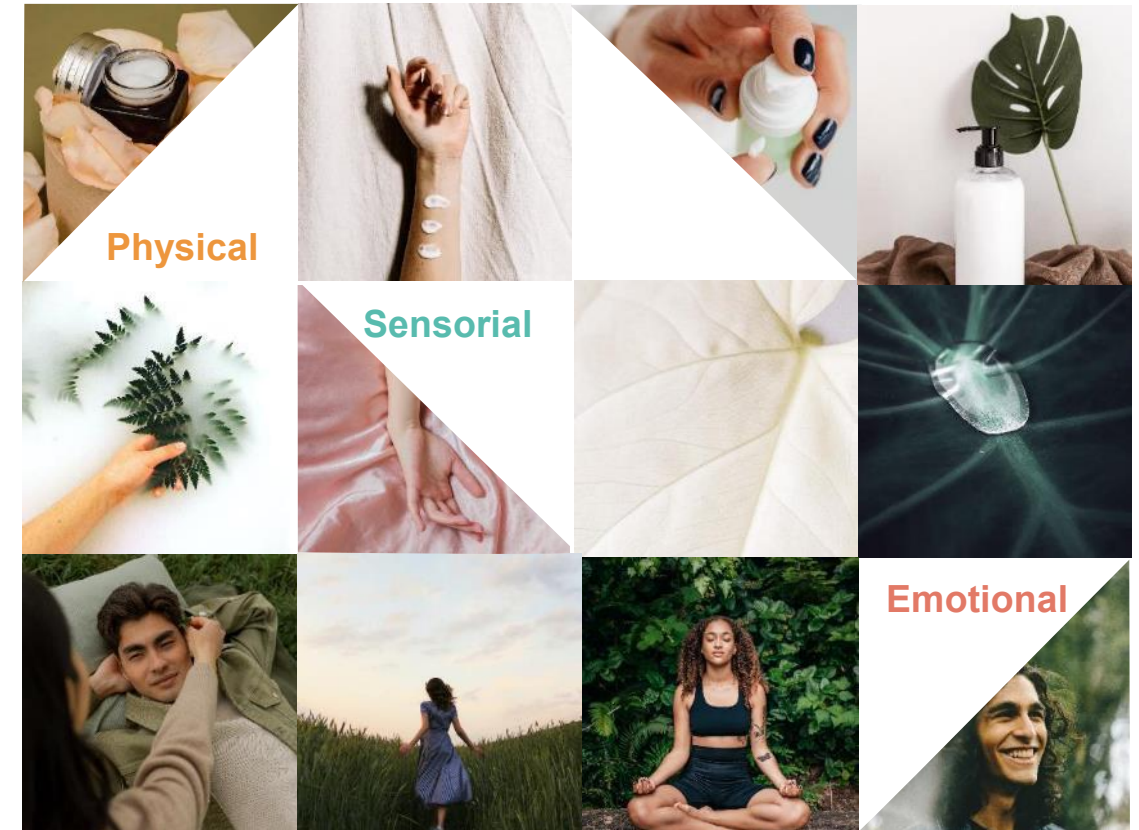
ECOGEL™

Sensory profile

Ecogel™ offers a **silky touch** and a **very pleasant sensory** profile upon application:

- High spreadability
- Freshness
- Non-tacky & Non-greasy
- Non-stringy
- **Slippery & soft skin after-feel**

insPera! by LMC



Ecogel™ provides a **silky touch** with a **slippery and soft skin after-feel** to all kind of formulas!

ECOGEL™

The natural silky emulsi-gelling agent

TECHNICAL FEATURES

- Gelling agent
- Emulsifier: Up to 10% of oil phase (2%)
- Stabilizing agent
- Excellent pigment wetting properties
- From sprayable to supple textures
- Cold or Hot process

ORIGIN

- 100% Natural Origin Content (NOC*)
- Origin: Soy, Wheat, Corn & Tapioca
- Readily biodegradable
- Nagoya compliant

ACTIVE PROPERTIES

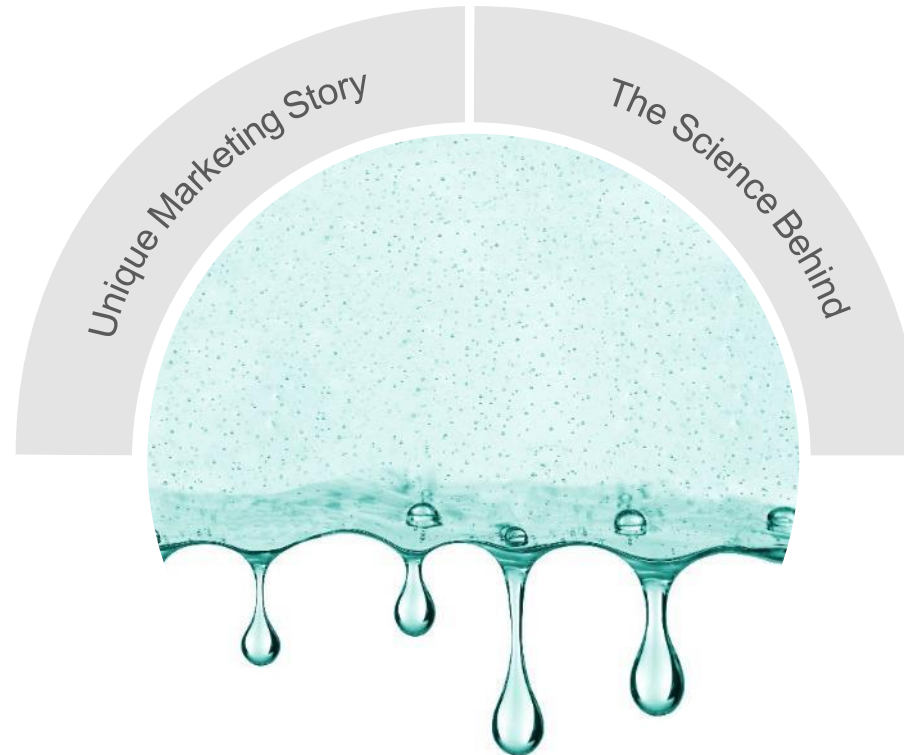
- Biomimetic lamellar structure: Strong active properties
- Skin hydration
- Active bioavailability booster

UNIQUE SENSORY

- Silky touch
- Soft and non-tacky skin feel
- Second skin effect: Very soft skin after-feel

MANUFACTURER BENEFITS

- The outstanding partner for formulators:
 - Natural emulsi-gelling agent
 - Slippery & soft skin feel
 - Creates senso-active formulas
- Easy-to-use, Time & Energy-savings
- 100% vegetable-derived formulas



FUNCTIONAL

Summary

LECIGEL™

The multifunctional
sensorial gelling &
emulsifying ingredient

Dosage

0.1 - 2%

INCI

Sodium Acrylates
Copolymer (and)
Lecithin



Optimum pH

4-8

Appearance

White powder

Applications

Gelling agent: 0.5-2%

Emulsifier: >1%

Viscosity adjuster: >0.5%

Stabilizer: >0.1%



FUNCTIONAL

Summary

LECIGEL™

The multifunctional
sensorial gelling &
emulsifying ingredient

Textures

From supple to very thick textures

Dosage

0.1 - 2%

Optimum pH

4-8

Emulsifying properties

Up to 20% of oil phase (2%)

Very easy-to-use

Non-shear sensitive

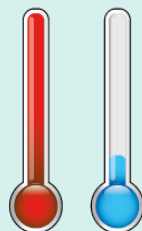
No pre-dispersion or lumps

Applications



LUCAS MEYER
COSMETICS
by Clariant

P
R
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S



Oil phase



Water phase



After emulsion

LECIGEL™



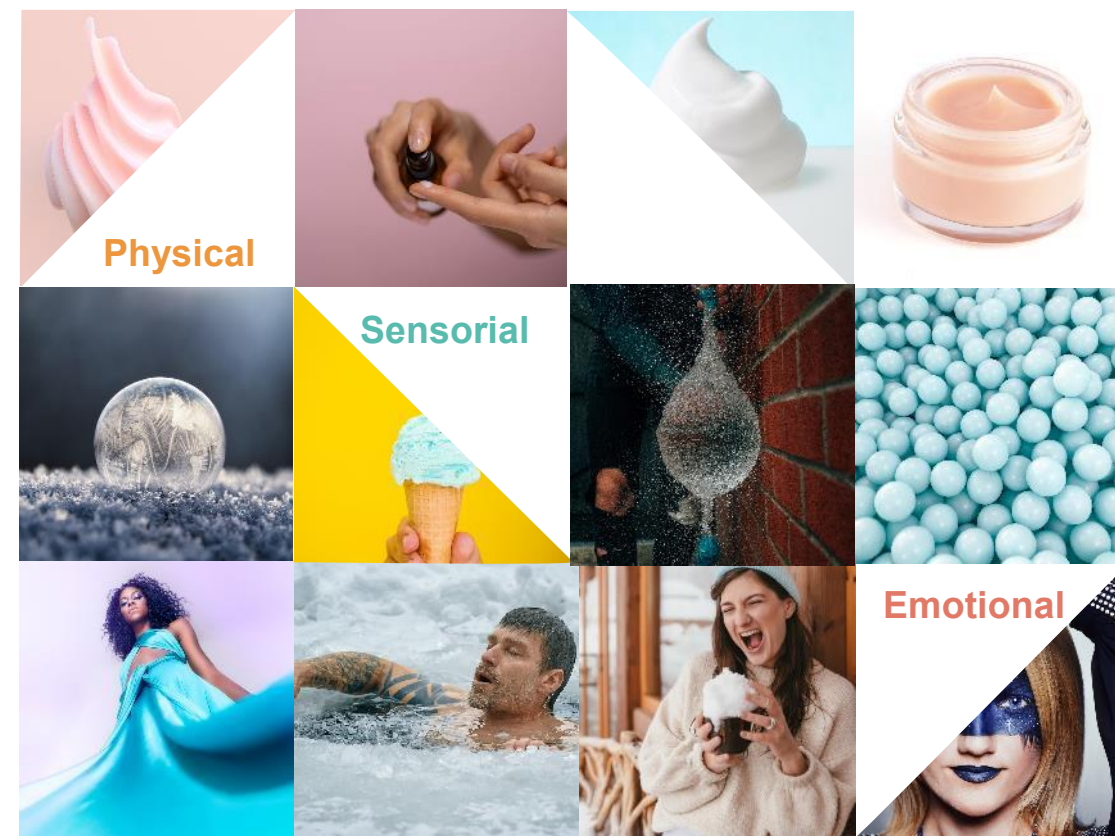
LECIGEL™

Sensory profile

Lecigel™ provides an **icy touch** and a **very pleasant sensory** profile upon application:

- High spreadability
- **Quick-break** effect
- **Freshness** with **ultra-cooling** sensations
- Quick absorption
- Non-tacky & Non-greasy

insp^{era}l by LMC



Lecigel™ offers a unique sensory profile: **Quick-break effect** and **ultra-cooling sensations**!

LECIGEL™

Cooling sensation

Sensory evaluation

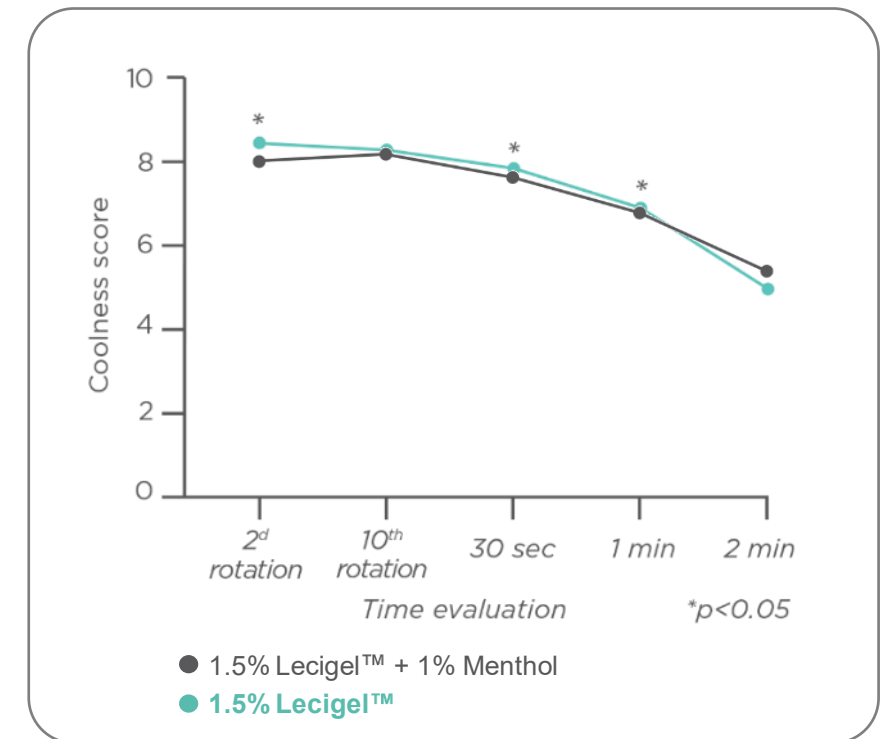
- 20 expert panelists, trained on freshness attributes
- Application: Once on the forearm with gloves for each formula
- Assessment: Evaluation by panelists on the 2nd & 10th rotation and during 2min after application
From 1 (No freshness) to 10 (Ultra-cooling effect)

According to **expert panelists**,

Lecigel™ brings the same **cooling effect** as menthol:

- **Lecigel™** – Decrease **skin temperature** (Physical response)
- Menthol – Cooling sensations (Neurological response)

Evaluation of Freshness



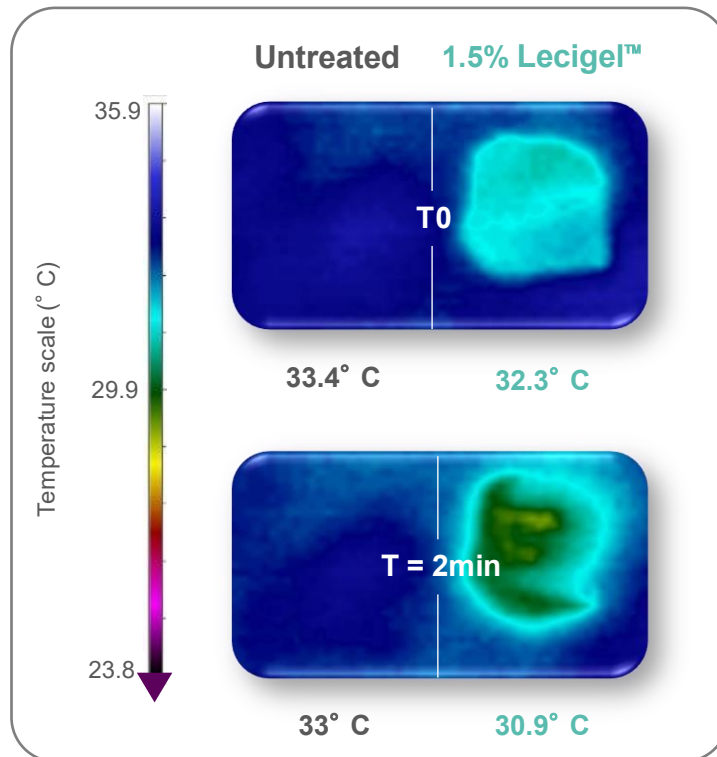
Lecigel™ provides an **intense** and **immediate ultra-cooling effect** for refreshed skin!

LECIGEL™

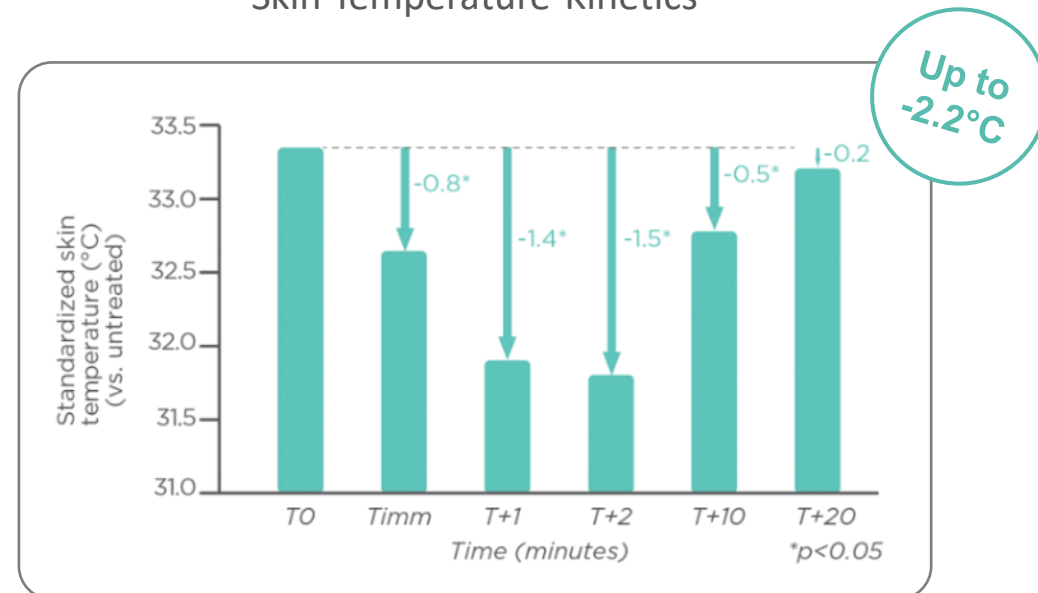
Ultra-cooling effect

Decrease in Skin Temperature

(Infrared images)



Skin Temperature Kinetics



- Immediate decrease in skin temperature
- Higher cooling effect at **2 min** (Consumer playtime): **- 1.5° C**

Lecigel™ brings an immediate cooling effect on the skin up to 20 minutes!

LECIGEL™

High texture versatility



Lecigel™ provides a **high texture versatility**, creating **disruptive formulas!**

LECIGEL™

The multifunctional sensorial gelling and emulsifying ingredient

TECHNICAL FEATURES

- Gelling agent
- Emulsifier: Up to 20% of oil (2%)
- Stabilizing agent
- From supple to very thick textures
- Cold or Hot process

ACTIVE PROPERTIES

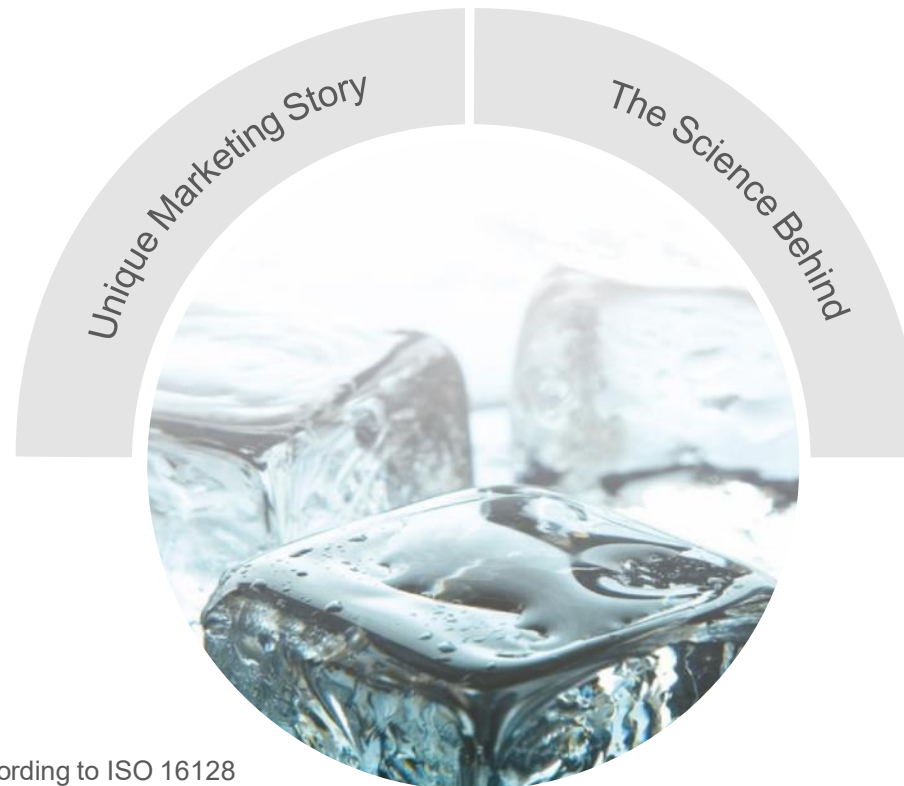
- Biomimetic lamellar structure: Strong active properties
- Skin hydration & Cooling effect
- Active bioavailability booster

UNIQUE SENSORIAL

- Icy touch
- Light and non-tacky skin feel
- Second skin effect: Soft skin after-feel
- Provides happiness upon application

ORIGIN

- 20 - 30% Natural Origin Content (NOC*)
- Origin: Soy & Synthetic
- Nagoya compliant



MANUFACTURER BENEFITS

- The perfect partner for formulators:
 - Versatile emulsi-gelling agent
 - Ideal for disruptive formulas
 - Ultra-cooling effect with quick break
- Very easy-to-use, Time & Energy-savings



*according to ISO 16128

FUNCTIONAL

Summary

HELIOGEL™

The versatile gelling agent

Dosage

0.2 - 3%

INCI

Sodium Acrylates
Copolymer (and)
Hydrogenated
Polydecene (and)
Phospholipids (and)
Polyglyceryl-10 Stearate
(and) Helianthus Annus
(Sunflower) Seed Oil



Optimum pH

4-8

Appearance

Beige paste

Applications

Gelling agent: 0.5-3%

Emulsifier: >1%

Viscosity adjuster >0.5%

Stabilizer: >0.2%



FUNCTIONAL

Summary

HELIOGEL™

The versatile gelling agent

Textures

From supple to thick textures

Dosage

0.1 - 2%

Optimum pH

4-8

Emulsifying properties

Up to 20% of oil phase (2%)

Easy-to-use

Non-shear sensitive

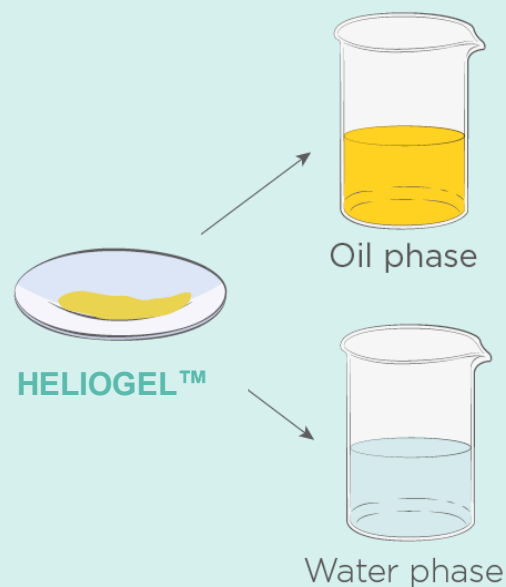
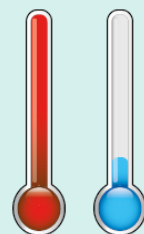
No pre-dispersion or lumps

Applications



LUCAS MEYER
COSMETICS
by Clariant

P
R
O
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HELIOGEL™

Sensory profile

Heliogel™ offers a **light** and **comfortable skin after-feel** with very pleasant sensory properties:

- High spreadability
- Freshness
- Quick absorption
- Non-tacky & non-greasy
- Non-stringy



● Aqueous gel with 1% **Heliogel™**
Evaluation by an expert panel

Heliogel™ provides a **light** and **comfortable skin after-feel** with a quick absorption!

HELIOGEL™

The versatile gelling agent

TECHNICAL FEATURES

- Gelling agent
- Emulsifier: Up to 20% of oil (3%)
- Stabilizing agent
- From supple to thick textures
- Cold or Hot process

ORIGIN

- 15 - 45 % Natural Origin Content (NOC*)
- Origin: Sunflower & Synthetic
- Nagoya compliant

ACTIVE PROPERTIES

- Biomimetic lamellar structure: Strong active properties
- Skin hydration
- Active bioavailability booster

UNIQUE SENSORY

- Light and non-tacky skin feel
- Second skin effect: Soft skin after-feel

MANUFACTURER BENEFITS

- The versatile partner for formulators:
 - Emulsi-gelling agent
 - Designed for extreme pH conditions
 - Creates senso-active formulas
- Easy-to-use, Time & Energy-savings



*according to ISO 16128

GELLING AGENTS

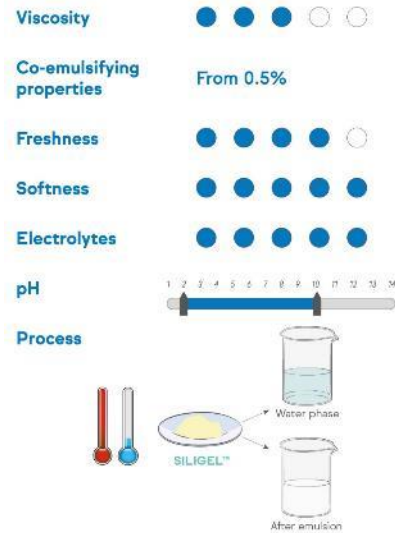
Multiplicity of active textures

Natural Origin



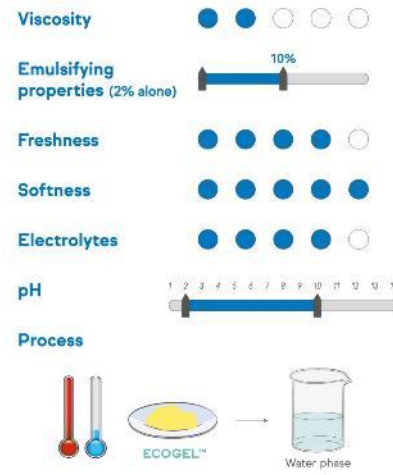
SILIGEL™

The foolproof gelling agent with amazing silicone-like skin feel



ECOGEL™

The natural silky emulsi-gelling agent

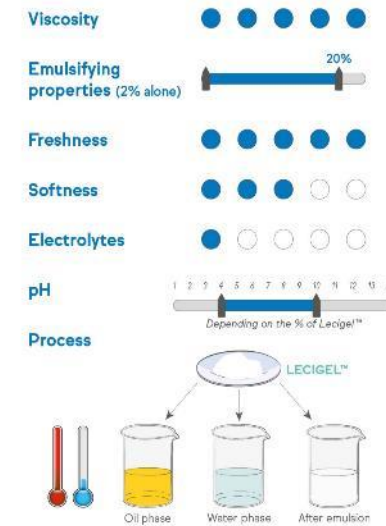


Natural & Synthetic Origin



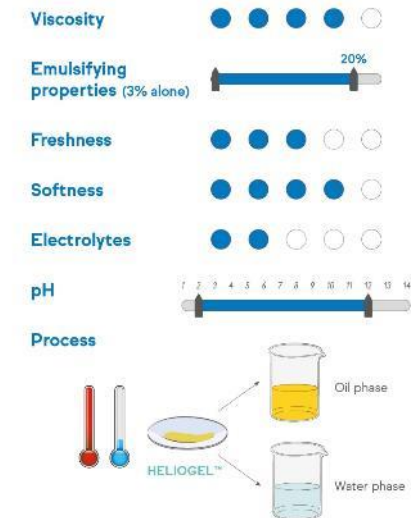
LECIGEL™

The multifunctional sensorial gelling and emulsifying ingredient



HELIOGEL™

The versatile gelling-agent



From **sprayable** to **very thick gel-cream**!

EMULMETIK™

- Emulmetik™ 100 J
- Emulmetik™ 320 IP

FUNCTIONAL PORTFOLIO

All Lecithin-based:

More than functional ingredients, they provide a multi-sensory experience and active properties!

EMULMETIK™

Lecithins

EMULMETIK™	100 J	320 IP
INCI name	Lecithin	Hydrogenated Lecithin
Phospholipids and glycolipids	60%	97%
Phosphatidylcholine	12%	23%
Technical function	Moisturizer Wetting agent Sensorial adjuster	Co-emulsifier Stabilizing agent Wetting agent



Emulmetik™ range offers **endless formulation possibilities!**



THANK YOU!