

CARBONWAVE

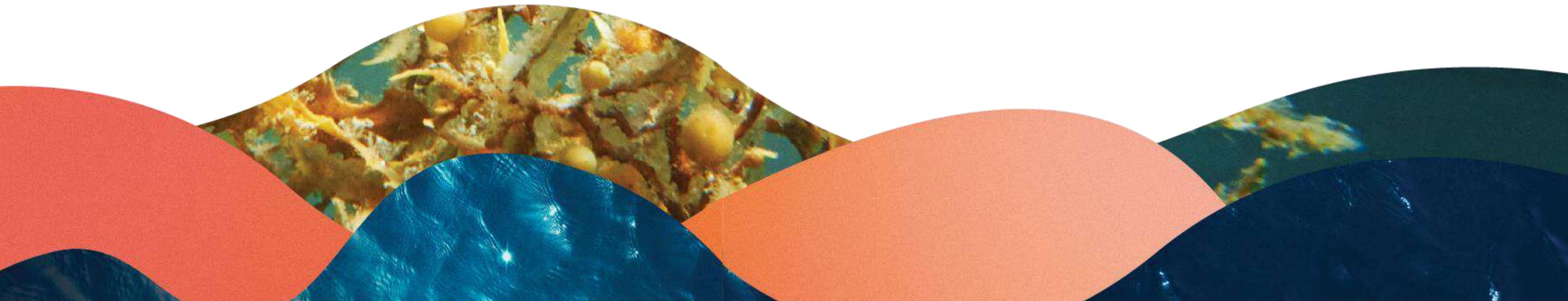
BREGAGLIÒ

Personal Care 

A Surfachem Company

‘Upcycling Sargassum Seaweed for Sustainable Beauty’

August Schelin - *Associate Director of Business Development, Personal Care Carbonwave*





A Public Benefit Corporation

The world's leading developer of ultra-regenerative, plant-based, advanced biomaterials from seaweed

Founded in

2020

43 Employees (+ Seasonal Contractors in MX)

Recognition



Intellectual Property

3+

Areas of IP created, with provisional patents filed and more to come

Series A Raise

\$7M

\$5M closed



althelia
funds



mirova
Responsible Investing



viridios
CAPITAL



Katapult
Ocean

Customers



Hilton



GRUPO **VIDANTA**



BREGAGLIO
Personal Care



proforest



amRESORIS



HORTIMAO
EQUIPOS, SERVICIOS Y REPARACIONES
- frutas - vegetales - flores -

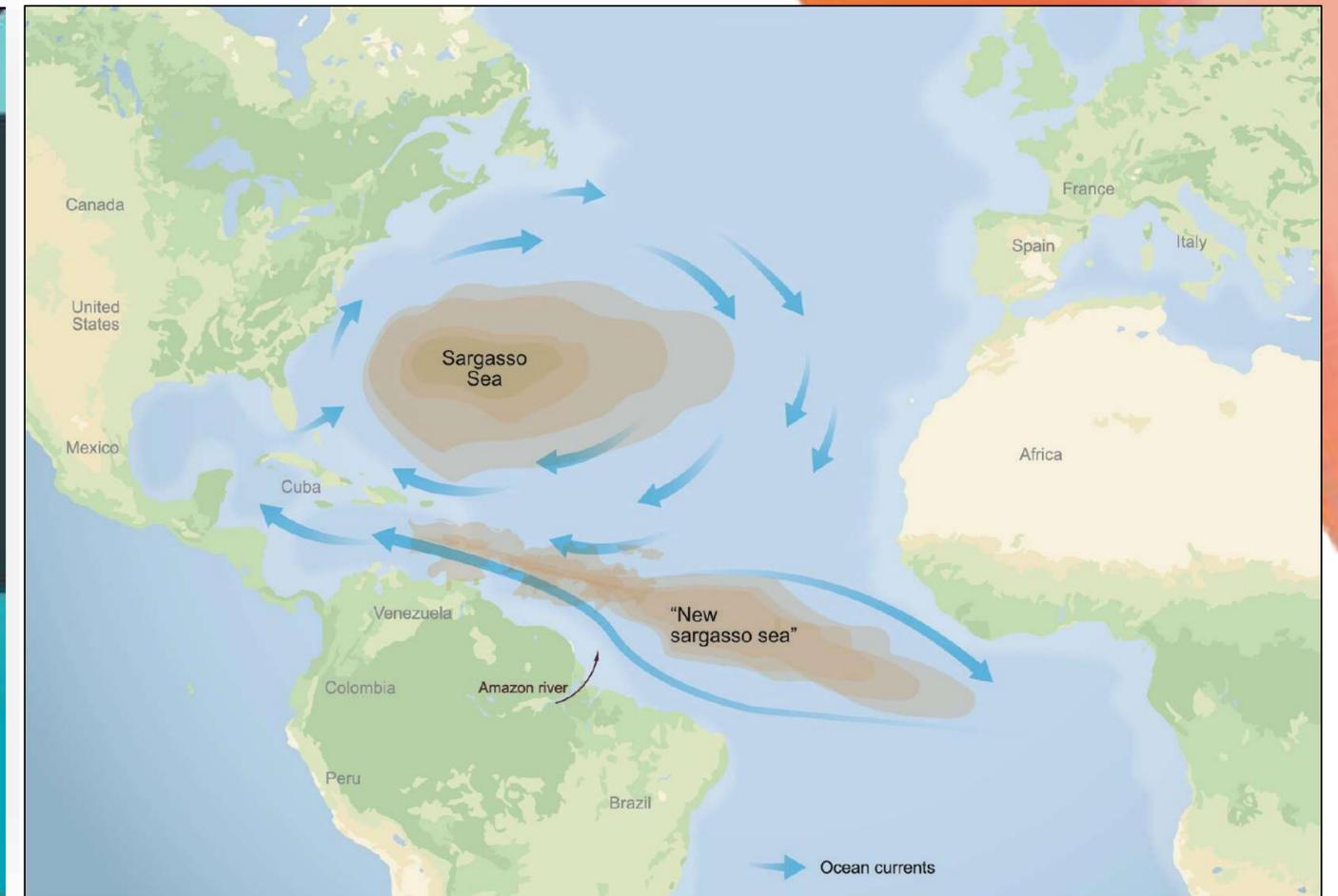
What is **Sargassum**?



- ❖ A floating seaweed that **absorbs carbon dioxide** from the ocean and air
- ❖ Absorbs excess **nutrients**
- ❖ **Habitat for fish** and other species in the open ocean

Great Atlantic Sargassum Belt

Alarming Growth over the Past Decade



Sargassum's continued growth is largely driven by warming oceans combined with the Amazon's deforestation and conversion to farmland. Brazil increased fertilizer use by 67% from 2011-18¹

The Problem

>20 Million Tonnes

Total Sargassum biomass in the Caribbean¹

An Ecological Disaster

Loss of biodiversity + methane emissions

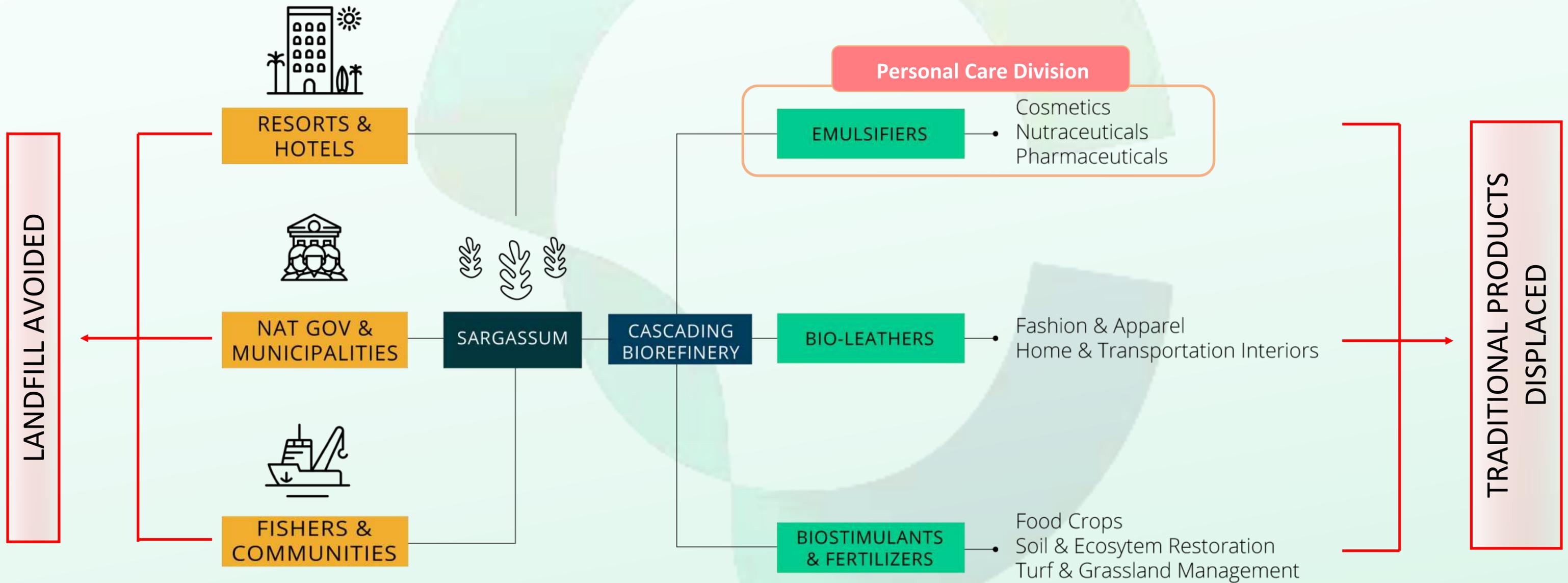
~35% Tourism Decline

In dollars spent across the Caribbean, BEFORE Covid²



A Cascading Biorefinery

Cascading Biorefinery with Patented Gentle Extraction of Sargassum Feedstocks



Our Facilities

We operate two Caribbean facilities with strong support from local communities



CANCUN, MEXICO

Initial Liquid / Pulp Extraction
(opened 2020)

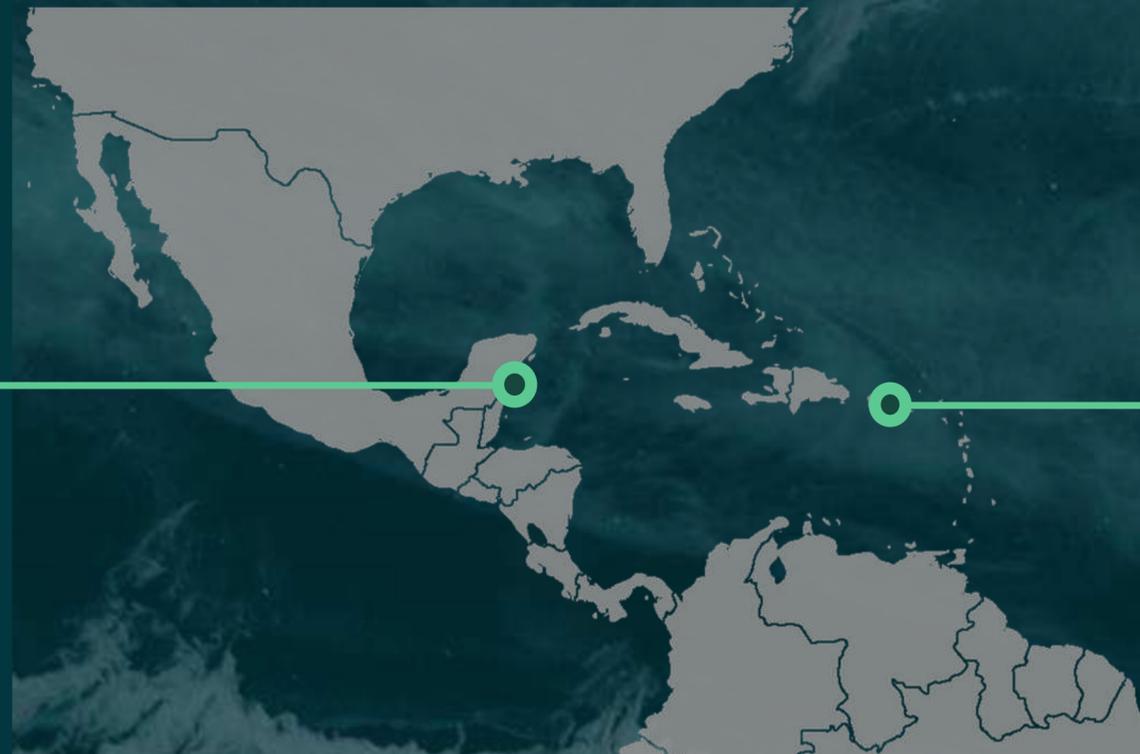
Collection, cleaning and drying
of Sargassum



SAN JUAN, PUERTO RICO

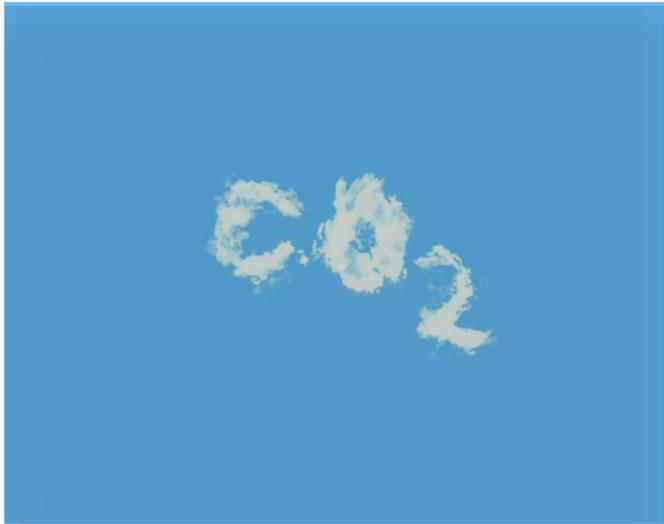
Manufacturing, R&D
(opened 2020)

Future site of advanced
biomaterial processing plant



First Blue Carbon Project Approved by Gold Standard

13. CLIMATE ACTION



14. LIFE BELOW WATER



12. RESPONSIBLE CONSUMPTION AND PRODUCTION



8. DECENT WORK AND ECONOMIC GROWTH



Gold Standard[®]
certified **SDG impacts**





SeaBalance 2000

Cold Process Natural O/W emulsifier

With a unique texture & great sensorial profile

SEA BALANCE

The world's first **seaweed-based**
cosmetic emulsifier



GOLD

Organização e Promoção:



GOLD

Testing

Testing underway at over
450 companies globally



**Winner: Best Functional Ingredient
In-Cosmetics Korea 2022x**



**Bronze: Green Ingredient Award
In-Cosmetics Global 2023**

Engagement

Engaged in conversation with
over 500 companies



**Winner: Most Innovative Ingredient
Brazilian Cosmetic Association**

SeaBalance 2000

Key Benefits

- Upcycled ingredient
- Fast and easy cold process – Saves time and energy
- Enhanced sensory – light, refreshing, soft and silicone-like skin feel
- Easy spreadability & quick penetration
- Moisturizing effect & film forming properties
- Very good resistance to electrolytes
- COSMOS Approved



Raw material verified by ECOCERT Greenlife, conforms to the COSMOS Standard, and Without Animal Origin





SeaBalance 2000 Identity Card

**SEA
BALANCE**
The world's first seaweed-based
cosmetic emulsifier.

▪ **INCI Name:** Sargassum Fluitans/Natans Extract, Xanthan Gum, Pentylene Glycol

▪ **Aspect:** Pale green viscous paste

▪ **Function:** Anionic O/W emulsifier

▪ **Specific features & How to use:**

- Water soluble
- Cold & hot process
- Emulsify up to 25% oil (various polarities)
- Not shear sensitive
- Good resistance to electrolytes
- Compatible with TiO₂, ZnO and alcohol
- pH range: 3.5 to 9.0
- Use Level: 3 to 6 %

**SEA
BALANCE**

The world's first seaweed-based
cosmetic emulsifier.

SeaBalance 2000

Textures & Applications

Textures

- Fluid lotion to light cream
- Sprayable

Applications

- Skin care
- Hair styling
- Cream cleansers
- Suncare
- BB creams



Toxicity Profile

A gentle emulsifier

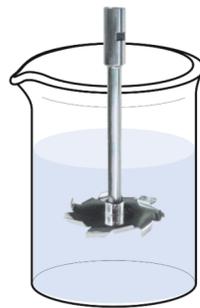
Toxicity Endpoint	Method	Substance tested	Result
Eye irritation	OECD 492, GLP	SeaBalance 2000 neat	Not irritant (GHS no category)
Skin irritation	OECD 439, GLP	SeaBalance 2000 neat	Not irritant (GHS no category)
Skin sensitization	Human Repeated Insult Patch Test (HRIPT) in-vivo n= 101	SeaBalance 2000 diluted at 10% (w/w) in water + 0.5% Pentylene Glycol. (pH = 9.1)	Not irritant (Score = 0) and not sensitizer
Phototoxicity	OECD 432, GLP	SeaBalance 2000 neat	Not phototoxic
Mutagenicity	OECD 471, GLP (AMES Test)	SeaBalance 2000 neat	Non mutagenic and non pro- mutagenic (tested up to 5000 µg /plate)

- ✓ Non irritant
- ✓ Non sensitizing
- ✓ Non Phototoxic



The Process

- 1 Prepare the water phase and add SeaBalance 2000



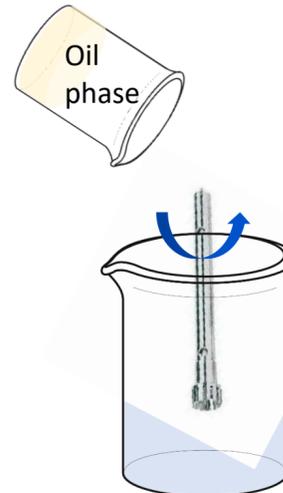
Demineralized water + weak acid (optional) + SeaBalance 2000

Disperse SeaBalance 2000 with a deflocculator or a homogenizer



The addition of a weak acid is optional but helps to remove the oceanic odor of SeaBalance 2000

- 2 Add oil phase to the water phase

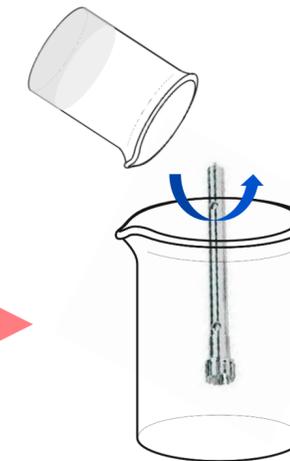


Add the oil phase to vortex into the water phase under high-shear homogenization



Mixing times will vary depending on the equipment, type of oil, and oil concentration.

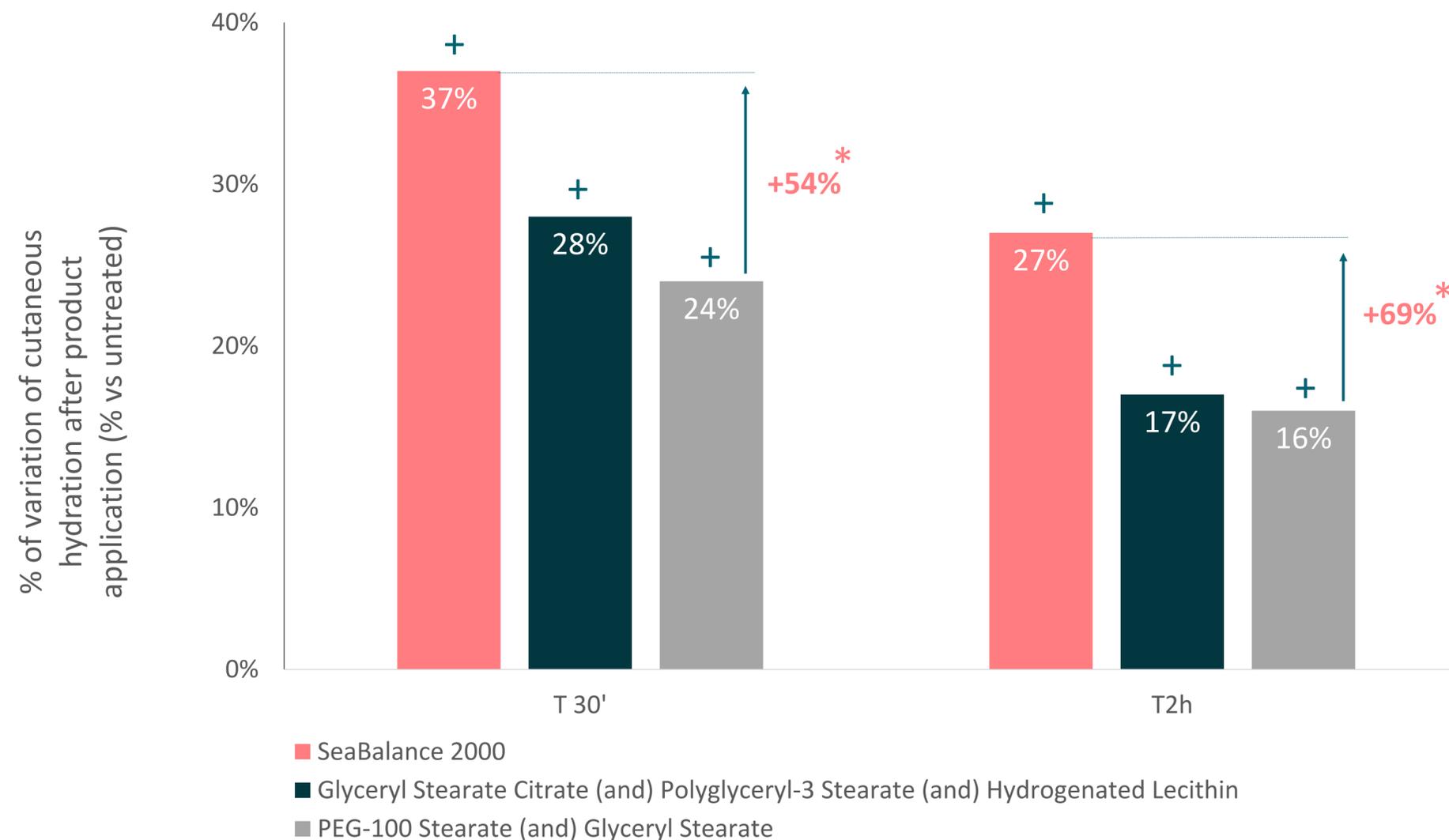
- 3 Add other ingredients



Overmixing does not cause thinning. It is possible to homogenize upon cool down to smooth out the emulsion.

Better moisturization effect vs. benchmark emulsifiers

Significant moisturization effect at 30mn and 2 hours



30min

+54% increase in variation of cutaneous hydration rate vs. synthetic benchmark emulsifier

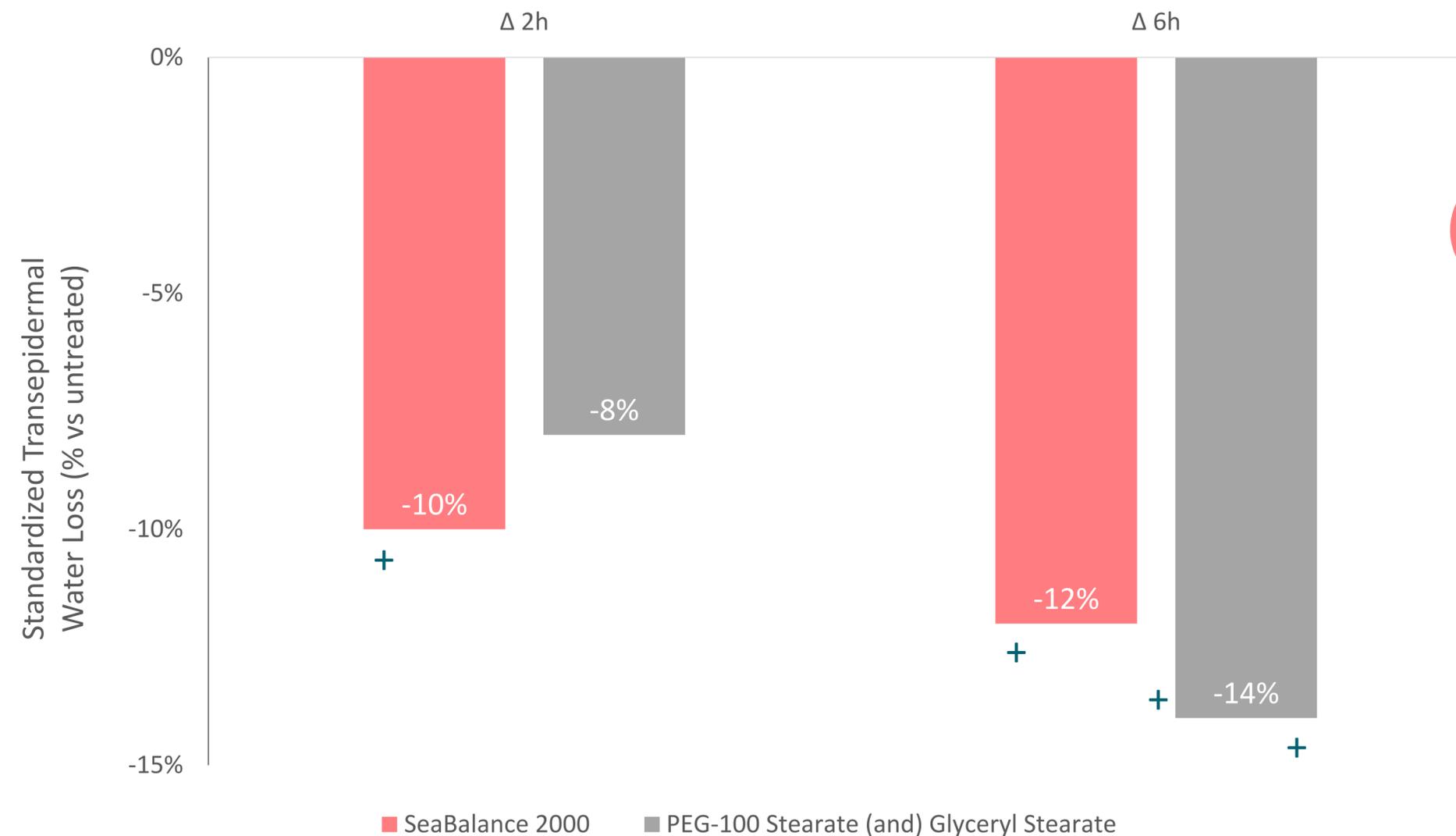


2 hours

+69% increase in variation of cutaneous hydration rate vs. synthetic benchmark emulsifier

Protective Barrier effect comparable to benchmark emulsifiers

Cutaneous barrier reinforcement until 6 hours



+ compared to untreated skin (p <0.001)

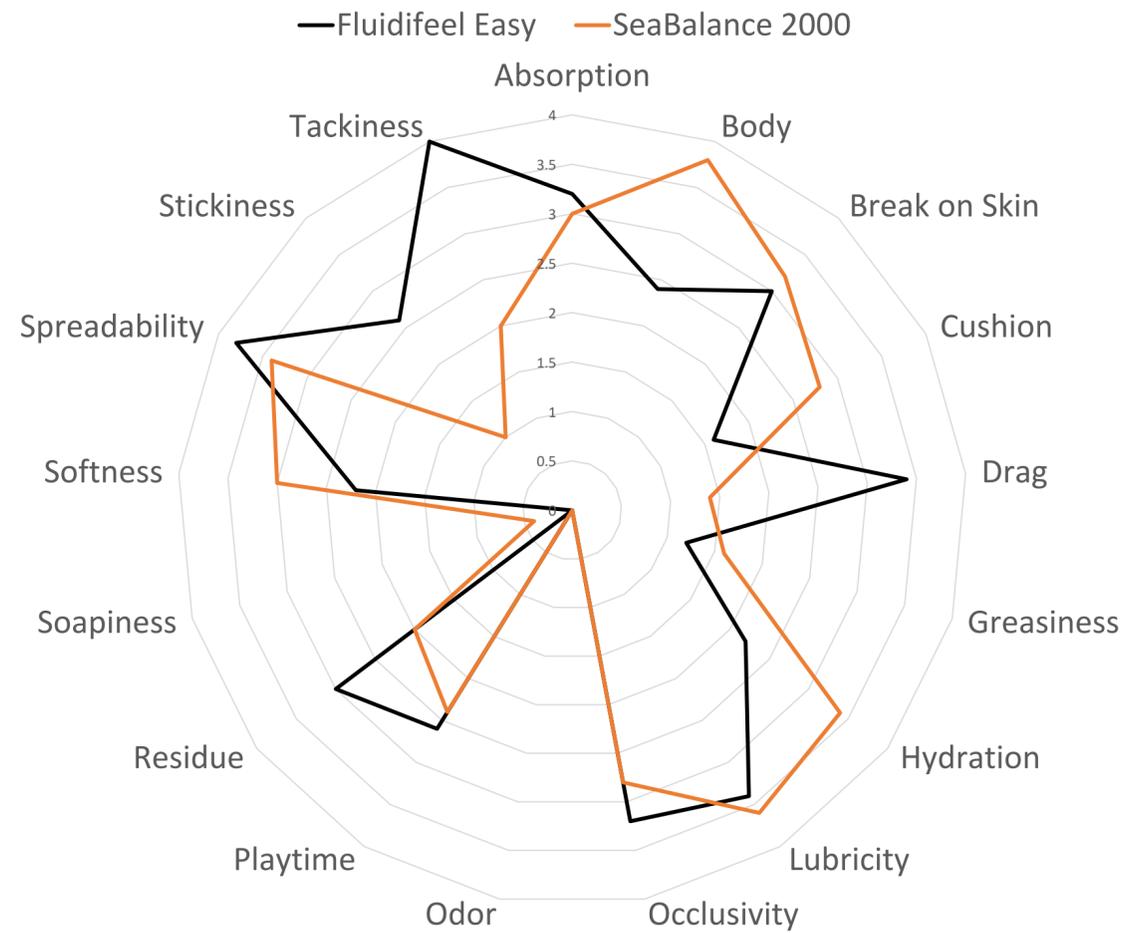


6 hours

- ✓ Skin Barrier function improvement
- ✓ Decrease of TEWL
- ✓ Keep moisture of the skin

*O/W emulsions with different emulsifiers (use rate 3%)
 Number of panelists: 11
 Test area: inner forearm
 Equipment: Tewameter® TM 300*

Sensory Profile **Body Milk**

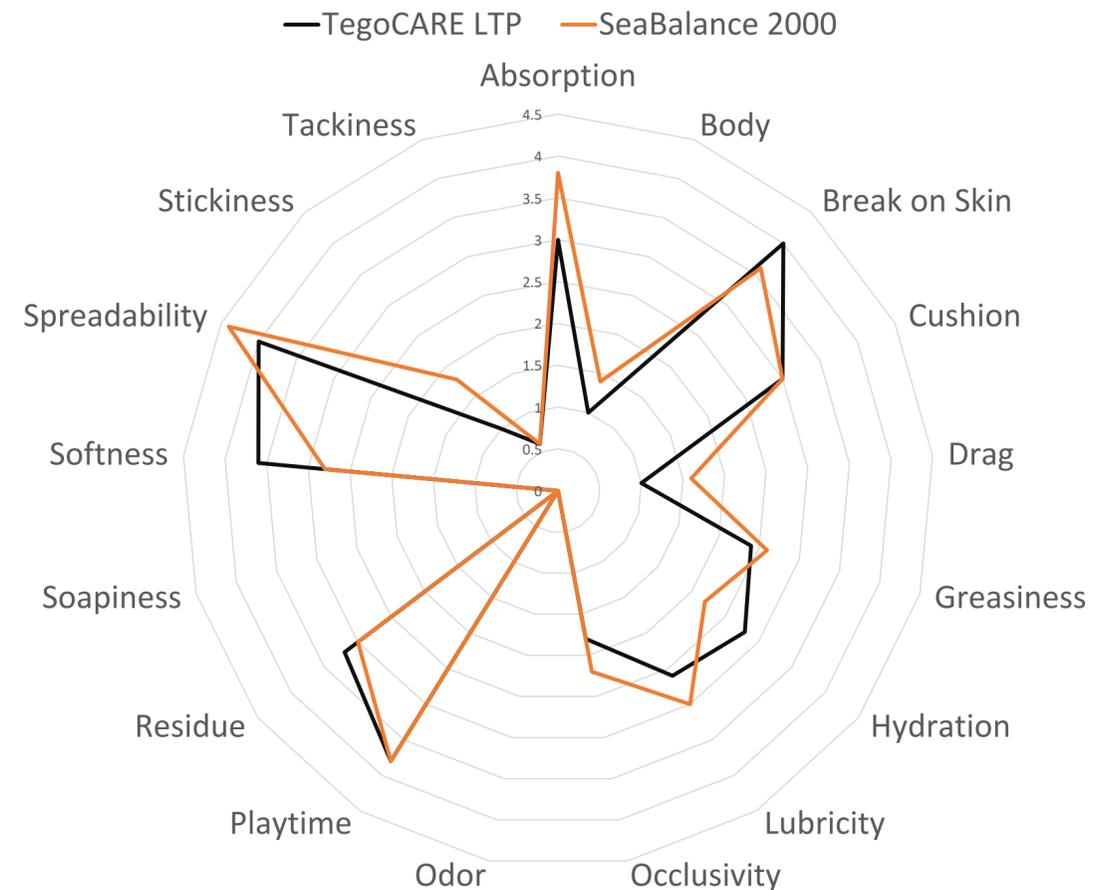


*Sensorial Panel evaluation on n= 5 people
Body milk lotion with 3% SeaBalance 2000 vs. 3% FLUIDIFEEL™ EASY*

Key Benefits

- ✓ Superior hydration
- ✓ Not tacky & not sticky
- ✓ Great Absorption
- ✓ Less residue

Sensorial Evaluation Sprayable Lotion



*Sensorial Panel evaluation on n= 5 people
Sprayable lotion with 2% SeaBalance 2000 vs. 2% TEGO® Care LTP*

Key Benefits

- ✓ Great spreadability
- ✓ Excellent playtime
- ✓ Very good absorption

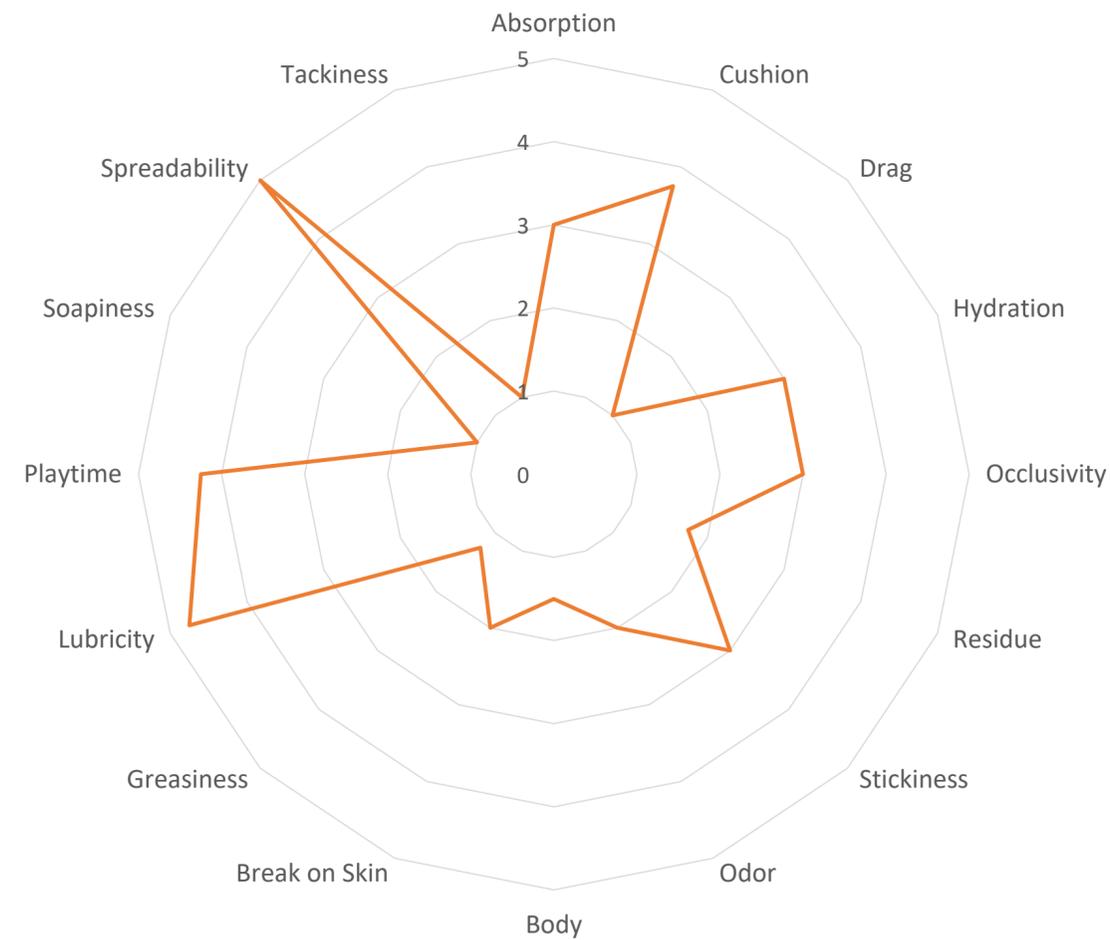
Mineral sunscreen SPF 50 PA+++

S11-01-22216-1

**SEA
BALANCE**
The world's first seaweed-based
cosmetic emulsifier.

Blends easily into the skin during application

- Quick break
- Excellent spreadability
- Very good playtime
- No whitening



After feel

- Smooth feeling (no drag)
- Low residue

Sensorial evaluation

- SeaBalance 2000 used at 4% in combination with 3% co-emulsifier Sensanov WR
- Mineral filters: Dispersions of TiO₂ & ZnO
- Number of panelists: 4

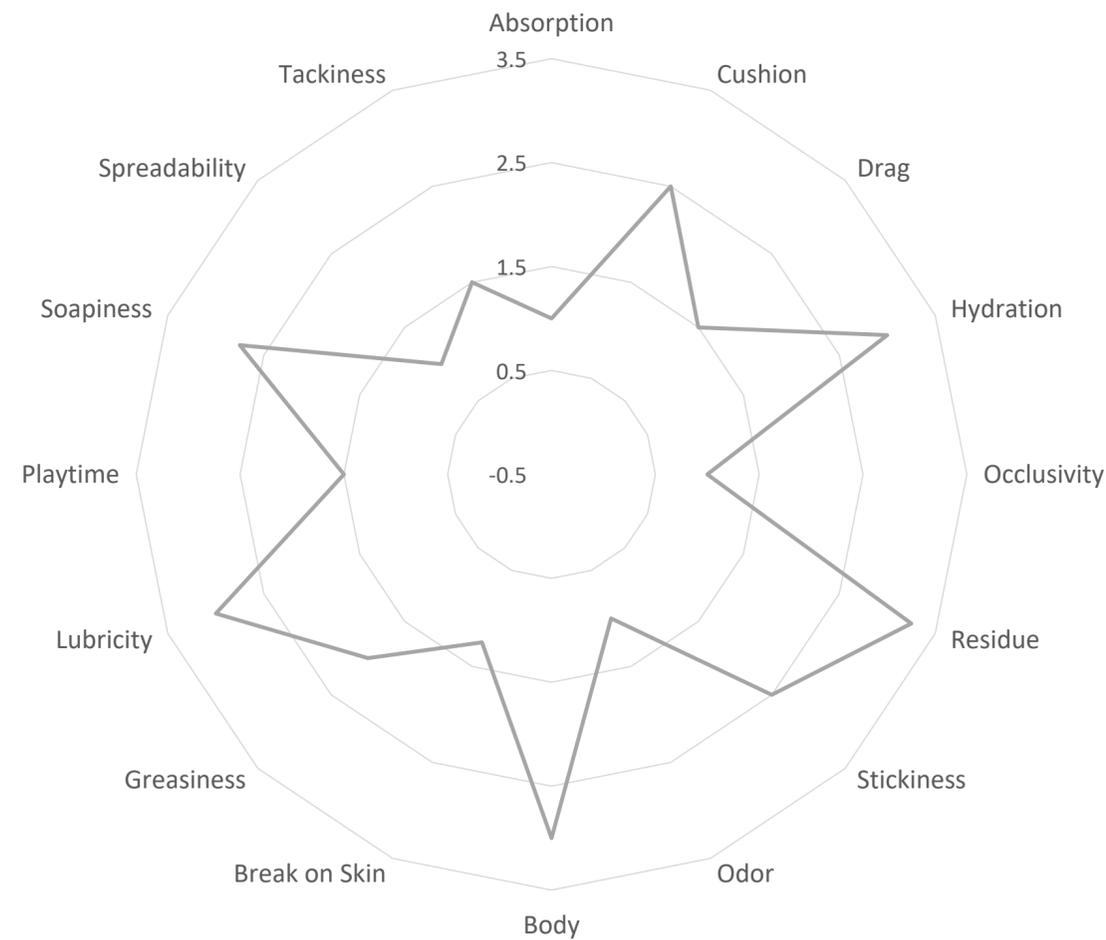
Sun Protect Light Gel SPF 50 PA+++ (Hybrid)

S10-01-23129-2

**SEA
BALANCE**
The world's first seaweed-based
cosmetic emulsifier.

During application

- Quick break
- Low greasiness
- No tackiness



After feel

- Blends easily into the skin
- Skin feels hydrated and protected

Sensorial evaluation

- SeaBalance 2000 used at 5% in combination with 3% co-emulsifier Fluidyfeel Easy
- Organic filters: OMC, EHS, OCR and BMDBM
- Mineral filters: Dispersions of TiO₂ & ZnO
- Number of panelists: 4



Grolman
Distribution of Premium Ingredients



Welcome to the Carbonwave World





WWW.CARBONWAVE.COM

Will you help us heal the planet by accelerating the shift to upcycled ingredients?

Contact us to learn more:

aschelin@carbonwave.com
info@bregaglio.eu

Visit us and discover our formulations!
STAND 344

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