

ISSUE DECEMBER 2024

COSMETOPOLITAN



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RAHN

Your partner for excellence

Dear Reader,



As we approach the close of another year, it's the perfect moment to reflect on all that we have accomplished and to reignite our aspirations for the year ahead. The end of a year holds a special allure: it's a time for fresh starts and the anticipation of new achievements that can bring even greater success.

Setting goals and resolutions in the workplace is often underrated, yet it's one of the most powerful ways to create a "reward-rich" environment. In positive psychology, when people perceive their environment as rewarding, they're more likely to display reward- or goal-seeking behavior – the very definition of an engaged employee. Engaged employees, approach their goals with energy and commitment, experiencing increased fulfillment and productivity. This, in turn, fosters a vibrant, high-performing workplace.

So, as we enter 2025, I would like to ask you: What are your aspirations for the coming year? What achievements do you envision for yourself or for your team?

We'd also like to extend a heartfelt thank you to each of you for the wonderful collaboration, inspiring projects, friendships, exciting product launches, and your continued loyalty. We look forward to building on these successes in 2025 and hope to connect with you in person at one of our trade shows or RAHN events soon.

Happy holidays,

Sandra

WHO IS NEW?



A very warm welcome to the new colleagues joining our team:



NURIA FERNÁNDEZ
Function
Customer Service Cosmetics
Joined
1st July 2024



HÉLÈNE VALLO
Function
Technical Sales Manager Cosmetics
Division
Team Switzerland
Joined
15th August 2024

Welcome aboard! We're excited to have you on our team and look forward to working with both of you.

RAHN – Behind the scenes!

Not just any team ...

Who actually works in what department and what does the department do? Meet the team ...

LOYA SCHOEFFEL



Part of the team since?	April 2021
Responsible for?	The <i>in-vivo</i> lab and certain RAHN Cosmetic Actives development projects.
How would you describe yourself in three words?	Adventurous, optimistic, driven.
What are you passionate about?	I'm passionate about sports, especially jogging, cycling, hiking, and skiing, as well as the wonderful world of nature and plants, healthy eating, time with friends and family, and a good true crime story or psychological thriller.
What do you like about RAHN?	My colleagues! They create the amazing atmosphere and strong RAHN team spirit. I love being surrounded by so many different personalities, each bringing their own story and unique character. My team, the RAHN-Cosmetic Actives, is also particularly close to my heart. Our collaboration is full of openness and mutual support. It's a joy to share ideas, learn from each other, and find solutions together. I feel appreciated and part of a strong team.

ALESSIA POSTAI



Part of the team since?	April 2022
Responsible for?	As the Digital Marketing Manager, I manage everything related to our online presence, whether it's the website, social media, or newsletter distribution.
How would you describe drei Worten beschreiben?	Creative, curious, open-minded.
What are you passionate about?	Outside of my full-time job, I'm a passionate makeup artist, which pairs well with RAHN-Cosmetics 😊. I also love discovering new things, whether it's new recipes, restaurants, cultures, travel destinations, or even hairstyles (at our next meeting, I probably won't look like I do in the photo).
What do you like about RAHN?	My motivated and warm colleagues! There's a lot to love about RAHN, but for me, the team dynamic stands out the most.

VIANEY BLANCO DIAZ



Part of the team since?	September 2022
Responsible for?	Management of the RAHN Cosmetic Actives distribution network in Southern and Eastern Europe, Scandinavia, Canada, and LATAM.
How would you describe yourself in three words?	Determined, reliable, committed.
What are you passionate about?	Traveling, long walks in nature, family & friends and lifelong learning.
What do you like about RAHN?	What I particularly appreciate about RAHN is the trust and respect shown to employees. I highly value team spirit, and it's clearly felt at RAHN. I think it's fantastic how we support each other to reach our «goal» together, all while having a lot of fun along the way.

Happy Anniversary!

Celebrating a Decade of Beauty Innovation with Cosmetopolitan ...

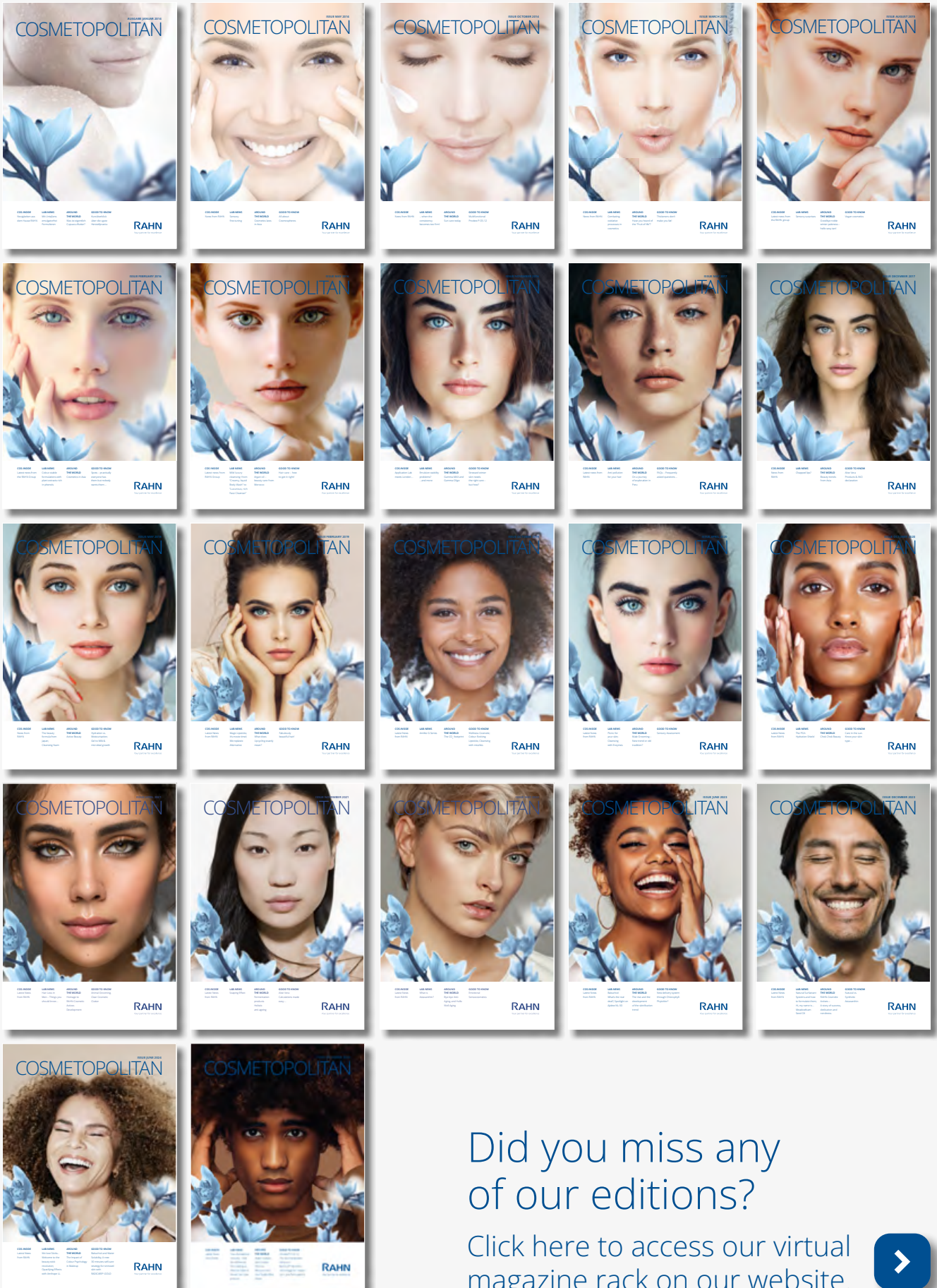
As we mark the **10th anniversary of Cosmetopolitan**, we are filled with gratitude. Over the past decade, our commitment to excellence has driven us to continually explore the cutting edge of beauty science, offering our readers insights into trends, transformative skincare ingredients, and technical solutions.

Each edition of Cosmetopolitan is crafted with passion, expertise, and a vision to educate and inspire beauty enthusiasts around the globe.

As we celebrate this milestone, we look forward to continuing our mission of bringing you the latest advancements in beauty and skincare. Here's to the next decade of innovation, learning, and timeless beauty!

Thank you for being part of this journey!





Did you miss any of our editions?

Click here to access our virtual magazine rack on our website.

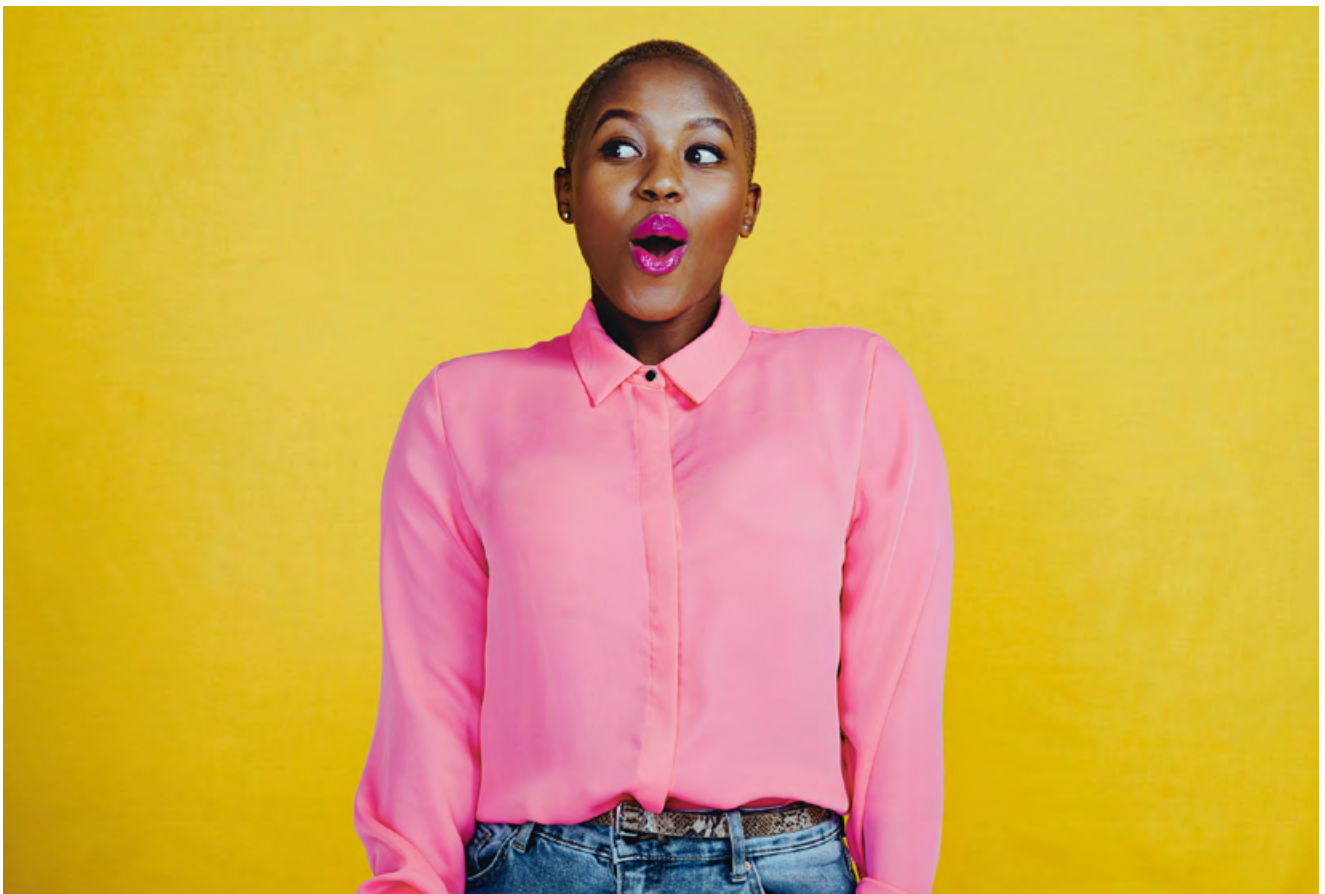


Transformational Textures – Feel the Difference

Are transforming textures for real? According to the transformational concept, a product starts in one form – what you see and feel in the packaging – but changes into another when applied to your skin. The product's texture is a significant part of your experience: Is it light or heavy? Gel-like, oily, creamy, or powdery? Does it absorb quickly, or does it feel like a thick layer on top of your skin? Touch and feel will always be a crucial aspect of our beauty product choices, so it's hard to see this trend fading anytime soon.

The science behind the transformation varies depending on the formulation but often involves a certain technology, specific ingredients, chemical reactions, melting temperature, or a combination of factors.

Intrigued? Transform your skincare routine with us using textures that change at your touch.



1. Transformation from Cream to Oil

This innovative texture transforms during use. The initial phase is creamy and contains a high percentage of light oils, providing a balanced oily sensation upon application. As you glide your finger over the surface, your body heat activates a transition into a light moisturizing oil that spreads easily. This ensures extended playtime and leaves the skin feeling nicely moisturized.

Example formulation:

Light Cream-to-Oil (Sisterna, CE.006)

St	Substance	INCI name USA	%w/w	Manufacturer
1	Deionised Water	Aqua	30.10	several
	Optiphen BSB-W	Benzyl Alcohol, Aqua, Sodium Benzoate, Potassium Sorbate	1.00	Ashland, US
	Glycerin	Glycerin	5.00	several
	Clearogel SG	Sclerotium Gum	0.30	MMP Europe, FR
	Keltrol CG-SFT	Xanthan Gum	0.30	CP Kelco, US
2	VASLight	Undecane, Tridecane, Hydrogenated Olive Oil Unsaponifiables, Coco-Caprylate/Caprates	20.00	EFP Biotek, PT
	Lipex SheaSolve	Shea Butter Ethyl Esters	20.00	AAK, SE
	GSOLight	Vitis Vinifera (Grape) Seed Oil	19.80	EFP Biotek, PT
	Sisterna SP70-C	Sucrose Stearate	3.00	Sisterna B.V., NL
	Dermofeel Toco 70 Non-Gmo	Tocopherol, Helianthus Annuus (Sunflower) Seed Oil	0.20	Evonik, DE
	Argan Infusion (240046)	Fragrance	0.30	Luzi, CH
	Citric Acid (10 % Aq. Sol.)	Citric Acid, Aqua	q.s.	several

2. Transformation from Oil-Gel to Milk

A highly viscous facial cleanser with a three-phase texture that effortlessly removes makeup and impurities. It starts as a soft gel, then transforms into an oil, and finally into a milk upon contact with water, leaving the skin clean and soft.

Example formulation:

Oil-Gel-to-Milk Cleanser (Sisterna, GE.013)

St	Substance	INCI name USA	%w/w	Manufacturer
1	Glycerin 99 %	Glycerin	37.70	several
	Sisterna SP70-C	Sucrose Stearate	2.00	Sisterna B.V., NL
2	Sunflower Oil	Helianthus Annuus (Sunflower) Seed Oil	59.00	several
	Tocopherol Oil CLR	Glycine Soja (Soybean) Oil, Tocopherol	1.00	CLR, DE
3	Natural Care 342791-A	Parfum	0.30	Luzi, CH

3. Transformation from Clay to Milk

A mask containing 20 % green clay that is easily rinsed off. Upon contact with water, the clay mask transforms into a milk, offering a pleasant surprise effect. It leaves the skin feeling silky soft afterward.

Example formulation:

Purifying Clay-to-Milk Mask, (Sisterna, GE.014)

St	Substance	INCI name USA	%w/w	Manufacturer
1	Glycerin 99 %	Glycerin	38.00	several
	Sisterna SP70-C	Sucrose Stearate	2.00	Sisterna B.V., NL
2	VS – Olive Squalane	Squalane	5.00	EFP Biotek, PT
	Apricot Oil	Prunus Armeniaca (Apricot) Kernel Oil	12.50	several
	VAL – Vegetable Alternative to Lanolin	Butyrospermum Parkii (Shea) Butter, Glyceryl Rosinate, Olea Europaea (Olive) Oil Unsaponifiables	9.00	EFP Biotek, PT
	Jjoba Oil	Simmondsia Chinensis (Jjoba) Seed Oil	12.40	several
	Tocomix L70-IP	Tocopherol, Helianthus Annuus (Sunflower) Seed Oil	0.10	Jan Dekker, NL
3	Vibrant Energy 261236-A	Fragrance	1.00	Luzi, CH
	Green Clay ER	Illite	20.00	Alban Muller, FR

4. Transformation from Gel to Oil

Starting as a soft and smooth gel texture, this cleanser grabs onto impurities and then transforms into a silky oil, removing even waterproof makeup without stripping away moisture, to reveal clear radiant skin.

Example formulation:

Melt-to-Oil Soft Cleansing Balm (Ajinomoto, SCG-B)

St	Substance	INCI name USA	%w/w	Manufacturer
1	Wheatgerm Oil	Triticum vulgare (wheat) germ oil	27.40	several
	TEGOSOFT® CO	Cethyl Ethylhexanoate	19.40	Evonik, DE
	Salacos PG-218	Polyglyceryl-10 Dioleate	18.40	Ikeda Corporation, JP
	TEGOSOFT CT	Caprylic/Capric Triglyceride	15.50	Evonik, DE
	TEGOSOFT M	Isopropyl Myristate	9.00	Evonik, DE
	PGLOL 102KC	Polyglyceryl-2 Oleate	2.80	KCI Limited, KR
2	EB-21	Dibutyl Ethylhexanoyl Glutamide	1.34	Ajinomoto, JP
	GP-1	Dibutyl Lauroyl Glutamide	0.16	Ajinomoto, JP
	dermosoft® Pentiol eco	Pentylene glycol	6.00	Evonik, DE
3	Perfume	Fragrance	q.s.	several

5. Transformation from Cream to Powder

When it's your time to shine but you want to stay matte ... This Cream-to-Powder product glides onto the skin as a soft, creamy emulsion with a lightweight, transformative texture. After application, it leaves the skin feeling silky and moisturised with a powdery finish.

Example formulation 1:

Cream-to-Powder Foundation (Elementis, C-2043-02)

St	Substance	INCI name USA	%w/w	Manufacturer
1	Finsolv TN	C12-15 Alkyl Benzoate	40.00	Innospec, US
	BENTONE GEL® LC V	C9-12 Alkane (and) Disteardimonium Hectorite (and) Triethyl Citrate	10.00	Elementis, US
	Jeechem NDA-LC	C9-12 Alkane	5.00	Vantage, US
	Almond Oil	Prunus Amygdalus Dulcis (Sweet Almond) Oil	5.00	several
	Tocopheryl Acetate	Tocopheryl Acetate	1.00	several
	Euxyl PE 9010	Phenoxyethanol (and) Ethylhexylglycerin	0.50	Schülke Mayr, DE
2	OD75CJE	Titanium Dioxide (and) Octyldodecanol (and) Jojoba Esters (and) Trihydroxystearin	8.00	Kobo, US
	OD55YJE	Iron Oxides (and) Octyldodecanol (and) Jojoba Esters (and) Trihydroxystearin	4.00	Kobo, US
	OD55RJE	Iron Oxides (and) Octyldodecanol (and) Jojoba Esters (and) Trihydroxystearin	1.00	Kobo, US
	OD75BJE	Iron Oxides (and) Octyldodecanol (and) Jojoba Esters (and) Trihydroxystearin	0.50	Kobo, US
3	THIXCIN® R PC	Trihydroxystearin	5.50	Elementis, US
4	Reisita Natural	Oryza Sativa (Rice) Starch	20.00	Agrana, AT

Example formulation 2:

Perfectly Matte – Natural Cream-to-Powder Make up (Evonik, ST 07/19-10)

St	Substance	INCI name USA	%w/w	Manufacturer
1	dermofeel® viscolid MB	Hydrogenated Palm Oil; Hydrogenated Rapeseed Oil	3.50	Evonik, DE
	TEGOSOFT® CR MB	Cetyl Ricinoleate	2.50	Evonik, DE
	Carnauba Wax	Copernicia Cerifera (Carnauba) Wax	1.00	several
	TEGOSOFT® DC MB	Decyl Cocoate	35.00	Evonik, DE
	Avocado Oil	Persea Gratissima (Avocado) Oil	12.80	several
	Almond Oil	Prunus Amygdalus Dulcis (Sweet Almond) Oil	3.50	several
	Argan Oil	Argania Spinosa Kernel Oil	3.50	several
	dermofeel® Toco 70 non GMO	Tocopherol; Helianthus Annuus (Sunflower) Seed Oil	0.50	Evonik, DE
	TEGO® Feel C 10	Cellulose	22.90	Evonik, DE
	Unipure White LC 981 HLC	CI 77891; Hydrogenated Lecithin	15.00	Sensient, US
	Unipure Yellow LC 182 HLC	CI 77492; Hydrogenated Lecithin	1.20	Sensient, US
	Unipure Red LC 381 HLC	CI 77491; Hydrogenated Lecithin	0.70	Sensient, US
	Unipure Black LC 989 HLC	CI 77499; Hydrogenated Lecithin	0.20	Sensient, US
	RonaFlair Softshade	Titanium Dioxide; Silica; Mica; Alumina	0.50	Merck, DE
	RonaFlair Balance Blue	Titanium Dioxide; Mica; Tin Oxide	0.20	Merck, DE
2	Perfume	Fragrance	q.s.	several

6. Transformational Color Changing Lipstick

Watch the transformation from transparent to pink. This formulation reacts to the “unique chemistry” of the wearer’s lips to create the perfect custom hue.

Example formulation:

Magic Lipstick (RAHN, 700418.0005)

St	Substance	INCI name USA	%w/w	Manufacturer
1	AJK OD2046	Octyl Dodecanol, Dibutyl Lauroyl Glutamide, Dibutyl Ethylhexanoyl Glutamide	30.00	Ajinomoto, JP
	Panalane H-300E	Hydrogenated Polyisobutene	15.00	Vantage, US
	Panalane L-14E	Hydrogenated Polyisobutene	25.70	Vantage, US
	Eldew SL-205	Isopropyl Lauroyl Sarcosinate	5.00	Ajinomoto, JP
	Tegosoft TN	C12-15 Alkyl Benzoate	14.50	Evonik, DE
	HydraSynol DOI	Isosorbide Dicaprylate	2.00	Sytheon Ltd, US
	Eldew PS-203R	Phytosteryl/Octyldodecyl Lauroyl Glutamate	7.00	Ajinomoto, JP
	Flavor Creme-de-Coco	Aroma	0.50	several
	Red 27	CI45410	0.20	several
	Citric Acid 100%	Citric Acid	0.10	several

7. Transformation from Lotion to Oil

The product transforms from a lotion to an oil while simultaneously providing effective sun protection. The oil leaves the skin highly moisturized and replenished.

Example formulation:

Lotion-to-Oil Sun Care SPF 50 (Evonik, SG 17/18-11)

St	Substance	INCI name USA	%w/w	Manufacturer
1	Tego Care PBS 6	Polyglyceryl-6 Stearate; Polyglyceryl-6 Behenate	3.00	Evonik, DE
	TEGOSOFT® XC MB	Phenoxyethyl Caprylate	17.00	Evonik, DE
	TEGOSOFT® DEC	Diethylhexyl Carbonate	15.00	Evonik, DE
	TEGOSOFT® DC MB	Decyl Cocoate	8.00	Evonik, DE
	Uvinul A Plus Granular	Diethylamino Hydroxybenzoyl Hexyl Benzoate	10.00	BASF, DE
	AakoSun BTZ	Diethylhexyl Butamido Triazone	4.50	Aako BV, NL
	Tinosorb S	Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine	5.00	BASF, DE
	AakoSun EHS	Ethylhexyl Salicylate	5.00	Aako BV, NL
	Neo Heliopan HMS	Homosalate	5.00	Symrise, DE
	dermofeel® AP MB	Ascorbyl Palmitate	0.20	Evonik, DE
	dermofeel® Toco 70 non GMO	Tocopherol; Helianthus Annuus (Sunflower) Seed Oil	1.00	Evonik, DE
2	Water	Aqua	22.05	several
	Glycerin	Glycerin	3.00	several
	EDTA	Disodium EDTA	0.05	several
3	Verstatil® TBO	Triethylcitrate; Caprylyl Glycol; Benzoic Acid	1.20	Evonik, DE

8. Transformational Quick Break Emulsion

This product uses a quick break system. During application, the cream transforms, and visible water droplets form on the skin, creating a slight cooling effect while leaving the skin nourished and refreshed.

Example formulation:

Essential Elegance Face Care (Evonik, MK 9/17-13)

St	Substance	INCI name USA	%w/w	Manufacturer
1	ISOLAN® 17 MB	Polyglyceryl-4 Diisostearate/Polyhydroxystearate/Sebacate; Caprylic/Capric Triglyceride; Polyglyceryl-3 Oleate; Diisostearyl Polyglyceryl-3 Dimer Dilinoleate	3.00	Evonik, DE
	dermofeel® sensolv MB	Isoamyl Laurate	4.50	Evonik, DE
	TEGOSOFT® CT MB	Caprylic/Capric Triglyceride	4.50	Evonik, DE
2	Water	Aqua	77.50	several
	Glycerin	Glycerin	7.00	several
	Zinc Sulfate Heptahydrate	Zinc Sulfate Heptahydrate	1.50	Merck, DE
	Verstatil® SL non GMO	Aqua; Sodium Levulinate; Potassium Sorbate	2.00	Evonik, DE
3	Parfum	Fragrance	q.s.	several



Creating transformational textures is all about wowing consumers and stimulating their senses in unique ways. And while it's fully backed by science, it does feel a bit like magic. **So, which one excites you the most?**

Formulating an effective state-of-the-art Sun Care product

Did you know that up to 90% of visible skin ageing happens in daylight – even through clouds and windows?

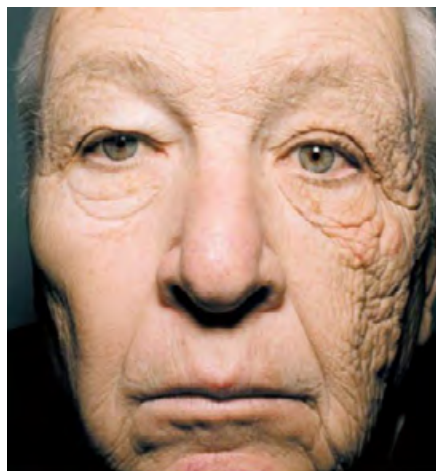
A 69-year-old truck driver, after 28 years on the road, provides a powerful example. A photograph in the New England Journal of Medicine reveals the damage on the left side of his face, caused by years of sun exposure. This side, regularly exposed to ultraviolet A (UVA) radiation, shows significantly more aging.

The difference is a strong reminder of how effective sunscreen can be in protecting your skin and preventing premature aging. It's a powerful reminder to apply SPF daily to protect your skin.

Formulating an effective state-of-the-art sun care product can be complex. Our goal was to create a formulation that not only shields against sun damage but also prevents and reverses visible signs of premature aging. We wanted to make a product you would actually want to wear- transforming sun care into skincare, whether you are indoors or outdoors.

To achieve this, we developed a three-level protection strategy designed to maximise consumer safety and satisfaction:

The first line of defense utilises a modern photostable UVB/UVA combination to ensure maximum protection against harmful UV radiation, without causing any negative effects. The second



(Source: New England Journal of Medicine)

line of defense incorporates a highly effective antioxidant system to shield the skin from photoaging and oxidative stress, offering additional protection against blue light and pollution. Finally, the third line of defense focuses on a fast-absorbing, non-sticky formulation that encourages frequent use by providing a pleasant user experience, reinforcing sunscreen's role as an essential anti-aging measure.

[Let's have a look at the formulation ...](#)

RAHN's Ultimate Protection Face Cream SPF 50

St	Substance	INCI name USA	%w/w	Manufacturer
1	Water demin.	Water	37.73	several
	Glycerin 99.5 %	Glycerin	2.50	several
	Dermosoft Pentiol Eco	Pentylene Glycol	2.50	Evonik, DE
	Dermosoft Hexiol	Hexylene Glycol	0.80	Evonik, DE
	Bentone Hydroclay 700	Hectorite, Xanthan Gum	0.50	Elementis, US
2	Tego Care 450 MB	Polyglyceryl-3 Methylglucose Distearate	3.00	Evonik, DE
	Amphisol K	Potassium Cetyl Phosphate	0.40	DSM, NL
	Tegosoft XC	Phenoxyethyl Caprylate	7.00	Evonik, DE
	Eldew SL-205	Isopropyl Lauroyl Sarcosinate	7.00	Ajinomoto, JP
	Parsol DHHB	Diethylamino Hydroxybenzoyl Hexyl Benzoate	8.00	DSM, NL
	Parsol EHT	Ethylhexyl Triazone	5.00	DSM, NL
	Parsol Shield	Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine	2.10	DSM, NL
	Uvasorb HEB	Diethylhexyl Butamido Triazone	1.00	3V Sigma, IT
	Cetiol Sensoft MB	Propylheptyl Caprylate	4.00	BASF, DE
	Dub DIS	Diisopropyl Sebacate	3.00	Stearinerie Dubois, FR
	Tego Filmstar One MB	Polyglyceryl-3 Stearate/Sebacate	1.50	Evonik, DE
	Tego Alkanol 1618	Cetearyl Alcohol	1.20	Evonik, DE
	Cutina HR	Hydrogenated Castor Oil	0.40	BASF, DE
	Dermofeel Toco 70 non-GMO	Tocopherol, Helianthus Annuus (Sunflower) Seed Oil	0.15	Evonik, DE
	3	RADICARE®-GOLD	Crambe Abyssinica Seed Oil, Beta-Carotene, Xanthophylls, Tocopherol, Helianthus Annuus (Sunflower) Seed Oil, Rosmarinus Officinalis (Rosemary) Leaf Extract	1.00
4	Parfum Esse 500	Fragrance	0.25	Huber the Nose, CH
5	Valvance Touch	Silica	1.00	DSM, NL
	Parsol MAX	Methylene Bis-Benzotriazolyl Tetramethylbutylphenol, Water, Decyl Glucoside, Propylene Glycol, Xanthan Gum	7.00	DSM, NL
6	Alcohol denat.	Alcohol denat.	2.50	several
7	Citric Acid solution 10 %	Water, Citric Acid	0.47	several



Ultimate Protection Face Cream SPF 50 in a nutshell

Let's have a look at the formulation highlights ...

- Light, non-sticky texture
- White-cast free formulation
- Microplastic-free
- Free of endocrine disruptors
- Coral reef-friendly
- Improved water-resistance
- Free of listed preservatives
- Contains RADICARE®-GOLD as effective cell protection shield for healthy skin

What's the UV filter strategy?

UVB/A filter combination that fulfils the following requirements:

- High UVB & UVA protection – Spectral homeostasis
- Photo-stable
- Modern non-critical UV filters
- Blue light protection (in silico)
- Eco-friendly, comply with the ÖKOTEST guidelines
- Eco class B green (sustainability)
- Not listed on EU potential endocrine disruptor list
- Coral reef friendly

And how about the SPF rating?

- SPF in vivo: 58, protection class: high
- UV-B SPF in silico (sunscreen calculator): 51.3
- UV-A PF (Protection factor) in silico (sunscreen calculator): 25.6
- UVA PF / SPF: 0.47 (min. 0.33 according to EU regulation)
- Critical wavelength λ_{max} 377 nm (min. 370 according to EU regulation)
- EcoSun Pass Value: 214 (basf.com) / Eco Class B Green (DSM)



Planning to launch a state-of-the-art face care product or sun care line for the upcoming summer season? Press the button below, and we'll send you our newly created presentation highlighting the key essentials.

Water matters:

Earth's Most Precious Resource and Your Scalp's Best Friend

Have you ever asked yourselves why we (humans) gravitate to water? We feel a sense of peace and soothing by just gazing at the oceans and lakes.

Water is essential to our bodies, making up about 60% of our body weight [1]. Our brain consists of 80%, our skin 64% and even our bones of 31% water. So, from this perspective, we are essentially intelligent water blobs with emotions.

It is no surprise, then, that dehydration can impair both our cognitive and molecular functions. A person may only survive a few days without water. Dehydration happens quickly and may lead to organ failure and death. In the plant kingdom, some species have developed remarkable strategies to endure extreme dryness, resuming normal metabolic activity once rehydrated [2]. One of those incredible plants is *Myrothamnus flabellifolia*. This unique shrub, native to the arid regions of southern Africa, is renowned for its extraordinary ability to withstand severe droughts and revive with the onset of rain (Figure 1).

The remarkable resilience of *M. flabellifolia* is attributed to its high trehalose content, a sugar that plays a critical role in the plant's survival strategy. This disaccharide is known for its kosmotropic or "order-making" nature. Trehalose's ability to form hydrogen bonds with a plethora of molecules, to intercalate between phospholipid head groups increasing their packing density, and to interact strongly with carbonyl and phosphates in the absence of water makes it an excellent molecule for stabilizing biological membranes and proteins.

Figure 1: During dry season, *M. flabellifolia* bush looks dead but revives instantly after rainfall.



This behavior mimics the NMF, Natural Moisturising Factor, which can maintain the scalp homeostasis, prevent moisture loss and facilitate the repair in states of scalp barrier disruption [4-6]. Trehalose acts as a bioprotectant thanks to its superior stabilizing properties towards membranes and proteins. It helps organisms survive extreme desiccation and this protective role is advantageous for scalp care, supporting its hydration even in harsh conditions.

These protective and moisture-retention properties are the reason why the newest member of RAHN-Cosmetic Actives – [MYRAMAZE®-PURE](#), acts as an asset in harsh climates or during seasonal changes when scalp dryness is more prevalent. Beyond its moisture-retention and membrane-stabilizing properties, MYRAMAZE®-PURE can improve various physiological conditions. Clinical rinse-off studies have demonstrated that MYRAMAZE®-PURE is able to protect and strengthen the scalp barrier in deleterious conditions. By promoting NMF and ceramide production in the scalp, the active ingredient can reinforce the barrier structure. Studies have also shown a significant protection against scalp dehydration as well as an additional moisture push. It therefore acts as a soothing ingredient, that allows a reduction in discomfort and in scalp erythema (Figure 2).

We from RAHN-Cosmetic Actives recognize the incredible value of *M. flabellifolia* and therefore we utilize the same biomass for three distinct active ingredients, namely [MYRAMAZE®-ESSENCE](#), as a first extraction product and proceed with the remaining to extract [MYRAMAZE®](#) and our newest development – [MYRAMAZE®-PURE](#). We are using different extraction techni-

ques to unlock the full potential of this botanical marvel, ensuring its gifts are captured in their purest form.

Furthermore, our systemic framework across the innovation and supply chain incorporates holistic concept of [circular kindness and RAHN-Cosmetic Actives compass](#). These principles are woven into the DNA of our work philosophy and our inner attitude. The selection of sustainable and transparently produced raw materials is the basis for trustworthy finished cosmetic products. This requires not only transparency of the upstream supply chain but also systematic analysis of the product's impact on nature and environment.

M. flabellifolia is [sustainably and carefully wild-harvested](#) by trained local communities during the dry season from its native mountainous shallow and rocky environment in South Africa. This method not only ensures the plant's conservation but also maintains its high levels of valuable substances. This process of rejuvenation pruning performed once a year, supports the plant's growth and contributes to its preservation in the wild safeguarding the biodiversity in this region. These plants have been withstood drought for 20–30 years, and our conscious harvesting ensures that they will continue to do so for many years to come. The sourcing and research and development of genetic resources, such as *M. flabellifolia*, are governed by the Nagoya Protocol and require compliance with Access and Benefit Sharing (ABS) regulations. At RAHN-Cosmetic Actives, we undertook the extensive process of obtaining the Integrated Biotrade and Bioprospecting Permit from the South African Government. This permit ensures that our use of this plant is fully compliant with ABS regulations, allowing us to responsibly utilize it for our customers.



Figure 2: MYRAMAZE®-PURE 0.5% visibly reduces scalp erythema and flaking.

MYRAMAZE®-PURE centers entirely around water. Besides the assessed Product Carbon Footprint, we have decided to thoroughly examine its water consumption throughout the entire value chain. The aim of this assessment is to understand and analyze the water use, scarcity and pollution associated with the cultivation and manufacture of MYRAMAZE® product range. In particular, it is important for us to understand and articulate our water-use efficiency, identify hot spots and what can be changed to achieve sustainable management of water resources. The assessment looks not only at direct water use, but also at the indirect water (hidden water) use associated with each step of the production or activity. There is little awareness of the hidden water behind a product. Visualising this water can help to understand the use and management of freshwater consumption and water pollution along the entire production and supply chain. For the Product Water Footprint we have used stepwise accumulative approach employing the open source tool Aqueduct™ [21] for Water Risk Assessment of sourcing and manufacturing sites, the Water Footprint Assessment Manual [22] for the calculation of blue water – the surface and groundwater resources (fresh water, scarce); green water – the water stored in the soil and from precipitation (rain and humidity); and grey water – fresh water which becomes polluted by the production (including thermal pollution). The Ecoinvent database was used when primary data were lacking. Together, all these components provide a comprehensive picture of water consumption used to produce any good, service or process.

The total water footprint for MYRAMAZE®-PURE is around 12000 m³/t. Our assessment revealed that the highest amount of water is accounted for the grey water footprint. This is due to the complex manufacturing process. To get the most out of the valuable biomass, MYRAMAZE®-PURE is extracted with a large amount of water, which is later evaporated to achieve a higher dry mass of the product. This results in a higher grey water footprint. However, as previously reported, the water used is not directly polluted but has a higher temperature than surrounding environment (thermal pollution).

Direct water consumption is something we can all understand. But the hidden water is generally not a common term and is difficult to estimate. There are currently no other product water footprints for cosmetic ingredients, so to get an idea of how much hidden water is in our product, we are forced to compare the total amount of the consumed water with products from the food industry. The table following shows some of the water footprints for food ingredients.

Food	Water footprint (m ³ /t) Total
Chocolate	17196
Green and black tea	8856
Olive Oil, virgin	14431
Coffee, roasted	18925
Bread (from wheat)	1680

If we talk about the footprint of a cup of coffee, we come to 0.13 m³ (130 l)/cup (based on the use of 7g of roasted coffee per cup), and that of tea is 0.027 m³ (27 l)/cup (3g of black tea per cup). For those who prefer a glass of apple juice, we must account 0.07 m³ (70l) per one glass [39]. Our food is thirsty. But not just our food, but all the other products we use every day. From the comparison we can say that MYRAMAZE®-PURE is in the range of green and black tea or olive oil but far from coffee or chocolate. Additionally, the low use concentration (0.5%) further decreases the PWF of finished cosmetics.

Sustainable water management strategies are important for any business sector and carrying out a risk and water footprint assessment enables the identification of hot spots and the evaluation of possible action strategies. We from RAHN-Cosmetic Actives are committed to analyse, optimise and minimise the water footprint of all our products. This requires the involvement of several stakeholders. Therefore, we are working with our manufacturers, suppliers and local farmers to proactively address water consumption. The analysis shows that the sourcing of cosmetic raw materials and the associated production processes are the biggest challenge, where we need to involve all stakeholders.

MYRAMAZE®-PURE and the family products are the first RAHN-Cosmetic Actives, but not the last, to be assessed on the journey of sustainable water management.

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Prodew[®] P-DS-12:

The Skin Penetration Enhancer

In the realm of high-performance skincare products, the ability of active ingredients to penetrate the skin effectively is crucial for achieving desired outcomes such as moisturising, anti-wrinkle, and anti-blemish effects. Prodew[®] P-DS-12 (*Sodium Caproyl Proline*), an amino acid-based moisturiser and booster for preservation systems, derived from L-proline, has shown promising results as a skin penetration enhancer, facilitating the delivery of active ingredients to targeted skin areas.

Studies

Both ex vivo and in vitro studies have confirmed the penetration-enhancing effects of Sodium Caproyl Proline. Using human abdominal skin and artificial membranes, researchers observed that Sodium Caproyl Proline significantly increased the penetration of amino acids. In vivo studies using confocal Raman spectroscopy further validated these findings, showing deeper penetration of L-phenylalanine into the stratum corneum when combined with Sodium Caproyl Proline.



Mechanisms of Action

The penetration enhancement by Sodium Caproyl Prolinate is attributed to several mechanisms:

1. **Ion Pair Formation:** Sodium Caproyl Prolinate forms ion pairs with amino acids, reducing their polarity and facilitating their penetration into the hydrophobic environment of the stratum corneum.
2. **Increased Lipid Fluidity:** Sodium Caproyl Prolinate increases the fluidity of intercellular lipids, promoting the penetration of active ingredients without significantly disrupting the skin barrier.
3. **Moisturisation:** By enhancing skin hydration, Sodium Caproyl Prolinate improves the partitioning of hydrophilic components, aiding their penetration.

Application in Anti-Aging Products

Sodium Caproyl Prolinate has also been effective in enhancing the penetration of other active ingredients such as niacinamide (NAM) and zinc pyrrolidone carboxylic acid (Zinc PCA). In studies using three-dimensional cultured skin models, formulations containing Sodium Caproyl Prolinate significantly reduced melanin production, indicating potential anti-blemish effects. Additionally, human studies showed that formulations with Zinc PCA and Sodium Caproyl Prolinate led to a significant improvement in wrinkle grades, suggesting enhanced anti-wrinkle benefits.



Conclusion

Prodew® P-DS-12 (Sodium Caproyl Prolinate) is a versatile and effective skin penetration enhancer that not only boosts the delivery of amino acids but also enhances the efficacy of other active ingredients in skincare formulations. Its ability to maintain skin hydration and improve the penetration of active components makes it a valuable addition to high-performance skincare products aimed at anti-aging and moisturising benefits.



If you're interested in the research paper on the penetration-enhancing abilities of Prodew P-DS-12, send us a quick message by pressing the button to the left, and we'll be happy to send it to you.

Bentone® Hectorite Technology

for Today's Sun Care Formulations

Hectorite clays, such as those in Bentone® products, have become indispensable in modern sun care formulations. Their versatility in both O/W (oil-in-water) and W/O (water-in-oil) emulsions optimises stability, enhances sensory feel, and ensures

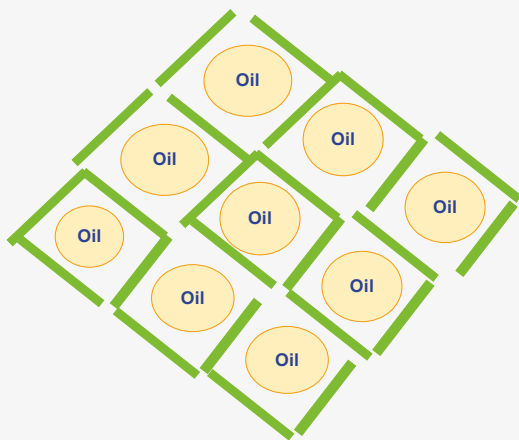
efficient active ingredient dispersion. Formulations using Bentone® Hectorite clays deliver a lightweight, powdery finish with improved heat stability, making them ideal for a wide range of sunscreen products.



Key Benefits in Sun Care Formulations

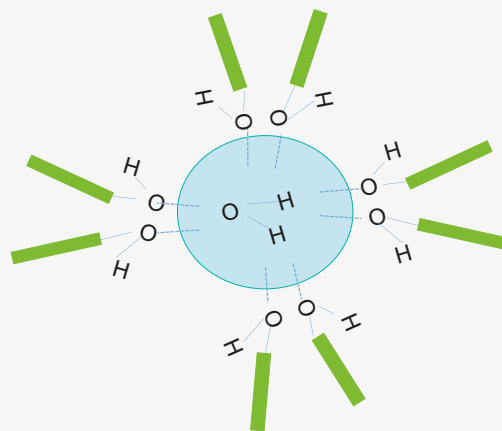
1. Thermostability and Emulsion Stability: Sunscreens are often exposed to extreme temperatures during both production and use. Hectorite clays, due to their natural heat resistance, provide exceptional thermostability, maintaining product homogeneity even at high temperatures. Bentone® Hectorites form a stabilizing structure that keeps UV filters evenly dispersed, preventing separation and degradation during exposure to heat up to 40°C or more, such as in beach environments. They enhance the stability of emulsions by preventing oil droplets from coalescing, thereby ensuring consistent and reliable sun protection.

BENTONE HYDROCLAY™ in Oil in Water Emulsions



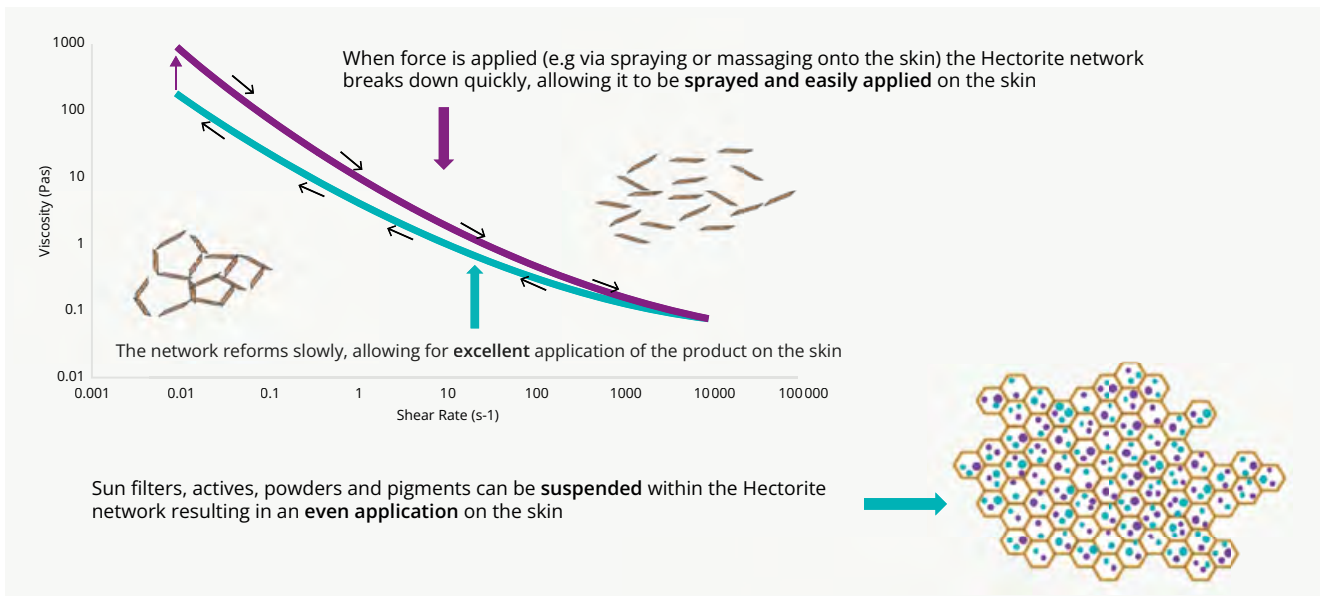
- ✓ In O/W formulations, Hectorite platelets form a network in water and stabilize the oil droplets
- ✓ In an emulsion, Bentone Gel®/Luxe also interacts on the surface of the water droplet through Hydrogen bonding creating excellent emulsion stability

BENTONE GEL® and BENTONE® LUXE in Water in Oil Emulsions

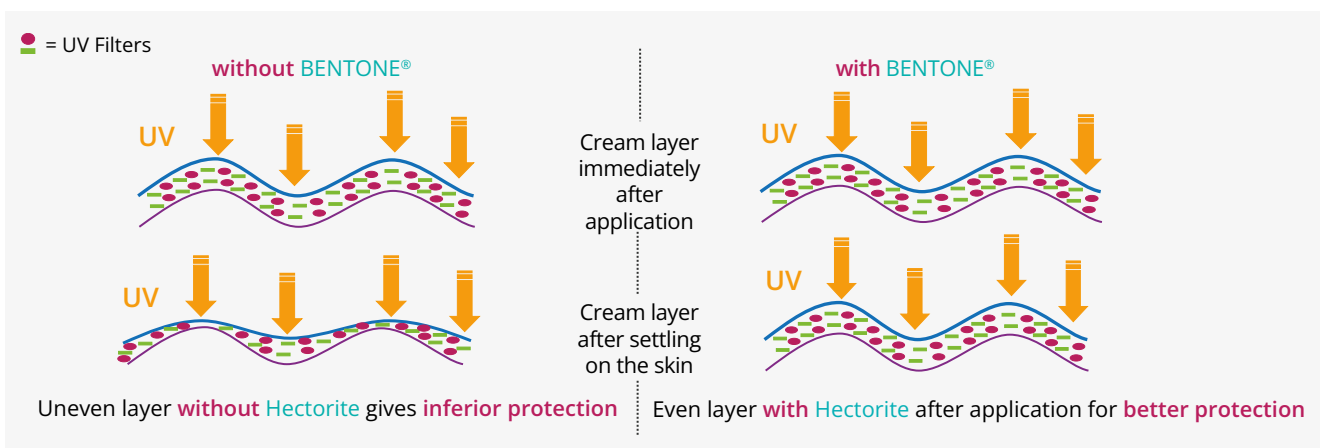


- ✓ Bentone Gel®/Luxe forms a network in the oil phase as well as keeping the water droplets separate reducing instability
- ✓ This prevents the oil droplets flowing together creating excellent stability

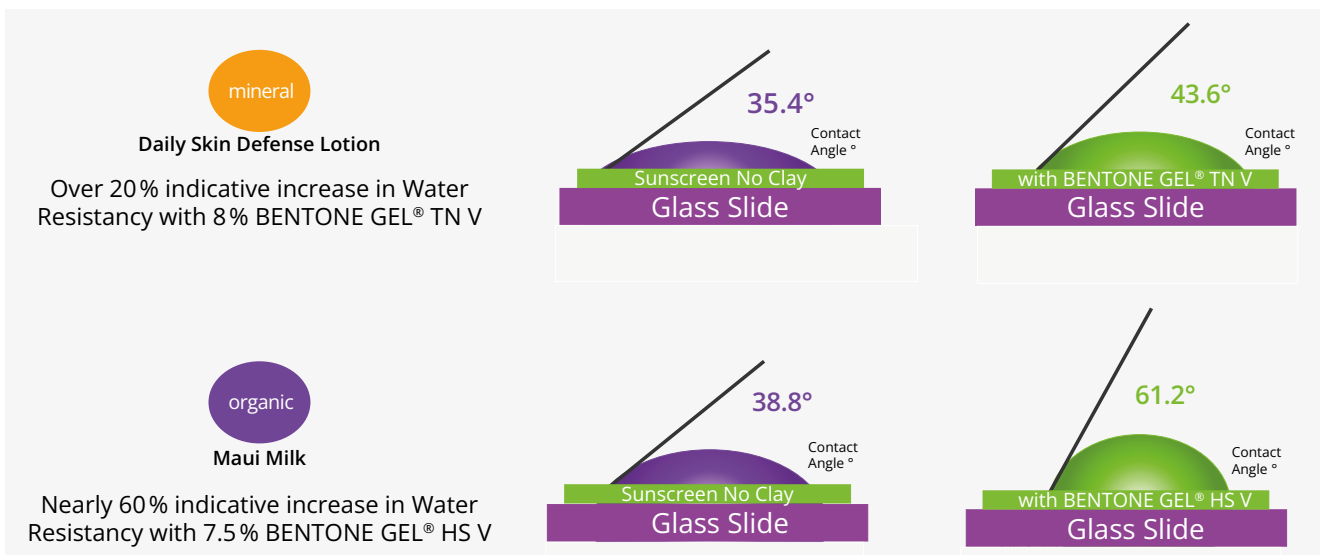
2. Rheology and Texture Control: Formulation texture plays a key role in user experience and SPF performance. Hectorite clays, such as Bentone Gel® and Bentone Luxe®, enable precise control over rheology by forming thixotropic systems. These systems are highly effective at rest and thin out when force is applied, allowing for a smooth, even application on the skin. This prevents patchy coverage and contributes to a more uniform SPF protection layer. The shear-thinning properties of Hectorite allow for enhanced spreadability and a non-greasy finish. Additionally, sprayable sunscreens often suffer from phase separation or nozzle clogging, but Hectorite clays address these issues by improving the sprayability of formulations. They provide the right balance of viscosity and thixotropy, ensuring a fine spray pattern without blocking the nozzle, while also maintaining stability.



3. Film Thickness and SPF Boosting: A key factor in sun protection is the thickness and evenness of the sunscreen film. Hectorite clays contribute to thicker, more uniform sunscreen layers, resulting in better SPF performance.



4. Water Resistance: One of the standout features of Bentone® Hectorites is their ability to enhance the water resistance of sunscreens. In formulations, that include Bentone Gel®, water resistance is improved by over 60%, ensuring that more sunscreen remains on the skin after prolonged exposure to water. This is critical for active users engaged in water sports or sweating.



Conclusion:

Bentone® Hectorite clay technology offers a comprehensive solution to the key challenges in sun care formulations, from improving application consistency to boosting SPF and enhancing water resistance. With their proven ability to form stable, even layers on the skin and withstand extreme conditions, Hectorite clays are crucial for creating sun care products that deliver superior protection, sensory feel, and lasting performance.

Elevate your sun care experience with Hectorites – your key to a flawless shield against the sun's rays.

The Encyclopaedia of Cosmetics

V
for ...

... **V**anillin

... **V**anishing Cream

... **V**aseline

... **V**egan

... **V**esicles

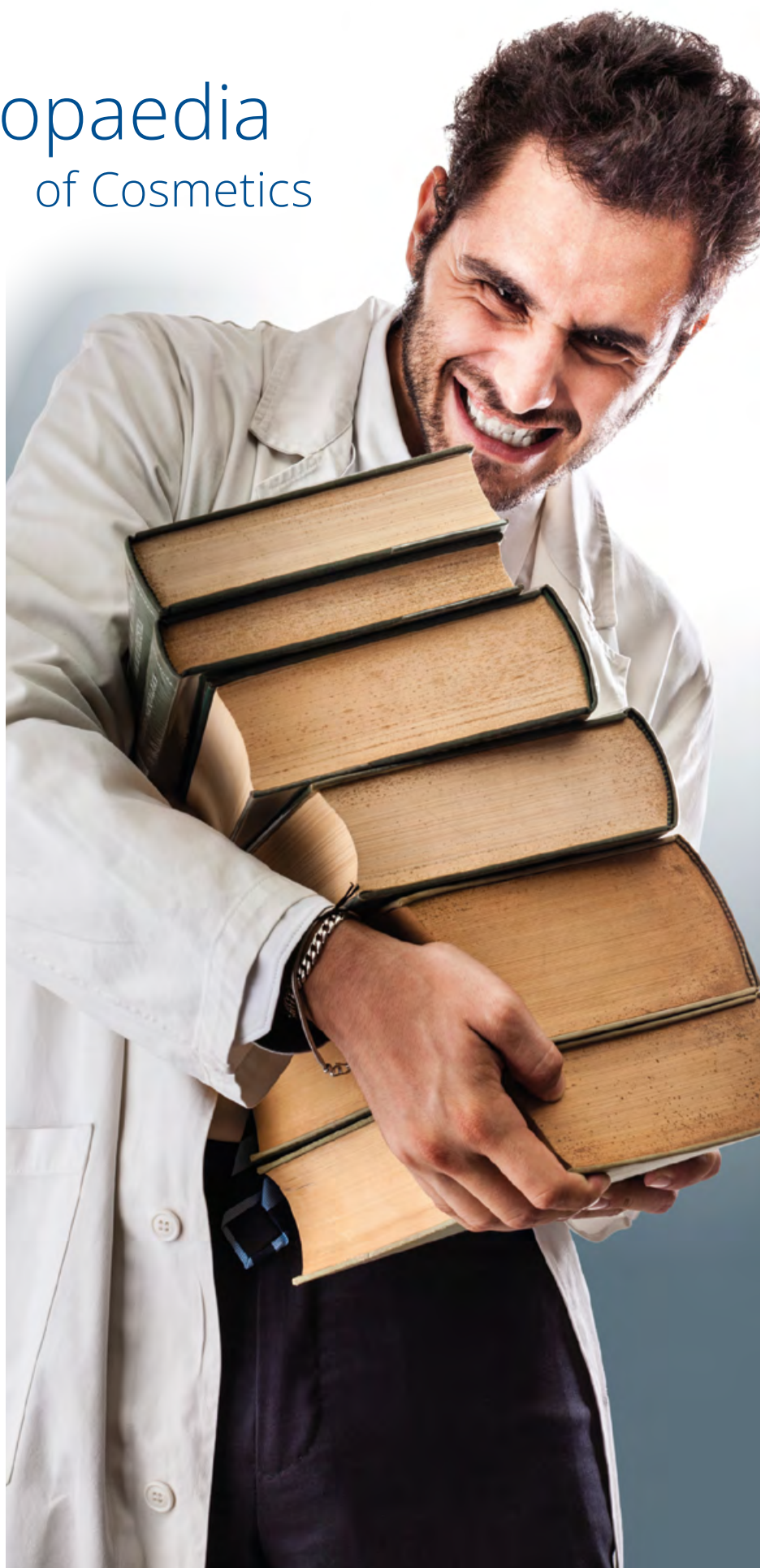
... **V**iscosity

... **V**itamin A

... **V**itamin C

... **V**itamin E

... **V**olumizer



Vanillin

= is a naturally occurring compound found in vanilla beans. Vanillin is widely used in cosmetics for its pleasant aroma and sweet taste, particularly in lip products like lip balms and glosses.

Vanishing Cream

= is a lightweight, water-based moisturiser, typically formulated with stearates or fatty alcohols, that quickly absorbs into the skin, giving it a smooth, matte finish. These creams were called „vanishing“ because they seemed to disappear upon application. The term was historically used for day creams, though it is rarely used today.

Vaseline

= refers to a brand of petroleum jelly, a semi-solid mixture of hydrocarbons. It is commonly used as a skin protectant, moisturizer, and occlusive agent. Vaseline helps lock in moisture by forming a barrier on the skin, preventing water loss and aiding in the healing of dry, cracked, or irritated skin. It is often used in lip balms, lotions, and other skincare products.

Vegan

= categorises products that do not contain any animal-derived (such as gelatine, cholesterol or collagen) or animal by-products (such as honey, beeswax or milk).

Vesicles

= particularly liposomes, are tiny, spherical structures made up of lipid bilayers that can encapsulate active ingredients. These microscopic carriers are used to deliver ingredients like vitamins, antioxidants, or moisturizers deeper into the skin. Liposomes help enhance the effectiveness of cosmetic products by protecting the active ingredients and ensuring their controlled release, improving skin absorption and overall performance.

Viscosity

= the thickness or consistency of a cosmetic product. The higher the viscosity, the thicker the product. A product's viscosity is defined by its resistance to flow and in skincare, an essential component of quality control.

Vitamin A

= refers to a group of compounds, such as retinoids like retinol and retinyl palmitate, that are widely used for their anti-aging and skin-renewing properties. It stimulates cell turnover, boosts collagen production, and helps reduce the appearance of fine lines, wrinkles, and hyperpigmentation. It can also improve skin texture and tone, making it a popular ingredient in anti-aging creams, serums, and treatments for acne.

Vitamin C

= is one of the most popular skincare ingredients. It is a potent antioxidant used in skincare to brighten the skin, reduce pigmentation, stimulate collagen production and more. There are many forms of vitamin C for skin and while they all have antioxidant benefits, they each work slightly differently. Some are even more effective than others. The most common one is Ascorbic acid, also known as L-ascorbic acid, which has the most skin-related research of any form of vitamin C.

Vitamin E

= INCI: Tocopherol, another key ingredient in skincare. Applying vitamin E to our skin helps protect delicate skin from damage due to its strong antioxidant properties. It's also extremely hydrating – it's both a 'humectant' and an 'emollient' – so it helps your skin absorb water and traps it within the skin too.

Volumizer

= a product that increases volume. Typically used in haircare to temporarily add volume, body, and shine to thin or flat hair. Volumizers come in many forms such as shampoos, conditioners, sprays, pomades, powders and lotions.



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