ISSUE DECEMBER 2025

COSMETOPOLITAN

COS-INSIDE
Latest News from RAHN

LAB-NEWS
Bentone Gels – A Formulator's Guide; Understanding and Stabilising W/O Emulsions

AROUND THE WORLD
The Magic of Mate: From Traditional Beverage to Beauty Innovation

GOOD TO KNOW
Cosmetic Raw Materials for Menopause & Perimenopause

RAHN
Your partner for excellence

Dear Reader,

Another year is coming to an end, and we find ourselves reflecting on the relationships that have made it meaningful. At the heart of everything we do stands the connection we share with you – our colleagues, partners, customers, and friends in the industry.

Together, we have navigated the seasons of 2025, celebrated progress, and learned from the challenges. Thank you for being an essential part of our story and for the trust and collaboration you bring to our journey.

As we step into a new year, we are excited to continue building, supporting, and growing alongside you. Here's to the journey ahead – and to the people who make it worthwhile.

Yours,

Sandra

WHO
IS NEW?

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

DANILO SEBARA
Function
Head of Distribution Management Cosmetics
Division: RAHN Cosmetics
Joined
June 1st, 2025

IVONNE HABKEMEYER
Function
Technical Sales Manager – Northern Germany
Division: RAHN-Cosmetics
Joined
July 1st, 2025

FLORIAN JENNY
Function
Product Information Expert Cosmetics
Division: RAHN-Cosmetics
Joined
June 1st, 2025

SANJA DAVIDOVIC
Function
Manager Safety & Regulatory Affairs Cosmetics
Division: RAHN Cosmetics
Joined
August 1st, 2025

MARIE BOURGEAY
Function
Business Development Manager for RAHN Cosmetic Actives France
Division: RAHN-Cosmetics Actives
Joined
June 1st, 2025

KELLY SHENTON
Function
Business Development Manager UK & Northern Europe
Division: RAHN Cosmetic Actives
Joined
September 1st, 2025

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

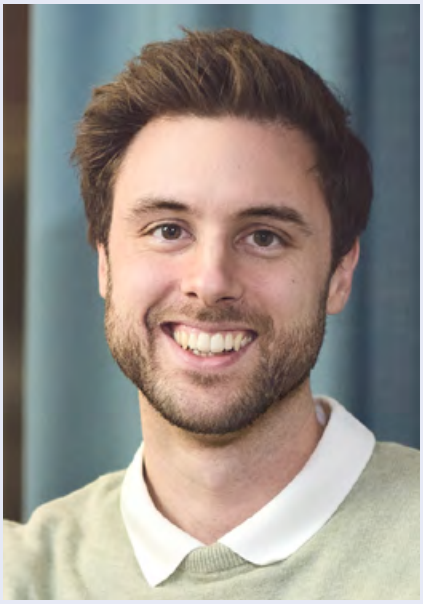
DILEK GASSER

Part of the team since?	July 2023
Responsible for?	• Receiving and processing customer orders • Checking prices, availability, and delivery times • Coordinating shipment and preparing delivery and invoice documents • Communicating with customers regarding questions, changes, or complaints • Collaborating with logistics, accounting, and sales
How would you describe yourself in three words?	Helpful, humorous, creative.
What are you passionate about?	I love when good organisation and genuine care for people come together.
What do you like about RAHN?	What I appreciate about RAHN is that people meet each other at eye level and the company culture feels genuine, not forced.

HÉLÈNE VALLO

Part of the team since?	August 2024
Responsible for?	Sales. For a wonderful region: Eastern Switzerland and Austria, from Vorarlberg to Upper Austria.
How would you describe yourself in three words?	Helpfulness, solution-oriented, independent.
What are you passionate about?	Family, humour, and immensity.
What do you like about RAHN?	The family-like atmosphere, the clear setting of goals, and the openness of my colleagues.

PASCAL WYSS



Part of the team since?	April 2024
Responsible for?	Regulatory affairs, registrations, and certifications for our RAHN Cosmetic Actives.
How would you describe yourself in three words?	Curious, team-minded, and cheerful by nature.
What are you passionate about?	Our products and representing them from a regulatory perspective, skiing, gymnastics club, and board games.
What do you like about RAHN?	The family-like and appreciative way of interacting with employees.

Every year in Coventry ...

Amazing 48 hours at SCS Formulate 2025

As every year, we attended SCS Formulate 2025 in Coventry (UK) together with our partners Ajinomoto and Elementis Personal Care.

A huge thank you to everyone who visited our stand and shared inspiring conversations with us. It was a pleasure to meet so many of you in person.

While our partners showcased advanced formulation concepts tailored to today's market needs, our RAHN-Cosmetic Actives experts took visitors on a journey to Argentina. They unveiled the fascinating world of Yerba Mate and its energising, radiance-boosting benefits for skin and hair.

Missed us? Don't worry – you can discover all the highlights here: https://lnkd.in/dHqVSJJK

SWISS EXPERTISE
RAHN
COSMETIC
ACTIVES
SILVERSON

Bentone Gels –
A Formulator's Guide

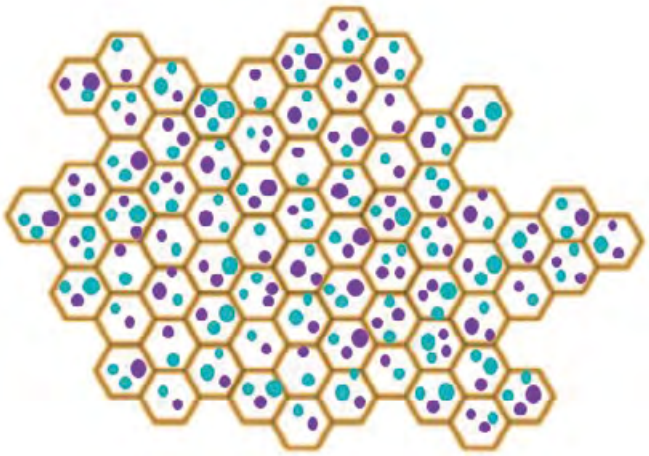
What Are Bentone Gels?

Bentone Gels are *pre-activated organoclay dispersions* designed to build structure and control rheology in the oil phase of cosmetic formulations.

They are based on hectorite clay, a naturally derived mineral that has been surface-treated with quaternary ammonium compounds to make it compatible with oils and other hydrophobic solvents.

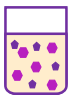
In simple terms, Bentone Gels create a honeycomb-like, three-dimensional "house-of-cards" network in the oil phase. This network stabilises emulsions, suspends pigments and actives, and improves texture and spreadability – giving formulations a luxurious, even application.

Because the clay is already fully activated in the carrier oil, Bentone Gels are ready-to-use, eliminating the need for high-shear mixing or chemical activation steps typically required when working with powdered organoclays.



Why Use Bentone Gels?

Even at low concentrations (1–5%), Bentone Gels can significantly improve product stability and sensorial feel. At higher levels (5–10%), they provide structure and suspension in anhydrous systems such as sticks and balms.

BENTONE GEL® Concentrations		
	Suspension	3–10%
	Thickening	1–15%
	Thermostable Viscosity Control*	1–25%

Main benefits include:

- Stable rheology – prevents phase separation and viscosity drift
- Suspension power – keeps pigments and actives evenly distributed
- Shear-thinning texture – smooth, even spread without heaviness
- Versatile compatibility – available for natural, silicone, and synthetic-based systems
- Enhanced film formation – improves SPF performance and water resistance

How to Work with Bentone Gels

1. Phase Addition

- Bentone Gels are added directly into the oil phase of your formulation.
- Add them before emulsification, together with the rest of the oil components.
- Ensure even mixing to fully develop the thixotropic network.
- No activation or chemical additive (like propylene carbonate) is required – that's already done during manufacture.

2. Mixing and Shear

- Start mixing under moderate shear (e.g., propeller or rotor-stator) until uniform.
- Avoid excessive shear at high temperatures, which can break down the gel network.
- If viscosity appears low, mix gently for longer rather than increasing shear.

3. Temperature Handling

- Bentone Gels are thermally stable, but prolonged heating above 80 °C can reduce efficiency.
- For emulsions, it's best to cool slightly before adding water to avoid destabilizing the network.

4. Typical Use Levels

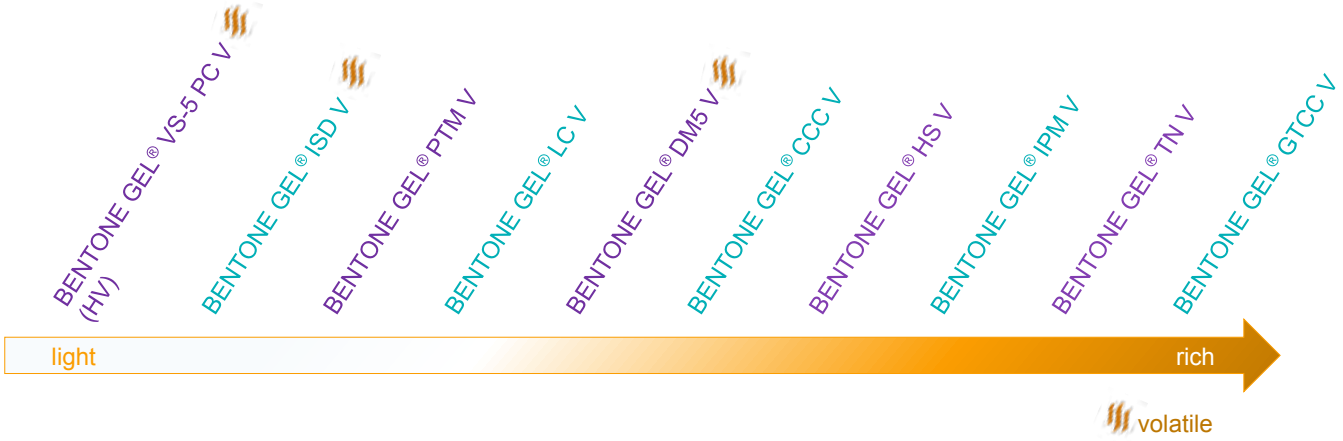
- Emulsions (W/O, W/Si): 1–5%
- Anhydrous systems: 5–10%
- Foundations, sunscreens, sticks: 3–8%, depending on pigment load and texture

5. Compatibility Check

- Ideally match the Bentone Gel solvent to your main oil or carrier (e.g., silicone, ester, hydrocarbon).
- Always perform a small pilot batch – the thickening efficiency depends on the overall formulation, not just Bentone Gel level.

How to Choose the Right Bentone Gel?

Selection Step	What to Look For	Example
Base Compatibility	Choose a gel with the same or similar solvent as your main oil.	*Bentone Gel ISD V* for isododecane, *VS-5PC V HV* for silicones.
Product Type	Match the gel texture to your application.	CAO V for glossy lip products, *TN V* for sun care creams.
Concept/Claims	Select natural or D5-free grades if needed.	*Bentone Gel MIO V* (natural ester base).
Desired Sensory	Pick by skin feel – light, rich, matte, or glossy.	Lighter for facial serums; richer for body butters or lip balms.



Troubleshooting Guide

Issue	Possible Cause	How to Fix/Prevent It
1. Low viscosity or poor thickening	• Bentone Gel level too low • Oil phase not compatible with Bentone Gel solvent • Overheating or excessive shear damaged the network	• Increase concentration gradually (0.5–1 % increments) • Switch to a Bentone Gel based on a compatible oil • Mix gently at moderate speed and avoid overheating.
2. Viscosity drift over time	• Water contamination weakening the hydrogen bonds • Clay not fully dispersed	• Ensure water phase is added slowly and emulsification is complete • Recheck storage temperature and compatibility of other emulsifiers or actives.
3. Poor pigment or active suspension	• Insufficient network strength • Low gel dosage or incompatible solvent system	• Increase Bentone Gel level (typically up to 10 %) • Use additional structuring agents or waxes for heavy pigments.
4. Product feels heavy, greasy, or sticky	• Bentone Gel base oil is too rich for the formula • Excessive level used	• Choose a lighter solvent version (e.g., ISD V instead of CAO V) • Reduce Bentone Gel dosage slightly.
5. Poor spreadability or draggy texture	• Over-thickened system • Network too strong or unbalanced oil blend	• Reduce Bentone Gel concentration • Blend with lighter emollients or silicone fluids.
6. Air entrapment during mixing	• Mixing speed too high or incorrect order of addition	• Reduce agitation speed • Degas under vacuum if necessary.

Final Takeaway

Bentone Gels simplify rheology control by providing ready-to-use, pre-activated organoclays that deliver consistent performance and a premium feel.

To get the best results:

1. Match the Bentone Gel to your oil system.
2. Add it early in the oil phase and mix gently under controlled temperature.
3. Adjust concentration according to desired viscosity and texture.

With these principles, formulators can achieve stable, elegant, and reproducible products – from silky light emulsions to rich, glossy anhydrous systems.

Understanding and Stabilising W/O Emulsions

A practical guide for formulators

What Is a W/O Emulsion?

A water-in-oil (W/O) emulsion consists of small water droplets dispersed within a continuous oil phase. Unlike the more common oil-in-water (O/W) emulsions (which make up around 80% of cosmetic emulsions), W/O systems offer unique textures and performance benefits.

They are valued for their ability to form rich, protective films on the skin, making them ideal for:

- Barrier creams and baby care
- Sun care and water-resistant formulations
- Cold-weather protection
- Foundations and high-coverage make-up
- Oil-based cleansing systems

W/O emulsions can, however, be challenging to stabilise. The close packing of water droplets, the high viscosity of the outer oil phase, and the sensitivity of the interfacial film mean that both formulation and processing must be carefully optimised.

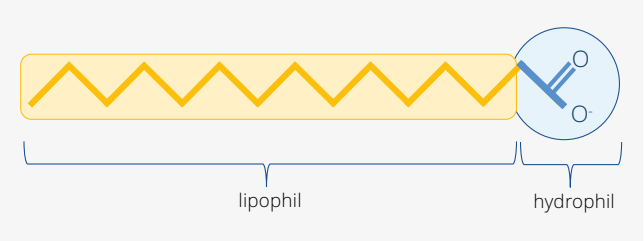
How W/O Emulsions Are Stabilised

A stable W/O emulsion is the result of the right balance between emulsifier, stabilisers, oil phase selection, phase ratio, and processing conditions.

1. The Emulsifier System

The emulsifier is responsible for forming and stabilising the interface between water and oil. In water-in-oil (W/O) emulsions, the emulsifiers must be distinctly lipophilic, typically with a low HLB value between 3 and 8. This lower HLB reflects a higher proportion of the lipophilic structure with-in the molecule.

The hydrophilic head is small and only weakly polar, while the lipophilic tail is long and strongly non-polar.



This amphiphilic structure is essential for creating a robust interfacial film capable of stabilising dispersed water droplets inside a continuous oil phase.

Examples include:

- Dermofeel PGPR (Polyglyceryl-3 Polyricinoleate) – primary emulsifier (~3%)
- Sisterna SP01-C (Sucrose Polystearate) – co-emulsifier (~0.5–1.0%)
- Isolan 17 MB (Polyglyceryl-4 Diisostearate/Polyhydroxystearate/Sebacate, Caprylic/Capric Triglyceride, Polyglyceryl-3 Oleate, Diisostearoyl Polyglyceryl-3 Dimer Dilinoleate) – co-emulsifier for lighter, more spreadable systems (~4–5%)

Key tips:

- Increasing emulsifier concentration raises viscosity but may lead to a heavy or resinous feel.
- Combining main emulsifiers with co-emulsifiers improves interfacial packing and stability.
- Polymeric or polyfunctional emulsifiers (e.g., ISOLAN® GPS, ABIL® EM 90) offer superior heat stability through the formation of dense, flexible interfacial films.

2. Stabilisers and Oil Structuring Agents

W/O emulsions require stabilisers to restrict droplet movement, reinforce the oil phase, and support texture.

Common stabilisers include:

- Beeswax (1–4%) – rich, protective feel
- Hydrogenated Castor Oil (0.5–2%) – strong thickening; may need re-homogenisation at ~25°C
- Magnesium Stearate (0.5–2%) – particulate stabiliser, matting effect
- Trihydroxystearin (THIXCIN R PC) – forms internal oil-phase network, improving thermal stability
- Modified Hectorites (BENTONE GEL/BENTONE LUXE) – thixotropy, enhanced particle suspension, and excellent heat stability

Stabilisers reduce the free volume in the oil phase, making it harder for water droplets to move, merge, or grow via Ostwald ripening.

3. Glycerin and Polyols

High levels of glycerin (up to 30–40%) significantly improve cold stability by reducing the freezing point within droplets and preventing expansion damage during freeze–thaw cycles.

4. Choice of Oils

Oil polarity, viscosity, and melting range all influence stabilisation:

- Non-polar oils (e.g., isohexadecane, mineral oil) → typically easier to stabilise
- Medium-polar oils (e.g., CCT, triheptanoin, most plant oils such as sunflower or olive) → good compromise between stability and sensory profile
- Highly polar oils (e.g., castor oil, short-chain esters, ethylhexylglycerin) → may disrupt the interfacial film if used at high levels

In addition, the intrinsic viscosity of the oils has a direct impact on the overall viscosity of the emulsion:

- Oils that are inherently low in viscosity will lead to a lower emulsion viscosity.
- Higher-viscosity oils will increase the viscosity of the emulsion.

Emulsion with Alkanes Emulsion with Olive Oil

A well-designed oil blend can optimise both stability and sensory characteristics.

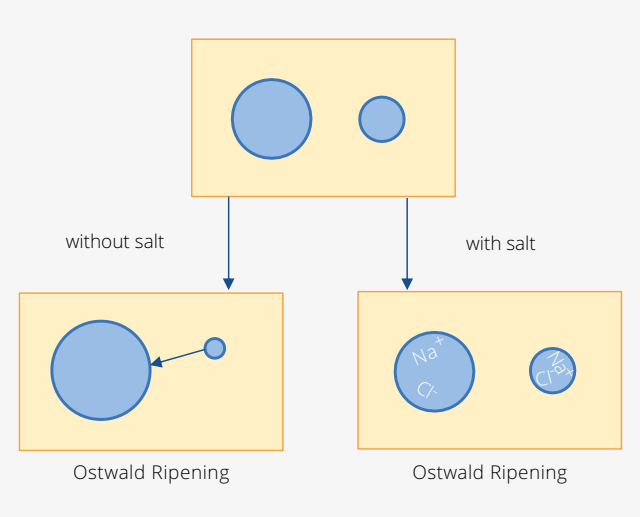
5. Salt as a Stabiliser

Adding small amounts of salt can significantly support the stability of a W/O emulsion. Salt reduces the attraction between water droplets and therefore decreases the tendency for coalescence. It can also slow down Ostwald ripening: by increasing the osmotic pressure inside smaller droplets, salt helps prevent the diffusion of water from small to larger droplets through the oil phase.

Salt further improves the self-organisation of emulsifier molecules at the interface. By partially "dehydrating" the hydrophilic head groups, it promotes a more compact interfacial film, enhancing stability.

Both monovalent and divalent salts can be used at 0.7–1.0%, with divalent salts generally being more efficient. Suitable options include:

- Sodium chloride (NaCl)
- Magnesium salts
- Zinc salts (e.g., Zinc PCA – pH should be monitored)



6. Process Parameters

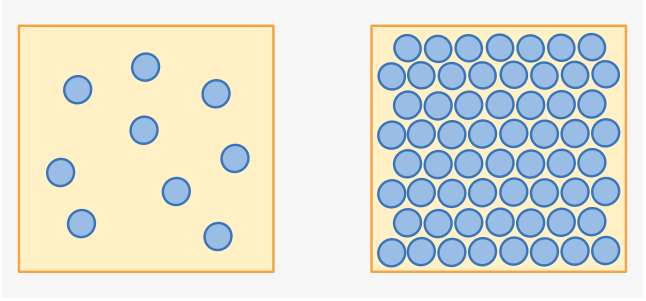
Processing often determines whether a W/O emulsion ultimately succeeds or fails.

- Homogenise first at ~70–80°C, then again at ~25°C to break up wax crystals and prevent graininess.
- Slowly add the water phase into the oil phase, never the reverse.
- Avoid overheating, which can damage emulsifiers or destabilise the oil-phase network.
- Maintain a workable phase ratio:
  - 50–75% water phase is ideal.
  - Extremely high-water phases overstress the interface and can cause breakage.
  - Very low water phases are harder to stabilise and require more structuring agents.

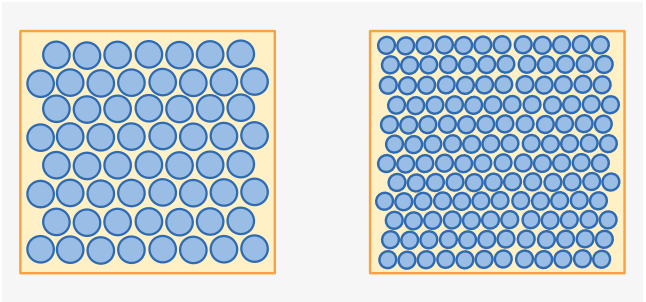
Phase Volume Ratio

The viscosity of a W/O emulsion can also be controlled by adjusting the ratio of oil to water.

A small water phase allows the droplets to move freely, resulting in lower viscosity (see picture left). A large water phase restricts droplet movement due to limited space, leading to higher viscosity (see picture right). W/O emulsions with very low water phases are often more difficult to stabilise and typically require additional stabilisers.



If the water phase becomes too large, the droplets become tightly packed. During homogenisation, their surface area increases even further, placing the system under mechanical stress. This can cause the emulsion to break.



It is also important that the viscosity of a W/O emulsion is not controlled solely through extensive droplet size reduction, as this can destabilise the system. Ideal water phase content: 50–75%.

Troubleshooting Guide for W/O Emulsions

Problem	Likely Cause	How to Fix It
1. Phase separation	Weak emulsifier system; insufficient homogenisation; unfavourable oil polarity	Use stronger/polymeric emulsifiers; increase shear; add stabilisers; adjust oil blend
2. Low viscosity	Insufficient stabiliser; excessive oil phase; too little emulsifier	Add structuring agents; adjust phase ratio; slightly increase emulsifier
3. Too thick/pasty	Too much emulsifier or wax; very high internal phase	Reduce emulsifier/wax; add more oil
4. Grainy texture	Recrystallisation of waxes; inadequate cooling or second homogenisation	Re-homogenise at 25°C; control cooling rate
5. Poor heat stability	Low-MW emulsifier; weak emulsifier system, weak oil-phase structure	Use polymeric emulsifiers; reinforce oil phase
6. Preservation issues	Membrane-active preservatives disturbing interface	Use acid-based preservatives; adjust pH; reduce glyceryl caprylate
7. Air bubbles	Over-aeration	Process under vacuum or reduce shear during cooling

Key Takeaways

- W/O emulsions depend on strong interfacial films and robust oil-phase structuring.
- Polyglyceryl emulsifiers are excellent for PEG-free, mild, natural-positioned formulations.
- Waxes, particulate stabilisers, and organoclays provide mechanical stability and viscosity control.
- Glycerin significantly improves cold stability and prevents freeze–thaw failure.
- Salt addition improves interfacial packing and reduces droplet growth.
- Processing – particularly slow water addition and dual homogenisation – is critical.

A well-designed W/O emulsion is the balance of chemistry, structured phases, and precise processing – resulting in luxurious, long-lasting performance.

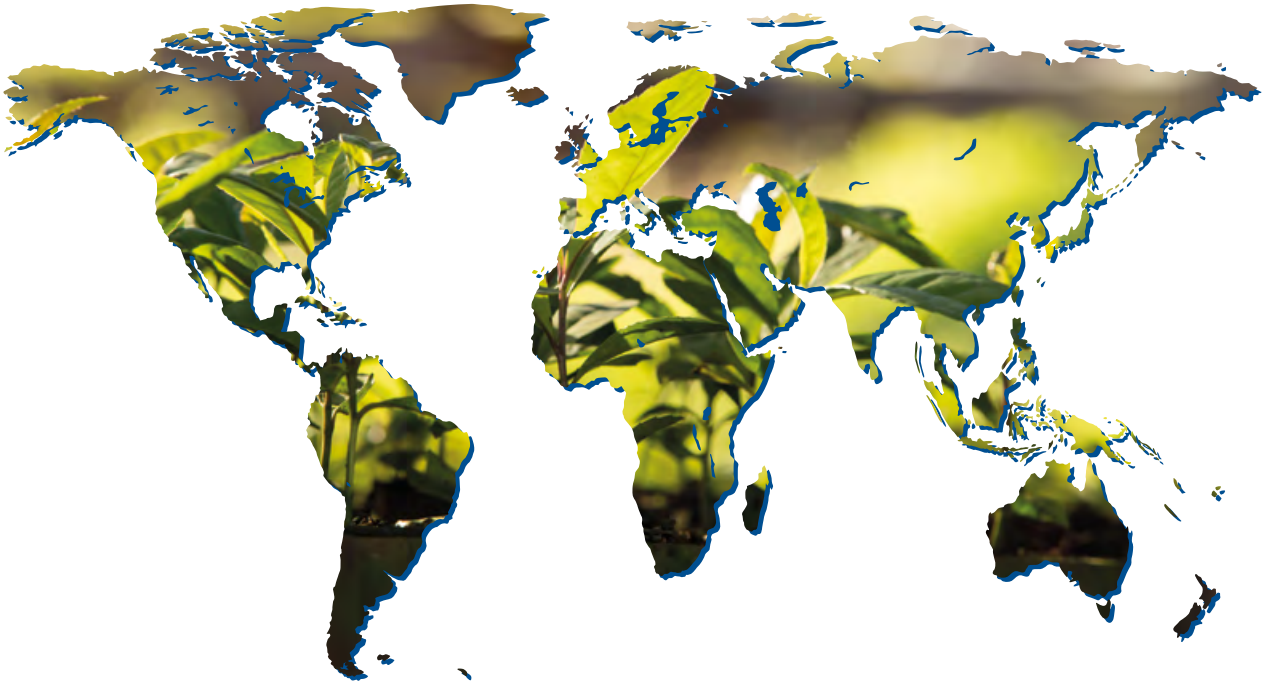
The Magic of Mate:
From Traditional Beverage to Beauty Innovation

Tradition Meets Modernity

Yerba Mate, the traditional drink from South America, has been cherished for centuries for its invigorating properties. Rich in antioxidants, caffeine and minerals, Mate provides natural energy and protection against free radicals. Today, this plant is undergoing an exciting transformation: from a ritual in a calabash to a key ingredient in cosmetics and wellness products.

Why Yerba Mate for Skin and Hair?

Mate leaves contain polyphenols, saponins, and vitamins that deliver energizing benefits, protect the skin from oxidative stress, and stimulate microcirculation. In hair care, Mate supports strong, shiny hair, individually targeting the various hair types and can help revitalise the scalp. Perfect for concepts focused on vitality and anti-ageing.



Global Trends and Opportunities

	Trend	Opportunity	Challenge	Conclusion
North America	Social media drives demand for "glass skin" and voluminous hair.	Mate fits perfectly into premium concepts with multi-benefit appeal.	Low awareness – education and storytelling are key.	Mate offers the innovation and visible results North American consumers crave.
Europe	Mate is well-established as a wellness ingredient, especially in food and beverages.	Strong momentum in skin and hair care for strengthening and brightening claims.	Often only listed in the INCI – highlighting it more creates shelf standout.	Consumers already trust Mate – making it visible unlocks its full potential.
Asia Pacific (APAC)	Mate is still niche but growing, particularly in hair care.	Aligns with beauty ideals such as glowing skin and full hair.	Clear communication and cultural relevance are essential.	Mate's natural benefits perfectly match APAC's beauty traditions and aspirations.

Core Message

Yerba Mate is more than a beverage – it's a powerhouse ingredient for the future. Its antioxidant and energising properties make it a compelling choice for modern cosmetic and wellness products. Brands that communicate Mate's benefits effectively can differentiate themselves in competitive beauty markets. With RAHN-Cosmetic Actives YERBALUXE®-PEARL and YERBALUXE®-CROWN there are already two perfectly tailored solutions that maximise the full potential of this extraordinary ingredient.

Explore how YERBALUXE®-PEARL and YERBALUXE®-CROWN, can unlock the exceptional power of Yerba Mate for your next cosmetic innovation.

Cosmetic Raw Materials for Menopause & Perimenopause

Formulating for changing skin needs

October is internationally recognised as **Menopause Awareness Month** – a time dedicated to increasing understanding and open conversation about women's health during this natural life stage. Although often underrepresented in public dialogue, menopause and perimenopause affect every woman at some point, bringing not only hormonal and emotional changes but also visible transformations in the skin.

As estrogen levels decline, the skin experiences a measurable reduction in collagen, elastin, ceramides, and hyaluronic acid. This leads to dryness, thinning, increased sensitivity, and a loss of firmness and radiance. The result is skin that requires specific, supportive, and adaptive care rather than conventional "anti-ageing" solutions.

In the wake of October's awareness initiatives, formulators and brands have a growing opportunity – and responsibility – to create products that address these real physiological changes with empathy and science. By focusing on hydration, barrier recovery, lipid replenishment, and soothing comfort, cosmetic raw materials can help menopausal and perimenopausal skin regain its resilience and well-being.

Understanding Menopausal Skin

Hormonal decline alters key physiological processes in the skin:

Effect of Hormonal Change	Visible Consequence
↓ Collagen & HA synthesis	Loss of firmness, dryness
↓ Sebum & ceramide production	Fragile, rough texture
↑ Oxidative stress & inflammation	Redness, pigmentation
↓ Skin density & elasticity	Sagging, fine lines
Altered microcirculation	Dull tone, reactivity

Understanding these mechanisms allows formulators to target the causes, not just the symptoms.

Key Raw Material Strategies

1. Hydration & Moisture Retention

With reduced estrogen, the skin's natural moisturizing factor (NMF) diminishes, leading to dehydration and tightness. To restore hydration, combine humectants and film-forming polysaccharides for multi-layer moisture delivery.

Recommended materials:

- Gamma-MAX™ & Gamma-Oligo™ (Moa Life Plus) – natural polysaccharides providing deep, long-lasting hydration and supporting a healthy barrier.
- Ajidew NL-50 (Ajinomoto) – Sodium PCA is a key NMF component for excellent water binding and improved suppleness.
- HyaCare® (Evonik) – a high-purity biotechnological hyaluronic acid that delivers intense hydration, plumping, and smoothing of fine lines.
- Aloe Vera (Terry) – a natural moisturising and soothing agent, rich in polysaccharides, that helps rehydrate and calm dry, stressed skin.

2. Barrier Recovery & Lipid Replenishment

Loss of sebum and structural lipids weakens the skin's barrier, leading to increased TEWL and micro-inflammation. Rebuilding this lipid architecture is central to comfort and resilience.

Recommended materials:

- Eldew® PS-203R (Ajinomoto) – a ceramide-like ester that mimics the skin's natural lipids for long-lasting moisturisation and flexible film formation.
- Evonik Ceramides Portfolio – biomimetic ceramides (III, NP, AP) that strengthen the stratum corneum, reduce TEWL, and improve elasticity.
- TEGO® Sterol 7-DHC V (Evonik) – a plant-derived phytosterol rich in 7-dehydrocholesterol, supporting lipid lamellae organisation and barrier regeneration; ideal for mature, dry skin.
- Natural emollients, e.g. Meadowfoam Seed Oil (Elementis) – provide excellent oxidative stability, a light, silky feel, and help lock in moisture while replenishing lipids.
- Hydra Synol™ DOI (Sytheon) – a multifunctional skin barrier strengthener that reinforces lipid layers, improves hydration and elasticity, and helps restore a healthy barrier function.

3. Mildness to Support the Barrier

Menopausal and perimenopausal skin becomes thinner and more reactive; cleansers and skincare products must protect rather than strip. Barrier-friendly formulations prevent tightness and prepare the skin for optimal moisturisation.

Formulation focus:

- Use amino acid–based surfactants (Ajinomoto), e.g. Amisoft or Amilite for ultra-mild, skin-compatible cleansing.
- Use sucrose ester-based emulsification systems for naturally mild and PEG-free emulsifiers suitable for sensitive skin (Sisterna).
- Clay-based rheology modifiers (Elementis) – e.g. Bentone Hydroclay or Bentone Gelsystems – provide stabilisation and sensory enhancement while contributing to skin softness and mild formulation aesthetics.
- Maintain a pH of 5.0–5.5 to preserve the skin's natural acid mantle and microbiome balance.

4. Renewal & Radiance

Dullness and roughness are common due to slower cell turnover. A mild exfoliating system can renew texture and enhance radiance without irritation.

Recommended materials:

- TEGO® RenewHA Mandelic (Evonik) – a gentle AHA complex combining mandelic acid and hyaluronic acid. It smooths texture, improves tone and elasticity, and hydrates simultaneously – ideal for sensitive, menopausal skin.
- CC Glycolic Acid 50 % (IRA) – a controlled-release glycolic acid providing effective but gentle exfoliation to improve skin clarity and luminosity.
- Zymo Clear MD (IRA) – an enzymatic exfoliating complex that removes dead skin cells enzymatically, enhancing brightness and smoothness without irritation.

5. Firmness & Elasticity Support

Declining estrogen reduces collagen and elastin synthesis. Support the dermal matrix with firming and anti-glycation actives that strengthen structure and improve tone.

Recommended materials:

- PROTEOLEA® (RAHN Cosmetic Actives) – an anti-ageing complex from olive leaf, jujube, and levan oligosaccharides that reactivates proteasomal activity, reduces visible signs of fatigue, and restores skin vitality and firmness.
- Vecollage® Fortify GP (Evonik) – a biotechnological vegan collagen that mimics human type I collagen, providing firming, lifting, and skin-smoothing effects.
- Cyclosystem Complex Retinol 33,000 IU/g (IRA) – encapsulated retinol that stimulates collagen synthesis, improves firmness and texture, while offering controlled release and reduced irritation.

6. Soothing & Anti-Inflammatory Support

Menopausal skin often exhibits subclinical inflammation ("inflammaging"). Calming actives reduce redness, oxidative stress, and irritation while strengthening skin tolerance.

Recommended materials:

- DEFENSIL®-PURE ECO (RAHN Cosmetic Actives) – a postbiotic active from gold millet ferment that balances the skin microbiota, strengthens the barrier, and reduces dryness and reactivity.
- Sytenol® A (Sytheon) – the natural retinol alternative, providing retinoid-like anti-ageing benefits without irritation, while reducing inflammation and oxidative stress.
- ASTACOS® OL50 (BDI) – a natural astaxanthin-rich active known as the "red diamond," offering strong antioxidant protection and reducing oxidative inflammation for healthier, calmer skin.

Formulation Considerations

To develop effective skincare for menopausal and perimenopausal skin, formulations should balance performance, comfort, and skin tolerance. At this life stage, the skin barrier is more fragile, and inflammatory responses are heightened – meaning mildness and functionality must go hand in hand.

Key formulation principles:

- Choose gentle emulsifiers – Sisterna Sucrose esters and amino acid–based systems (Amisoft/Amilite) offer mild, PEG-free solutions suitable for sensitive skin.
- Use barrier-friendly rheology modifiers – Bentone Hydroclay™ or Bentone Gel™ stabilise emulsions and enhance sensory softness without irritation.
- Incorporate biomimetic lipid systems – Eldew® PS-203R, Evonik Ceramides, TEGO® Sterol 7-DHC V, and Hydra Synol DOI rebuild the lipid lamellae and improve TEWL protection.
- Design multi-level hydration – Combine humectants (Gamma-MAX, Sodium PCA) with film-formers (HyaCare®, Aloe Vera) to restore the skin's moisture reservoir.
- Support dermal structure – Add actives like Vecollage® Fortify GP and PROTEOLEA® to help firm and smooth the skin over time.
- Include soothing and antioxidant components – DEFENSIL®-PURE ECO, Sytenol® A, and ASTACOS® OL50 help mitigate inflammation and oxidative stress.
- Control pH between 5.0–5.5 – Maintains enzymatic balance and preserves the acid mantle.
- Ensure sensorial harmony – Combine lightweight emollients (e.g. Meadowfoam Seed Oil) with mid-polarity esters for a comfortable, non-greasy finish.
- Protect actives – Use encapsulation (e.g. Cyclosystem Complex Retinol) and antioxidants (tocopherol, ascorbyl derivatives) for formulation stability.

The Formulator's Toolbox

Function	Raw Materials	Key Claim / Benefit
Hydration	Gamma-MAX™, Gamma-Oligo™ (Moa Life); Sodium PCA (Ajinomoto); HyaCare® (Evonik); Aloe Vera (Terry)	Deep and lasting hydration; film-forming moisture retention; smooth, supple feel
Barrier Repair	Eldew® PS-203 (Ajinomoto); Evonik Ceramides; TEGO® Sterol 7-DHC V (Evonik); HydroSynol™ DOI (Sytheon)	Biomimetic lipid replenishment; strengthens barrier; reduces TEWL; improves elasticity
Natural Emollients	Meadowfoam Seed Oil (Elementis)	Oxidatively stable emollient; non-greasy softness; sensory balance
Mildness & Stability	Amino acid surfactants (Ajinomoto); Sucrose esters; Bentone Hydroclay™ / Bentone Gel™ (Elementis)	Mild cleansing and emulsification; stabilisation with elegant texture
Renewal & Radiance	TEGO® RenewHA Mandelic (Evonik); CC Glycolic Acid 50 % (IRA); Zymo Clear MD (IRA)	Gentle exfoliation; improves tone and luminosity; renews skin without irritation
Firmness & Elasticity	PROTEOLEA® (RAHN Cosmetic Actives); Vecollage® Fortify GP (Evonik); Cyclosystem Complex Retinol	Reactivates cell vitality; vegan collagen support; firming and smoothing
Soothing & Antioxidant Protection	DEFENSIL®-PURE ECO (RAHN Cosmetic Actives); Sytenol® A (Sytheon); ASTACOS® OL50 (BDI)	Reduces oxidative inflammation; calms reactivity; strengthens microbiome balance

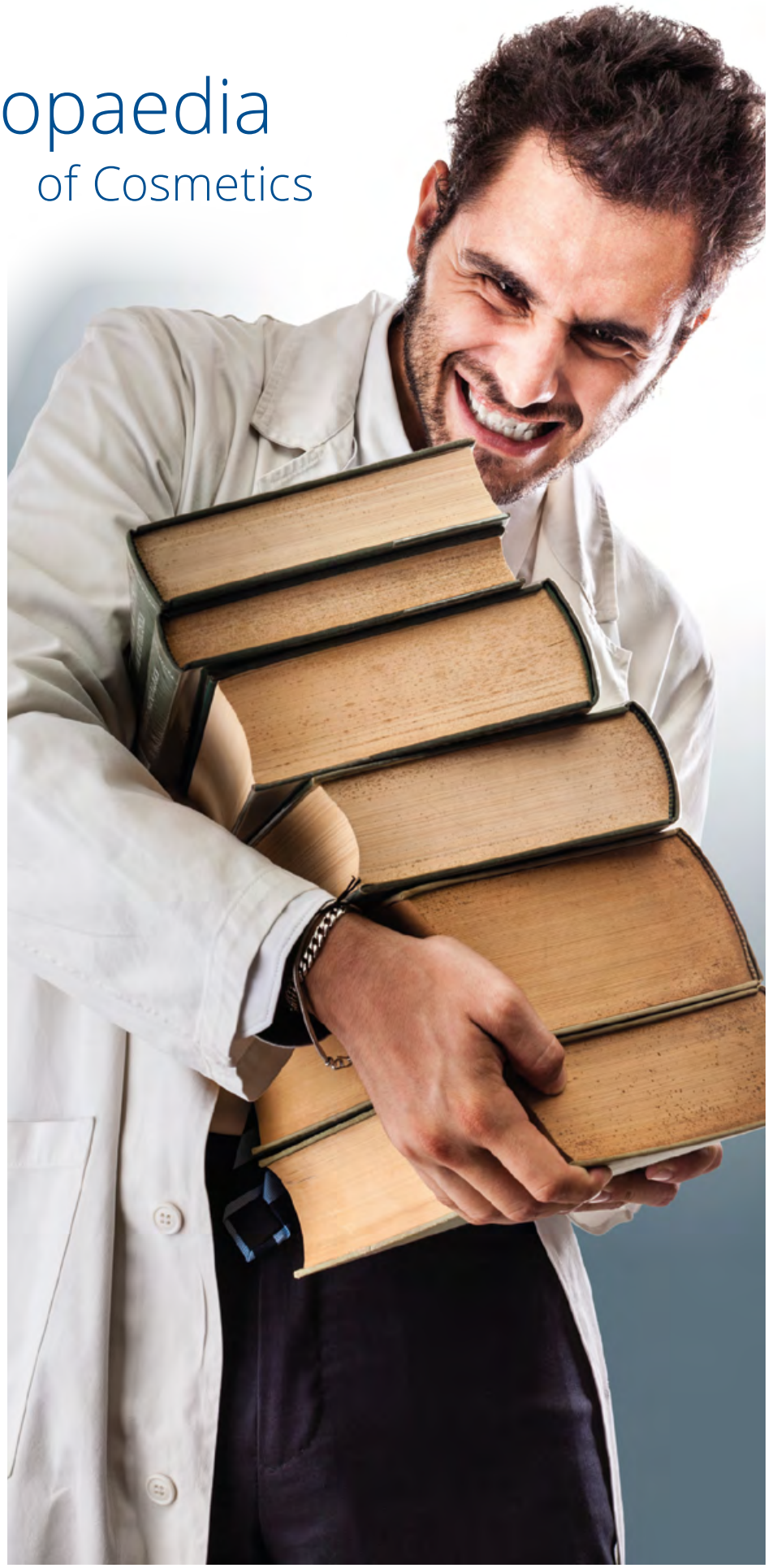
Conclusion

Menopause skincare marks a shift from anti-aging to pro-skin resilience. Declining estrogen alters the skin's barrier, structure, and hydration capacity – yet modern formulation science offers advanced tools to support, protect, and restore balance.

Menopause is a powerful and transformative phase in a woman's life. Embracing tailored skincare during this time not only enhances skin health but also contributes to overall comfort, confidence, and well-being.

Let us celebrate this journey and continue to empower women with innovative formulations that elevate their natural beauty and resilience throughout every stage of life.

The Encyclopaedia of Cosmetics



X for ...

...**X**anthan Gum

...**X**anthine

...**X**anthomonas Campestris

...**X**eroderma

...**X**imenia Americana Seed Oil

...**X**ylitol

...**X**ylityl Phosphate

...**X**ylopia Aethiopica Fruit Extract

...**X**imenia Seed Oil

...**X**ylose

Xanthan Gum

A viscosity agent increases the firmness of formulas, turning liquids into gels. You can usually find them inside all your favourite jelly-like products. The satisfyingly squeezable ones.

Xanthine

Xanthine and its derivatives are used in cosmetics as a skin-conditioning agent. A well-known methylxanthine is caffeine.

Xanthomonas Campestris

A bacterium that naturally produces xanthan gum, a polysaccharide widely used as a thickening and stabilizing agent in food, cosmetics, and pharmaceuticals.

Xeroderma

Xeroderma is a medical term for dry skin, but it can also refer to the rare genetic disorder Xeroderma pigmentosum (XP), which causes extreme sun sensitivity.

Ximenia Americana Seed Oil

Also known as wild or sour plum oil, is a natural oil extracted from the seeds of the Ximenia Americana tree. It is rich in fatty acids and vitamins, making it a popular ingredient in skin and hair care products for its moisturizing, anti-inflammatory, and conditioning properties.

Xylitol

Xylitol is a sugar alcohol that can be plant-derived or synthetic. In the plant world, xylitol naturally occurs in many fruits and vegetables, including mushrooms, lettuce, oats strawberries, bananas, and yellow plums. It can also be derived from wood or upcylced paper. Research has shown that, like the skin-replenishing ingredient glycerin and similar sugar-derived ingredient sorbitol, xylitol hydrates due to its humectant (moisture-binding) properties

Xylityl Phosphate

Xylityl phosphate is used in cosmetics for its anti-dandruff and deodorant properties. It can also have anti-acne and oil-controlling effects and is used in various formulations for hair and skin care.

Xylopia Aethiopica Fruit Extract

Xylopia Aethiopica Fruit Extract is derived from the fruit of the Xylopia aethiopica tree. This ingredient is also known by other names such as African pepper, Guinea pepper, and Ethiopian pepper. Chemically, the extract is rich in essential oils, alkaloids, and various bioactive compounds. Xylopia Aethiopica Fruit Extract is primarily known for its skin conditioning properties.

Xylose

A sugar often used in anti-aging ingredients (e.g., boosting collagen or improving dermal matrix).

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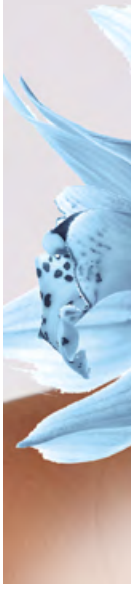

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