

Personal Care

**ECOTAIN® SUSTAINABLE
SOLUTIONS**



What do consumers expect from modern skin and hair care products? **WHY DO THEY BUY THEM?**

Satisfying the demands of beauty consumers is becoming more and more demanding. They expect products that are one step ahead of those they already know – milder, yet with excellent cleansing and caring properties, providing a uniquely pleasant sensory experience, and doing so in a nature-friendly way.

The fear of harmful ingredients is seen as one of the main reasons why consumers are increasingly turning to natural and organic cosmetics. These are often perceived as more easily tolerated and less hazardous to health. Questions of sustainability are playing an ever more important role according to market observers. This development is considered part of a general trend towards greater naturalness, eco-friendliness, and social responsibility, which has first revolutionized the

food sector and is now causing deep changes in the world of beauty products. The market for organic and natural cosmetics has transformed from a niche segment to a boom segment in recent years.

In response to consumer pressure, producers are already mixing an increasingly large portion of naturebased ingredients into their formulations. This trend is expected to continue to intensify due to growing consumer knowledge and higher demands. Yet in order to successfully market a natural product it is no longer enough to make credible reference to its botanical origins. Customers have also come to expect these products to be highly effective – at least as effective as traditional products, and perhaps even more so.

»Sustainability is a market need and for us an indispensable tool to create value for our customers and their fast moving targets.«

Christian Vang
Head of Business
Unit Industrial & Consumer Specialties



»We serve a whole series of global trends at Care Chemicals, particularly Consumer Care Products.«

World population growth and urbanisation

Better lifestyle, and higher living standards

Digitalisation and increasing transparency

»Today, customers expect innovative products and solutions to meet the requirements of sustainability and efficiency.«

We are closely connected to the market trends and **SUSTAINABILITY NEEDS**



Smart & eco-friendly products

- Switch to plant-based ingredients
- Nourishing products with less environmental impact
- High performance solutions for various skin/hair types
- Easy to formulate, comfortable to use
- High ingredient efficiency



Digitalisation, transparency & conscious consumption

- Responsible sourcing:
 - Sustainable Sourcing of renewable feedstock
 - Improve working and environmental conditions in global supply chains
- Data transparency at product level
- Compatibility with Eco labels
- Social engagement






Sustainable production & operational efficiency

- Increased share of renewable energy
- Save water, energy & GHG emissions
- Reduced waste
- Recyclable packaging solutions

Which ingredients are needed for sustainable personal care products?

IMPACT ON FORMULATIONS

Talking about sustainability in general and abstract terms is easy. It's the doing that counts. For Clariant it was obvious that waiting is not an option even though there is no harmonized sustainability approach available. Instead we decided to move ahead pro-actively. Together with external and internal stakeholders and in partnership with the Collaborating Centre on Sustainable Consumption and Production (CSCP) we underpinned our existing EcoTain initiative with a profound criteria catalogue. With its 36 criteria we define sustainability at Clariant at product level. But we do not stop there. Being closely connected to the market equally means that one needs to assess the sustainability trends specifically for the personal care industry. In addition, we break-down these trends to the actual impact on a personal care formulation.

SUSTAINABILITY TRENDS	IMPACT ON PERSONAL CARE FORMULATIONS
 Smart & Eco-friendly	<ul style="list-style-type: none">• High Renewable content (RCI)• Vegetable origin• Mildness & excellent environment profile• Multifunctional components, performance booster• Convenient & flexible use• Direct improvement of material efficiency for customer
 Conscious Consumption	<ul style="list-style-type: none">• Member of "Together for Sustainability" initiative, conduction of Sedex audits etc.• Renewable feedstock:<ul style="list-style-type: none">- Palm based materials: RSPO Mass Balance certification, traceability- Local sourcing• Profound insight on product features (consultancy service)• Joint product development• Eco label suitable products• Smallholder project in Sabah (Malaysia) "SPOTS", local initiatives
 Sustainable Production	<ul style="list-style-type: none">• Carbon- & water product footprint• Corporate data on waste, water, energy & GHG• Strengthened environmental targets 2025• Certified Management System (SQS)• Energy Saving Program



Certificates ecolabels and initiatives for **RENEWABLE RESOURCES**

Clariant is committed to the sustainable sourcing of ingredients. With strong partnerships, the company is working on the right balance of economic, social, and ecological interests.

Bio-based chemicals have the potential to significantly reduce greenhouse gas emissions and to lessen dependence on fossil fuels. Wherever it makes sense from an economic, environmental, and social point of view, Clariant therefore strives to use bio-based raw materials and to meet the requirements of important ecolabels and organizations.

Palm oil is the most widely used renewable raw material at Clariant, e.g. for the production of surfactants, emulsifiers, and preservatives. Clariant has intensified its efforts to ensure the sustainability of the palm oil materials it uses and is focusing on RSPO certification and traceability. The Roundtable on Sustainable Palm Oil (RSPO) is a not-for-profit organization promoting sustainable cultivation methods for palm oil to limit environmental damage. Clariant is a member of the RSPO since 2011.

Ecocert is a French-based certification body that assesses the compliance of agricultural and consumer products to natural and organic standards. In 2017, it has replaced its own standard for cosmetics with the internationally harmonized Cosmos (cosmetic organic) standard, which has also been adopted by the German BDIH, the British Soil Association, and other European certification bodies.

Called the »Nordic Swan« because of its symbol, the Nordic Ecolabel is one of the most successful ecolabels worldwide. The EU Ecolabel was launched by the European Commission in light of developing a Europe-wide voluntary environmental labelling scheme that consumers could trust.

The Renewable Carbon Index (RCI) is another way to prove how important the use of renewable raw materials is for Clariant: it indicates the content of carbon.

ISO 16128-1:2016 provides guidelines on definitions for natural and organic cosmetic ingredients. In addition to natural and organic ingredients, other ingredient categories which may be necessary for natural and organic product development are defined with associated restrictions.



RSPO-1106234



16128-1:2016



COSMOS APPROVED

»EcoTain® products exceed sustainability market standards.«

36 Evaluation through a screening process with 36 criteria



Along the whole product's life-cycle



Covering all three sustainability dimensions



In absolute terms and in relation to a benchmark product



The EcoTain label is awarded to products providing sustainable benefits above market standard, representing best-in-class-solutions

EcoTain® defines sustainability excellence AT PRODUCT LEVEL



PEOPLE



SAFE USE, TRANSPARENCY AND INFORMATION

- Profound insight on product features
- Regulatory data package (RPI = regulatory product information)
- Guidance on international, national & regional regulation requirements



ADDRESSING MEGATRENDS AND SOCIAL NEEDS

- Address trend towards use of renewable feedstock instead of fossil fuel based ingredients (climate change)
- Answer desire for natural, mild, pure and eco-friendly products driven by end-consumer



PLANET



RAW MATERIALS AND SUSTAINABLE SOURCING

- Products based on natural, renewable resources
- Vegetable origin
- Local sourcing
- RSPO certification (Mass Balance)



RESOURCE EFFICIENCY AND ENVIRONMENTAL PROTECTION

- Direct improvement of material efficiency for customer (low application dosage, high active content)
- Mildness & excellent environment profile: hazardous label-free, readily biodegradable, low aqua-toxicity
- Production efficiency (water, energy, CO² emissions, waste)



PERFORMANCE



INTEGRATED SUSTAINABLE BUSINESS

- Comprehensive, tailor-made technical service supported by state-of-the-art lab equipment
- Joint product development, customer trainings / workshops
- Carbon footprint calculation



PERFORMANCE ADVANTAGES

- Convenient & flexible use (cold processable, water soluble)
- Tool box approach: complete range of products for spot-on solutions
- Multi-functionality enables customer to use less components while improving performance
- Compatibility with eco label certification taking into account regional requirements

EcoTain® ingredients for sustainable personal care FORMULATIONS

32 products of BU ICS/market segment Personal Care have been awarded with the ECOTAIN® sustainable excellence label:



Actives

- Plantasens Olive Active HP
- Plantasens Crambisol



Care Ingredients

- Plantasens Abyssinian Oil
- Plantasens Crystolive Wax
- Plantasens Squalane
- Plantasens Squalene



Emulsifiers / Solubilizers

- Hostacerin DGI
- Hostacerin SFO



Hair Care

- Genadvance Hydra
- Genadvance Life



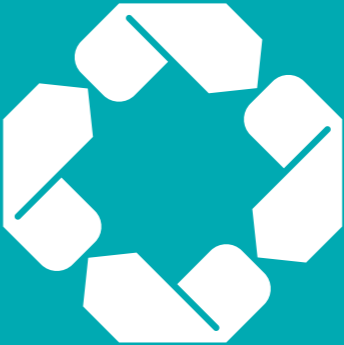
Preservatives

- Velsan AS
- Velsan SC
- Velsan SPA
- Nipaguard SCE
- Nipaguard SCL
- Nipaguard SCA



Surfactants

- Genagen KB
- GlucoTain Care
- GlucoTain Clean
- GlucoTain Clear
- GlucoTain Flex
- GlucoTain LiquiFlex
- GlucoTain Plus
- GlucoTain Sense
- Hostapon CCG
- Hostapon CGN
- Hostapon CLG
- Hostapon SG
- Hostapon SGC
- Hostapon SLG
- Perlogen SF 117
- Perlogen SF 3000



ECOTAIN®

»Sweet« surfactants with that extra bit of sustainable foam
GLUCOTAIN®

- COSMOS approved
- 94-95 % RCI*
- Available in RSPO Mass Balance quality

- RSPO-certified product

- Biodegradable

- Readily biodegradable
- No environmental hazard label

- EO-free

- Mild surfactant with enhanced skin compatibility

- Extremely mild to hair and skin

»GlucoTain® allows an excellent cleaning effect to be combined with equally good nourishing properties on plantbasis. The products' high degree of efficiency makes them especially attractive to producers, and their production from renewable raw materials exemplifies our company's sustainability concept.«

* Renewable Carbon Index

A booster for preservatives made from corn, sugar, and natural oils
VELSAN® SC

- No human hazard label

- Readily biodegradable
- No environmental hazard label

»The ideal preservative doesn't exist. That's why we created Velsan® SC to bring the preservatives there are a little closer to perfection.«

- Multifunctionality

- COSMOS approved
- 100% RCI*
- Available in RSPO
- Mass Balance quality

Radiant pearlizing effect – simply by using less **PERLOGEN® SF 3000**

»The production utilizes a patented and highly efficient low-energy blending process that reduces the overall carbon footprint significantly.«

- Energy efficient production
- Excellent pearlizing effect at low dosage concentration (0.5-3.0%)
- No environmental hazard label
- 52% RCI*
· Available in RSPO Mass Balance quality
- Long shelf-life
· cold processable
· liquid

* Renewable Carbon Index

Making sustainable use of olive oil **PLANTASENS® OLIVE ACTIVE HP**

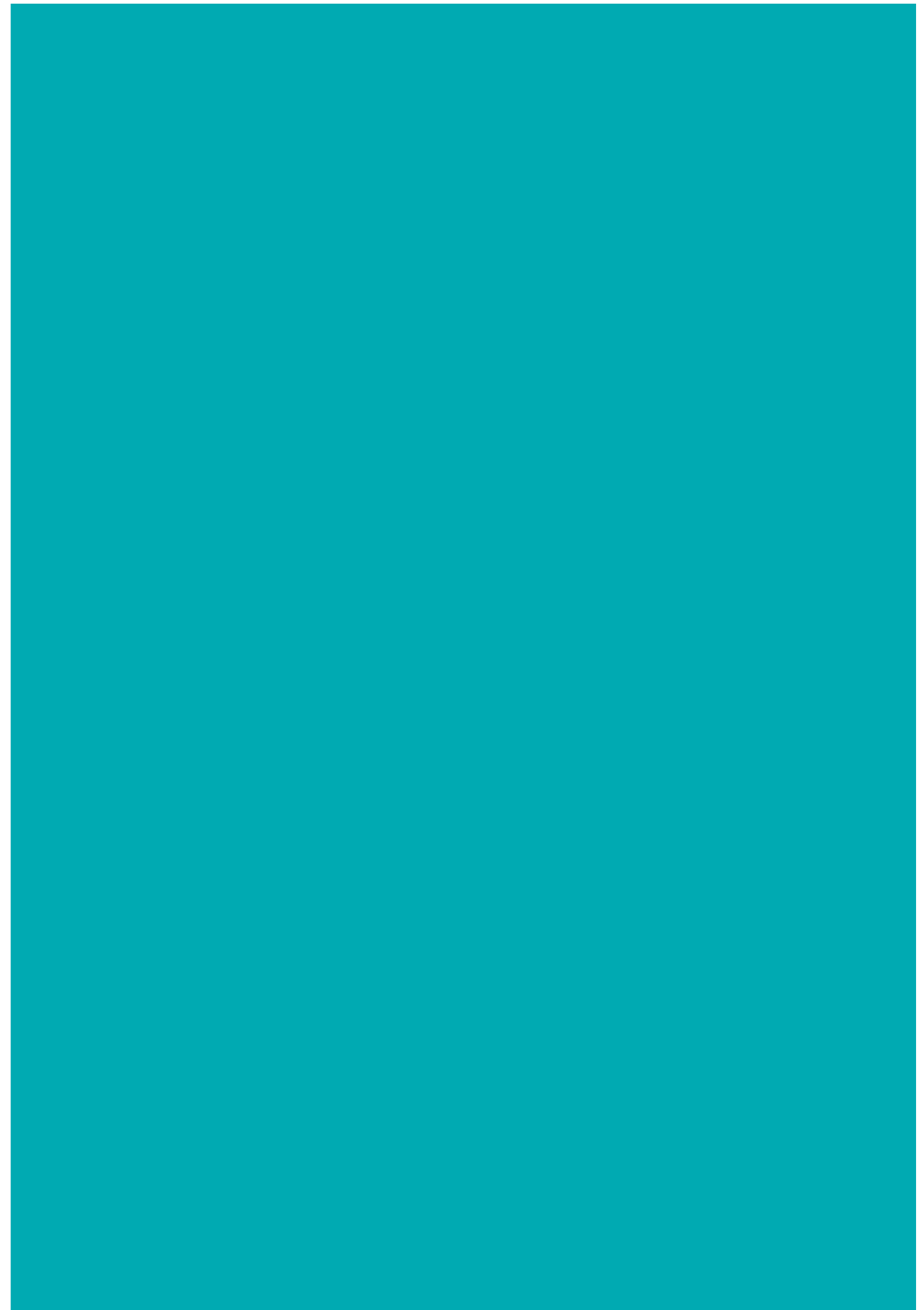
»Plantasens Olive Active HP provides formulators and brand owners with an innovative naturally-derived active. By combining advanced performance and a natural basis it addresses many consumer preferences in one tool.«

- 100% biodegradable
· No environmental hazard label
- 100% RCI*
- Tailor-made formulation guidance
- COSMOS approved
- Desire for natural products driven by consumers

* Renewable Carbon Index

»The trend in cosmetics is towards greater naturalness. Our innovative products in the beauty sector combine naturalness with a high degree of effectiveness and economic efficiency. This allows us to meet both consumers' needs and the requirements of the producers of final products.«

Hariolf Kottmann,
CEO



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