

Il Progetto Formulativo tra Innovazione, Sicurezza e Sostenibilità

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23-24 Novembre 2022
Hall 4, MiCo, Milano
Belli da nutrire



Consumatori alla ricerca di soluzioni innovative per migliorare la qualità della vita nel rispetto dell'ambiente



*Identification of elements for a future "Strategy for the EU Ecolabel",
European Commission, DG ENV – Final Report*

Sostenibilità

Attenzione a singoli aspetti e al loro insieme

- Processo produttivo
- Scelta materie prime
- Tipologia prodotto
- Packaging
- Riciclabilità

Clean Beauty

- Trasparenza della formulazione
- Semplicità della lista ingredienti
- Trasparenza sui claims
- Riduzione impatto ambientale
- Sicurezza

Blue Beauty

Salvaguardia degli oceani e della biodiversità marina

- Packaging riciclabile / plastic-free
- Attenzioni ad alcuni ingredienti, in particolare filtri solari

Personalizzazione

- Digitalizzazione
- Formule tailor made
- Cosmetica fai da te
- Cosmetical digital therapy



A hand is shown from the bottom, holding a globe. Overlaid on the globe is a large green recycling symbol (three chasing arrows forming a triangle). The globe and the recycling symbol are rendered with a wireframe or mesh effect, with green lines and dots. The background is a light, hazy green with faint network-like patterns of white and blue dots connected by thin lines. A dark green horizontal bar is positioned across the middle of the image, containing the text.

HOLISTIC SUSTAINABILITY

SDGs Agenda 2030

European Commission Priorities

European Green Deal



Economy that works for people



Europe fit for the digital age



European way of life

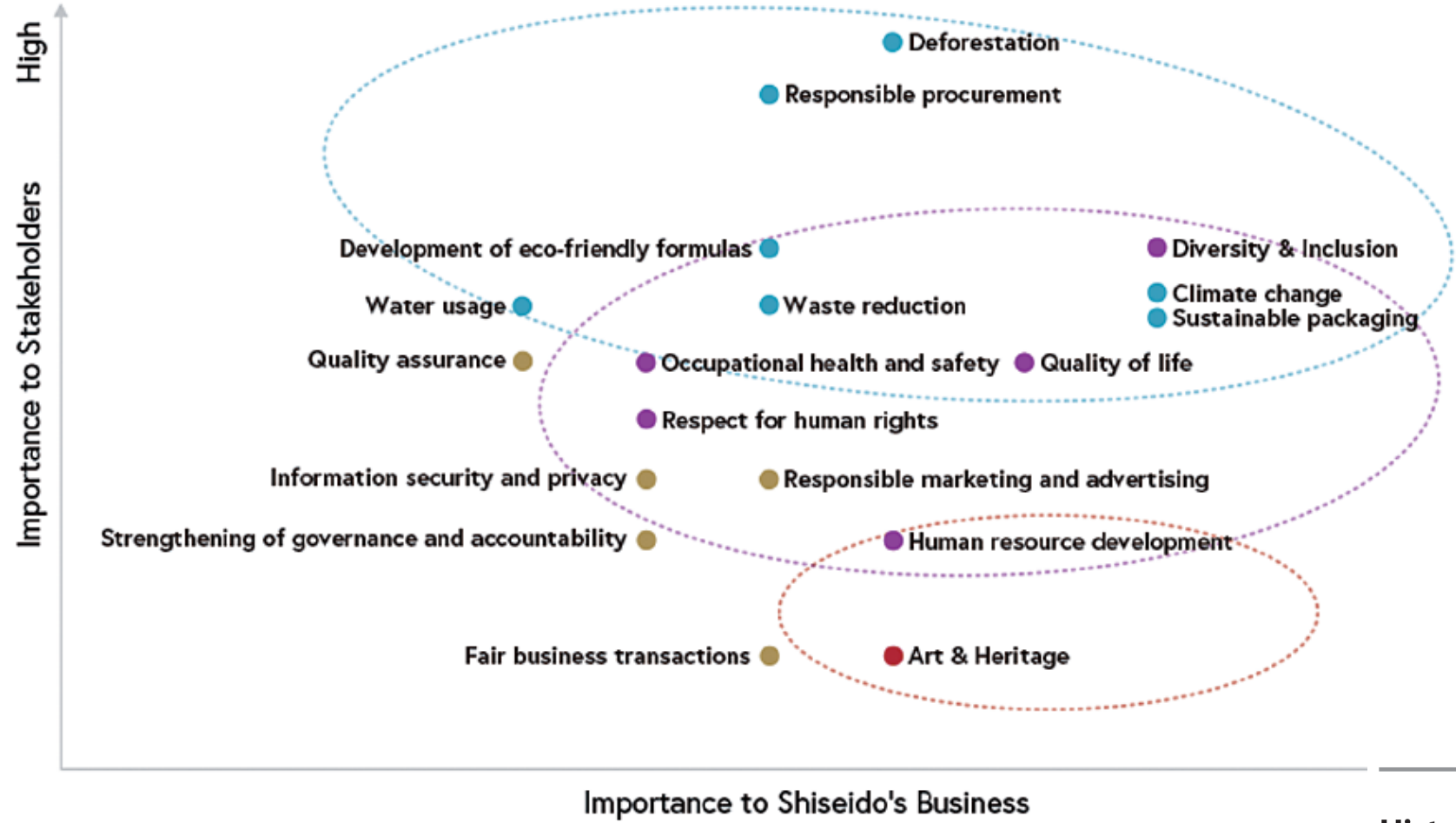


Stronger Europe in the world



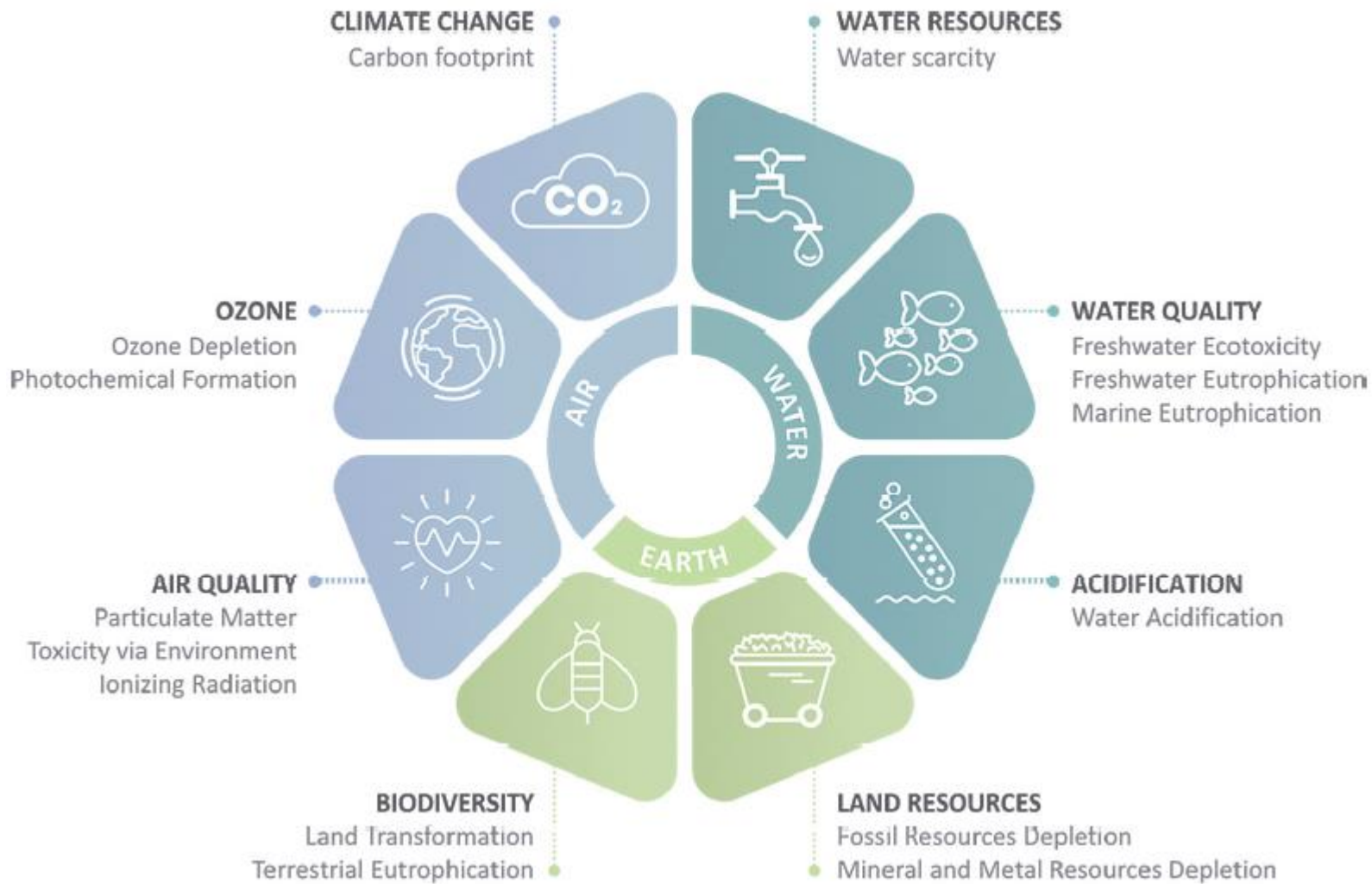
European Democracy





History and DNA with Sustainability and its Future

Shihori Oyama¹, Yoshinori Kumasaka¹, Daisuke Aso², Mihoshi Yokoo¹, Nathalie Broussard³
¹ Brand Value R&D Institute, Shiseido Co., Ltd., Japan
² Mirai Technology Institute, Shiseido Co., Ltd., Japan
³ Shiseido Group EMEA, Shiseido Co., Ltd., Japan



Holistic Sustainability

Laurent Gilbert¹, Sanford Browne³, Rachel Barre¹, Isabelle Rollat¹, Delphine Bouvier¹, Michel Philippe², Isabelle Castiel¹, Lucile Lafaurie¹, Ana Kljuic¹

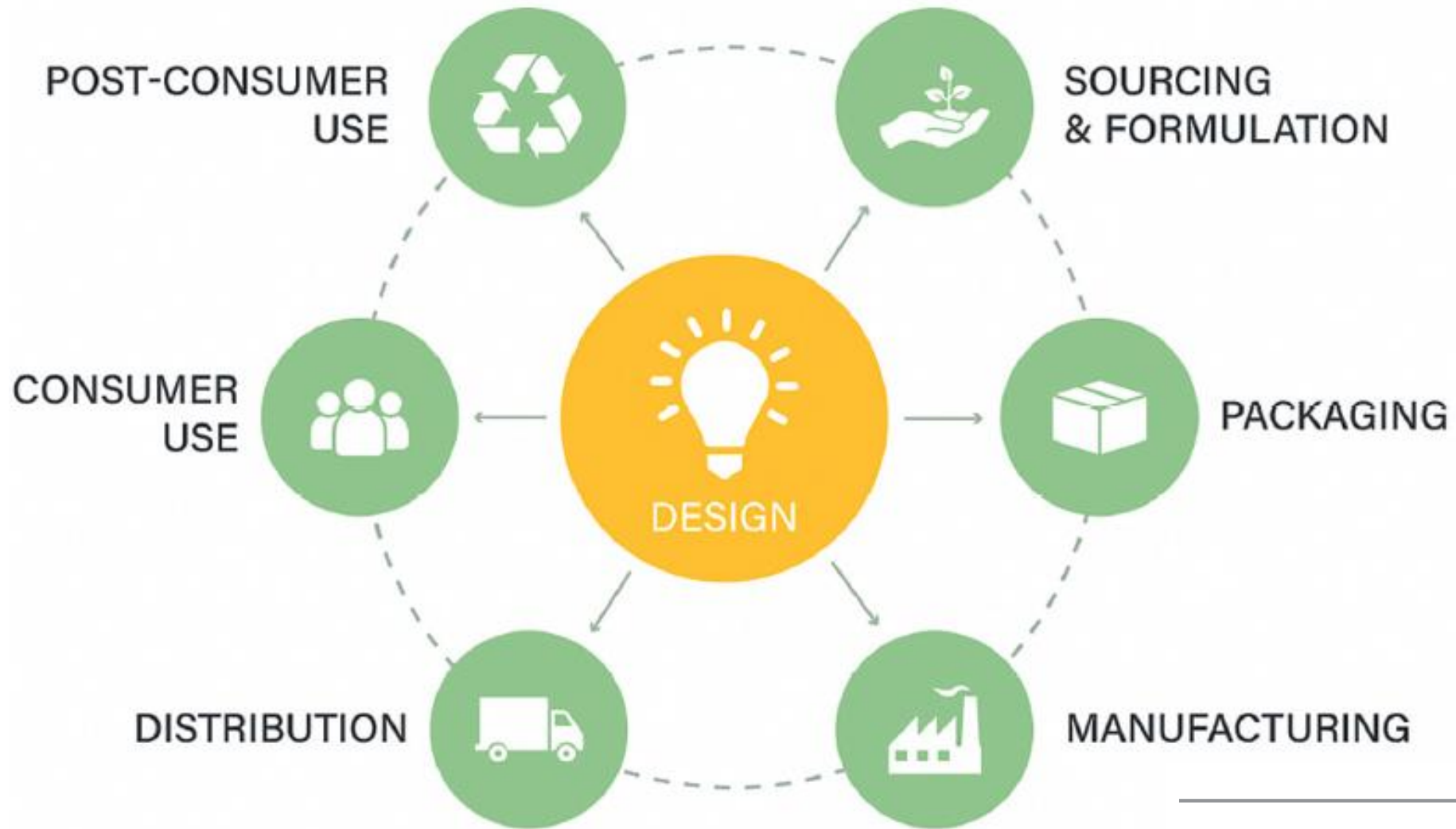
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² Consultant in Eco-design, Green Chemistry and Naturalness, France

³ L'Oréal R&I, USA

Fonte:

Keywords: sustainability, life cycle analysis, environmental impact, Green sciences, eco-design



The Art, Design and Science of Product Sustainability: A Brand Case Study

Tim Kedwards¹, Camille Sasik³, Cindy Angerhofer³, Eva Thompson², Paul Scott², Rob DiPalma², Nicole Chang², Nicole Call³, Jeff Eidenschink³, Susan Morrissey²

¹ The Estée Lauder Companies, Petersfield, UK

² The Estée Lauder Companies, New York, NY, USA

³ The Estée Lauder Companies, Blaine, MN, USA

Fonte:

Sviluppo Prodotto

- Utilizzo di **materie prime rinnovabili**
- Sviluppo di **processi eco-compatibili** (ingredienti & prodotto)
- Innovazione basata su **ingredienti ecocompatibili**
- La nuova **formula riduce** la sua **impronta ambientale** e la sua impronta **idrica**
- **Migliore efficienza** (ingredienti & prodotto)
- Il nuovo **packaging** ha un **profilo ambientale migliorato**
- Il nuovo **prodotto** ha un **impatto sociale positivo**



Richiesta x Prodotto

- **Trasparenza:** maggiori informazioni su ingredienti e *claim*
- **Tracciabilità** sugli ingredienti
- **Ridotto** utilizzo di acqua
- **Pochi ingredienti** → ridotto consumo di acqua & energia
- Prodotto a **ridotto impatto ambientale** – **NO GREEN WASHING**

(...) However, even as “guilt-free beauty” focuses in on the environmental and ecological consequences of beauty products, confusion and cynicism around green claims in the UK have caused these consumer percentages to remain relatively static over the last few years [4], and many consumers continue to favor big brands (...)

**Tactical Approaches to Sustainability:
Conversations from the Frontline**

Tom Branna
Happi/Rodman Media, 25 Philips Pkwy, Montvale, NJ 07645, USA

Fonte:

This Issue

Views **935** | Citations **0** | Altmetric **223**

Research Letter

September 14, 2022

Prevalence of Contact Allergens in Natural Skin Care Products From US Commercial Retailers

Peter A. Young, MPAS^{1,2}; Haiwen Gui, BS¹; Gordon H. Bae, MD¹

» [Author Affiliations](#)

JAMA Dermatol. 2022;158(11):1323-1325. doi:10.1001/jamadermatol.2022.3180



Black List

NO	SÌ
Acrylates	Polyquaternium 7 o 55
Sulfate	Sulfosuccinate
Octocrylene ???	
...	

SOSTENIBILE ?



What is Octocrylene

A synthetic compound used in sunscreens to protect the skin against the damaging effects of UV radiation.



HOME > SKINMAG > OCTOCRYLENE NELLE CREME SOLARI. PERCHÉ È SOTTO ACCUSA?

FOCUS SCIENTIFICI

OCTOCRYLENE NELLE CREME SOLARI. PERCHÉ È SOTTO ACCUSA?

L'octocrylene è un filtro chimico utilizzato nei prodotti solari per proteggere la pelle dai danni delle radiazioni solari e in alcuni cosmetici per proteggere gli ingredienti che subirebbero una degradazione a opera dei raggi UV.

Negli ultimi anni è finito sotto accusa: il dibattito su questo filtro solare ruota intorno a diversi aspetti.

Il rischio di sensibilizzazione

La prima questione sollevata nei confronti dell'octocrylene è stata quella della sensibilizzazione. Di recente, infatti, questo filtro è stato oggetto di revisione da parte del Comitato Scientifico per la Sicurezza dei Consumatori in seguito a segnalazioni di problematiche di sensibilizzazione, soprattutto nei bambini, in Francia, Spagna e Italia.

Tuttavia, dopo un'estesa revisione del potere sensibilizzante di questa molecola, è stato dedotto che **la dermatite allergica da contatto provocata dall'octocrylene sia molto rara nella popolazione generale.**

Anche i casi di fotosensibilizzazione sono rari e generalmente conseguenti a una fotosensibilizzazione al ketoprofene topico.



Review Article | Free Access

Review of the safety of octocrylene used as an ultraviolet filter in cosmetics

E. Berardesca, T. Zuberbier, M. Sanchez Viera, M. Marinovich

First published: 07 October 2019 | <https://doi.org/10.1111/jdv.15945> | Citations: 17

Conflict of interest

EB and MSV are members of the Scientific Advisory Board of Cosmetique Active International. The authors declare they have no conflicts of interest that might be relevant to the contents of this manuscript.

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SECTIONS

PDF TOOLS SHARE

Abstract

Octocrylene or octocrilene is an organic ultraviolet (UV) filter which absorbs mainly UVB radiation and short UVA wavelengths. It is used in various cosmetic products to either provide an appropriate sun protection factor in sunscreen products or to protect cosmetic formulations from UV radiation. There is no discussion that UV filters are beneficial ingredients in cosmetics since they protect from skin cancer, but octocrylene has been recently incriminated to potentially induce adverse effects on the endocrine system in addition to having allergic and/or photoallergic potential. However, the substance has the advantage to work synergistically with other filters allowing a beneficial broad photoprotection, e.g. it stabilizes the UVA filter avobenzene (i.e.

HOW IS IT USED IN OUR PRODUCTS?

We use octocrylene in concentrations authorised by the various regulations in force in the cosmetics industry. We optimise concentrations of this filter depending on other filters with which it is combined, the targeted sun protection, the desired sensoriality and the targets for which the product is intended. Octocrylene is necessary to stabilize avobenzene: their combined use guarantees maximum performance (UVA + UVB coverage). When we can, we use filters with a more favourable environmental profile than octocrylene in our formulations.

We have developed a scientific testing platform that enables us to accurately measure and continuously improve the environmental profile of our sunscreen formulas containing this and other filters.

As is the case with all our products, those containing octocrylene are systematically subjected to a strict evaluation of their quality and safety for humans and their impact on the environment. This is a fundamental principle applied to all our products everywhere around the world.

OCTOCRYLENE WHAT IS IT?

Octocrylene is an organic sun filter. This filter mainly absorbs UVB radiation, which is responsible for tanning but also for sunburn and skin cancer. In our products, it appears in the list of ingredients on the packaging, under the name OCTOCRYLENE.

WHERE DOES IT COME FROM?

Octocrylene is comprised of organic compounds (carbon compounds that absorb UV rays) converted to obtain this sunscreen.

WHY IS IT QUESTIONED?

Octocrylene is questioned due its allergenic potential. This ingredient is also suspected of being an endocrine disruptor. Finally, studies have called into question its environmental profile, especially its impact on corals. It's also not very biodegradable.

The Facts:

- Octocrylene used alone does not cause photo-allergy and cases of allergies to this ingredient in sunscreen products are exceedingly rare. Some cases of allergies due to exposure to the sun (photo-allergies) and transient skin irritations have been observed in contexts with high octocrylene concentrations.
- According to the European Commission (CSSC), octocrylene is not considered either a photo-allergen or even an allergen.
- It is not an endocrine disruptor according to the definition of the World Health Organization, whose role is to lead and coordinate global health within the United Nations.
- The use and concentration of octocrylene in our sunscreen products is carefully controlled to avoid any potential impact on the aquatic



CONSUMER HEALTH



SOSTENIBILE !

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Sunscreen Filters

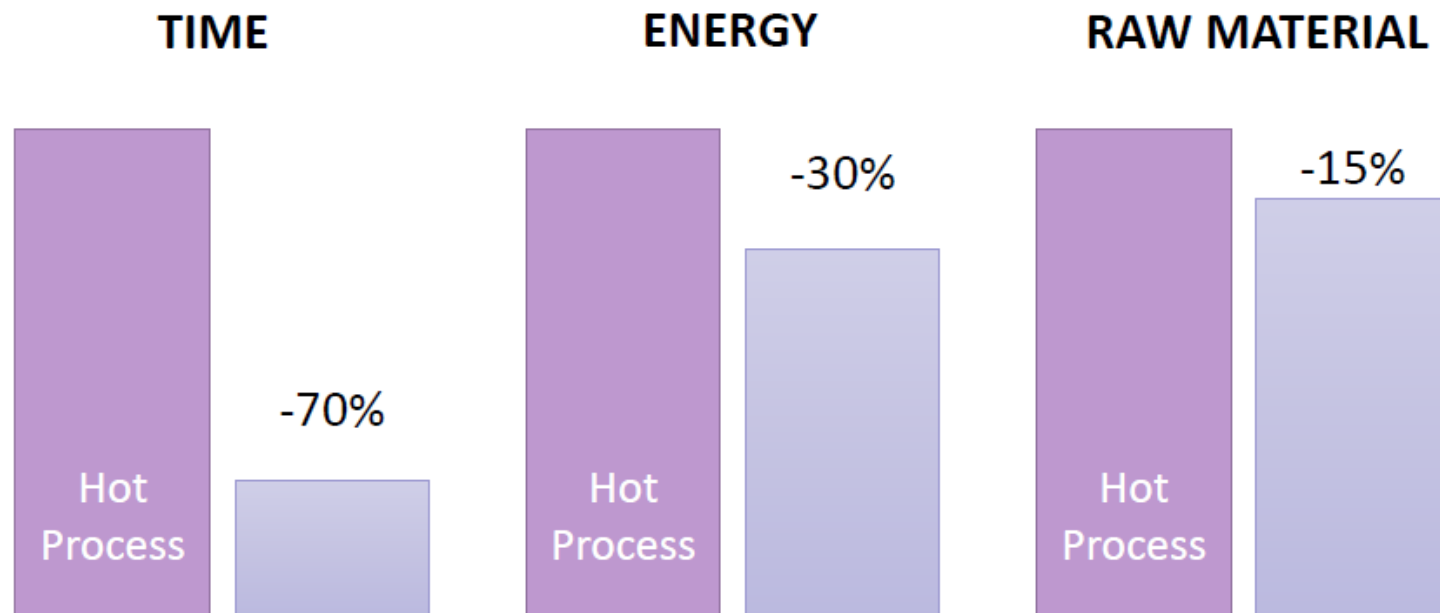
Why Sunscreens are Critical to Sun Safety

Approximately 9,500 Americans are diagnosed with skin cancer every day – that's nearly 3.5 million people per year. Dermatologists say even one severe sunburn can double your chances of getting a form of skin cancer. According to the World Health Organization, experts believe that 4 out of 5 cases of skin cancer are preventable. Healthcare professionals and regulatory authorities worldwide say that using effective sunscreens is a critical part of staying safe in the sun and preventing skin cancer.

That's why it's essential to use sunscreen filters that deliver maximum protection from harmful ultraviolet (UV) rays. By using a diverse set of organic and mineral sunscreen ingredients, Johnson & Johnson Consumer Health develops science-backed sunscreens that provide superior sun protection.

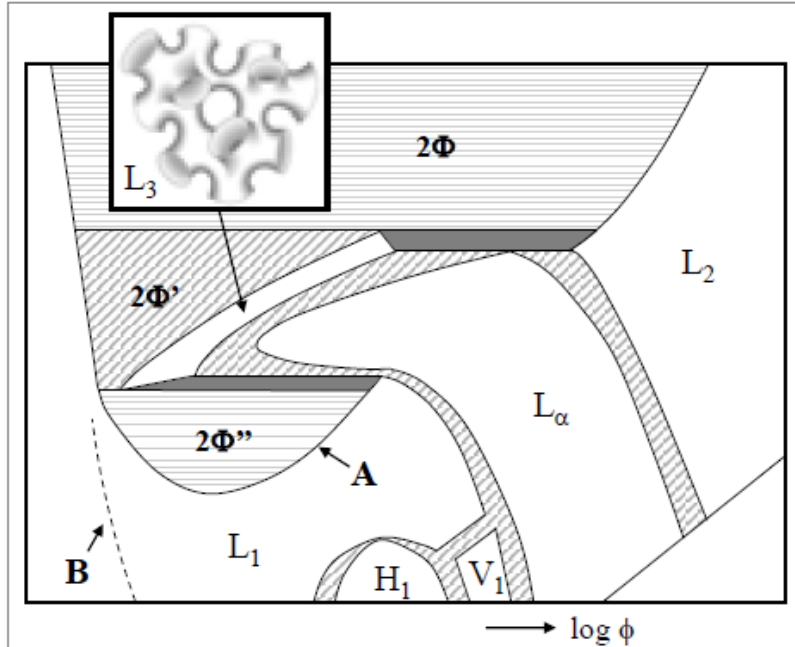
Did You Know These Facts About Sunscreen?

SOSTENIBILE



Stima del miglioramento del processo produttivo di un emulsione contenente polimero Acrilico

SOSTENIBILE

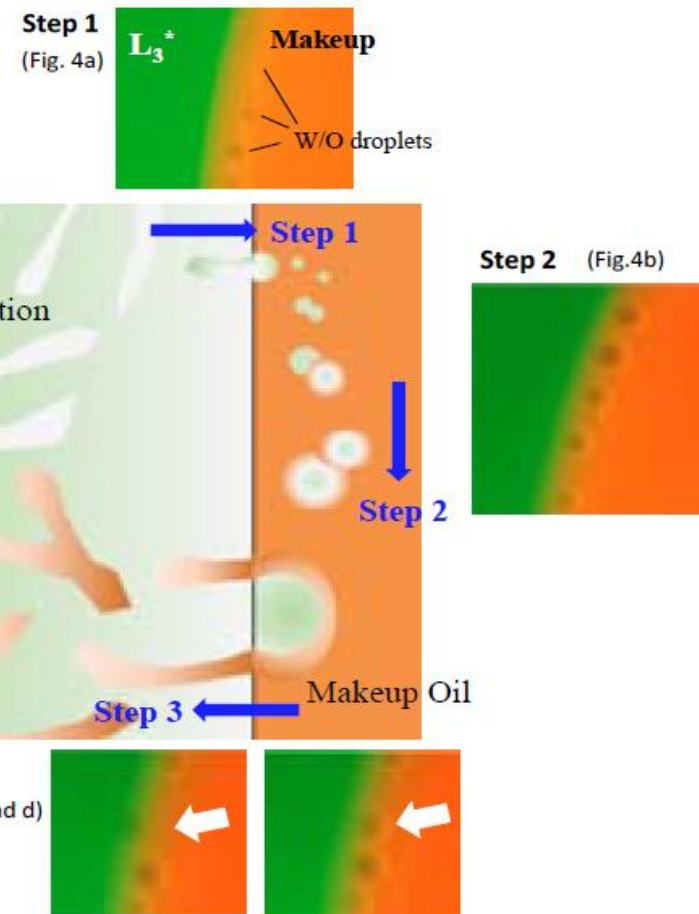
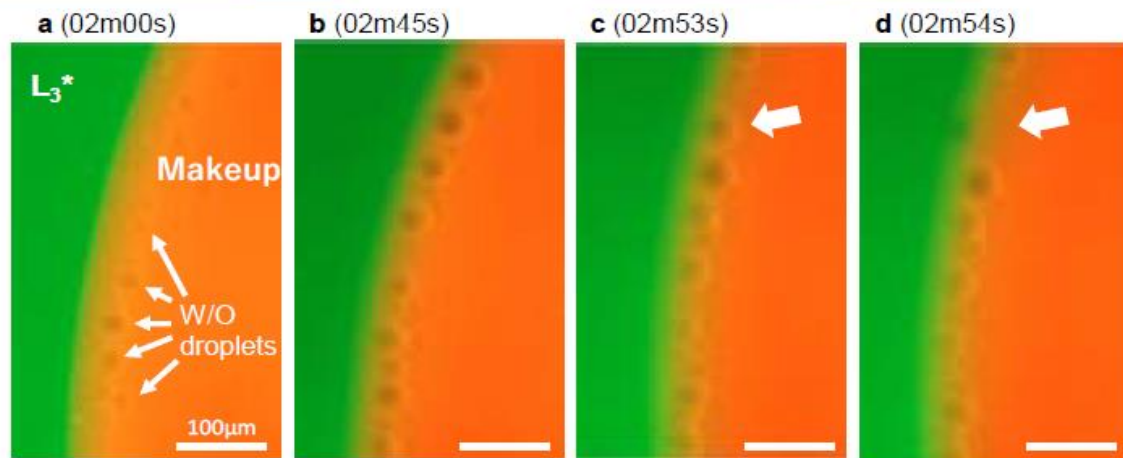
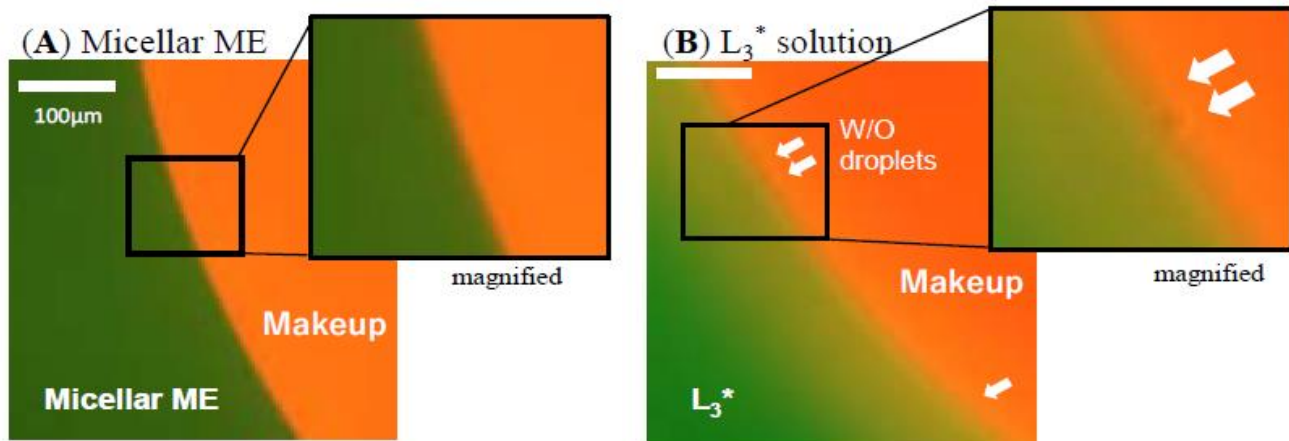


- Polyglycerol fatty acid esters (PGFEs)
- @ T. amb
- @ bassa conc. < 3 %
- High cleansing performance without excess friction
- Basso livello irritazione x occhi

Application of “Sponge Phase” – Road to Sustainable Formulation Concept “Less-is-More”

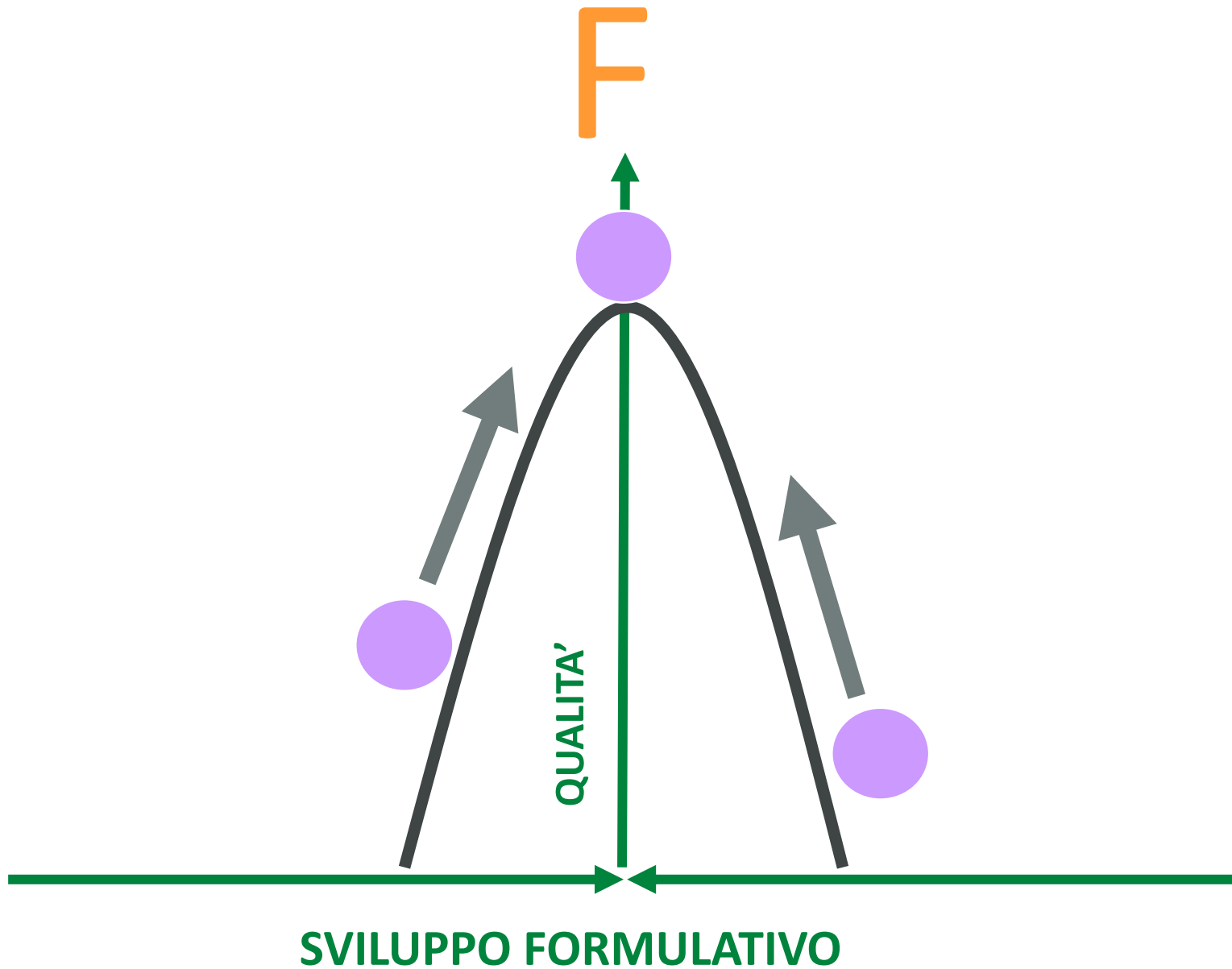
Yuji Yamashita
Chiba Institute of Science, 3 Shiomi-cho, Choshi Chiba 288-0025, Japan

SOSTENIBILE



SOSTENIBILE





- **STEP-BY-STEP**
- **TRIALS & ERROR**
- **VALUTAZIONE di TUTTE le VARIABILI**
- **VALUTAZIONE dei LIMITI**
- **FORMULE di BACKUP**
- ***PAZIENZA + TEMPO***



AI development flow

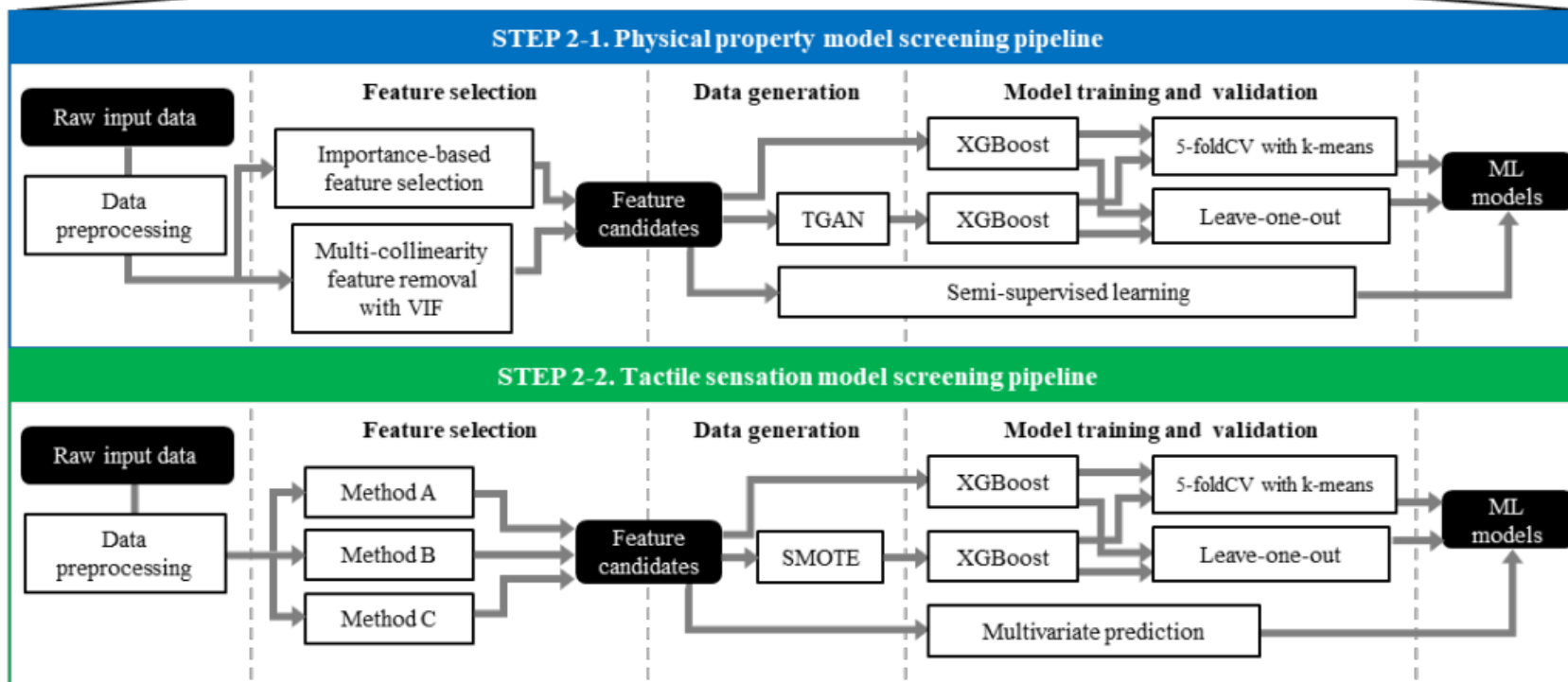
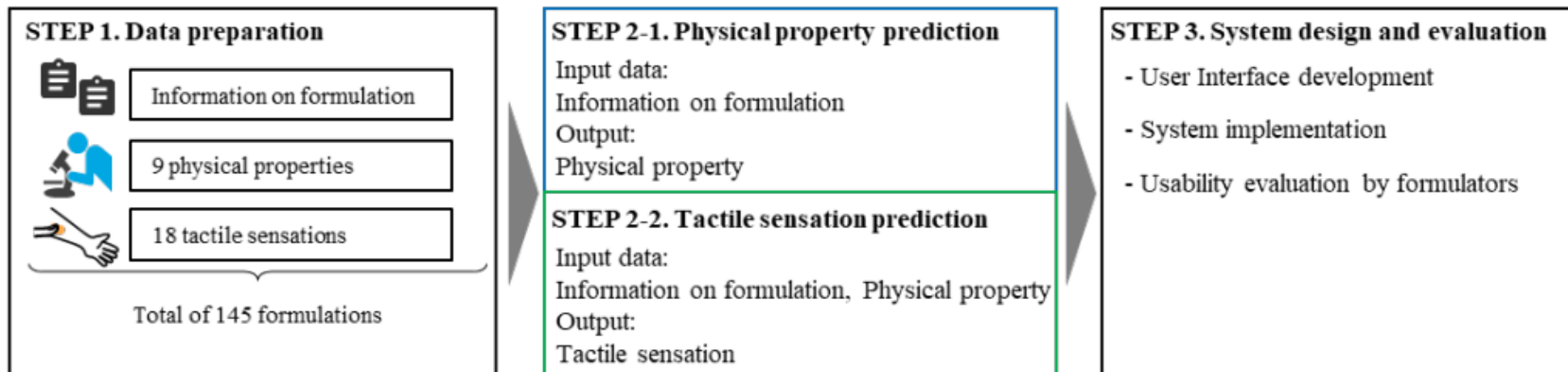
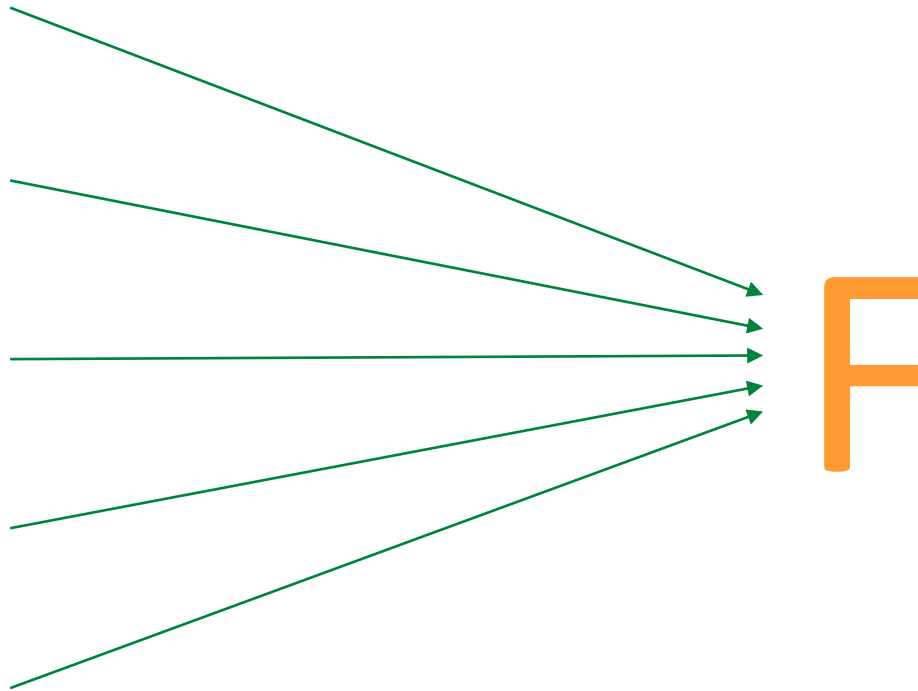


Figure 1 Flowchart of AI development

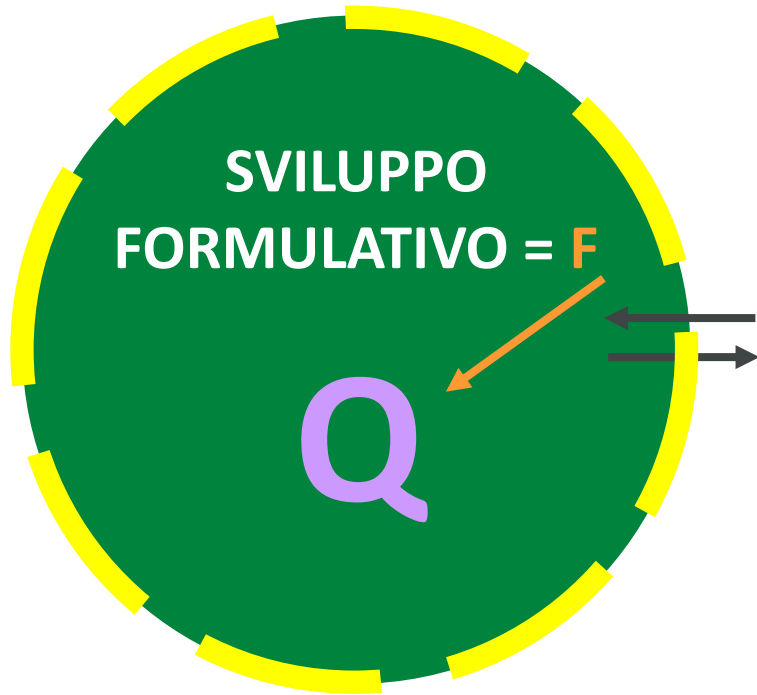
Fonte:

Qualità della Formula

- **FUNZIONALE**
- **SICUREZZA**
- **SENSORIALE**
- **CHIMICO-FISICA**
- **APPLICATIVA**



BRIEF



PRODUZIONE



P = Prodotto finito

BRIEF



Q

FUNZIONALE

SICUREZZA

SENSORIALE

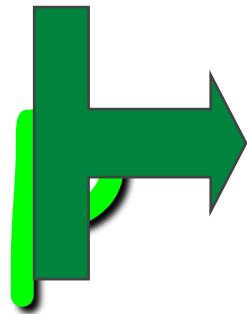
CHIMICO-FISICA

APPLICATIVA

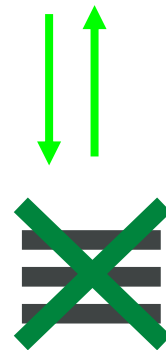
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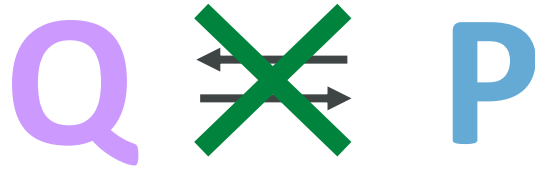
PRODUZIONE



Q



P



- **Diminuzione Shelf-life (separazione)**
- **Odore sgradevole**
- **Presenza “corpi estranei”**
- **Prodotto grumoso**
- **Presenza cristalli**
- **Opacità**
- **Non conformità Microbiologica**

Productos seleccionados

PRODUCTO	EMPRESA
Les cosmetiques sun ultimate sensitive spray solar SPF50+ Piel sensible	Centros Comerciales Carrefour, S.A.
Belle&SUN Bruma solar invisible FPS50	Perseida Belleza.
Abelay Protector Solar FPS50	Ab7 cosmética.
Isdin Fotoprotector Fusion wáter SPF 50 Fotoprotector facial de uso diario	ISDIN.
Heliocare 360° airgel SPF 50 protector solar-corporal	Industrial Farmacéutica Cantabria.
BE+ Sin protect dry touch SPF50+ 200 ML	Laboratorios Cinfa.
Ecran Sunnique Sensitive Leche Protectora SPF100 AC	Marca Personal Care, S.L.
Farline spray solar 50+ 200 mL Protección muy alta	Farline comercializadora de productos farmacéuticos S.A.
Mussvital fotoprotector spray aerosol ultra light 50+	Peroxfarma.
Babaria solar Bruma protectora SPF50	Berioska.
Seesee / Spray Solar Transparente SPF 50+	Cosmetrade.
Eucerin sun protection sensitive protect sun spray transparent dry touch SPF 50 alta	Beiersdorf AG.
Piz Buin Hydro Infusión Crema solar en gel SFP 50 Protección alta (PR-018944)	Johnson & Johnson Santé Beauté.
Ladival Piel Sensible FPS 50+	STADA Arzneimittel AG.
Cien sun protector solar sensitive FPS50+	Win cosmetic GmbH & Co. KG.
Garnier- Delial- Ambre solaire- UV Water Spray Protector Transparente FPS 50	L'Oreal ESPAÑA S.A.
Hawaiian Tropic® Silk Hydratation® Bruma Solar air soft® SPF 50+ (Alta)	Wilkinson Sword.
Australian gold / SPF Botanical SPF 50 Continuous Spray	Biorius.
Lancaster Sun Sensitive Luminous Tan Crema Confort SPF 50+	Coty.

5 OK

9 SPF/UVA inferiore di un range

5 SPF/UVA metà dell'atteso



Informe sobre el análisis de FPS de productos solares

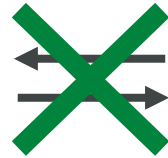
Campaña de control de mercado

Fonte:

Fecha de publicación: 26 de julio de 2021

VARIABILI DI PROCESSO

Q

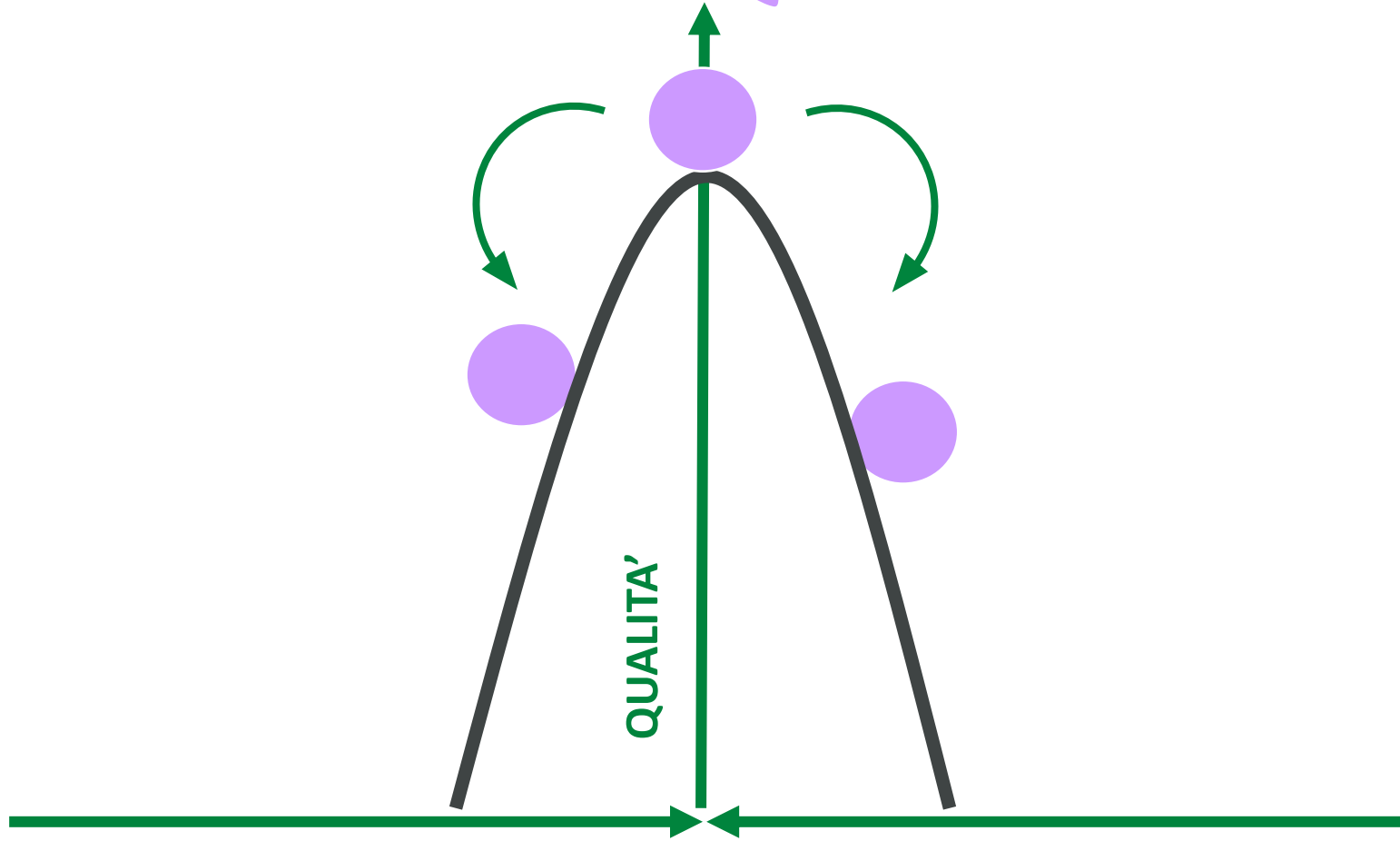


P

- Quantità lotto
- Cumulo impurezze
- Cicli Termici
- Velocità miscelazione
- Velocità omogeneizzazione

- Modalità di addizione
- Tempi di addizione / miscelazione / raffreddamento / emulsione...
- Variabile umana

F = Q ≠ P



FASE FORMULATIVA

Prevedere & Curare

CHI ?

QUANDO ?



COME ?

Chi fa Cosa?

- **FORMULATORE**
- **FORMULATORE + resp. PRODUZIONE**
- **PRODUZIONE**

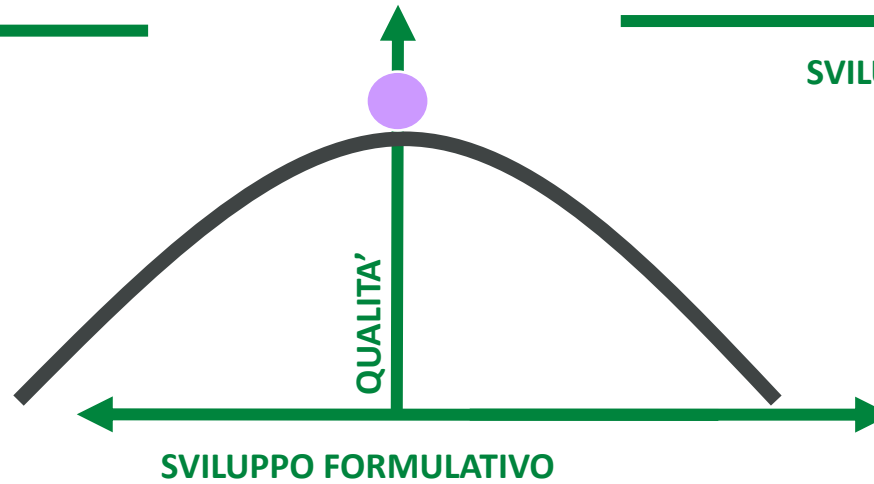
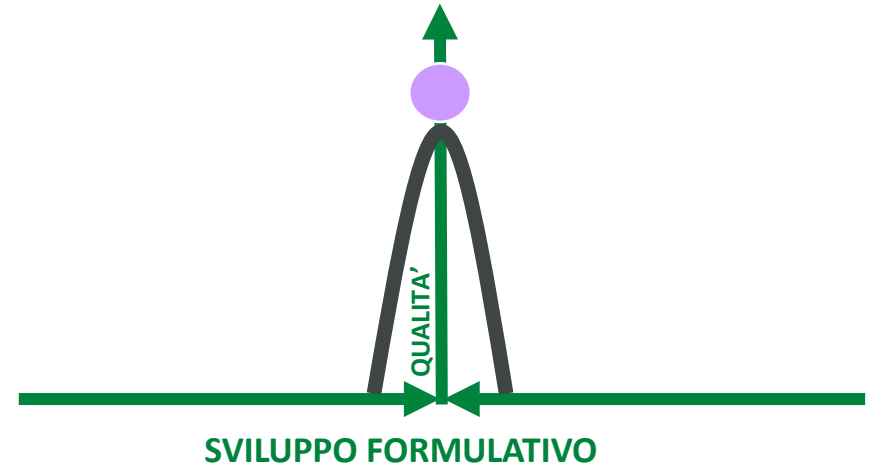
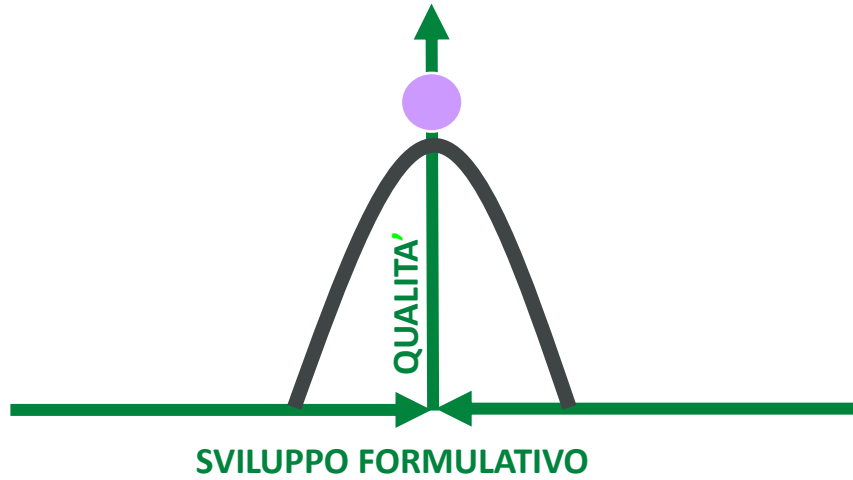


FORMULATORE



Quando e Come?

FASE FORMULATIVA



Chi fa Cosa?

- **FORMULATORE**
- **FORMULATORE + resp. PRODUZIONE**
- **PRODUZIONE**

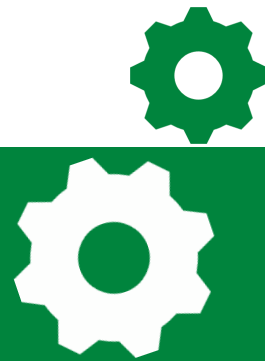


Chi fa Cosa?

- **FORMULATORE**
- **FORMULATORE + resp. PRODUZIONE**
- **PRODUZIONE**



RESPONSABILE
PRODUZIONE



Come?

- INDAGINE SU VARIABILI
- ANALISI
- OSSERVAZIONE CRITICA
- REGISTRAZIONE



Quando e Come?

- INDUSTRIALIZZAZIONE
- PRODUZIONE



STEPS successivi:

1. QUALITA' PRODOTTO
2. PUNTI DEBOLI
3. RIDUZIONE TEMPI
4. SEMPLIFICAZIONE PROCESSI
5. RIDUZIONE COSTI



Grazie

Nicola Lionetti
LabAnalysis S.r.l

