Skin Wellness Concepts Collection & First-Ever Skin Microbiome-Friendly Certified Silicone Ingredients

Discover Where Holistic Beauty Meets Science

–

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UL Prospector Webinar

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DOW®

Agenda

- Market Trends & Voice of Consumer
- Microbiome Friendly Ingredients
- Skin Wellness Concepts Collection - Formulations & Details

Voice of consumer

33% of global skin care consumers are listing **sensitive skin** as their top skin concern & sensitive skin suitability is the #2 most desired product functionality*

42% of global hair care consumers are concerned about their **scalp** problems*

53% of beauty consumers*** research ingredients as a means of better understanding the **efficacy** of products**

39% of skin care consumers*** (Gen X or older) feel it's important for skin care products to be **recommended by a doctor or dermatologist****

45% of global consumers are moderately or extremely concerned about skin health in 2023*

Industry trends

- ❑ Skin Streaming
- ❑ Prevention over cure
- ❑ Healthy Skin > Beauty
- ❑ Personalization
- ❑ Inclusivity
- ❑ Discretionary Spending
- ❑ Holistic Wellness
- ❑ Digitalization
- ❑ Multifunctionality

*Source:Euromonitor.com
**Source: Mintel.com
***from the US

Understanding Microbiome: The science behind skin health

Skin Microbiome is a diverse community of microorganisms present on the skin surface, playing a vital role in maintaining healthy skin and preventing skin disorders such as acne, psoriasis and atopic dermatitis.

Skin Microbiome-friendly ingredients do not harm the beneficial bacteria of the skin and respect skin's microbial balance and diversity.

Source: Euromonitor

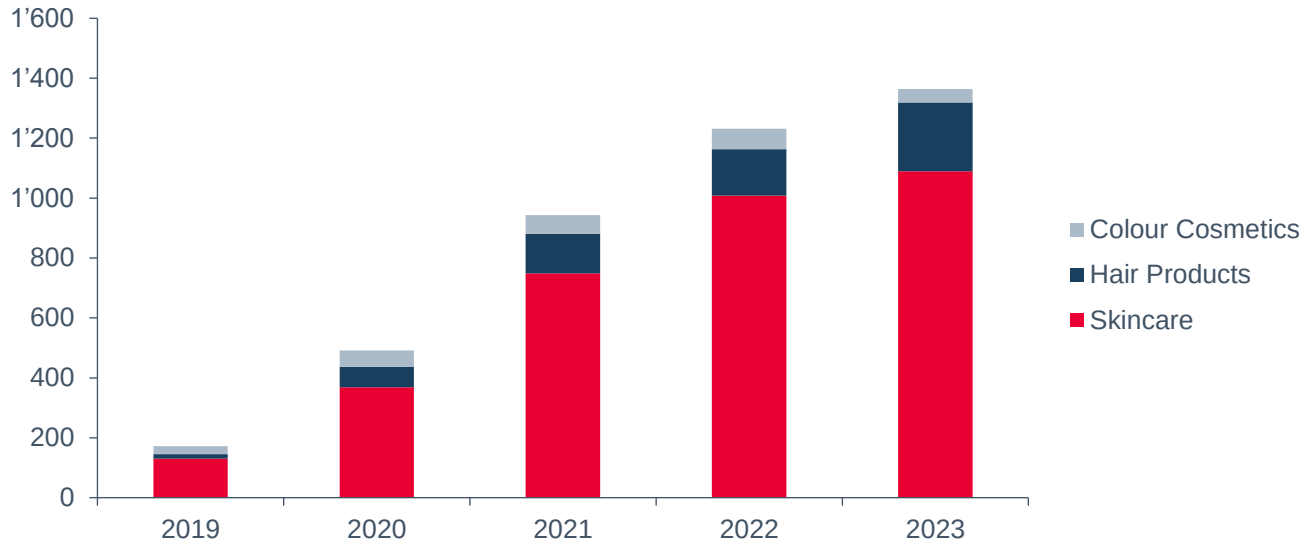
“Microbiome” is the new black

Number of launches in Beauty & Personal Care selected categories* that has “microbiome” in the product description increased by

697%

in the last 5 years.

Absolute Number of Launches with "Microbiome" in the product description



Holistic Wellness

Shift from “Beauty” to “Healthy Skin ”

Protect & Care

Rising demand in “microbiome-friendly” ingredients

*Skin care, Hair Care, Make-up, Deodorants
Source: Mintel GNPD

Skin microbiome-friendly certification

Standardized methods

Microbiome® friendly
MyMicrobiome.info

- **Dow has partnered with MyMicrobiome AG** to study the effects of a selection of Dow's personal care ingredients on skin microbiome.
- **Demonstrate the innocuity of a cosmetic ingredient/product on key microorganisms** populating the skin surface.
- *In vitro* testing focusing on **3 endpoints.**

MICROBIAL BALANCE	MICROBIAL DIVERSITY	MICROBIAL GROWTH
The ingredient or product should favour the growth of skin-friendly bacteria vs. skin-harmful bacteria	The ingredient or product should respect the microbial diversity of the skin	The ingredient or product should not impair the growth of the microbial community

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Skin microbiome-friendly certification

Key endpoints

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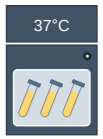
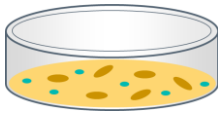
MICROBIAL BALANCE

Co-culture of ***S. epidermidis*** (skin-friendly) and ***S. aureus*** (skin-harmful) together with the test product

Incubation under shaking at 37°C for **15min (rinse-off)** or **4h (leave-on)**



Plating, incubation and CFU* measurement



Change in the ratio of the two microbes is compared to that of the untreated co-culture

MICROBIAL DIVERSITY

Co-culture of **up to 7 microbial species** relevant to the specific body site together with the test product

Incubation under shaking at 37°C for **15min (rinse-off)** or **4h (leave-on)**

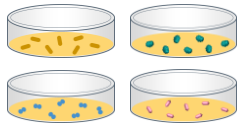
Plating, incubation and CFU* measurement

Change in microbial diversity is compared to that of the untreated co-culture

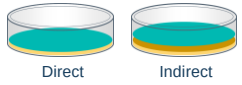
MICROBIAL GROWTH

Culture of each microbial species that are relevant to the specific body site

Plating



Exposure to test product and CFU* measurement



Change in microbial growth is compared to that of the untreated culture

- Body (Dry areas): *C. tuberculostearicum; P. acnes; S. mitis; S. oralis; M. luteus; M. globosa*
- Face (Sebaceous areas): *P. acnes; S. epidermidis; S. hominis; S. capitis; S. mitis; C. simulans; M. globosa*
- Scalp: *M. globosa; M. furfur; P. acnes; S. epidermidis*

*CFU: Colony-forming units

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Skin microbiome-friendly certification
Grading

MyMicrobiome.info

Results are rated with grades from 1 to 3:

- 1: positive effects or no influence of the tested product (Microbiome-friendly)
- 2: only a very weak influence of the tested product (Microbiome-neutral)
- 3: influence of the tested product is significant (Microbiome-influencing)

MICROBIAL BALANCE	
CFU (Product vs. Control) (%)	Grade
95% ≤ CFU	1
70% ≤ CFU < 95%	2
CFU < 70% or if Product reduces *S. epidermidis* by ≥ 90%	3

MICROBIAL DIVERSITY	
CFU (Product vs. Control) (%)	Grade
95% ≤ CFU ≤ 120%	1
70% ≤ CFU < 95% or 120% < CFU ≤ 160%	2
CFU < 70% or CFU > 160%	3

MICROBIAL GROWTH	
CFU (Product vs. Control) (%)	Grade
95% ≤ CFU ≤ 120%	1
70% ≤ CFU < 95% or 120% < CFU ≤ 160%	2
CFU < 70% or CFU > 160%	3

Certification is awarded for scores up to 2.0:

- 1.0 – 2.0 = Microbiome-friendly
- 2.1 – 3.0 = Microbiome-influencing

Key Endpoints	Grade
Microbial Balance	1
Microbial Diversity*	2.7
Microbial Growth – Direct Contact*	1.3
Microbial Growth – Indirect Contact	1.4
Overall Grade	**1.7**

*Double weighted grade

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Dow's skin microbiome-friendly certified products

Covering various categories for formulation versatility

Microbiome® friendly
MyMicrobiome.info

Products	Category	Skin Areas	Application	Score
EcoSense™ GL-60 HA Surfactant	Biosurfactant	Face (sebaceous)	Rinse-off	2.0
EcoSense™ GL-60 HL Surfactant	Biosurfactant	Face (sebaceous)	Rinse-off	1.7
EcoSmooth™ Universal Fluid 1100	Bio-based & Biodegradable Fluid	Face (sebaceous)	Leave-on	1.7
DOWSIL™ FZ-3196 Fluid	Moderate Volatility Silicone Fluid	Face (sebaceous)	Leave-on	2.0
DOWSIL™ ES-5600 Silicone Glycerol Emulsifier	Silicone Emulsifier	Face (sebaceous)	Leave-on	1.9
DOWSIL™ FA 4003 DM Silicone Acrylate	Silicone Film Former	Face (sebaceous) Body (dry)	Leave-on	1.5
XIAMETER™ PMX-200 Silicone Fluid 2 cSt	Volatile Silicone Fluid			
DOWSIL™ EL-9341 Silicone Elastomer Blend	Low Cyclics Silicone Elastomer Blend	Face (sebaceous) Body (dry)	Leave-on	1.8
DOWSIL™ 200 Silicone Fluid 6 cSt	Low Viscosity Silicone Fluid			

External data. Users should confirm results by their own tests.

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Skin Wellness Concepts Collection

Skin Wellness Concepts Collection

Based on advanced science and inspired by the growing demand for Skin Wellness products, the «Skin Wellness Concepts Collection» features **30 Dow technologies** that have been carefully chosen for their cutting-edge ability to revolutionize versatile skin and scalp formulations.

7 formulations aligned to Skin, Scalp and Hair Care for a complete daily care routine

Extensive characterization and claims validation for each formulation

30 Dow technologies & 9 Skin Microbiome-Friendly ingredients (including silicones)

Featuring 30 Dow technologies

Clean My Day	Balance My Scalp	Soothe My Hair	Hydrate My Body	Protect My Face	Revitalize My Face	See See My Skin
Mild facial cleanser for oily skin	Serum for Oily Scalp	Mild Shampoo for Sensitive Scalp	Moisturizing Body Lotion	O/W Day Face Cream	W/O Night Face Cream	O/W CC Cream
VERSENE™ NA2 Crystals Chelating Agent	VERSENE™ NA2 Crystals Chelating Agent	UCARE™ Extreme Polymer	ACULYN™ Siltouch Rheology Modifier	EcoSense™ APP-5000 Formulation Aid	**DOWSIL™ ES-5600 Silicone Glycerol Emulsifier**	DOWSIL™ ES-5373 Formulation Aid
CELLOSIZE™ HEC PCG-10 Thickener	DOWSIL™ HMW 2220 Non-Ionic Emulsion	ACULYN™ 22 Polymer	DOWSIL™ HMW 2220 Non-Ionic Emulsion	EcoSmooth™ Rice Husk Cosmetic Powder	**DOWSIL™ EL-9341 Silicone Elastomer Blend**	DOWSIL™ EL-8050 ID Silicone Organic Elastomer Blend
FOAMYSENSE™ N60K Polymer	EcoSmooth™ Rice Husk Cosmetic Powder	EcoSense™ 919 Surfactant	DOWSIL™ 580 Wax	MaizeCare™ Clarity Polymer	**DOWSIL™ 200 Silicone Fluid 6 cSt**	**DOWSIL™ FA 4003 Silicone Acrylate Emulsion**
Triethanolamine (TEA), LFG 85	ACULYN™ 28 Rheology Modifier	DOWSIL™ 979 Emulsion		Propylene Glycol USP/EP	**EcoSmooth™ Universal Fluid 1100**	**XIAMETER™ PMX-200 Silicone Fluid 2 cSt**
EcoSense™ GL-60 HA Surfactant	MaizeCare™ Clarity Polymer			SunSpheres™ BIO SPF Booster	**DOWSIL™ FZ-3196 Fluid**	**DOWSIL™ FZ-3196 Fluid**
EcoSense™ GL-60 HL Surfactant					Propylene Glycol USP/EP	Propylene Glycol USP/EP
EcoSense™ 3000 Surfactant					DOWSIL™ 2502 Cosmetic Fluid	
DOWSIL™ 2511 Cosmetic Wax					DOWSIL™ 2503 Cosmetic Wax	

Skin Microbiome-Friendly Ingredients

Skin Wellness Concepts Collection

Exceptional formulations aligned to Skin, Scalp and Hair Care for a complete daily routine featuring 7 of Dow's Skin Microbiome-Friendly Ingredients.

Each formulation will be presented in detail in the following slides.

Formulated with Skin Microbiome-Friendly Ingredients

Skin Wellness Concepts Collection - Formulations

Clean My Day – Mild Facial Cleanser for Oily Skin

Clean the day-off with "Clean My Day" that offers smooth and mild cleansing for oily and sensitive skin. Specially crafted for daily use, this non-irritant cleanser effortlessly creates a fine foam that delicately removes impurities, leaving the skin refreshed and velvety.

Attributes

- Non-irritant to the eyes and to the skin
- Formulated with microbiome friendly ingredients
- Offers good quality foam
- Effectively removes impurities
- Leaves a pleasant after-feel
- Suitable for daily use and for sensitive skin

Featured products

- **EcoSense™ 3000 Surfactant** – A readily biodegradable, 100% vegetable origin, mild surfactant that produces moderate to high stable foam.
- **EcoSense™ GL-60 HA Surfactant*** and **EcoSense™ GL-60 HL Surfactant*** – Microbiome-friendly surfactants that contribute to a mild surfactant package and help preserve skin microbial balance.
- **DOWSIL™ 2511 Cosmetic Wax** – A water soluble, skin temperature melting wax that leaves skin hydrated and smooth.

*Skin Microbiome-Friendly Ingredients

Clean My Day – Mild Facial Cleanser for Oily Skin

Phase	Trade name / Supplier	INCI name	Wt%
A	Water	Water	71.42
	VERSENE™ NA2 Crystals Chelating Agent / Dow	**Disodium EDTA**	**0.10**
	CELLOSIZE™ HEC PCG-10 Thickener / Dow	**Hydroxyethyl Cellulose**	**1.00**
	FOAMYSENSE™ N60K Polymer / Dow	**PEG-45M**	**0.08**
	Triethanolamine (TEA), LFG 85 / Dow	**Triethanolamine**	**0.40**
	GLYCERINE 4810 / Oleon	Glycerin	2.00
	Dermosoft 1388 eco / Evonik	Glycerin (and) Water (and) Sodium Levulinate (and) Sodium Anisate	2.50
B	AMONYL 380 BA / Seppic	Cocamidopropyl Betaine	6.00
	EcoSense™ GL-60 HA Surfactant / Dow	**Glycolipids**	**4.00**
	EcoSense™ GL-60 HL Surfactant / Dow	**Glycolipids**	**1.00**
	EcoSense™ 3000 Surfactant / Dow	**Decyl Glucoside**	**6.00**
C	**DOWSIL™ 2511 Cosmetic Wax / Dow**	**Bis-PEG-18 Methyl Ether Dimethyl Silane**	**2.00**
D	ALPAFLOR ALP-SEBUM CB / DSM-Firmenich	Glycerin (and) Water (and) Epilobium Fleischeri Flower/Leaf/Stem Extract (and) Citric Acid	0.50
E	Citric Acid (25% sol.)	Citric Acid	q.s.
F	Actipone Ginger / Symrise	Water (and) Butylene Glycol (and) Zingiber Officinale (Ginger) Root Extract (and) PEG-40 Hydrogenated Castor Oil (and) Trideceth-9	3.00

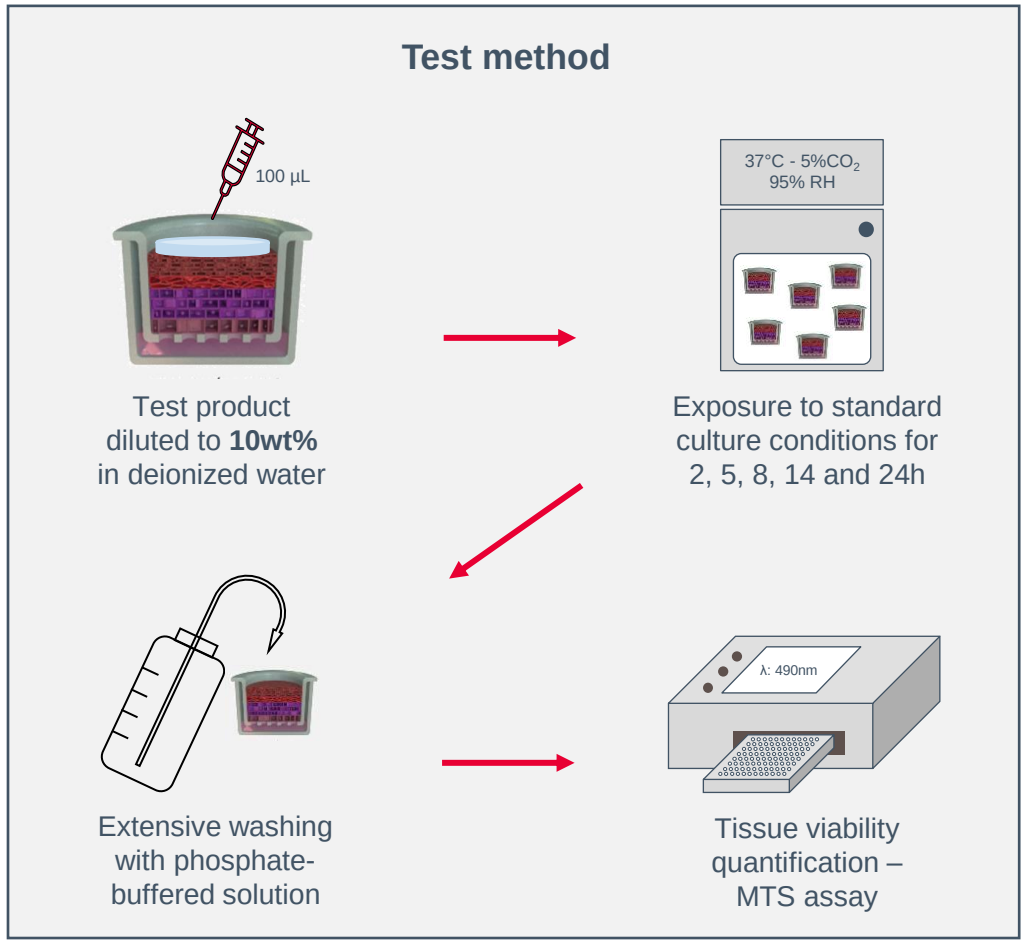
pH 6.2; Viscosity: 6 800 cPs (Brookfield DV2; Spindle 4; Speed 20).

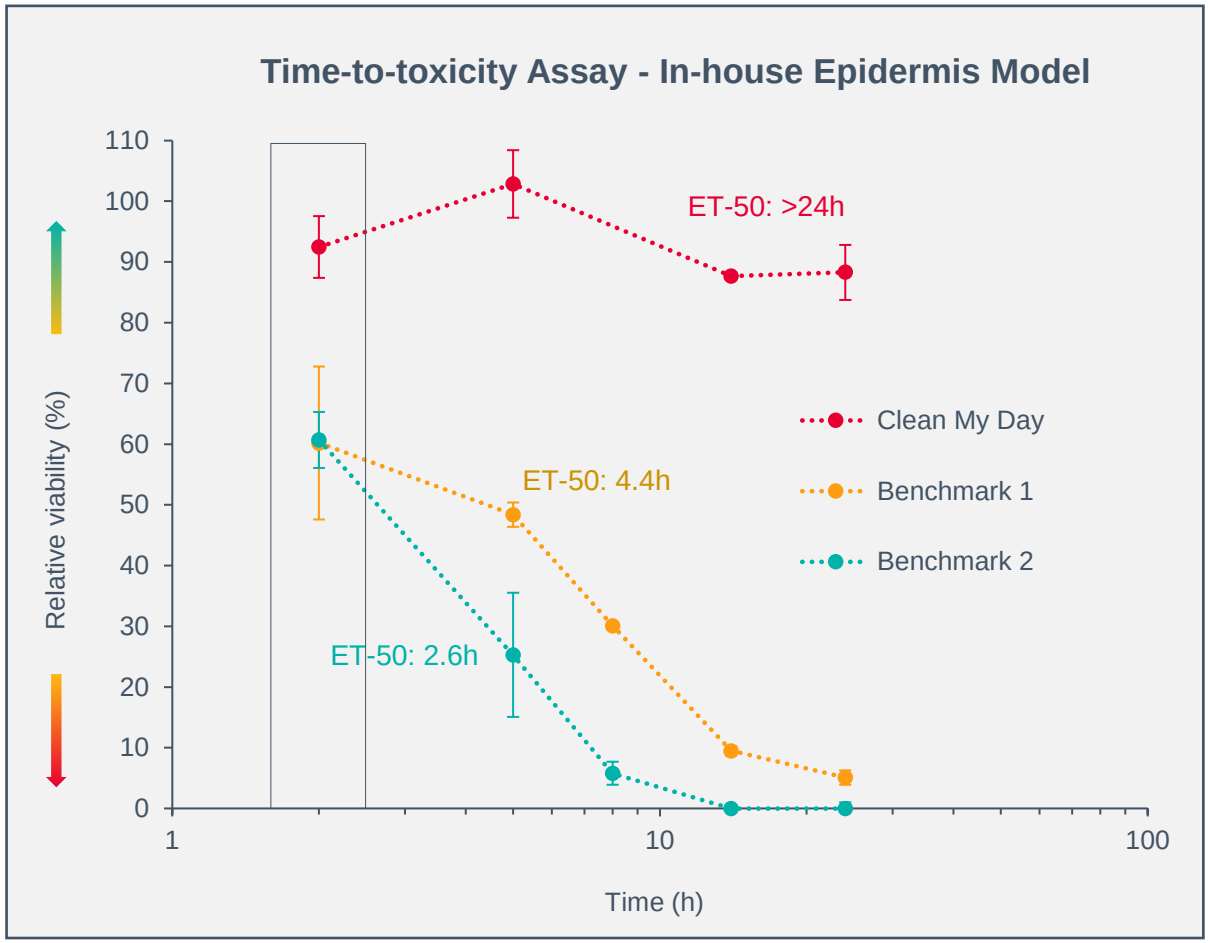
Procedure:

1. Mix phase A ingredients in order listed, mixing well between each addition until homogeneous.
2. Add phase B ingredients one by one under moderate mixing.
3. Melt phase C, add it to phase AB, and mix.
4. Add phase D and mix.
5. Adjust pH to 6.2 - 6.5 with phase E ingredient, keeping a clear solution.
6. Add phase F ingredient. Mix until homogeneous.

Skin Microbiome-Friendly Ingredients

Clean My Day – Mild to the skin





Surfactant package
Clean My Day: DECYL GLUCOSIDE • GLYCOLIPIDS • COCAMIDOPROPYL BETAINE
Benchmark 1: SODIUM LAURETH SULFATE • COCO-BETAINE
Benchmark 2: COCO-BETAINE • COCO GLUCOSIDE

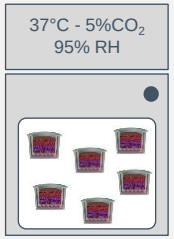
ET-50: time required to decrease tissue viability by 50%.

Internal data. Users should confirm results by their own tests.

Clean My Day – Non-irritating to the eyes

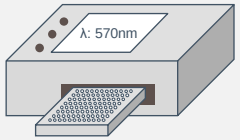
Test method

Test product diluted to **20wt%** in deionized water

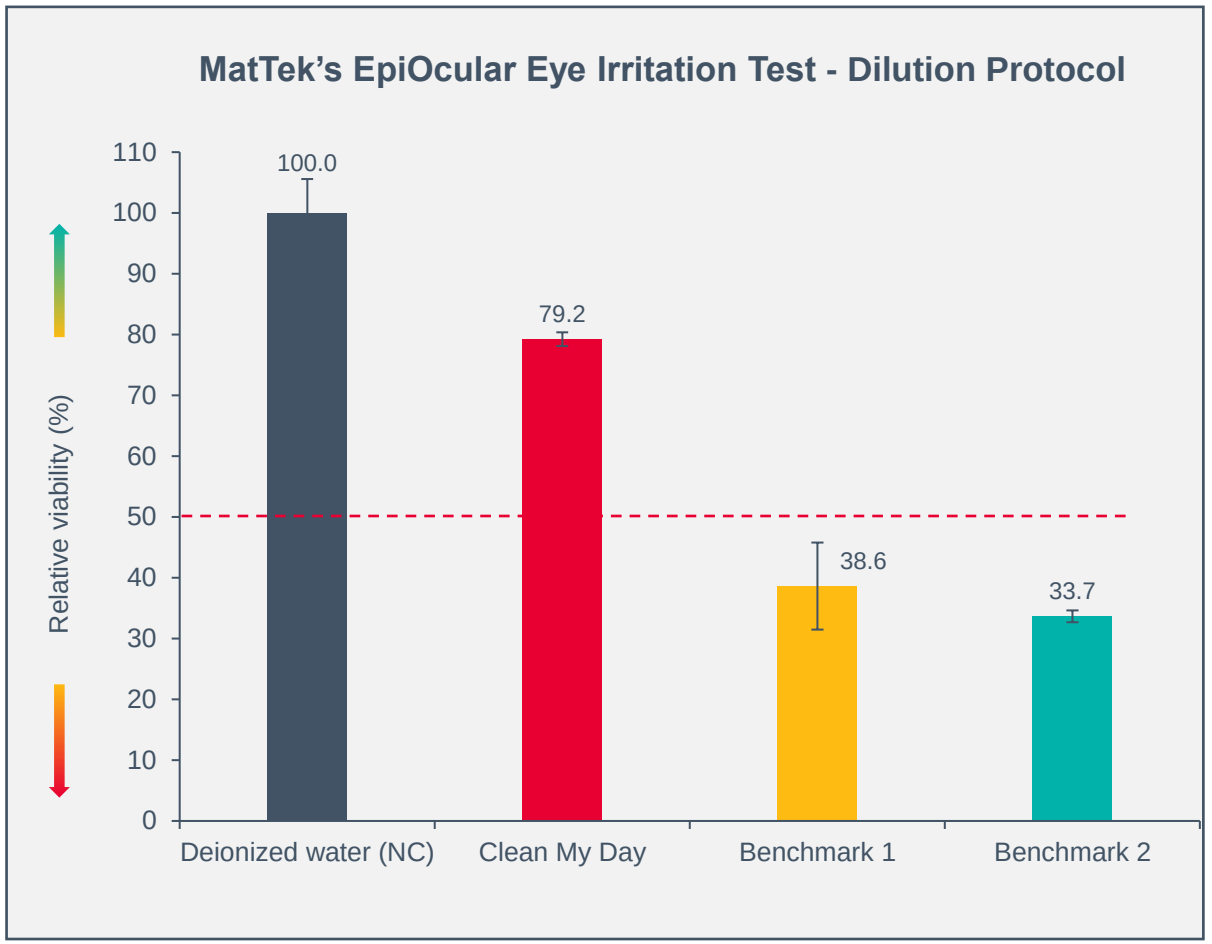


Exposure to standard culture conditions for **26.5 minutes**

Extensive washing with phosphate-buffered solution followed by a 10-minute immersion in culture medium



Tissue viability quantification – MTT assay
> 50% = Non-irritant
≤ 50% = Irritant



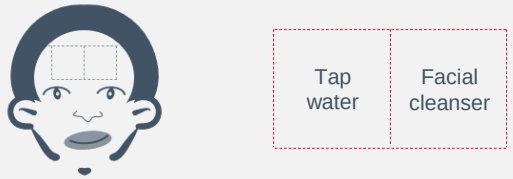
Surfactant package
Clean My Day: DECYL GLUCOSIDE • GLYCOLIPIDS • COCAMIDOPROPYL BETAINE
Benchmark 1: SODIUM LAURETH SULFATE • COCO-BETAINE
Benchmark 2: COCO-BETAINE • COCO GLUCOSIDE

Internal data. Users should confirm results by their own tests.

Clean My Day – Effectively removes sebum from oily skin

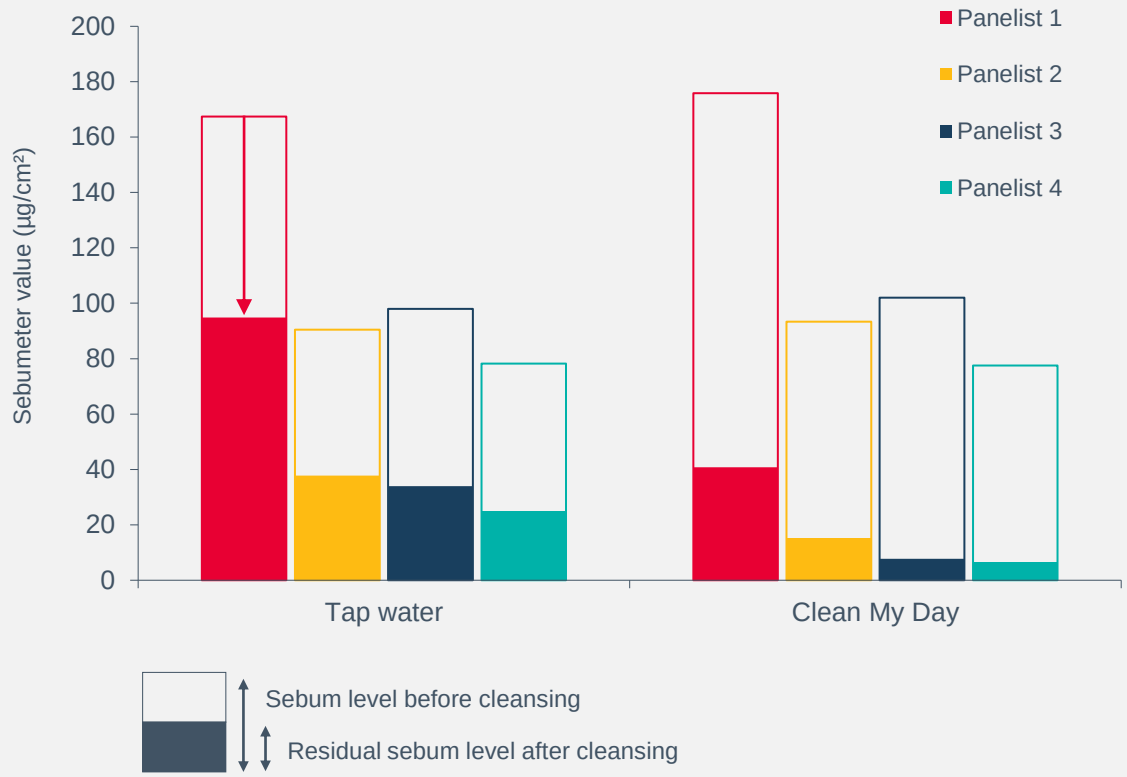
Test method

- Panelists' forehead is subdivided into two areas (4 x 4 cm) to compare the efficacy of a rinse-off facial cleanser vs. tap water.



- Sebum level is measured on panelists' forehead using Courage+Khazaka's Sebumeter SM 815 that allows grease spot photometry measurement on a mat tape.
- When brought into contact with the surface of the skin, the tape becomes more or less transparent as a function of the sebum level.
- The sebum level is determined as function of the light transmission through the tape.
- Measurements are made before and 15 minutes after washing the forehead with the facial cleanser.
- Washing procedure:
  1. Wet forehead area with tap water.
  2. Wash area with 1mL of facial cleanser or tap water for 20 sec.
  3. Rinse area with tap water and gently dry it with paper towel.
- Test is conducted on 4 panelists.

Efficacy of a rinse-off facial cleanser to remove sebum



Internal data. Users should confirm results by their own tests.

Balance My Scalp – Serum for Oily Scalp

Experience the confidence of having a healthy scalp with the gentle leave-on "Balance My Scalp" serum that does not only absorbs the excess sebum but also offers protection against air pollutants, leaving the scalp feeling refreshed and elevated.

Attributes

- Mild to the scalp
- Respects skin's physiological pH
- Absorbs sebum
- Protects skin from air pollutants

Featured products

- **EcoSmooth™ Rice Husk Cosmetic Powder** – A silica obtained from upcycling rice husk that effectively absorbs sebum from oily scalp.
- **DOWSIL™ HMW 2220 Non-Ionic Emulsion** – A high viscosity silicone polymer emulsion that improves formulation visual aspect and sensory attributes.
- **MaizeCare™ Clarity Polymer** – A bio-based and biodegradable film-forming polymer that contributes to the protection from air pollutants.

Balance My Scalp – Serum for Oily Scalp

Phase	Trade name / Supplier	INCI name	Wt%
A	Water	Water	81.10
	VERSENE™ NA2 Crystals Chelating Agent / Dow	**Disodium EDTA**	**0.05**
	MaizeCare™ Clarity Polymer / Dow	**Hydrolyzed Corn Starch**	**1.00**
	EcoSmooth™ Rice Husk Cosmetic Powder / Dow	**Silica**	**1.50**
	ACULYN™ 28 Rheology Modifier / Dow	**Acrylates/Beheneth-25 Methacrylate Copolymer**	**2.40**
	GLYCERINE 4810 / Oleon	Glycerin	2.00
	usNeo / Lipoid Kosmetik AG	Propanediol (and) Usnea Barbata (Lichen) Extract (and) Tromethamine (and) Tetrasodium Glutamate Diacetate (and) Water (and) Sodium Hydroxide	1.00
	TRIS AMINO ULTRA PC (30% sol.) / Advancion	Tromethamine	0.45
B	Water	Water	5.00
	Niacinamide PC / DSM-Firmenich	Niacinamide	2.00
C	**DOWSIL™ HMW 2220 Non-Ionic Emulsion / Dow**	**Divinyldimethicone/Dimethicone Copolymer (and) C12-13 Alketh-23 (and) C12-13 Alketh-3**	**3.00**
	NEOLONE PH 100 Preservative / LANXESS	Phenoxyethanol	0.50

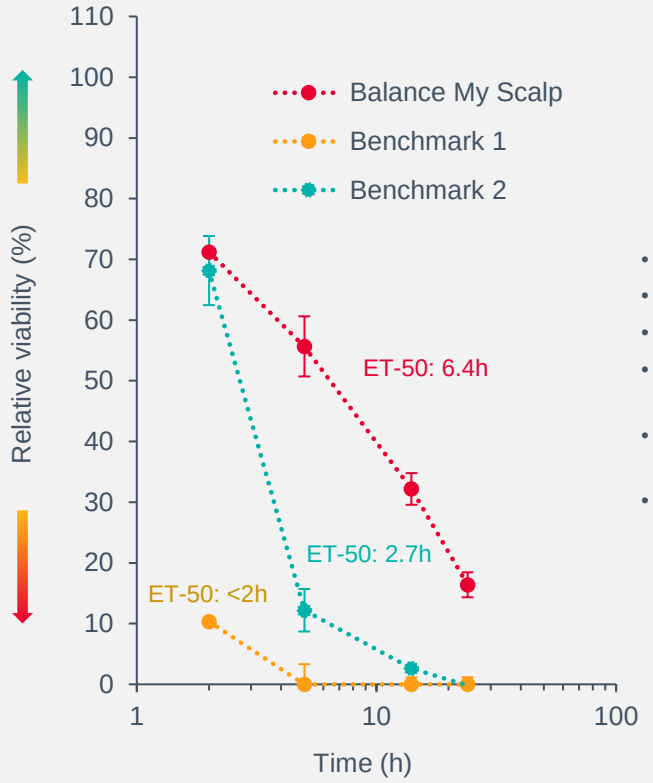
pH 5.7; Viscosity: 840 cPs (Brookfield DV2; Spindle 2; Speed 30).

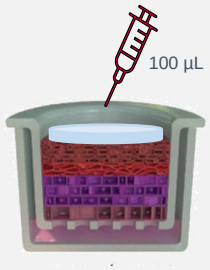
Procedure:

1. Mix phase A ingredients in order listed until homogeneous.
2. Mix phase B ingredients together and add to phase A.
3. Add phase C ingredients in order listed to phase AB.
4. Check pH and adjust if needed to pH 5.7 - 6.0.

Balance My Scalp – A mild serum with light and non-greasy after-feel

Mild to the skin





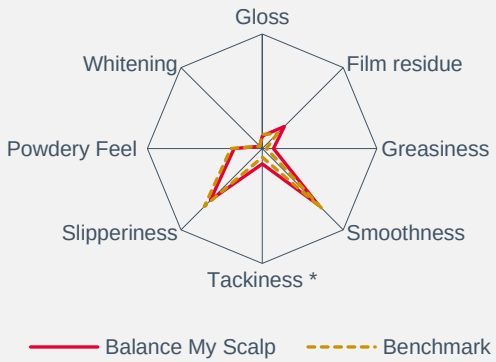
- In-house in-vitro epidermis model
- Product tested undiluted
- Topical application: 100µL
- Tissues exposed to standard culture conditions for 2, 5, 14, 24h
- Extensive washing with phosphate-buffered solution
- Tissue viability quantification via MTS assay

ET-50: time required to decrease tissue viability by 50%.

Light and non-greasy after-feel

- Sensory evaluation on volar forearm
- Topical application: 2mg/cm²
- 18 panelists

vs. Benchmark 1



vs. Benchmark 2

Internal data. Users should confirm results by their own tests.

Balance My Scalp – Effectively absorbs sebum from oily scalp

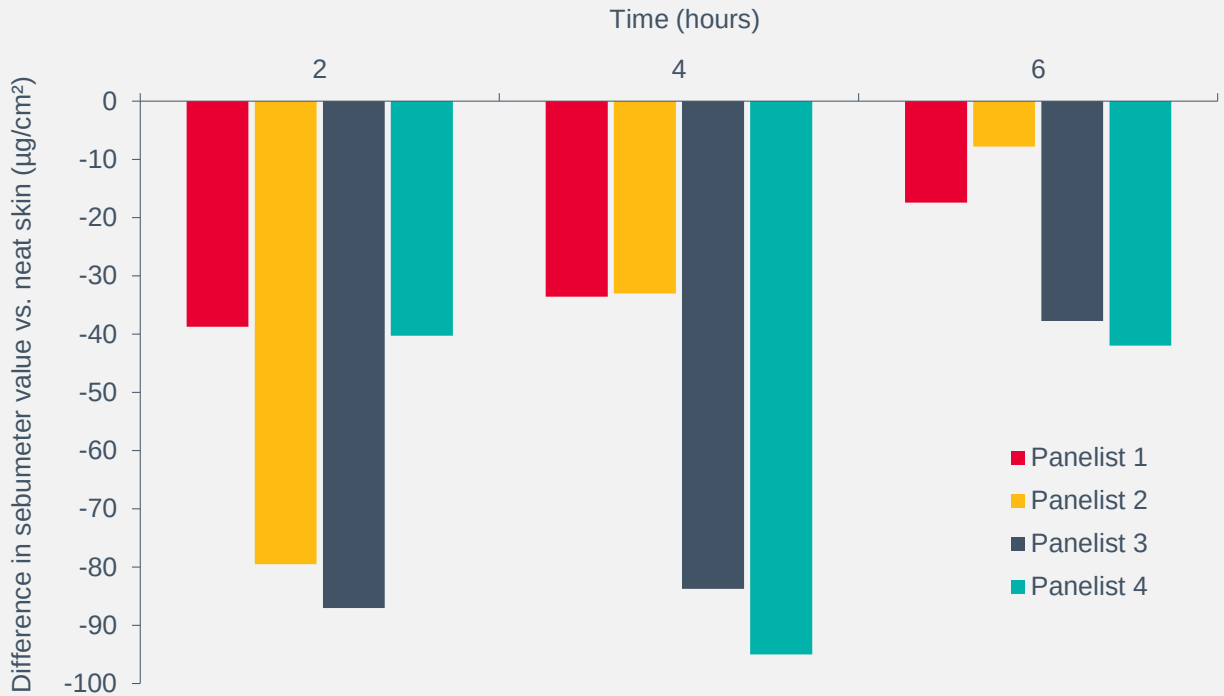
Test method

- Panelists' forehead is subdivided into eight areas to compare at different time intervals the efficacy of a cosmetic product (3mg/cm²) vs. neat skin.

Neat skin		Product	
T4h	T6h	T6h	T4h
T2h	T0	T0	T2h

- Sebum level is measured on panelists' forehead using Courage+Khazaka's Sebumeter SM 815 that allows grease spot photometry measurement on a mat tape.
- When brought into contact with the surface of the skin, the tape becomes more or less transparent as a function of the sebum level.
- The sebum level is determined as function of the light transmission through the tape.
- Three measurements are made for each test area and time interval.
- Test is conducted on 4 panelists.

Efficacy of a scalp serum to absorb sebum

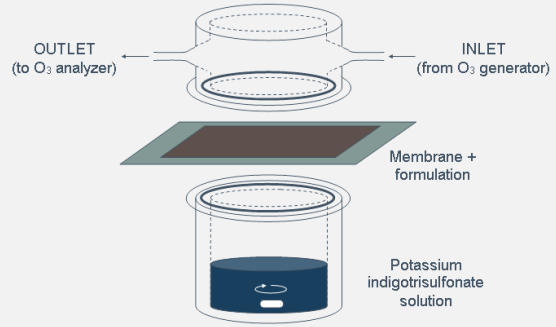


Internal data. Users should confirm results by their own tests.

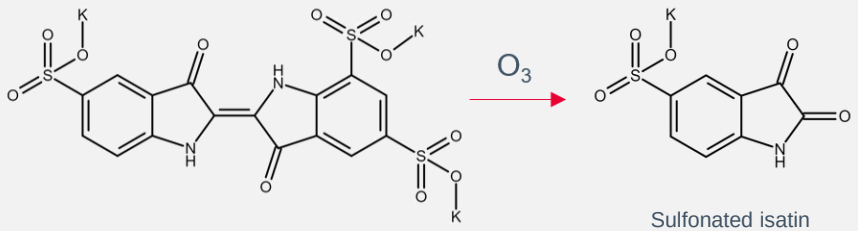
Balance My Scalp – Leaving a uniform film with protection benefits

Test method

- Formulation (2mg/cm²) is applied on a polycarbonate membrane, spread with a bulb-headed glass rod and dried at room temperature for 1h.
- Membrane is mounted on a diffusion cell and exposed to ozone for 2h.

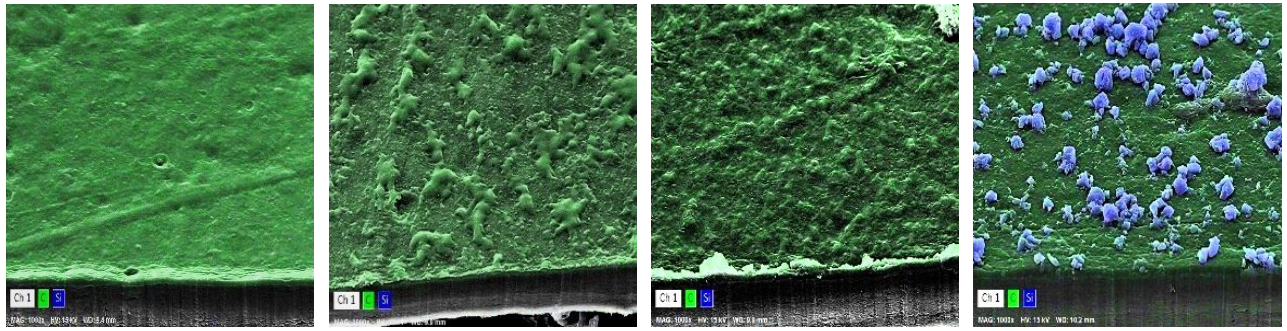


- Protection against ozone is determined by measuring the oxidation of the potassium indigotrisulfonate ozone-scavenging reagent into sulfonated isatin.

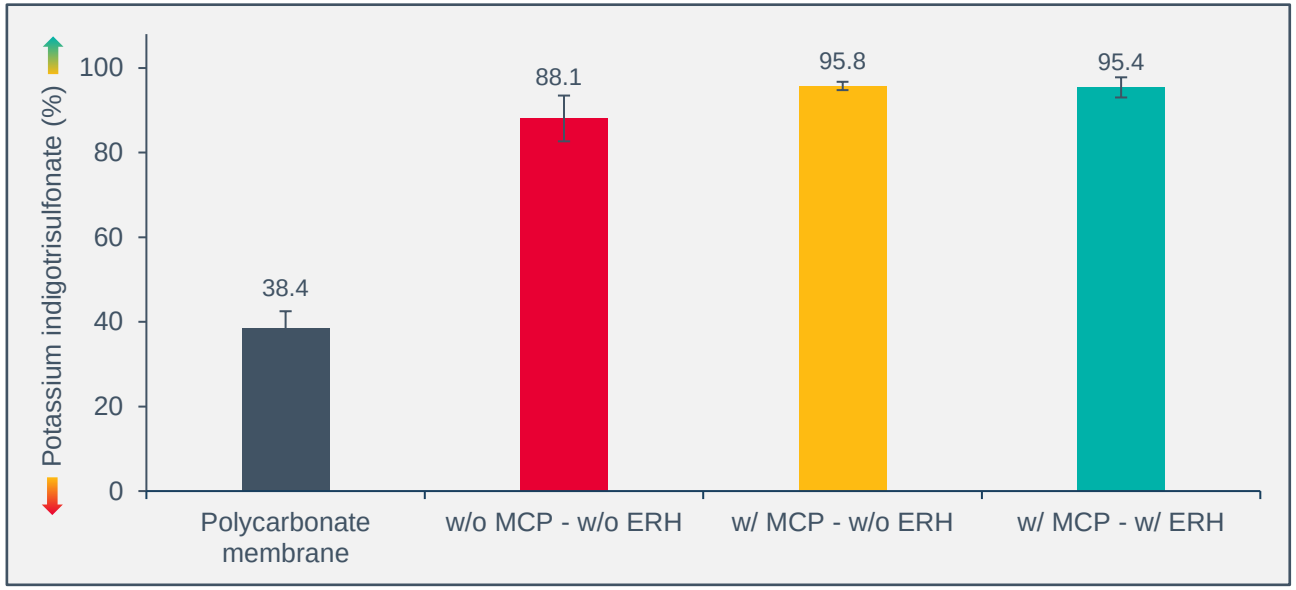


Potassium indigotrisulfonate (dark blue)

Sulfonated isatin (colorless)



Collagen | w/o MCP - w/o ERH | w/ MCP - w/o ERH | w/ MCP - w/ ERH



MCP: MaizeCare™ Clarity Polymer; ERH: EcoSmooth™ Rice Husk Cosmetic Powder.

Internal data. Users should confirm results by their own tests.

Soothe My Hair – Mild Shampoo for Sensitive Scalp

Meet "Soothe My Hair", a gentle and soothing mild shampoo formulated specifically to cater to sensitive scalps. This shampoo invites you to indulge the ultimate comfort with its sulfate-free surfactant formula that delicately cleans the hair and scalp.

Attributes

- Non-irritant to the eyes and mild to the scalp
- Sulfate-free surfactant package
- Excellent foam quality
- Improves hair manageability and combing

Featured products

- **EcoSense™ 919 Surfactant** – A readily biodegradable, 100% vegetable origin, mild surfactant that produces moderate to high stable foam.
- **DOWSIL™ 979 Emulsion** – A low viscosity aminosilicone emulsion that offers superior conditioning benefits.
- **UCARE™ Extreme Polymer** – A bio-derived and biodegradable cellulosic technology for enhanced combability.
- **ACULYN™ 22 Polymer** – A highly efficient rheology modifier for difficult-to-thicken surfactant systems.

Soothe My Hair – Mild Shampoo for Sensitive Scalp

Phase	Trade name / Supplier	INCI name	Wt%
A1	Water	Water	36.00
	Sodium Lauroyl Glutamate	Sodium Lauroyl Glutamate	9.00
A2	**ACULYN™ 22 Polymer / Dow**	**Acrylates/Steareth-20 Methacrylate Copolymer**	**6.00**
B	Water	Water	30.00
	UCARE™ Extreme Polymer / Dow	**Polyquaternium-10**	**0.30**
	Sodium Hydroxide (40% sol.)	Sodium Hydroxide	0.10
C	AMONYL 380 BA / Seppic	Cocamidopropyl Betaine	6.60
	EcoSense™ 919 Surfactant / Dow	**Coco-Glucoside**	**6.00**
	Octopirox / Ashland	Piroctone Olamine	0.30
D	Sodium Hydroxide (40% sol.)	Sodium Hydroxide	2.30
E	**DOWSIL™ 979 Emulsion / Dow**	**Amodimethicone (and) C11-15 Alketh-12 (and) C11-15 Alketh-7**	**2.00**
	D-Panthenol 50 P / BASF	Panthenol (and) Propylene Glycol	0.50
	Euxyl pe 9010 preservative / Ashland	Phenoxyethanol (and) Ethylhexylglycerin	0.90

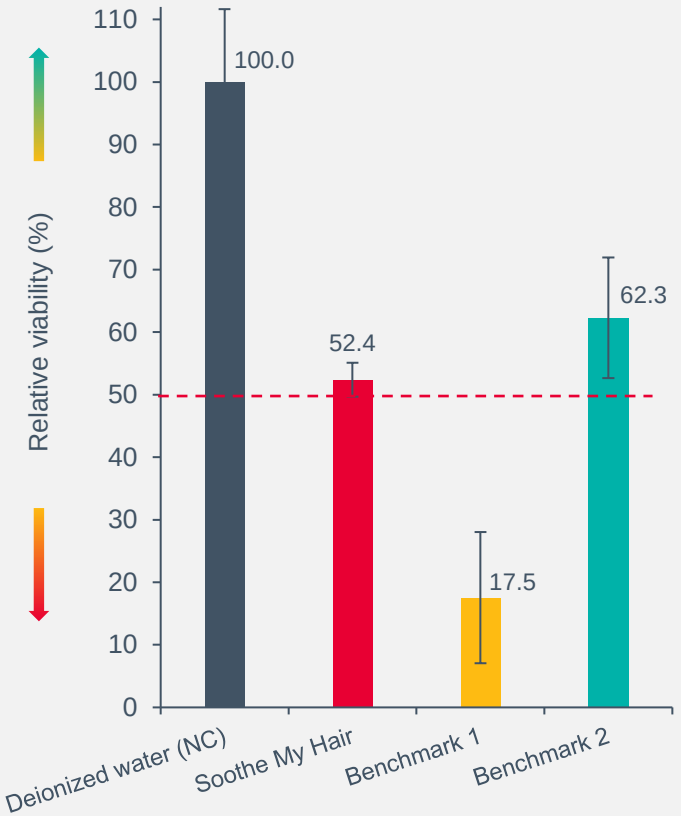
pH 6.8; Viscosity: 20 800 cPs (Brookfield DV2; Spindle 5; Speed 12).

Procedure:

1. Mix phase A1 ingredients together and heat to 80°C. Mix until a clear solution is obtained (ca. 20 minutes), then cool down to 45°C.
2. Add phase A2 to phase A1. Mix until homogeneous under moderate speed.
3. Mix phase B ingredients in order listed until homogeneous.
4. Add phase B to phase A. Mix well until homogeneous.
5. Mix phase C ingredients together and add to phase AB.
6. Adjust pH to 6.5 - 6.8 with phase D to obtain the desired viscosity.
7. Add phase E ingredients in order listed and mix.

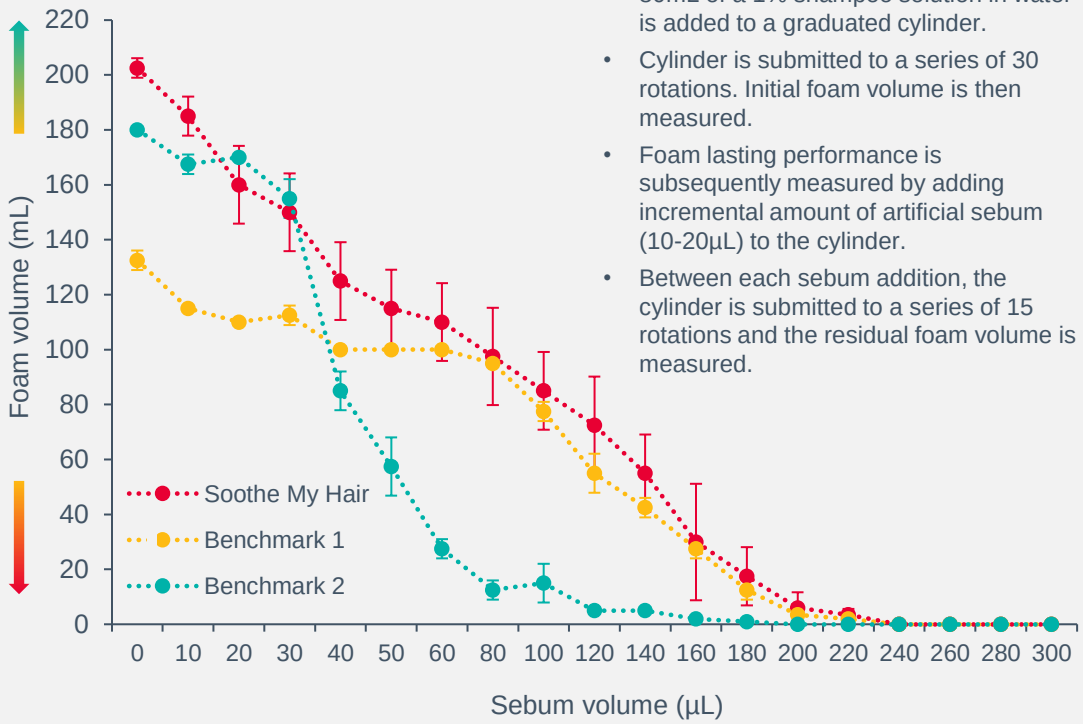
Soothe My Hair – A mild shampoo with high quality & long-lasting foam

Non-irritating to the eyes



- EpiOcular tissues (MatTek Corp.)
- Dilution protocol
- Test product diluted to 20wt% in deionized water
- Topical application: 100µL
- Tissues exposed to standard culture conditions for 26.5 minutes
- Extensive washing with phosphate-buffered solution followed by a 10-minute immersion in culture medium
- Tissue viability quantification via MTT assay: > 50% = Non-irritant; ≤ 50% = Irritant

High quality & long-lasting foam



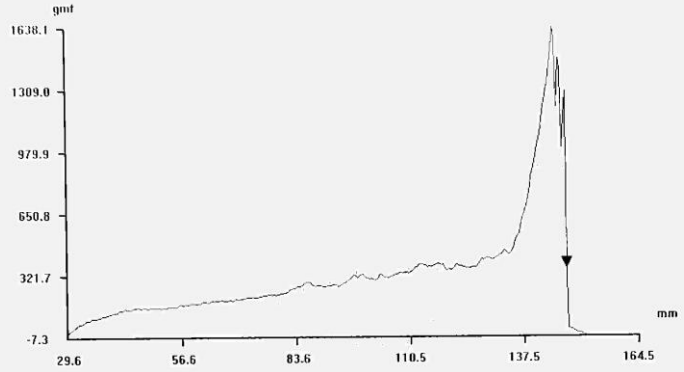
- 80mL of a 1% shampoo solution in water is added to a graduated cylinder.
- Cylinder is submitted to a series of 30 rotations. Initial foam volume is then measured.
- Foam lasting performance is subsequently measured by adding incremental amount of artificial sebum (10-20µL) to the cylinder.
- Between each sebum addition, the cylinder is submitted to a series of 15 rotations and the residual foam volume is measured.

Internal data. Users should confirm results by their own tests.

Soothe My Hair – A shampoo cleanser offering ease of combing

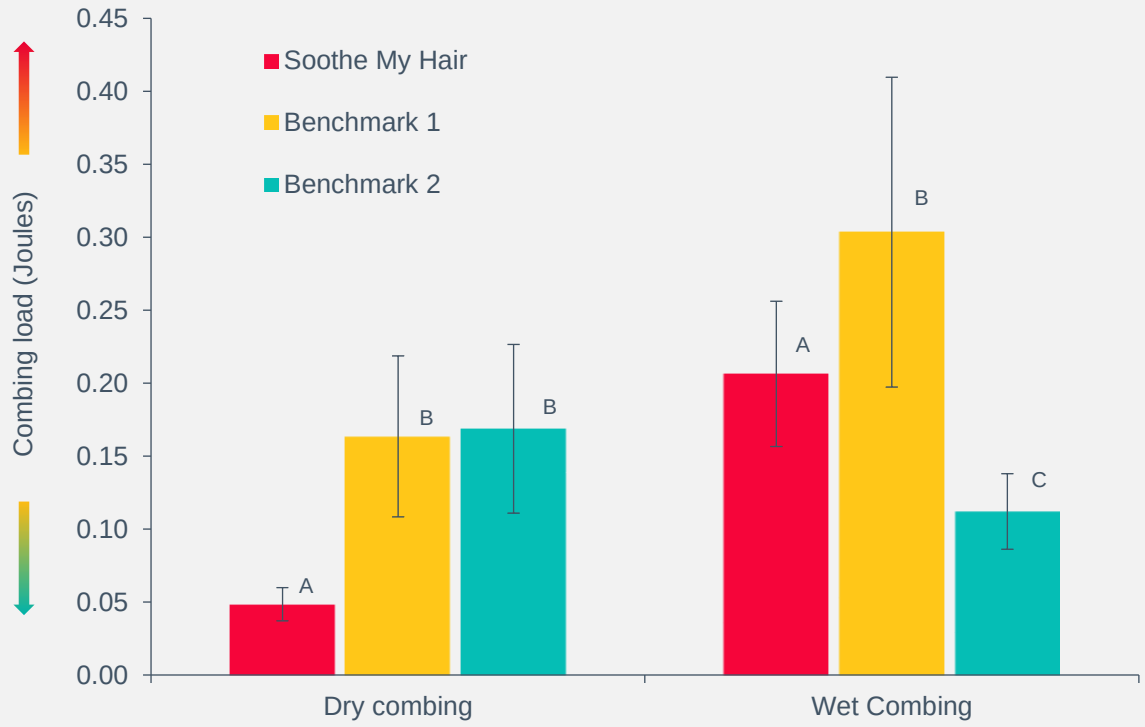
Test method

- The effect of three shampoos (0.4g/g of hair) on hair combability is evaluated 24h after cleansing on dry and wet hair tresses using Dia-STRON MTT175 equipment.
- The equipment records the cumulative energy required to comb through the entire hair tress (i.e., area under the combing curve).



- Slightly bleached, Caucasian, flat hair are used (15cm long; 2g).
- Three tresses per product – Five measurements per tress.

Effect of shampoos on hair combability



Different letters show a statistical difference at 95% confidence.

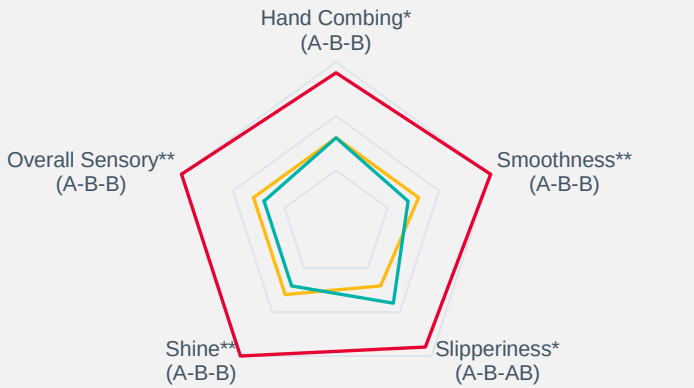
Internal data. Users should confirm results by their own tests.

Soothe My Hair – Distinct sensorial benefits for both dry and wet

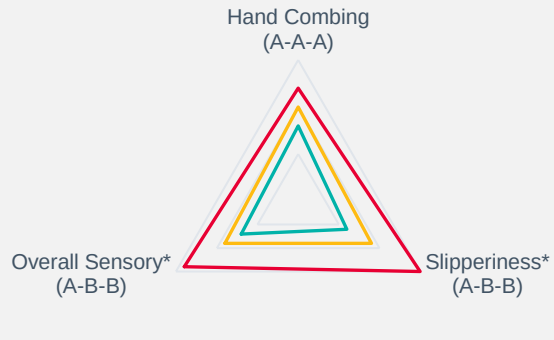
Test method

- The effect of three shampoos (0.4g/g of hair) on hair sensorial attributes is evaluated on dry and wet hair tresses.
- Slightly bleached, Caucasian, flat hair are used (15cm long; 2g).
- For each attribute, panelists are asked to rank the test products by order of performance.
- Panelists can be asked to submit their overall preference.
- Test is conducted on 6 trained panelists.

Dry Sensory



Wet Sensory



Randomized block analysis of rank data: different letters show a statistical difference at 90% (*) or 95% (**) confidence.

Internal data. Users should confirm results by their own tests.

Hydrate My Body – Moisturizing Body Lotion

A truly gentle yet potent moisturizing body lotion that respects and nurtures the skin while offering deep and lasting hydration. "Hydrate My Body" invites the skin to immerse the undeniable touch of bliss and comfort.

Attributes

- Mild to the skin
- Respects skin's physiological pH
- Offers skin moisturization
- Leaves a pleasant after-feel
- Suitable for daily use and for sensitive skin

Featured products

- **ACULYN™ Siltouch Rheology Modifier** – A rheology modifier that quickly builds water-phase viscosity even at low pH.
- **DOWSIL™ 580 Wax** – A soft wax that enhances skin feel and offers long-lasting hydration.
- **DOWSIL™ HMW 2220 Non-Ionic Emulsion** – A high viscosity silicone polymer emulsion that improves formulation visual aspect and sensory attributes.

Hydrate My Body – Moisturizing Body Lotion

Phase	Trade name / Supplier	INCI name	Wt%
A	Almond Oil Refined / Henry Lamotte Oils	Almond Oil	1.00
	Crodamol GTCC / Croda	Caprylic/Capric Triglyceride	2.00
	DUB ININ / Stearinerie Dubois	Isononyl Isononanoate	2.00
	Crodamol IPM / Croda	Isopropyl Myristate	2.00
	VEGELIGHT SILK / Biosynthis	C9-12 Alkane	3.00
	DL-α-Tocopherol / DSM-Firmenich	Tocopherol	0.20
	DOWSIL™ 580 Wax / Dow	**Stearoxytrimethylsilane (and) Stearyl Alcohol**	**5.00**
B	Water	Water	74.10
	GLYCERINE 4810 / Oleon	Glycerin	5.00
	ACULYN™ Siltouch Rheology Modifier / Dow	**Sodium Acrylate/Sodium Acryloyldimethyl Taurate Copolymer (and) Dimethicone (and) Trideceth-6 (and) PEG/PPG-18/18 Dimethicone**	**2.00**
C	**DOWSIL™ HMW 2220 Non-Ionic Emulsion / Dow**	**Divinyldimethicone/Dimethicone Copolymer (and) C12-13 Alketh-23 (and) C12-13 Alketh-3**	**3.00**
	Euxyl pe 9010 preservative / Ashland	Phenoxyethanol (and) Ethylhexylglycerin	0.70

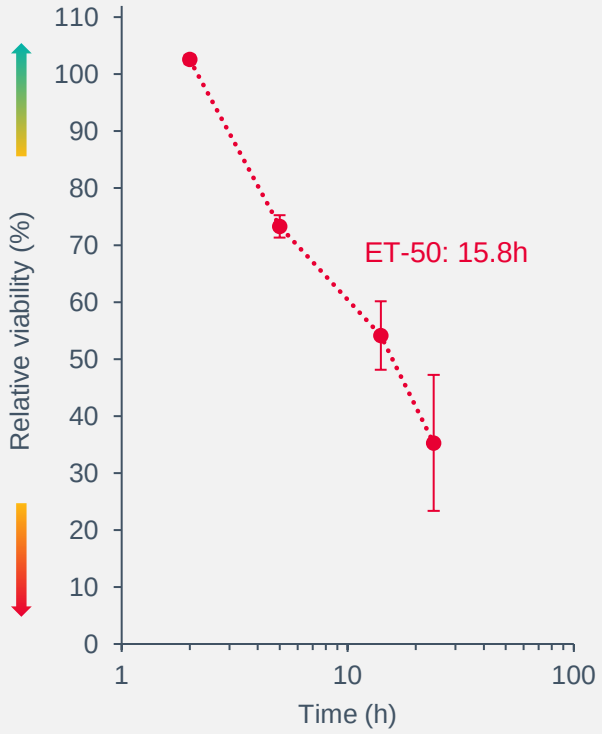
pH 5.6; Viscosity: 23 000 cPs (Brookfield DV2; Spindle 5; Speed 12).

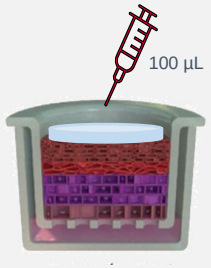
Procedure:

1. Add phase A ingredients in a beaker and start heating to 50°C mixing until homogeneous.
2. Mix phase B ingredients together until a homogeneous gel is obtained. Heat to 50°C.
3. Add phase A to phase B under high shear.
4. When temperature is below 40°C, add phase C ingredients in order listed to phase AB.
5. Mix for an additional 5 minutes under high shear.

Hydrate My Body – A mild body lotion with light and pleasant after-feel

Mild to the skin





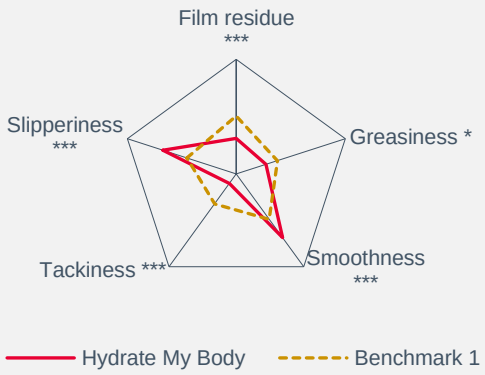
- In-house in-vitro epidermis model
- Product tested undiluted
- Topical application: 100µL
- Tissues exposed to standard culture conditions for 2, 5, 14, 24h
- Extensive washing with phosphate-buffered solution
- Tissue viability quantification via MTS assay

ET-50: time required to decrease tissue viability by 50%.

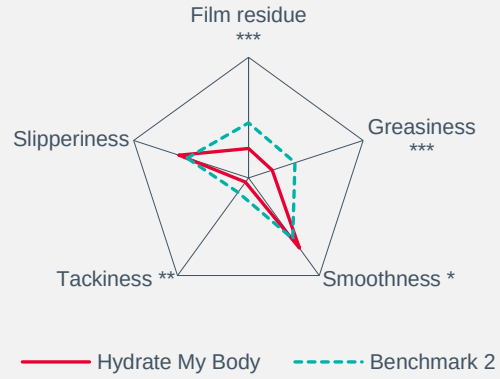
Light and pleasant after-feel

- Sensory evaluation on volar forearm
- Topical application: 2mg/cm²
- 18 panelists

vs. Benchmark 1



vs. Benchmark 2



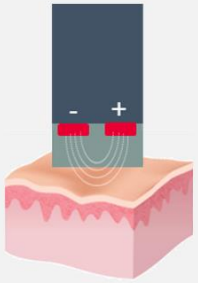
Internal data. Users should confirm results by their own tests.

Hydrate My Body – Long-lasting hydration benefits

Test method

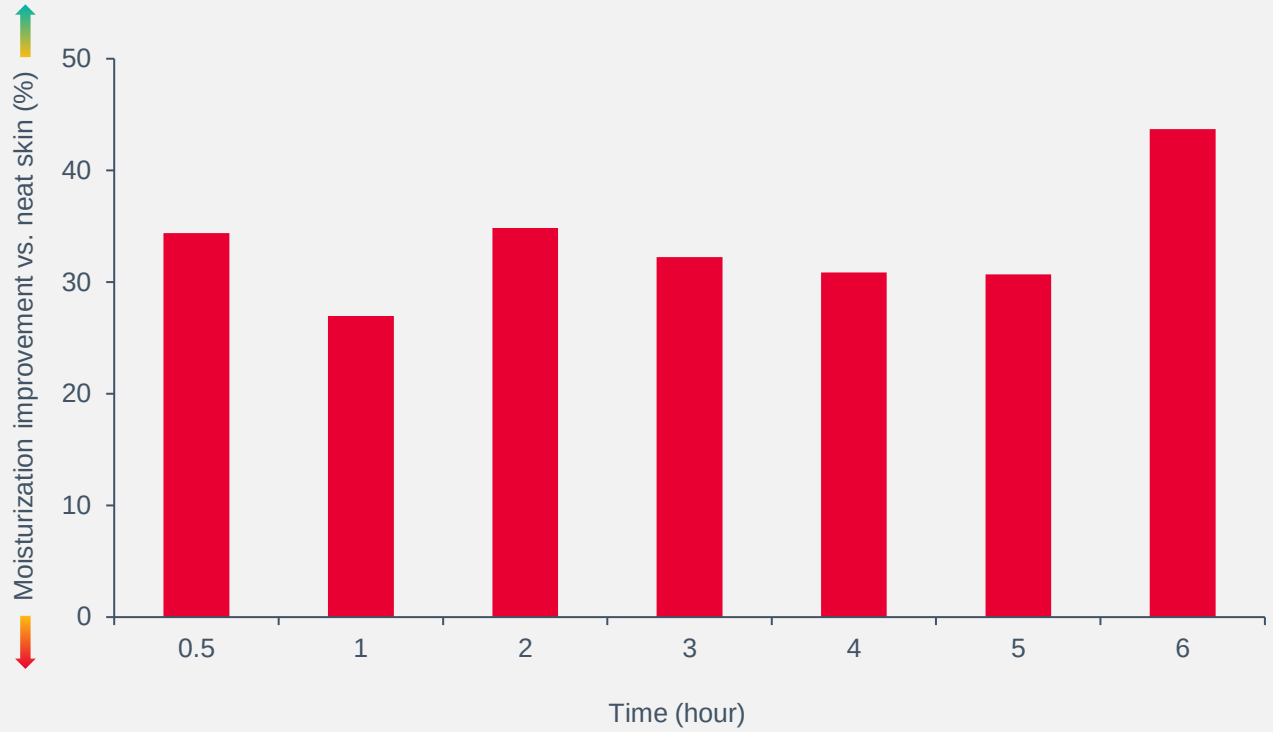
- Panelists' volar forearm is subdivided into two areas to compare at different time intervals the efficacy of a cosmetic product (2mg/cm²) vs. neat skin.

- Hydration level is measured on panelists' forearm using Courage+Khazaka's Corneometer CM 825.
- When brought into contact with the surface of the skin, the equipment measures the change in the dielectric constant due to skin surface hydration (capacitance measurement).



- Six measurements are made for each test area and time interval.
- Test is conducted on 5 panelists.

Long-lasting skin hydration benefits



Internal data. Users should confirm results by their own tests.

Protect My Face – O/W Day Face Cream

An enchanting daily face cream that elevates the skincare routine to new heights. "Protect My Face" (SPF20) shields the skin from air pollutants and gently moisturizes the skin for a long-lasting hydration.

Attributes

- Mild to the skin
- Respects skin's physiological pH
- Offers long-lasting skin hydration
- Absorbs sebum
- Protects skin from air pollutants
- Suitable for daily use

Featured products

- **EcoSense™ APP-5000 Formulation Aid** – A non-ionic, bio-based, 100% naturally derived, oil-in-water emulsifier that can emulsify high oil phase content.
- **EcoSmooth™ Rice Husk Cosmetic Powder** – A silica obtained from upcycling rice husk that effectively absorbs sebum secreted at the skin surface.
- **MaizeCare™ Clarity Polymer** – A bio-based and biodegradable film-forming polymer that contributes to the protection from air pollutants.
- **SunSpheres™ BIO SPF Booster** – A bio-based SPF booster built on a crystalline cellulose technology. It also acts as viscosity builder allowing typically lower use level of thickening agents.

Protect My Face – O/W Day Face Cream

Phase	Trade name / Supplier	INCI name	Wt%
A1	PARSOL HMS / DSM-Firmenich	Homosalate	7.00
	PARSOL 1789 / DSM-Firmenich	Butyl Methoxydibenzoylmethane	3.00
	PARSOL 340 / DSM-Firmenich	Octocrylene	6.00
	PARSOL EHS / DSM-Firmenich	Ethylhexyl Salicylate	5.00
A2	**EcoSense™ APP-5000 Formulation Aid / Dow**	**Myristyl/Stearyl Xylosides (and) Myristyl Alcohol (and) Stearyl Alcohol**	**2.50**
B	Water	Water	32.00
	SunSpheres™ BIO SPF Booster / Dow	**Microcrystalline Cellulose**	**1.50**
	MaizeCare™ Clarity Polymer / Dow	**Hydrolyzed Corn Starch**	**2.00**
	Keltrol CG-SFT / CP Kelco	Xanthan Gum	0.10
	EcoSmooth™ Rice Husk Cosmetic Powder / Dow	**Silica**	**3.00**
	GLYCERINE 4810 / Oleon	Glycerin	5.00
	Propylene Glycol (PG) USP/EP / Dow	**Propylene Glycol**	**2.00**
C	Water	Water	27.50
	HYA-ACT S / DSM-Firmenich	Sodium Hyaluronate	0.15
	HYA-ACT M / DSM-Firmenich	Sodium Hyaluronate	0.15
	AA2G / NAGASE & CO	Ascorbyl Glucoside	2.00
	Sodium Hydroxide (40% sol.)	Sodium Hydroxide	0.50
D	Geogard ECT / Arxada	Benzyl Alcohol (and) Salicylic Acid (and) Glycerin (and) Sorbic Acid	0.60

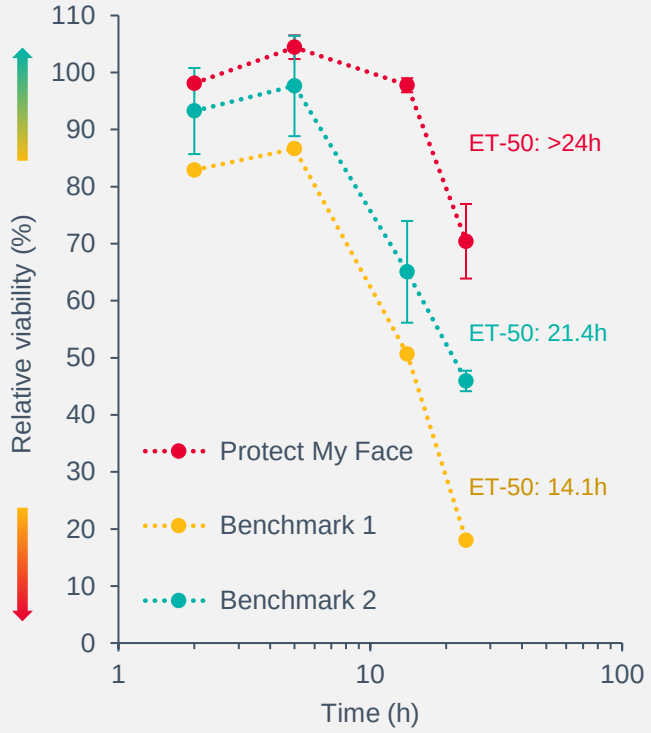
pH 5.8; Viscosity: 4 700 cPs (Brookfield DV2; Spindle 5; Speed 50).

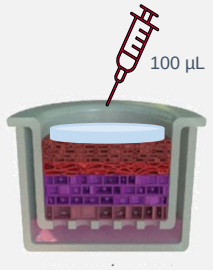
Procedure:

1. Mix phase A1 ingredients together and heat to 80°C. Mix for ca. 10 minutes to avoid UV filters recrystallization.
2. Add phase A2 ingredient to A1 and mix until homogeneous. Keep the mixture at 55-60°C.
3. Prepare phase B: Add SunSpheres™ BIO SPF Booster to water and mix until fully dispersed (ca. 20 minutes). Add then the other ingredients of phase B, in order listed, mixing well between each addition.
4. Prepare phase C: Mix ingredients in order listed ensuring homogeneous solution before next addition. Decrease mixing speed before adding AA2G (stringy).
5. Add phase C to phase B and start heating to 50-55°C.
6. Slowly add phase A to phase BC. Mix until homogeneous under moderate shear.
7. Cool down to room temperature and add phase D ingredient. Mix for an additional 5 minutes under moderate shear.
8. Check pH and adjust if needed to pH 5.5 - 5.8.

Protect My Face – A mild day cream with light & non-greasy after-feel

Mild to the skin

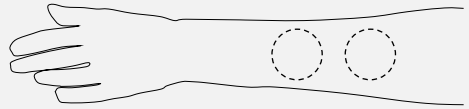




- In-house in-vitro epidermis model
- Product tested undiluted
- Topical application: 100µL
- Tissues exposed to standard culture conditions for 2, 5, 14, 24h
- Extensive washing with phosphate-buffered solution
- Tissue viability quantification via MTS assay

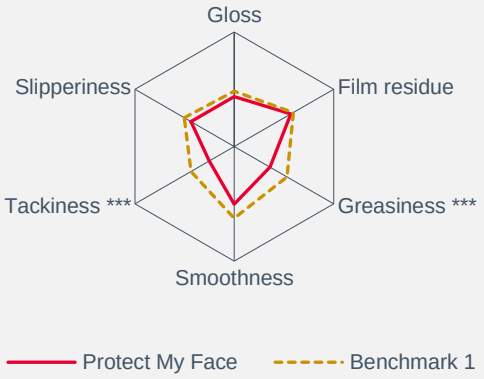
ET-50: time required to decrease tissue viability by 50%.

Light and non-greasy after-feel

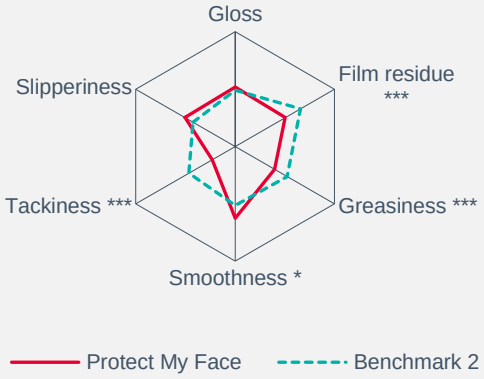


- Sensory evaluation on volar forearm
- Topical application: 2mg/cm²
- 18 panelists

vs. Benchmark 1



vs. Benchmark 2



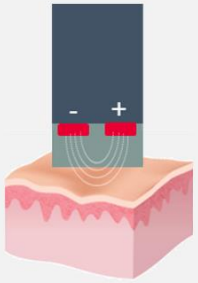
Internal data. Users should confirm results by their own tests.

Protect My Face – Long-lasting hydration benefits

Test method

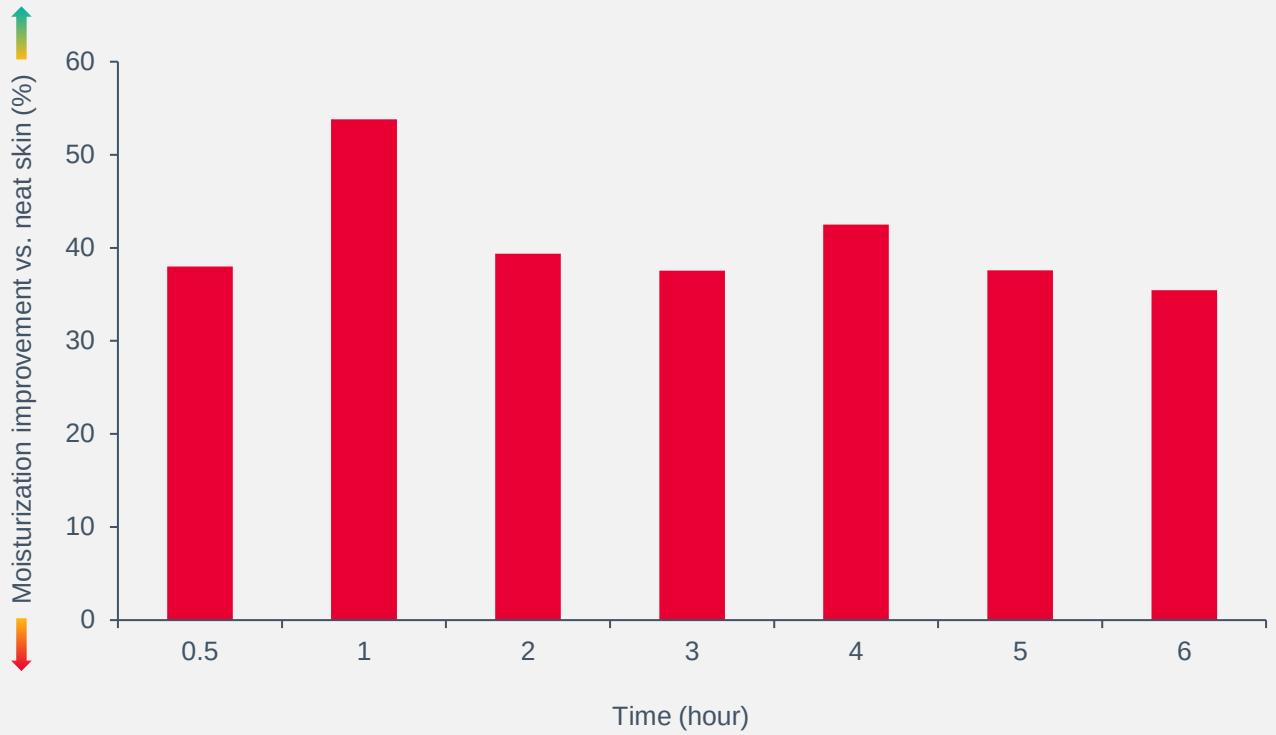
- Panelists' volar forearm is subdivided into two areas to compare at different time intervals the efficacy of a cosmetic product (2mg/cm²) vs. neat skin.

- Hydration level is measured on panelists' forearm using Courage+Khazaka's Corneometer CM 825.
- When brought into contact with the surface of the skin, the equipment measures the change in the dielectric constant due to skin surface hydration (capacitance measurement).



- Six measurements are made for each test area and time interval.
- Test is conducted on 5 panelists.

Long-lasting skin hydration benefits

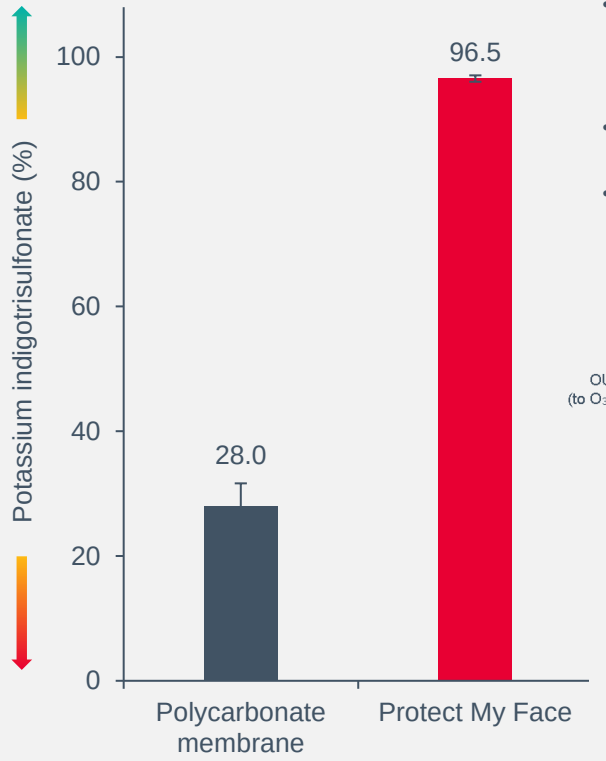


All data showed significant difference vs. neat skin according to paired t-test (α: 0.05).

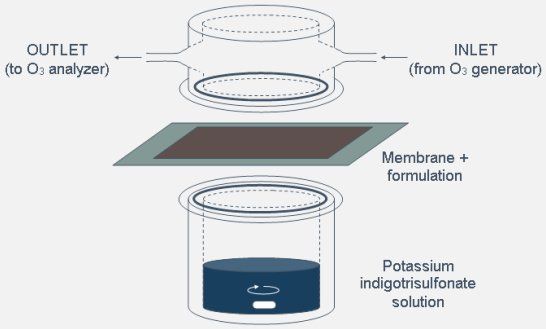
Internal data. Users should confirm results by their own tests.

Protect My Face – Protect the skin from air pollutants

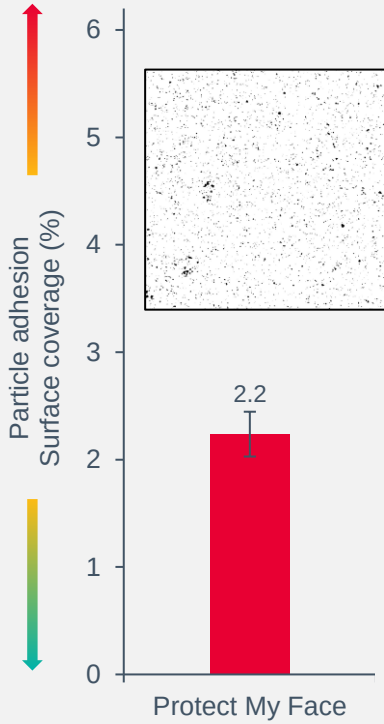
Protection from noxious gases



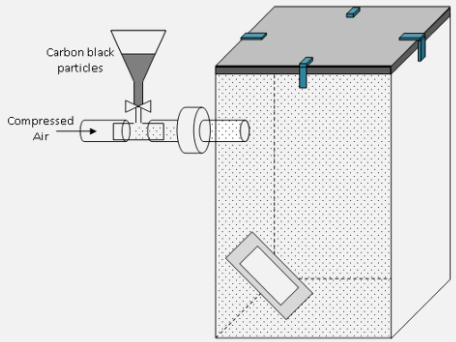
- Formulation (2mg/cm²) is applied on a polycarbonate membrane, spread with a bulb-headed glass rod and dried at room temperature for 1h.
- Membrane is mounted on a diffusion cell and exposed to ozone for 2h.
- Protection against ozone is determined by measuring the oxidation of the potassium indigotrisulfonate ozone-scavenging reagent into sulfonated isatin.



Protection from pollution particles



- Formulation is coated on Vitro-Skin substrate (wet film thickness: 25µm) (3 films per formulation).
- Film is dried overnight at 32°C before being exposed to carbon black particles.
- Particle adhesion is quantified by ImageJ software after binary transformation of images magnified using stereomicroscope.



Internal data. Users should confirm results by their own tests.

Revitalize My Face – W/O Night Face Cream

A must-have soft face cream for the night care routine. "Revitalize My Face" is suitable for dry and sensitive skin that unveils the beauty of skin during sleep time with its true moisturization and pleasant after-feel benefits.

Attributes

- Mild to the skin
- Formulated with microbiome-friendly ingredients
- Offers long-lasting skin moisturization
- Leaves a pleasant after-feel
- Suitable for daily use and for sensitive skin

Featured products

- **DOWSIL™ ES-5600 Silicone Glycerol Emulsifier*** – A microbiome-friendly W/Si and W/Oil emulsifier that produces stable emulsions with enhanced sensory.
- **DOWSIL™ EL-9341 Silicone Elastomer Blend*** – A microbiome-friendly, low-cyclics elastomer gel that offers a rich, smooth after-feel.
- **EcoSmooth™ Universal Fluid 1100*** – A microbiome-friendly, biodegradable and biobased carrier fluid that offers a non-greasy, non-tacky, soft skin feel.
- **DOWSIL™ FZ-3196 Fluid*** – A microbiome-friendly caprylyl branched trisiloxane technology that offers a light, smooth and pleasant after-feel.
- **DOWSIL™ 2502 Cosmetic Fluid** and **DOWSIL™ 2503 Cosmetic Wax** – Alkylmethylsiloxane technologies that offer moisturizing benefits.

*Skin Microbiome-Friendly Ingredients

Revitalize My Face – W/O Night Face Cream

Phase	Trade name / Supplier	INCI name	Wt%
A	**DOWSIL™ EL-9341 Silicone Elastomer Blend / Dow**	**Dimethicone (and) Dimethicone Crosspolymer**	**4.00**
	DOWSIL™ FZ-3196 Fluid / Dow	**Caprylyl Methicone**	**4.00**
	DOWSIL™ ES-5600 Silicone Glycerol Emulsifier / Dow	**Cetyl Diglyceryl Tris(Trimethylsiloxy)silylethyl Dimethicone**	**2.00**
	EcoSmooth™ Universal Fluid 1100 / Dow	**Ethyl PG-Acetal Levulinate**	**4.00**
	DOWSIL™ 2502 Cosmetic Fluid / Dow	**Cetyl Dimethicone**	**3.00**
	DOWSIL™ 2503 Cosmetic Wax / Dow	**Stearyl Dimethicone (and) Octadecene**	**3.00**
	DL-α-Tocopheryl Acetate / DSM-Firmenich	Tocopheryl Acetate	1.00
B	Water	Water	68.40
	GLYCERINE 4810 / Oleon	Glycerin	5.00
	Sodium Chloride	Sodium Chloride	1.00
	Propylene Glycol (PG) USP/EP / Dow	**Propylene Glycol**	**1.00**
	Niacinamide PC / DSM-Firmenich	Niacinamide	1.00
	D-Panthenol 50 P / BASF	Panthenol (and) Propylene Glycol	2.00
C	Geogard ECT / Arxada	Benzyl Alcohol (and) Salicylic Acid (and) Glycerin (and) Sorbic Acid	0.60

Viscosity: 21 000 cPs (Brookfield DV2; Spindle 6; Speed 30).

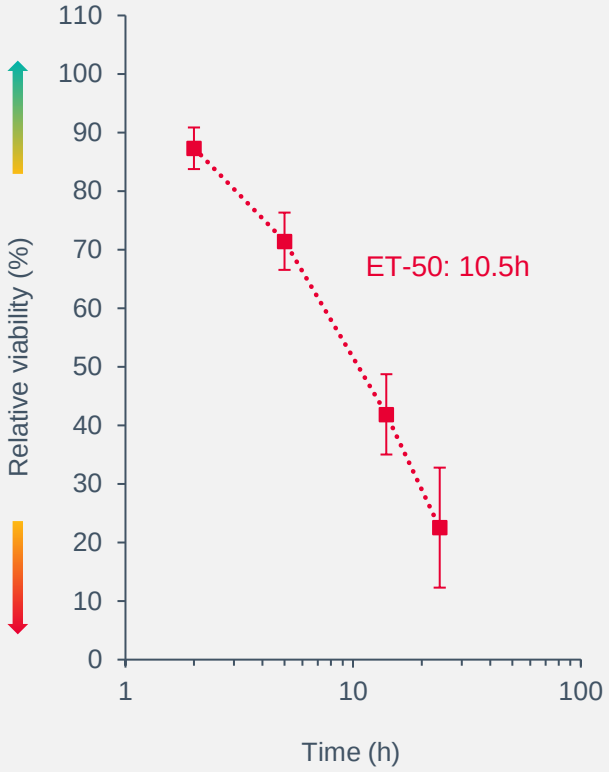
Procedure:

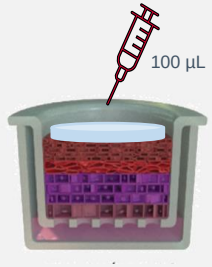
1. Prepare phase A by slowly adding ingredient #2 to ingredient #1.
2. When mixture is homogeneous, add the other ingredients of phase A in order listed. Mix well between each addition. Melt DOWSIL™ 2503 Cosmetic Wax before adding it. Heat phase A to 40°C.
3. Mix phase B ingredients together until homogeneous. Heat to 40°C.
4. Slowly add phase B to phase A increasing mixing speed upon addition.
5. Add phase C ingredient to phase AB.
6. Mix for an additional 5 minutes under high shear.

Skin Microbiome-Friendly Ingredients

Revitalize My Face – A mild night cream with light & smooth after-feel

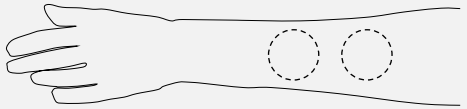
Mild to the skin





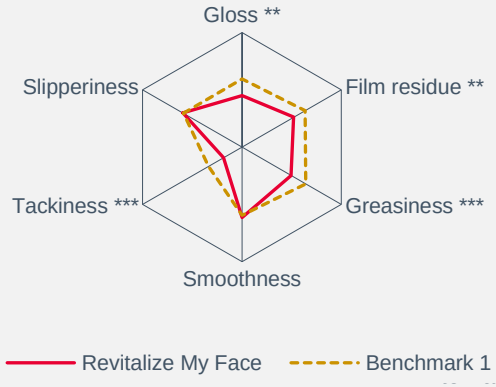
- In-house in-vitro epidermis model
- Product tested undiluted
- Topical application: 100µL
- Tissues exposed to standard culture conditions for 2, 5, 14, 24h
- Extensive washing with phosphate-buffered solution
- Tissue viability quantification via MTS assay

Light and smooth after-feel

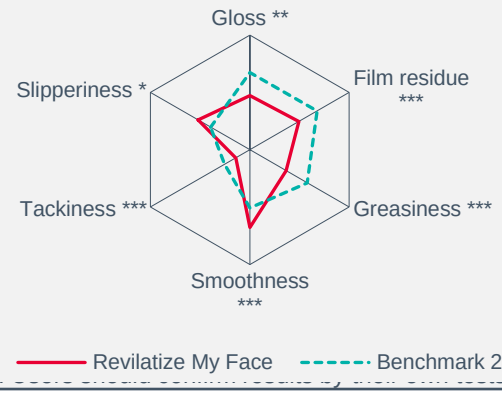


- Sensory evaluation on volar forearm
- Topical application: 2mg/cm²
- 18 panelists

vs. Benchmark 1



vs. Benchmark 2



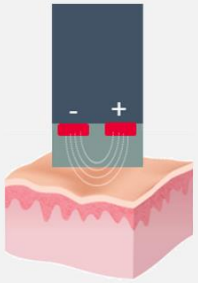
ET-50: time required to decrease tissue viability by 50%.

Revitalize My Face – True moisturizing benefits

Test method

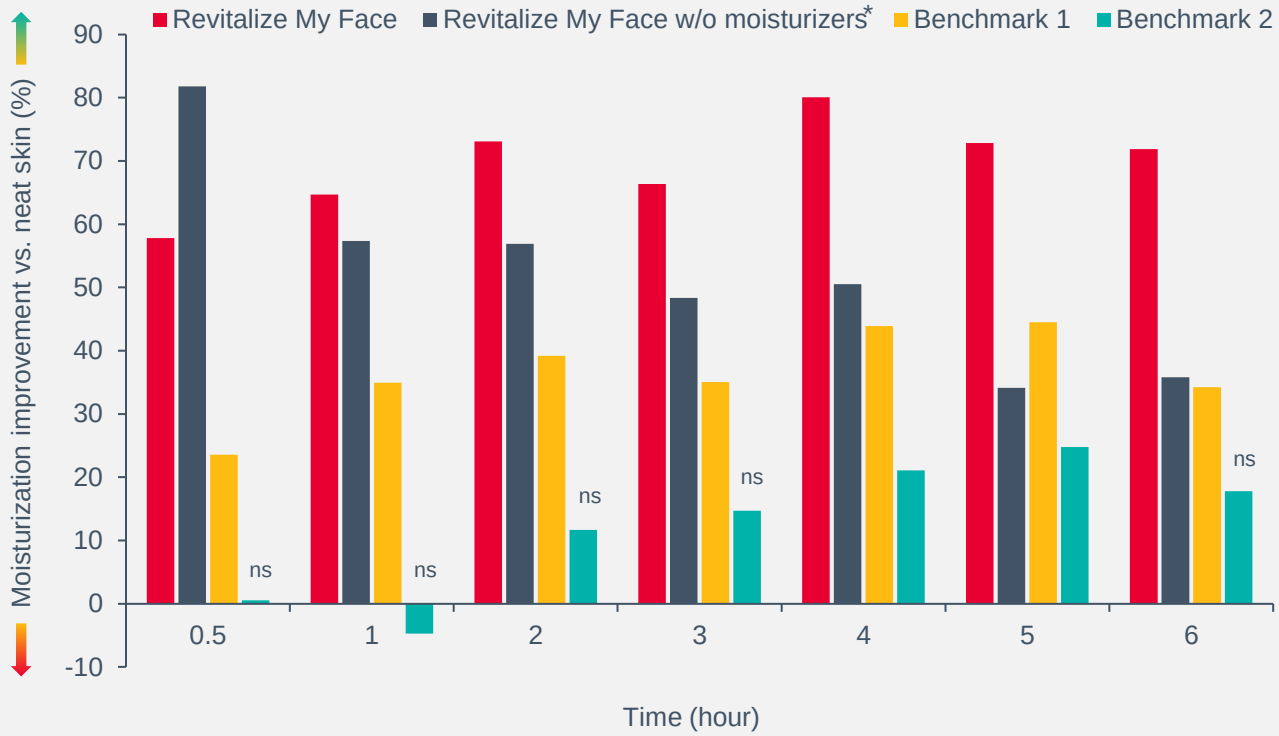
- Panelists' volar forearm is subdivided into two areas to compare at different time intervals the efficacy of a cosmetic product (2mg/cm²) vs. neat skin.

- Hydration level is measured on panelists' forearm using Courage+Khazaka's Corneometer CM 825.
- When brought into contact with the surface of the skin, the equipment measures the change in the dielectric constant due to skin surface hydration (capacitance measurement).



- Six measurements are made for each test area and time interval.
- Test is conducted on 5 panelists.

Long-lasting skin moisturization benefits



ns: no significant difference vs. neat skin according to paired t-test (α: 0.05).

All the other data showed significant difference vs. neat skin according to paired t-test (α: 0.05).

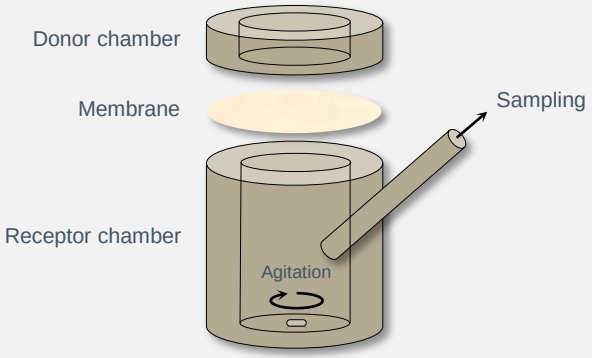
*DOWSIL™ 2502 Cosmetic Fluid and DOWSIL™ 2503 Cosmetic Wax are replaced by DOWSIL™ FZ-3196 Fluid.

Internal data. Users should confirm results by their own tests.

Revitalize My Face – Continuous release of α-tocopheryl acetate

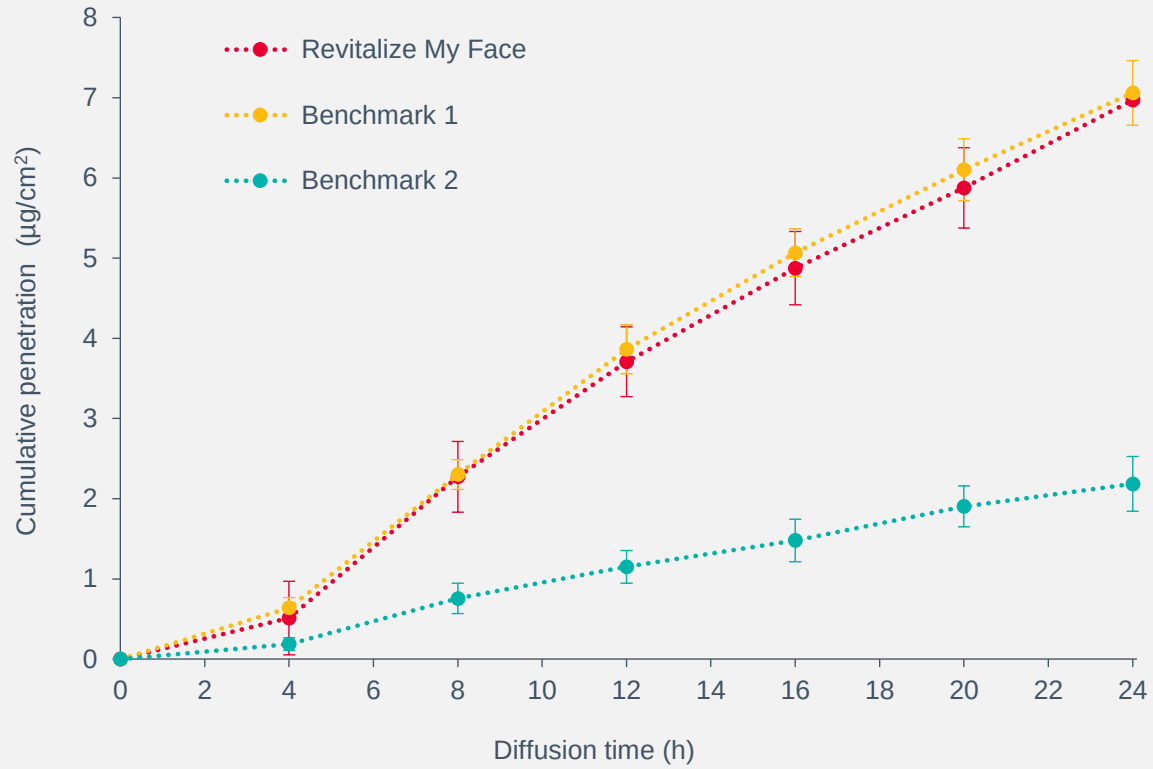
Test method

- Formulation (5mg/cm²) is applied onto a Strat-M membrane, i.e. a synthetic, non-animal alternative for transdermal diffusion testing.
- Membrane is mounted on a vertical static Franz-type diffusion cell using phosphate-buffered saline (PBS buffer) pH 7.4 + 1% Triton X-100 as receptor medium.
- Receptor medium is thermostated at 32°C during the entire experiment.



- Diffusion of α-tocopheryl acetate through the Strat-M membrane is monitored by sampling the receptor medium at regular time intervals followed by UPLC-UV analysis (285nm).

α-Tocopheryl acetate release through Strat-M membrane



Benchmark 2 contains 3x less α-tocopheryl acetate than Revitalize My Face & Benchmark 1.

Internal data. Users should confirm results by their own tests.

See See My Skin – O/W CC Cream

For a flawless canvas that lasts all day, "See See My Skin" is suitable for the daily use and for sensitive skin. It offers a natural coverage with a protection for the skin from UVA/UVB with SPF15.

Attributes

- Mild to the skin
- Formulated with microbiome-friendly ingredients
- Protects skin from air pollutants
- Offers even coverage and long-lasting wear
- Suitable for daily use and for sensitive skin

Featured products

- **DOWSIL™ FZ-3196 Fluid*** – A microbiome-friendly caprylyl branched trisiloxane technology that offers a light, smooth and pleasant after-feel.
- **DOWSIL™ EL-8050 ID Silicone Organic Elastomer Blend** – A clear silicone-organic elastomer gel delivered in a volatile organic carrier fluid that enhances aesthetics of water-based formulations.
- **DOWSIL™ FA 4003 DM Silicone Acrylate*** – A microbiome-friendly silicone acrylate copolymer that offers long-lasting benefits and contributes to the protection from air pollutants.
- **DOWSIL™ ES-5373 Formulation Aid** – An Oil/W silicone emulsifier targeted for low viscosity applications and offering light formulation aesthetics.

*Skin Microbiome-Friendly Ingredients

See See My Skin – O/W CC Cream

Phase	Trade name / Supplier	INCI name	Wt%
A1	PARSOL HMS / DSM-Firmenich	Homosalate	1.65
	PARSOL 1789 / DSM-Firmenich	Butyl Methoxydibenzoylmethane	1.10
	PARSOL Shield / DSM-Firmenich	Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine	1.35
	PARSOL EHT / DSM-Firmenich	Ethylhexyl Triazone	2.20
	PARSOL EHS / DSM-Firmenich	Ethylhexyl Salicylate	2.75
	Exceparl LM-LC / Kao Chemicals Europe	Lauryl Lactate	2.75
	Crodamol AB / Croda	C12-15 Alkyl Benzoate	2.20
A2	**DOWSIL™ EL-8050 ID Silicone Organic Elastomer Blend / Dow**	**Isododecane (and) Dimethicone/Bis-Isobutyl PPG-20 Crosspolymer**	**6.00**
	DOWSIL™ FZ-3196 Fluid / Dow	**Caprylyl Methicone**	**2.00**
A3	**DOWSIL™ ES-5373 Formulation Aid / Dow**	**PEG-12 Dimethicone**	**3.00**
	DOWSIL™ FA 4003 DM Silicone Acrylate / Dow	**Dimethicone (and) Acrylates/ Polytrimethylsiloxymethacrylate Copolymer**	**5.00**
	DL-α-Tocopheryl Acetate / DSM-Firmenich	Tocopheryl Acetate	1.00
B1	Unipure White LC 987 PHY / Sensient Beauty	CI 77891 (and) Phytic Acid (and) Sodium Hydroxide	9.94
	Unipure Yellow LC 188 PHY / Sensient Beauty	CI 77492 (and) Phytic Acid (and) Sodium Hydroxide	1.32
	Unipure Red LC 388 PHY / Sensient Beauty	CI 77491 (and) Phytic Acid (and) Sodium Hydroxide	0.58
	Unipure Black LC 998 PHY / Sensient Beauty	CI 77499 (and) Phytic Acid (and) Sodium Hydroxide	0.16
B2	Water	Water	44.32
	Keltrol CG-SFT / CP Kelco	Xanthan Gum	0.80
	GLYCERINE 4810 / Oleon	Glycerin	3.00
C	Neosalyl / Givaudan	Salicylic Acid	1.00
	Propylene Glycol (PG) USP/EP / Dow	**Propylene Glycol**	**2.50**
	1,3 BG / OQ Chemicals	Butylene Glycol	2.50
	Tween 20 / Croda	Polysorbate 20	0.50
	Sodium Hydroxide (20% sol.)	Sodium Hydroxide	1.20
D	Sodium Hydroxide (20% sol.)	Sodium Hydroxide	0.18
E	Dermosoft OMP / Evonik	Methylpropanediol (and) Caprylyl Glycol (and) Phenylpropanol	1.00

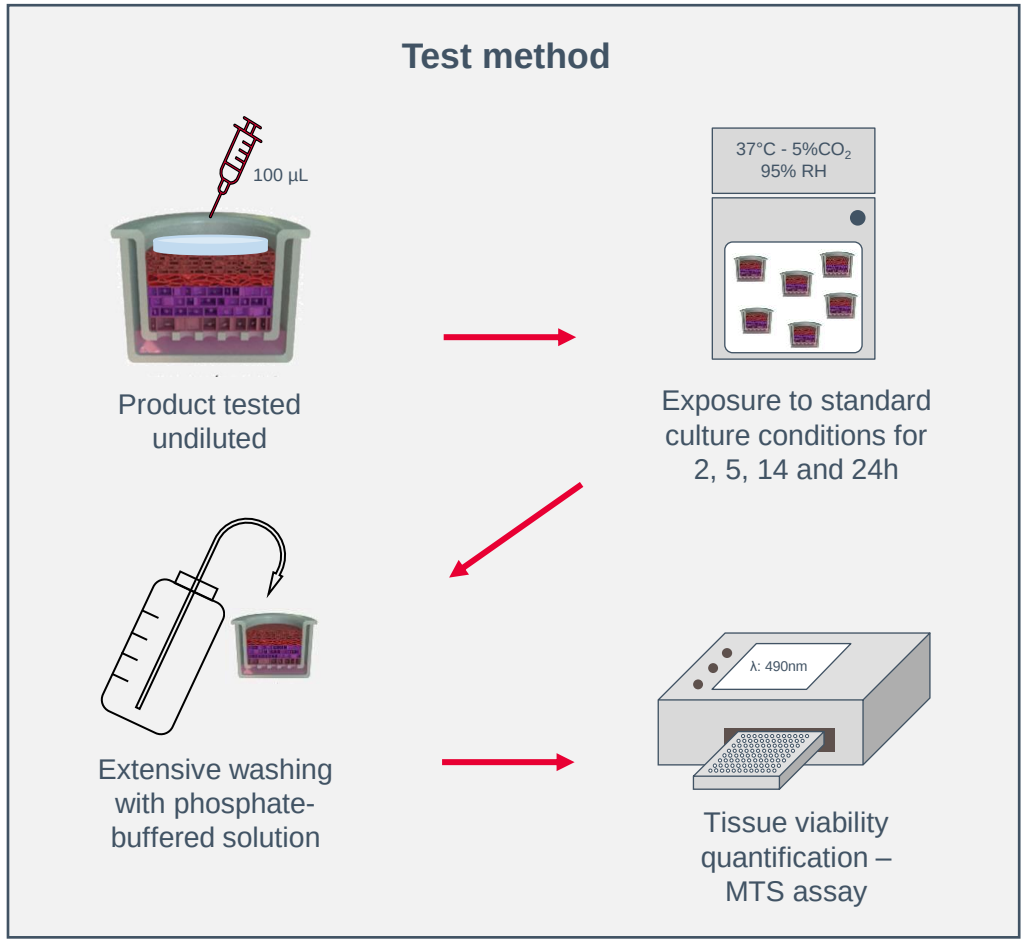
pH 5.8; Viscosity: 6 500 cPs (Brookfield DV2; Spindle 4; Speed 20).

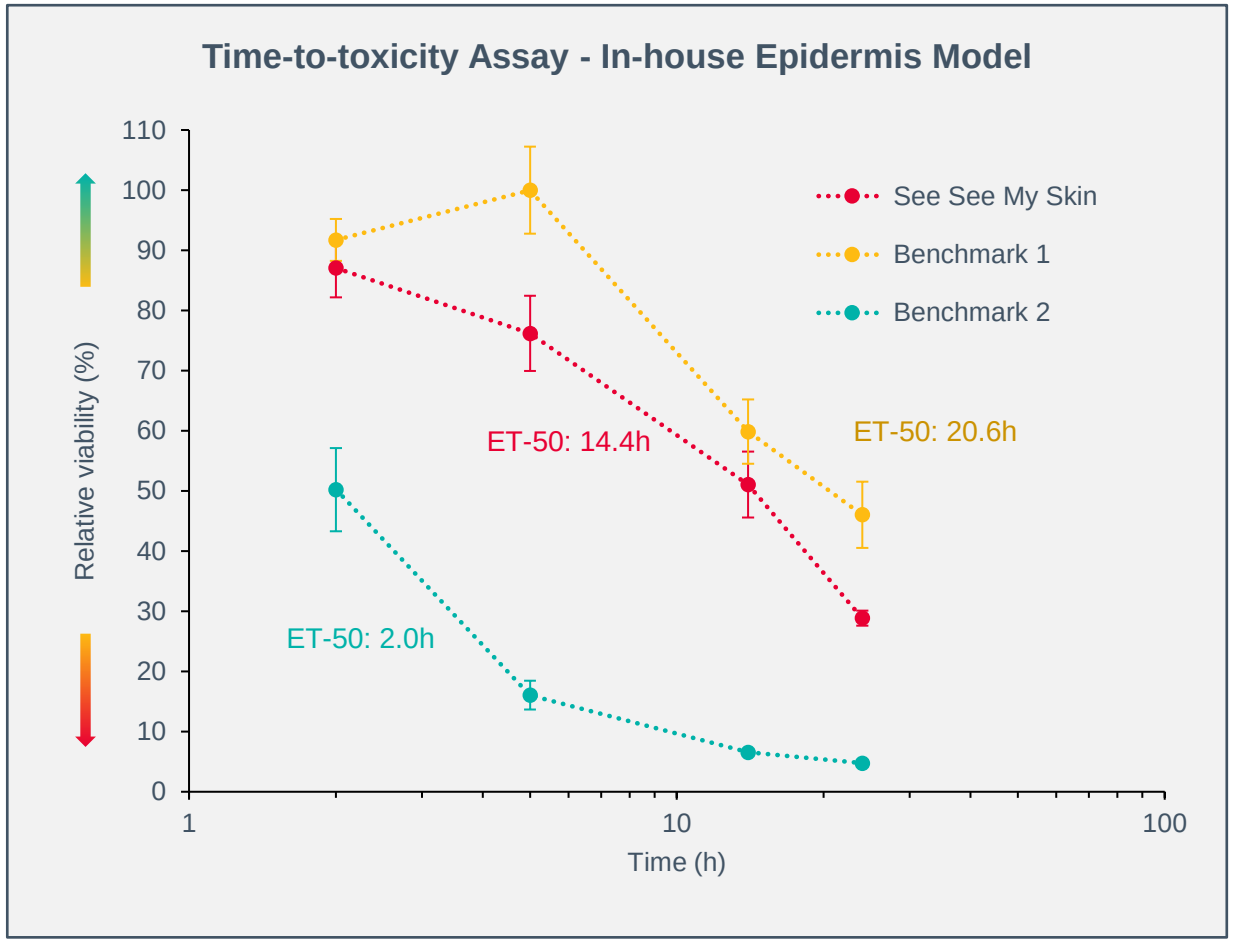
Procedure:

1. Prepare phase A1 by mixing and heating to 80°C all ingredients together. Mix for ca. 10 minutes to avoid UV filters recrystallization. Let cool down to room temperature while mixing.
2. Prepare phase A2 by slowly adding ingredient #2 to ingredient #1.
3. When phase A2 is homogeneous, add phase A1. Then, add ingredients of phase A3 in order listed. Mix well between each addition.
4. Prepare phase B1 by mixing ingredients together with a coffee grinder until a homogeneous color is obtained.
5. Prepare phase B2 by mixing ingredients in order listed until homogeneous.
6. Add phase B1 to phase B2 and mix until homogeneous.
7. Prepare phase C by mixing ingredients together until homogeneous.
8. Add phase C to phase B and mix.
9. Add phase D to phase BC and mix.
10. Slowly add phase A to phase BCD and mix under moderate speed (ca. 5 minutes).
11. Add phase E to phase ABCD and mix under moderate speed (ca. 2 minutes).

Skin Microbiome-Friendly Ingredients

See See My Skin – Mild to the skin





ET-50: time required to decrease tissue viability by 50%.

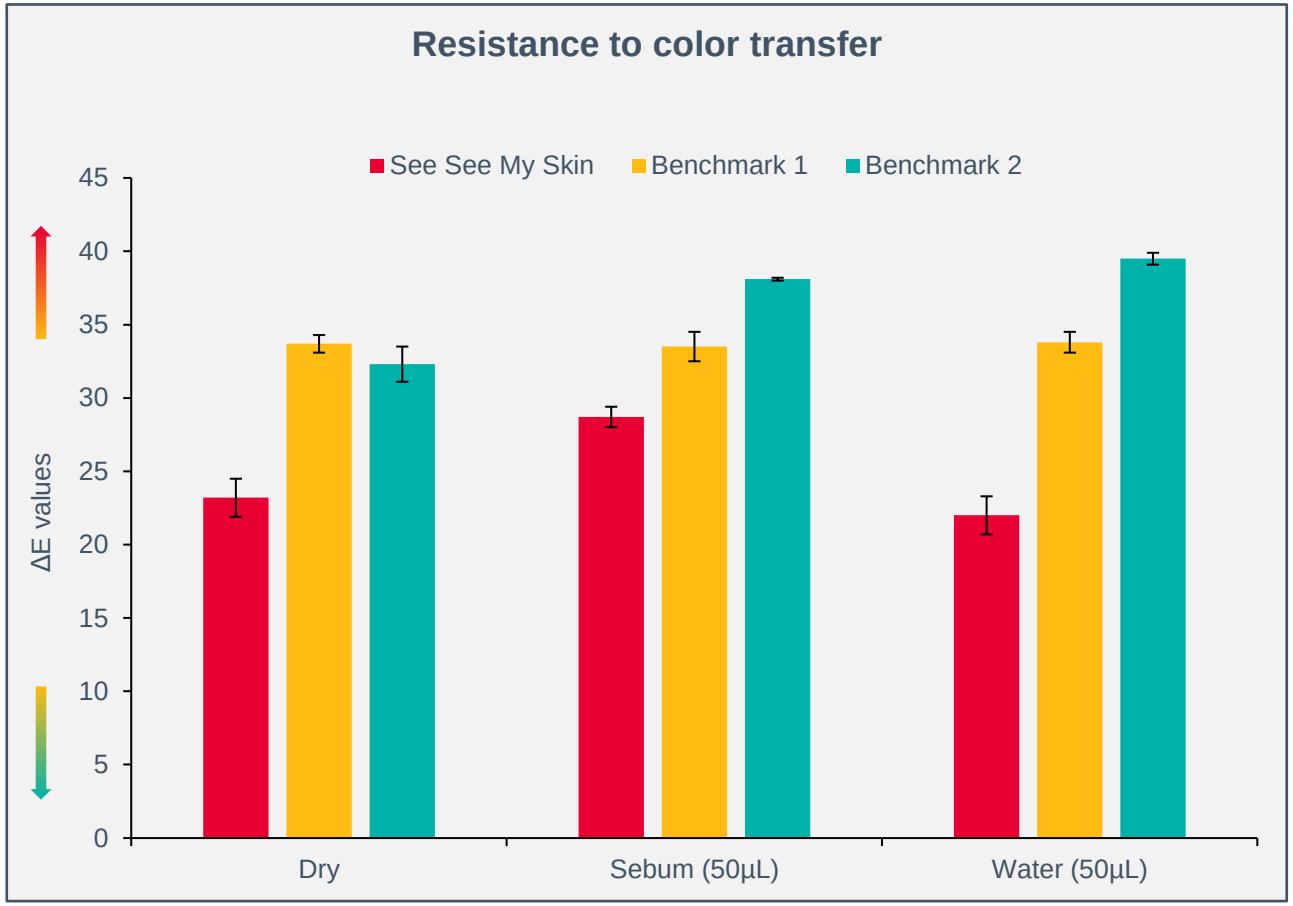
Internal data. Users should confirm results by their own tests.

See See My Skin – A long-hold CC cream with low color transfer

Test method

- Formulation is coated on a skin-mimicking Vitro-Skin membrane (wet film thickness: 25µm).
- Film is dried at 32°C for 24h before assessing its long-lasting benefits, in dry conditions or in presence of artificial sebum or water (50µL).
- Film is exposed to a series of 50 friction cycles on a felt band.
- Performance is evaluated by measuring the Cie-L*a*b* values of the film before and after the friction process and calculating the delta-e (ΔE) values.
- Lower (ΔE) values indicate lower color transfer.

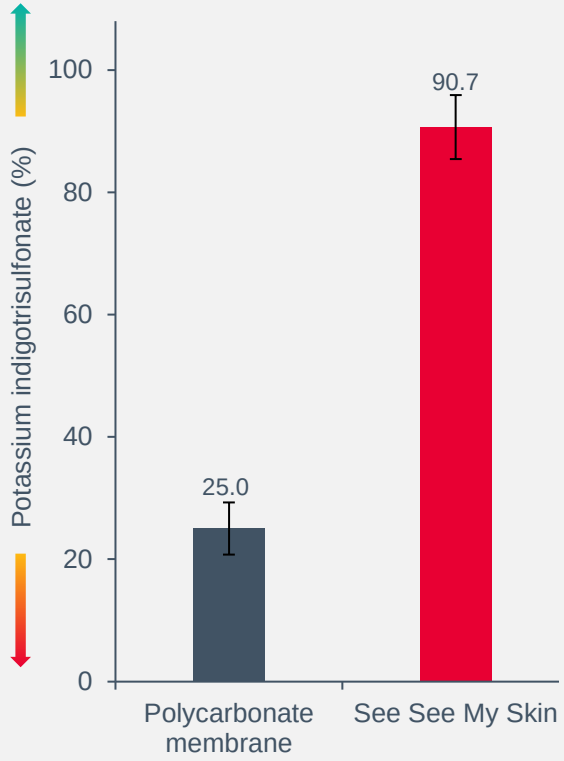
Formulation	Foundation color		
	L*	a*	b*
See See My Skin	61.6	17.5	22.5
Benchmark 1	59.6	17.7	20.3
Benchmark 2	68.0	21.4	30.3



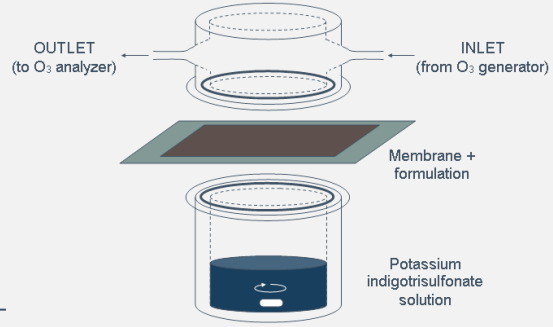
Internal data. Users should confirm results by their own tests.

See See My Skin – Protect the skin from air pollutants

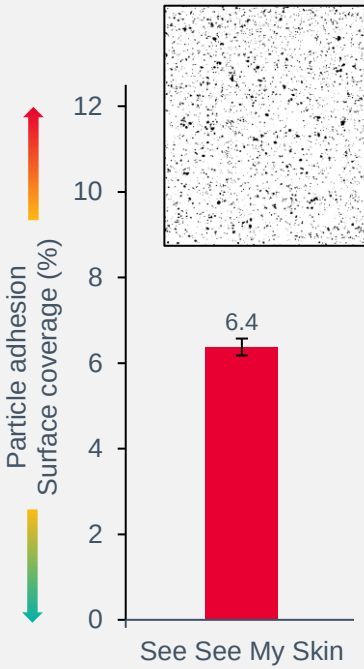
Protection from noxious gases

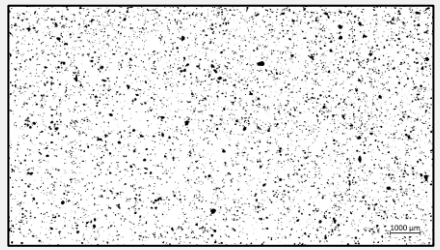


- Formulation (2mg/cm²) is applied on a polycarbonate membrane, spread with a bulb-headed glass rod and dried at room temperature for 1h.
- Membrane is mounted on a diffusion cell and exposed to ozone for 2h.
- Protection against ozone is determined by measuring the oxidation of the potassium indigotrisulfonate ozone-scavenging reagent into sulfonated isatin.

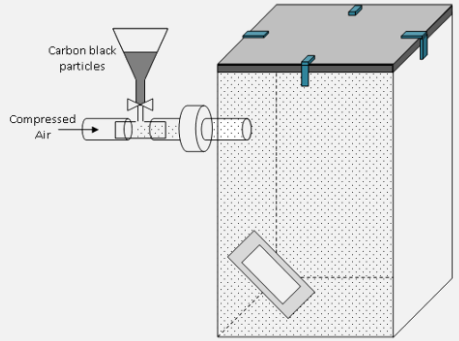


Protection from pollution particles





- Formulation is coated on Vitro-Skin substrate (wet film thickness: 25µm) (3 films per formulation).
- Film is dried overnight at 32°C before being exposed to carbon black particles.
- Particle adhesion is quantified by ImageJ software after binary transformation of images magnified using stereomicroscope.



Internal data. Users should confirm results by their own tests.

Skin Wellness Concepts Collection

-

Take-away Messages

Skin Wellness Concepts Collection – Take-away messages

7 formulations aligned to Skin, Scalp and Hair Care for a complete daily care routine.

Extensive characterization and claims validation for each formulation.

30 Dow technologies & 9 Skin Microbiome-Friendly ingredients (including silicones).

Plug & Play according to your needs.

Enhance your marketing claims.

Meeting customer demand for efficacy, safety and microbiome compatibility.

Addressing specific skin concerns.

Bridging the gap between cosmetic and healthy skin.

Thank you

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The call is now open for Q&A.

Please type your questions and we will get them answered now or after the call.

Do you want to learn more about Dow's Concepts Collections and cutting-edge cosmetic ingredients?

Visit Dow Personal Care website or contact your sales representative.

Dow Personal Care Website

Virtual Experience Center

Skin Wellness Concepts Collection

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Appendix

EcoSense™ GL-60 HA Surfactant

A mild biosurfactant with good cleansing properties

Test conditions:

- Product dilution: **11.3% in water** (pH 6.0) (i.e., **6% active surfactant**)
- Application: **Rinse-off** – 33% dilution in phosphate-buffered saline & 15 minutes incubation
- Test Standard: **MyMicrobiome Standard 18.10 Face** (Sebaceous skin region)
- **Test result: 2.0**
- Certification: **Granted**
- Test report no.: 23.642.18.1

Key Endpoints	Grade
Microbial Balance	2
Microbial Diversity*	2.1
Microbial Growth – Direct Contact*	2.1
Microbial Growth – Indirect Contact	1.9
Overall Grade	**2.0**

*Double weighted grade

External data. Users should confirm results by their own tests.

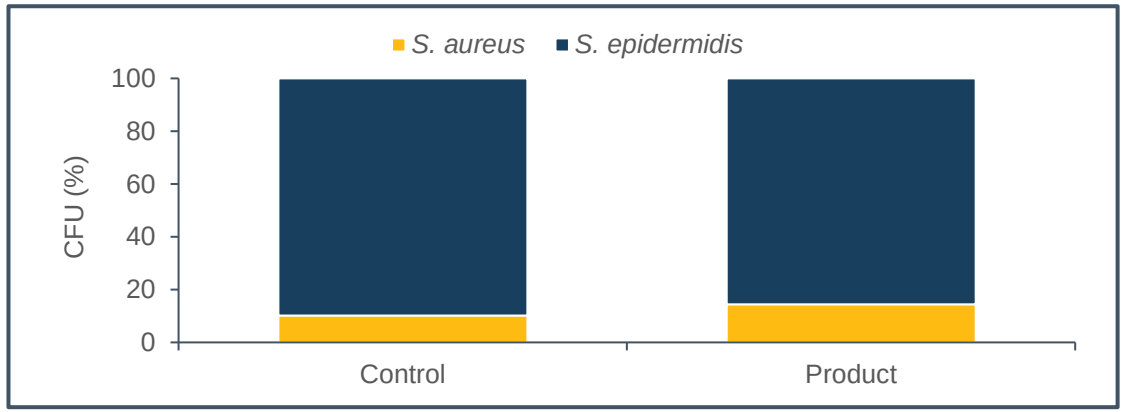
Microbiome Friendly® is a registered certification mark of MyMicrobiome Aktiengesellschaft

EcoSense™ GL-60 HA Surfactant

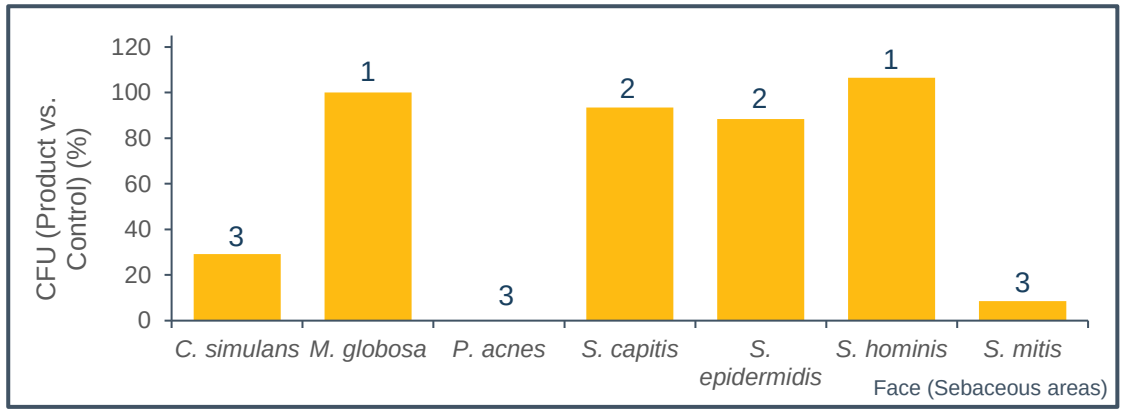
A mild biosurfactant with good cleansing properties

Microbiome friendly
Certified: 04/2024
No. 23.642.18.1
Standard 18.10
Face
2.0
www.MyMicrobiome.info

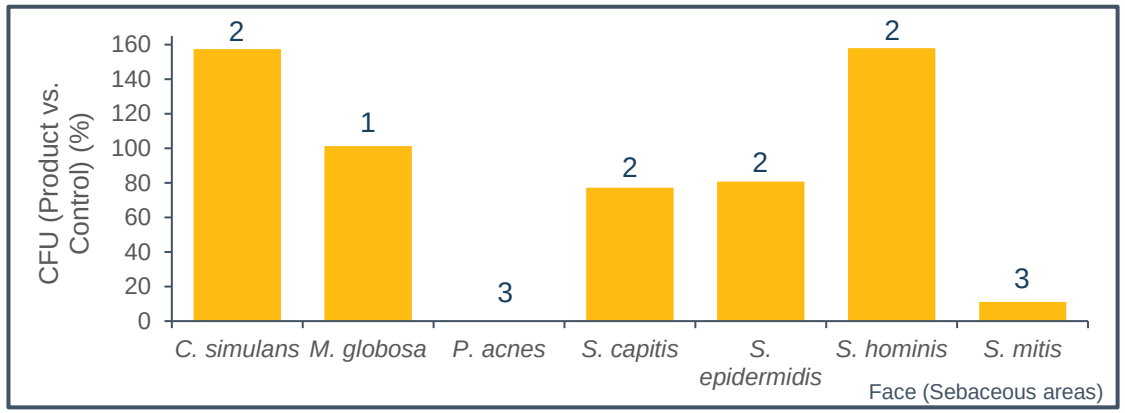
Effect on microbial balance – Grade: 2



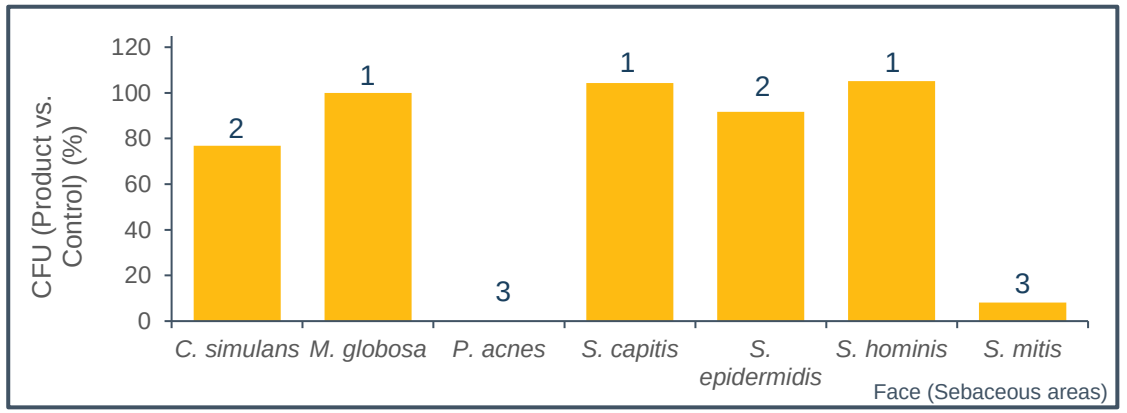
Effect on microbial growth – Direct – Grade: 2.1



Effect on microbial diversity – Grade: 2.1



Effect on microbial growth – Indirect – Grade: 1.9



External data. Users should confirm results by their own tests.

DOW®

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DOWSIL™ FA 4003 DM Silicone Acrylate

A silicone film-former with skin protection benefits against air pollutants

Test conditions

- Product dilution: **37.5% in squalane** (i.e., **15% active film-former**)
- Application: **Leave-on** – 4 hours incubation
- Test Standard: **MyMicrobiome Standard 18.10 Face/Body** (Sebaceous/Dry skin regions)
- **Test result: 1.5**
- Certification: **Granted**
- Test report no.: 24.865.18.1

Key Endpoints	Grade
Microbial Balance	1
Microbial Diversity (Sebaceous)*	1.7
Microbial Diversity (Dry)*	1.7
Microbial Growth – Direct Contact (Sebaceous)*	1.6
Microbial Growth – Direct Contact (Dry)*	1.3
Microbial Growth – Indirect Contact (Sebaceous)	1.3
Microbial Growth – Indirect Contact (Dry)	1.3
Overall Grade	**1.5**

*Double weighted grade

External data. Users should confirm results by their own tests.

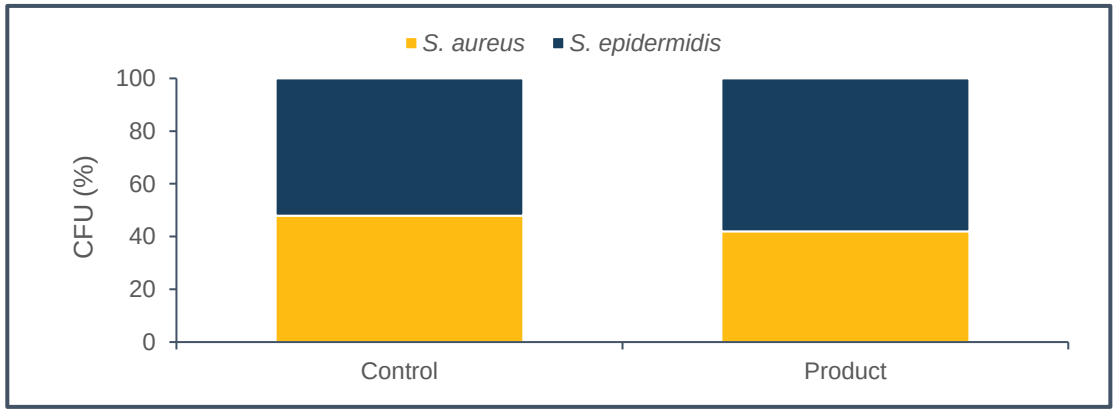
Microbiome Friendly® is a registered certification mark of MyMicrobiome Aktiengesellschaft

DOWSIL™ FA 4003 DM Silicone Acrylate

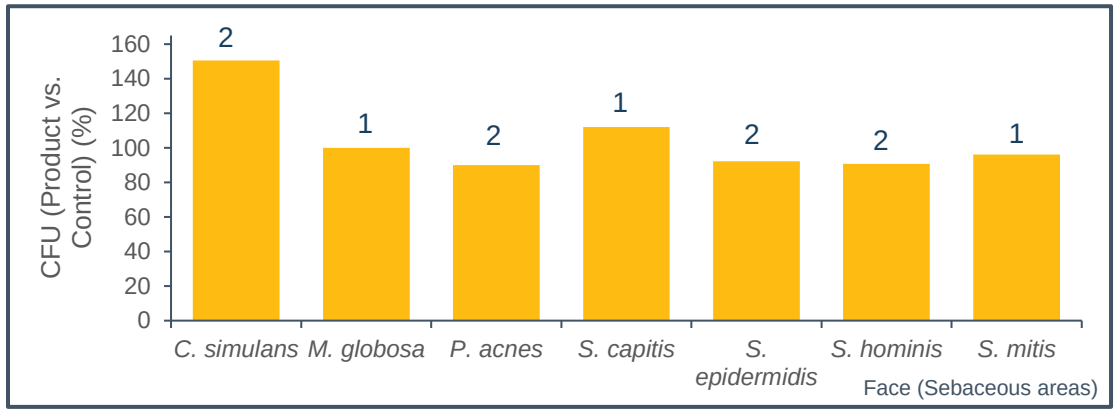
A silicone film-former with skin protection benefits against air pollutants

Microbiome friendly
Certified: 04/2024
No. 24.865.18.1
Standard 18.11
Face / Body
1.5
www.MyMicrobiome.info

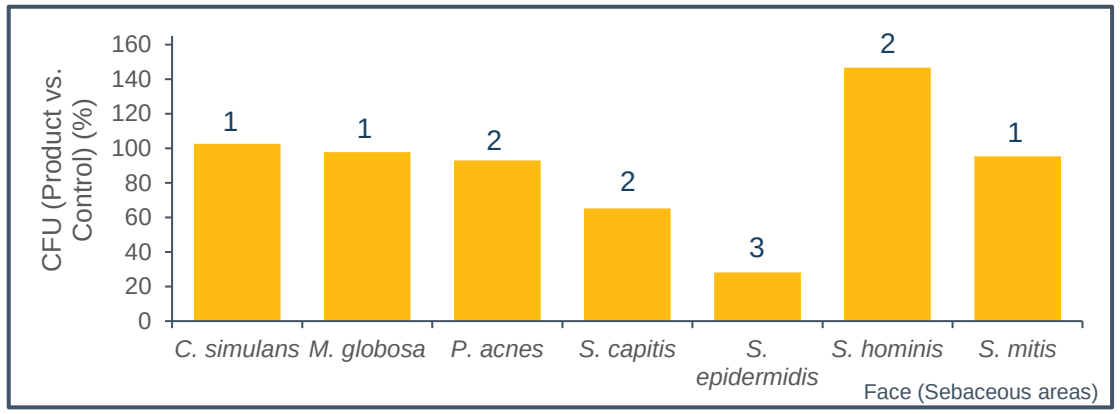
Effect on microbial balance – Grade: 1



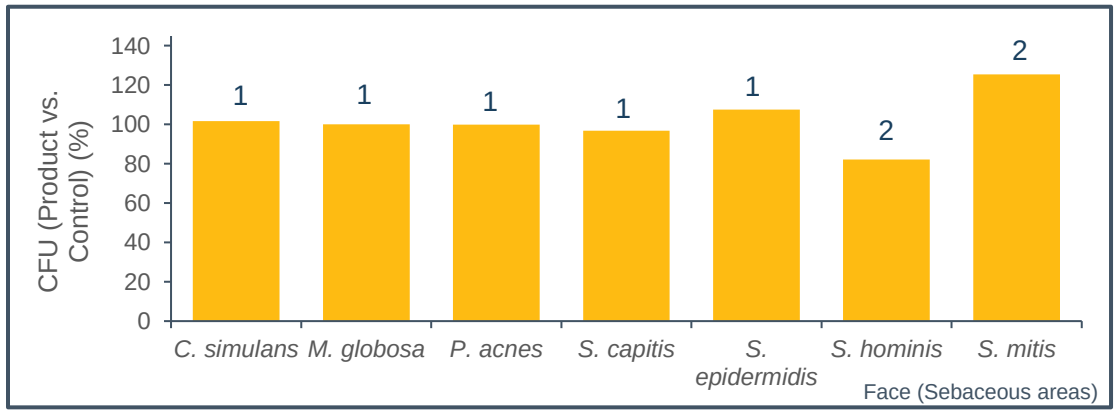
Effect on microbial growth – Direct – Grade: 1.6



Effect on microbial diversity – Grade: 1.7



Effect on microbial growth – Indirect – Grade: 1.3



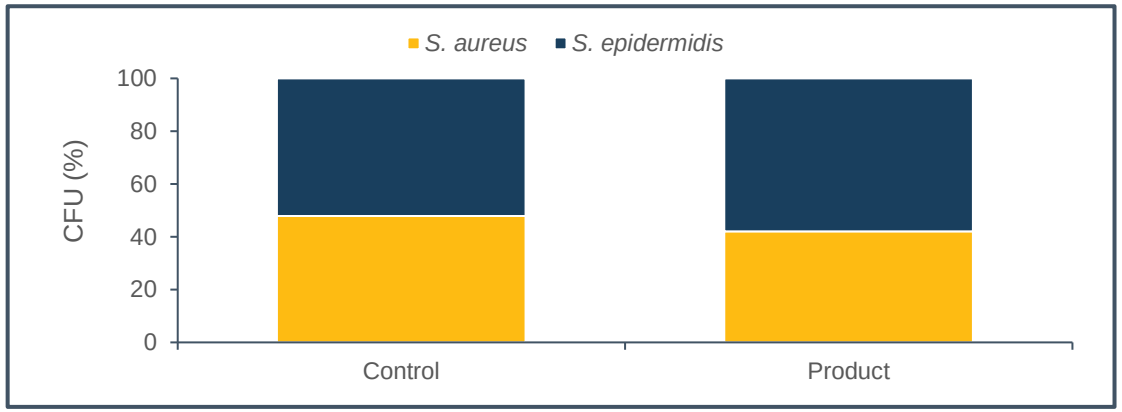
External data. Users should confirm results by their own tests.

Microbiome Friendly® is a registered certification mark of MyMicrobiome Aktiengesellschaft

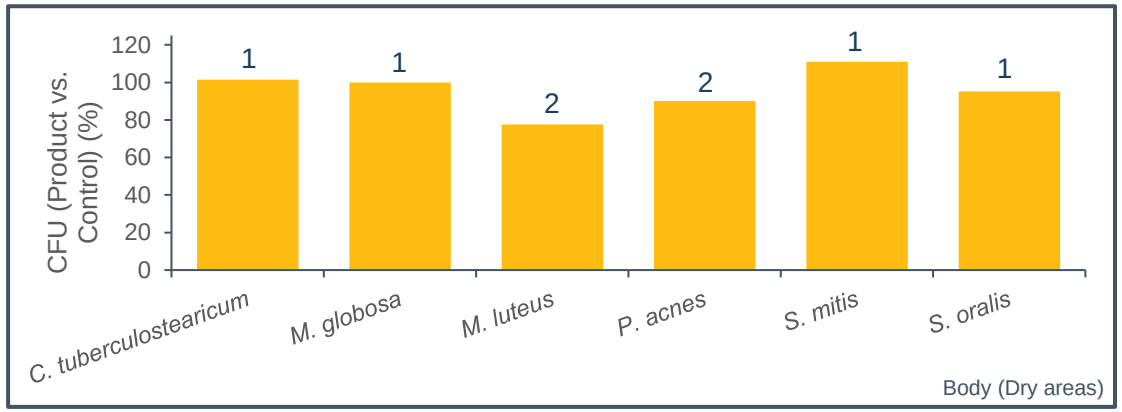
DOWSIL™ FA 4003 DM Silicone Acrylate

A silicone film-former with skin protection benefits against air pollutants

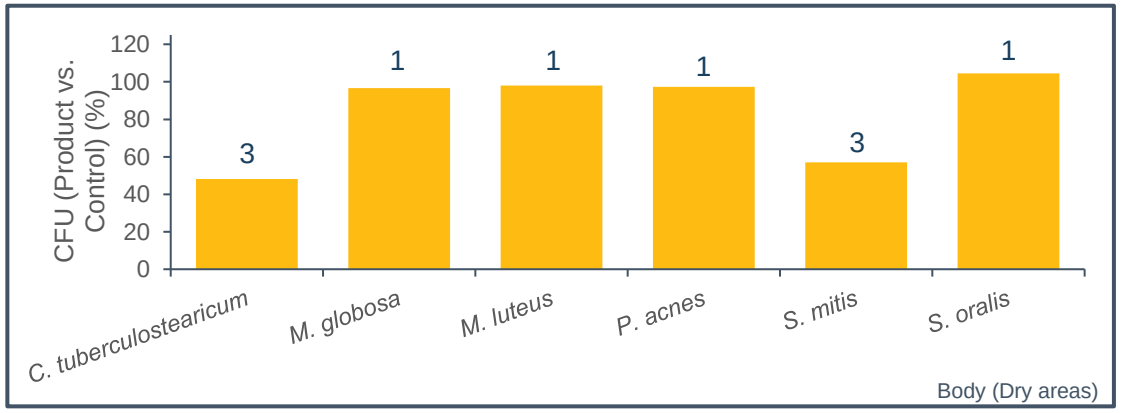
Effect on microbial balance – Grade: 1



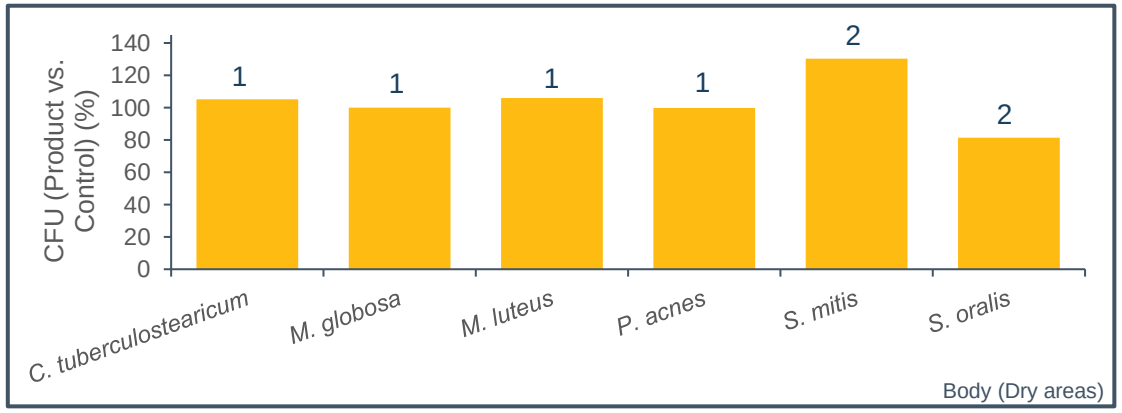
Effect on microbial growth – Direct – Grade: 1.3



Effect on microbial diversity – Grade: 1.7



Effect on microbial growth – Indirect – Grade: 1.3



External data. Users should confirm results by their own tests.

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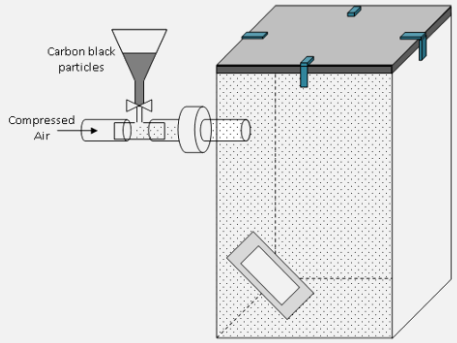
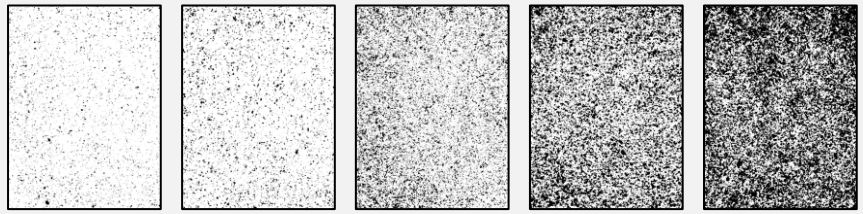
Protection from air pollutants – Carbon black test method

Test method

- Formulation is coated on Vitro-Skin substrate (wet film thickness: 25µm) (3 films per formulation).
- Film is dried overnight at 32°C before being exposed to carbon black particles.



- Particle adhesion is quantified by ImageJ software after binary transformation of images magnified using stereomicroscope.



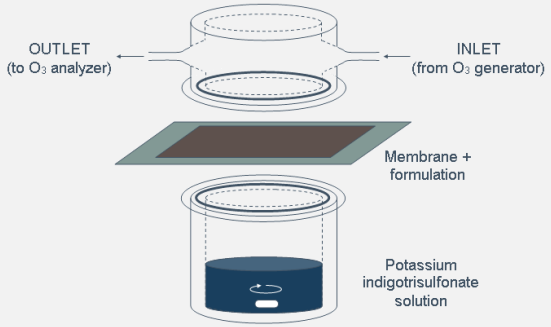
5% 10% 20% 35% 55%

↑ Particle adhesion → ↓ Protection

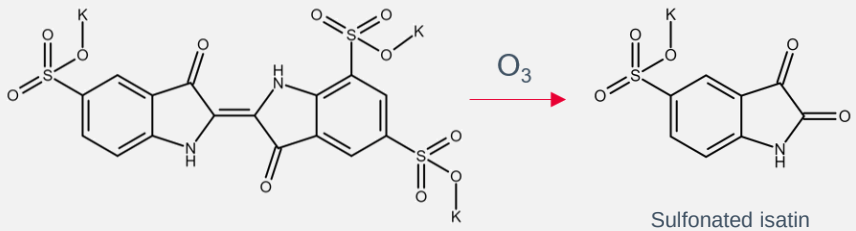
Protection from air pollutants – Ozone test method

Test method

- Formulation (2mg/cm²) is applied on a polycarbonate membrane, spread with a bulb-headed glass rod and dried at room temperature for 1h.
- Membrane is mounted on a diffusion cell and exposed to ozone for 2h.

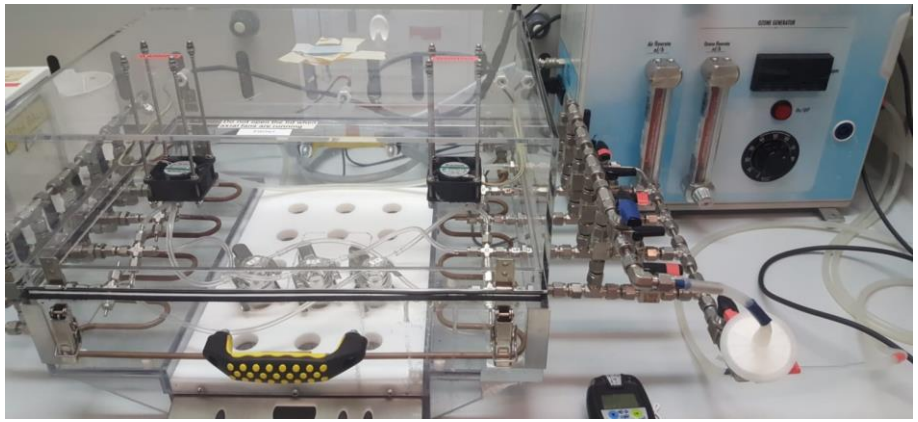


- Protection against ozone is determined by measuring the oxidation of the potassium indigotrisulfonate ozone-scavenging reagent into sulfonated isatin.



Potassium indigotrisulfonate
(dark blue)

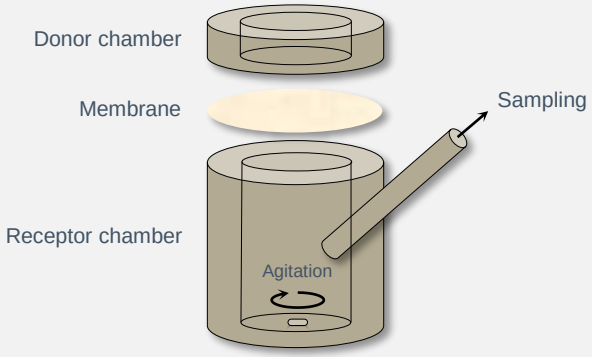
Sulfonated isatin
(colorless)



Skin release of cosmetic active ingredients

Test method

- Formulation (5mg/cm²) is applied onto a Strat-M membrane, i.e. a synthetic, non-animal alternative for transdermal diffusion testing.
- Membrane is mounted on a vertical static Franz-type diffusion cell using a receptor medium that is appropriate for the active ingredient of interest (good solubility properties).
- Receptor medium is thermostated at 32°C during the entire experiment.



- Diffusion of the active ingredient of interest through the Strat-M membrane is monitored by sampling the receptor medium at regular time intervals followed by UPLC-UV analysis or any other analytical techniques.