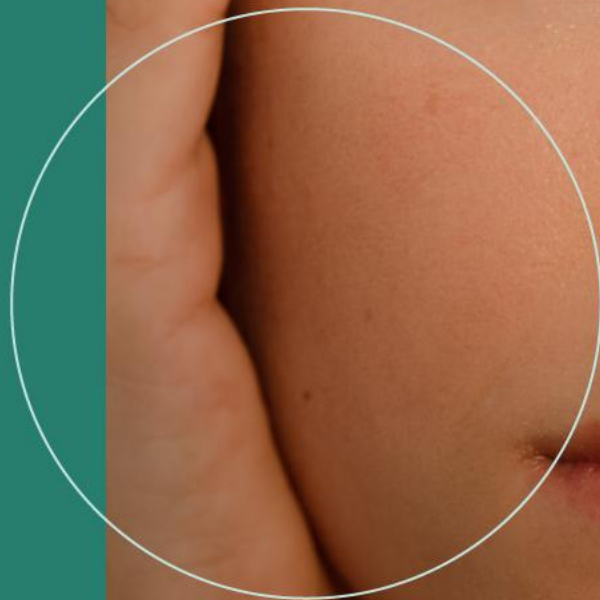


STIMU-TEX®

*Immediate relief for
sensitive & irritated skin*

AS



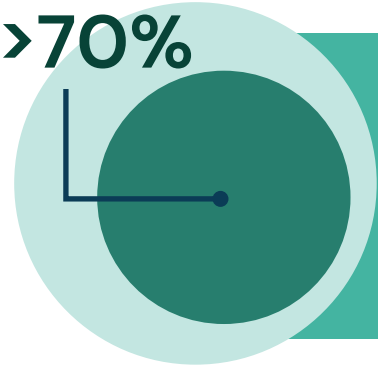
April 2026

Naturals | The science of nature

dsm-firmenich 

Sensitive skin is a universal phenomenon

>70%



>70% of global consumers say they have experienced signs of sensitivity, like **redness**, **dryness**, or **stinging / burning / itching** on their facial skin

Sensitive skin is equally common across all ethnicities.

Women are more likely to report sensitive skin than men.

Post-menopausal women claiming sensitive skin, over 70% perceived their skin sensitivity increased after menopause.

Younger age groups report higher rates of sensitive skin.

<https://www.personalcareinsights.com/news/aveeno-reveals-increasing-skin-sensitivity-and-related-emotional-disorders-in-consumers.html>



What is sensitive skin?

- **Sensitive skin is characterized by an extreme reaction to everyday factors** like dust, pollution, chemicals, heat, cold or UV.
- As skin becomes sensitized, it becomes vulnerable to outside attacks, and responds with **redness, stinging or itchy feelings**, and even **burning sensations**.
- People with sensitive skin report impairment of health-related quality of life.

<https://www.personalcareinsights.com/news/aveeno-reveals-increasing-skin-sensitivity-and-related-emotional-disorders-in-consumers.html>

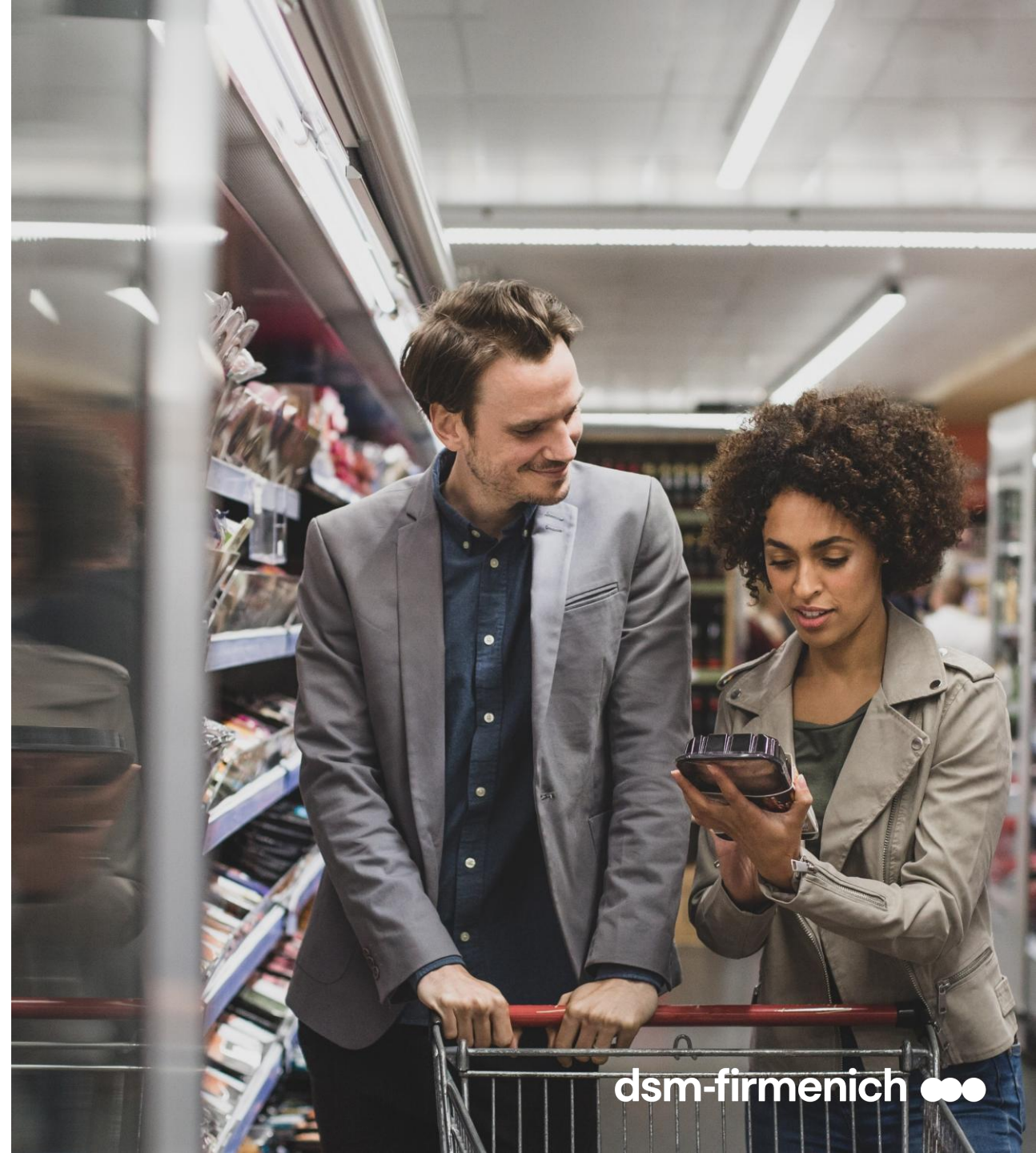


High demand for products for sensitive skin

Consumer demand for sensitive skincare products is at an all-time high because of environmental aggressors.



<https://www.personalcareinsights.com/news/aveeno-reveals-increasing-skin-sensitivity-and-related-emotional-disorders-in-consumers.html>



STIMU-TEX® AS

ID Card

INCI NAME:	Spent Grain Wax, Argania Spinosa (Argan) Kernel Oil, Butyrospermum Parkii (Shea Butter) Extract, Tocopherol		
TECHNOLOGY:	A unique mixture of premium, upcycled spent grain wax a by-product of the beer production, cold-processed argan oil, and shea butter. 100% of natural origin		
TECHNICAL:	Form: Off-white to yellowish lipidic mass	Use level: 1–5% Preservative: Free	Solubility: Oil soluble
BENEFITS:	- Significantly decreases the expression of IL-1α, a marker for inflammatory reactions** - Helps to reduce itch mediators such as histamine* - Effectively reduces histamine-related symptoms like itching and redness, while significantly enhancing skin comfort within 5 minutes***		
REGISTRATION CERTIFICATION	   		

* in vitro ** ex vivo *** in vivo

The rise of upcycled beauty

Consumers around the world are increasingly looking for authentic products with scientifically proven efficacy.

Upcycled ingredients for use in our modern world is proving popular among those who want to nourish their skin for a naturally flawless look.

What is upcycling?

It transforms by-products and waste materials into something new and exciting – something that consumers want to use and find great joy from.

STIMU-TEX® AS is enriched with upcycled spent grain wax



Brewers have always had smooth, soft hands

- For generations, **beer brewers have recognized the soothing properties of spent grain**, traditionally associated with calming skin and relieving itching.

But what exactly is brewer's spent grain?

- Brewer's spent grain is the most abundant **by-product of the beer-brewing process**, accounting for around 85% of all brewing by-products.
- It is the **natural residue** left after pure barley (*Hordeum vulgare*) is transformed into malt through successive physical and fermentative processing steps.



Pure Spent Grain Wax — From Brewery By-Product to High Value Skin Soother

- **Rooted in the German brewing tradition**, Pure Spent Grain Wax is upcycled from brewer's spent grain left after beer production.
- **Using gentle supercritical CO₂ extraction**, it is transformed into a pure, **golden wax** that:
 - Avoids harsh solvents
 - Preserves skin-soothing lipids
 - Delivers a soft, skin-loving texture
- **Unique upcycled origin**

Role in STIMU-TEX® AS

- Provides skin-soothing lipids that enhance comfort
- Supports relief from itching and irritation
- Contributes to the soft, caring sensory profile of the blend

A fusion of heritage and green innovation, turning an overlooked by-product into a comforting, sustainable skin ingredient.

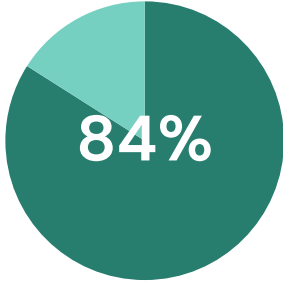


Spent grain wax delivers strong relief on skin with atopic conditions

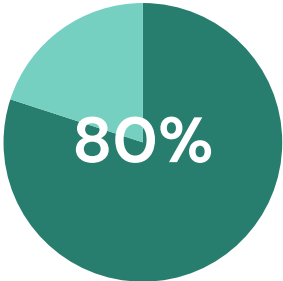
Dermatological study performed on skin with atopic conditions*

100 volunteers, 1% and 5% spent grain wax used in a w/o emulsion; placebo, half-face blind application of verum & placebo; twice daily, 1-4 weeks

Result: strong and perceivable itching alleviation



Preferred formula



Better anti-itching effect

Spent grain wax | Placebo

** Source: Entwicklung und Prüfung eines neuen dermatologisch-kosmetischen Wirkstoffes aus Gerstentreiber (development and testing of a new dermatological-cosmetic active ingredient from barley grains), H. Tronnier, P. Haas and L. Motitschke, Ärztliche Kosmetologie 17, 342-352 (1987)



Argan Oil — Purity, Heritage & High Concentration of Actives

Exceptional quality & processing

- Cold pressed from Argania spinosa kernels to maintain a high concentration of soothing compounds
- Minimal processing preserves purity and maximizes skin calming efficacy
- Specifically deodorized resulting in a clear and nearly colorless product

Authentic multicultural sourcing

- It is known to the Berbers living there as the “Tree of Life”.
- Responsibly sourced from Morocco, rooted in centuries old beauty traditions

Role in STIMU-TEX® AS

- Reinforces the blend’s instant soothing action
- Helps restore comfort for sensitive and irritated skin



Shea Butter — Time Honored Comfort with Deep Soothing Power

Rich cultural heritage

- Known as the “African wonder”, cherished for more than 2,000 years
- A symbol of natural nourishment and protection from ancient Egypt to today
- The extraction of the fruit’s kernels provides the butter, which consists mostly of fatty acids – linoleic acid in particular.

Dermatological comfort

- Naturally soothing, nourishing, and skin softening

Role in STIMU-TEX® AS

- Complements the full blend to deliver long lasting comfort



STIMU-TEX® AS

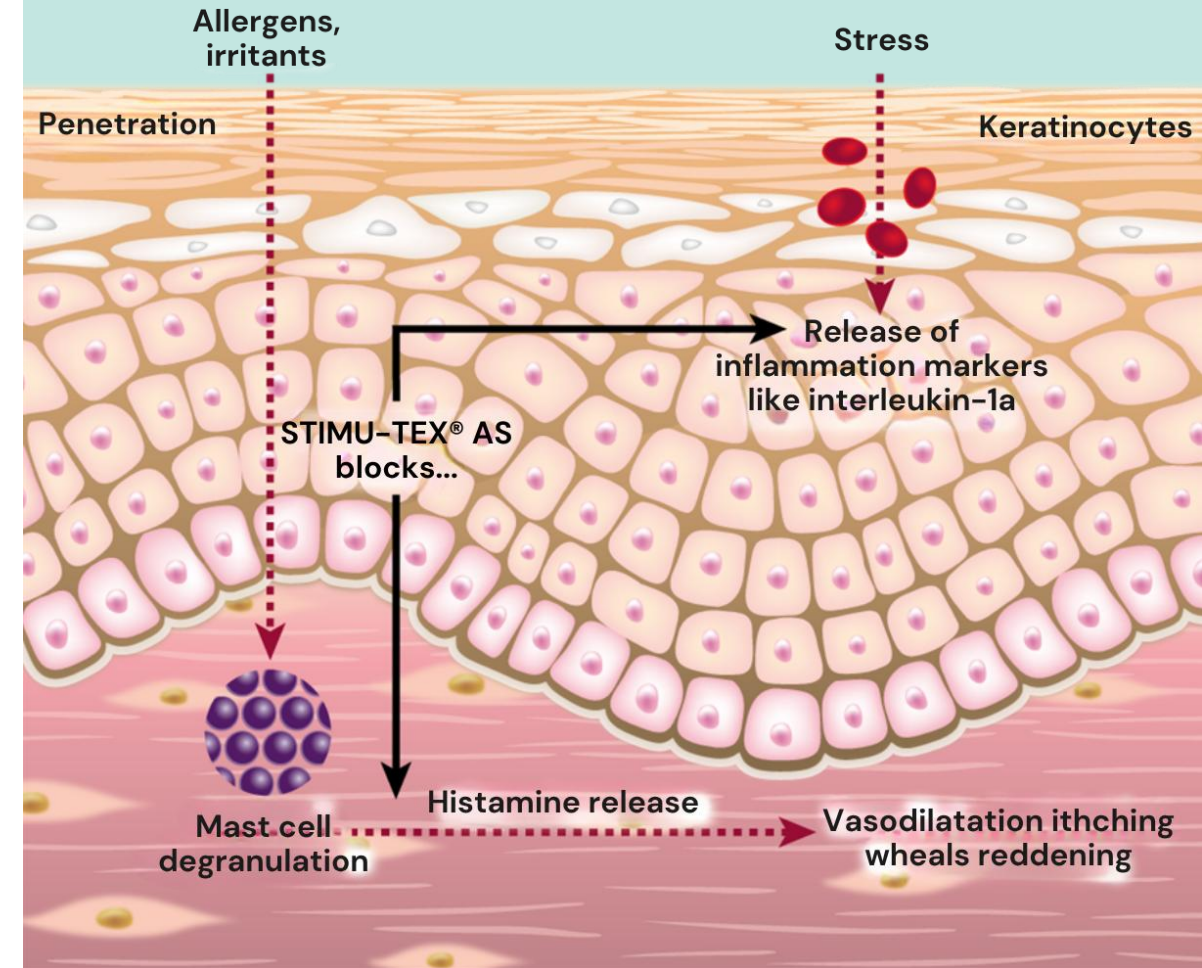
Mode of action

Dry and sensitive skin is characterized by a weak barrier function and a low threshold for allergic reactions, which can be triggered by different stimuli present in our environment. In response, dsm-firmenich has developed **STIMU-TEX® AS**, which effectively eases sensitive skin complaints thanks to the complementary skin-care properties of its three compounds.

- STIMU-TEX® AS liberates feeling of skin comfort
- It effectively helps to inhibit epidermal reddening processes.*
- It helps to reduce the effects of histamine release like redness and itching**.

*in vitro

**in vivo



STIMU-TEX® AS

Strong histamine rebalancing capacity *in vitro*

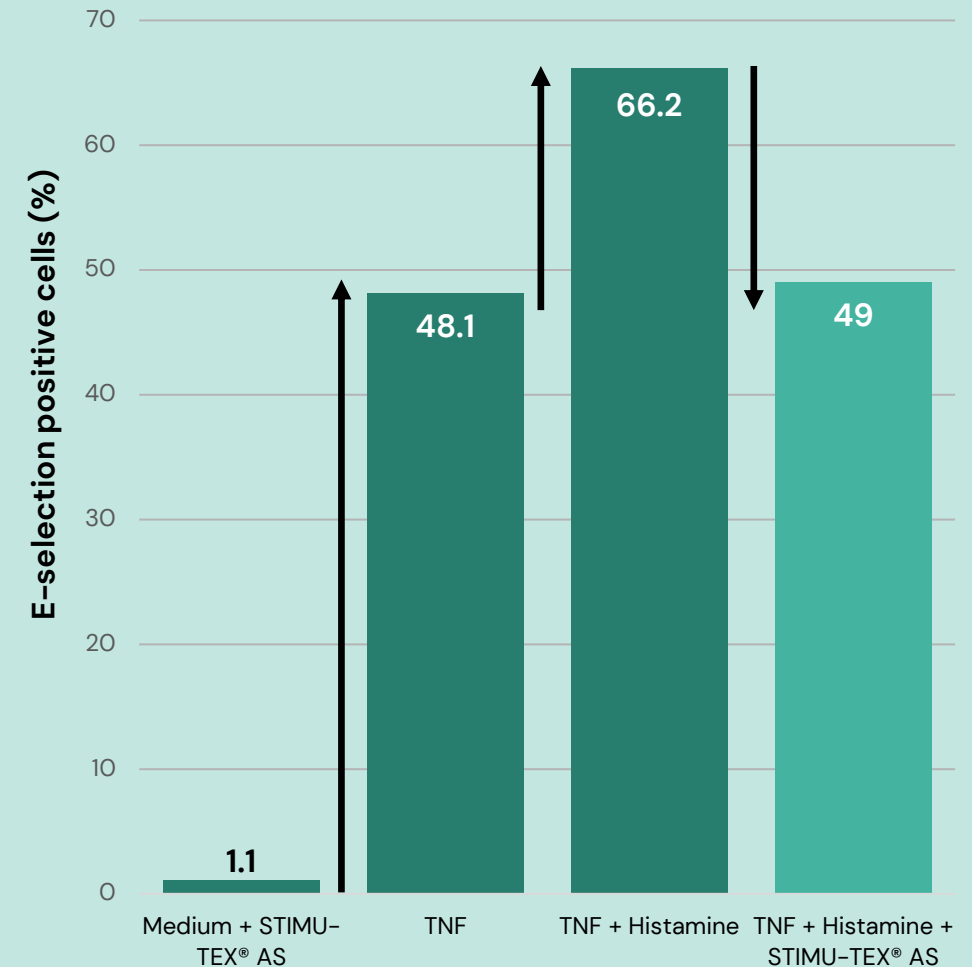
Histamine effect blocking assay

- Histamine is a marker for allergic reactions. Histamine blocking products inhibit the symptoms of allergy such as itching, swelling, and red skin.
- An *in vitro* assay with human endothelial cells was developed to quantify histamine effects: Histamine combined with TNF (Tissue Necrosis Factor) enhances the induction of E-selectin on endothelial cells. E-selectin induction is the starting point of an inflammatory reaction.

STIMU-TEX® AS nearly completely rebalances E-selectin expression on endothelial cells, a downstream target of histamine*.

**in vitro*

in vitro



STIMU-TEX® AS

Strong reducing of skin reddening *ex vivo*

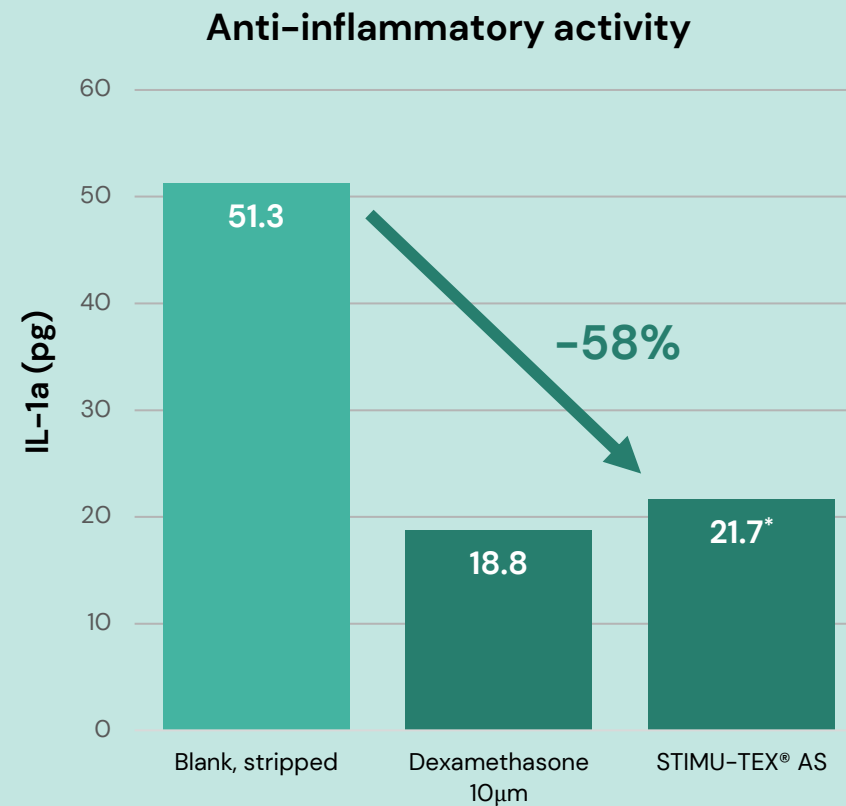
Anti-inflammatory assay *ex vivo*

- Determination of the inflammation marker interleukin-1 α , released in the supernatants of stripped human skin disks.
- A human skin fragment was taken after abdominal plastic surgery and stripped 10 times. STIMU-TEX® AS was tested on the skin surface at a concentration of 1 mg/cm². Dexamethasone is a glucocorticoid, used as positive control.

STIMU-TEX® AS significantly decreases the expression of IL-1 α by 58%, a marker for inflammatory reactions*.

**ex vitro*

ex vivo



STIMU-TEX® AS

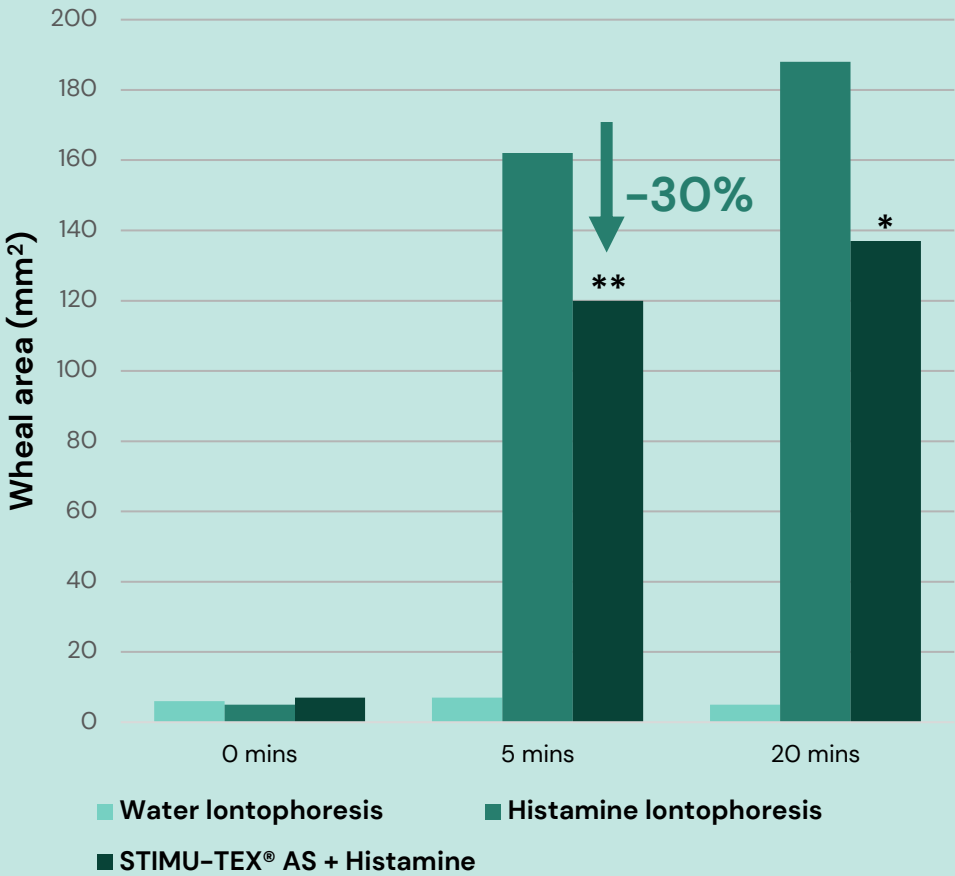
Immediate relief within 5 minutes *in vivo*

- The release of histamine induces a vasodilatation, an increase of vascular permeability, inflammation, and skin redness. Laser Doppler flow measurements enable this increased blood flow to be quantified.
- Histamine was applied on the inner forearm of 10 healthy female volunteers between the ages of 18 and 39.
- Penetration of histamine into the skin was stimulated non-invasively by iontophoresis in order to produce a mild reaction.
- Results for distilled water (negative control), histamine alone (positive control), and 5% STIMU-TEX® AS with histamine were compared.
- The reactions were determined non-invasively as perfusion modification by means of a laser Doppler imager and as wheal formation by computerized surface measurement.

STIMU-TEX® AS formulation significantly reduces histamine-related symptoms by 30% after as little as 5 minutes**

**in vivo

in vivo



STIMU-TEX® AS

Dermatological study on Asian skin with atopic conditions¹

- 29 Asian (Thai) patients (18 male and 11 female), aged between 2–15 years
- 3% STIMU-TEX® AS (S cream) vs 1% Hydrocortisone (HS cream)
- The body was randomly divided to left and right side. One side was applied with S cream and the other side was applied with HC cream twice daily for four weeks.

Visible reduction of Childhood Atopic Dermatitis by a STIMU-TEX® AS (3%) cream after already 2 weeks



¹: Panaya Jirabundansuk MD*, Suwirakorn Ophaswongse MD*, Montree Udompataikul MD*
Skin Center, Faculty of Medicine, Srinakharinwirot University, Bangkok, Thailand; J Med Assoc Thai Vol. 97 No. 8 2014

STIMU-TEX® AS

Easy to use

- Off-white to yellowish, lipidic mass with a pleasant smell.
- Soluble/miscible in lipophilic products.
- Can be incorporated into the oily phase of a cosmetic formulation either hot (up to 80°C) or after the emulsion step around 40°C.
- Stress relief cosmetic lines for sensitive and irritated skin.
- Recommended dosage: 1 to 5%.



Advanced Skin Relief Cream

Liberates feeling of skin comfort

This gentle cream helps skin feel relieved from irritation and discomfort. It transforms dry and sensitive skin into a smoother, healthier appearance.

- **STIMU-TEX® AS** helps to calm irritated and itchy skin.
- **ALPAFLOR® EDELWEISS CB** reinforces the skin barrier, helps reduce skin redness, helps the skin preserve its natural balance, and reduces skin sensitivity.
- **VALVANCE® Touch 210** provides sensory enhancement

Products are for experimental use only and are not for sale. dsm-firmenich is not responsible for final products claims



Advanced Skin Relief Cream

99.7% natural origin content*

	Ingredients	% w/w	Function
A	Cetearyl Olivat, Sorbitan Olivat	2,50	Emulsifier
	Cetyl Alcohol	1,00	Co-Emulsifier
	Caprylic/Capric Triglyceride	3,00	Emollient
	Squalane	5,00	Emollient
	Capryloyl Glycerin/Sebacic Acid Copolymer, Diheptyl Succinate	2,00	Emulsifier
	Macadamia Integrifolia Seed Oil	1,00	Emollient
B	Propanediol	2,00	Sensory, Hydration, Active carrier and Preservative booster
	Gluconolactone, Sodium Benzoate	0,80	Preservative
	Glycerin	3,00	Humectant
	Xanthan Gum	0,30	Rheology modifier
	Aqua	70,83	Solvent
C	ALPAFLOR® EDELWEISS CB (Leontopodium Alpinum Flower/Leaf Extract, Glycerin, Aqua, Citric Acid)	3,00	Active
	STIMU-TEX® AS (Argania Spinosa Kernel Oil, Tocopherol, Butyrospermum Parkii Butter Extract, Spent Grain Wax)	2,50	Active
	VALVANCE® Touch 210 (Silica)	2,00	Sensory modifier
D	Aqua, Sodium Hydroxide	1,07	pH adjuster

Procedure

1. Mix Phase A and heat up under stirring to 80 °C.
2. Add the Macadamia Seed Oil at the end of the heating phase.
3. Phase B and heat up under stirring to 75 °C.
4. Add Phase A to Phase B under stirring and homogenize 1.5 min at 18'000 rpm.
5. Let cool down and add Phase C under stirring at about 30 °C.
6. Let cool down to room temperature and adjust the pH with Phase D to ± 5.0.

Technical data

pH: 5.02

Viscosity (spindle RV-3/10 rpm): 7180 mPaS

SK-E-102382-1

See disclaimer Guide Formulations

*Calculated according to ISO 16128 by including formulation water
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Soothing Fluid

Helps to calm irritated skin

- This fluid delivers a creamy and smooth texture, providing lasting care for your skin. It delivers maximum hydration and helps to calm irritated skin.
- PENTAVITIN® excellent moisture-retaining capacities by binding to skin, brings dry skin back to life, restores & calms stressed skin, strengthens skin barrier function for a more resilient skin
- STIMU-TEX® AS helps to calm irritated and itchy skin.
- ARGAN OIL has been used for its soothing properties
- HYA-ACT™ M provides immediate hydration and strengthens the protective skin barrier by building a superior protecting film
- Vitamin B12 cryst Food Grade helps relieve sensitive and stressed skin, skin looks more vibrant
- dl-alpha-Tocopheryl Acetate helps the skin defend itself against external aggressions (UVs, pollutants) and to make use of its antioxidant and anti-pollution properties
- Mixed Tocopherols 95 is mostly used to stabilize oxygen-sensitive ingredients in the formulation

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Soothing Fluid

97.5% natural origin content*

	Ingredients	% w/w	Function
A	Aqua	75,25	Solvent
	Caprylyl Glycol	0,20	Preservative
B	Propanediol	2,00	Sensory, Hydration, Active carrier and Preservative booster
	Pentylene Glycol	4,00	Humectant, Co-Preservative
	Xanthan Gum	0,20	Rheology modifier
	HYA-ACT™ M (Sodium Hyaluronate)	0,70	Active
C	Cetearyl Alcohol, Glyceryl Stearate, Jojoba Esters, Helianthus Annuus Seed Cera, Sodium Stearoyl Glutamate, Aqua, Polyglycerin-3	4,00	Emollient
	Glyceryl Behenate	1,50	Thickening agent
	AMPHISOL® K (Potassium Cetyl Phosphate)	0,50	Co-Emulsifier
	STIMU-TEX® AS (Argania Spinosa Kernel Oil, Tocopherol, Butyrospermum Parkii Buttere Xtract, Spent Grain Wax)	2,00	Active
	ARGAN OIL (Argania Spinosa Kernel Oil)	1,00	Active
	Caprylic/Capric Triglyceride	3,00	Emollient
	Isononyl Isononanoate	4,00	Emollient
D	dl-alpha-Tocopheryl Acetate (Tocopheryl Acetate)	0,50	Active
	dl-alpha-Tocopherol (Tocopherol)	0,10	Active
	PENTAVITIN® (Saccharide Isomerate, Aqua, Citric Acid, Sodium Citrate)	0,20	Active
	Vitamin B12 cryst Food Grade (Cyanocobalamin)	0,01	Active
	PARFUM	0,10	Provides olfactive identity
E	CITRIC ACID, AQUA	0,74	pH adjuster

*Calculated according to ISO 16128 by including formulation water
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Procedure

1. Prepare Phase A.
2. Pre-disperse HYA-ACT™ M and Xanthan Gum in glycols under stirring (Phase B).
3. Add Phase B into Phase A and heat up to 85 °C.
4. Prepare Phase C and heat up to 85°C.
5. Add Phase C into Phase A+B and homogenize at 13500 rpm for 2 min.
6. Cool down to 40 °C under stirring.
7. Add ingredients of Phase D one by one into the emulsion.
8. Adjust the pH (5.5) with Phase E if necessary.

Technical data

pH: 5.5
 Viscosity: 5 287 mPaS
 (AR 550 plate 40 mm SST, ST shear rate 10/s 25°C)

SK-E-102146-1
 See disclaimer Guide Formulations

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