

VICHY

LABORATOIRES



MINÉRAL 89 DAILY BOOSTER

2023 COMPENDIUM

20+ STUDIES WORLDWIDE

VICHY'S MOST CLINICALLY TESTED PRODUCT

8 POST-AESTHETICS PROCEDURES INDICATIONS

6 FACIAL DERMATOSES INDICATIONS

MAN AND WOMAN. ALL PHOTOTYPES

TESTED ON ASIAN AND CAUCASIAN POPULATIONS

MINERAL 89 DAILY BOOSTER STUDIES TABLE OF CONTENTS

00 INTRODUCTION (3-7)

1. VICHY MINÉRAL 89 DAILY BOOSTER.
2. SAFETY AND SUSTAINABILITY COMMITMENTS.
3. VICHY'S SKIN EXPOSOME SCIENCE.
4. VICHY VOLCANIC MINERALISING WATER.
5. OVERVIEW OF EFFICACY AND SAFETY TESTS.

01 SKIN STRENGTHENING (8-15) IN VIVO EFFICACY & SAFETY STUDIES

1. **SKIN BARRIER RECOVERY IN CAUCASIAN WOMEN.**
IN VIVO EFFICACY STUDY
2. **SKIN BARRIER RECOVERY IN ASIAN WOMEN.**
IN VIVO EFFICACY STUDY
3. **SKIN BARRIER PROTECTION IN CAUCASIAN AND ASIAN WOMEN.**
IN VIVO EFFICACY STUDY
4. **TONICITY AND FIRMNESS.**
IN VIVO EFFICACY STUDY
5. **HYDRATION.**
IN VIVO EFFICACY STUDY
6. **TEST UNDER DERMATOLOGICAL CONTROL.**
IN VIVO SAFETY STUDY
7. **TEST UNDER OPHTHALMOLOGICAL CONTROL.**
IN VIVO SAFETY STUDY
8. **NON-SENSITISING, NON-IRRITANT.**
IN VIVO SAFETY STUDY

02 BOOSTING ANTI-AGEING (16-22) IN VIVO EFFICACY & CONSUMER PERCEPTION

1. **COSMETOCLINICAL STUDY IN ASIAN SKIN**
IN VIVO EFFICACY STUDY.
2. **COSMETOCLINICAL STUDY IN CAUCASIAN SKIN**
IN VIVO EFFICACY STUDY.
3. **CONSUMER TESTS ON ALL PHOTOTYPES**

03 GLOBAL OBSERVATIONAL STUDY (23-26)

1. **GLOBAL OBSERVATIONAL STUDY**
3400 PATIENTS, 22 COUNTRIES.

04 POST-PROCEDURE PRESCRIPTION (27-31)

1. **GLOBAL OBSERVATIONAL STUDY**
POST-AESTHETIC PROCEDURES SUBGROUP.
2. **IN VIVO POST-PROCEDURE EFFICACY AND TOLERANCE STUDY – COSMETIC MASK.**

05 ROSACEA PRESCRIPTION (32-41)

1. **GLOBAL OBSERVATIONAL STUDY**
ROSACEA, REACTIVE AND SENSITIVE SKIN SUBGROUP.
2. **IN VIVO EFFICACY, TOLERABILITY AND SATISFACTION**
SPLIT-FACE STUDY.
3. **EX VIVO IVERMECTIN PENETRATION STUDY.**



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MINERAL 89 DAILY BOOSTER

**STRENGTHENS SKIN BARRIER FUNCTION
ENHANCES SKIN HYDRATION
IMPROVES SENSITIVE SKIN**



CLINICALLY-PROVEN EFFICACY AS ADJUNCT TO **8** POST PROCEDURES AND **6** FACIAL DERMATOSES. IMPROVEMENT IN: ERYTHEMA - HYDRATION - DESQUAMATION - BURNING - ITCHING - STINGING/TINGLING.

MOST CLINICALLY TESTED PRODUCT, INCLUDING A LARGE OBSERVATIONAL STUDY
3.927 PATIENTS - **20** SCIENTIFIC STUDIES - **325** DERMATOLOGISTS - **22** COUNTRIES.

HIGH TOLERANCE - DAILY USE - CLEAN FORMULA - SUITABLE FOR MEN & WOMEN.

YOUR PATIENTS' FIRST STEP FOR A HEALTHY-LOOKING SKIN

MINERAL 89 DAILY BOOSTER SUSTAINABILITY



CLEAN FORMULA



94% NATURAL ORIGIN INGREDIENT

NO ALCOHOL, NO SILICON, NO FRAGRANCE, NO PHENOXYETHANOL, NO EDTA, NO BHT, NO SULFATE.

ONLY 13 INGREDIENTS

ECO-CONSCIOUS BOTTLE



-23% VIRGIN GLASS REMOVED FROM THE BOTTLE

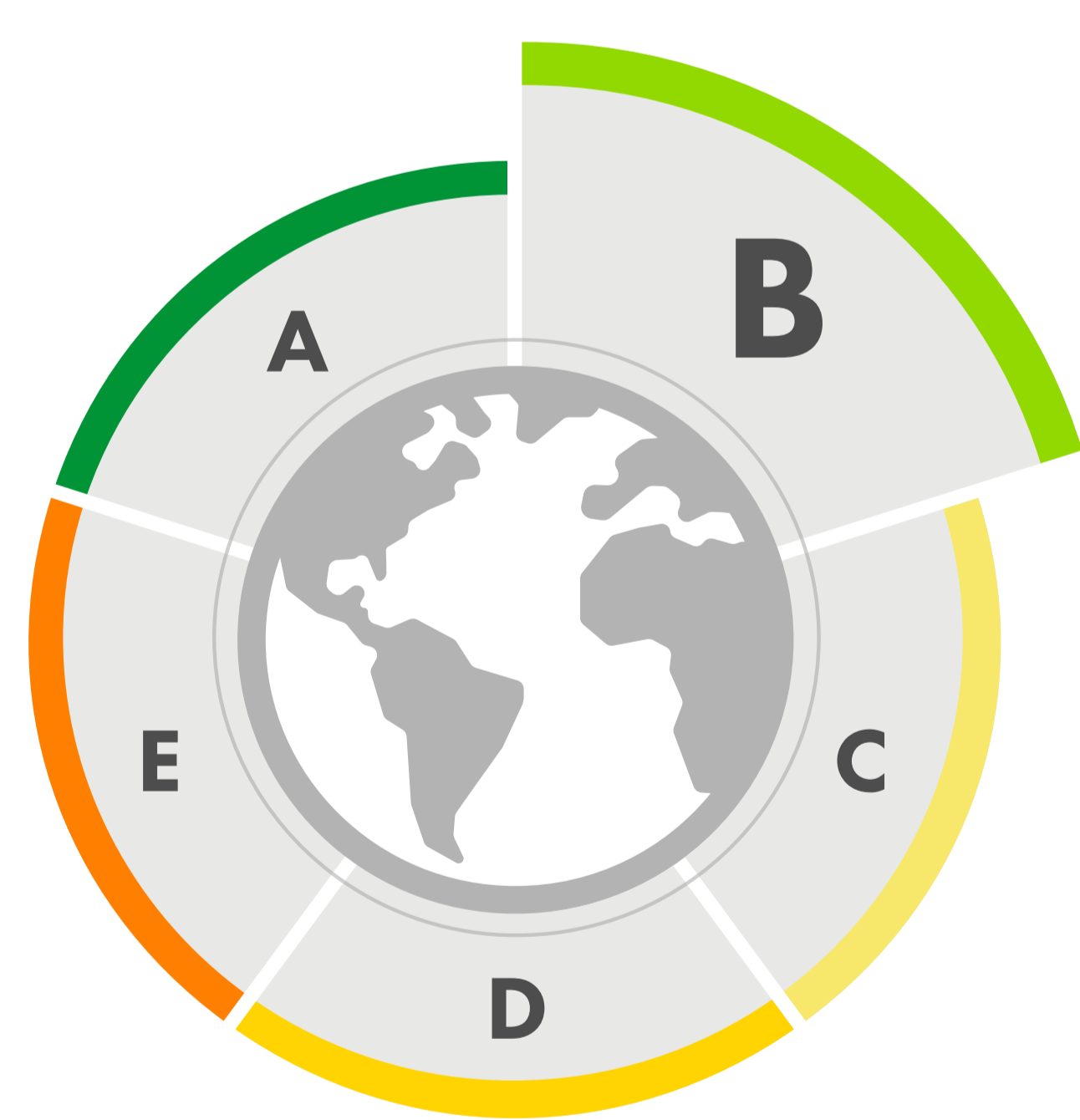
25% RECYCLED GLASS

¼ OF OUR PACKAGING CONTAINS RECYCLED GLASS.

100% RECYCLABLE BOTTLE

OUR GLASS BOTTLE IS FULLY RECYCLABLE.

GLOBAL ENVIRONMENTAL AND SOCIAL IMPACT OF MINÉRAL 89 DAILY BOOSTER*



CARBON FOOTPRINT

8,5 g¹ per use. 119 g for 10 ml.



WATER FOOTPRINT

0,3² per use. 5,4 for 10 ml.



MANUFACTURING CONDITIONS:

MADE IN A RESPONSIBLE FACTORY.

Waste recovery	100%
Renewable energy	>99%

ENVIRONMENTAL IMPACT OF PACKAGING:

Share of FSC™ or PEFC certified paper/ board	100%
Part of bottle made of recycled material³	25%
Recyclable⁴	Yes
Rechargeable ou refillable	No

SOCIAL IMPACT OF PRODUCT

The ingredients and components of this product come from suppliers committed to the UN Core Principles on Working Conditions. 4 suppliers committed to the social inclusion of people from vulnerable communities contributed to the realization of this product.

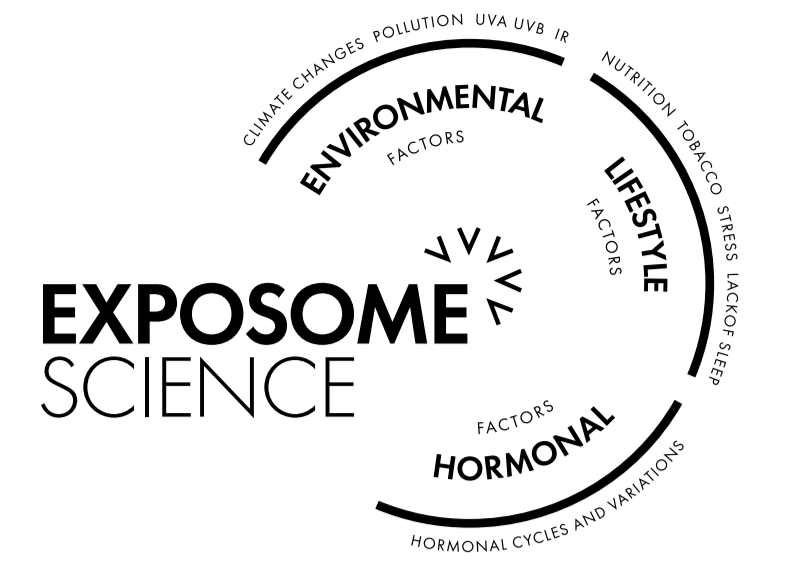
1. Grams of CO2 equivalent (average of the skincare category = 9.8g) 2. Water including impact on quantity (m³) and water quality - average of the facial category = 1.7) 3. Excluding the locking system 4. Sorting instructions may vary locally

EDTA: Ethylenediaminetetraacetic acid; BHT: Butylated hydroxytoluene; FSC: Forest Stewardship Council; PEFC: Programme for the Endorsement of Forest Certification

*Method approved by independent scientific experts and data verified by Bureau Veritas, independent auditor.

VICHY'S SKIN EXPOSOME SCIENCE

40 YEARS OF EXPERTISE & 28 PUBLICATIONS



"THE EXPOSOME IS THE CUMULATIVE MEASURE OF ENVIRONMENTAL INFLUENCES, INCLUDING LIFESTYLE AND BIOLOGICAL RESPONSES ASSOCIATED WITH LIFE."

- DR. CHRISTOPHER WILD, 2005¹

Being the barrier between the body & the external world, skin is the first organ impacted.

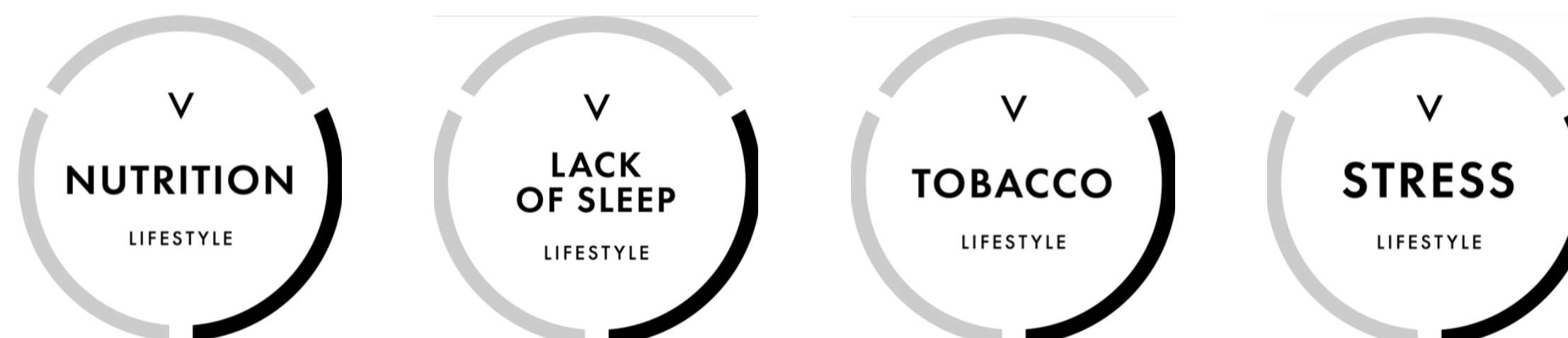
Vichy Laboratories are the first to have studied the scientific data on the impact of exposome on skin aging through a consensus paper "The skin aging exposome"². This consensus paper is the 1st in scientific literature.

EXPOSOME FACTORS

ENVIRONMENTAL FACTORS



LIFESTYLE FACTORS



HORMONAL FACTORS



IMPACT OF THE EXPOSOME ON THE SKIN BARRIER²

BIOLOGICALLY

PHYSICAL BARRIER

- Decrease of corneocyte adhesion
- Alteration of intercellular matrix quality

ANTIMICROBIAL BARRIER

- Imbalance of pH
- Decrease of immune defenses
- Impact of desquamation process

ANTIOXIDANT BARRIER

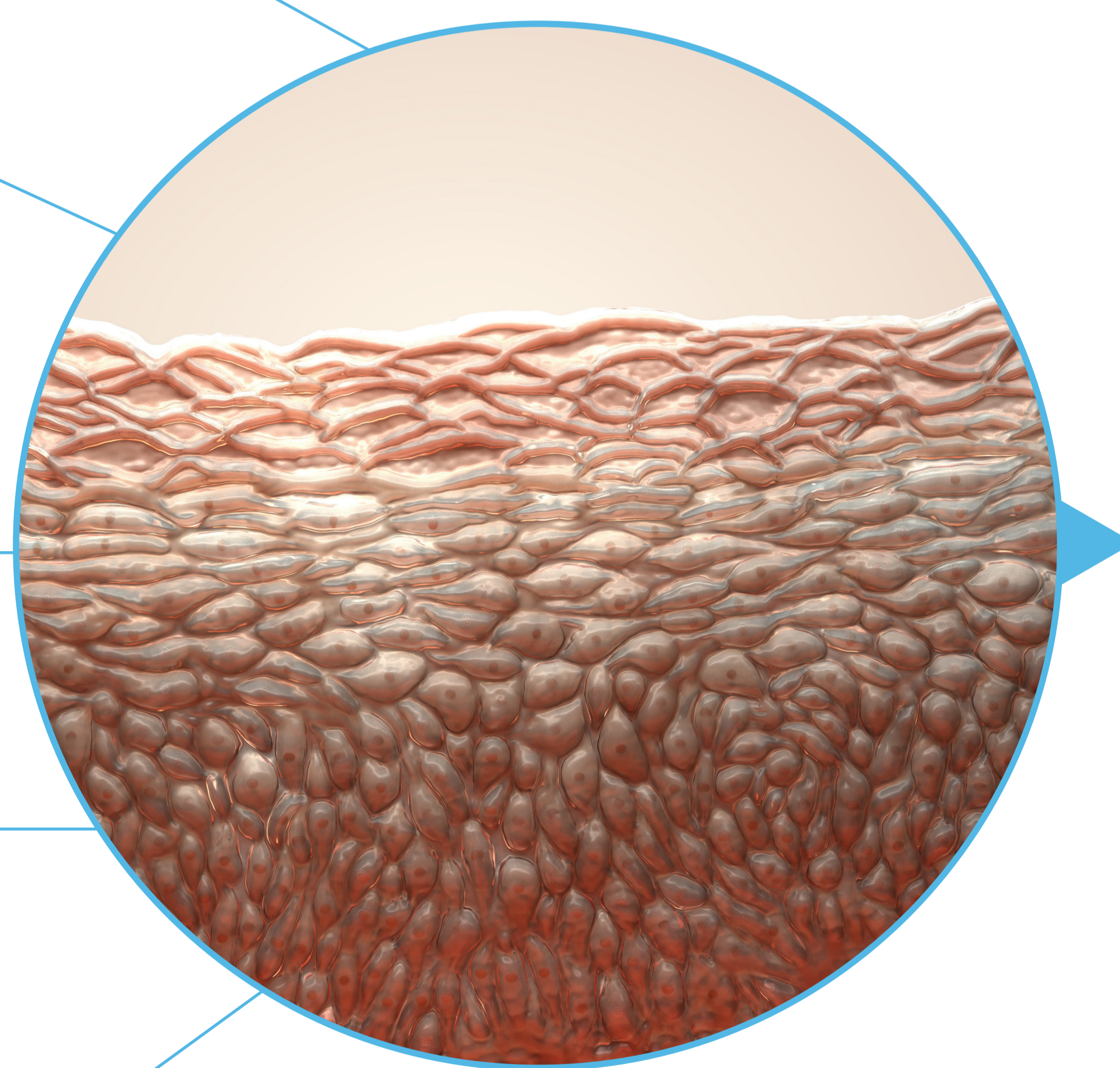
- Overproduction of oxidative stress

HYDRIC BARRIER

- Decrease of NMF components synthesis
- Decrease of cellular adhesion
- Increase of TEWL

PHOTOPROTECTIVE BARRIER

- Decrease epidermis thickness
- Impact on skin integrity
- Decrease of melanocytes number
- Impact on desquamation process



CLINICALLY

DEHYDRATION



REDNESS



INCREASED SENSITIVITY



DULL COMPLEXION



1. Wild, C. Complementing the genome with an "exposome": the outstanding challenge of environmental exposure measurement in molecular epidemiology. *Cancer Epidemiol Biomarkers Prev.* 2005;14(8):1847-1850. 2. Krutmann, J. et al. The skin aging exposome. *J Dermatol Sci.* 2017;85(3):152-161.

VICHY VOLCANIC MINERALIZING WATER

EFFICACY PROVEN IN 20+ STUDIES

STUDIES AND EXPERTISE

MILLION YEARS AGO	1861	1931	FROM 1995 TO 2003	FROM 2003 TO 2017	2018	2019	2020
<ul style="list-style-type: none"> ORIGIN OF THE VICHY VOLCANIC WATER 	<ul style="list-style-type: none"> DECLARATION OF PUBLIC INTEREST: Beneficial health properties recognised by the Academy of Medicine 	<ul style="list-style-type: none"> Dr Haller discovers the healing properties on skin and created Vichy brand 	<ul style="list-style-type: none"> 1st clinical study on pathological skins 1st publication: Effect of Vichy Volcanic Water on catalase activity 2nd publication: Soothing effect of Vichy Volcanic Water after glycolic acid peelings 3rd publication: Effect of Vichy Volcanic Water on inflammation induced by Substance P 	<ul style="list-style-type: none"> 13 scientific studies <ul style="list-style-type: none"> - TEWL - Transcriptomic - Skin regeneration - Skin sensitivity - Skin tolerance - Skin comfort, etc. More than 250 women involved 	<ul style="list-style-type: none"> 4th publication Vichy Volcanic Water and skin ageing exposome 	<ul style="list-style-type: none"> 3 scientific studies <ul style="list-style-type: none"> - Keratinocytes differentiation (Tgk, filaggrin, involucrin), and Tight junctions (claudin-1 and ZO-1) - Skin barrier recovery versus Avène - Soothing sensitive skin + hydration 	<ul style="list-style-type: none"> Vichy Volcanic Water alone + in association with Vichy Volcanic probiotic extract <ul style="list-style-type: none"> - Protection of Langerhans cells after UV exposure - AMP synthesis - Regulation of the immune response to inflammation: IL8/IL10 - Phagocytose - Migration: recruitment of PNM 5th publication: Vichy Volcanic Water strengthens the skin

HIGH MINERALITY

MINERAL	COMPOSITION	ACTION
Hydrogenocarbonates	4,818.6 mg/l	Buffer effect
Boron	970 µg/l	Healing
Calcium	165.6 mg/l	Protection
Iron	810 µg/l	Cells oxygenation
Fluorine	7.7 mg/l	Antioxidant
Lithium	5.2 mg/l	Anti-inflammatory
Magnesium	12.1 mg/l	Stimulates regeneration

Manganese	200 µg/l	Antioxidant
Orthophosphates	210 µg/l	Energy synthesis
Potassium	103.6 mg/l	Skin hydration
Silicon	11.8 mg/l	Stimulates regeneration
Sodium	1,862.9 mg/l	Regulation of cells hydration
Strontium	1.6 mg/l	Anti-inflammatory
Sulphur	182.4 mg/l	Organism detoxification
Ammonium	390 µg/l	Amino-acids synthesis

SKIN BARRIER STRENGTHNER

STIMULATES KERATINOCYTE DIFFERENTIATION MARKERS ¹	STIMULATES TIGHT JUNCTION PROTEIN SYNTHESIS ²	REDUCES TRANSEPIDERMAL WATER LOSS (TEWL) ²
<p>Transglutaminase, filaggrin and involucrin</p> <p>Control epidermis Epidermis treated with Vichy Volcanic Mineralizing Water</p> <p>Increased expression of Filaggrin, a keratinocyte differentiation marker</p>	<p>Claudin-1, Zonula Occludens-1 [POSTER EADV 2020]</p> <p>A.U. (%)</p> <p>Claudin -1 Zonula Occludens -1</p> <p>Before treatment After treatment</p>	<p>Skin barrier repair efficacy vs competitor [POSTER AAD 2020]</p> <p>g/hm²</p> <p>T0 T1 T2 T3 T4 T5 T6</p> <p>SLS Application</p> <p>VICHY Competitor Untreated area</p>

REGENERATES SKIN INTEGRITY - REPAIRS AND ACCELERATES SKIN RECOVERY - STRENGTHENS ANTIOXIDANT DEFENSES - SOOTHES

SCIENTIFIC STUDIES 16	SCIENTIFIC PUBLICATIONS 4	SCIENTIFIC POSTERS 6
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1. Nielsen, M. et al. Vichy Volcanic Mineralizing Water stimulates epidermal keratinocyte differentiation and tight junction synthesis. Poster at EADV 2020. 2. Berardesca, E. et al. Effectiveness of mineralizing water in skin barrier recovery after skin irritation. Poster at AAD 2020.

MINERAL 89 DAILY BOOSTER

IN VIVO EFFICACY & SAFETY TESTS

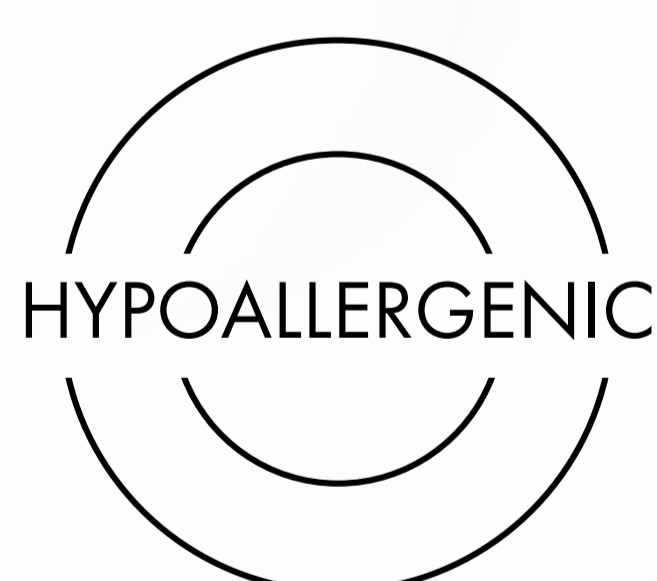
EFFICACY TESTS

TESTS CONDUCTED	RESULTS
Corneometer (Caucasian & Asian skin)	THE FORMULA HAS A MOISTURISING EFFECT DURING 24 HOURS
Comparative hydration vs Vichy Water	STATISTICALLY SIGNIFICANT INCREASE OF THE MOISTURISING EFFECT
Dermal Torquemeter (Caucasian skin)	SKIN TONICITY AND FIRMNESS ARE IMPROVED
TEWL Trans-epidermal water loss - Skin barrier function (Caucasian & Asian skin)	THE PROTECTIVE EFFECT OF THE SKIN BARRIER IS IMPROVED
TEWL after stripping - Skin barrier recovery (Asian skin)	SKIN BARRIER RECOVERY IS IMPROVED
Skin barrier recovery – Skin barrier function – Caucasian skin	M89 SIGNIFICANTLY HELPS TO RESTORE THE SKIN BARRIER FROM THIRD DAY AFTER DAMAGE
Cosmetoclinical test (Caucasian skin)	REFINED SKIN TEXTURE, REVITALISED, TONED, AND HEALTHIER-LOOKING SKIN AFTER 4 WEEKS
Cosmetoclinical test with exposome questionnaire (Asian skin)	IMPROVED RADIANCE, IMPROVED HOMOGENEITY, PLUMP AND SKIN SMOOTHNESS AFTER 4 WEEKS
Consumer test (All phototypes and multi-gender)	HEALTHY-LOOKING, COMFORTABLE AND SOFTER SKIN AFTER 4 WEEKS

SAFETY TESTS



TESTED UNDER
DERMATOLOGICAL CONTROL



HYPOALLERGENIC
(HRIPT: HUMAN REPEAT INSULT PATCH TEST)



TESTED UNDER
OPHTHALMOLOGICAL CONTROL



NON COMEDOGENIC



TESTED ON
SENSITIVE SKIN



MINÉRAL 89 DAILY BOOSTER

VICHY'S #1 MOST CLINICALLY TESTED PRODUCT

3.927 PATIENTS | 20 SCIENTIFIC STUDIES | 325 DERMATOLOGISTS | 22 COUNTRIES
6 FACIAL DERMATOSES | 8 AESTHETIC PROCEDURES | ALL PHOTOTYPES | MEN & WOMEN

In vivo efficacy & safety studies in **Asian and Caucasian populations** showing **skin barrier strengthening, hydration efficacy** and **protection against exposome factors** with **highest safety standards**¹⁻⁹

TESTED EFFICACY AND SAFETY

CONCLUSIONS

SKIN BARRIER

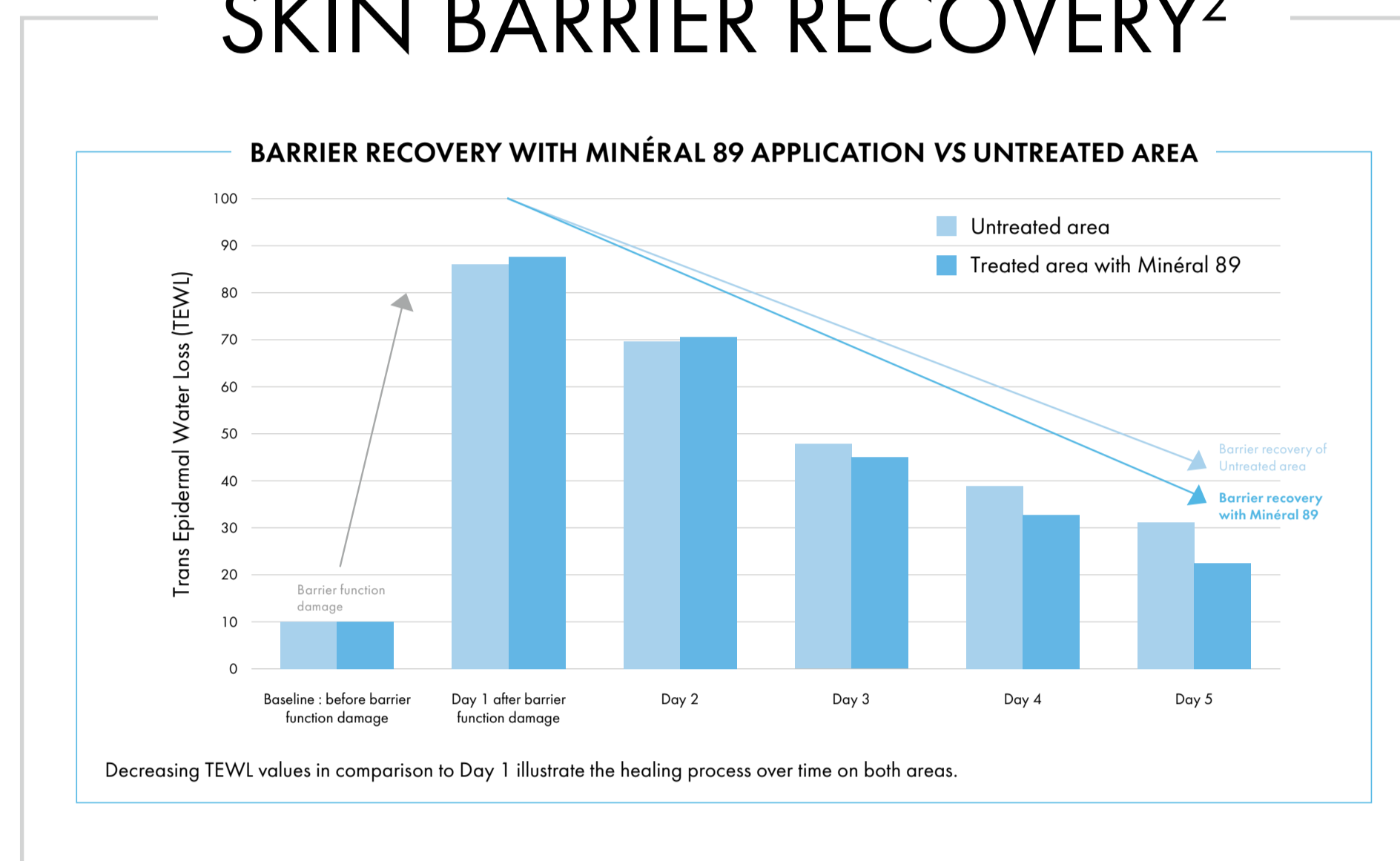
SKIN BARRIER RECOVERY

- CAUCASIAN WOMEN¹ (N = 21)
- ASIAN WOMEN² (N = 24)

SKIN BARRIER PROTECTION

- CAUCASIAN WOMEN³ (N = 22)
- ASIAN WOMEN³ (N = 24)

SKIN BARRIER RECOVERY²



SKIN BARRIER PROTECTION³

TEWL REDUCTION BY

14.51%³

TONICITY, HYDRATION, FIRMNESS

TONICITY & FIRMNESS

N = 40 WOMEN⁴

HYDRATION

N = 24 WOMEN⁵

TONICITY IMPROVED BY

11.4%
TREATED VS
UNTREATED AREA⁴

LONG LASTING HYDRATION

1 TO 24H
AFTER ONE SINGLE
APPLICATION^{4,5}

SAFETY

CLINICALLY-PROVEN SAFETY ON

210 SUBJECTS⁶⁻⁸



**NON-SENSITISING
NON-IRRITANT⁹**



1. In vivo efficacy study – skin barrier recovery: 21 Caucasian women applied MINÉRAL 89 DAILY BOOSTER twice a day on inner forearms during 5 days and skin barrier recovery after damage induced by stripping was measured vs an untreated area. **2.** In vivo efficacy study – skin barrier recovery: 24 Asian women applied MINÉRAL 89 DAILY BOOSTER in one single application on inner forearms and skin barrier recovery after damage induced by stripping was measured vs an untreated area. **3.** In vivo efficacy study – skin barrier protection 24 Caucasian and 24 Asian women applied MINÉRAL 89 DAILY BOOSTER in one single application on inner forearms and skin barrier protection was measured vs an untreated area. **4.** In vivo efficacy study – tonicity and firmness: 40 women applied MINÉRAL 89 DAILY BOOSTER in one single application on inner forearms and tonicity, and firmness were measured vs an untreated area. **5.** In vivo efficacy study - hydration: 24 women applied MINÉRAL 89 DAILY BOOSTER in one single application on inner forearm and hydration was measured vs an untreated area. **6.** In vivo safety study – test under dermatological control: 53 women with sensitive skin applied MINÉRAL 89 DAILY BOOSTER twice a day on face, eyes and lips. **7.** In vivo safety study – test under ophthalmological control: 50 women with sensitive skin, 20 sensitive eyes, 20 normal eyes and 10 lens contact wearers, applied MINÉRAL 89 DAILY BOOSTER twice a day on face, eyes and lips. **8.** In vivo safety study - human repeat insult patch test: 107 healthy subjects applied MINÉRAL 89 DAILY BOOSTER on the back during 6 weeks.



MINERAL 89 DAILY BOOSTER

IN VIVO EFFICACY TESTS

SKIN BARRIER RECOVERY IN CAUCASIAN WOMEN

SUBJECTS

21 (Caucasian women, 35 – 65 years old)

EVALUATION METHOD

Trans epidermal water loss (tewametry)

USE

The product was applied **twice a day in the morning and in the evening** on the inner side of one volar forearm **during 5 days** according to a left right randomisation. The other forearm was left untreated.

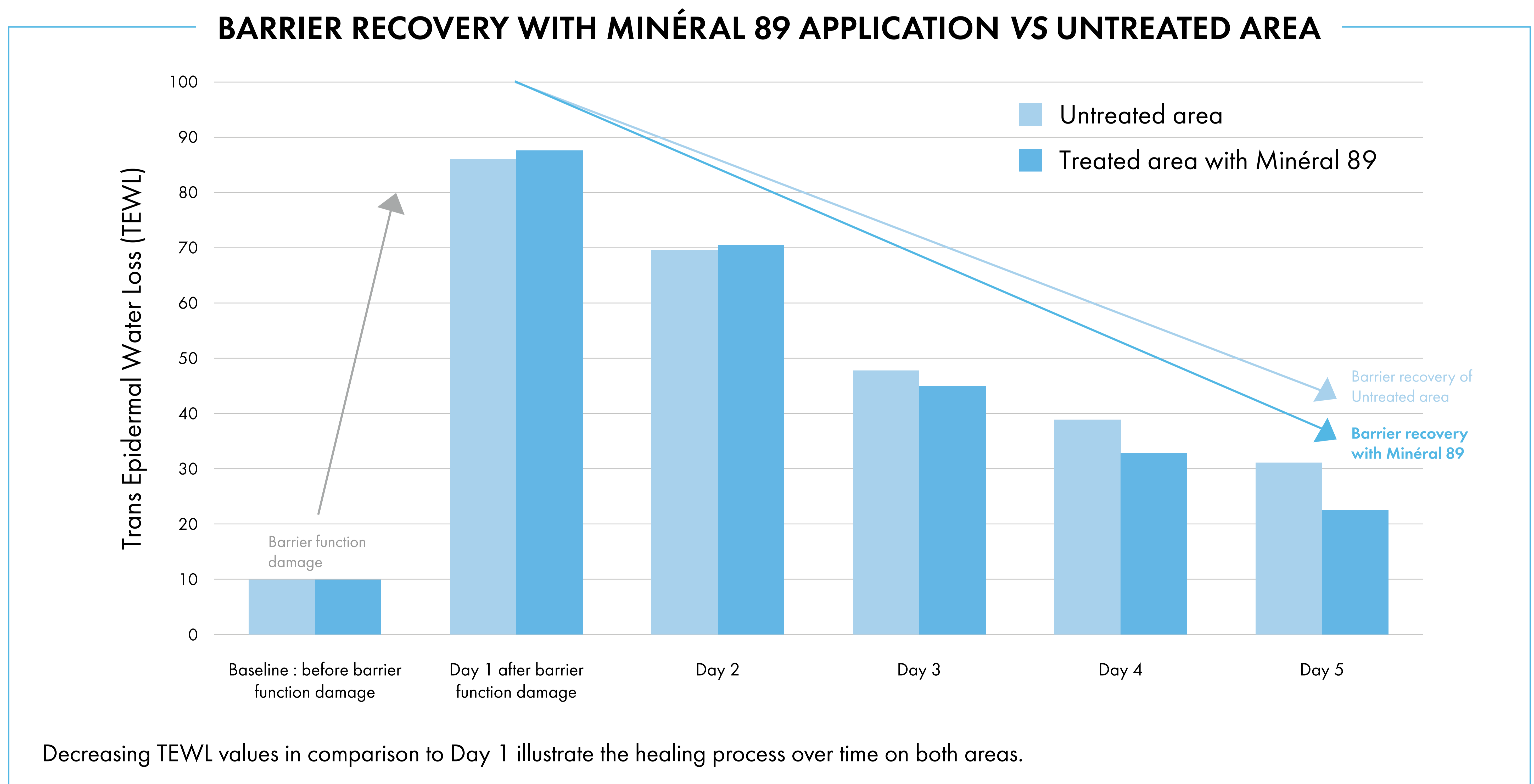
BARRIER FUNCTION DAMAGE BY TAPE STRIPPING WITH D-SQUAMES

Barrier tape stripping was **performed on both test areas** (treated and untreated). The D-squames were shortly stuck to the skin and removed. This was repeated until stratum lucidum becomes visible (10 to 20 tapes, depending on the individual condition of skin).

TIME EVALUATION

The assessments were done on **D1 before and after barrier function damage** and on **D2, D3, D4 and D5**.

RESULTS



MINÉRAL 89 DAILY BOOSTER SHOWS SKIN BARRIER REPAIR EFFECACY IN CAUCASIAN WOMEN,

with a statistically significant contribution to **restore the skin barrier** from **Day 3** after damage induced by stripping compared to the untreated area.

MINERAL 89 DAILY BOOSTER

IN VIVO EFFICACY TESTS

SKIN BARRIER RECOVERY IN ASIAN WOMEN

SUBJECTS

24 (Asian women, from 18 to 65 years old) with a TEWL value $\geq 6 \text{ g/m}^2\text{h}$ on the anterior side of the forearms before stripping, and with a TEWL value $\geq 20 \text{ g/m}^2\text{h}$ on the anterior side of the forearms after stripping.

EVALUATION METHOD

Tewameter at T0 before stripping (T0), T0 after stripping (Tstripping), T1h, T2h, T4h and T6h after application of the product post-stripping.)

RESULTS

- **Mean % change from baseline post-tape strip** = $(T_n - T_{\text{stripping}}) / T_{\text{stripping}} \times 100$
- **% Recovery** = $((T_n - T_{\text{stripping}}) / (T_{\text{stripping}} - T_0)) \times 100$
- **% Natural recovery improvement** = $(\% \text{ Recovery treated} - \% \text{ Recovery untreated}) / (\% \text{ Recovery untreated})$

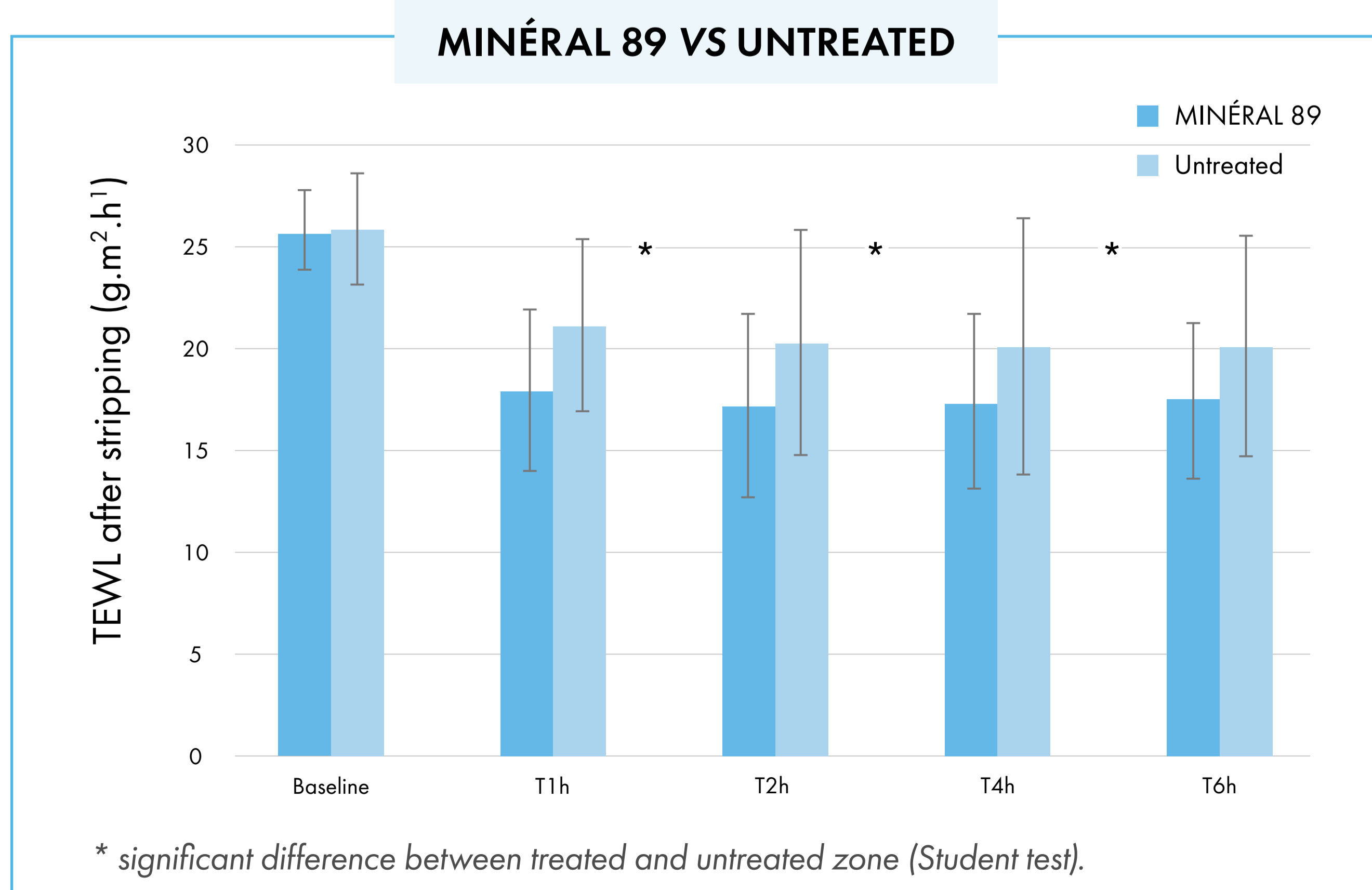
USE

One standard application (2mg/cm²)

TIME EVALUATION

T0-T1H

N=24	Site	Mean (± SD)	Mean Change from baseline post- stripping (± SD)	Mean % Change from baseline post- stripping p-value (from Baseline post-stripping)	Significance (Mean Change Treated VS Untreated)	% Recovery	% Natural recovery improvement
Baseline	M89 (pre- stripping)	8,8 ± 2,6 NS (p=0,1030)					
	Untreated (pre- stripping)	8,4 ± 2,2					
	M89 (post- stripping)	21,7 ± 1,7					
	Untreated (post- stripping)	NS (p=0,7937) 21,8 ± 2,3					
1 hour	M89	15,1 ± 3,3	-6,6 ± 2,6	-30,4%	S (p<0,0001)	-51,4%	71,1%
	Untreated	17,8 ± 3,5	-4,0 ± 2,9	-18,5%		-30,0%	
2 hours	M89	14,5 ± 3,8	-7,2 ± 3,0	-33,0%	S (p<0,0001)	-55,7%	61,0%
	Untreated	17,1 ± 4,6	-4,6 ± 3,6	21,3%		-34,6%	
4 hours	M89	14,6 ± 3,6	-7,1 ± 3,1	-32,7%	S (p=0,0056)	-55,2%	51,4%
	Untreated	16,9 ± 5,3	-4,9 ± 4,2	-22,5%		-36,5%	
6 hours	M89	14,7 ± 3,2	-7,0 ± 2,7	-32,3%	S (p=0,0038)	-54,6%	52,9%
	Untreated	17,0 ± 4,5	-4,8 ± 3,7	-22,0%		-35,7%	



MINÉRAL 89 DAILY BOOSTER SHOWS SKIN BARRIER REPAIR EFFICACY IN ASIAN POPULATION,

with a statistically significant reduction in TEWL after forearm stripping, compared to an untreated area, **1H after a single application.**

MINERAL 89 DAILY BOOSTER

IN VIVO EFFICACY TESTS

SKIN BARRIER PROTECTION IN CAUCASIAN AND ASIAN WOMEN

CAUCASIAN WOMEN

SUBJECTS

24 (CAUCASIAN WOMEN, 18 – 65 YEARS OLD)

EVALUATION METHOD

TRANS EPIDERMAL WATER LOSS (TEWAMETRY)

USE

SINGLE APPLICATION ON ONE FOREARM VERSUS AN UNTREATED AREA

TIME EVALUATION

T0-T1H

RESULTS

TEWL	T1 hour – T0
% evolution treated area versus untreated area	-10.1% (S)

ASIAN WOMEN

SUBJECTS

24 (ASIAN WOMEN, 18 – 65 YEARS OLD) WITH A TEWL VALUE ≥ 6 G/M²/H ON THE ANTERIOR SIDE OF THE FOREARMS

EVALUATION METHOD

TRANS EPIDERMAL WATER LOSS (TEWAMETRY)

USE

SINGLE APPLICATION ON ONE FOREARM VERSUS AN UNTREATED AREA (2 MG/CM²)

TIME EVALUATION

T0-T1H

RESULTS

TEWL	T1 hour – T0
% evolution treated area versus untreated area	-14.51% (S)



MINÉRAL 89 DAILY BOOSTER PROTECTS SKIN BARRIER FUNCTION IN ASIAN AND CAUCASIAN POPULATION,

with a statistically significant reduction in TEWL **1H** after a **single application**:

- 10.1% vs untreated area – in Caucasian women
- 14.5% vs untreated area – in Asian women

In vivo efficacy study – skin barrier protection 24 Caucasian and 24 Asian women applied MINÉRAL 89 DAILY BOOSTER in one single application on inner forearms and skin barrier protection was measured vs an untreated area.

MINERAL 89 DAILY BOOSTER

IN VIVO EFFICACY TESTS

TONICITY AND FIRMNESS

SUBJECTS

40 (Caucasian women, presenting problems of cutaneous tonicity, 40-65 years old)

EVALUATION METHOD

Dermal **torquemeter**. Analysed parameters: Immediate tonicity (Ur); Elasticity/Firmness (Ur/Ue).

USE

Single application on inner forearms versus untreated site.

TIME EVALUATION

T0-T4H

RESULTS

DTM	Tone Ur	Elasticity/firmness Ur/Ue
Treated area non treated comparison % relative difference	11.4 % (S)	7.0 % (S)



MINÉRAL 89 DAILY BOOSTER SIGNIFICANTLY IMPROVES TONICITY AND FIRMNESS,

with a statistically significant improvement of the biomechanical properties of the skin, compared to an untreated area, **4H** after **a single application.**

In vivo efficacy study – tonicity and firmness: 40 women applied MINÉRAL 89 DAILY BOOSTER in one single application on inner forearms and tonicity, extensibility and firmness were measured vs an untreated area

MINERAL 89 DAILY BOOSTER

IN VIVO EFFICACY TESTS

HYDRATION

SUBJECTS

24 (women, 18 – 65 years old)

EVALUATION METHOD

Hydration measurements with Corneometer® CM 825 PC

USE

Single application on inner forearms versus an untreated area

TIME EVALUATION

T0-T4H-T8H-24H

RESULTS

Hydration	T4 hours - T0	T8 hours - T0	T24 hours - T0
Mean percentage of improvement	+24.3 % (S)	+21.3% (S)	+8.9% (S)

MINÉRAL 89 DAILY BOOSTER HAS A RAPID MOISTURISING EFFICACY

statistically significant on the upper layers of the epidermis, at **4H, 8H and 24H** after **a single application**.

COMPARATIVE HYDRATION VS VICHY WATER

SUBJECTS

24 (women, 18 – 65 years old)

EVALUATION METHOD

Hydration measurements with Corneometer® CM 825 PC

USE

Single application on inner forearms versus an untreated area

TIME EVALUATION

T0-T1H

RESULTS

Hydration	T1 hour - T0
MINÉRAL 89	+15.1% (S) vs control
Vichy water	-3.5% (S) vs control
Hydration M89 vs Vichy Water	+18.6%

MINÉRAL 89 DAILY BOOSTER HAS AN IMMEDIATE MOISTURISING EFFECT, 18.6% MORE POWERFUL VS VICHY WATER ALONE,

with a statistically significant increase **1H** after **a single application**.

MINERAL 89 DAILY BOOSTER

IN VIVO EFFICACY TESTS

USE TEST UNDER DERMATOLOGICAL CONTROL¹

SUBJECTS

53 Chinese women, 26-62 years old, all skin types, 100% sensitive skin.

DURATION OF THE TEST

4 weeks

USE

Twice a day, in the morning, on face, eyes and lips

RESULTS

THE FORMULA IS VERY WELL TOLERATED.

USE TEST UNDER OPHTHALMOLOGICAL CONTROL²

SUBJECTS

50 Caucasian women, 18-65 years old, all skin types, 100% sensitive skin, 20 sensitive eyes, 20 normal eyes, 10 lens contact wearers.

DURATION OF THE TEST

4 weeks

USE

Twice a day, in the morning, on face, eyes and lips

RESULTS

THE FORMULA IS WELL TOLERATED.

HRIPT: HUMAN REPEAT INSULT PATCH TEST³

SUBJECTS

107 healthy subjects. Zone of application: back.

DURATION OF THE TEST

6 weeks

RESULTS

THE FORMULA IS NON-SENSITISING NON-IRRITANT.

MINÉRAL 89 DAILY BOOSTER
HAS A CLINICALLY-PROVEN SAFETY,
tested under dermatological and ophthalmological control
on 210 healthy volunteers, including subjects with sensitive skin.

1. In vivo safety study – test under dermatological control: 53 women with sensitive skin applied MINÉRAL 89 DAILY BOOSTER twice a day on face, eyes and lips.

2. In vivo safety study – test under ophthalmological control: 50 women with sensitive skin, 20 sensitive eyes, 20 normal eyes and 10 lens contact wearers, applied MINÉRAL 89 DAILY BOOSTER twice a day on face, eyes and lips.

3. In vivo safety study - human repeat insult patch test: 107 healthy subjects applied MINÉRAL 89 DAILY BOOSTER on the back during 6 weeks.



MINÉRAL 89 DAILY BOOSTER

VICHY'S #1 MOST CLINICALLY TESTED PRODUCT

3.927 PATIENTS | 20 SCIENTIFIC STUDIES | 325 DERMATOLOGISTS | 22 COUNTRIES
6 FACIAL DERMATOSES | 8 AESTHETIC PROCEDURES | ALL PHOTOTYPES | MEN & WOMEN

In vivo efficacy studies showing **boosting anti-ageing benefits** in **Caucasian** and **Asian** women and subjects of all phototypes¹⁻³

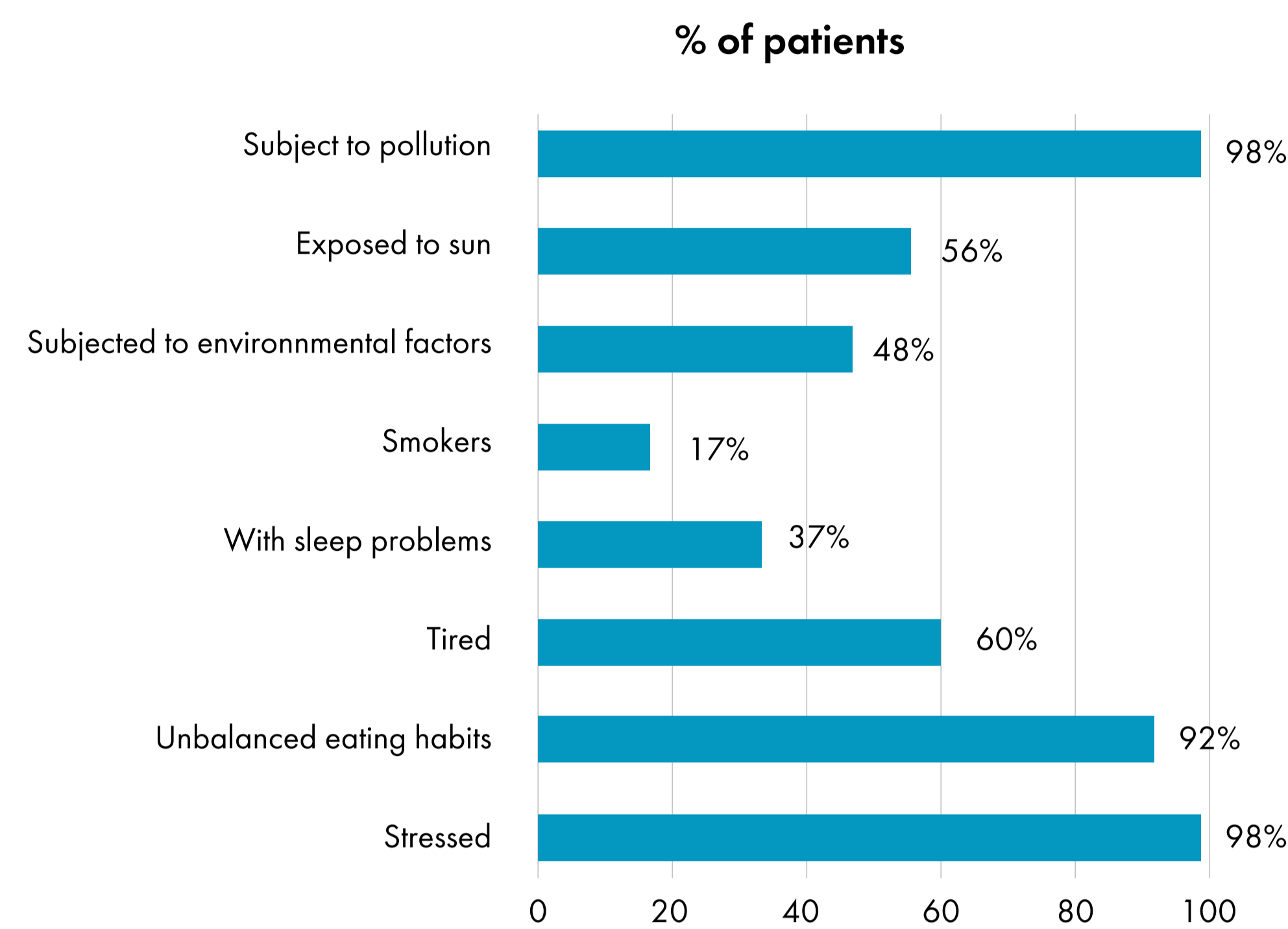
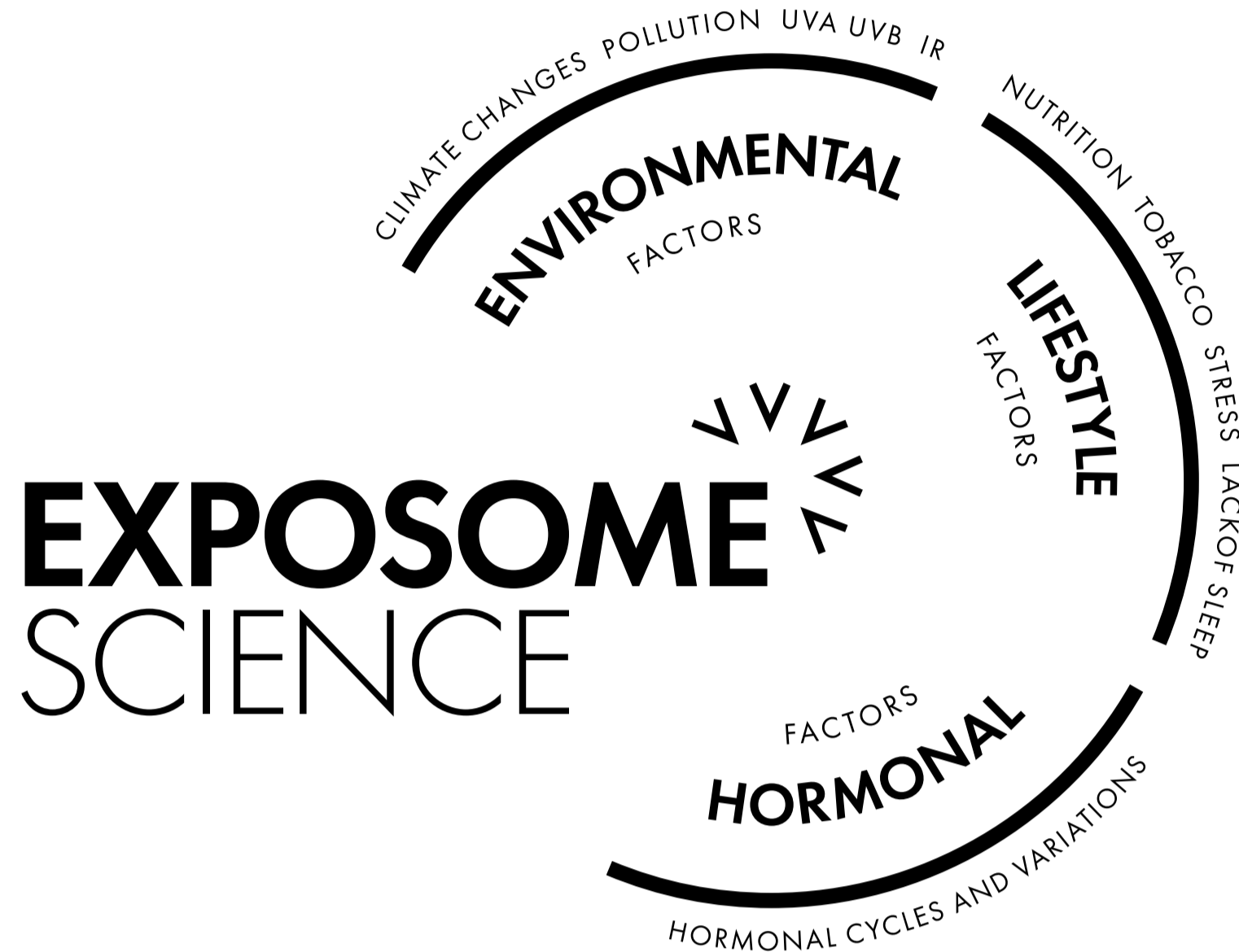
TESTED EFFICACY

2 COSMETOCLINICAL TESTS

52 ASIAN¹ & 48 CAUCASIAN WOMEN² WITH SENSITIVE SKIN

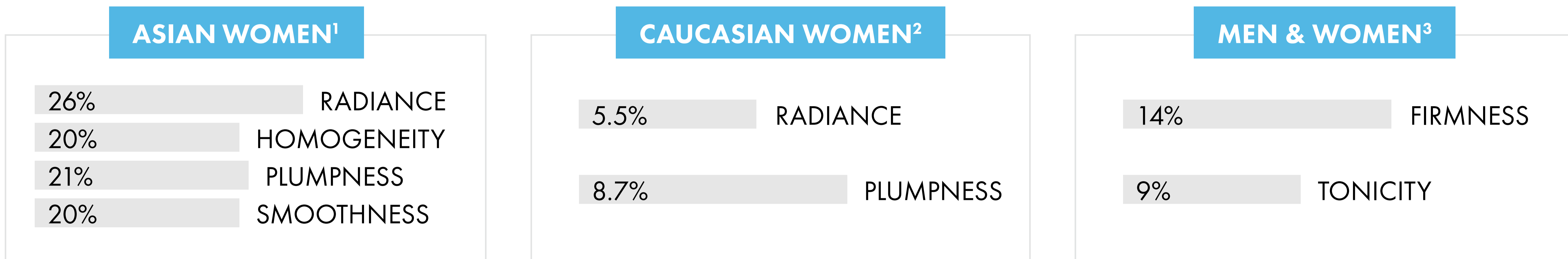
1 CONSUMER TEST

159 SUBJECTS, MEN AND WOMEN, ALL PHOTOTYPES³



CONCLUSIONS

SIGNIFICANT IMPROVEMENT AFTER 4 WEEKS



HIGH SUBJECTS SATISFACTION

100% PLEASANT PRODUCT

ASIAN WOMEN¹

85% SENSATION OF FRESHNESS

CAUCASIAN WOMEN²

94% INVISIBLE ON SKIN

MEN & WOMEN³

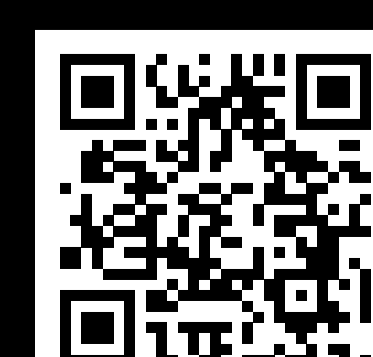
1. In vivo efficacy study – cosmetoclinic asian skin: 52 Chinese women applied MINÉRAL 89 DAILY BOOSTER twice daily on face, eyes and lips contour, during 4 weeks. Evaluation was performed by dermatologist at D0 and D28 and through self-assessment after 1st application, at 1 week and 4 weeks.

2. In vivo efficacy study – cosmetoclinic caucasian skin: 48 Caucasian women applied MINÉRAL 89 DAILY BOOSTER twice daily on face, eyes and lips contour, during 4 weeks. Evaluation was performed by dermatologist and through self-assessment at baseline and after 4 weeks.

3. Consumer tests on all phototypes: 159 patients (120 women and 39 men) applied MINÉRAL 89 DAILY BOOSTER twice daily on face, eyes and lips contour, during 4 weeks. Evaluation was performed through self-assessment immediately after 1st application, and after 7, 21 and 28 days.



MINÉRAL 89 DAILY BOOSTER



MINERAL 89 DAILY BOOSTER

IN VIVO EFFICACY TESTS

COSMETOCLINIC ASIAN SKIN (1/3)

OBJECTIVE

Evaluate the efficacy of MINÉRAL 89 by a cosmetoclinical test under dermatological control on Asian women with sensitive skin after repeated application (twice a day on the face) during 4 weeks.

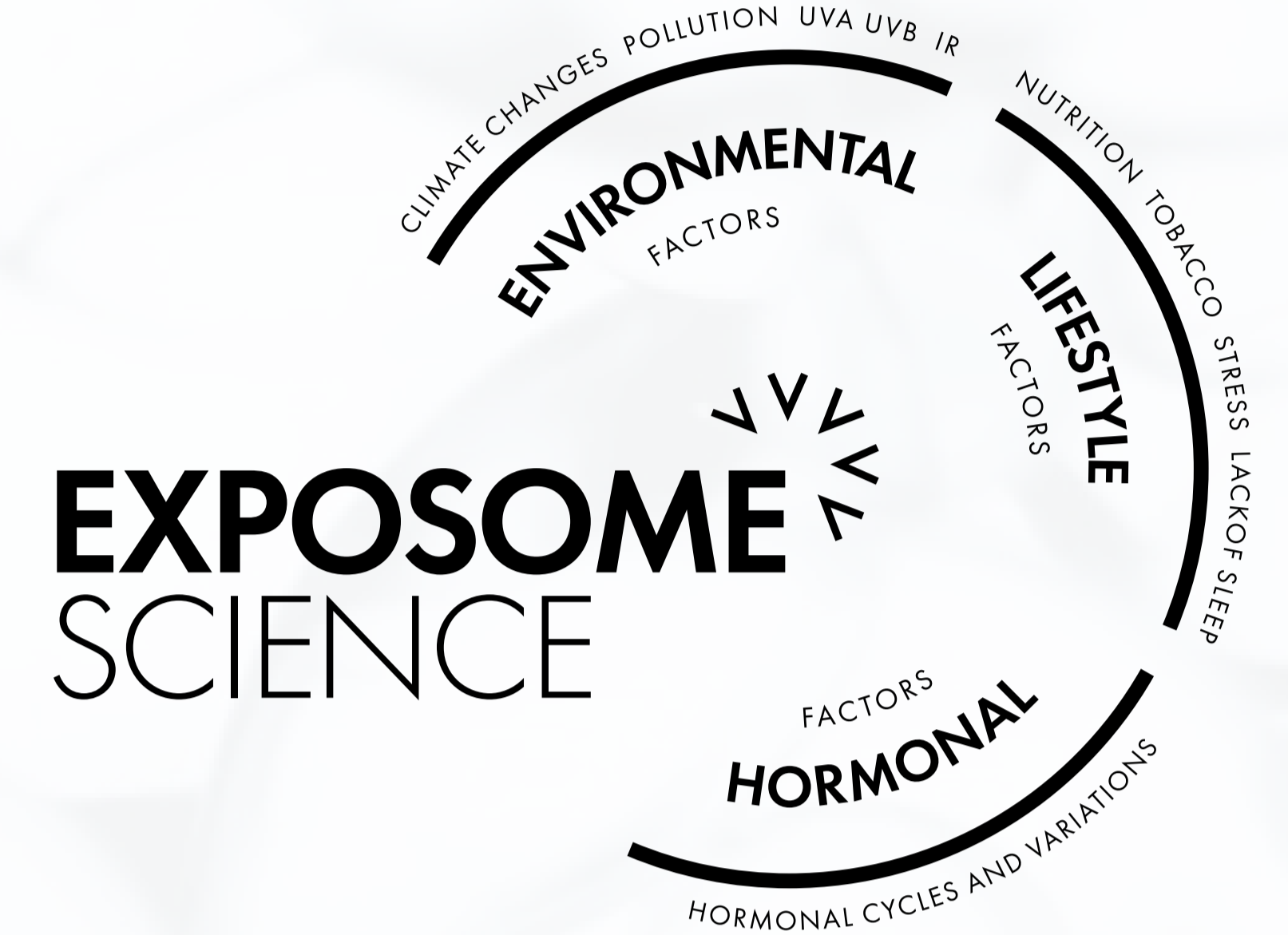
SUBJECTS

52 Chinese women, 26-62 years old, with all skin type presenting a sensitive skin (declarative) and:

- A dull complexion (grade ≥ 4 on a 10-point scale)
- A non-homogeneous complexion (grade ≥ 4 on a 10-point scale)
- A lack of plumpness (grade ≥ 4 on a 10-point scale)
- A lack of smoothness (grade ≥ 4 on a 10-point scale)

EXPOSOME QUESTIONNAIRE (big and bold like other titles) - with blue line on the left side

- 98% were subjected to pollution
- 98% felt stressed
- 92% eating habits were not balanced
- 60% felt tired
- 56% exposed to sun
- 48% subjected to environmental factors
- 37% had sleep problems
- 17% were smokers



PROTOCOL

The product was applied twice a day (morning and evening) on the cleansed and dried face skin (eyes and lips contour included) by slight massages until complete penetration, before their usual essence and/or care products during 4 weeks.

EVALUATION

- Specific questionnaire for the inclusion on D0
- Clinical scoring by the dermatologist of the radiance and homogeneity of the complexion, and of the smoothness and plumpness of skin on D0 and D28 days
- Self-assessments according to 5 points questionnaires (agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree) immediately after the 1st application of the product, at T1 week and T4 weeks.

RESULTS

Clinical evaluation by the dermatologist investigator:

	Variation percentage (vs initial values)
DULL COMPLEXION	-26%
NON-HOMOGENEOUS COMPLEXION	-20%
LACK OF PLUMPNESS	-21%
LACK OF SMOOTHNESS	-20%

MINÉRAL 89 DAILY BOOSTER
IMPROVES RADIANCE,
HOMOGENEITY, SMOOTHNESS AND
PLUMPED ASPECT OF THE SKIN,

with statistically significant results after **4 weeks**.



In vivo efficacy study – cosmetoclinic Asian skin: 52 Chinese women applied MINÉRAL 89 DAILY BOOSTER twice daily on face, eyes and lips contour, during 4 weeks. Evaluation was performed by dermatologist at D0 and D28 and through self-assessment after 1st application, at 1 week and 4 weeks.

MINERAL 89 DAILY BOOSTER

IN VIVO EFFICACY TESTS

COSMETOCLINIC ASIAN SKIN (2/3)

I SELF-ASSESSMENTS ACCORDING TO AN EFFICACY QUESTIONNAIRE

EFFICACY (5 POINT SCALE - ANSWERS GIVEN BY "SOMEWHAT AGREE" TO "AGREE") N=52	TIMM*	D28
The skin seems more luminous	75%	94%
The skin seems smoother	85%	92%
Eyes contours skin feels more hydrated	83%	92%
The product gives a sensation of freshness upon application	85%	90%
The skin seems softer	77%	88%
Eyes contours skin appears suppler	77%	88%
The skin seems healthier	81%	87%
This product helps to prepare the skin to usual routine	81%	87%
The skin look more translucent	77%	87%
The skin seems moisturized as watery	85%	81%
The skin seems suppler	71%	81%

MINÉRAL 89 DAILY BOOSTER'S
IS PERCEIVED EFFICACEOUS IMMEDIATELY AND 28 DAYS AFTER USE,
as they report a high percentage of satisfaction with the effect on their skin:

PREPARES SKIN FOR USUAL ROUTINE HEALTHIER
CLEARER **SMOOTHER** FRESHNESS SENSATION
 MORE LUMINOUS MORE TRANSLUCENT
 EYES CONTOURS FEEL **MORE HYDRATED**

Timm* : immediately after the 1st application of the product

In vivo efficacy study – cosmetoclinic Asian skin: 52 Chinese women applied MINÉRAL 89 DAILY BOOSTER twice daily on face, eyes and lips contour, during 4 weeks. Evaluation was performed by dermatologist at D0 and D28 and through self-assessment after 1st application, at 1 week and 4 weeks.

MINERAL 89 DAILY BOOSTER

IN VIVO EFFICACY TESTS

COSMETOCLINIC ASIAN SKIN (3/3)

EVALUATION OF THE COSMETIC QUALITIES

ITEMS - FACE CARE 688854 93 (% AGREE + SOMEWHAT AGREE) N=52	D28
Globally, the product is pleasant	100%
The texture of the product feels lightweight on skin	96%
The product is easy to apply	96%
The product is gentle for the skin	96%
The product is quickly absorbed	94%
The product leaves the skin comfortable	92%
The product is suitable for my skin type	92%
The texture of the product is pleasant	88%
The product doesn't leave the skin greasy	88%
The product doesn't leave the skin shiny	88%
The product is suitable for me	88%
The product doesn't leave the skin sticky	85%



MINÉRAL 89 DAILY BOOSTER IS PLEASANT FOR ALL USERS, THANKS TO ITS COSMETIC QUALITIES

as they report a high percentage of satisfaction with the effect on their skin:

QUICKLY ABSORBED GENTLE FOR THE SKIN NO SHINY SKIN
SUITABLE PLEASANT EASY TO APPLY
 NO STICKY SKIN **FEELS LIGHTWEIGHT**
 SENSATION OF FRESHNESS **COMFORTABLE** NO GREASY SKIN SKIN IS COMFORTABLE

In vivo efficacy study – cosmetoclinic Asian skin: 52 Chinese women applied MINÉRAL 89 DAILY BOOSTER twice daily on face, eyes and lips contour, during 4 weeks. Evaluation was performed by dermatologist at D0 and D28 and through self-assessment after 1st application, at 1 week and 4 weeks.

MINERAL 89 DAILY BOOSTER IN VIVO EFFICACY TESTS

COSMETOCLINIC CAUCASIAN SKIN (1/2)

OBJECTIVE

Evaluate the efficacy of MINÉRAL 89 by a cosmetoclinical test under dermatological control on Caucasian women with sensitive skin after repeated application (twice a day on the face) during 4 weeks.

SUBJECTS

48 Caucasian women, 35-50 years old, with all skin type, 100% sensitive skin (declarative) and:

- Presenting a lack of radiance complexion with an inclusion grade ≥ 4 on a scale from 0 to 9
- Presenting a lack of plump skin with an inclusion grade ≥ 4 on a scale from 0 to 9
- Living in urban area
- Usual user of care products for the face and lips

RESULTS

Clinical evaluation by the dermatologist investigator

Following signs were graded according to a 10 points scale:

- **Radiance of the complexion** (0= Very Radiant, 9= Not radiant at all) (visual, whole face)
- **Plumped aspect** (0= Very plumped, 9= Not plumed at all) (visual, whole face)

Clinical scores (n=48)	% of variation
LACK OF RADIANCE OF THE COMPLEXION	-5.48% (S)
LACK OF PLUMPED ASPECT	-8.74% (S)

PROTOCOL

The product was applied twice a day (morning and evening) on a clean and dry skin before the usual skin care routine for the face, eye contour and lips during 28 consecutive days in conditions of normal use.

EVALUATION

- Clinical scoring by the dermatologist: plump and radiance at T0-baseline and T4weeks (n=48)
- Self-assessments according to 5 points questionnaires (agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree) immediately after the 1st application and after 4 weeks (n=48).

MINÉRAL 89 DAILY BOOSTER IMPROVES RADIANCE AND PLUMPED ASPECT OF THE SKIN,
with statistically significant results after **4 weeks.**

EVALUATION OF THE COSMETIC QUALITIES

EFFICACY (5 point scale - % «somewhat agree» and «agree»)	D28
The product gives a sensation of freshness upon application	85%
The skin seems softer	81%
This product helps to prepare the skin to your usual routine	79%
The skin seems clearer	77%
The skin seems smoother	77%
Skin looks suppler	75%
The skin seems healthier	75%
Skin texture seems refined	73%
Eyes contours skin appears suppler	73%

MINÉRAL 89 DAILY BOOSTER'S EFFICACY IS WELL PERCEIVED BY USERS,

as they report a high percentage of satisfaction with the effect on their skin:

Tone looked more even and revitalised- texture seemed refined - clearer - healthier - eyes contours feel more hydrated and suppler - lips seem moisturised, smoother and softer

MINERAL 89 DAILY BOOSTER

IN VIVO EFFICACY TESTS

COSMETOCLINIC CAUCASIAN SKIN (2/2)

EVALUATION OF THE COSMETIC QUALITIES & ACCEPTABILITY

COSMETIC QUALITIES (5 POINT SCALE - ANSWERS GIVEN BY «SOMEWHAT AGREE» TO «AGREE»)	D28
The application is homogenous/uniform	100%
The product is quickly absorbed	100%
The texture of the product is not oily when touching	98%
The product is easy to apply	98%
The texture of the product feels lightweight on skin	96%
The aspect of the product is pleasant	96%
The texture of the product is pleasant	90%
The texture of the product is not sticky when touching	90%
ACCEPTABILITY (5 POINT SCALE - ANSWERS GIVEN BY «SOMEWHAT AGREE» TO «AGREE»)	D28
The product is gentle for the skin	96%
The product is comfortable	96%
The product doesn't leave the skin shiny	96%
The product does not leave the skin oily	96%
The product doesn't leave the skin sticky	94%
The product leaves the skin comfortable	92%
APPRAISAL (2 OR 5 POINT SCALE - ANSWERS GIVEN BY «SOMEWHAT AGREE» TO «AGREE» OR BY «YES*»)	D28
Overall, the product is pleasant	92%

MINÉRAL 89 DAILY BOOSTER
IS PLEASANT FOR USERS, THANKS TO ITS COSMETIC QUALITIES

as they report a high percentage of satisfaction with the effect on their skin:

UNIFORM APPLICATION EASY TO APPLY
HOMOGENOUS APPLICATION GENTLE FOR THE SKIN
LIGHTWEIGHT
PLEASANT ASPECT QUICKLY ABSORBED
NO STICKY SKIN SENSATION OF FRESHNESS
SKIN IS COMFORTABLE

In vivo efficacy study – cosmetoclinic Caucasian skin: 48 Caucasian women applied MINÉRAL 89 DAILY BOOSTER twice daily on face, eyes and lips contour, during 4 weeks. Evaluation was performed by dermatologist and through self-assessment at baseline and after 4 weeks.

MINERAL 89 DAILY BOOSTER

IN VIVO EFFICACY TESTS

CONSUMER TEST ON ALL PHOTOTYPES, MEN AND WOMEN

SUBJECTS

159 (120 women and 39 men)

INCLUSION CRITERIA

Men and women, living in France, from 20 to 60 years old, all skin type, 100% of sensitive skin, all phototypes (35 phototypes I/II, 35 phototypes III/IV, 35 phototypes V/VI)

PROTOCOL

- Frequency of application: twice a day, in the morning and in the evening.
- Application sites: on face and on eye area.
- Instructions of use: "You will apply this care on your face and eye area twice a day, in the morning and in the evening, for 28 days, instead of your usual day & night care."

EVALUATION

Self-assessments according to 5 points questionnaires (agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree) up to T28 days.

RESULTS

Self-assessments according to a questionnaire:

EFFICACY	T28 days N=155	COSMETICITY	T28 days N=157
Skin feels comfortable	72.3%	This product applies easily, smoothly	92.4%
Overall skin appearance looks improved	65.2%	This product does not feel oily/greasy on the skin after application	93.6%
Skin is healthy looking	74.2%	This product does not look shiny on the skin after application	91.1%
Skin feels softer	70.3%	This product is quickly absorbed	86.0%
Skin texture appears refined	65.2%	This product feels gentle on the skin	79.0%
Skin complexion looks fresher	68.4%	This product feels lightweight on the skin	86.6%
Product gives a healthy glow	65.8%	This product is pleasant to use	78.3%
Product helps prepare skin to your usual routine	72.3%	This product has a pleasant consistency	75.2%
The skin seems toned	66.5%	This product is invisible on the skin	93.6%

MINÉRAL 89 DAILY BOOSTER EFFICACY AND SENSORIALITY ARE WELL PERCEIVED BY BOTH MEN AND WOMEN WITH ALL PHOTOTYPES

as they report a high percentage of satisfaction with the effect on their skin:

EASY AND SMOOTH APPLICATION **COMFORTABLE**
NOT SHINY OR OILY PREPARES SKIN
 INVISIBLE ON SKIN **HEALTHY LOOKING FOR USUAL ROUTINE**

Consumer tests on all phototypes: 159 patients (120 women and 39 men) applied MINÉRAL 89 DAILY BOOSTER twice daily on face, eyes and lips contour, during 4 weeks. Evaluation was performed through self-assessment immediately after 1st application, and after 7, 21 and 28 days.

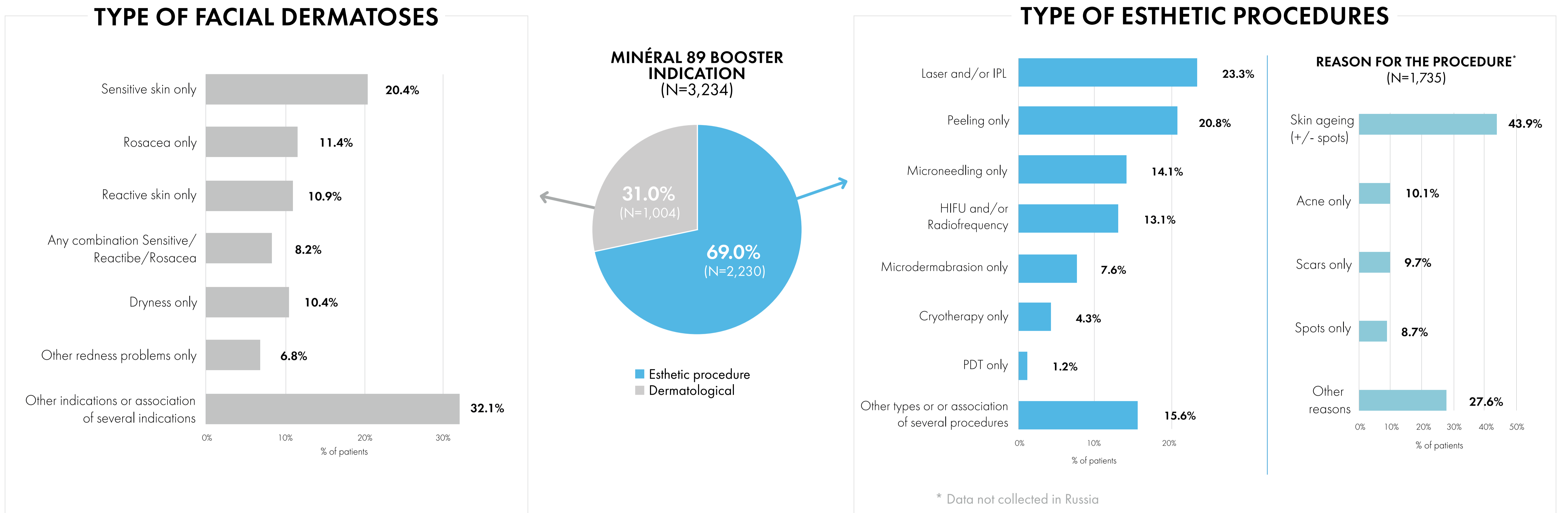
MINÉRAL 89 DAILY BOOSTER

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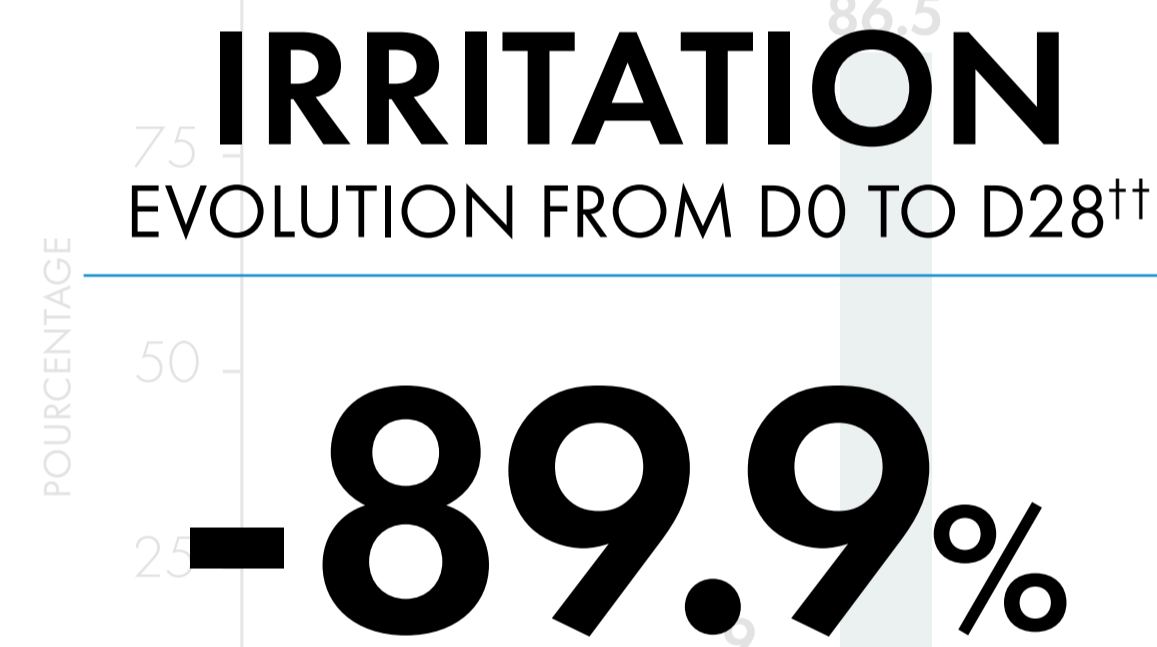
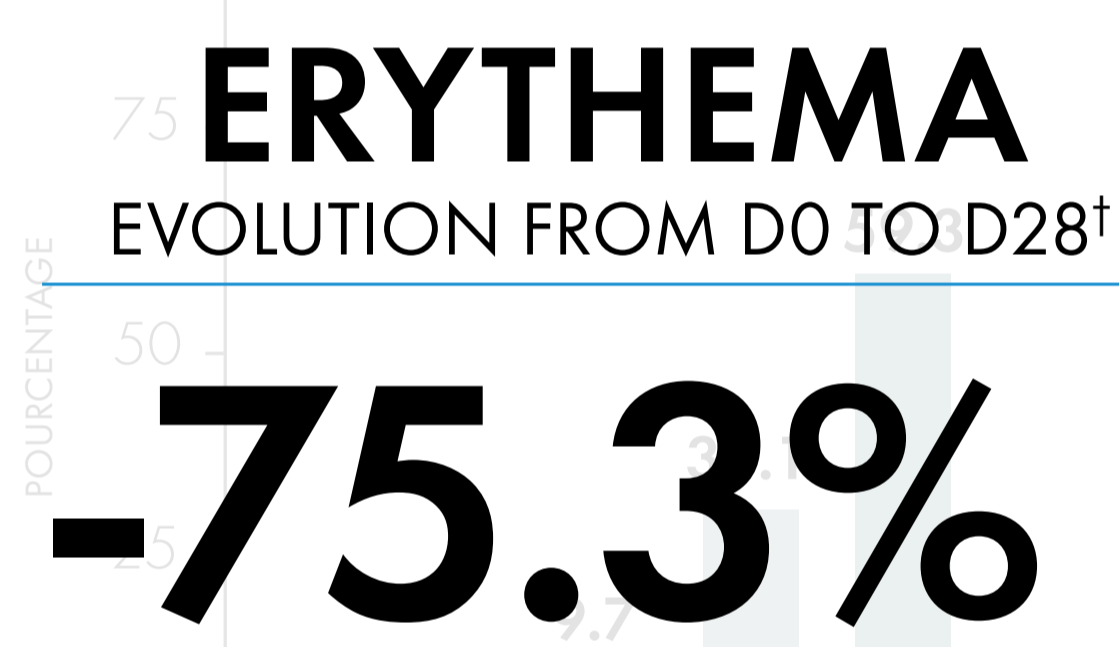
6 FACIAL DERMATOSES | 8 AESTHETIC PROCEDURES | ALL PHOTOTYPES | MEN & WOMEN

INDICATION OF PRESCRIPTION OF MINÉRAL 89 BOOSTER



CONCLUSIONS

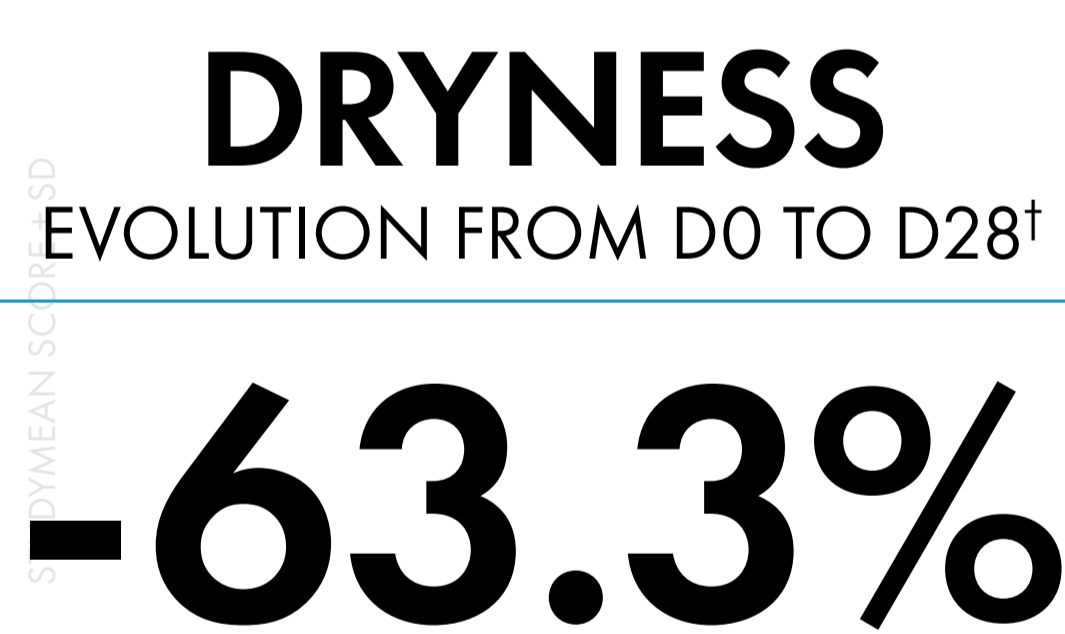
SIGNIFICANTLY IMPROVES CLINICAL SIGNS IN BOTH GROUPS



HIGH INVESTIGATOR SATISFACTION

97.7%
INVESTIGATOR SATISFACTION²

SIGNIFICANTLY IMPROVES SYMPTOMS



HIGH PATIENT SATISFACTION

98.4%
TEXTURE SATISFACTION²

PUBLICATION¹



POSTER²



† in facial dermatoses group ; †† in esthetic procedures group.

1. Tan J. *et al.* Vichy Mineralizing Water with Hyaluronic Acid is effective and well tolerated as an adjunct to the management of various dermatoses and after esthetic procedures. *J Cosmet Dermatol.* 2020;19(3):682-688. 2. Tan J. *et al.* M89: A combination of 89% of Vichy volcanic mineralizing water and hyaluronic acid strengthens the natural skin barrier: results from an international multicenter observational study. Poster O455 at EADV. 2020

MINÉRAL 89 DAILY BOOSTER



MINERAL 89 DAILY BOOSTER OBSERVATIONAL STUDY

MINÉRAL 89 DAILY BOOSTER: A COMBINATION OF 89% OF VICHY VOLCANIC MINERALIZING WATER AND HYALURONIC ACID STRENGTHENS THE NATURAL SKIN BARRIER AND SHOWS EFFICACY AND HIGH TOLERABILITY IN VARIOUS FACIAL INFLAMMATORY DERMATOSES AND AESTHETIC PROCEDURES AS ADJUNCT

AIM

The aim of this observational study was to assess the efficacy and tolerability of M89 as an adjunct in subjects with inflammatory facial dermatoses including rosacea/ sensitive/ reactive skin, and in those undergoing dermatological procedures.

METHODS

Adults with inflammatory facial dermatoses or having undergone dermatological procedures applied M89 twice daily for 4 weeks as an adjunct to their standard treatment. Clinical evaluations were conducted at start and end of study.

A dermatologist assessed cutaneous clinical signs of erythema, desquamation and irritation, on a scale ranging from 0 (absent) to 4 (very intense). Subjects assessed skin symptoms (dryness, burning sensation, itching, stinging/ tingling) on a scale from 0 (absent) to 10 (most intense), at start and end of study.

After 4 weeks of M89 daily use, physician global satisfaction was rated from 0 (unsatisfied) to 3 (very satisfied); subject satisfaction was rated with a visual scale (0 = very unsatisfied to 10 = very satisfied).

PANEL

A total of 3461 subjects were included, from 22 countries. 3234 were suitable for efficacy analysis.

Demographic data for the global, facial dermatoses and dermatological procedure subgroups is shown Table 1.

Severity grades for the global, facial dermatoses and dermatological procedure groups are in Table 2.

Table 3 shows dermatological procedures and dermatological indications.

DEMOGRAPHICS AND SKIN CHARACTERISTICS AT STUDY START

	TOTAL		FACIAL DERMATOSES		DERMATOLOGIC PROCEDURES	
	N	%	N	%	N	%
Gender	3214	100	10000	100	2214	100
Female	2819	87,7	849	84,9	1970	89,0
Male	395	12,3	151	15,1	244	11,0
Age	3154		986		2168	
mean ± SD	40,2 ± 11,8		38,2 ± 12,4		41,1 ± 11,4	
Median	40,0		38,00		41,0	
Min; Max	18,0;88,0		18,0;88,0		18,0;85,0	
phototype	3211	100	988	100	2223	100
I	226	7,0	100	10,1	126	5,7
II	1289	40,1	439	44,4	850	38,2
III	1239	38,6	341	34,5	898	40,4
IV	384	12,0	97	9,8	287	12,9
V	67	2,1	10	1,0	57	2,6
VI	6	0,2	1	0,1	5	0,2
Skin type	3217	100	998	100	2219	100
Very dry	282	8,8	107	10,7	175	7,9
Dry	1219	37,9	424	42,5	795	35,8
Normal	687	21,4	139	13,9	548	24,7
Combination	738	22,9	222	22,2	516	23,3
Oily	265	8,2	96	9,6	169	7,6
Very oily	26	0,8	10	1,0	16	0,7
Sensitive skin	3204	100	992	100	2212	100
Yes	2059	64,3	799	80,5	1260	57,0
No	1145	35,7	193	19,5	952	43,0

CLINICAL SIGNS ASSESSED BY THE INVESTIGATORS AT STUDY START

	TOTAL		FACIAL DERMATOSES		DERMATOLOGIC PROCEDURES	
	N	%	N	%	N	%
Erythema	3220	100	998	100	2222	100
Grade	3162	100	981	100	2181	100
Very intense	75	2,4	25	2,5	50	2,3
Intense	311	9,8	131	13,4	180	8,3
Moderate	742	23,5	273	27,8	469	21,5
Low	552	17,5	236	24,4	316	14,5
Absent	1482	46,9	316	32,2	1166	53,5
Desquamation	3224	100	1001	100	2223	100
Grade	3183	100	984	100	2199	100
Very intense	42	1,3	13	1,3	29	1,3
Intense	171	5,4	76	7,7	95	4,3
Moderate	503	15,8	189	19,2	314	14,3
Low	688	21,6	257	26,1	431	19,6
Absent	1779	55,9	449	45,6	1330	60,5
Irritation	3216	100	999	100	2217	100
Grade	3158	100	982	100	2178	100
Very intense	52	1,6	13	1,3	39	1,8
Moderate	884	28,0	230	23,4	654	30,1
Low	472	14,9	174	17,7	298	13,7
Absent	1489	47,2	469	47,8	1020	46,9

FACIAL DERMATOSES AND DERMATOLOGICAL PROCEDURES

	TOTAL	
	N	%
FACIAL DERMATOSES	113	100
Total	1004	100,0
Sensitive skin only	205	20,4
Reactive skin only	109	10,9
Rosacea only	114	11,4
Any combination Sensitive/Reactive/Rosacea	82	8,2
Other redness problems only	68	6,8
Dryness only	104	10,4
other indications or association of several indications	322	32,1
DERMATOLOGICAL PROCEDURES		
Total	223,	100,0
Laser only and/or IPL	520	23,3
HIFU only and/or Radiofrequency	293	13,1
Microneedling only	314	14,1
Peeling only	463	20,8
Microdermabrasion only	170	7,6
PDT only	26	1,2
Cryotherapy only	97	4,3
Other types of procedures or association of several procedures	347	15,6
Low	472	14,9
Absent	1489	47,2

MINERAL 89 DAILY BOOSTER

OBSERVATIONAL STUDY

RESULTS FOR GLOBAL POPULATION

In subjects with signs and symptoms at study start, significant ($p < 0.0001$) improvement was observed after 4 weeks of M89 use: erythema had improved in 78.4% of subjects, desquamation in 82.9% and irritation in 90.9%.

Symptom scores had improved for dryness by 61.6%, for burning by 75.4%, for itching by 68.9% and for stinging/tingling sensation by 77.3%.

98.4% OF SUBJECTS STATED TO BE SATISFIED WITH THE TEXTURE OF M89.

The mean satisfaction score for M89 was 8.2 ± 1.9 (out of 10) after one week and 9.0 ± 1.5 after 4 weeks.

Proportions reporting that skin was soothed or very soothed were 89.4% at one week and 97.7% at 4 weeks. For 97.7% of subjects, investigator satisfaction was high or very high.



MINÉRAL 89 DAILY BOOSTER IS AN EFFECTIVE AND WELL-TOLERATED ADJUNCT TO STANDARD CARE IN VARIOUS INFLAMMATORY FACIAL DERMATOSES AND AFTER DERMATOLOGICAL PROCEDURES

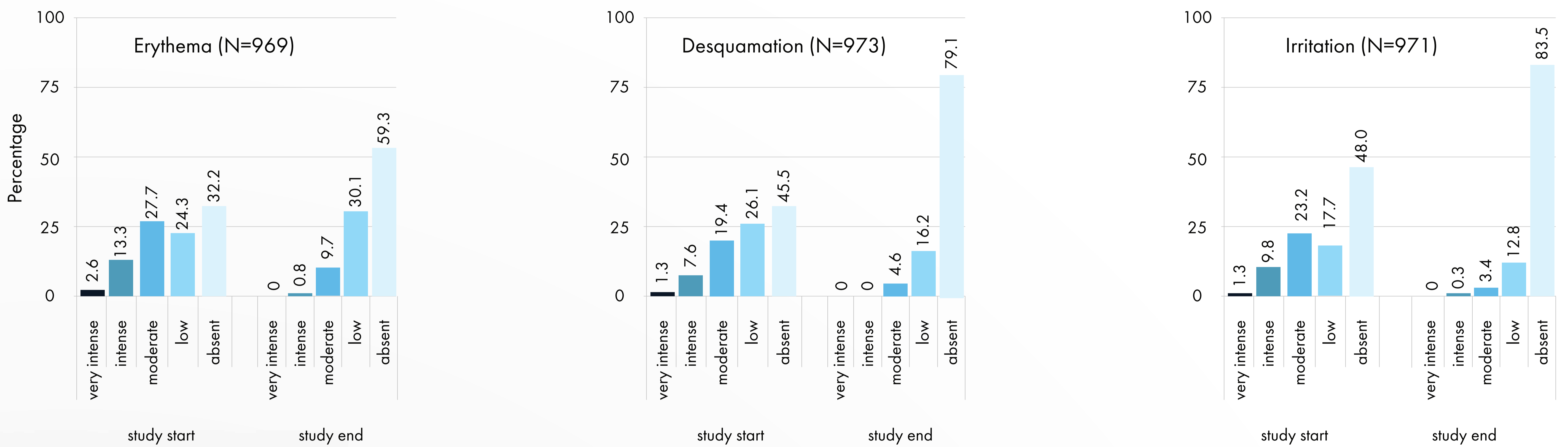
as demonstrated on over 3400 subjects evaluated by 325 dermatologists in 22 different countries:

- Improves clinical signs and symptoms of rosacea, sensitive and reactive skin, with high tolerability and satisfaction in a real-life setting;
- Is an effective and well tolerated adjunct in post-procedure skin care, including aggressive lasers.

MINERAL 89 DAILY BOOSTER OBSERVATIONAL STUDY

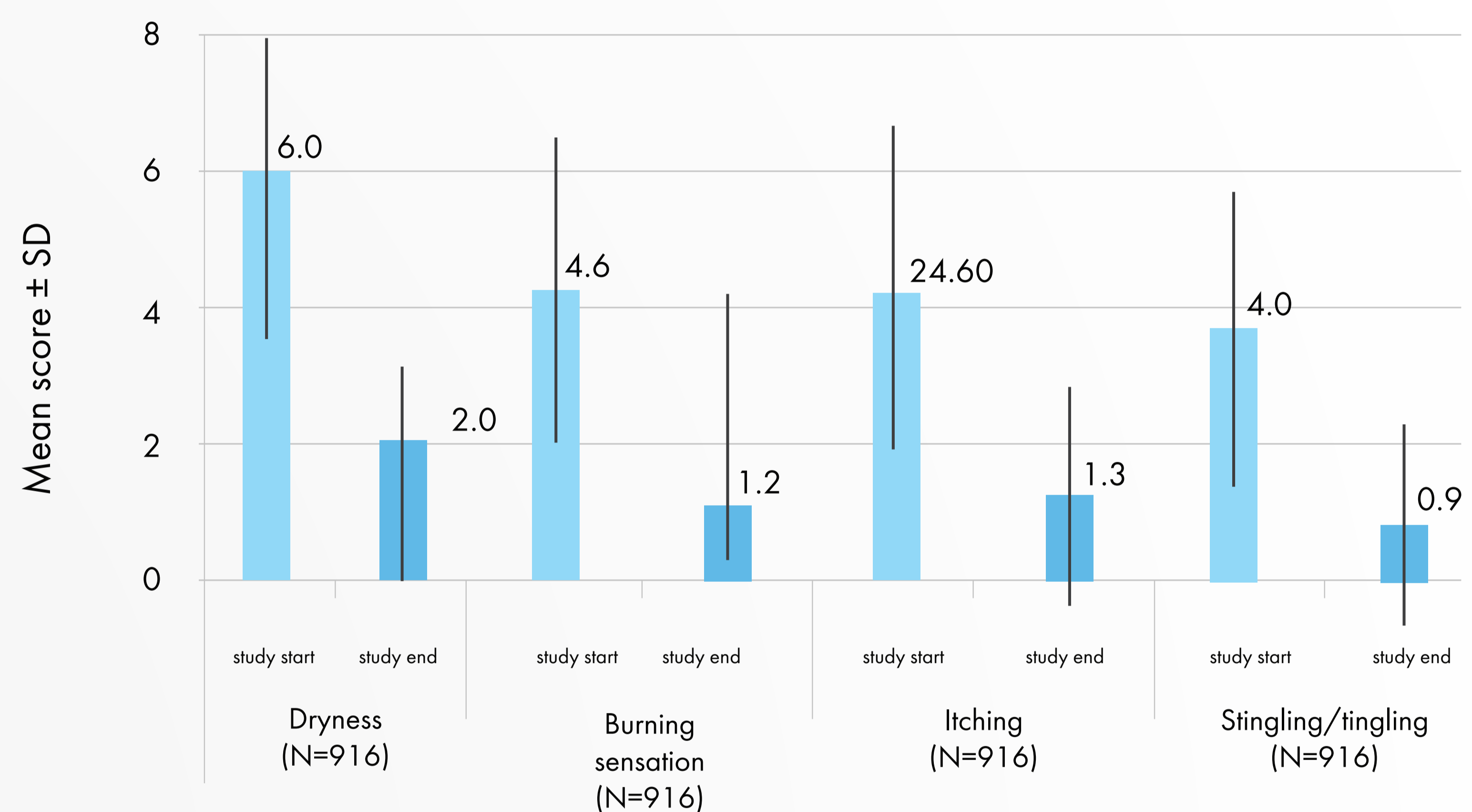
RESULTS FOR FACIAL DERMATOSES SUBGROUP

FACIAL DERMATOSES: SHIFT OF SEVERITY GRADES OF CLINICAL SIGNS (% OF SUBJECTS)



The difference in prevalence of subjects with improved clinical signs was statistically significant ($p < 0.0001$) after 4 weeks compared to study start for facial dermatoses and post-procedures.

FACIAL DERMATOSES: MEAN CLINICAL SYMPTOM SCORES AT STUDY START AND AT END OF STUDY (SUBJECTS WITH SYMPTOMS AT STUDY START)



The decrease of mean scores at study end was statistically significant ($p < 0.00001$) for facial dermatoses and post-procedures.



MINÉRAL 89 DAILY BOOSTER IS AN EFFECTIVE AND WELL-TOLERATED IN SUBJECTS WITH SIGNS AND SYMPTOMS OF FACIAL DERMATOSES

with significant results after 4 weeks:

- **Improvement of clinical signs and subject-reported symptoms: erythema in 75.3%, desquamation in 87.0%, irritation in 93.3% and dryness in 63.3%** of subjects, and scores for **burning, itching and stinging/tingling** sensation by **77.9%, 72.6% and 79.6%**, respectively;
- **Mean satisfaction score: 8.3±1.9** (out of 10) after one week and **8.9±1.6** after 4 weeks;
- **Skin was soothed or very soothed** and in **97.4% after 4 weeks**;
- Investigator **satisfaction** was rated as **high or very high** for 97.2%.

MINÉRAL 89 DAILY BOOSTER

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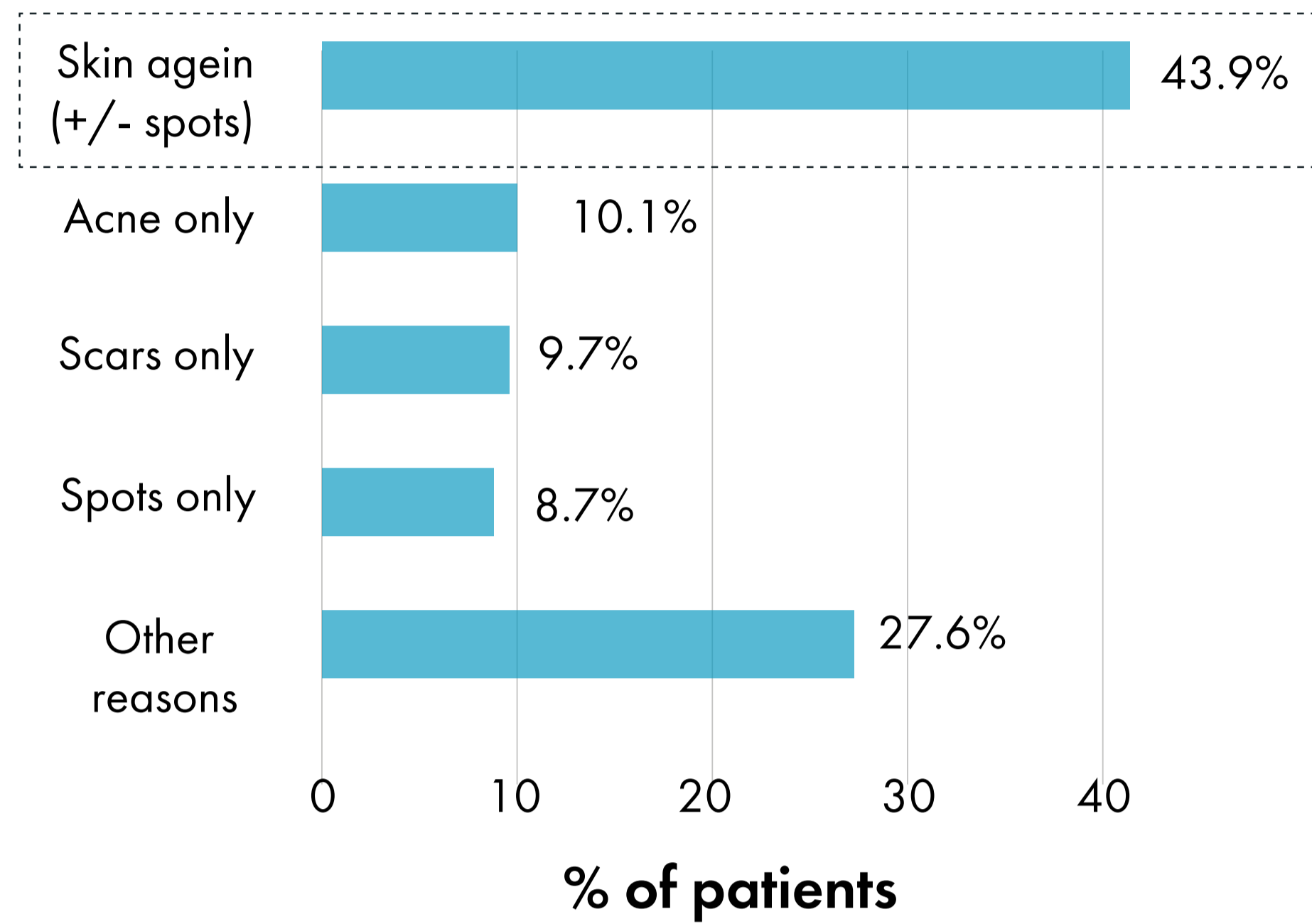
Post-aesthetic procedures high efficacy demonstrated in global observational study subgroup analysis^{1,2}

INDICATION OF PRESCRIPTION

761 PATIENTS

POST-ANTIAGEING PROCEDURES

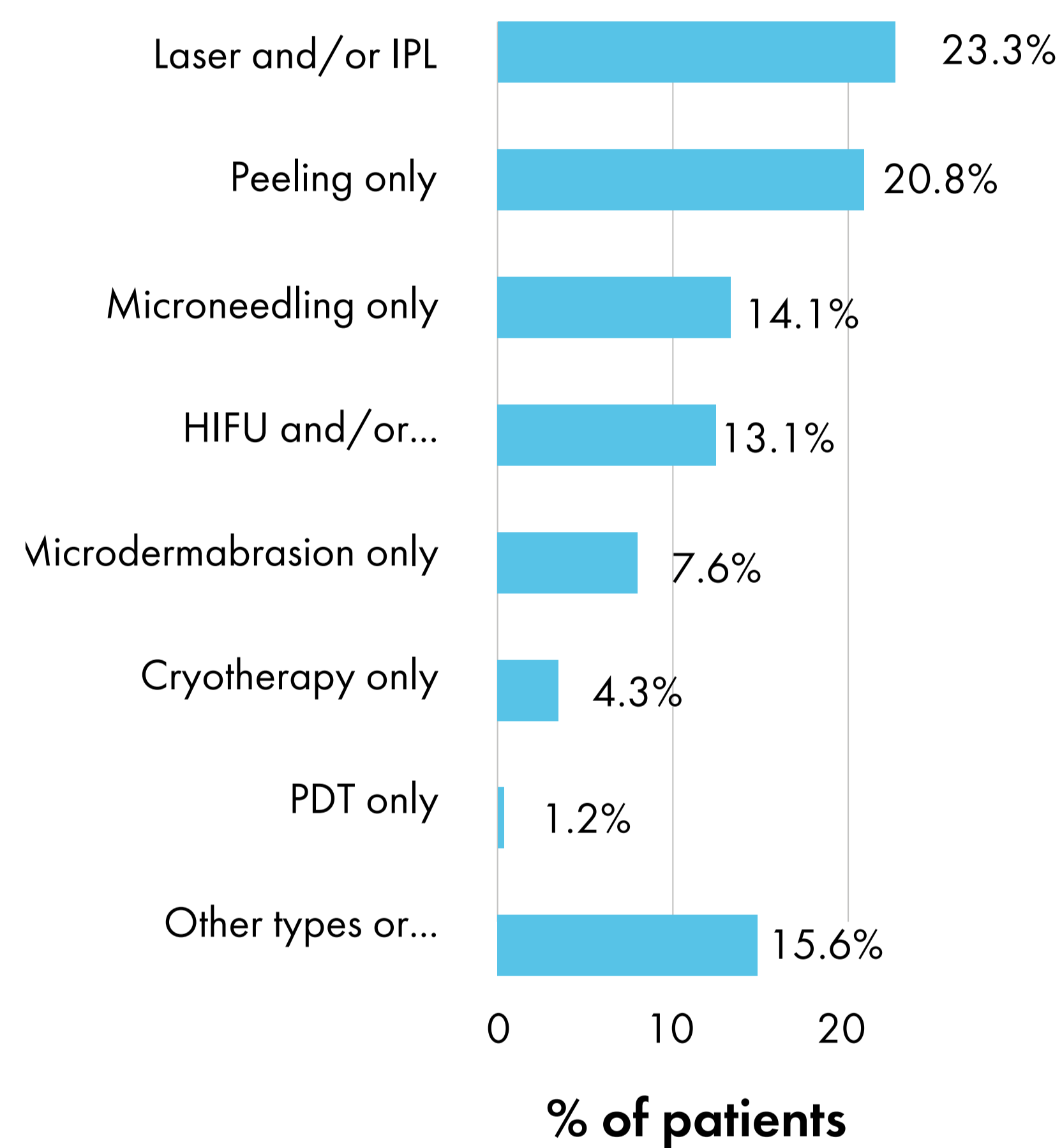
REASON FOR THE PROCEDURE (N=1.735)



2230 PATIENTS

POST-ACNE, SCARS, SPOTS PROCEDURES

TYPES OF PROCEDURE (N=2 230)



CONCLUSIONS

MINÉRAL 89 DAILY BOOSTER

SIGNIFICANTLY IMPROVED CLINICAL SIGNS AND SYMPTOMS WHEN USED AFTER ESTHETIC PROCEDURES FOR **SKIN AGEING**: INCLUDING MICRONEEDLING, LASER OR IPL & PEELING

IRRITATION
-93.0%

ITCHING
-74.5%

MINÉRAL 89 DAILY BOOSTER

SIGNIFICANTLY IMPROVED CLINICAL SIGNS AND SYMPTOMS WHEN USED AFTER ESTHETIC PROCEDURES FOR **ACNE, SCARS AND SPOTS**

AGGRESSIVE LASER PROCEDURE
179 PATIENTS

IRRITATION
-88.9%

STINGING
-80.5%

PEELING
463 PATIENTS

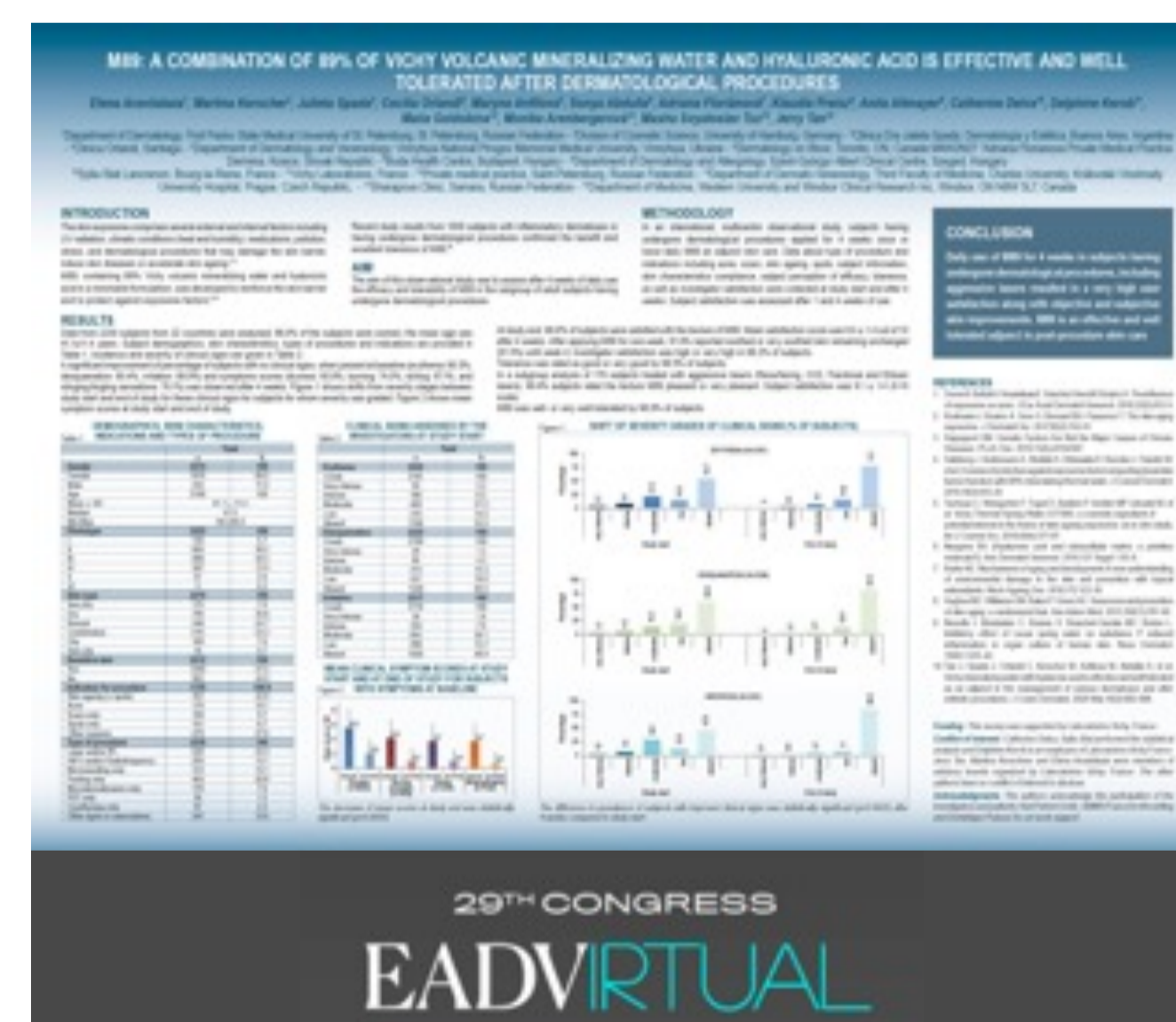
ITCHING
-92.0%

STINGING
77.7%

PUBLICATION¹



POSTER²



* Aggressive laser: Resurfacing, CO2, Fractional and Erbium lasers; IPL: intense pulsed light; HIFU: high-intensity focused ultrasound; PDT: photodynamic therapy.

1. Tan J. et al. Vichy Mineralizing Water with Hyaluronic Acid is effective and well tolerated as an adjunct to the management of various dermatoses and after esthetic procedures. J Cosmet Dermatol. 2020;19(3):682-688. 2. Tan J. et al. M89: A combination of 89% of Vichy volcanic mineralizing water and hyaluronic acid is effective and well tolerated after dermatological procedures. Poster 0424 at EADV. 2020



MINERAL 89 BOOSTER

POST-AESTHETIC PROCEDURE PRESCRIPTION

RESULTS FOR DERMATOLOGICAL PROCEDURE SUBGROUP

The subgroup analysis of 2230 adult subjects having undergone dermatological procedures (including Laser and/or IPL, HIFU and/or radiofrequency, microneedling, peeling, microdermabrasion, PDT, cryotherapy), significant ($p < 0.0001$) improvement was observed after 4 weeks of M89 use:

- **Improvement of clinical signs and subject-reported symptoms:** erythema had improved in 80.5% of subjects, desquamation in 80.4% and irritation in 89.9%. Scores for dryness, burning, itching and stinging/tingling sensation had improved by 60.8%, 74.0%, 67.1% and 76.1% respectively;
- **Soothed or very soothed skin** in 84.6% after one week and in 91.5% after 4 weeks;
- **Pleasant or very pleasant texture** in more than 98.6% of subjects;
- **Very good tolerance** in 98.5% of subjects.

98.4% OF SUBJECTS RATED M89 TOLERANCE AS GOOD OR VERY GOOD.

The mean satisfaction score for M89 was 8.2 ± 1.9 (out of 10) after one week and 9.0 ± 1.5 after 4 weeks. Proportions reporting that skin was soothed or very soothed were 89.4% at one week and 97.7% at 4 weeks. For 97.7% of subjects, investigator satisfaction was high or very high.

Figure 1 POST-PROCEDURES: SHIFT OF SEVERITY GRADES OF CLINICAL SIGNS (% of subjects)

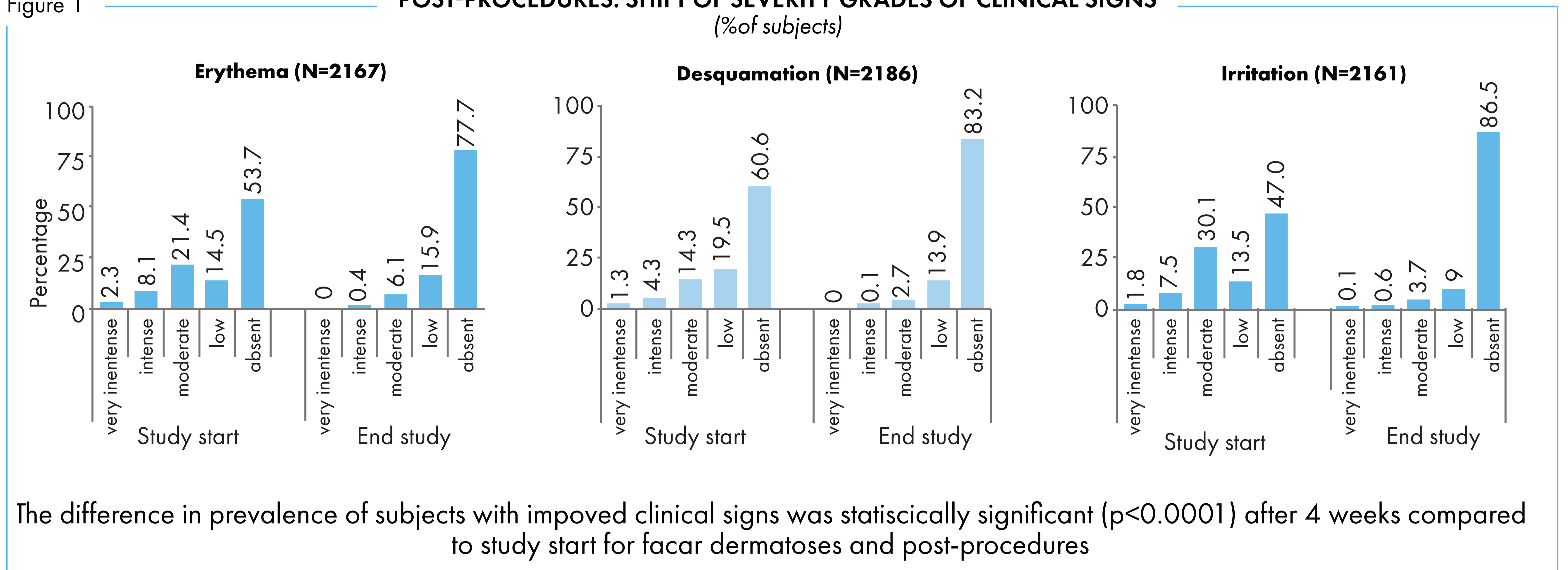
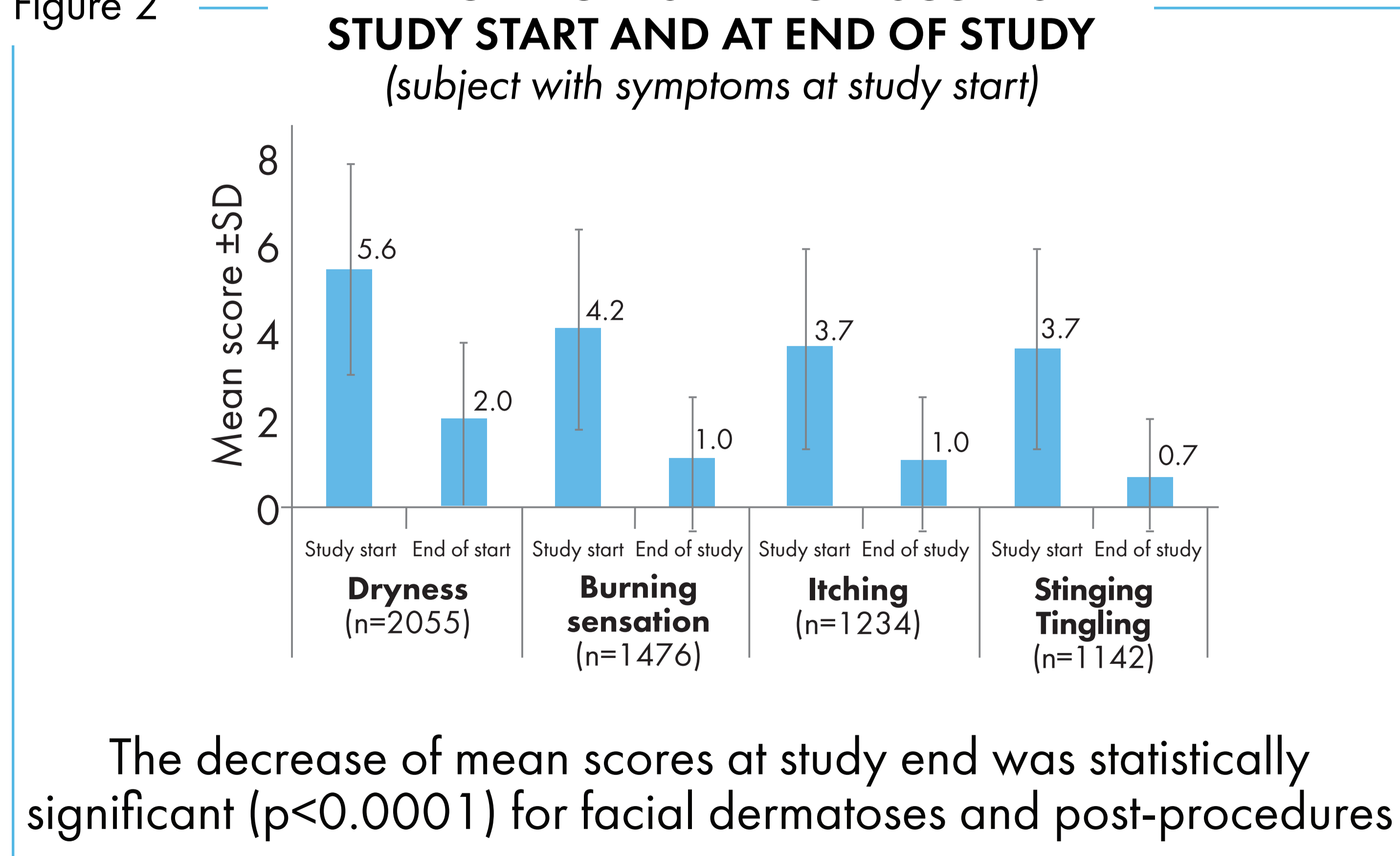


Figure 2 POST-PROCEDURES: MEAN CLINICAL SYMPTOM SCORES AT STUDY START AND AT END OF STUDY (subject with symptoms at study start)



MINÉRAL 89 DAILY BOOSTER IS EFFECTIVE AND WELL-TOLERATED AFTER DERMATOLOGICAL PROCEDURES with significant results after **4 weeks.**



MINÉRAL 89 MASK

VICHY'S #1 MOST CLINICALLY TESTED PRODUCT

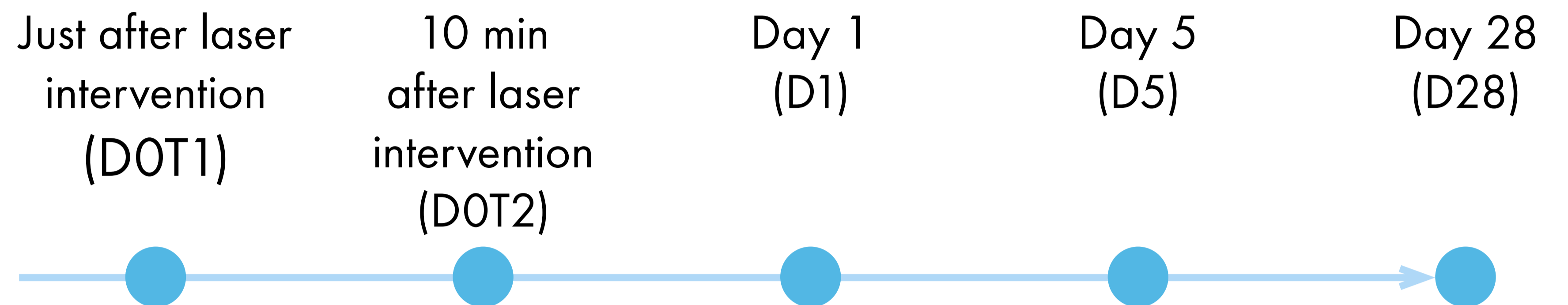
3.927 PATIENTS | 20 SCIENTIFIC STUDIES | 325 DERMATOLOGISTS | 22 COUNTRIES
6 FACIAL DERMATOSES | 8 AESTHETIC PROCEDURES | ALL PHOTOTYPES | MEN & WOMEN

Post-laser procedures very high soothing effect of M89 booster in mask format clinically demonstrated¹

TESTED EFFICACY

MINERAL 89 MASK
POST FRACTIONAL ER- AND
ND-YAG LASER PROCEDURE

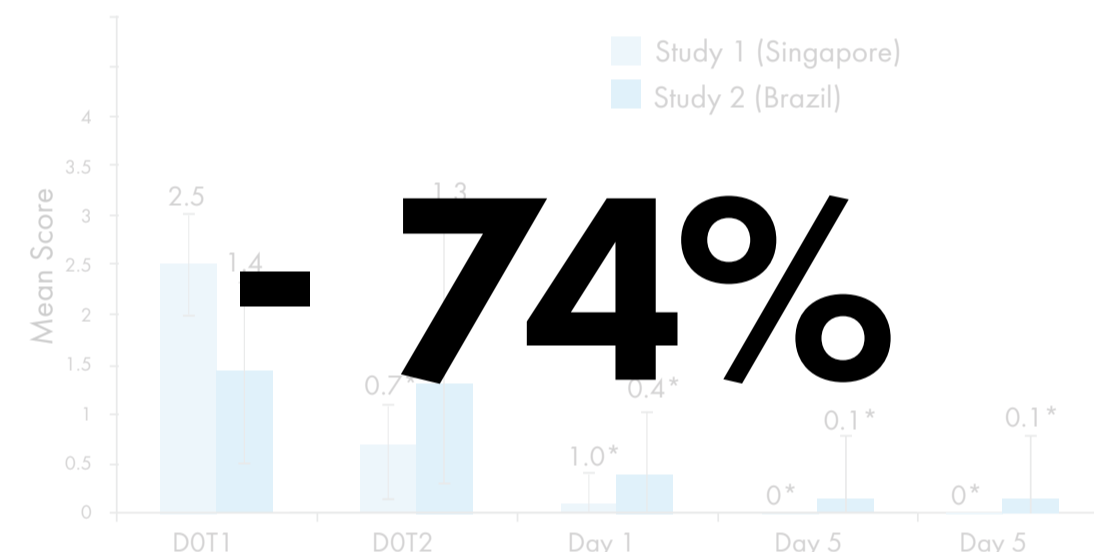
51 BRAZILIAN AND CHINESE WOMEN



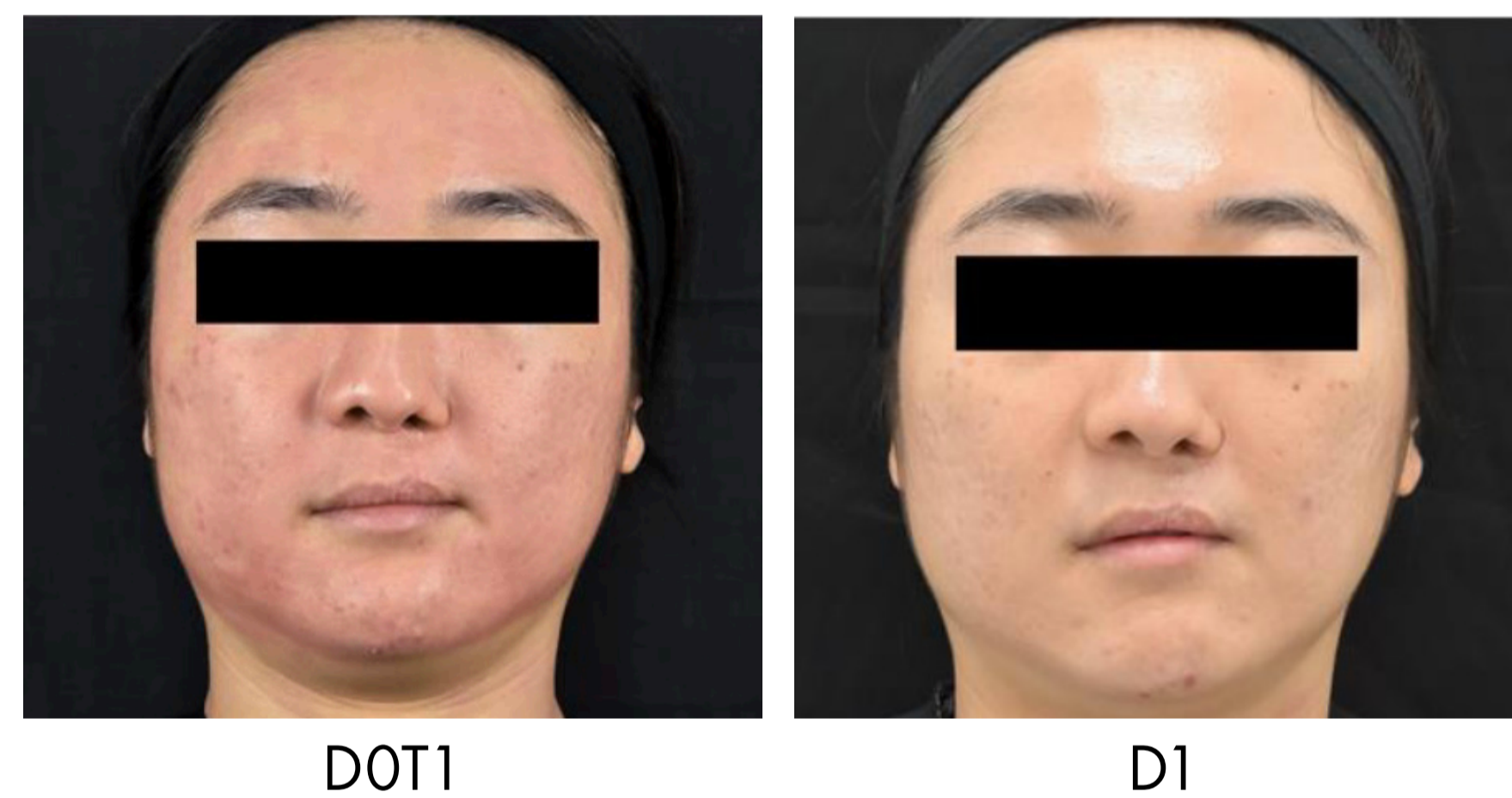
CONCLUSIONS

SIGNIFICANTLY IMPROVES CLINICAL SIGNS¹

ERYTHEMA
EVOLUTION IN 10 MIN*



VISIBLE IMPROVEMENT



SIGNIFICANTLY IMPROVES SKIN HYDRATION¹

MEASURED BY :

- CORNEOMETER
- TRANSEPIDERMAL WATER LOSS (TEWL)

SIGNIFICANTLY IMPROVES SYMPTOMS¹

BURNING
EVOLUTION IN 10 MIN*

- 92%

THIGHTNESS
EVOLUTION IN 10 MIN*

- 88%

STINGING
EVOLUTION IN 10 MIN*

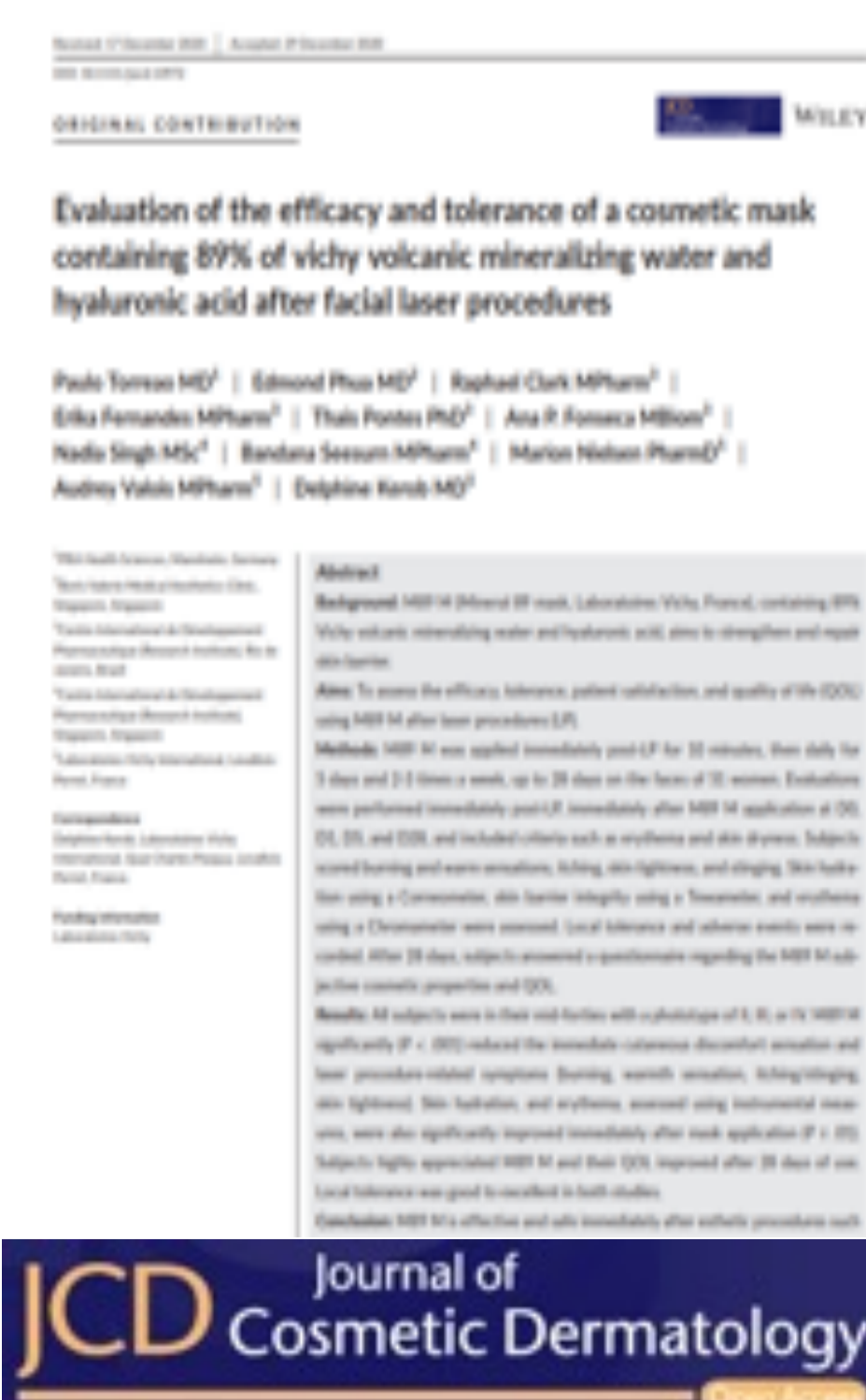
- 94%

IMPROVES QUALITY OF LIFE¹

IMPACT ON QOL
EVOLUTION IN 28 DAYS*

- 88%

PUBLICATION¹



* Numerical results correspond to the Chinese subgroup; ER-YAG: erbium-doped yttrium aluminium garnet ; ND-YAG: neodymium-doped yttrium aluminum garnet; QoL: quality of life.

1. Torreão P. *et al.* Evaluation of the efficacy and tolerance of a cosmetic mask containing 89% of vichy volcanic mineralizing water and hyaluronic acid after facial laser procedures. *J Cosmet Dermatol.* 2021;20:2860–2866.



MINERAL 89 MASK

IN-VIVO POST-PROCEDURE CLINICAL STUDY

EVALUATION OF TOLERANCE AND EFFICACY OF A COSMETIC MASK USED POST PROCEDURE

PRODUCT

Mineral 89 Mask: A micro-algae fiber tissue mask enriched with 89% of Vichy volcanic mineralizing water and natural hyaluronic acid.

AIM

Assess efficacy and tolerance of Mineral 89 Mask on the face of 51 adult women post fractional Er- and Nd-YAG laser procedure

- 27 Brazilian in Brazil
- 24 Chinese living in Singapore

METHODS

- Application just after laser intervention for 10 minutes (DOT2), then daily for 5 days, and 2 to 3 times a week up to 28 days
- Statistical analysis using Student's Paired t-test and the Wilcoxon Signed Rank Test
- Baseline after laser (DOT1), right after product application (DOT2), D1, D5 and D28

RESULTS

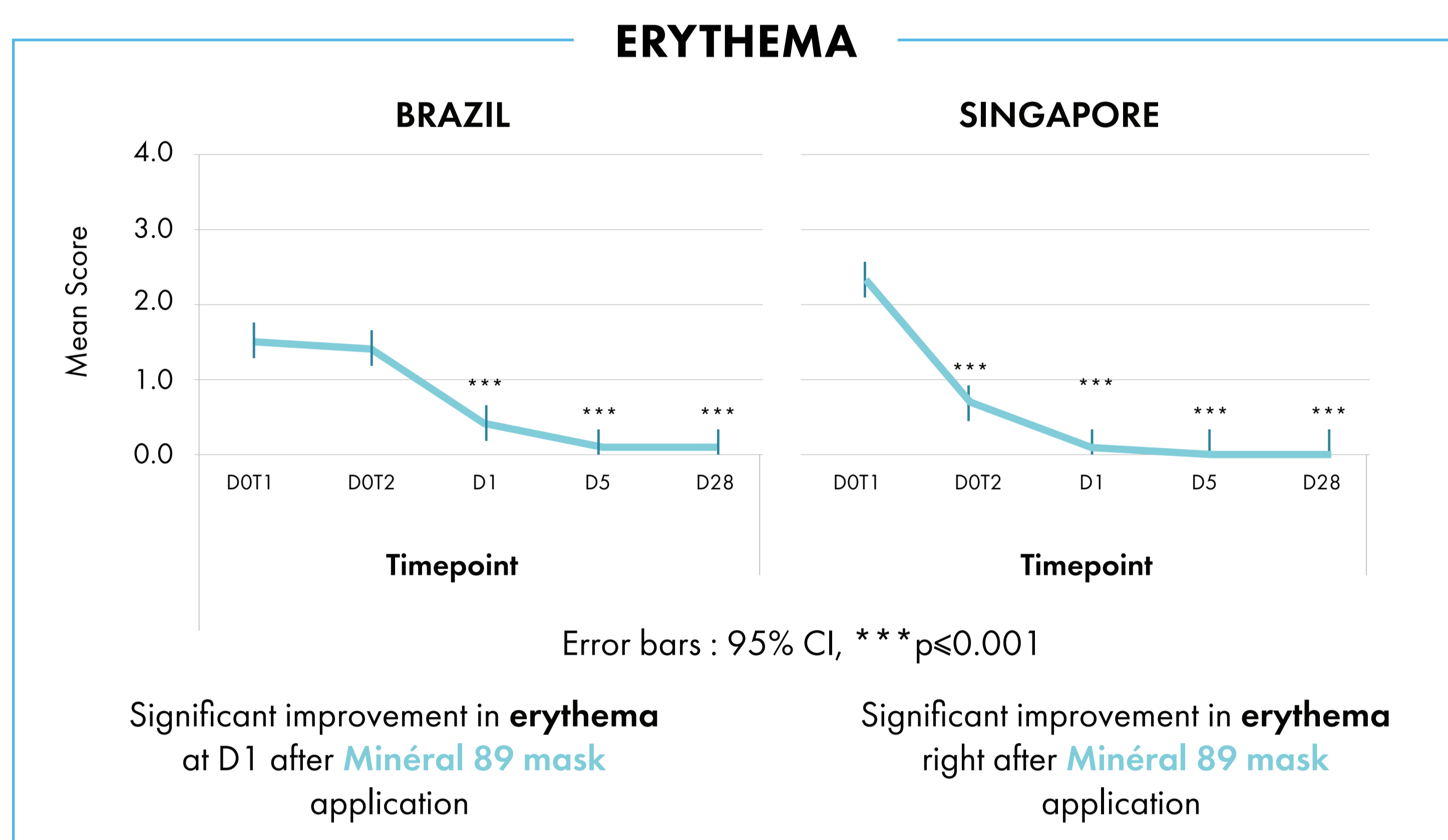
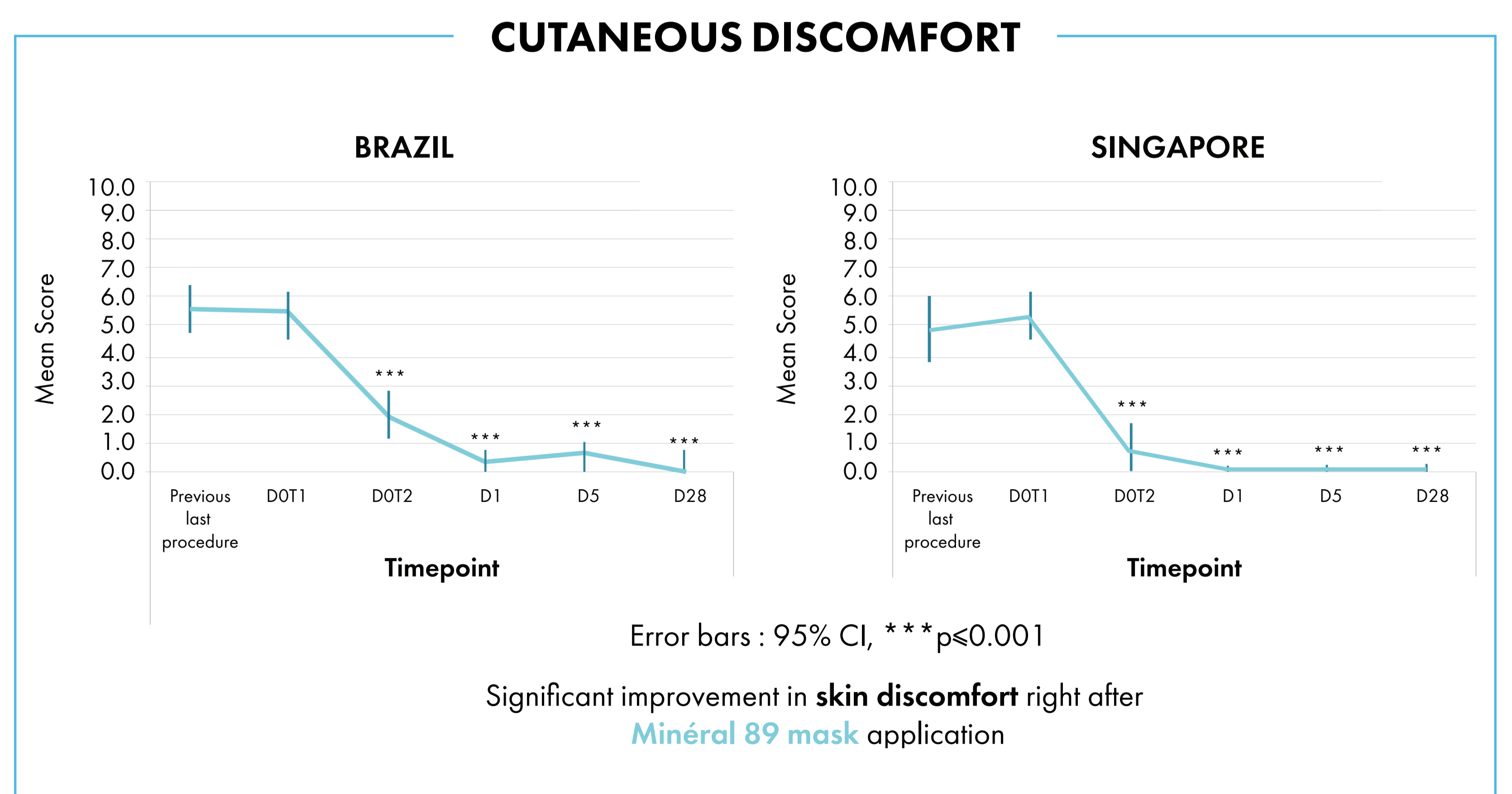
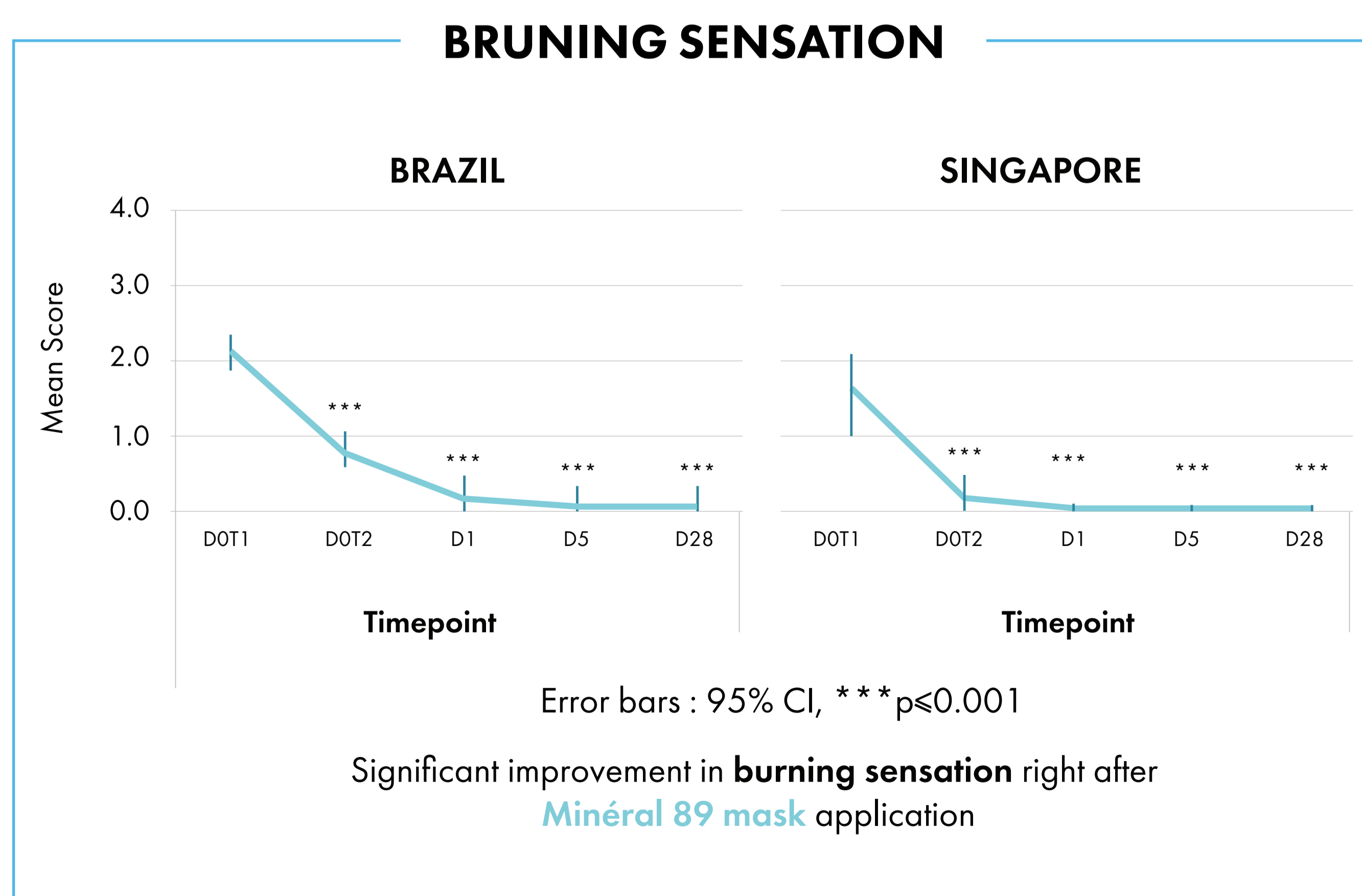


Figure 1: ColorFace® Brazilian subject. Timepoints: baseline (DOT1), after product application (DOT2), D1



Figure 2: Chinese living in Singapore. Timepoints: baseline (DOT1), after product application (DOT2), D1



MINERAL 89 MASK

IN-VIVO POST-PROCEDURE CLINICAL STUDY

Figure 1 SUBJECT-REPORTED SYMPTOMS

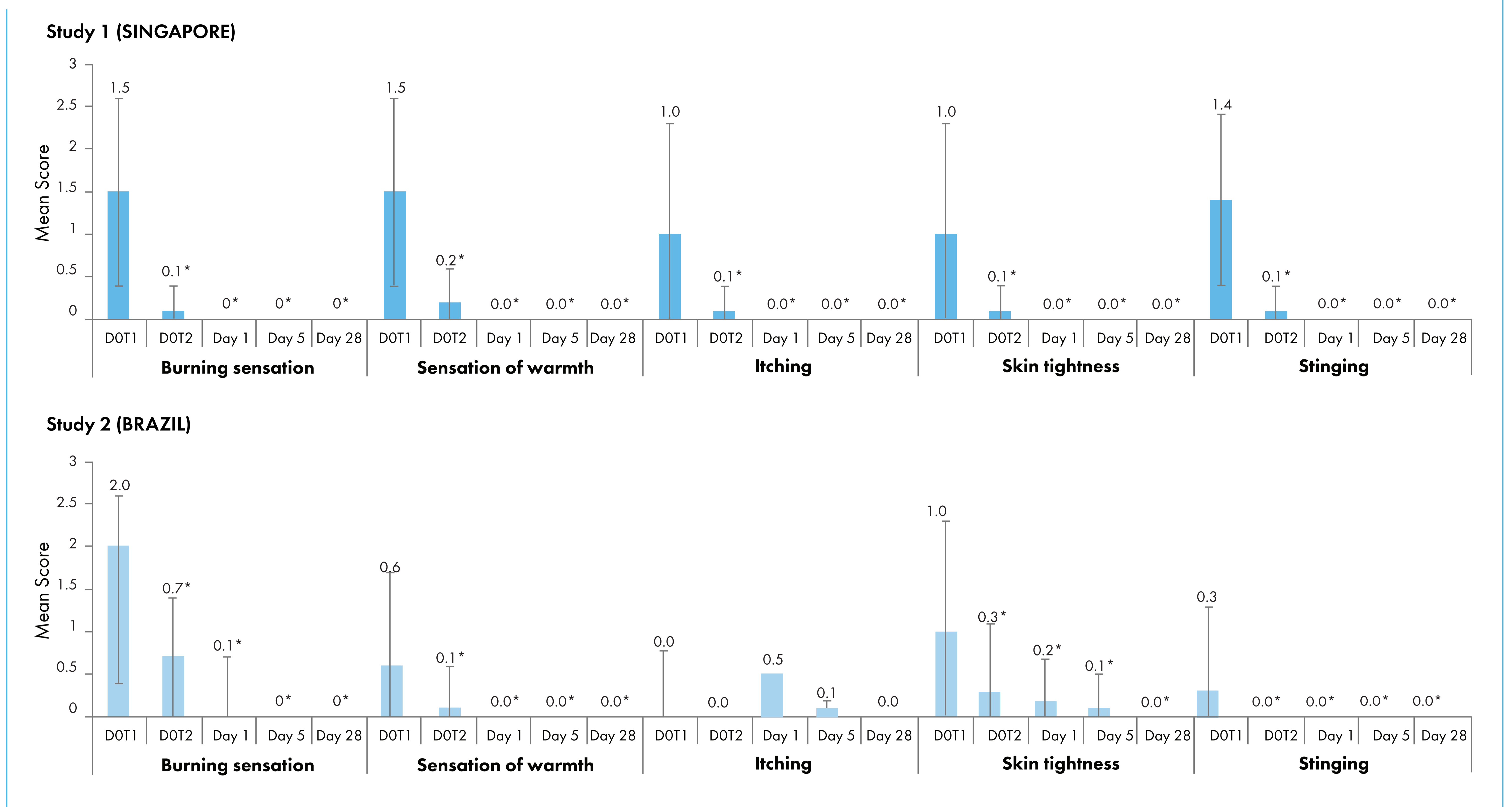


Figure 2 DERMATOLOGY LIFE QUALITY INDEX

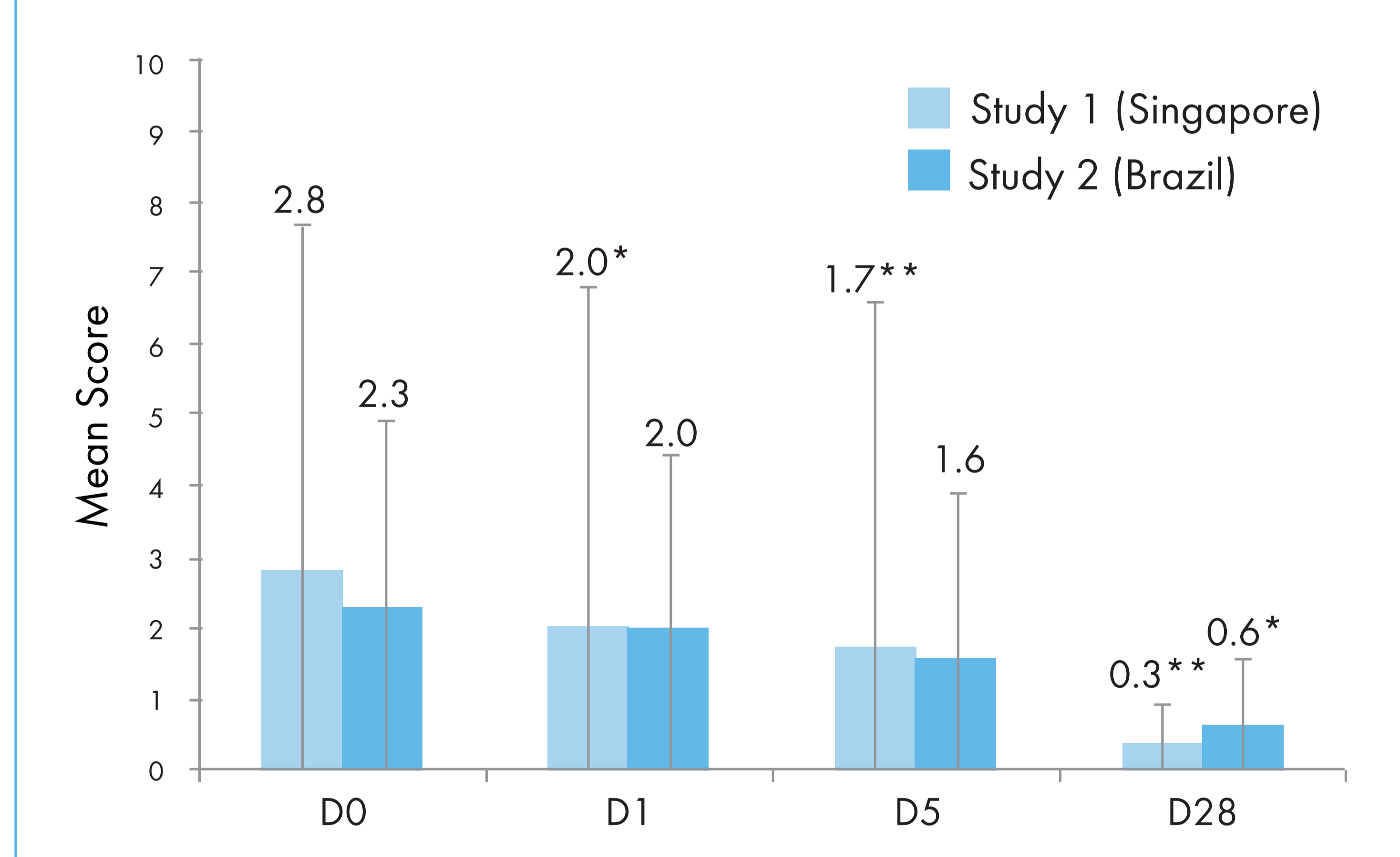
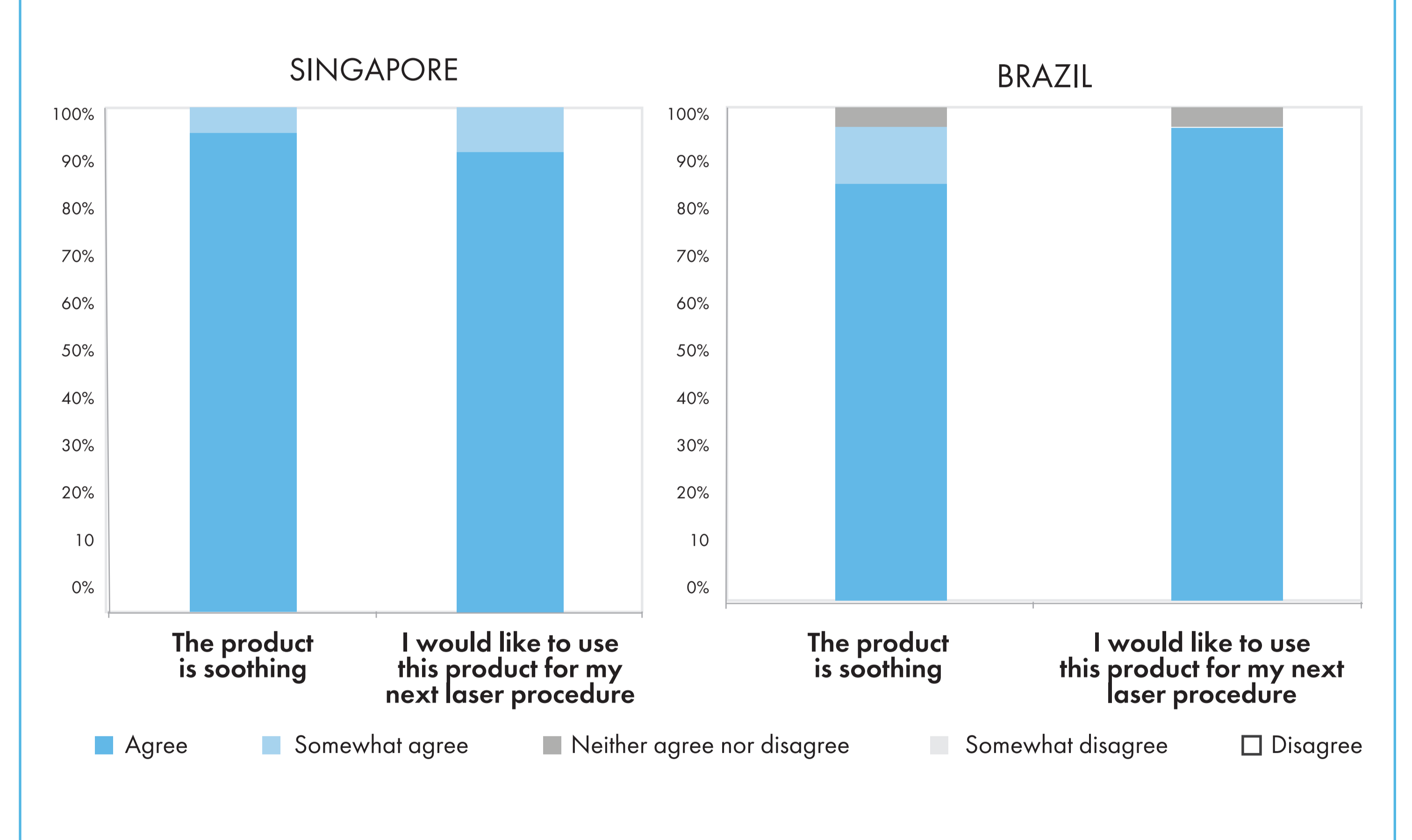


Figure 3 PATIENT SATISFACTION



MINÉRAL 89 MASK CAN BE USED IMMEDIATELY AFTER AESTHETIC PROCEDURES SUCH AS FRACTIONAL LASERS SHOWING IMPROVEMENT OF QOL AND HIGH PATIENT SATISFACTION

with significant reduction in discomfort and erythema and improvement of skin barrier function and hydration.

- **Very high soothing effect** perceived and willingness to reuse **MINÉRAL 89 MASK** or future laser procedures.*

*Only 3 out of 51 subjects presented local intolerance signs related to the face mask (burning sensation, tearing and erythema) throughout the 28 days of study. None of these local intolerance findings led to product discontinuation.

Torreão P. et al. Evaluation of the efficacy and tolerance of a cosmetic mask containing 89% of vichy volcanic mineralizing water and hyaluronic acid after facial laser procedures. J Cosmet Dermatol. 2021;20:2860–2866.

MINÉRAL 89 DAILY BOOSTER

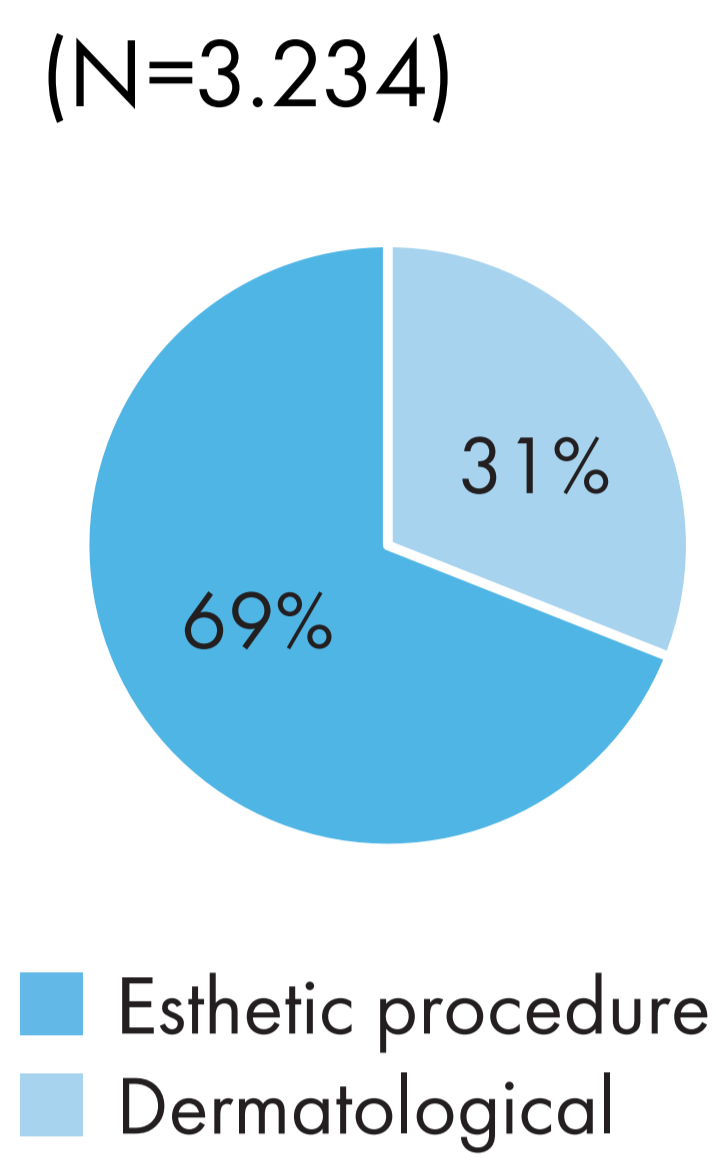
VICHY'S #1 MOST CLINICALLY TESTED PRODUCT

3.927 PATIENTS | 20 SCIENTIFIC STUDIES | 325 DERMATOLOGISTS | 22 COUNTRIES
6 FACIAL DERMATOSES | 8 AESTHETIC PROCEDURES | ALL PHOTOTYPES | MEN & WOMEN

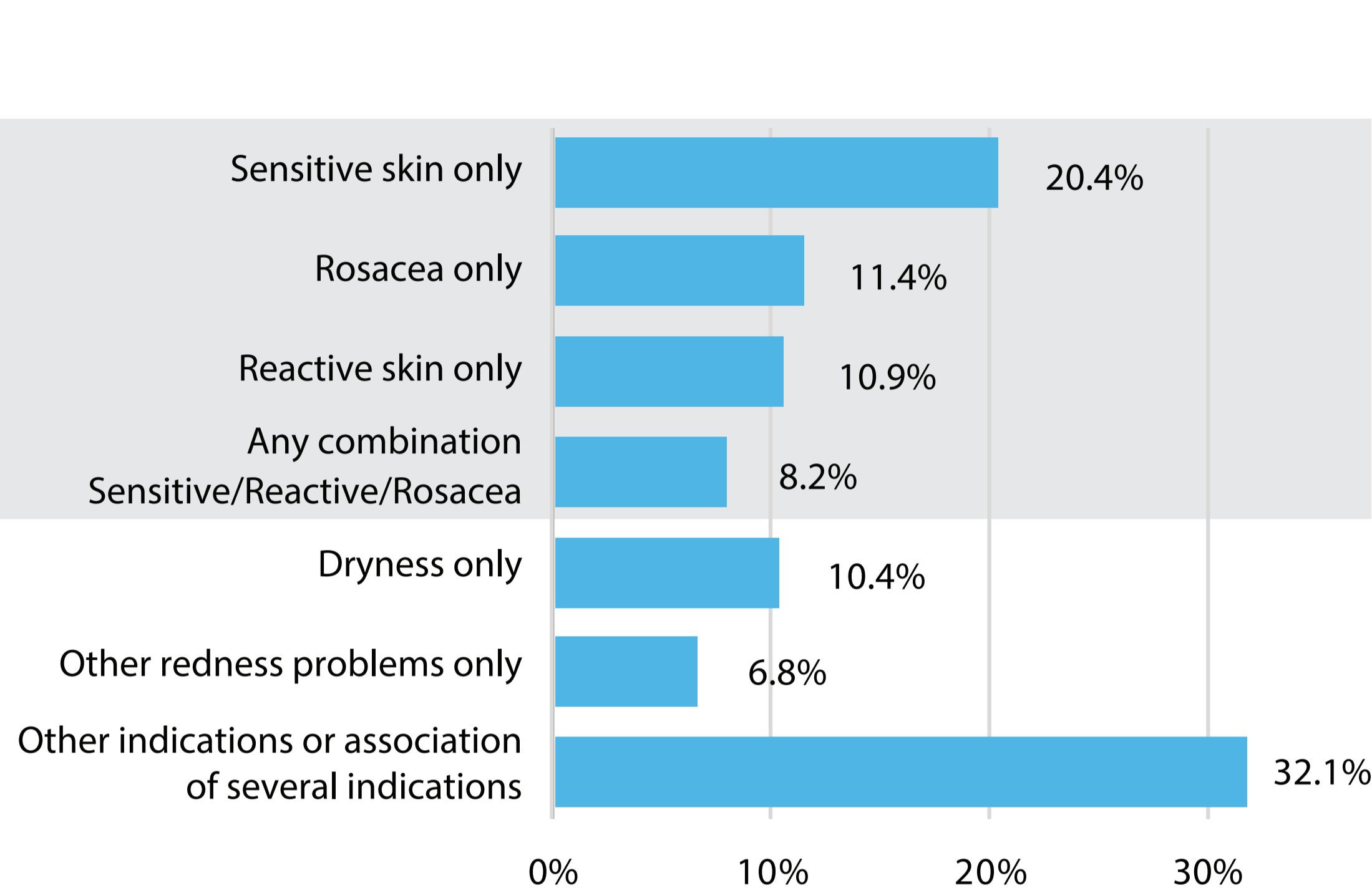
Rosacea, sensitive and reactive skin efficacy demonstrated in global observational study subgroup analysis^{1,2}

INDICATION OF PRESCRIPTION

MINÉRAL 89 DAILY BOOSTER INDICATION (N=3.234)



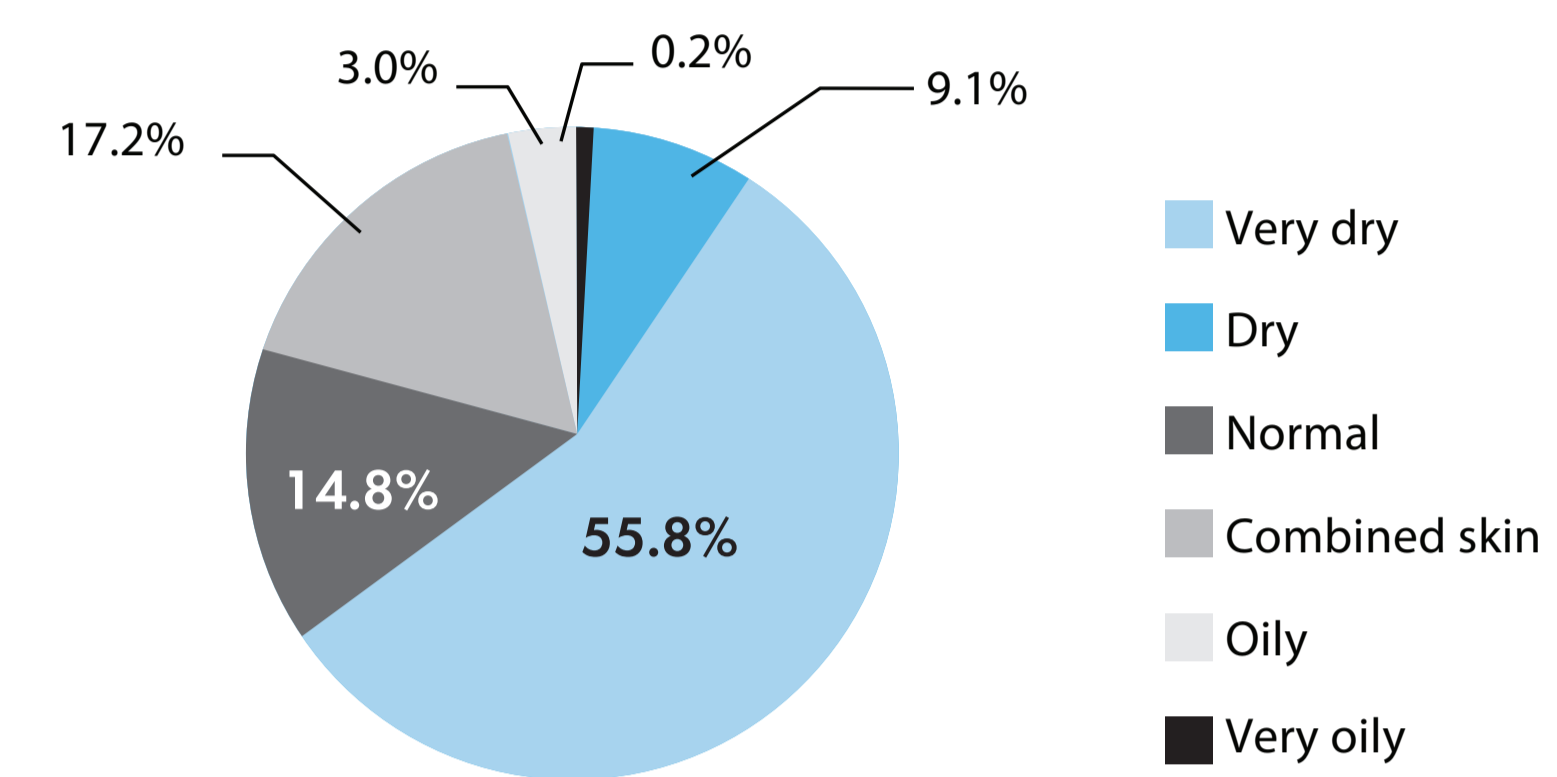
TYPES OF FACIAL DERMATOSES (N=1.004)



ROSACEA, SENSITIVE OR REACTIVE SKIN, OR COMBINATION

510 PATIENTS

SKIN TYPES



CONCLUSIONS

SIGNIFICANTLY IMPROVES CLINICAL SIGNS

ERYTHEMA

EVOLUTION FROM D0 TO D28

68.2%

IRRITATION

EVOLUTION FROM D0 TO D28

92.2%

HIGH INVESTIGATOR SATISFACTION

97.2%

SIGNIFICANTLY IMPROVES SYMPTOMS

DRYNESS

EVOLUTION FROM D0 TO D28

- 65.9%

BURNING

EVOLUTION FROM D0 TO D28

- 80.6%

HIGH PATIENT SATISFACTION

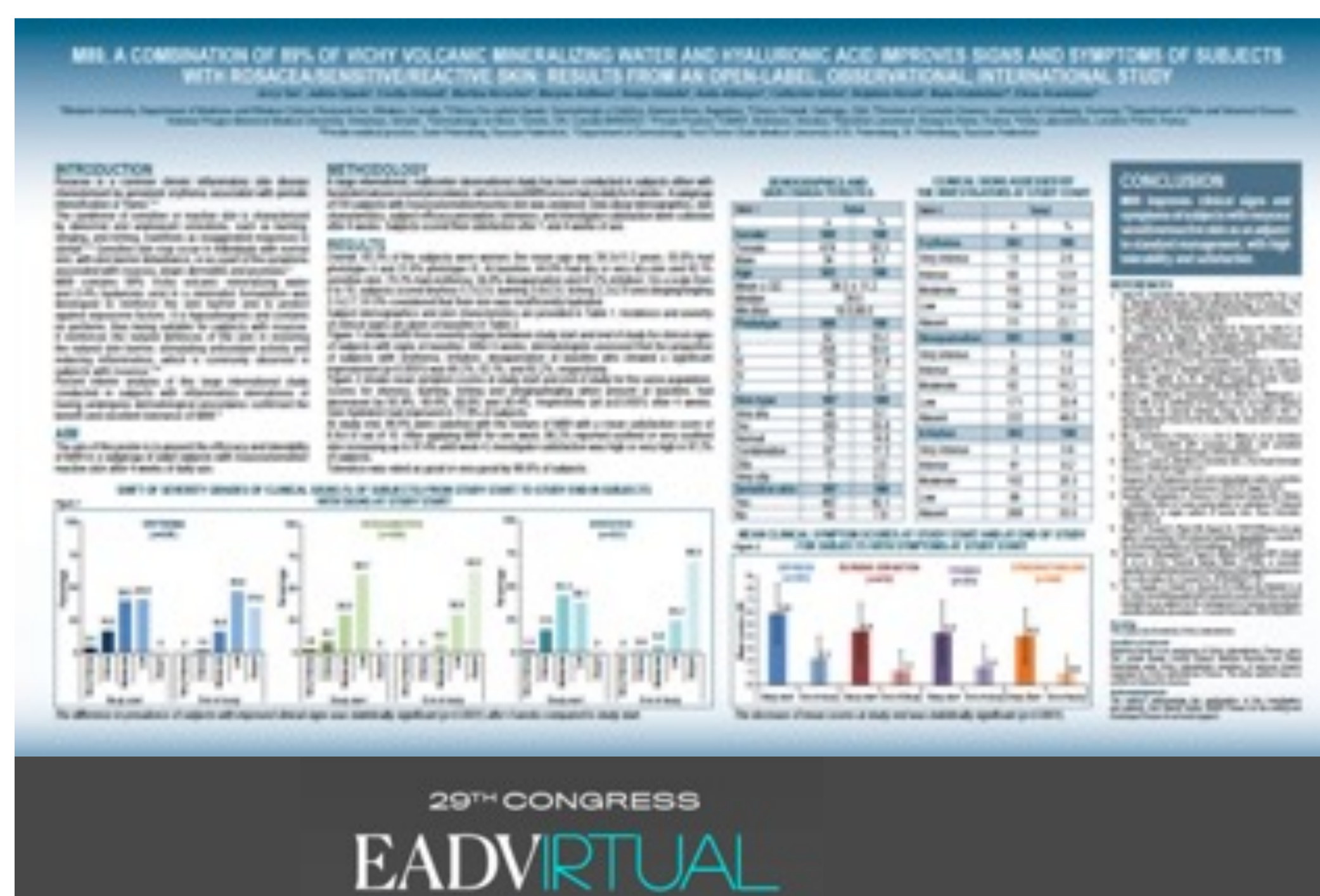
98.4%

TEXTURE SATISFACTION

PUBLICATION¹



POSTER²



1. Tan J. *et al.* Vichy Mineralizing Water with Hyaluronic Acid is effective and well tolerated as an adjunct to the management of various dermatoses and after esthetic procedures. *J Cosmet Dermatol.* 2020;19(3):682-688.

2. Tan J. *et al.* M89, a combination of 89% of Vichy Volcanic mineralizing water and hyaluronic acid improves signs and symptoms of subjects with rosacea/sensitive/reactive skin: results from an open-label, observational, international study. Poster 026268 at AAD. 2021.



MINÉRAL 89 DAILY BOOSTER



MINERAL 89 DAILY BOOSTER OBSERVATIONAL STUDY

MINERAL 89: A COMBINATION OF 89% OF VICHY VOLCANIC MINERALIZING WATER AND HYALURONIC ACID IS BENEFICIAL AS AN ADJUNCT FOR THE MANAGEMENT OF ROSACEA

AIM

The aim of this observational study was to present the benefits and tolerability of M89 as an adjunct in a subgroup of subjects with rosacea.

MATERIALS & METHODS

- Data from a subgroup of 114 subjects treated for rosacea were analyzed. M89 was provided as an adjunct to conventional therapy for 4 weeks.
- Clinical evaluations included assessment of clinical signs and symptoms at baseline and after 4 weeks.
- At week 1 and 4, perceived tolerance and satisfaction were assessed.

PANEL

- A total of 114 subjects were included.
- Detailed demographic data are given in Table 1.
- Table 2 provides details about clinical signs and their severity grade at study start.

**DEMOGRAPHICS AND SKIN CHARACTERISTICS
AT STUDY START**

	TOTAL	
	N	%
GENDER	113	100
Female	97	85.8
Male	16	14.2
Age	112	
Mean 50	43.0 ± 9.8	
Median	42.0	
Min; Max	23.0;86.0	
PHOTOTYPE	113	100
I	11	9.7
II	66	58.4
III	30	26.5
IV	6	5.3
Skin type	113	100
Very dry	4	3.5
DRY	61	54.0
Normal	16	14.2
Combinaison	22	19.5
Oily	10	8.8
Sensitive skin	112	100
Yes	103	92.0
No	9	8.0
PAPULES/PUSTULES	112	100
Yes	35	31.3
No	77	68.8

**CLINICAL SIGNS ASSESSED BY THE INVESTIGATORS
AT STUDY START**

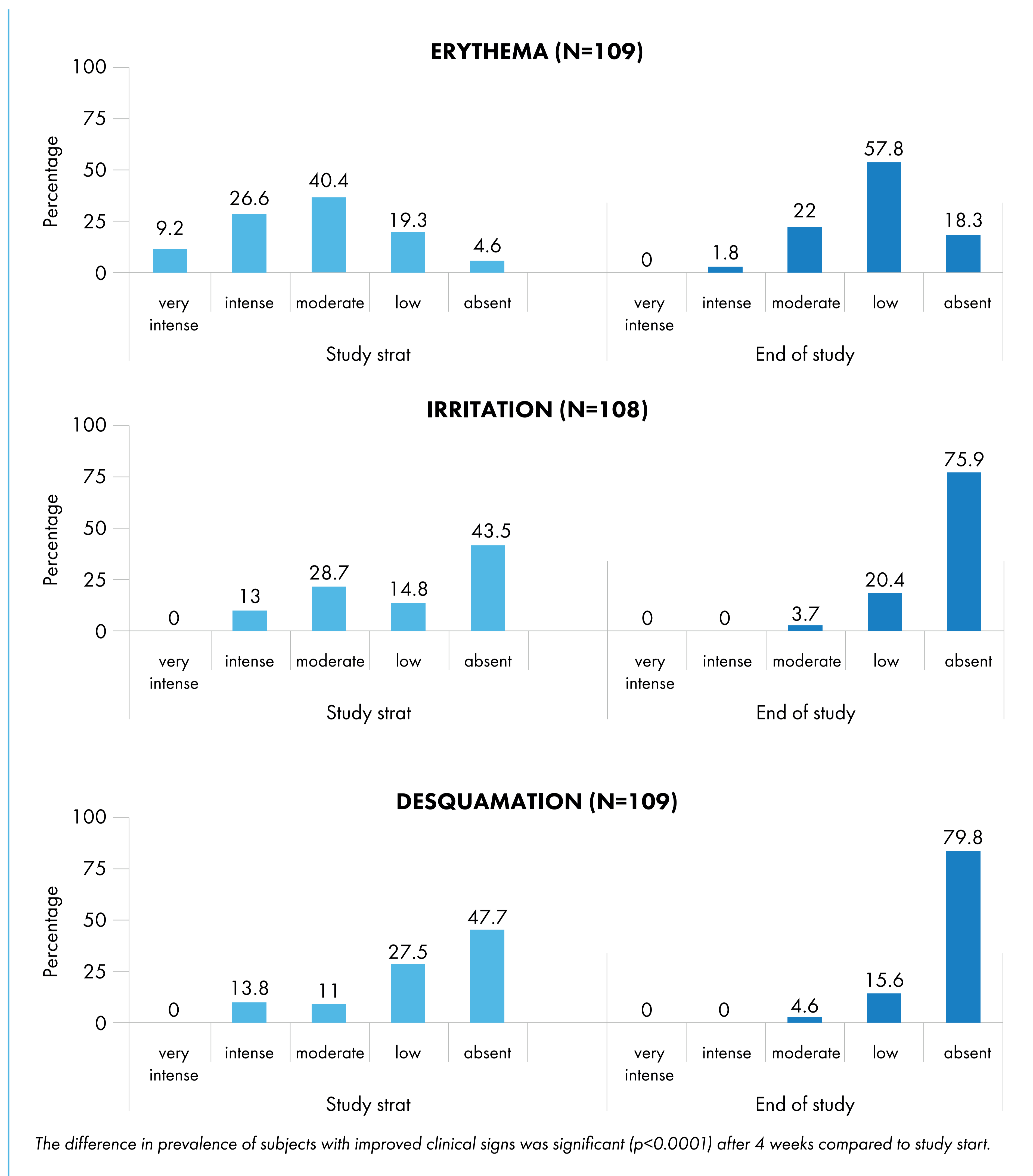
	TOTAL	
	N	%
ERYTHEMA	114	100
Grade	111	100
Very intense	10	9.0
Intense	30	27.0
Moderate	45	40.5
Low	21	18.9
Absent	5	4.5
DESQUAMATION	113	100
Grade	112	100
Very intense	0	0
Intense	16	14.3
Moderate	12	10.7
Low	31	27.7
Absent	53	47.3
IRRITATION	114	100
Grade	109	100
Very intense	0	0
Intense	14	12.8
Moderate	32	29.4
Low	16	14.7
Absent	47	43.1

1. Tan J. et al. M89, a combination of 89% of Vichy Volcanic mineralizing water and hyaluronic acid improves signs and symptoms of subjects with rosacea/sensitive/reactive skin: results from an open-label, observational, international study. Poster 026268 at AAD. 2021.

MINERAL 89 DAILY BOOSTER OBSERVATIONAL STUDY

RESULTS FOR ROSACEA SUBGROUP

Figure 1 — SHIFT OF SEVERITY GRADES OF CLINICAL SIGNS

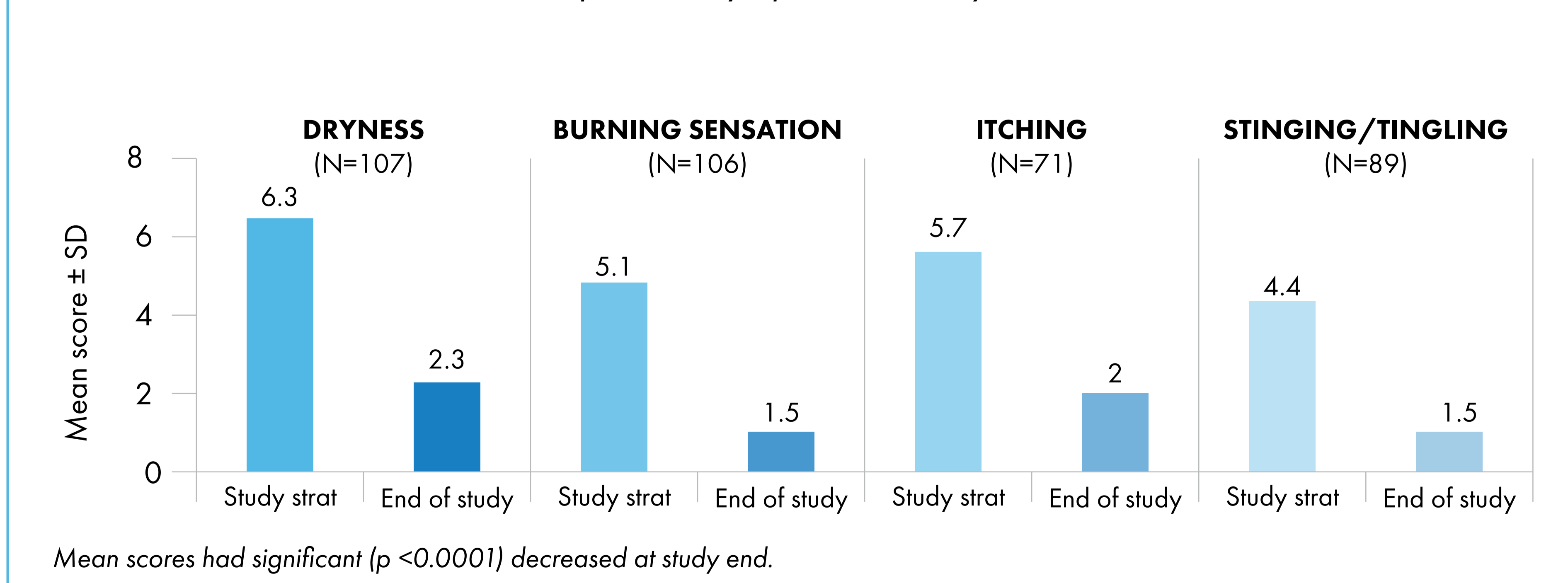


MINÉRAL 89 BOOSTER IS EFFECTIVE AND WELL-TOLERATED IN SUBJECTS WITH ROSACEA, SENSITIVE OR REACTIVE SKIN

with significant results after 4 weeks:

- **improvement of clinical signs:**
erythema **+77.9%**
desquamation **+89.5%**
irritation by **95.1%**
- **improvement of the symptoms:**
skin dryness **-62.1%**
burning sensation **-77.5%**

Figure 2 — POST-PROCEDURES: MEAN CLINICAL SYMPTOM SCORES AT STUDY START AND AT END OF STUDY (subject with symptoms at study start)



1. Tan J. et al. M89, a combination of 89% of Vichy Volcanic mineralizing water and hyaluronic acid improves signs and symptoms of subjects with rosacea/sensitive/reactive skin: results from an open-label, observational, international study. Poster 026268 at AAD. 2021.

MINÉRAL 89 DAILY BOOSTER

VICHY'S #1 MOST CLINICALLY TESTED PRODUCT

3.927 PATIENTS | 20 SCIENTIFIC STUDIES | 325 DERMATOLOGISTS | 22 COUNTRIES

6 FACIAL DERMATOSES | 8 AESTHETIC PROCEDURES | ALL PHOTOTYPES | MEN & WOMEN

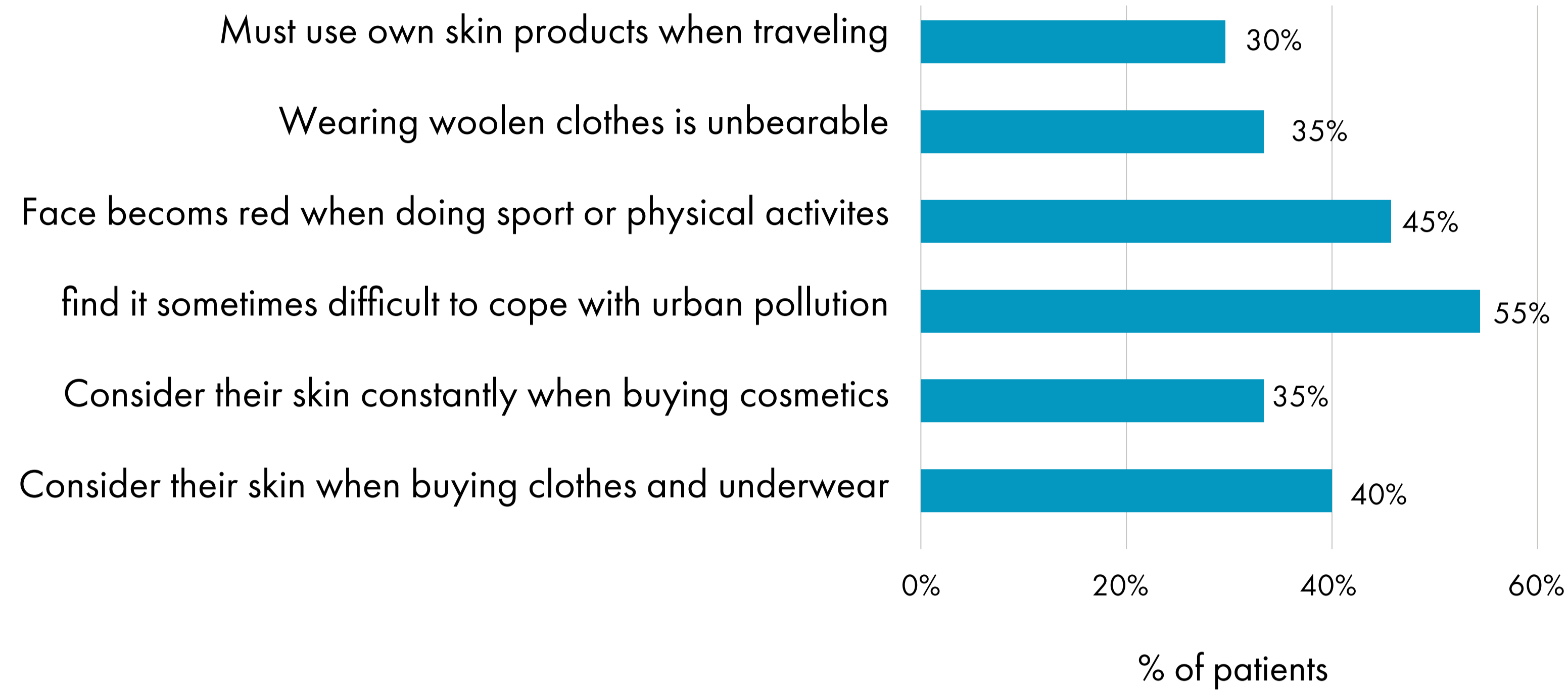
Split-face study in patients with rosacea and sensitive skin confirms clinical efficacy, skin hydration and excellent tolerance^{1,2}

TESTED EFFICACY AND SAFETY

SPLIT-FACE, RANDOMISED, CONTROLLED CLINICAL TRIAL

20 WOMEN WITH ROSACEA, ERYTHEMA AND SENSITIVE SKIN

ROSACEA PATIENT'S CONCERNS



CONCLUSIONS

SIGNIFICANTLY IMPROVES CLINICAL SIGNS^{1,2}

STATISTICALLY SIGNIFICANT IMPROVEMENT IN
15 DAYS



SIGNIFICANTLY IMPROVES SKIN HYDRATION^{1,2}

- MEASURED BY :
- CORNEOMETER
 - GPSKIN BARRIER
 - TRANSEPIDERMAL WATER LOSS (TEWL)

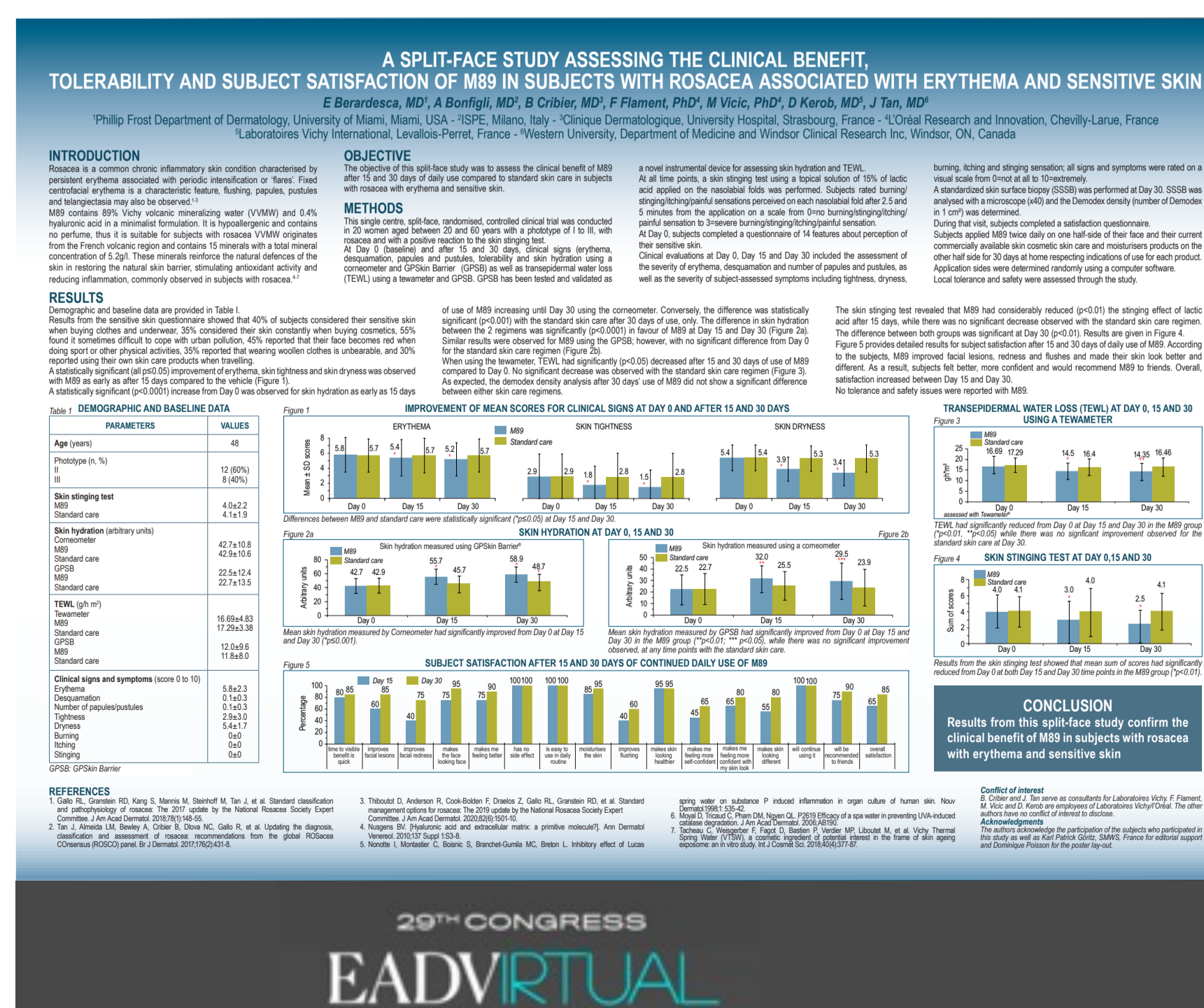
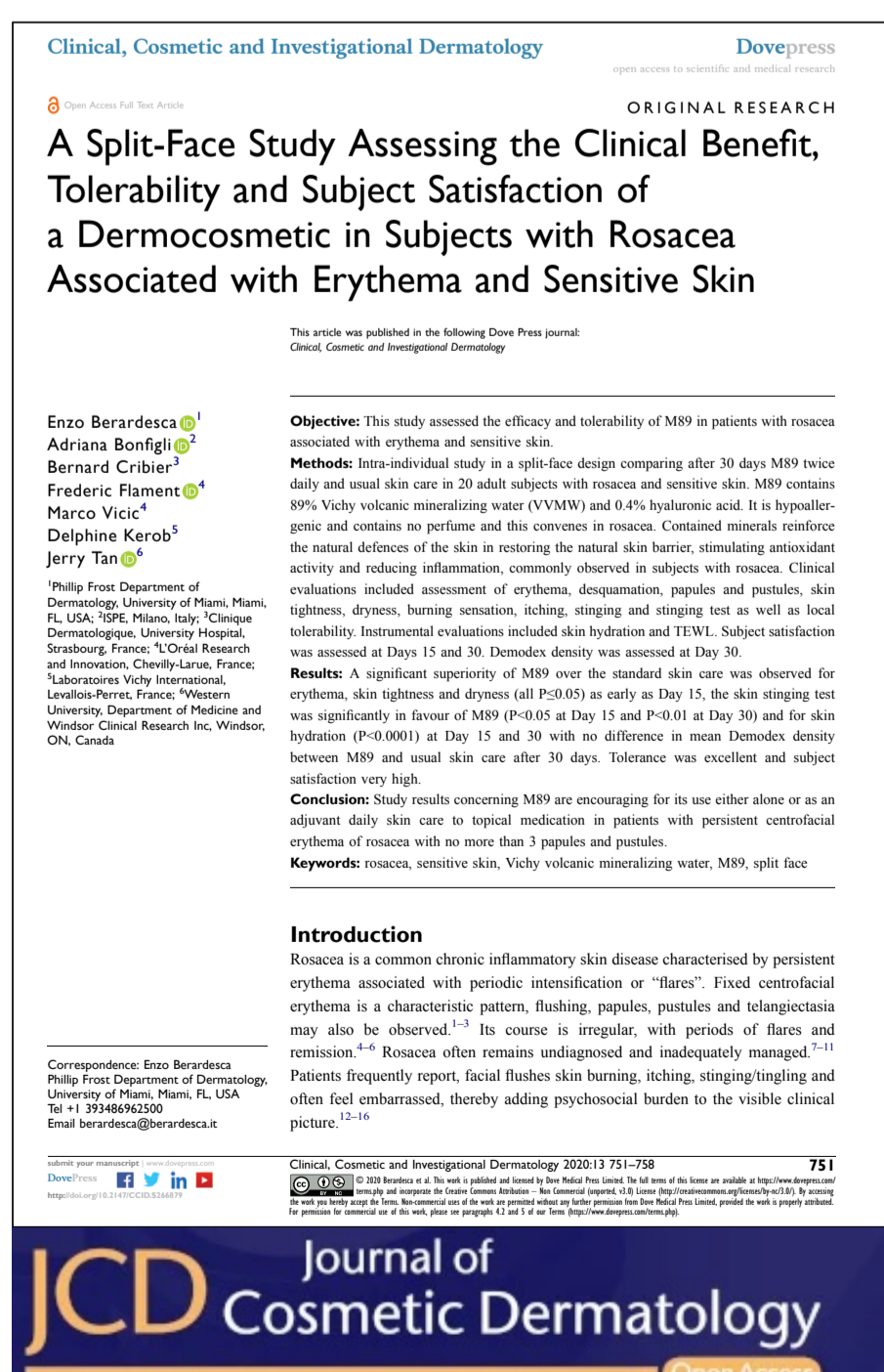
HIGH SUBJECTS SATISFACTION AND EXCELLENT TOLERANCE^{1,2}

- IMPROVEMENT OF :
- FACIAL LESIONS
 - REDNESS
 - FLUSHES

PUBLICATION¹

POSTER²

Clinical, Cosmetic and Investigational Dermatology



1. Berardesca E. et al. A Split-Face Study Assessing the Clinical Benefit, Tolerability and Subject Satisfaction of a Dermocosmetic in Subjects with Rosacea Associated with Erythema and Sensitive Skin. Clin Cosmet Investig Dermatol. 2020;13:751-758. 2. Berardesca E. et al. A split-face study assessing the clinical benefit, tolerability and subject satisfaction of m89 in subjects with rosacea associated with erythema and sensitive skin. Poster 0423 at EADV. 2020



MINERAL 89 BOOSTER

IN-VIVO CLINICAL STUDY IN SUBJECTS WITH ROSACEA

A SPLIT-FACE STUDY ASSESSING THE CLINICAL BENEFIT, TOLERABILITY AND SUBJECT SATISFACTION OF M89 IN SUBJECTS WITH ROSACEA ASSOCIATED WITH ERYTHEMA AND SENSITIVE SKIN

AIM

The objective of this split-face study was to assess the clinical benefit of M89 after 15 and 30 days of daily use compared to standard skin care in subjects with rosacea with erythema and sensitive skin.

METHODS

- Single centre, split-face, randomised, controlled clinical trial
- 20 women aged between 20 and 60 years with a phototype of I to III, with rosacea and with a positive reaction to the skin stinging test.
- Application of Minéral 89 twice a day for 30 days versus usual skin care product
- Clinical evaluations: baseline, D15, D30 of:
 - efficacy (Erythema, desquamation, papules and pustules, skin tightness, dryness, burning sensation, itching, stinging test)
 - tolerability
- Instrumental evaluations: baseline, D15, D30 for skin hydration (Corneometer CM825 and Gpskin Barrier) and TEWL (Tewameter TM 300 MDD 4 and Gpskin Barrier)
- Satisfaction questionnaire: D15, D30

PANEL

- Demographic and baseline data are provided in Table I.
- Results from the sensitive skin questionnaire showed that 40% of subjects considered their sensitive skin when buying clothes and underwear, 35% considered their skin constantly when buying cosmetics, 55% found it sometimes difficult to cope with urban pollution, 45% reported that their face becomes red when doing sport or other physical activities, 35% reported that wearing woolen clothes is unbearable, and 30% reported using their own skin care products when travelling.



DEMOGRAPHIC AND BASELINE DATA

PARAMETRES	VALUES
Age (years)	48
Prototype (n, %)	
II	12 (60%)
III	8 (40%)
Skin stinging test	
M89	4.0 ± 2.2
Standard care	4.1 ± 1.9
Skin hydration (arbitrary units)	
Corneometer	
M89	42.7 ± 10.8
Standard care	42.9 ± 10.6
GPSB	
M89	22.5 ± 12.4
Standard care	22.7 ± 13.5
TEWL (g/h m ²)	
Tewameter	
M89	16.69 ± 4.83
Standard care	17.29 ± 3.38
GPSB	
M89	12.0 ± 9.6
Standard care	11.8 ± 8.0
Clinical signs and symptoms (score 0 to 10)	
Erythema	5.8 ± 2.3
Desquamation	0.1 ± 0.3
Number of papules/pustules	0.1 ± 0.3
Tightness	2.9 ± 3.0
Dryness	5.4 ± 1.7
Burning	0 ± 0
Itching	0 ± 0
Stinging	0 ± 0

GPSB: GPsSkin Barrier

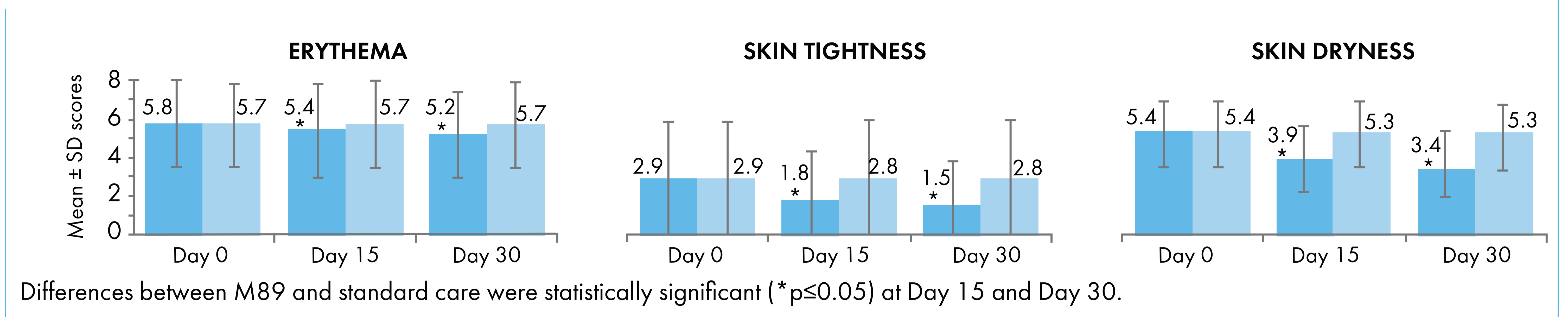
1. Berardesca E. et al. A Split-Face Study Assessing the Clinical Benefit, Tolerability and Subject Satisfaction of a Dermocosmetic in Subjects with Rosacea Associated with Erythema and Sensitive Skin. Clin Cosmet Investig Dermatol. 2020 Oct 5;13:751-758.

MINERAL 89 BOOSTER

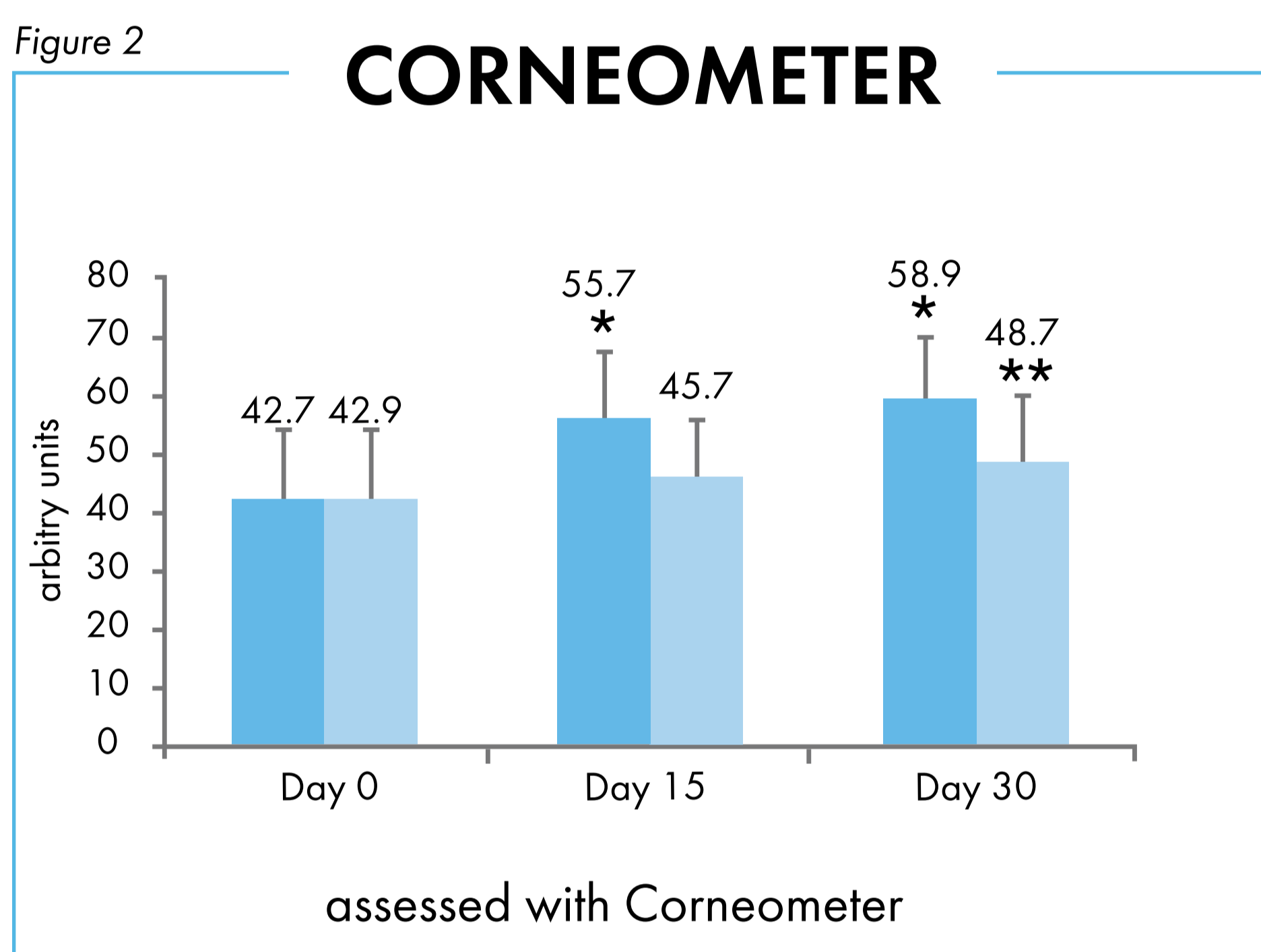
IN-VIVO CLINICAL STUDY IN SUBJECTS WITH ROSACEA

RESULTS

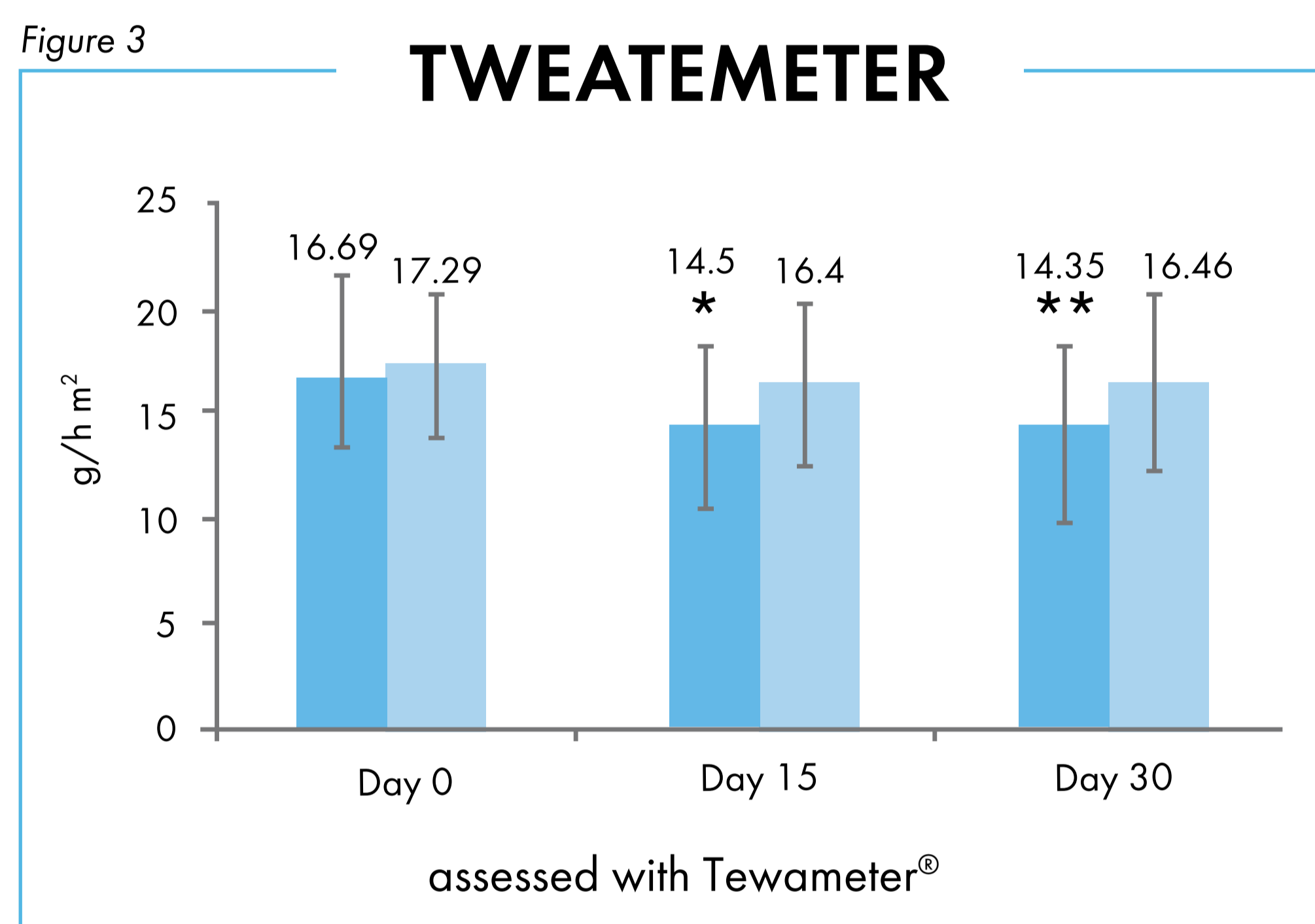
Figure 1 IMPROVEMENT OF MEAN SCORES FOR CLINICAL SIGN AT DAY 0 AFTER 15 DAYS AND 30 DAYS



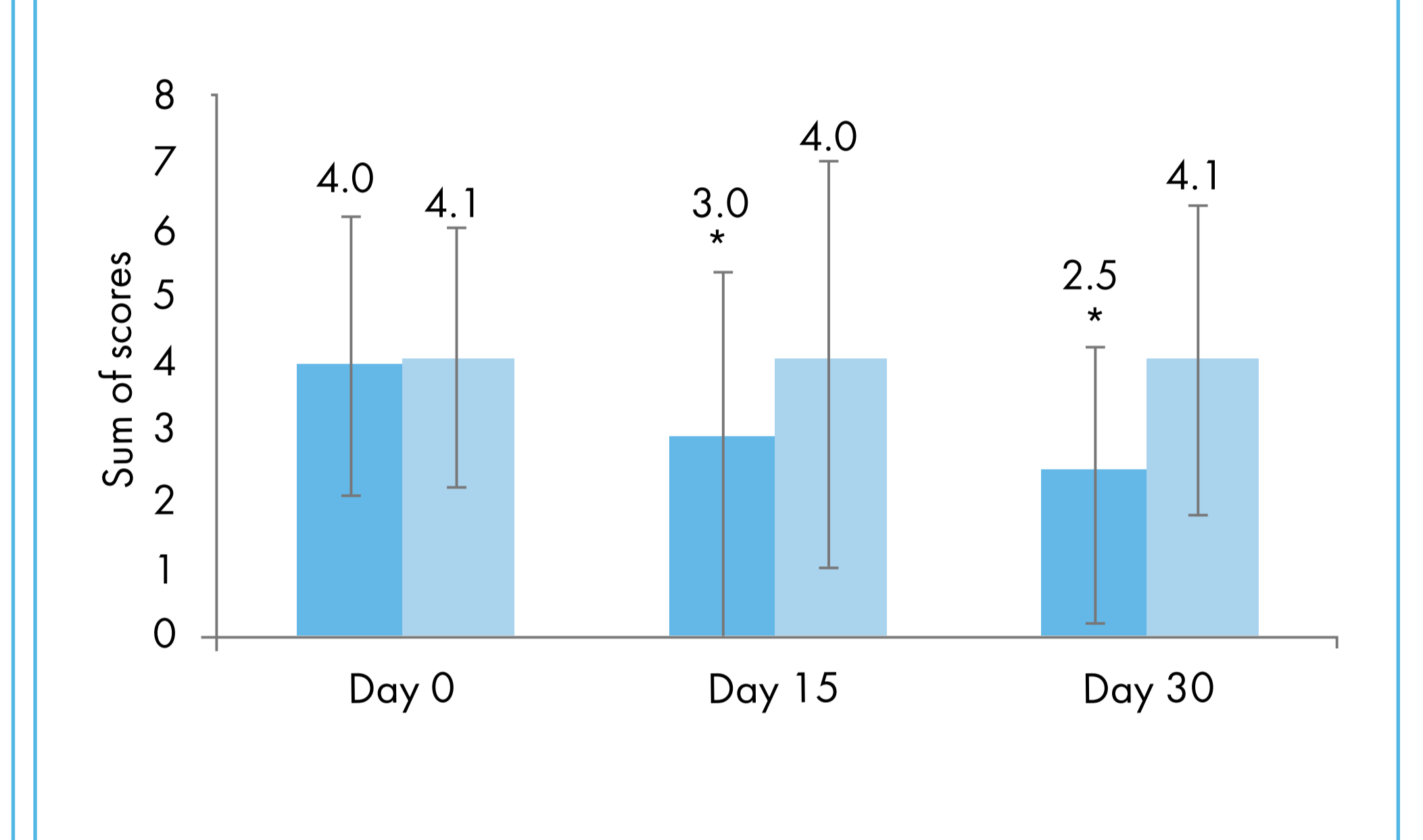
SKIN HYDRATION ASSESSMENT



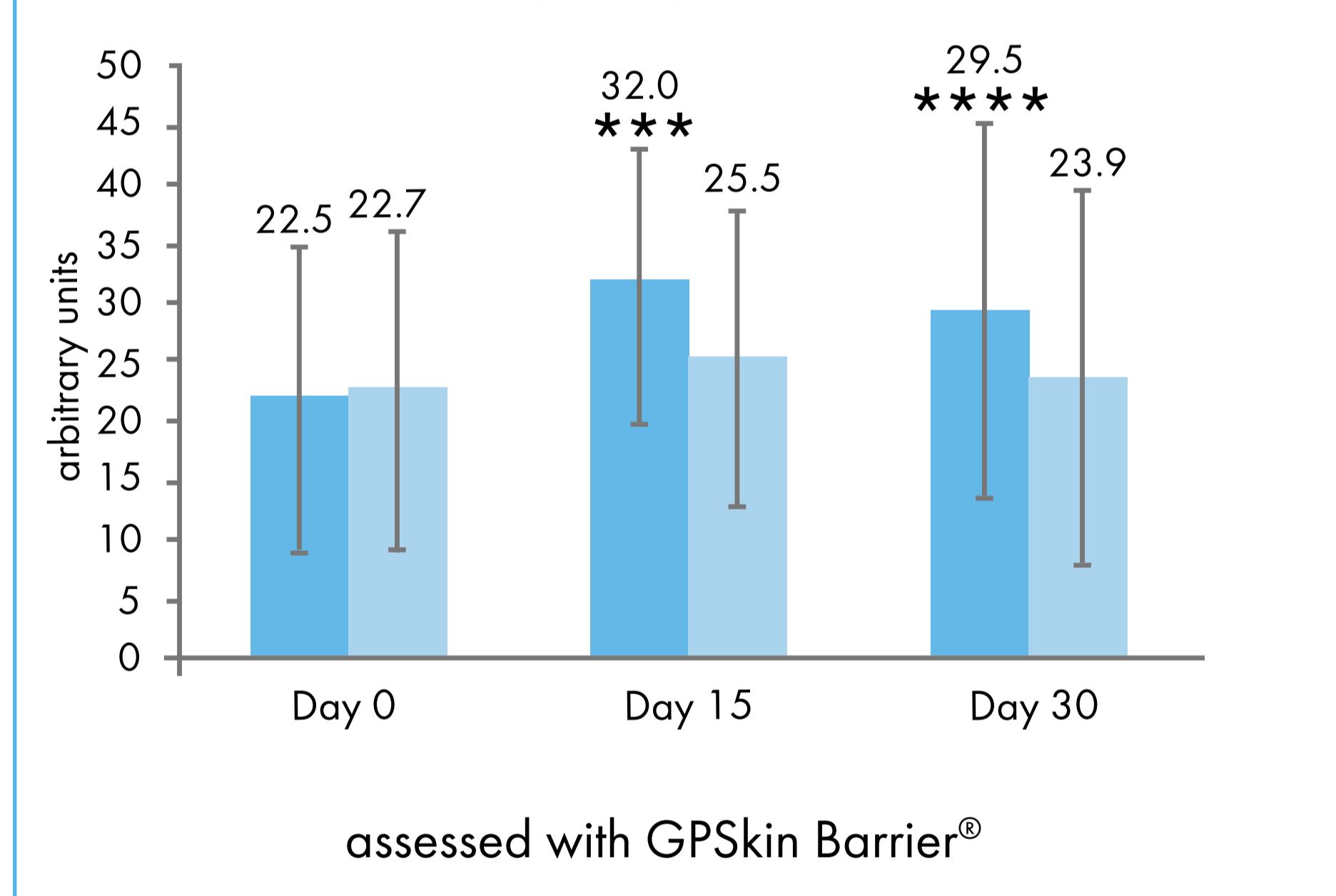
SKIN BARRIER FUNCTION ASSESSMENT



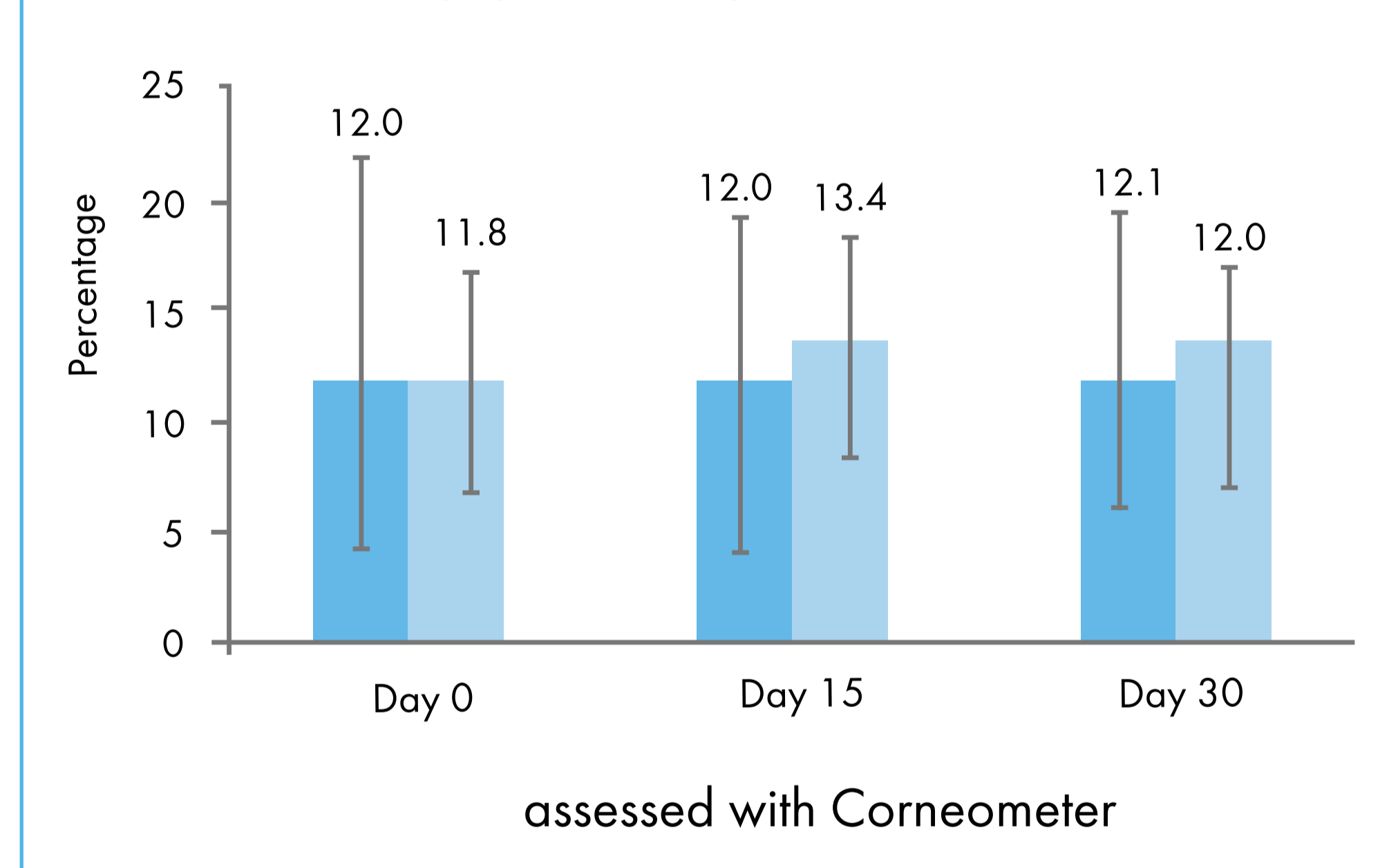
SKIN STINGING TEST



GP SKIN

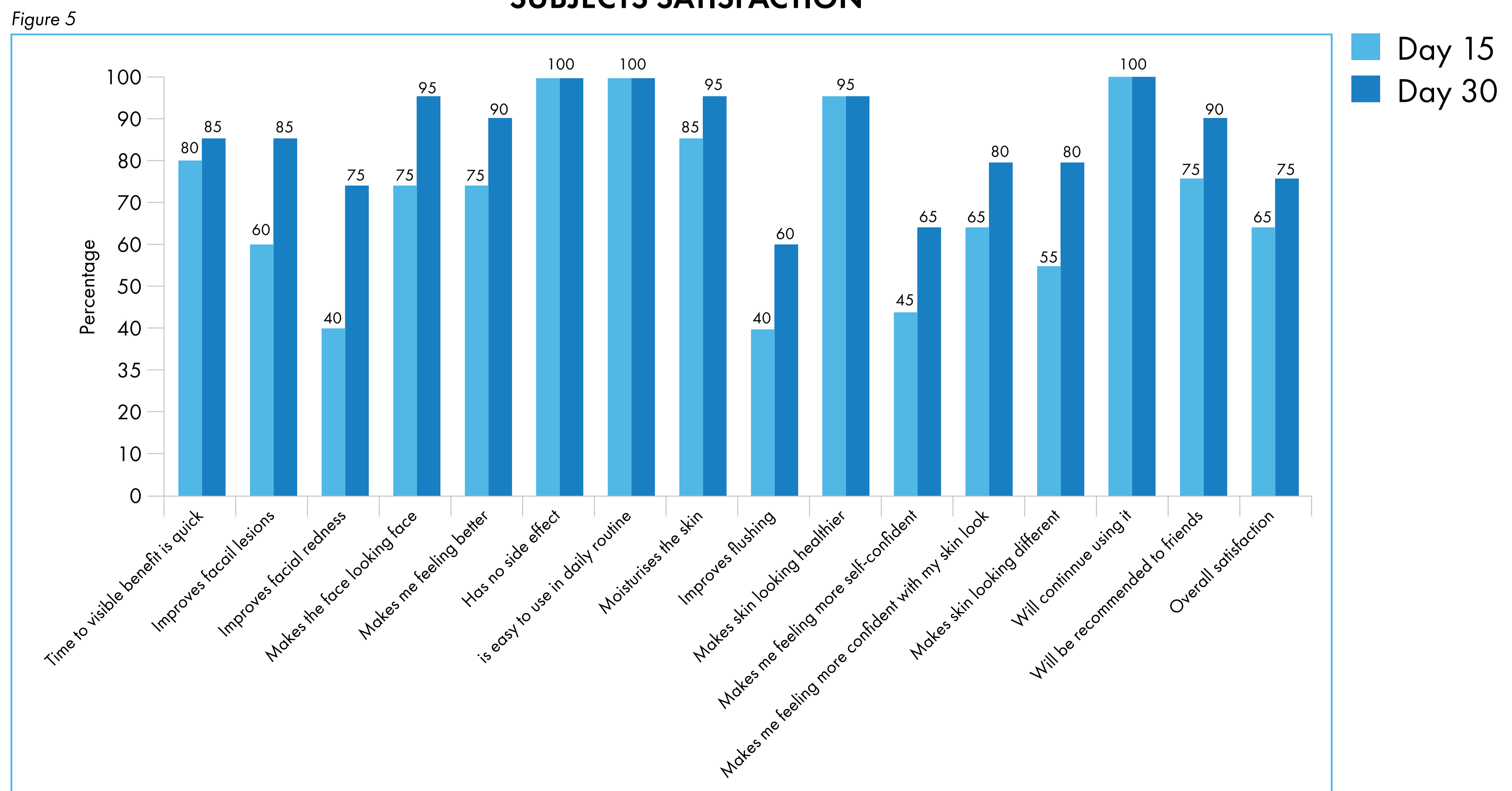


CORNEOMETER



■ M89
■ Standard care

SUBJECTS SATISFACTION



1. Berardesca E. et al. A Split-Face Study Assessing the Clinical Benefit, Tolerability and Subject Satisfaction of a Dermocosmetic in Subjects with Rosacea Associated with Erythema and Sensitive Skin. Clin Cosmet Investig Dermatol. 2020 Oct 5;13:751-758.

MINERAL 89 DAILY BOOSTER

IN-VIVO CLINICAL STUDY IN SUBJECTS WITH ROSACEA

CONCLUSION

MINÉRAL 89 BOOSTER IS EFFECTIVE AND WELL-TOLERATED IN SUBJECTS WITH ROSACEA WITH ERYTHEMA AND SENSITIVE SKIN IN A SPLIT-FACE CLINICAL STUDY WITH THE 1ST RESULTS NOTICED WITHIN 15 DAYS :

- **Statistically significant improvement of erythema, skin tightness and skin dryness** as early as after 15 days compared to the vehicle (all $p \leq 0.05$);
- **Statistically significant increase skin hydration** observed using the corneometer, as early as 15 days, increasing until Day 30 using the corneometer ($p < 0.0001$);
- **Statistically significant decrease in TEWL** after 15 and 30 days ($p < 0.05$), observed using the tewameter;
- **Considerable reduction in the stinging effect of lactic acid** after 15 days ($p < 0.01$);
- According to the subjects, **M89 improved facial lesions, redness and flushes** skin look better and different;
- **No tolerance and safety issues were reported** with M89



MINÉRAL 89 DAILY BOOSTER

#5 ROSACEA PRESCRIPTION

VICHY'S #1 MOST CLINICALLY TESTED PRODUCT

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6 FACIAL DERMATOSES | 8 AESTHETIC PROCEDURES | ALL PHOTOTYPES | MEN & WOMEN

Ex Vivo Study demonstrating **no interference with skin absorption and distribution of ivermectin¹**

EX-VIVO STUDY

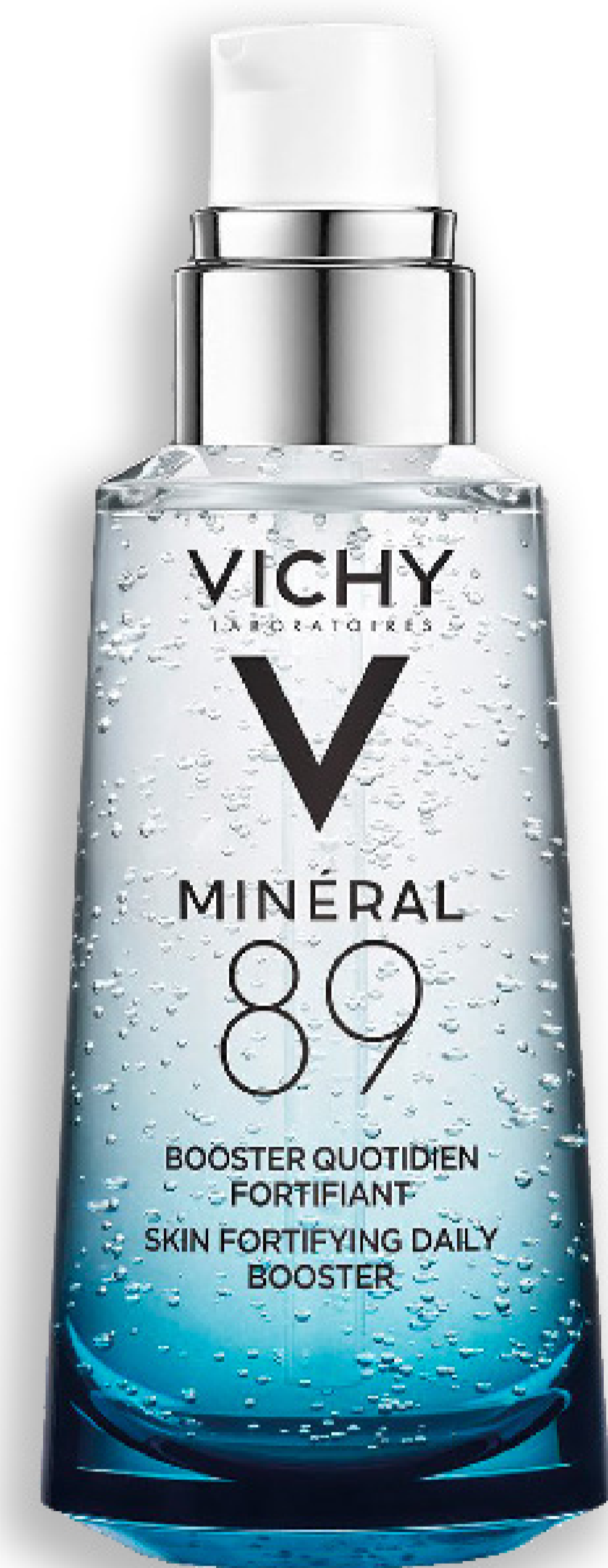
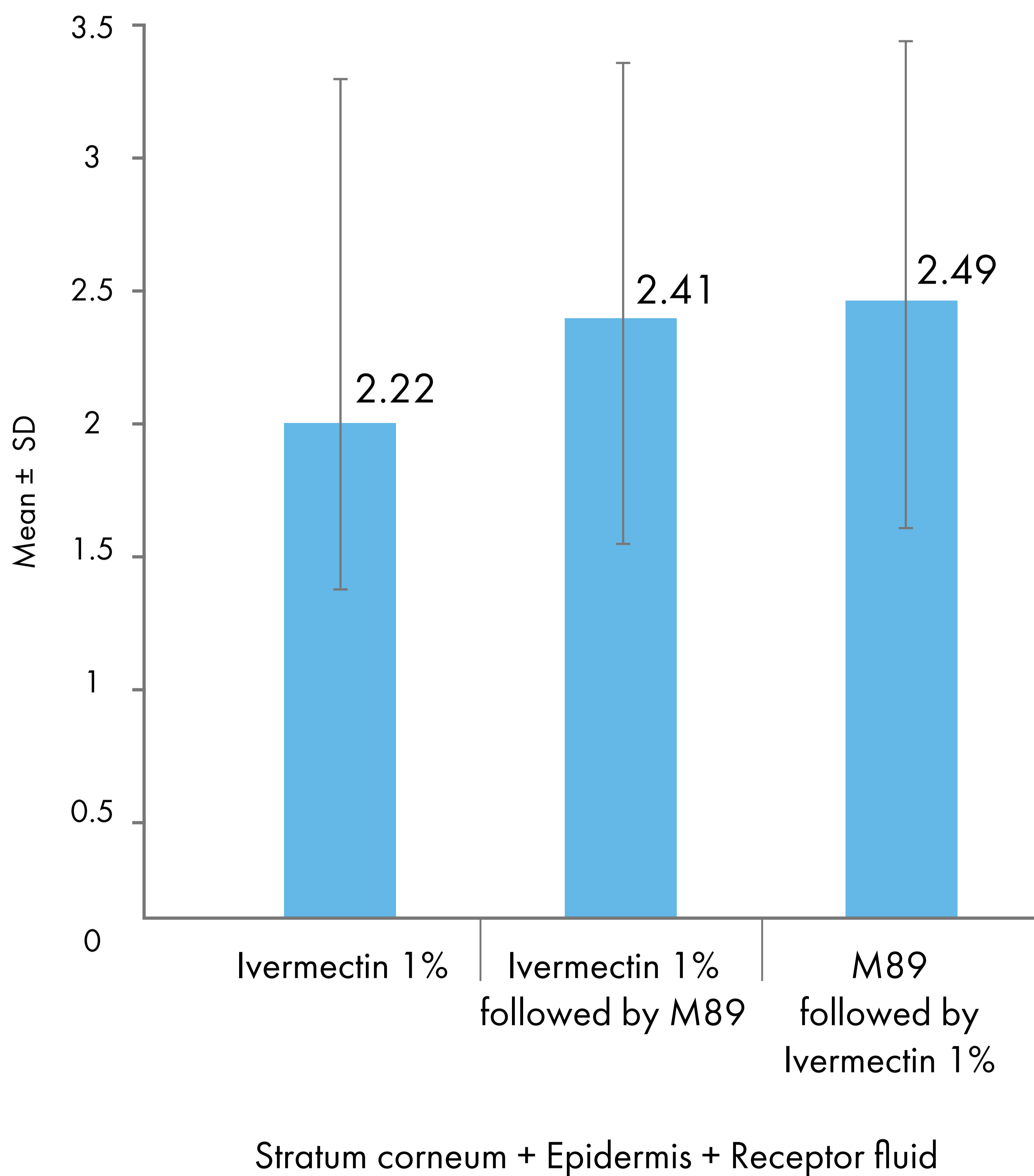
ON FULL THICKNESS OF HUMAN SKIN SAMPLES (3 DONORS)

IVERMECTIN 1% APPLIED BEFORE OR AFTER MINÉRAL 89 BOOSTER

CONCLUSIONS

SIMILAR ABSORPTION OF TOPICAL IVERMECTIN

MINÉRAL 89 BOOSTER DOES NOT INTERFERE WITH CUTANEOUS ABSORPTION OF TOPICAL IVERMECTIN



POSTER¹

M89, A DERMOCOSMETIC COMBINING 89% VICHY VOLCANIC MINERALIZING WATER AND HYALURONIC ACID DOES NOT MODIFY CUTANEOUS PENETRATION OF TOPICAL IVERMECTIN EX VIVO
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INTRODUCTION
 Ivermectin is a potent antiparasitic dermatologic agent with an established efficacy and tolerability profile. It is used to treat various skin conditions, including rosacea, acne, and scabies. The aim of this study was to evaluate the effect of M89 on the cutaneous absorption of topical ivermectin ex vivo.

EXPERIMENTAL DESIGN

Group	Application of Ivermectin 1% cream	Application of M89	Application of Ivermectin 1% cream
Control	Application of Ivermectin 1% cream	None	Application of Ivermectin 1% cream
M89	Application of Ivermectin 1% cream	Application of M89	Application of Ivermectin 1% cream

RESULTS
 The mean ivermectin amount in the stratum corneum, skin and receptor fluid was 2.22 µg/cm² (SD 0.75) for the control group, 2.41 µg/cm² (SD 0.75) for the M89 group, and 2.49 µg/cm² (SD 0.75) for the M89 group. No significant differences were observed between the groups.

CONCLUSION
 Cutaneous absorption of topical ivermectin is not impacted by the application of M89.

29th CONGRESS EADVIRTUAL

1. Tan J. et al. Mineral 89: A dermocosmetic combining 89% vichy volcanic mineralizing water and hyaluronic acid Does not modify cutaneous penetration of topical ivermectin ex vivo. Poster P0421 at EADV 2020.



MINERAL 89 BOOSTER

EX-VIVO ASSESSEMENT OF IVERMECTIN PENETRATION

MINERAL 89: A COMBINATION OF 89% OF VICHY VOLCANIC MINERALIZING WATER AND HYALURONIC ACID DOES NOT MODIFY CUTANEOUS PENETRATION OF TOPICAL IVERMECTIN EX VIVO

AIM

This ex vivo assay assessed the skin absorption and distribution in the skin of ivermectin 1% applied before or after M89 application.

METHODS

The assay was conducted using full thickness human skin samples from 3 donors (2 women, 1 man), who underwent abdominal plastic surgery.

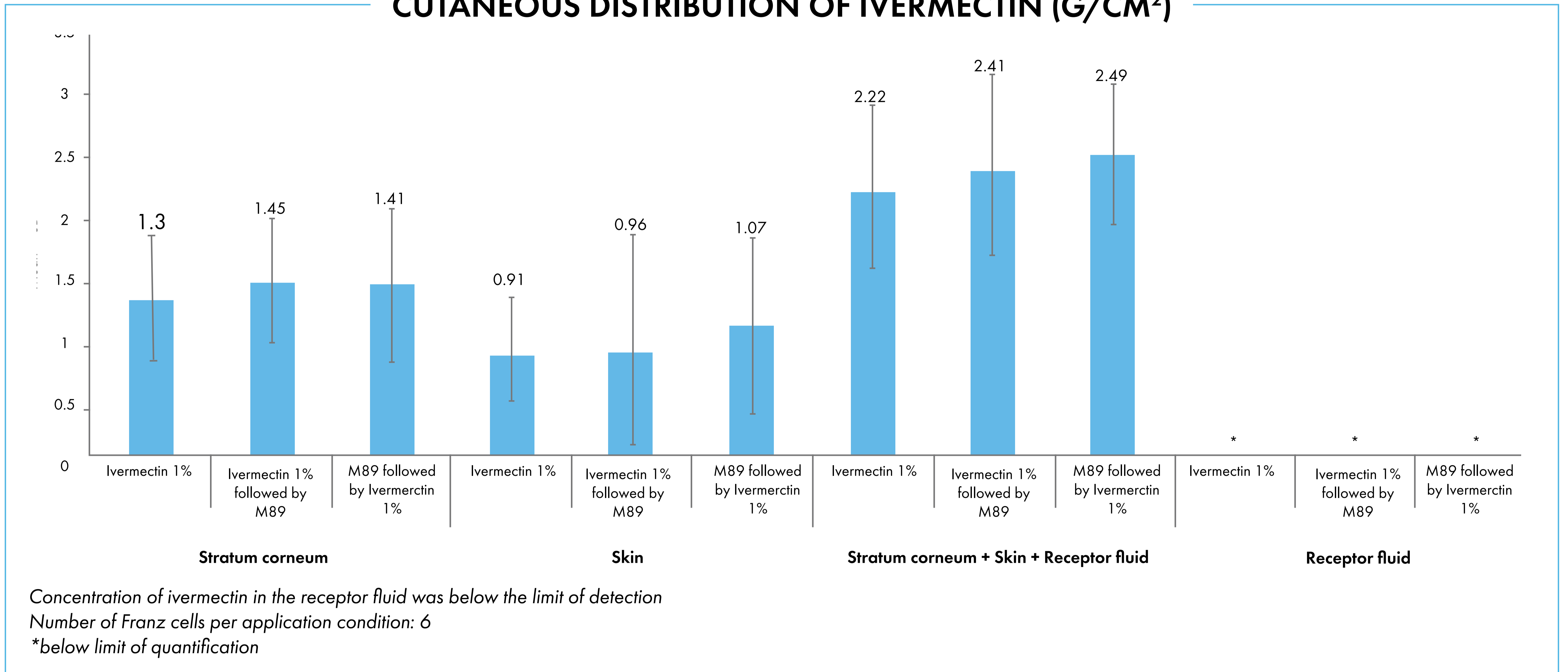
STUDY DESIGN

Condition	Application of ivermectin 1% cream	<ul style="list-style-type: none"> Application of ivermectin 1% cream 20-minutes delay between applications Application of M89 	<ul style="list-style-type: none"> Application of M89 20-minutes delay between applications Application of ivermectin 1% cream
Total amount of ivermectin 1% / cm ²	5 mg		
Total amount of M89 / cm ²	None	5 mg	
Skin thickness			
Number of cells per donor	2	2	2
Number of donors	3	3	3
Total number of cells	18	18	18
Receptor fluid	PBS 0.01 M pH 7.4 (data given by the supplier) + 0.25% tween 80		
Receptor fluid sampling	total volume of receptor fluid: 7 mL; collected after 24 hours		
Washing and dismantling of cells	24h		
Washing of formulations	2 kimwipes (2 x 2 cm) wetted with PEG 400 / EtOH (70/30 v/v) and 3 dried kimwipes (2 x 2 cm) or equivalent		
Strips	20* strips Polypropylene adhesive tape roll 3M (Sensitive®) size 19*5mm were performed on each skin. Strips were pooled by 4 (1-4, 5-8, 9-12, 13-16, 17-20).		
RCD extraction solvent	MeOH		

MINERAL 89 BOOSTER EX-VIVO ASSESSEMENT OF IVERMECTIN PENETRATION

RESULTS

CUTANEOUS DISTRIBUTION OF IVERMECTIN (G/CM²)



CONCLUSION

MINÉRAL 89 DAILY BOOSTER DOES NOT INTEREFERE WITH THE CUTANEOUS ABSORPTION OF TOPICAL IVERMECTIN

- Ivermectin was not detected in the receptor fluid (LOD 1.5 ng/mL) and **mainly found in the stratum corneum.**
- The cutaneous distribution of ivermectin was not different as the mean total ivermectin amount in the stratum corneum, skin and receptor fluid was:
 - 2.22 µg/cm² (representing 4.15% of the applied dose) after application of ivermectin alone,
 - 2.41 µg/cm² (4.54%) after application of ivermectin followed by M89,
 - 2.49 µg/cm² (4.83%) after application of M89 followed by ivermectin.



1. Tan J. et al. Mineral 89: A dermocosmetic combining 89% vichy volcanic mineralizing water and hyaluronic acid Does not modify cutaneous penetration of topical ivermectin ex vivo. Poster P0421 at EADV 2020.

VICHY
LABORATOIRES