Human Co., Ltd. Clinical Trials Center

Human Clinical Trials Center

Clinical Trials Report

Hironic

Test Product

Synerjet

Report No.

HM-R25-0291

Report Date

June 25, 2025

HUMAN
Human Co., Ltd. Clinical Trials Center

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Authentication

Synerjet	
Study item	Improvement of surface skin hydration
	Improvement of deep skin hydration

This study commissioned by Hironic was conducted in accordance with the GCP (Good Clinical Practice), guidelines of MFDS (Ministry of Food and Drug Safety) and the Standard operation procedure of Human Co., Ltd. Skin Clinical Trial Center. The results are reported as follows.

June 25, 2025

President	Human Co., Ltd. Skin Clinical Trial Center	Huijeong Jeong	
Principal Investigator	Human Co., Ltd. Skin Clinical Trial Center	Wonkyu Hong, M.D., Ph.D.	

Contents

Information of the Study Request

Study Title	Human clinical trial on the efficacy of [Synerjet] in improving surface skin hydration and deep skin hydration after one use.	
Study Code	HM-P25-0291	
IRB Code	HM-IRB-P25-0291	
Study Period	May 14, 2025 ~ May 15, 2025	
Report Date	June 25, 2025	
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Quality Assurance Statement

Study Title	Human clinical trial on the efficacy of [Synerjet] in improving surface skin hydration and deep skin hydration after one use.
Study Code	HM-P25-0291
IRB Code	HM-IRB-P25-0291
Study Period	May 14, 2025 ~ May 15, 2025

A Clinical trial for humans was conducted accurately in accordance with the test protocol agreed upon with Hironic, GCP (Good Clinical Practice), MFDS (Ministry of Food and Drug Safety) guidelines, and the Standard Operating Procedures (SOP) of Human Co., Ltd. Skin Clinical Trial Center. We confirm that the results have been faithfully reflected. All result obtained during the study period have been faithfully reflected in this report, and it is certified that all procedures of this clinical trial were inspected under the supervision of quality assurance and received finally approval from principal investigator, as detailed below.

Classification	Inspection Items	Inspection Date	Status of Approval
Equipment and Facilities	Routine Inspection of Equipment	2025. 04. 10	Approval
	Document and Sample Storage Facility		Approval
	Laboratory Structure		Approval
Study Plan	Study Protocol	2025. 04. 09	Approval
	IRB Approval	2025. 04. 10	Approval
	Preparation of Test Product Information	2025. 05. 13	Approval
	Subject recruitment		Approval
Study Process	Study procedure and data analysis	2025. 05. 14 ~ 2025. 05. 15	Approval
	IRB Study completion certification	2025. 05. 23	Approval
Report	Finial Reported Date(Korea)	2025. 05. 26	Approval
	Finial Reported Date(English)	2025. 06 25	Approval
	Documents Storage	2025. 05. 26	Approval

June 25, 2025

Principal Investigator: Wonkyu Hong 

Quality Assurance: Hongsuk Kim 

Report Summary

Study Title	Human clinical trial on the efficacy of [Synerjet] in improving surface skin hydration and deep skin hydration after one use.		
Clinical Trial Center	Human Co., Ltd. Skin Clinical Trial Center	**Sponsor**	Hironic
Study Code	HM-P25-0291	**IRB Code**	HM-IRB-P25-0291
Study Period	May 14, 2025 ~ May 15, 2025		
Purpose	To evaluate the efficacy of a skincare device in improving surface skin hydration and deep skin hydration after one use.		
Result	1. Subjects Final number of subjects (Average age): 20 (54.00 yrs) 2. Results 1) Improvement of surface skin hydration - Comparisons within the test group: After one use, the average dielectric constant (ε) significantly increased. - Comparisons within the control group: After one use, the average dielectric constant (ε) significantly increased. - Between groups: After one use, a significant difference was observed between the test and control groups. 2) Improvement of deep skin hydration - Comparisons within the test group: After one use, the deep skin moisture content (TDC) significantly increased. - Comparisons within the control group: After one use, the deep skin moisture content (TDC) also significantly increased. - Between groups: After one use, a significant difference was observed between the test group and the control group. 3. Questionnaire Results 95.00~100.00% of the subjects responded positively to all items. 4. Adverse reaction Subjects were not reported adverse event during the test period. Also, no adverse events were observed upon physical examination by a dermatologist.		

Conclusion	**[Synerjet], commissioned by Hyronic, is considered to helpful in improvement of surface skin hydration and deep skin hydration after one use.**

1. Purpose

This study aims to evaluate the efficacy of [Synerjet], commissioned by Hironic, in improving hydration of the skin's surface and deeper layers in healthy Korean female adults aged 19 years and older.

2. Test Sample Information and All Ingredients

Table 1. Test sample information

Product type	Skincare device
Name	Synerjet
Application area	Facial area
Duration/Frequency	Used once on the test day
Application method	Application according to the method provided by sponsor. [Application Ampoule] - GOURI cosmetic formulation and physiological saline were mixed at a ratio of 1:2. A total volume of 3cc was applied, with 1.5cc administered to each side of the face (left and right).

[Test group]

*A 1:2 mixture of GOURI cosmetic and saline was applied (1.5 cc) to the right side of the face.

1) Plasma 2 Pass

MODE	POWER	ON Time	Repetition
Continuous	2	0.5 sec	0.5 sec

2) Sprayed using the SJ 10mm EP Tip and absorbed using the electroporation.

Spray Distance (EP Tip Usage)	Power	Hz	Volume	EP Level
10mm (EP Tip used)	150	10	2.0	2

[Control group]

* A 1:2 mixture of GOURI cosmetic and saline was applied (1.5 cc) to the left side of the face.

1) Sprayed using the SJ 10mm tip at a distance, then absorbed by massaging with gloved hands.

Spray Distance (EP Tip Usage)	Power	Hz	Volume	EP Level
10mm (EP Tip not used)	150	10	2.0	X

Table 2. Test sample all ingredients

GOURI Cosmetic (PCL)
10.5%PCL+D.W

3. Subjects

3.1. Inclusion criteria

- Healthy Korean female adults aged 19 years and older
- Subjects who have signed consent form voluntarily after being informed sufficiently on the objectives of study and all related contents
- Subjects who are healthy without acute and chronic diseases including skin disorders
- Subjects who can be observed and traced throughout the entire study period

3.2. Exclusion criteria

- Subjects who are and/or have plan of pregnant or breast-feeding
- Subjects who have psychiatric disease and infectious skin disease
- Subjects who have used an ointment containing steroids for more than 1 month
- Subjects who participated in the similar test within the past 6 months
- Subjects who have sensitive and hypersensitive skin
- Subjects who have skin disorders on the test site such as moles, pimples, red spots, scalds (burns), hemotelangiosis, and scars
- Subjects who have used cosmetics or drugs on the test site with similar efficacy within the past 3 months
- Subjects who received treatment from dermatologist or aestheticians on the test site within the past 6 months
- Those who are employed in this clinical trial center
- Those who are considered as a nonqualified person by judge or the investigator

3.3. Discontinuation and elimination criteria

Subjects who participated in this test can stop or withdraw at any time, and if the following reasons occur, the test subject is excluded from the test and the test results. If a test subject was dropped, the investigator specified the reason among the items below, recorded any other unusual information, and reported it to the test director.

(1) Voluntary withdrawal by the subject

(2) Violation of the protocol

(3) Occurrence of adverse event or seriously adverse event on the test site

(4) Failure to follow up on the subject

(5) Others

3.4. Ethical conduct of study

This human use test was conducted to protect the rights, safety, and welfare of test subjects in accordance with the spirit of the Helsinki Declaration and the contents of the GCP guidelines. The researchers faithfully implemented the following to ensure the safety of the test subjects.

(1) During the test, the principal investigator and the investigator should do their best to the safety of the test subject, and in the event of an adverse reaction, take prompt and appropriate measures to minimize the reaction.

(2) If the subject reports skin irritation or adverse reactions by the test product during the test, immediately wipe the investigational product and, if symptoms do not improve, obtain a dermatological evaluation and appropriate treatment by the test manager.

(3) If an adverse reaction occurs despite the normal test procedure, seek appropriate dermatological treatment.

(4) In case of any other abnormal skin reaction, the principal investigator and the investigator take appropriate measures together with the dermatological evaluation and record the case in detail.

3.5. Subject's obligation

- The application method and restrictions of the test product are faithfully implemented and follow the assessment schedule.
- All symptoms occurring during the test period should be reported in detail and without exception.
- During this test period, all questions, questionnaires, and questions should be written with integrity and honesty.

3.6. Prohibition and restriction

- Subjects should be prohibited to take any medication (including traditional medicines) or cosmetics that contains aspirin, anti-inflammatory, anti-histamines, and steroid during study period.
- Subject should follow the same skin care or make-up regimes during study period.
- Any aesthetic or dermatological procedures are prohibited during study period.
- Subjects should avoid higher sun exposure activities such as outdoor swimming, skiing, mountain climbing, and long-term travel during the test period.

3.7. Confidentiality of information and duty of good faith

- The confidentiality of test subjects participating in this test is guaranteed. However, test data could be used for medical, academic research or marketing purposes to the extent that the identity of the subject is not revealed.
- Test subjects must keep the information in confidential until the test is completed.
- Test subjects participating in this test must fill out the data sincerely and honestly.

4. Test procedure

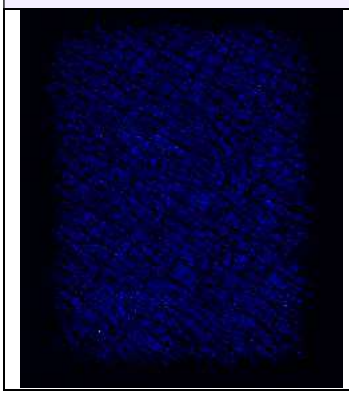
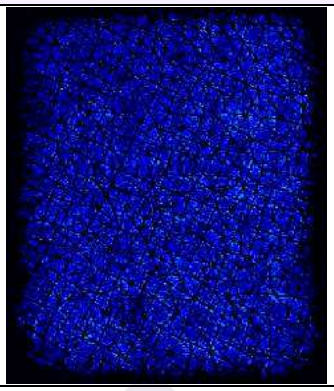
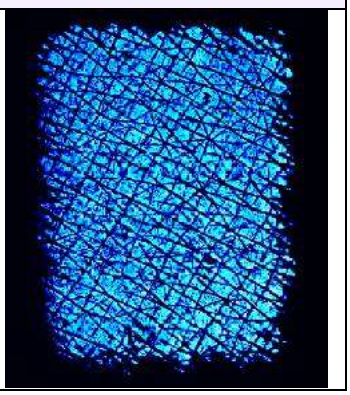
All measurements and assessments were conducted in a controlled environment with a constant temperature of 22±2°C and humidity of 50±5%, ensuring the absence of airflow and direct sunlight. The test subjects were allowed to let their skin stabilize.

4.1. Assessment of improvement of surface skin hydration

The Epsilon E100 (Biox Systems Ltd., England) is a device that visualizes skin hydration using a CMOS fingerprint sensor with a special resolution of 50 μm. It operates based on the principle of capacitance measurement. Skin hydration on the contact area (12.8 mm × 15 mm) is quantified as an average dielectric constant (ε) value. Higher skin moisture results in higher values and increased brightness in the resulting image (Fig. 1, 2).

Fig 1. Epsilon E100 device image

Fig 2. Epsilon E100 hydration measurement example

Low	Medium	High
		

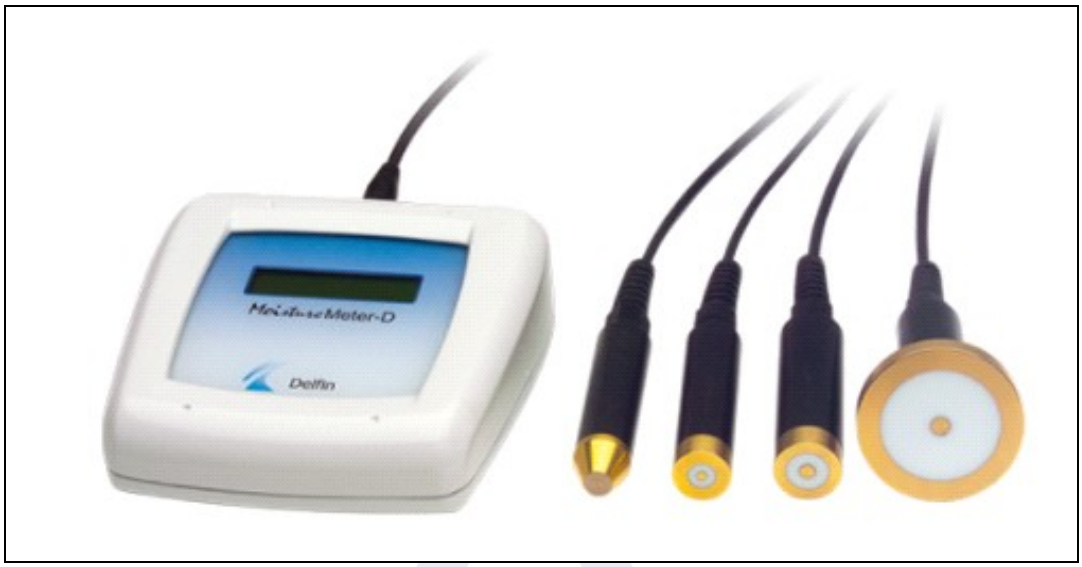
In this study, the subjects' faces were vertically divided into two sides: one side was designated as the test group, treated with Plasma pre-treatment + SJ Rejuvenation + Electroporation using the EP Tip; the other side was designated as the control group, treated with SJ Rejuvenation only.

Epsilon E100 was used to take an image of the cheek and then the average dielectric constant (ε) was measured before and after one use.

4.2. Assessment of improvement of deep skin hydration

The MoistureMeter D (Delfin Technologies Ltd., Finland) consists of an electronic control unit and a probe that measures the deep skin moisture content (TDC) of the skin. It evaluates skin hydration by transmitting a high-frequency electromagnetic wave (265 MHz) through the probe into the skin and analyzing the reflected signal. The measurement depth varies depending on the size of the probe, and higher moisture content results in higher TDC values (Fig. 3).

Fig 3. Moisturemeter D device image



In this study, the subjects' faces were vertically divided into two sides: one side was assigned to the test group, which received Plasma pre-treatment + SJ Rejuvenation + Electroporation using the EP Tip; the other side was assigned to the control group, which received SJ Rejuvenation only.

Moisturemeter D was used to take an image of the cheek and then the deep skin moisture content (TCD) was analyzed using M25 probe (2.5mm depth) before and after one use.

4.3. Questionnaire

After using the test product, the subjects subjectively evaluated the questionnaire items provided by the sponsor. The evaluation was conducted using a 6-point scale (1: Strongly Disagree, 2: Disagree, 3: Slightly Disagree, 4: Slightly Agree, 5: Agree, 6: Strongly Agree), with scores of 4 to 6 being considered positive responses.

4.4. Assessment of skin adverse reaction

The investigator confirmed the occurrence of adverse skin reactions during the test period and the use of concomitant drugs that may affect the test. In the event of an adverse reaction, the investigator immediately informs the principal investor, and he determines whether to continue participating in the test after appropriate consideration.

4.5. Data analysis and interpretation

To verify the statistical significance before and after using the test product, statistical analysis was conducted using Embedded on SPSS Statistics 26. Significance was confirmed when the probability value was $p<0.05$ within the 95% confidence interval.

The results derived from device evaluation were presented in terms of mean and standard deviation as continuous variables, while the survey evaluation results were conveyed through frequency and percentage as categorical variables.

The normality of the data was verified using the Shapiro-Wilk test. For data with two measurement points, if normality was satisfied, Paired t-test (parametric method) was conducted. if normality was not satisfied, the Wilcoxon signed rank test (non-parametric method) was used.

Between-group comparisons were conducted using raw data, if normality was satisfied, Repeated Measures ANOVA (parametric method) was conducted. If normality was not satisfied, the Generalized Estimating Equation (GEE, non-parametric method) was conducted.

4.6. Calculation method for the improvement rate

The calculation method for the improvement rate between each data is as follows.

$$\text{Improvement rate (\%)} = \frac{|\ (\text{After-Before})\ |}{\text{Before}} * 100$$

The calculation method for improvement rate compared to the control group is as follows.

$$\text{Improvement rate (\%) compared to control} = \frac{|\ (\text{Test group-Control group})\ |}{\text{Before}} * 100$$

5. Result

5.1. Subject Information

In this test, 21 subjects who met all the criteria were recruited, however, 1 subject was excluded due to protocol violation, and the final 20 subjects were included in the result analysis. The average age of the subjects was 54.00 years old (Table 3, 4).

Table 3. Subject information

Item	Classification	Frequency
Gender	Female	20
	Male	0
Average age		54.00±8.00
Skin Type	Dry	7
	Normal	5
	Oily	0
	Combination	8

Table 4. Dropout Subject information

The eliminated	Reason for elimination	The point of elimination
No. 04	Protocol violation	First application

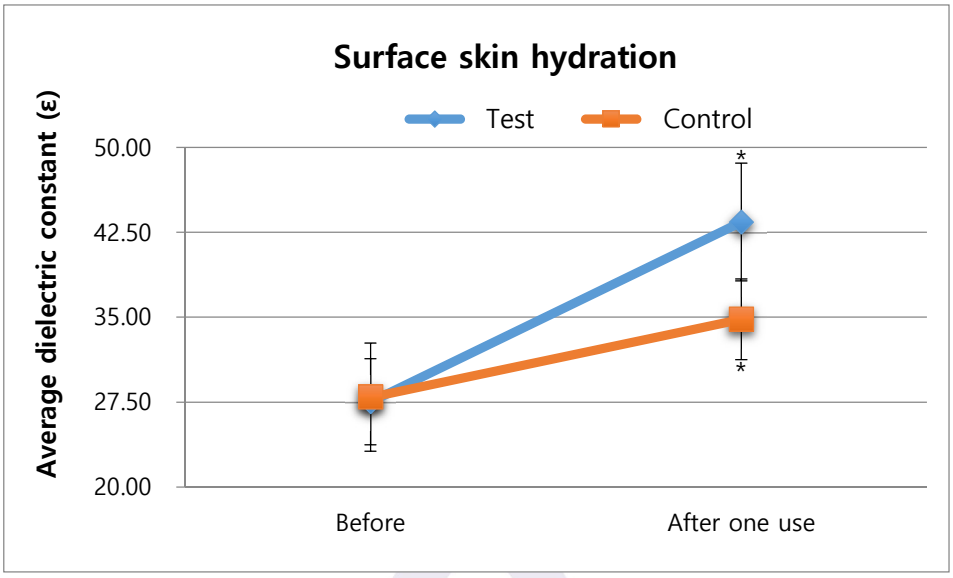
5.2. Result of improvement of surface skin hydration

- Comparisons within the test group: After one use, the average dielectric constant (ε) significantly increased.
- Comparisons within the control group: After one use, the average dielectric constant (ε) significantly increased.
- Between groups: After one user, a significant difference was observed between the test and control groups after a single use (Table 5).

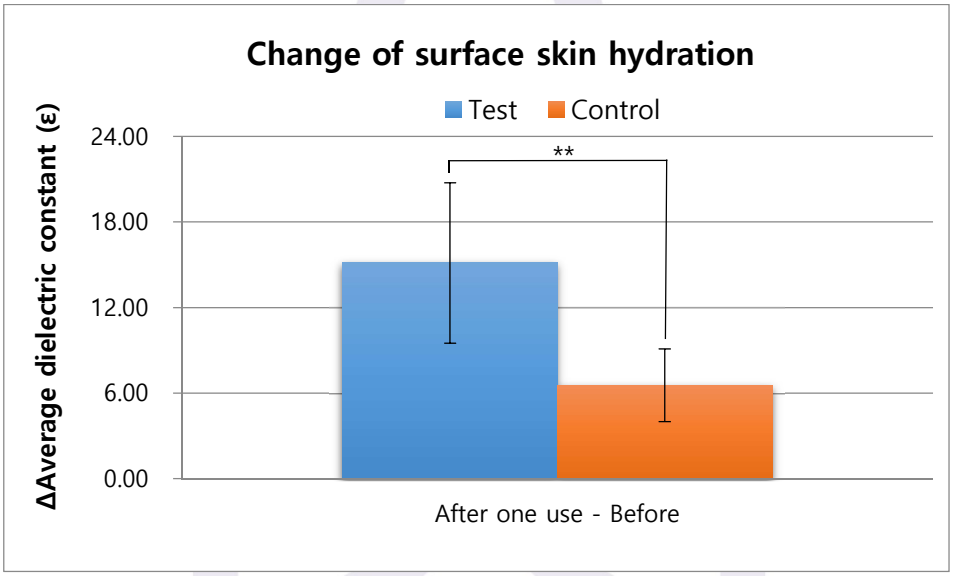
Table 5. Results of the average dielectric constant evaluation

Area, Assessment / Period		Test group cheek, Aerage dielectric constant (ε)	Control group cheek, Average dielectric constant (ε)
Before		27.53±3.80	27.93±4.78
After one use		43.41±5.20	34.81±3.57
Significance probability (Within-group) 1)	**Before - After one use**	**<0.001**	**<0.001^**
Significance probability (Between-group) 2)	**Before - After one use**	**<0.001**	
Improvement rate	**Before - After one use**	57.69%	24.64%
	Test - Control	134.14%	

1)p-value: Significant probability, Paired t-test, ^Wilcoxon signed rank test (p<0.05, comparison to initial value).
2)p-value: Significant probability, Generalized Estimating Equation, GEE (p<0.05, comparison between groups).



Significant difference (p<0.05, comparison to initial value).



**Significant difference (p<0.05, comparison to between groups).*

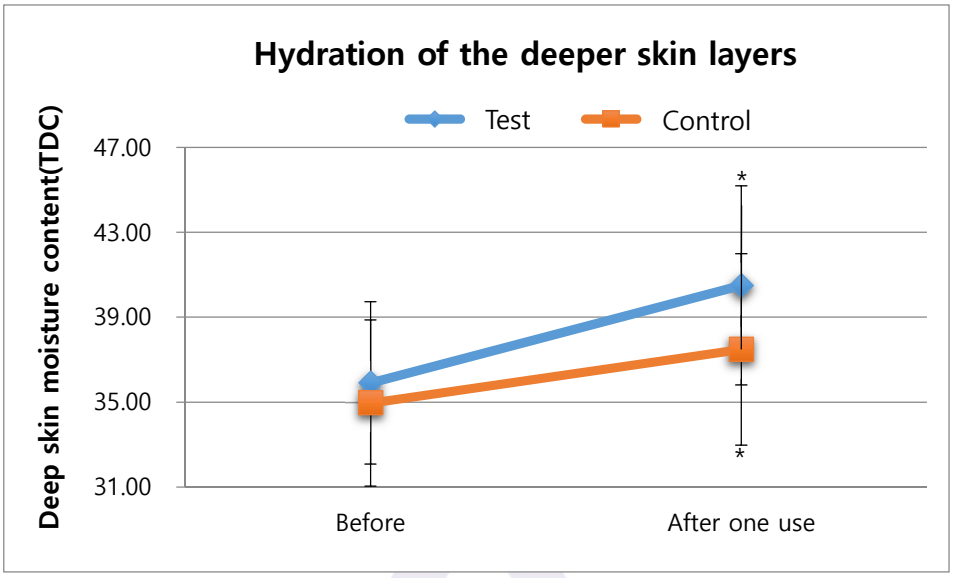
5.3. Result of improvement of deep skin hydration

- Comparisons within the test group: After one use, the deep skin moisture content (TDC) significantly increased.
- Comparisons within the control group: After one use, the deep skin moisture content (TDC) also significantly increased.
- Between groups: After one use, a significant difference was found between the test group and the control group (Table 6).

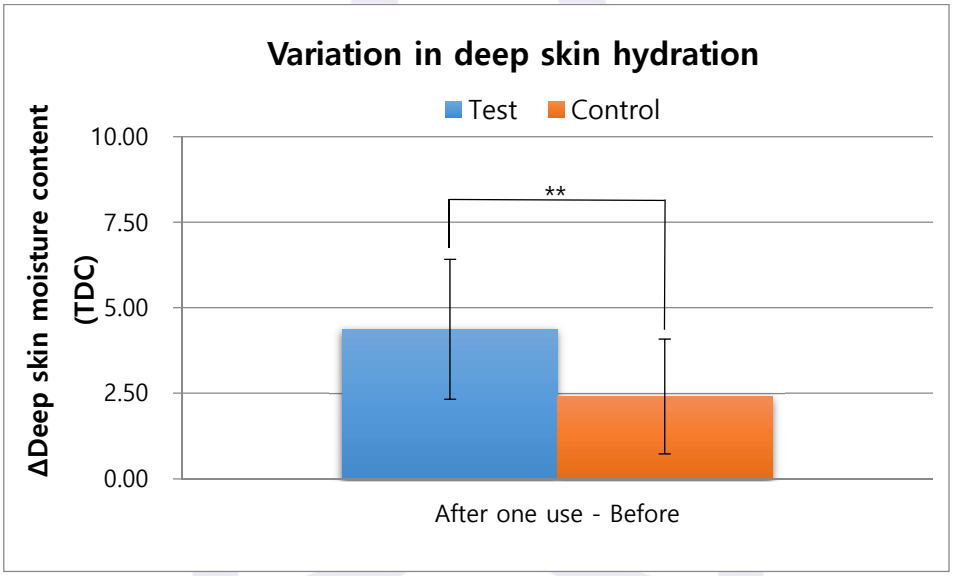
Table 6. Result of the deep skin moisture content

Area, Assessment / Period		Test group cheek, Deep skin moisture content (TDC)	Control group cheek, Deep skin moisture content (TDC)
Before		35.91±3.82	34.96±3.92
After one use		40.50±4.69	37.48±4.51
Significance probability (Within-group) 1)	**Before - After one use**	**<0.001**	**<0.001^**
Significance probability (Between-group) 2)	**Before - After one use**	**<0.001**	
Improvement rate	**Before - After one use**	12.78%	7.23%
	Test - Control	76.83%	

1)p-value: Significant probability, Paired t-test, ^Wilcoxon signed rank test (p<0.05, comparison to initial value).
2)p-value: Significant probability, Generalized Estimating Equation, GEE (p<0.05, comparison between groups)



Significant difference ($p<0.05$, comparison to initial value).



**Significant difference ($p<0.05$, comparison to between groups).

5.4. Questionnaire results

Questionnaire was conducted, and the results of analysis are as follow (Table 7).

Table 7. Questionnaire results

Item	Satisfaction rate (%)
1. It seems to have contributed to the improvement of surface skin hydration.	95.00
2. It seems to have contributed to the improvement of deep skin hydration.	95.00
3. The product feels good on the skin.	95.00
4. The product is well absorbed into the skin.	100.00
5. The product has a good fragrance.	95.00
6. I am willing to recommend the product to others.	95.00
7. The product is generally satisfying.	95.00

**Positive response: 4: Slightly agree +5: Agree +6: Very agree*

5.5. Result of skin adverse reaction

5.5.1. Evaluation Results of Skin Adverse Reactions by the Investigator

No skin adverse reactions to allergic contact dermatitis or irritant contact dermatitis were reported or observed after using the test product on subjects during this study.

5.5.2. Skin adverse reaction self-report by subjects

As a result of conducting a questionnaire evaluation on the subjects separately from the evaluation of adverse reactions by the investigator, no special adverse reactions were observed (Table 8).

**(During the test period, the clinical trial was conducted with the safety of the subject as a top priority, notified the subject that if a skin abnormality occurs due to this test or test product, necessary examination and treatment can be requested to the test requesting agency.)*

Table 8. Skin adverse reaction self-report by subjects

Skin adverse reaction	After one use
1. Erythema (Redness)	0
2. Edema (Swelling)	0
3. Squama (Keratin)	0
4. Itching	0
5. Tingling sensations (Pain)	0
6. Burning sensation	0
7. Stiffness	0
8. Tingling	0

0: None, 1: Slight, 2: Moderate, 3: Severe

- Cases of side effects, etc: 0

- Details of treatment and compensation measures for side effects: 0

6. Conclusion and Discussion

This study was conducted to evaluate the efficacy of [Synerjet], commissioned by Hironic, in improving surface skin hydration and deep skin hydration after one use.

1. Subjects

   Final number of subjects (Average age): 20 (54.00 yrs)

2. Result

   1) Improvement of surface skin hydration

   - Comparisons within the test group: After one use, the average dielectric constant (ε) significantly increased.

   - Comparisons within the control group: After one use, the average dielectric constant (ε) significantly increased.

   - Between groups: After one use, a significant difference was observed between the test and control groups.

   2) Improvement of deep skin hydration

   - Comparisons within the test group: After one use, the deep skin moisture content (TDC) significantly increased.

   - Comparisons within the control group: After one use, deep skin moisture content (TDC) also significantly increased.

   - Between groups: After one use, a significant difference was observed between the test group and the control group.

3. Questionnaire Results

   95.00~100.00% of the subjects responded positively to all items.

4. Adverse reaction

   Subjects were not reported adverse event during the test period. Also, no adverse events were observed upon physical examination by a dermatologist.

Based on the above results, [Synerjet], commissioned by Hyronic, is considered to helpful in improvement of surface skin hydration and deep skin hydration after one use.

7. Reference

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8. Appendix

Appendix 1. Subject test guideline document and compensation policy for participants

Subject Test Guideline

1. Purpose

This study aims to evaluate the efficacy of the test product in improving surface skin hydration and deep skin hydration before and after a single use in healthy Korean adult women aged 19 years and older.

2. Test sample type

- 1 skincare device

3. Schedule

Contents	Before	After one use
Writing informed consent informed form	O	-
Improvement of surface skin hydration	O	O
Improvement of deep skin hydration	O	O
Questionnaire	-	O
Skin adverse reaction evaluation	-	O

4. Prohibition

- Subjects should be prohibited to take any medication (including traditional medicines) such as aspirin, anti-inflammatory, anti-histamines, and steroid during study period.
- During the study period, the use of cosmetics or pharmaceuticals with the same or similar efficacy on the test area is prohibited.
- Avoid excessive exposure to sunlight during the study period.
- Avoid drinking alcohol and smoking during the study period.
- Avoid excessive physical exercise during the study period.
- Don't take part in activities that are far from your usual routine during the study period.

5. Benefits

There are no medical or biological benefits provided to the study participants. However, a modest transportation allowance will be provided for the visits.

6. Withdrawal

Participation in this study is voluntary, and the participant decides to join on their own. There will be no disadvantages if the participant chooses not to consent. Even after giving consent, they can withdraw from the study at any time, should they want to do so. Additionally, we confirm that participants will not face any disadvantages even after withdrawing again.

7. Adverse Events and Compensation

During the study period, adverse events such as urticaria, itching, stinging, or a burning sensation may occur due to the test product. If these symptoms persist or become severe, please report them to the investigator immediately.

During this study, the investigator will ensure the safety of the participants regarding any adverse events caused by the test product. In the event of an adverse event, prompt and appropriate measures will be taken to minimize its impact. The investigator will take full responsibility and provide appropriate compensation.

8. Privacy

The privacy of participants in this study will be strictly maintained. However, for medical purposes, study data may be used in a way that does not reveal the participant's identity.

9. Obligation

This is a mandatory requirement to ensure the protection of test subjects and the accurate conduct of the study.

- Please comply with the prohibition and study schedule.
- Please report in detail any disease or symptoms that occur during the study period.
- Please maintain confidentiality regarding any information obtained from this study until its completion.
- Please complete all study-related documents honestly.

10. Withdrawal

- If an unexpected adverse reaction occurs.
- If excessive sun exposure, alcohol, smoking, or other factors interfere with the accuracy of the evaluation during the study.
- If the participant receives any other treatments that could affect the study.
- If the participant withdraws consent to participate in the study.
- If the participant can no longer be followed up.
- If any conditions for withdrawal are met.
- If the principal investigator determines that the participant cannot continue in the study.
- If the participant does not comply with the study's prohibition or obligations.
- If the participant meets the criteria for withdrawal, they will be excluded from the study due to non-compliance with the requirements, even if they were selected as a participant

11. Sign

Participants can join the study by listening to the information about this study and signing the consent form.

12. Contact Information

Human Co., Ltd. Skin Clinical Trial Center

1516~1517ho, 62, Digital-ro 31-gil, Guro-gu, Seoul, Republic of Korea

Investigator: Jieun Kim

Tel.: +82-2-6741-0227

Compensation Policy for Participants

The sponsor will provide appropriate compensation if unexpected adverse reactions, such as skin side effects caused by the test product, require treatment or hospitalization of the participant during the study.

1. The management of adverse reactions should meet the following criteria:
    1) The principal investigator (or investigator) must faithfully implement the study protocol.
    2) There must be no evident negligence, intentional actions, or serious errors on the part of the principal investigator (or investigator) in conducting the study.
    3) If an adverse reaction occurs, contact the sponsor to prepare appropriate measures.

2. Compensation will not be provided in the following cases
    1) Adverse reactions caused by products not provided or approved by the sponsor.
    2) No compensation for the test product not delivering its expected effects or benefits.
    3) Adverse reactions or injuries caused by not following the agreed study plan.
    4) Adverse reactions or injuries due negligence.to the participant's
    5) If the participant does not receive proper treatment after side effects, refuses treatment, gets treated by someone who is not a dermatologist, or uses medication without a prescription, making the side effects worse.

3. Compensation Criteria

    The sponsor is responsible for compensation and resolving any disputes with participants or their guardians regarding adverse reactions caused by the test product.

    Our company ensures that participants face no disadvantages from this study. If any issues arise, we will take responsibility according to the compensation agreement.

2025. 05. 14

Appendix 2. Subject information

No.	Initial	Gender	Age	Skin type
01	SYS	F	69	Combination
02	KCH	F	56	Dry
03	KOR	F	67	Dry
04	LHJ	F	55	Dry
05	JMS	F	47	Combination
06	NEJ	F	43	Normal
07	YIO	F	59	Normal
08	GPG	F	55	Combination
09	HEJ	F	51	Dry
10	KCY	F	61	Normal
11	JKS	F	48	Dry
12	JSR	F	37	Combination
13	LHS	F	61	Combination
14	SKS	F	51	Combination
15	SSS	F	63	Combination
16	PMY	F	47	Combination
17	CHJ	F	57	Dry
18	PJH	F	49	Normal
19	KMO	F	52	Normal
20	PSM	F	51	Dry
21	MMY	F	56	Dry

Appendix 3. Result data of improvement in surface skin hydration

Assessment, Period / No.	Average dielectric constant (ε)			
	Test group		Control group	
	Before Test product use	After one use	Before control Product use	After one use
01	28.27	44.68	29.86	37.54
02	26.78	48.33	25.37	35.88
03	33.07	44.12	29.87	34.75
04	*N.A.*			
05	34.68	50.32	41.21	44.47
06	28.53	38.51	30.71	34.48
07	26.04	44.60	25.39	33.27
08	23.73	39.84	25.66	34.22
09	27.98	41.66	29.42	34.78
10	26.90	39.88	29.18	33.66
11	23.52	36.01	24.14	32.60
12	28.26	38.78	29.56	35.43
13	22.03	40.91	25.58	33.58
14	20.94	36.70	23.93	32.59
15	28.06	52.36	24.03	34.37
16	29.88	52.70	27.66	34.45
17	30.52	50.83	28.39	36.76
18	22.09	43.94	17.54	25.36
19	25.95	37.33	25.53	32.86
20	30.66	43.61	34.56	39.97
21	32.72	43.12	31.05	35.25
Mean±S.D.	**27.79±3.89**	**43.27±5.11**	**28.08±4.71**	**34.91±3.51**

No.	Individual improvement rate (%)	
	Average dielectric constant (ε)	
	Test group	Control group
	After one use	After one use
01	58.05%	25.72%
02	80.47%	41.43%
03	33.41%	16.34%
04	*N.A.*	
05	45.10%	7.91%
06	34.98%	12.28%
07	71.27%	31.04%
08	67.89%	33.36%
09	48.89%	18.22%
10	48.25%	15.35%
11	53.10%	35.05%
12	37.23%	19.86%
13	85.70%	31.27%
14	75.26%	36.19%
15	86.60%	43.03%
16	76.37%	24.55%
17	66.55%	29.48%
18	98.91%	44.58%
19	43.85%	28.71%
20	42.24%	15.65%
21	31.78%	13.53%

Appendix 4. Result data of improvement in deep skin hydration

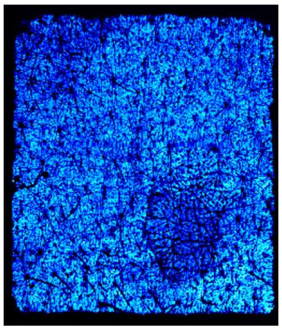
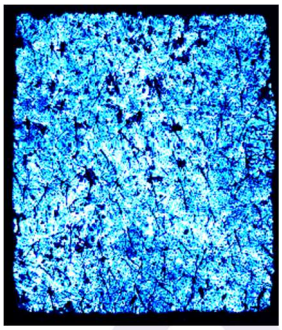
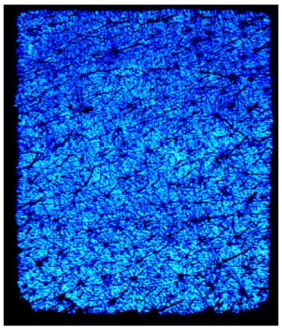
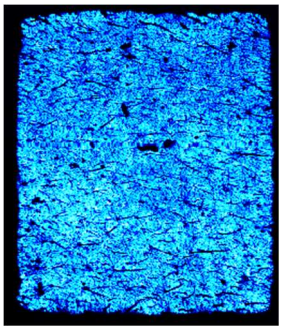
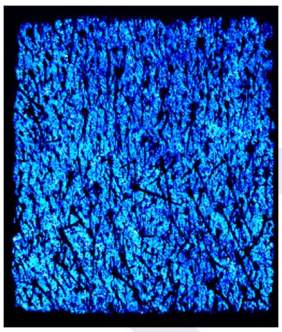
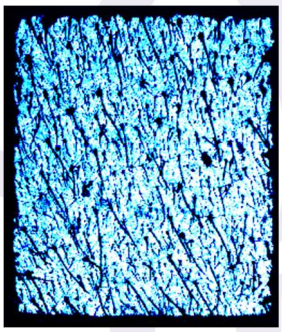
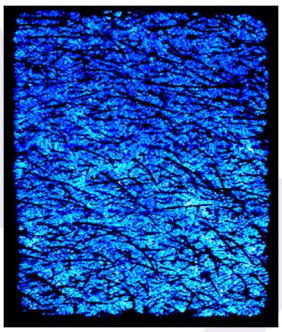
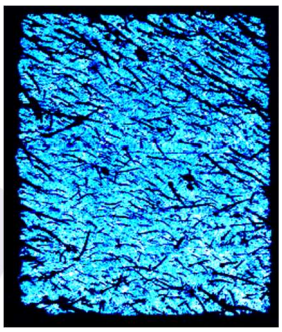
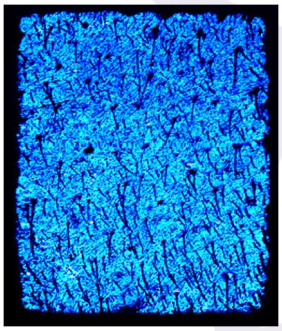
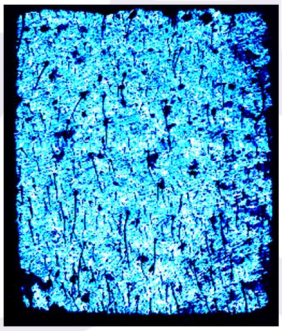
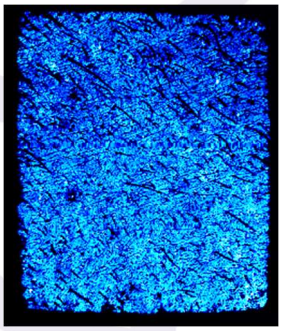
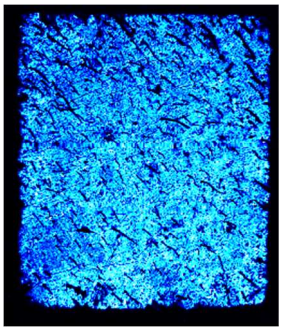
Assessment, Period / No.	Deep skin moisture content (TDC)			
	Test group		Control group	
	Before Test product use	After one use	Before control Product use	After one use
01	39.10	44.33	39.47	41.63
02	36.33	38.20	37.37	38.33
03	33.40	35.70	30.73	31.83
04	*N.A.*			
05	40.23	44.43	38.57	40.37
06	32.03	36.23	29.60	32.53
07	30.60	34.93	38.13	41.27
08	36.60	39.57	37.07	37.77
09	29.57	33.87	29.57	31.33
10	32.37	36.20	31.83	34.07
11	32.83	38.60	31.77	35.77
12	40.73	48.77	39.70	46.70
13	37.73	44.73	30.30	34.73
14	42.73	48.33	38.70	42.50
15	35.20	41.33	34.43	36.23
16	30.57	36.60	29.07	31.37
17	38.00	41.40	33.47	35.47
18	39.67	46.30	39.57	44.53
19	37.03	38.77	36.33	37.40
20	34.17	36.27	33.77	34.27
21	39.30	45.43	39.67	41.53
Mean±S.D.	**35.90±3.73**	**40.38±4.60**	**34.98±3.82**	**37.42±4.41**

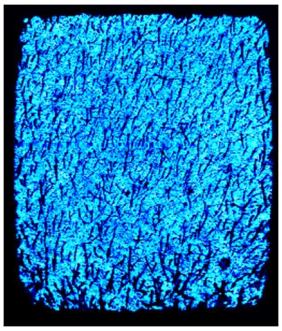
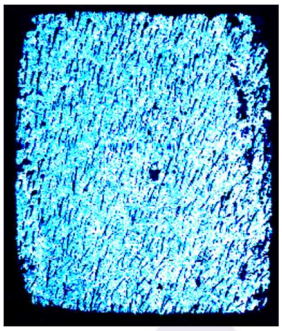
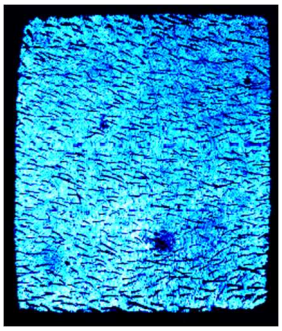
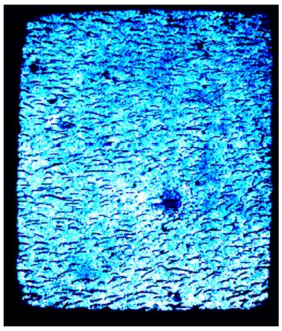
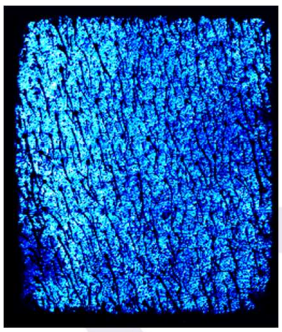
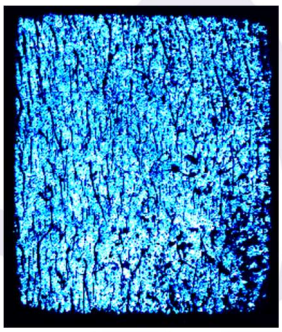
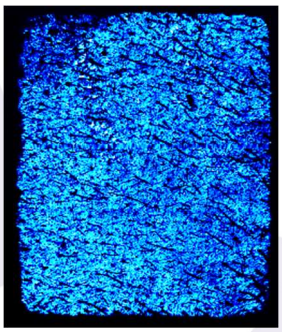
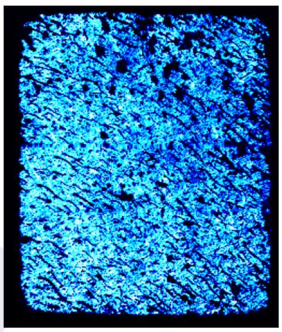
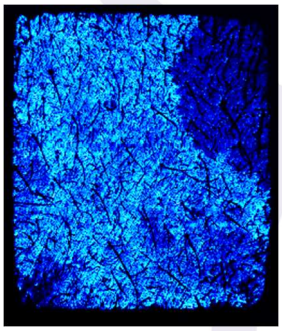
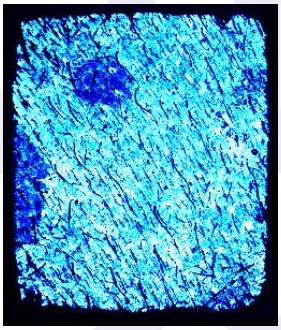
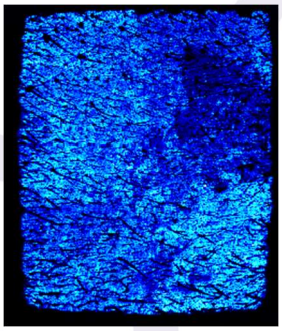
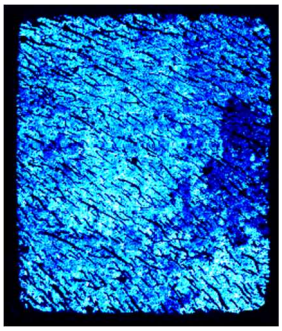
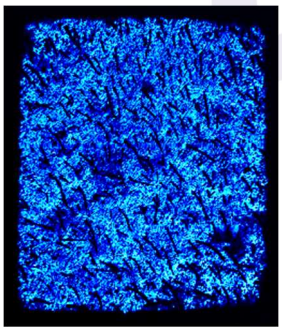
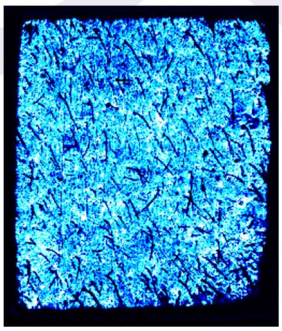
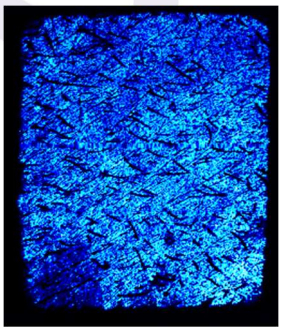
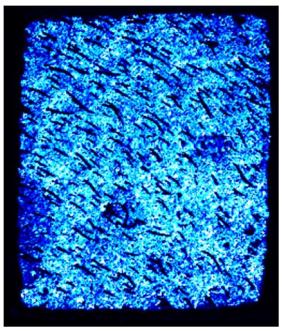
No.	Individual improvement rate (%)	
	Deep skin moisture content (TDC)	
	Test group	Control group
	After one use	After one use
01	13.38%	5.49%
02	5.14%	2.59%
03	6.89%	3.58%
04	*N.A.*	
05	10.44%	4.67%
06	13.11%	9.91%
07	14.16%	8.22%
08	8.11%	1.89%
09	14.54%	5.98%
10	11.84%	7.02%
11	17.56%	12.59%
12	19.72%	17.63%
13	18.55%	14.63%
14	13.10%	9.82%
15	17.42%	5.23%
16	19.74%	7.91%
17	8.95%	5.98%
18	16.72%	12.55%
19	4.68%	2.94%
20	6.15%	1.48%
21	15.61%	4.71%

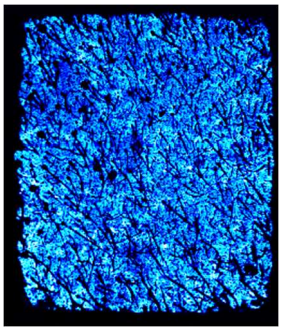
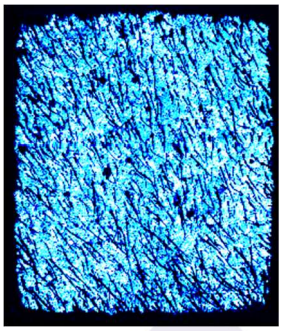
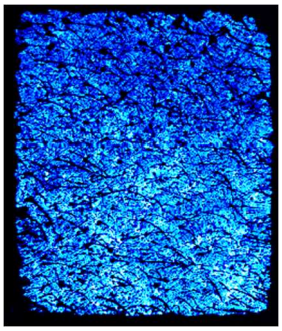
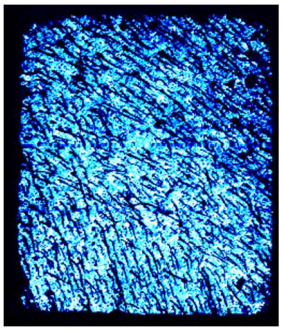
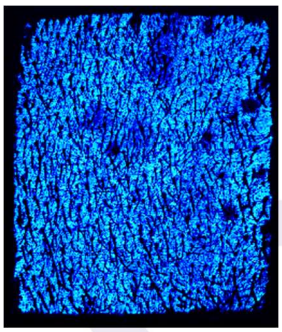
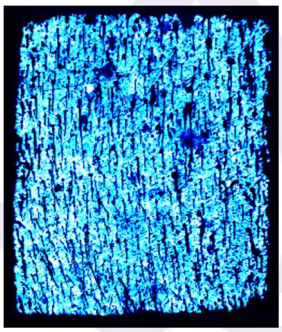
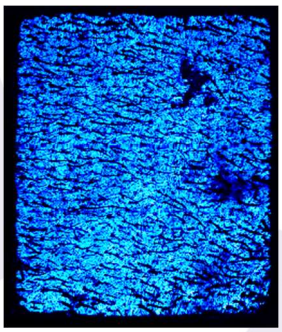
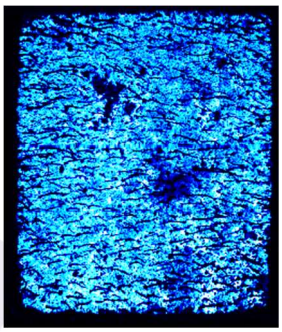
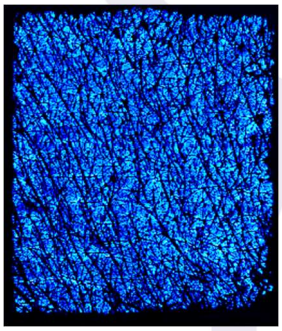
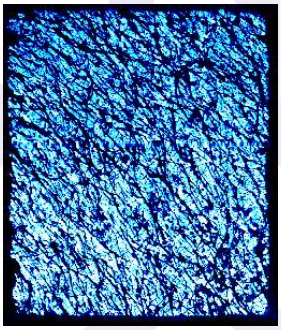
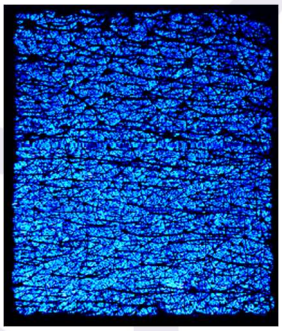
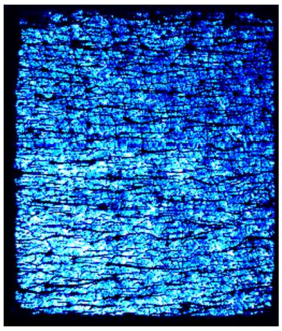
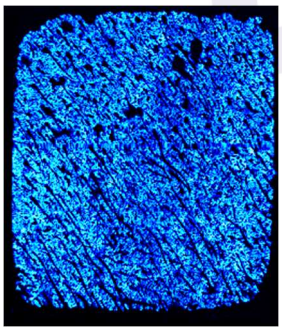
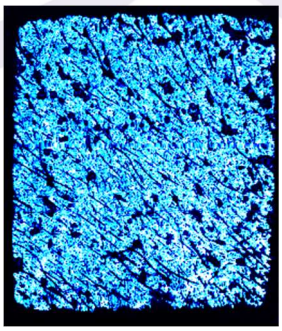
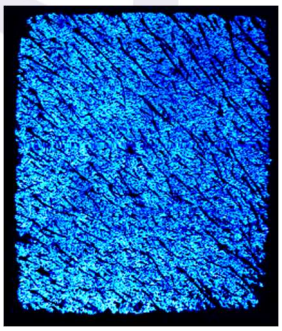
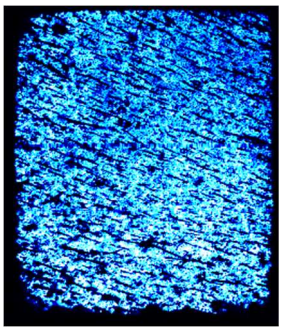
Appendix 5. Questionnaire Results

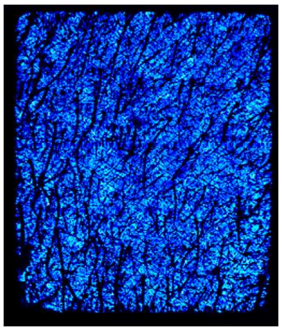
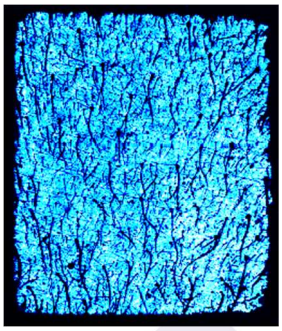
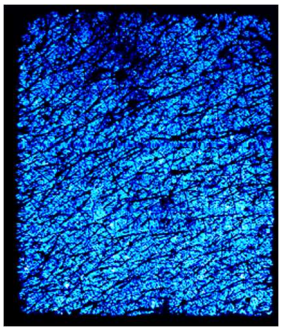
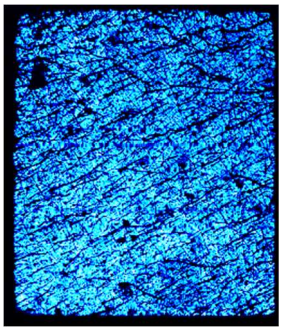
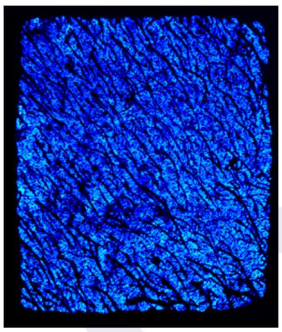
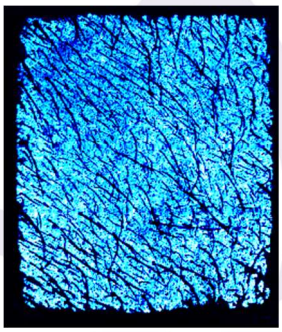
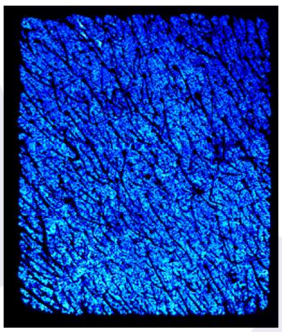
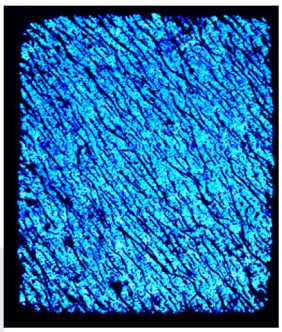
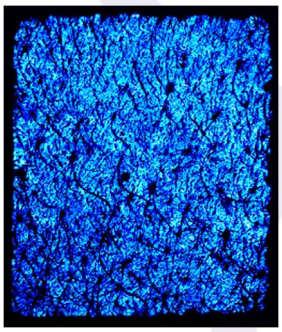
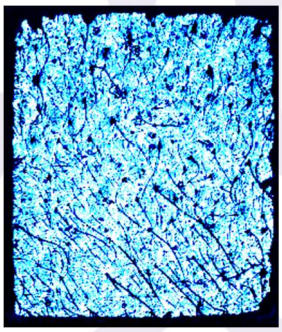
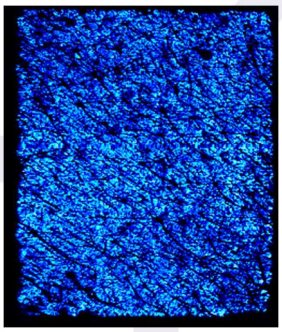
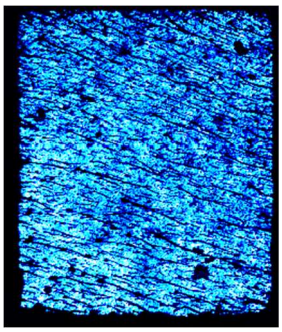
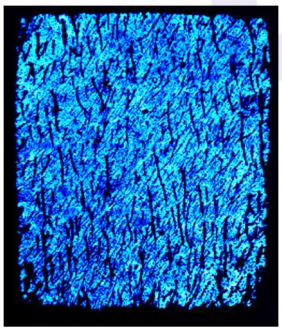
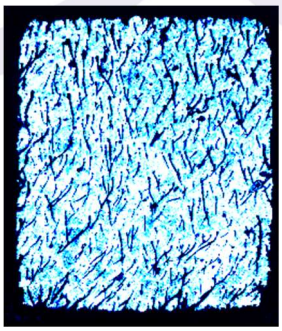
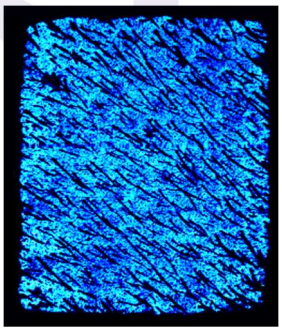
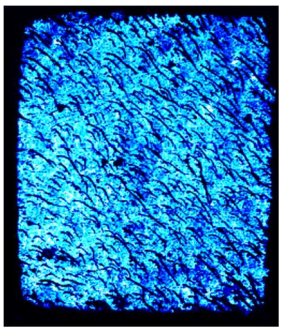
Item \ No.	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21
1. It seems to have contributed to the improvement of surface skin hydration.	5	5	5	N. A.	3	6	5	6	5	4	5	6	5	6	6	5	5	5	6	6	6
2. It seems to have contributed to the improvement of deep skin hydration.	5	5	5		3	6	6	6	5	4	5	6	5	6	6	5	5	5	6	6	6
4. The product feels good on the skin.	5	5	5		3	6	6	6	5	4	5	5	5	6	6	4	4	5	6	6	6
5. The product is well absorbed into the skin.	5	5	5		4	6	5	6	5	4	5	5	5	6	6	5	5	5	6	6	6
6. The product has a good fragrance.	5	5	5		3	6	6	6	5	4	5	4	5	6	6	4	4	5	6	6	5
7. I am willing to recommend the product to others.	5	5	5		3	6	5	6	5	4	5	5	5	6	6	4	5	5	6	6	6
8. The product is generally satisfying.	5	5	5		3	6	6	6	5	4	5	5	5	6	6	4	5	5	6	6	6

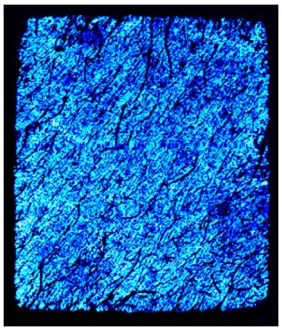
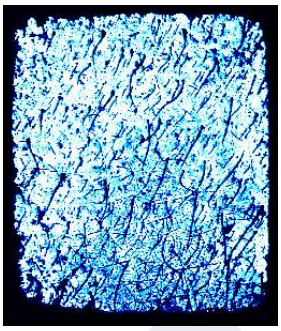
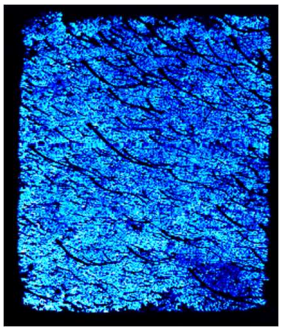
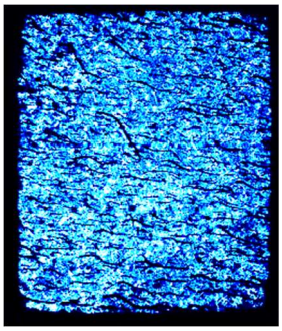
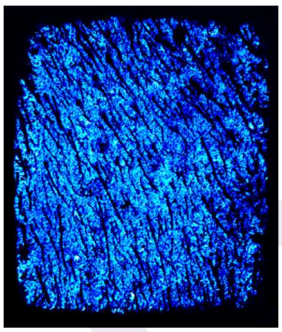
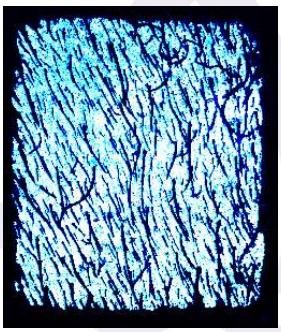
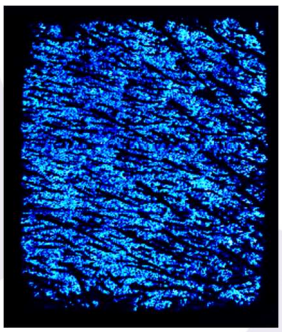
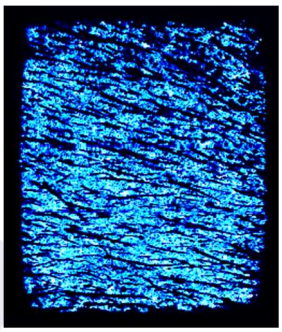
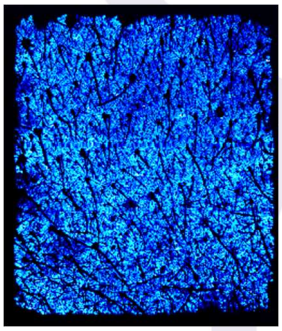
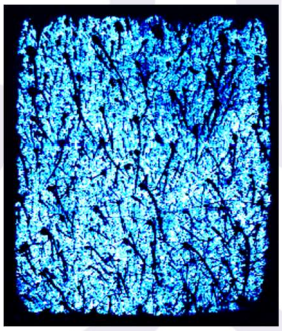
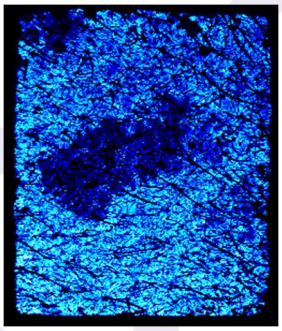
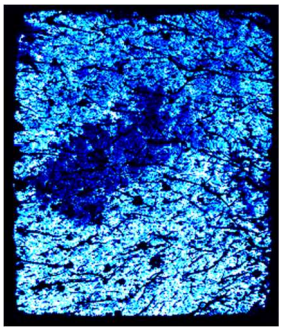
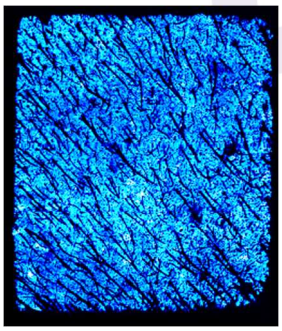
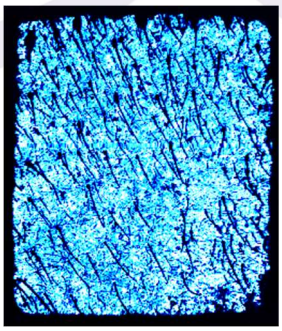
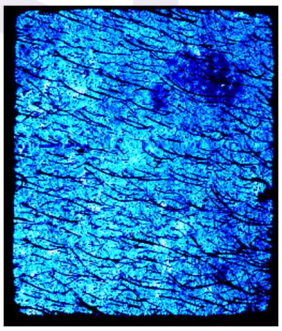
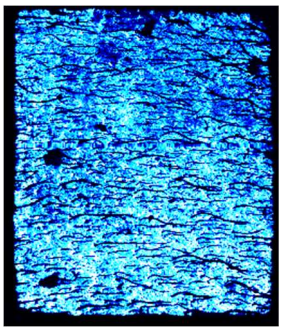
Appendix 6. Image

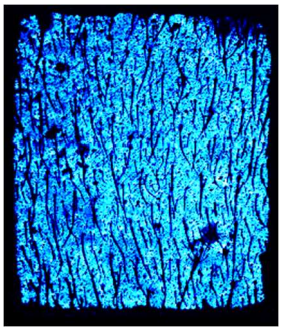
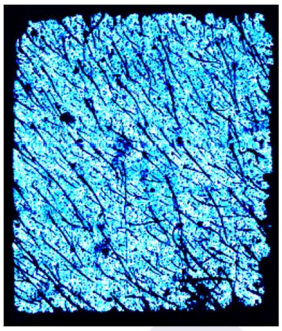
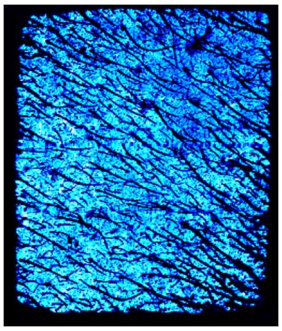
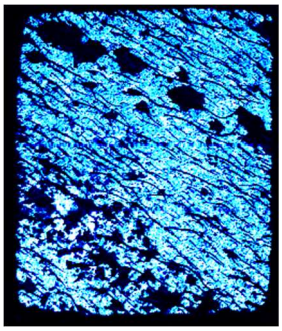
	Surface skin hydration image			
	Test group		Control group	
	Before Test product use	After one use	Before Control product use	After one use
No. 01				
No. 02				
No. 03				
No. 04	*N.A.*			

	Surface skin hydration image			
	Test group		Control group	
	Before Test product use	After one use	Before Control product use	After one use
No. 05				
No. 06				
No. 07				
No. 08				

	Surface skin hydration image			
	Test group		Control group	
	Before Test product use	After one use	Before Control product use	After one use
No. 09				
No. 10				
No. 11				
No. 12				

	Surface skin hydration image			
	Test group		Control group	
	Before Test product use	After one use	Before Control product use	After one use
No. 13				
No. 14				
No. 15				
No. 16				

	Surface skin hydration image			
	Test group		Control group	
	Before Test product use	After one use	Before Control product use	After one use
No. 17				
No. 18				
No. 19				
No. 20				

	Surface skin hydration image			
	Test group		Control group	
	Before Test product use	After one use	Before Control product use	After one use
No. 21				

N.A.: excluded subjects 1(No. 04) – violation of the protocol (First application) excluded from analysis

Institutional Assessment Report

■ Clinical Trials Information			
Name	Human Co., Ltd. Skin Clinical Trial Center		
Address	1516~1517ho, 62, Digital-ro 31-gil, Guro-gu, Seoul, Republic of Koera		
President	Huijeong Jeong		
Principal Investigator	Wonkyu Hong / Dermatologist		
Phone Number	070-5222-9663	**Fax**	070-7500-9650
E-mail	skin@humantest.co.kr		

■ Objectives of the Clinical Trials Center
This institution was established to perform human clinical studies on skin products to assess their safety, efficacy, and functionality. It also provides the results of these studies and relevant technical information

■ Clinical Trials Items	
Cosmetic Safety Evaluation and Research	Evaluation and Research of functional Cosmetic
Cosmetic Efficacy Evaluation and Research	Evaluation and Research of Quasi-Drugs
Evaluation and Research of Skin-related Products	Evaluation and Research of Functional Foods

■ Facility		
A thermo-hygrostat	VECTRA XT	Mark-Vu
F-ray	DSLR (Cannon EOS 80D)	Antera 3D
DUB® SkinScanner	Epsilon E100	Electronic scale
Cutometer® dual MPA 580	Corneometer® CM825	Sebumeter® SM815
Tewameter TM300	VISIA-7	PRIMOS CR
Moisturemeter D	Vapometer	SkinGlossMeter
SkinColorCatch	PH meter	FLIR E75
Kong Camera	Dino-Lite Digital Microscope	Folliscope 5.0
Fine dust injection system	Infrared Moisture Analyzer	Bathtub
Infrared Sauna System	IR lamp	Black D-Squame
Static meters	Ballistometer BLS780	Clean bench
Incubator	Auto clave	Water Purification System
DERMAVISION Beauty Edition	MulteTest-dV	3D Meta-Vu
UV-PCL 1000	EM-30P	-

Research Resume

■ **President**

Huijeong Jeong / CEO

Education	2004	Graduated from Department of Environmental Engineering, Konkuk University, bachelor of engineering
Career	2018 ~ 2020	Head of Skin Clinical Trial Center, OATC Co., Ltd.
	2020 ~ present	CEO of Human Skin Clinical Trial Center

Reliability review of whitening function evaluation using transparent film mapping

Blue light blocking test device patent registration[10-2346709]

Patent registration of anti-dust performance test device and method[10-2019883]

Patent application for portable cosmetic container[10-2019-0052712]

Patent application for cosmetics sterilizer[10-2019-0080854]

Patent application for cosmetic container with temperature control[10-2019-0084935]

Patent application for skin heavy metal measuring device[10-2019-0168852]

Cereal skin type analysis and patent application for customized cosmetics manufacturing device[10-2020-0068940]

■ **Principal Investigator**

Wonkyu Hong / Dermatologist

Education	2004	Graduated from Inha University School of Medicine, Bachelor of Medicine
	2004 ~ 2005	Intern of Inha University Hospital
	2005 ~ 2009	Resident of Inha University Hospital
	2007	Graduated from Inha University School of Medicine, Master of Medicine
Career	2004	Acquired Doctor's License (License number: 83931)
	2009	Acquired dermatologist (License number: 1771)
	2009 ~ 2012	Associate Chairman of Hansen Welfare Association Jeonbuk Branch
	2013 ~ 2015	Representative Director of Pyeongtaek Human Dermatology
	2013 ~ present	Adjunct Professor of Dermatology Class, Inha University
	2016	Representative Director of Cheongna Human Dermatology
	2018	Research Director of Human Cosmetic
	2018	Adjunct Professor of International St. Mary's Hospital
	2018 ~ 2020	Research Director of Skin Clinical Trial Center, OATC Co., Ltd.
	2020 ~ present	Research Director of Human Skin Clinical Trial Center
Society activities		Regular member of Korean Society of Dermatology
		Regular member of the Korean Society for Acne Research
		Regular member of Korean Hair Research Society
		Regular member of Association of Korean Dermatologists
	2018 ~ present	Intelligence member of Association of Korean Dermatologists
	2018 ~ present	Planning policy member of Association of Korean Dermatologists

■ **Quality Assurance**

Hongsuk Kim / Dermatologist

Education	2001	Graduated from Dong-A University College of Medicine, Bachelor of Medicine
	2001 ~ 2002	Intern of Dong-A University Hospital
	2002 ~ 2006	Resident of Dong-A University Hospital
	2004	Master of Dermatology, Dong-A University College of Medicine, Master of Medicine
Career	2001	Acquired Doctor's License(License number: 72561)
	2006	Acquired dermatologist (License number: 1629)
	2006 ~ 2009	Manager, Jeju Special Self-Governing Province Branch, Korea Hansen Welfare Association
	2010 ~ 2011	Manager of Nohyung Beautiful Dermatology
	2011 ~ 2012	Representative Manager of Dermatology, Seoul Clinic
	2014 ~ present	Adjunct Professor of Dermatology Class, Dong-A University,
	2012 ~ present	Representative director of Wine Dermatology Plastic Surgery
	2015 ~ present	Clinical Instructor of Department of Medical Beauty, Chungcheong University
	2016 ~ present	Clinical Instructor of Cosmetics Consulting Professional Association
	2020 ~ present	Human Skin Clinical Trial Center Reliability assurance officer
Society activities		Publication director of the Korean Society for Anti-aging Dermatology
		Director of the Korean Society for Skin Type Research
		Director of the Korean Society of Cosmetics and Cosmetology
		Regular member of Korean Society of Dermatology
		Regular member of Korean Society of Dermatology Surgery
		Regular member of Korean Medical Society for Cosmetics
		Regular member of Korean Laser Society
		Regular member of the Korean Society for Psoriasis
		Regular member of the Korean Society for Acne Research
		Regular member of Korean Society of Vitiligo
		Regular member of the Korean Atopic Dermatitis Association

■ **Investigator**

Hyounghoon Hwang / Clinical Trial Division Head

Education	2000 ~ 2006	Yonsei University, Biological sciences, Bachelor of Science
Career	2007 ~ 2014	Researcher / DERMAPRO Ltd
	2014 ~ 2020	Senior researcher / GFC Life Science, KDRI
	2020 ~ 2022	Senior researcher / KSRC Korean Skin Research Center
	2023 ~ present	Human Skin Clinical Trial Center, Clinical Trial Division Head

Soyeon Kim / Senior Researcher

Education	2013 ~ 2015	Shin Ansan University, Department of Food and Life Sciences
Career	2015 ~ 2021	DERMAPRO Ltd. Researcher
	2021 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Senior Researcher

Eunseok Lee / Senior researcher

Education	2009 ~ 2011	Shin Ansan University
	2018	Academic Creditbank System, business adminstration
Career	2011 ~ 2021	Dermapro Skin Research Center, Chief researcher
	2021 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Senior researcher

Boram Heo / Senior researcher

Education	2017 ~ 2020	Konkuk University Future Knowledge Education Center, Department of K-beauty Industrial Convergence, Bachelor of Science
Career	2017 ~ 2019	Korea Institute of Dermatological Sciences, researcher
	2019 ~ 2022	P&K Skin Research Center, researcher
	2022 ~ 2024	Human Skin Clinical Trial Center, Clinical Trial Team, Senior researcher
	2024 ~ 2025	Ace Skin Clinical Research Institute, Senior researcher
	2025 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Senior researcher

Suji Kim / Senior Researcher

Education	2011 ~ 2016	Kangwon National University, Department of Animal Biotechnology
Career	2016 ~ 2017	National Cancer Center, researcher
	2018 ~ 2024	Biosolution, manager
	2024 ~ 2025	Bundang Seoul National University Hospital, researcher
	2025 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Senior researcher

Daehan Lee / Senior researcher

Education	2012 ~ 2017	Eulji University, Department of Biomedical Laboratory Science, Bachelor of Science
	2017 ~ 2019	Eulji University Graduate School, Department of Medicine (Pharmacology), Master of Medical Science
Career	2019 ~ 2020	METACURA Ltd. Researcher
	2020 ~ 2022	PRIMORIS Ltd. Cell Research Team, Researcher
	2022 ~ 2024	NanoEntek Ltd. R&D Team, Manager
	2025 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Senior researcher

Suyeong Kim / Chief researcher

Education	2013	Jeju National University Graduate School, Department of Chemistry, Master of Sciences
Career	2014 ~ 2022	Ami cosmetic, Research Engineer
	2022 ~ 2022	Chief researcher / KSRC Korean Skin Research Center
	2023 ~ present	Human Skin Clinical Trial Center, Chief researcher

Heejin Lim / Chief researcher

Education	2017 ~ 2021	Kyungsung University, chemistry department, Bachelor of Science
Career	2021 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Chief researcher

Sangmin Lee / Chief researcher

Education	2018 ~ 2020	Shin Ansan University, Department of Food and Life Sciences
	2022 ~ 2024	Korea National open University, Bachelor of Food and Nutrition
Career	2020 ~ 2023	COREDERM Inc, Skin Research Center, Researcher
	2024 ~ 2024	KC Skin Research Center, Chief Researcher
	2024 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Chief researcher

Dahyeon Kim / Chief Researcher

Education	2018 ~ 2022	Bucheon University, Department of Beauty Care
Career	2022 ~ 2023	OATC Skin Clinical Test Center, Researcher
	2023 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Suji Lee / Researcher

Education	2018 ~ 2020	Shin Ansan University, Department of Food and Life Sciences
Career	2020 ~ 2023	COREDERM Inc, Skin Research Center, Researcher
	2024 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Jin Kim / Researcher

Education	2020 ~ 2024	U1 University, Department of beauty Care Engineering
	2024 ~ present	Konkuk University Graduate School of Industry Major in Cosmetology
Career	2023 ~ 2024	Korea Institute of Dermatological Sciences, Researcher
	2024 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Yesol Lee / Researcher

Education	2015 ~ 2017	Jaeneung University, Department of Cosmetics Science
Career	2024 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Jiyu Kim / Researcher

Education	2020 ~ 2022	Jaeneung University, Department of Cosmetics Science
Career	2024 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Eunjeong Kwon / Researcher

Education	2008 ~ 2010	Keimyung College University, Department of Beauty Coordination
Career	2024 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Hyein Kim / Researcher

Education	2015 ~ 2019	Daegu University, Department of Food Engineering
Career	2024 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Taeo Gu / Researcher

Education	2014 ~ 2021	Dongui University, Department of Chemical Engineering
Career	2024 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Hyoju Kim / Researcher

Education	2017 ~ 2022	Sangmyung University, Department of Green Chemical Engineering
Career	2024 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Doyun Jeong / researcher

Education	2018 ~ 2023	Jeju National University, Department of Earth and Marine Sciences
Career	2024 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Shinhee Kang/ Researcher

Education	2020 ~ 2022	Konkuk University, Graduate School of Engineering Department of Cosmetology
Education	2023 ~ 2025	Konkuk University, Graduate School of Department of Cosmetics Engineering
Career	2025 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Sieun Yu/ researcher

Education	2023 ~ 2025	Dongyang Mirae University, Department of Bio-convergence Engineering
Career	2025 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Suyeon Hwang/ Researcher

Education	2019 ~ 2022	Bucheon University, Department of Textile Fashion Business
Career	2025 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Seungho Shin/ Researcher

Education	2019 ~ 2025	Korea University(Sejong), Department of chemical
Career	2025 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Heyongtak Lee / Researcher

Education	2019 ~ 2025	Dongguk University WISE Department of Advanced materials and Chemistry
Career	2025 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Yejin Kim / Senior Researcher

Education	2013 ~ 2017	Seowon University, Bachelor of Science in Department of Cosmetics Engineering
	2018 ~ 2022	Seowon University Graduate School of Industry of Cosmetics Engineering
Career	2016 ~ 2020	P&K Skin Research Center, Assistant Research Engineer
	2020 ~ 2022	Seowon Skin Research Center, Senior Researcher
	2023 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Senior Researcher

Subin Lee / Chief researcher

Education	2014 ~ 2018	Kongju University Department of Chemistry Education, Bachelor of Science
Career	2022 ~ 2024	P&K Skin Research Center, Researcher
	2025 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Chief researcher

Kyungeun Kim / Researcher

Education	2019~2020	Osan Univerity, Beauty and Cosmetics Affiliation Department of Skin and Cosmetics
	2021 ~ 2023	Mokwon Univerity, Department of Cosmetics Engineering, Bachelor of Science
Career	2022 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

Jieun Kim / Researcher

Education	2018 ~ 2022	Mokwon Univerity, Department of Cosmetics Engineering
Career	2022 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

Hajeong Nam / Researcher

Education	2013 ~ 2016	Shinsung University, Department of Hotel Cooking associate degree
	2022 ~ present	Konkuk University Future Knowledge Education Center, Department of K-beauty Industrial Convergence, Bachelor of Science
Career	2022 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

Nayoung Lee / Researcher

Education	2018 ~ 2020	Incheon jaeneung University, Department of Cosmetics
Career	2020 ~ 2024	P&K Skin Research Center, Researcher
	2024 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

HyeonJi Lee / Researcher

Education	2020 ~ 2024	Daejeon University, Department of Beauty Design
Career	2024 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

Semin Choi / Researcher

Education	2018 ~ 2022	Dona-A University, Department of Chemistry
Career	2024 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

Minjin Lee / Researcher

Education	2018 ~ 2023	Andong University, Department of Pharmacognosy
Career	2024 ~ 2024	True Skin Clinical Trial Center, Clinical Trial Team, Researcher
	2024 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

Jongmin Kim / Researcher

Education	2013 ~ 2018	Chosun College Of Science & Technology, Department of Chemical Engineering
Career	2024 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

Eunbi Han / Researcher

Education	2020 ~ 2024	CHA University, Department of Bio Engineering
Career	2024 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

Yeonhee Jeong / Researcher

Education	2019 ~ 2023	Konkuk University glocal campus, Department of energy meterial
Career	2023 ~ 2024	Cellontech, quality control team
	2024 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team, Researcher

Jiyeon Yun / Researcher

Education	2019 ~ 2023	Daegu Hanny University, Department of Aroma-applied Industry and Industry of Cosmetics Engineering
Career	2024 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

Minkyoung Seo / Researcher

Education	2018 ~ 2023	Jeju National University, Department of chemistry and Cosmetics
Career	2024 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

List of publications

■ **Principal investigator**

No.	Journal
1	Bohee Yang, Wongyu Hong, Sunghyup Han, Jiwon Byeon, Heejin Song, Seunggyun In, Kwangsung Choi, Jeonghyun Shin. Skin Granulomas associated with Common Variable Immunodeficiency. Journal of Korean Society of Dermatology. 2011:49(7):601-605
2	Heejin Song, Sunghyup Han, Jiwon Byeon, Wongyu Hong, Hyunsook Lee, Jeonghyun Shin, Kwangsung Choi. Sodium Tetradecyl Sulfate 3 Cases of Mucosal Cyst treated with Sclerotherapy. Journal of Korean Society of Dermatology. 2008:46(9):1249-1252
3	Sunghyup Han, Heejin Song, Wongyu Hong, Hyunsook Lee, Jeonghyun Shin, Kwangsung Choi. A Case of Sister Mary Joseph node. Journal of Korean Society of Dermatology. 2008:46(8):1103-1107
4	Heejin Song, Wongyu Hong, Hyunsook Lee, Jeonghyun Shin, Sunyoung Moon, Kwangsung Choi. A Case of Pregnant Woman Tsutsugamushi Disease treated with Azithromycin. Journal of Korean Society of Dermatology. 2008:46(6):859-861
5	Wongyu Hong, Jeonghyun Shin, Kwangsung Choi. Effect of Topical Treatment with Anthralin in Patients with Refractory Alopecia Areata having a Wide Range of Hair Loss. Journal of Korean Society of Dermatology. 2008:46(5):641-647
6	Heejin Song, Sunghyup Han, Wongyu Hong, Hyunsook Lee, Kwangsung Choi, Jeonghyun Shin. A Case of Rheumatic Neutrophil Dermatitis. Journal of Korean Society of Dermatology. 2008:46(4):514-516
7	Wongyu Hong, Jeonghyun Shin, Kwangsung Choi. Clinical Treatment Effect of Germinated Brown Rice Phellinus linteus in Atopic Dermatitis. Korea Journal of Herbology. 2008:23(1):103~108
8	Heejin Song, Wongyu Hong, Hyunsook Lee, Kwangsung Choi, Jeonghyun Shin. A Case ofMacular Amyloidosis Presented as Depressed Patches on the Face. Journal of Korean Society of Dermatology. 2008:46(2):285-288
9	Hyunsook Lee, Sunghyup Han, Heejin Song, Wongyu Hong, Jeonghyun Shin, Kwangsung Choi. A Case of Lichenoid Drug Eruption by Allopurinol. Journal of Korean Society of Dermatology. 2008:46(1);130-133

10	Wongyu Hong, Heejin Song, Hyunsook Lee, Jongrok Lee, Jeonghyun Shin, Kwangsung Choi. A Case of Cowen Syndrome. Journal of Korean Society of Dermatology. 2007:45(8);829-831
11	Hyeyoung Lee, Wongyu Hong, Jeonghyun Shin, Juyoung Noh, Jongrok Lee. A Case of Umbilical Omphalomesenteric Duct Polyp. Journal of Korean Society of Dermatology. 2006:44(11);1342-1344
12	Hyunsook Lee, Wongyu Hong, Jongrok Lee, Jeonghyun Shin, Kwangsung Choi, Yuchan Kim. A Case of Acrosyringeal Nevus. Journal of Korean Society of Dermatology. 2006:44(6);751-753
13	Wongyu Hong, Hyunsook Lee, Jongrok Lee, Kwangsung Choi, Jeonghyun Shin, Yuchan Kim. 2 Cases of Pilomatricoma with Bullous Appearance. Journal of Korean Society of Dermatology. 2006:44(3);330-333
14	Hyunsook Lee, Wongyu Hong, Seunggyun In, Jongrok Lee, Jeonghyun Shin, Kwangsung Choi. A Case of Dermatomyositis Associated with Scarring Alopecic Patches. Journal of Korean Society of Dermatology. 2006:44(2);250-252
15	Wongyu Hong, Jeonghyun Shin, Kwangsung Choi. Effect of Anthralinn Immunotherapy in Patients with Alopecia Areata having a Wide Range of Hair Loss. Journal of Korean Society of Dermatology. 2009:42(9);1130-1137
16	Heejin Song, Wongyu Hong, Sunghyup Han, Jiwon Byeon, Hyunsook Lee, Kwangsung Choi, Jeonghyun Shin. Acral Angioosteoma Cutis. American Journal of Dermatopathology. 2010:32(5):477-478
17	Heejin Song, Sunghyup Han, Wongyu Hong, Hyunsook Lee, Jeonghyun Shin, Kwangsung Choi. Paraneoplastic bullous pemphigoid: Clinical disease activity correlated with enzyme-linked immunosorbent assay index for the NC16A domain of BP180. Journal of Dermatology. 2009:36:66-68
18	Jiwon Byeon, Sunghyup Han, Heejin Song, Wongyu Hong, Hyunsook Lee, Jeonghyun Shin, Kwangsung Choi. A case of supraumbilical skin rash after chemoembolization for hepatocellular carcinoma. Journal of the European Academy of Dermatology and Venereology. 2009:23(12):1458-1459
19	Wongyu Hong, Heejin Song, Hyunsook Lee, Jeonghyun Shin, Kwangsung Choi. Hobnail haemangioma associated with a secondary sexual characteristic. Journal of the European Academy of Dermatology and Venereology. 2009:23:465-466
20	Heejin Song, Wongyu Hong, Hyunsook Lee, Kwangsung Choi, Jeonghyun Shin. Herpes zoster complicated by delayed intracranial haemorrhage. Clinical and Experimental Dermatology. 2009:34:518-540

21	Sunghyup Han, Heejin Song, Wongyu Hong, Hyunsook Lee, Kwangsung Choi,Jeonghyun Shin. Rhabdomyomatous mesenchymal hamartoma of the vagina. Pediatric Dermatology. 2009:26(6):753-755
22	Sunghyup Han, Heejin Song, Wongyu Hong, Hyunsook Lee, Kwangsung Choi, Jeonghyun Shin. A case of adult blaschkitis with features of interface dermatitis. British Journal of Dermatology. 2008:159:231–266
23	Heejin Song, Wongyu Hong, Hyunsook Lee, Jeonghyun Shin, Kwangsung Choi. Intramuscular lipoma of the sternocleidomastoid muscle. J Eur Acad Dermatol Venereol. 2008:22:363–404
24	Hyunsook Lee, Heejin Song, Wongyu Hong, Jeonghyun Shin, Kwangsung Choi. Pseudoxanthoma elasticum-like papillary dermal elastolysis with solar elastosis. J Eur Acad Dermatol Venereol. 2008:22:363–404
25	Shingu Park, Uicheol Lee, Wongyu Hong, Heejin Song, Jeonghyun Shin. A Case of Occupational Allergic Contact Dermatitis due to PVC Hose. Journal of Occupational Health. 2008:50:197-200
26	Jeonghyun Shin, Wongyu Hong, Heejin Song, Kwangsung Choi, Yuchan Kim. Atypical Acute Graft-Versus-Host Disease. American journal of dermatopathology. 2007:29;576-577
27	Byun JW, Hong WK, Han SH, Song HJ, Lee HS, Choi GS, Shin JH. Red scrotum syndrome: successful treatment with oral doxycycline. International Journal of Dermatology. 2012;51(3):362-363

■ **Quality Assurance**

No.	Journal
1	Sentinel Lymph Node Biopsy and Staging of Melanoma Using Lymphoscintigraphy and Gamma-probe
2	Preference of Near-erythemogenic Narrow-band UVB Phototherapy in Psoriasis and Change of Dendritic Cells and Chemokines
3	Effectiveness of Amniotic Membrane Patch in the Treatment of Chronic Ulcers
4	Effects of Keratinocyte Growth Factor (KGF), Epidermal Growth Factor (EGF), and Extracellular Calcium on the Growth of Cultured Psoriatic Keratinocytes
5	Photodynamic Therapy of Actinic Keratoses Using 585nm Dye Laser and Variable Lights
6	A Clinical Analysis of the Risk Factors of Varicose Veins in Korean
7	A Case of Churg-Strauss Syndrome Associated with Small Bowel Perforationfollowing High Dose Systemic Steroid Intravenous Injection
8	A Case of Muticentric Reticulohistiocytosis Misdiagnosed As Rheumatoid Arthritis
9	A Case of Pigmented Clear Cell Acanthoma
10	A Case of SAPHO Syndrome in a Palmoplantar Pustulosis Patient
11	A Case of Xanthoma Disseminatum with Diabetes Insipidus
12	A Case of Chilblain Lupus Erythematosus Associated with Antibodies to SSA/Ro
13	A Case of Primary Mucinous Carcinoma of the Skin
14	A Case of ALK-negative Systemic Anaplastic Large Cell Lymphoma
15	CD4-/CD56+/CD123+ Hematodermic neoplasm showing early liver metastasis