Human Study Report

GSC-L1231107-T01

Human study of the primary skin irritation for ‘Cellreborn Athens Moisture Water Essence’

GSC 안티에이징랩

Sponsor | YJBN Co., Ltd.
Institution | Global Standard Certification Co., Ltd
GSC Anti-aging Lab
Date of Issue | 16th November 2023

Contents

Submission Letter

Global Standard Certification Co., Ltd, GSC Anti-aging Lab (hereinafter referred to as "GSC Anti-aging Lab") has conducted the human study of the primary skin irritation for 'Cellreborn Athens Moisture Water Essence' commissioned by YJBN Co., Ltd., and submits a test report as follows by solemnly following the related regulations including Guidelines for Human Study and *In Vitro* Tests, and Test Method Guidelines for the Demonstration of Labeling and Advertisement for Cosmetic of the Ministry of Food and Drug Safety (MFDS), the Enforcement Decree of Bioethics and Safety Acts, GCP (Good Clinical Practice) Guidelines, and GSC Anti-aging Lab SOP (Standard Operating Procedure).

16th November 2023

Institution:	Global Standard Certification Co., Ltd GSC Anti-aging Lab	Managing Director	Jeakem Jun (seal)
		Institution Director	Juhwan Oh (seal)
Principal Investigator:	Global Standard Certification Co., Ltd GSC Anti-aging Lab	Dermatologist	Hyeonsook Lee (seal)
Sub-investigator and Researchers:	Global Standard Certification Co., Ltd GSC Anti-aging Lab	Principal Researcher	Yunhee Hwang
		Senior Researcher	Suyeon Kim
		Senior Researcher	Saehee Yoon
		Researcher	Hyeonji Kim
		Researcher	Heesu Bae
		Researcher	Suhui An
		Researcher	Sohyeon Park

Sponsor and Institution Information

Sponsor	**Name**	YJBN Co., Ltd.
	Address	13, Bonggol-gil 81beon-gil, Gwangju-si, Gyeonggi-do, Republic of Korea
	President	Eun Ju Jang
	Monitor	Kyung Hwa Lee
	Tel.	82-31-8027-2155
	e-mail	leekh@cellreborn.co.kr

Institution	**Name**	Global Standard Certification Co., Ltd GSC Anti-aging Lab
	Address	807, Woorim Lion's valley A, 168, Gasan digital 1-ro, Geumcheon-gu, Seoul, Republic of Korea
	President	Junjae Kem
	Principal Investigator	Hyeonsook Lee / Dermatologist
	Sub-investigator	Hyun Ji Kim / Researcher
	Tel.	+82-2-866-1002
	e-mail	lab2@gsckorea.co.kr

Quality Assurance Certificate

GSC Anti-aging Lab has conducted the human study in accordance with the related regulations including Guidelines for Human Study and *In Vitro* Tests, and Test Method Guidelines for the Demonstration of Labeling and Advertisement for Cosmetic of the Ministry of Food and Drug Safety (MFDS), the Enforcement Decree of Bioethics and Safety Acts, GCP (Good Clinical Practice) Guidelines, GSC Anti-aging Lab SOP (Standard Operating Procedure), confirmed that the results has been reflected precisely, and guarantees the results.

Study Code	GSC-L1231107-T01	
Study Name	Human study of the primary patch test for 'Cellreborn Athens Moisture Water Essence'	
Conduct Period	**Contents**	**Confirmed**
02nd November 2023	Protocol	✔
From 25th October 2023 to 06th November 2023	Recruitment of test subjects	✔
From 07th November 2023 to 09th November 2023	Study Period	✔
From 10th November 2023 to 14th November 2023	Data Audit	✔
15th November 2023	Study Report	✔

16th November 2023

Global Standard Certification Co., Ltd GSC Anti-aging Lab

Quality Assurance Investigator: Kyongouk HUH (seal)

Principal Investigator: Hyeonsook Lee (seal)

Report Summary

Study Name	Human study of the primary skin irritation for 'Cellreborn Athens Moisture Water Essence'		
Study Code	GSC-L1231107-T01		
Report No.	GSC-L1231107-T01 R29_V0		
Test Period	From 07th November 2023 to 09th November 2023		
Institution	GSC Anti-aging Lab	**P.I.**	Hyeonsook Lee (seal)
Objective	This study was conducted to evaluate the primary skin irritation response by patch test.		
Sponsor	YJBN Co., Ltd.		
Products	Cellreborn Athens Moisture Water Essence		
Subject	Male and female (domestic) subjects aged from 20 to 60 qualified under the inclusion criteria while not meeting the exclusion criteria. Final screened subject: 34 (Dropouts: 0)		
Method	**1. Test Site** Back (Clean and flat part except backbone) **2. Evaluation Times** After 30 minutes of the patch removal, After 24 hours of the patch removal (Total 2 times) **3. Assessment Method** 1) Subject screening and check medical history/ drug injection and the dosage 2) Primary skin irritation test ① Patch attachment and removal Attach the closed patch and remove after 24 hours ② Skin response scored		

<table>
<tr><td></td><td>Skin response scored (erythema, edema) by the doctor a 30 minutes and 24 hours after the patch removal
③ Skin irritation assessment
Primary Irritation Index calculation by skin response score and skin irritation assessment

3) Adverse Event Assessment
Observe external symptoms except erythema, crust, and edema and medical examination of subjects' symptoms</td></tr>
<tr><td>Results</td><td>1. Subject
Used the 34 test results of male and female aged from 20 to 60 for the result analysis.
1) Subject gender
- Male 0, Female 34
2) Subject age
- Mean 50.0, Max 59, Min 41

2. Primary Skin Irritation Test
<table>
<tr><th colspan="2">Product name</th></tr>
<tr><td colspan="2">Cellreborn Athens Moisture Water Essence</td></tr>
<tr><th>Primary Irritation Index</th><th>Skin irritation assessment</th></tr>
<tr><td>0.00</td><td>Non irritation range</td></tr>
</table></td></tr>
<tr><td>Adverse Event Assessment</td><td>Adverse events have not been observed from subjects during test period.</td></tr>
<tr><td>Conclusion</td><td>As a result,
The 'Cellreborn Athens Moisture Water Essence' commissioned by 'YJBN Co., Ltd.' is considered as a product under Non irritation range.</td></tr>
</table>

1. Background

Recently, as more consumers feel that their skin has become sensitive due to various factors such as external stimuli and stress, interest in cosmetics safety is naturally increasing. To meet these consumers, cosmetics manufacturers and retailers must prepare information on the safety of cosmetics and data on objective evaluation.

With the complete revision of the Cosmetics Act in August 2011, the Ministry of Food and Drug Safety stipulated details necessary for labeling and advertising in accordance with Articles 14 of the Cosmetics Act and 23 of the Enforcement Rules of the same Act to protect cosmetics consumers from false and exaggerated advertisements and guide responsible retailers of cosmetics, cosmetics manufacturer, customized cosmetics retailers, and retailers to make reasonable labeling and advertising.

Accordingly, empirical data that can be recognized as a reasonable basis is needed to prove that facts are true among the claims made in labeling and advertisements, and among the empirical data recognized by the above regulations, the human study is a test conducted on people to verify the effectiveness and safety of the cosmetics. The results of the human study are related to the contents of the advertisement and should be secured with reliability and reproducibility as data by scientific and objective methods.

In addition, according to the Ministry of Food and Drug Safety Notice No. 2020-131, 「the Regulations on the Review of Functional Cosmetics」 (revised on December 30, 2020), document of safety and effectiveness are required by submitting functional cosmetics review data. Primary skin irritation test data are one of them.

GSC Anti-aging Lab, conducted this human study to evaluate the primary skin irritation response of the 'Cellreborn Athens Moisture Water Essence' commissioned by YJBN Co., Ltd. to not only provide empirical data on safety, labeling, and advertising for cosmetics but also help the cosmetics industry develop by creating a scientific and systematic research base.

1-1. Study Name

Human study of the primary skin irritation of 'Cellreborn Athens Moisture Water Essence'

1-2. Objective

This study was conducted to evaluate the primary skin irritation response by patch test on men and women aged from 20 to 60 (domestic).

1-3. Test Period

From 07th November 2023 to 09th November 2023

1-4. Institution

Table 1. Institution Information

Institution Name	Global Standard Certification Co., Ltd. GSC Anti-aging Lab
Address	807, Woorim Lion's valley A, 168, Gasan digital 1-ro, Geumcheon-gu, Seoul, Republic of Korea

1-5. Sponsor

Table 2. Sponsor

Company Name	YJBN Co., Ltd.
Address	13, Bonggol-gil 81beon-gil, Gwangju-si, Gyeonggi-do, Republic of Korea

2. Products

2-1. Products Information

Table 3. Products Information

Product Name	Cellreborn Athens Moisture Water Essence
Product Description	White Liquid
Sample Code	GSC-L12310-P56
Used Density*	As is
Store Method	Keep out of direct sunlight
Full Ingredients	Appendix 2

*Adequate density of the study product for patch

3. Subject

Among male and female (domestics) aged from 20 to 60, those who were satisfied with the inclusion criteria and did not meet the exclusion criteria were selected as subjects. The principal investigator or the person delegated by the principal investigator fully explained all information of the human study to the subject, and the subject who voluntarily decided to participate in the test signed the consent form directly.

3-1. Inclusion Criteria

1) Male and female (domestic) aged from 20 to 60
2) Those who have a clean back without pigmentation etc.
3) Those who recognized the issues to be informed to the subject by the principal investigator or the person delegated by the principal investigator and voluntarily signed the consent form
4) Those who are healthy and don't have any acute or chronic physical disease, including skin disease
5) Those who can be monitored during the test period

3-2. Exclusion Criteria

1) Sensitization to tape and alcohol
2) Pregnancy and lactation period
3) Intake external preparation which contains steroid for skin disease treatment more than a month
4) Skin abnormalities such as mole, acne, erythema, and capillary dilatation at the test site
5) Surgery or surgical procedure on the test site within 6 months before the test
6) Others judged as inadequate for the test by the principal investigator

3-3. Dropout Criteria

1) If the subject withdraws his/her consent to participate in the test
2) If the subject has taken any medication that may affect their skin
3) If there is a disability in evaluating the results due to excessive drinking, smoking, etc.
4) Others where the principal investigator judges that it is no longer possible to participate in the test

3-4. Basis of Calculation for Subject

The number of subjects was set to be more than 30 by referring to the human study of Paragraph 7 of the Toxicity Test Act in Article 5, Subparagraph 1, B (2) (A) of the Ministry of Food and Drug Safety Notice No. 2020-131, 「the Regulations on the Review of Functional Cosmetics」 (revised on December 30, 2020).

4. Subject Protection

4-1. Subject Safety Measurement

Based on the Helsinki Declaration, this human study was conducted with the safety of the subjects as the top priority. The sub-investigator decided whether to participate in the test in consideration of the health status of the subjects for the subject inclusion. The sub-investigator and the relevant people fully understood the product and protocol and made every effort to protect the safety of the subjects. The subjects were trained to report to the sub-investigator immediately if an adverse event occurs while participating in the test. There has been no disadvantage even though the subject withdrew his/her intention to participate during the test, and the subject was notified.

4-2. Personal Information Management

The personal information of the subjects obtained through this human study was guaranteed to be confidential. The names of the subjects were replaced with initials, and the photographic data obtained as results of the test were not individually identifiable. Even if test results are published, all results are allowed to be used as the subject is not identified. In addition, the minimum personal information necessary for the progress of the human study is obtained with the consent of the subject, stored for five years, and discarded immediately when subjects request to destroy documents.

4-3. Compensation Plan When an Adverse Event Occurs

Due to the participation in this human study, the subject was required to report immediately to the sub-investigator if a direct or indirect adverse event occurred, and the necessary test and treatment could be received due to the adverse event. The sub-investigator records the occurrence and process of adverse events in detail and notify the request company. If a side effect occurs due to a product, the cost to treat it should be compensated by the sponsor. However, in principle, the costs unrelated to this human study are borne by the subject.

5. Method

5-1. Flow Chart

A flow chart of this human study is as below.

Table 4. Human Study Flow Chart

Contents	1st Visit (-1d)	2nd Visit (0d)	3rd Visit (1d)
Study explanation	✔		
Fill out consent form	✔		
Review inclusion/exclusion criteria	✔		
Demographic investigation	✔		
Medical history investigation	✔		
Drug injection and the dosage investigation	✔		
Assign screening number	✔		
Attach patch	✔		
Remove patch		✔	
Skin response scored		✔	✔
Assessment adverse event		✔	✔

5-2. Test Site

The test site of this human study is the flat and clean back area except for the backbone.

5-3. Screening, Medical History, and drug injection and the dosage Investigation

Screening was conducted on those who voluntarily participated in the test that met the inclusion criteria of the subjects and did not meet the exclusion criteria. Medical history and drug injection and the dosage within 3 months of the start date of the test were investigated, and drug intake and administration were investigated until the end of the test.

5-4. Method

1) Basic Figure

After changing into a gown, the subjects took skin stability under constant temperature and humidity conditions (22±2°C, 50±5%) for about 30 minutes, and they are restricted marks by clothes or going out that may affect the results during the test, and same researchers measure same test area for objective results for every visit.

2) Primary Skin Irritation Test

The primary skin irritation test referred to [Safety Test Guidelines of Personal Care Products Council (PCPC), most frequently referenced when evaluating human beings, and the criteria of the International Contact Dermatitis Research Group (ICDRG) and evaluated by using "Toxicity Test Standards for Drugs, etc." Manual of National Institute of Food and Drug Safety Evaluation.

① Attach and remove patch

Prepared the product and the tertiary purified water (negative compare) by dropping 20 μl each on the closed patch chamber filter paper of IQ Ultra™.

After wiping with 70% ethyl alcohol and drying the subjects, the product was attached and fixed using 3M™Micropore™Surgical Tape (Tan 1533-1).

After 24 hours of attaching the patch, removed the patch and marked location of the product on the back of the subject with a Surgical Skin Marker for ② Skin response scored.

② Skin response scored

After 30 minutes and 24 hours of the patch removal (total 2 times), the doctor scored skin response.

The criteria of the skin response scored were evaluated by observing erythema and edema based on Table 7. skin response scored.

Table 5. Skin response scored criteria

Erythema Formation	Score
No erythema	0
Highly light erythema (recognized by naked eyes nearly)	1
Distinct erythema	2
Slightly severe erythema	3
Severe erythema (carrot like rubefaction) and light crust (deep injury)	4

Edema Formation	Score
No edema	0
Highly light edema (recognized by naked eyes nearly)	1
Light edema (clearly swollen so the marginal zone is recognized clearly)	2
General edema (swollen about 1mm)	3
Severe edema (swollen more than 1mm and expanded over exposed area)	4

Ref. 「Toxicity Test Standards for Drugs etc.」 manual 8 Topical Toxicity Test I of NIFDS (Skin Irritation Test)

③ Skin irritation assessment

The skin irritation assessment, the investigator calculated the Primary Irritation Index, PII, using scored skin response by the doctor response and evaluated skin irritation according to Table 8. Skin irritation range.

$$PII = \left(\frac{\sum Score\ Avg.}{4}\right)_{30min} + \left(\frac{\sum Score\ Avg.}{4}\right)_{24h}$$

Table 6. Skin Irritation Range

Primary Irritation Index	Classification
From 0.00 to 0.25	Non irritation
From 0.26 to 1.00	Slight irritation
From 1.01 to 2.50	Moderate irritation
From 2.51 to 4.00	Intense irritation

Ref. 「Toxicity Test Standards for Drugs etc.」 manual 8 Topical Toxicity Test I of NIFDS (Skin Irritation Test)

5-6. Adverse Event Assessment

The sub-investigator observed the external symptoms of the subject due to participation in the test at each visit, and checked in with the symptoms that the subject was aware of. In this test, erythema, crust, and edema were excluded from the assessment of abnormal reactions since they were skin response items that evaluated skin irritation.

6. Results

6-1. Subject Information

1) The Number of The Subject and Distribution

Screening was conducted for those who applied for participation in the test through the recruitment of this human study, and 34 of them were registered for this test. During the test period, 0 dropouts occurred, and the final 34 people complied with the test and ended.

Table 7. The Number of The Subjects

Classification*	Total (n)
Screening	34
Enrolled	**34**
Completed	**34**
Drop-out	**0**

*Screening: The number of applicants at the sorting process of the subjects
Enrolled: The number of the enrolled subjects met the inclusion criteria while didn't meet the exclusion criteria
Completed: The number of the subjects who completed the test
Drop-out: The number of the subjects who failed

2) Test subjects Dropouts

In this human body application test, 0 dropouts occurred, and the final 34 test subjects completed the test.

3) Subjects Age and Gender

The average age of 34 test subjects who completed this human study was 50.0, consisting of 0 person in their 20s, 0 people in their 30s, 12 people in their 40s, 22 people in their 50s, and 0 people in their 60s. And 0 males and 34 females for gender.

Table 8. Subjects Age

Age (International)	No. of People (n)	Percentage (%)
20s	0	0.0
30s	0	0.0
40s	12	35.3
50s	22	64.7
60s	0	0.0
Total	**34**	**100**

Table 9. Subjects Gender

Gender	No. of People (n)	Percentage (%)
Male	0	0.0
Female	34	100.0
Total	**34**	**100**

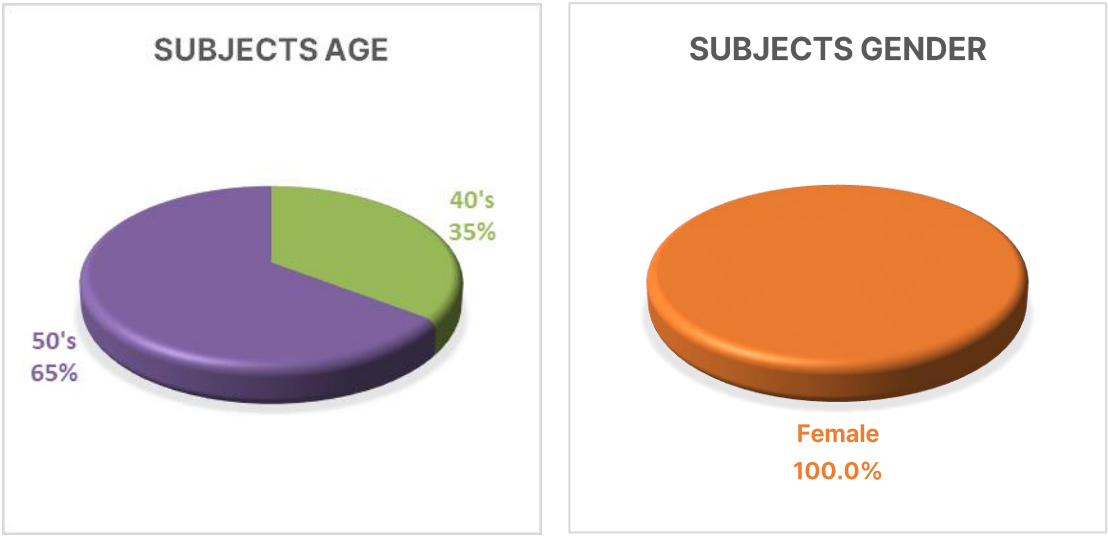

Figure 1. Subjects Age and Gender Distribution

4) Subjects Skin Type

As a result of the skin type survey of 34 subjects who completed this human study, 16 people responded with dry skin, 7 person responded with normal skin, 0 people responded with oily skin, and 11 people with combination type skin.

Table 10. Subjects Skin Type

Skin Type	No. of People (n)	Percentage (%)
Dry	16	47.1
Normal	7	20.6
Oily	0	0.0
Combination	11	32.4
Total	**34**	**100**

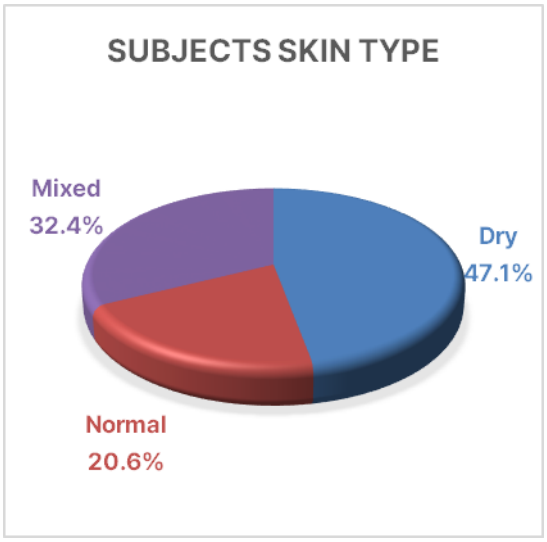

Figure 2. Subjects Skin Type Distribution

6-2. Primary Skin Irritation Test

The result calculated the primary irritation index by scored skin response after applying the 'Cellreborn Athens Moisture Water Essence' to the skin for 24 hours by closed patch was concluded as 0.00. As a result of evaluating skin irritation, it was determined to be a product within the Non irritation range.

Table 11. Primary Skin Irritation Test Result (N=34)

Products	Sum of Skin Response Score				Primary Irritation Index	Skin Irritation Assessment
	Erythema		Edema			
	30min	24h	30min	24h		
Investigational product	0	0	0	0	0.00	Non irritation
Distilled water (Negative control)	0	1	0	0	0.01	Non irritation

7. Conclusion and Discussion

Global Standard Certification Co., Ltd GSC Anti-aging Lab made a conclusion of the primary skin irritation test of 'Cellreborn Athens Moisture Water Essence', commissioned by YJBN Co., Ltd., as below.

1) Used the 34 test results of male and female aged from 20 to 60 for the result analysis.

- Subject gender : Male 0, Female 34
- Subject age : Mean 50.0, Max 59, Min 41

2) The result calculated the primary irritation index by scoring skin response after applying the 'Cellreborn Athens Moisture Water Essence' to the skin for 24 hours by closed patch was concluded as 0.00. As a result of evaluating skin irritation, it was determined to be a product within the Non irritation range.

3) Adverse events of the subjects' skin have not been observed during the test.

As a result

The **'Cellreborn Athens Moisture Water Essence'** commissioned by **'YJBN Co., Ltd.'** is considered as a product under **Non irritation Range.**

8. References

1) Test Method Guidelines for the Demonstration of Labeling and Advertisement for Cosmetic, The Ministry of Food and Drug Safety, 2018
2) Guidelines for Human Study and In Vitro Tests, The Ministry of Food and Drug Safety, 2021
3) The Regulations on the Review of Functional Cosmetics, The Ministry of Food and Drug Safety, 2020
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6) Guidelines for the safety assessment of a cosmetic, Foundation of Korea Cosmetic Industry Institute, 2011.
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12) SOH, Soon-Young; CHUN, Yong-Jin. Cosmeceutical Properties of Extracts of Torreya nucifera and Alpinia henryi and Formulation Characteristics of Mask Pack Containing Extracts of These. *Journal of the Korea Academia-Industrial cooperation Society*, 2020, 21.8: 36-43.
13) Park, H.J., et al. A Comparative Study on the Erythema Response of several Surfactants Measured by Visual Scoring and Noninvasive Bioengineering Methods. *Korean Jornal of Investigative Dermatology*, 1999, 6.3.

Appendix 1. Human Study Results

1) Subjects Information

SN	Initial	Gender	Age	Skin Type	Note
S01	LJH	Female	57	Dry	-
S02	CS	Female	47	Dry	-
S03	PHY	Female	45	Dry	-
S04	KHH	Female	56	Dry	-
S05	KYK	Female	41	Mixed	-
S06	JSD	Female	56	Mixed	-
S07	JKS	Female	51	Dry	-
S08	CYJ	Female	53	Dry	-
S09	KSE	Female	55	Normal	-
S10	SKM	Female	59	Mixed	-
S11	SAJ	Female	55	Dry	-
S12	KTI	Female	53	Dry	-
S13	KHJ	Female	51	Mixed	-
S14	KOH	Female	41	Dry	-
S15	JBR	Female	51	Dry	-
S16	KJY	Female	49	Dry	-
S17	KJA	Female	42	Dry	-
S18	LHK	Female	51	Mixed	-
S19	NEJ	Female	42	Mixed	-
S20	YH	Female	50	Dry	-
S21	PJJ	Female	52	Normal	-
S22	JJH	Female	45	Mixed	-
S23	PMY	Female	45	Mixed	-
S24	PSH	Female	52	Mixed	-
S25	JYH	Female	53	Dry	-
S26	KSH	Female	43	Normal	-
S27	PHY	Female	52	Dry	-
S28	PSY	Female	54	Normal	-
S29	KMO	Female	50	Normal	-
S30	LMK	Female	50	Normal	-
S31	KAS	Female	53	Mixed	-
S32	KHS	Female	49	Dry	-
S33	WSM	Female	44	Mixed	-
S34	HHJ	Female	52	Normal	-

*Dropout: N/A

2) Skin Response Scored Result

SN	Cellreborn Athens Moisture Water Essence				Control (Distilled water)			
	Erythema		Edema		Erythema		Edema	
	30mins†	24hrs‡	30mins†	24hrs‡	30mins†	24hrs‡	30mins†	24hrs‡
S01	0	0	0	0	0	0	0	0
S02	0	0	0	0	0	0	0	0
S03	0	0	0	0	0	0	0	0
S04	0	0	0	0	0	0	0	0
S05	0	0	0	0	0	0	0	0
S06	0	0	0	0	0	0	0	0
S07	0	0	0	0	0	0	0	0
S08	0	0	0	0	0	0	0	0
S09	0	0	0	0	0	0	0	0
S10	0	0	0	0	0	0	0	0
S11	0	0	0	0	0	0	0	0
S12	0	0	0	0	0	0	0	0
S13	0	0	0	0	0	0	0	0
S14	0	0	0	0	0	0	0	0
S15	0	0	0	0	0	0	0	0
S16	0	0	0	0	0	0	0	0
S17	0	0	0	0	0	0	0	0
S18	0	0	0	0	0	0	0	0
S19	0	0	0	0	0	0	0	0
S20	0	0	0	0	0	0	0	0
S21	0	0	0	0	0	0	0	0
S22	0	0	0	0	0	1	0	0
S23	0	0	0	0	0	0	0	0
S24	0	0	0	0	0	0	0	0
S25	0	0	0	0	0	0	0	0
S26	0	0	0	0	0	0	0	0
S27	0	0	0	0	0	0	0	0
S28	0	0	0	0	0	0	0	0
S29	0	0	0	0	0	0	0	0
S30	0	0	0	0	0	0	0	0
S31	0	0	0	0	0	0	0	0
S32	0	0	0	0	0	0	0	0
S33	0	0	0	0	0	0	0	0
S34	0	0	0	0	0	0	0	0

†*30 min after removal of the patch*

‡*24 hours after removal of the patch*

Appendix 2. Product Full Ingredients

Product	Cellreborn Athens Moisture Water Essence
Product Description	White Liquid
Full Ingredients	Water, Glycerin, Hydrolyzed Keratin, Hydrolyzed Collagen, Hydrolyzed Silk, Phenoxyethanol, Hydrolyzed Collagen PG-Propyl Methylsilanediol, Butylene Glycol, Methylparaben, Propylparaben, Amodimethicone, Cetrimonium Chloride, Trideceth-12, Centella Asiatica Extract, Polygonum Multiflorum Root Extract, Panax Ginseng Root Extract, Biota Orientalis Leaf Extract, Portulaca Oleracea Extract, Lycium Chinense Fruit Extract, Angelica Gigas Extract, Carthamus Tinctorius (Safflower) Flower Extract, Glycine Max (Soybean) Seed Extract, Camellia Sinensis Leaf Extract, 1,2-Hexanediol, Asarum Heterotropoides Extract, Sophora Angustifolia Root Extract, Lactobacillus/Viscum Album (Mistletoe) Leaf /Branch Ferment Extract, Castanea Crenata (Chestnut) Cupule Extract, Dalbergia Oliveri Extract, PEG-40 Hydrogenated Castor Oil, Hydrolyzed Barley Protein, Hydrolyzed Corn Protein, Hydrolyzed Potato Protein, Hydrolyzed Rice Protein, Hydrolyzed Rice Bran Protein, Hydrolyzed Soy Protein, Hydrolyzed Oat Protein, Hydrolyzed Pea Protein, Hydrolyzed Wheat Protein, Hydrolyzed Sweet Almond Protein, Niacinamide, Dexpanthenol, Tocopheryl Acetate, Panthenol, Ceramide NP, Hyaluronic Acid, Alpha-Isomethyl Ionone, Benzyl Benzoate, Citronellol, Limonene, Eugenol, Geraniol, Hexyl Cinnamal, Linalool, Butylphenyl Methylpropional, Fragrance

Appendix 3. Institution Facility Information

Institution			
Name	Global Standard Certification Co., Ltd GSC Anti-aging Lab		
Address	807, Woorim Lion's valley A, 168, Gasan digital 1-ro, Geumcheon-gu, Seoul, Republic of Korea		
Managing Director	Junjae Kem	Institution Director	Juhwan Oh
Principal Investigator	Hyeonsook Lee	Contact Number	+82-2-866-1002
Institution Research Area			
Safety Assessment and Research (Cosmetics)		Functional Assessment and Research (Cosmetics)	
Efficacy Assessment and Research (Cosmetics)		Quasi-Drugs Assessment and Research	
Health Functional Food Assessment and Research		Animal Replacement Assessment and Research	
In vitro Assessment and Research			
Institution Main Facility			
Skin Efficacy Evaluation Room 1		*In vitro* Room	
Skin Efficacy Evaluation Room 2		Skin Primary Irritation Test Room	
Skin Efficacy Evaluation Room 3		Face Image Analysis Room	
Skin Efficacy Evaluation Room 4		Body Evaluation Room	
Skin Efficacy Evaluation Room 5		Cleansing Room	
Consultation Room		Photo Room	
Document Storage Room		Volunteer Waiting Room	
Office Room		Locker Room	
Conference Room			
Institution Main Equipment			
Cutometer MPA 580 2mm Probe		Cutometer MPA 580 8mm Probe	
APM Pro 200		Antera 3D CS	
Epsilon E100		Ballistometer BLS780	
Corneometer CM825		Moisturemeter D	
F-ray		Translucency Meter TLS850	
Spectrophotometer CM700d		Tewameter TM HEX	
FLIR T530		Skin Scanner DUB-USB	
Skin glossmeter		Visioscan VC20 plus	
Mexameter MX18		Dermavision beauty edition	
Solar light 601 Multiport		EOS-5D-Mrark 6	

EOS 80D	Image pro plus 10
Chromameter CR-400	OMNIFIT Mindcare
Moisture Determination Balance(FD-660)	USB-225

Appendix 4. Institution Personnel Information

1. Institution Director

Name :	Ju Hwan Oh
Date of Birth :	March 25, 1976
Academic Background :	Bachelor of Engineering, Department of Industrial Engineering, Daejin University Associate degree, Industrial Management Division, Dongwon University.
Work Experience :	
2023 – present	Director, GSC Anti-aging Lab, Global Standards Certification Co., Ltd.
2019 – 2022	Director, INE Co., Ltd.
2015 – 2019	Researcher, Research Institute of Natural Story Co., Ltd.
2013 – 2015	Researcher, Research Institute of CN Tech Co., Ltd
2007 – 2013	Senior Researcher, Research Institute of DASSO&COMPANY Co., Ltd.
2006 - 2007	Senior Researcher, Research Institute of Eyesome Co., Ltd.
2003 – 2006	Researcher, Research Institute of My Cosmetic., Ltd

2. Principal Investigator

Name :	Hyeon Sook Lee
Date of Birth :	March 25, 1978
Academic Background :	Bachelor of Medical school, Inha University, South Korea
	Master of Dermatology, Medical school, Inha University, South Korea
	Doctor of philosophy in Dermatology, Medical school, Inha University, South Korea
Work Experience :	
2022 – present	President, Board Certified Dermatologist, Oracle Dermatologic Clinic, Incheon-Kuwol, South Korea
2010 - 2012	Board Certified Dermatologist, B&C Dermatologic Clinic, Seoul, South Korea
2008 - 2009	Fellow and Assistant Professor, Department of Dermatology, Inha University Hospital, South Korea
2004 - 2007	Resident, Department of Dermatology, Inha University Hospital, South Korea
Related activities :	
	Member or Korean Academy of Dermatology
	Member of Korean Academy of Atopic Dermatitis
	Member of Korean Academy of Dermatologic Surgery
	Member of Korean Academy of Corrective Dermatology
	Member of The Institute for Functional Medicine of Korean Dermatologist

Articles :

1. LEE, H. S., Song. H. J., Hong, W. K., Shin, J. H., & Choi, G. S. (2008). Pseudoxanthoma elasticum-like papillary dermal elastolysis with solar elastosis. *J Eur Acad Dermatol Venerol*, 2008, 22:363-404
2. Song, H., Lee, H., Choi, G., & Shin, J. (2009). Cutaneous nontuberculous mycobacterial infection: a clinicopathological study of 7 cases. *The American journal of dermatopathology*, 31(3), 227-231.

3. SONG, H. J., HAN, S. H., HONG, W. K., LEE, H. S., SHIN, J. H., & CHOI, G. S. (2009). Paraneoplastic bullous pemphigoid: Clinical disease activity correlated with enzyme-linked immunosorbent assay index for the NC16A domain of BP180. The Journal of Dermatology, 36(1), 66-68.BP180. *The Journal of Dermatology*, 2009, 36.1: 66-68.
4. Hong, W. K., Song, H. J., Lee, H. S., Shin, J. H., & Choi, G. S. (2009). Hobnail haemangioma associated with a secondary sexual characteristic. *Journal of the European Academy of Dermatology and Venereology*, 23(4), 465-466.
5. Lee, H. S., Choi, G. S., Shin, J. H. (2008). Prolonged ERK Activation of S1P on B16 Melanoma Cells. *Korean Journal of Dermatology*, 46(6), 769-775
6. Lee, H. S., Han, S. H., Song, H. J., Hong, W. K., Shin, J. H., Choi, G. S. (2008). A Case of Lichenoid Drug Eruption Caused by Allopurinol. *Korean Journal of Dermatology*, 46(1), 130-133
7. Lee, H. S., Hong, W. K., Lee, J. R., Shin, J. H., Choi, G. S. (2006). A Case of Acrosyringeal Nevus. *Korean Journal of Dermatology*, 44(6), 751-753
8. Lee, H. S., Lee, J. R., Choi, G. S., Shin, J. H. (2006). Expression of Smad 2 and 3 on the Lesions of Leprosy. *Korean Journal of Dermatology*, 44(3), 304-308
9. Lee, H. S., Hong, W. K., et al. (2006). A Case of Dermatomyositis Associated with Scarring Alopecic Patches. *Korean Journal of Dermatology*, 44(2), 250-252

3. Quality Assurance Investigator

Name :	Euigu Yeo
Date of Birth :	October 24, 1979
Academic :	Bachelor of Science, Department of Astronomy & Space Science, Chungnam National Univ.
Work Experience :	
2023 – Present	Director of GSC Co., Ltd.
2021 – 2023	CEO in Storang Co., Ltd.
2019 – 2021	CEO in Triz Consulting LLC.
2005 – 2018	Team Leader of Sales Department Unit. in BRKOREA Co., Ltd.

4. Researcher

Name :	Yunhee Hwang
Date of Birth :	November 10, 1982
Academic Background :	Bachelor of Science, Department of Biotechnology, Dongguk University
Work Experience :	
2023 – Present	Head of center, GSC Anti-aging Lab, Global Standards Certification Co., Ltd.
2021 – 2023	CEO, Oracle Skin Clinical Trial Center
2020 - 2021	Division director, Human Skin Clinical Trial Center
2018 - 2019	Team leader, 3CR Clinical Center Co., Ltd.
2016 - 2018	Team leader, Skin Biotechnology Center Clinical Research Institute, Kyunghee University
2015 - 2015	Senior Researcher, P&K Skin Clinical Research Center Co., Ltd.
2010 - 2014	Senior Researcher, IEC Korea Co., Ltd.

Name :	Su Yeon Kim
Date of Birth :	February 01, 1991
Academic Background :	Bachelor of Sciences, Department of Chemistry, Cosmetology Major(2nd major), Soonchunhyang University
Work Experience :	
2022 – present	Senior Researcher, GSC Anti-aging Lab, Global Standards Certification Co., Ltd.
2022 – 2022	Clinical trial consultant, CDRI Co., Ltd.
2019 – 2021	Assistant manager(Part leader), OATC Skin Clinical Test Center
2016 – 2018	Researcher, P&K Skin Research Center Co., Ltd.

Name :	Sae Hee Yoon
Date of Birth :	February 23, 1991
Academic Background :	Master of science in dentistry, Kyunghee University
Work Experience :	
2023 – present	Senior Researcher, GSC Anti-aging Lab, Global Standards Certification Co., Ltd.
2020 – 2023	Assistant manager, OATC Skin Clinical Test Center
2017 – 2020	Researcher, Ellead Co., Ltd.

Name :	Hyeonji Kim
Date of Birth :	October 10, 1996
Academic Background :	Bachelor of Science, Department of Oriental Bio Convergence Science, Semyung University
Work Experience :	
2023 – present	Researcher, GSC Anti-aging Lab, Global Standards Certification Co., Ltd.
2020 – 2023	Researcher, Human Skin Clinical Trials Center
2019 – 2020	Employee, ES COSMETIC Co., Ltd.

Name :	Hee Su Bae
Date of Birth :	September 29, 1995
Academic Background :	Bachelor of Science, Oriental Cosmetics Science, Hoseo University
Work Experience :	
2023 – 현재	Researcher, GSC Anti-aging Lab, Global Standards Certification Co., Ltd.
2020 – 2022	Researcher, Human Skin Clinical Trials Center

Name :	Su Hui An
Date of Birth :	April 29, 1999
Academic Background :	Bachelor of Science, Department of Bio Food Industry, Semyung University
Work Experience :	
2023 – present	Researcher, GSC Anti-aging Lab, Global Standards Certification Co., Ltd.
2022 – 2022	Employee, Cosmax pharma (QC)

Name :	So Hyeon Park
Date of Birth :	May 18, 1997
Academic Background :	Bachelor of Science, Department of Bio-Life Medicine, Chungbuk Provincial University
Work Experience :	
2022 – present	Researcher, GSC Anti-aging Lab, Global Standards Certification Co., Ltd.
2021 – 2022	Employee, FITI Testing Researcher
2020 – 2021	Employee, Boryeong Biopharma

Name :	Hee jin Kim
Date of Birth :	October 30, 1997
Academic Background :	Bachelor of Science in Public Health, Department of Beauty Health, Shinhan University
Work Experience :	
2023 – present	Researcher, GSC Anti-aging Lab, Global Standards Certification Co., Ltd.
2021 – 2023	Researcher, Human Skin Clinical Trials Center