

# Study Report

**A study to evaluate the effectiveness of  
'MEDICUBE AGE-R BOOSTER-H' and one other cosmetic  
product in the 24-hour skin hydrating effect**

**ver.2.0**

**December 12, 2022**



## DESCRIPTION FOR SUBMISSION

An Industrial R&D Center of APR Corporation (hereinafter referred to as "Global Institute of Dermatological Sciences") conducted this study to contribute to the research and development process focusing on the safety and effectiveness of cosmetics sponsored by APR Corporation on the human body. A study to evaluate the effectiveness of 'MEDICUBE AGE-R BOOSTER-H' and one other cosmetic product in the 24-hour skin hydrating effect was conducted according to following related documents: Guidelines to Application Test to a Human Body and Efficacy Test of Cosmetic Product; Guidelines to Test Methods for the Substantiation Labeling and Advertisement of Cosmetic Product; Guideline for Effectiveness Assessment of Functional Cosmetics by Ministry of Food and Drug Safety; Bioethics and Safety Act by Ministry of Health and Welfare; and Standard Operating Procedure (SOPs) of Global Institute of Dermatological Sciences. The results were reported as follows and this study report is an English translation copy of Korean study report.

**ver.2.0**

**December 12, 2022**

**Global Institute of Dermatological Sciences**



President of Global Institute of Dermatological Sciences:

Dermatologist M.D. Myung Sun Choi



Principal Investigator of this study:

Dermatologist M.D. Myung Sun Choi



Sub-investigator of this study:

Dasom Shin



This report is the property of Global Institute of Dermatological Sciences under 「Copyright Act」 and 「Trade Secret Protection Act」, so it cannot be transferred, viewed, quoted, disclosed, reproduced, or transferred to third parties without permission.

## CERTIFICATE OF RELIABILITY ASSURANCE

This study is about the evaluation of the effectiveness of 'MEDICUBE AGE-R BOOSTER-H' and one other cosmetic product in the 24-hour skin hydrating effect.

This study was appropriately conducted based on the World Medical Association Declaration of Helsinki, and in accordance with following applicable regulatory requirements: 『Bioethics and Safety Act』; 『Cosmetics Act』 of the Republic of Korea; public announcement from Ministry of Food and Drug Safety; Regulation for Designation of Testing Institutes for Drugs, etc., Cosmetics, and Medical Devices; Korea Good Clinical Practice (KGCP) for Drugs; Guidelines to Application Test to a Human Body and Efficacy Test of Cosmetic Product; Guidelines to Test Methods for the Substantiation Labeling and Advertisement of Cosmetic Product; Guideline on Effectiveness Assessment of Functional Cosmetics; and Standard Operating Procedure (SOPs) of Global Institute of Dermatological Sciences. This report guarantees the reliability of following results.

Monitoring procedures	Date	Result	Note
Study Protocol	July 15, 2022	Approved	
Initial IRB Review	July 15, 2022	Approved	70094430-2207-HR-038-03
Study Initiation	July 27, 2022	Approved	
Study Completion	July 28, 2022		
Data Analysis and Report Work	July 29, 2022 ~ August 04, 2022	Approved	
Draft Study Report	August 05, 2022	Approved	
IRB Study Closure Report	August 08, 2022	Approved	70094430-2207-HR-038-07
Final Study Report	August 23, 2022	Approved	
English Translation Report	November 21, 2022	Approved	Summary only
Final English Translation Report	December 12, 2022	Approved	

Director of Reliability Assurance:

Global Institute of Dermatological Sciences

Hyeyoung Kim



This report is the property of Global Institute of Dermatological Sciences under 『Copyright Act』 and 『Trade Secret Protection Act』, so it cannot be transferred, viewed, quoted, disclosed, reproduced, or transferred to third parties without permission.

## SUMMARY

Title of Study	A study to evaluate the effectiveness of 'MEDICUBE AGE-R BOOSTER-H' and one other cosmetic product in the 24-hour skin hydrating effect	
Study Identification Code	GLB-220727-I1	
Study Institution	Global Institute of Dermatological Sciences 4F, 94, Seokchonhosu-ro, Songpa-gu, Seoul, Republic of Korea	
Sponsoring Institution	APR Corporation 36F, 300, Olympic-ro, Songpa-gu, Seoul, Republic of Korea	
Study Approval Date	July 15, 2022	
Participation Period of Subjects	July 27, 2022 ~ July 28, 2022	
Reporting Date	August 05, 2022	
Subjects	22 Korean adult women aged 20 to 60 who met the inclusion criteria and were not included in the exclusion criteria were enrolled for this study. (Average age: 46.909±10.479_22 completion, 0 drop-out)	
Study Product	Study Product A: At-home skincare device (Industrial product) 'MEDICUBE AGE-R BOOSTER-H' Study Product B: Basic skin care products, Essence 'MEDICUBE DEEP VITA C AMPOULE 2.0'	
Methods	Usage of Study Products	- Applying study products as a following procedure, once at the first visit after cleansing upper arm: ① Applying 0.1 g of study product B 'MEDICUBE DEEP VITA C AMPOULE 2.0' each to the designated A+B application area (T) and B application area (C1) on both upper arm; ② Set study product A 'MEDICUBE AGE-R BOOSTER-H' as Level 5; ③ Apply study product A to the left upper arm for 1 minute. - Applying study product A after removing any jewelry or metals on the body.
	Evaluations	1. Effectiveness evaluations 1) Measurement of 24-hour skin hydrating effect: Corneometer 2. Safety evaluation 3. Subjective questionnaire evaluation

Results	<p>1. Result of effectiveness evaluation</p> <p>1) The evaluation results for 24-hour skin hydrating effect using Corneometer</p> <p>Significant improvements in 24-hour skin hydrating effect were observed on both application area in comparison to baseline; capacitance, representing hydration of SC (stratum corneum) of epidermis, were increased 75.655% and 27.310% (<math>p &lt; .001</math>) each on A+B application area immediately after once and after 24 hours of study products application, and increased 40.239% and 12.689% (<math>p &lt; .01</math>) each on B application area immediately after once and after 24 hours of study products application; And both application area showed statistically significant (<math>p &lt; .01</math>) differences each to non-application area.</p> <p>In addition, 24-hour skin hydrating effect was further improved when study product A+B were used together; capacitance of A+B application area showed statistically significant (<math>p &lt; .01</math>) difference to B application area immediately after once and 24 hours of study products application.</p> <p>2. Results for safety evaluation</p> <p>The principal investigator or the sub-investigator entrusted by the principal investigator monitored whether subjects had any of the following skin responses: erythema, edema, scaling, itching, stinging, burning, tightness, and prickling, through asking and assessment for every visit. And the result showed that abnormal skin responses to application area before and after study products application were not detected during the study period.</p> <p>3. Results for subjective questionnaire evaluation</p> <p>Subjective questionnaire was conducted 15 questions: a question about subjects' skin type, 2 questions about an extent of skin condition improvement after study products application, and 12 questions about satisfaction about study products. And results for each question were taken statistics as average, standard deviation (SD), and positive answer rate (%).</p>
Conclusion	<p>The study products 'MEDICUBE AGE-R BOOSTER-H' and one other cosmetic product, requested by the APR Corporation, were considered to have 24-hour skin hydrating effect.</p>