



DERMAPRO

SAFETY AND EFFICACY EVALUATION
OF COSMETICS & COSMECEUTICALS

E - version

DERMAPRO Ltd.

History

DERMAPRO

National Project for
"Clinical Study of Multi-Racial Skin Characteristics"
in Rome Italy and Toronto Canada
(Ministry of Health and Welfare,
Foundation of Korea Cosmetic Industry Institute)

National Project for
"Clinical Study of Multi-Racial Skin Characteristics"
in LA, New York
(Ministry of Health and Welfare,
Foundation of Korea Cosmetic Industry Institute)

National Project for
"Clinical Study of Multi-Racial Skin Characteristics"
in Manila Philippines, Moscow Russia, Istanbul Turkey
(Ministry of Health and Welfare,
Foundation of Korea Cosmetic Industry Institute)

Acquisition of Certificate of ISO 9001:2015

MOU as a Partnership with Stephen & Associates in Dallas, USA
MOU as a Partnership with Landproof in Gangzhou, China
Registration of IRB Committee, Ministry of Public Health in Korea
Registration of Cosmetic Manufacturing and Distributor in KFDA

MOU as a Partnership with
Shanghai Skin Disease Hospital in Shanghai, China

Registration Venture Business Enterprise

Acquisition of Certificate ISO 9001:2008 (KQS5885)

Construction of Company Building

2020 Acquisition of LMO Safety Management 2nd Grade
(No.LML 20-105)

2019

National Project for
"Clinical Study of Multi-Racial Skin Characteristics"
in Paris, Tokyo
(Ministry of Health and Welfare,
Foundation of Korea Cosmetic Industry Institute)

2018

2017

National Project for
"Clinical Study of Multi-Racial Skin Characteristics"
in Guangzhou, Haeolppin
(Ministry of Health and Welfare,
Foundation of Korea Cosmetic Industry Institute)

2016

2015

National Project for "Clinical Study of Multi-Racial Skin Characteristics"
in Ulaanbaator, Taipei, Astana
(Ministry of Health and Welfare,
Foundation of Korea Cosmetic Industry Institute)

2014

MOU as a Partnership with Proderm in Hamburg Germany

2013

Acquisition of 'Manufacturer and Seller Registration (KFDA)'

2012

Certification of IRB (KCDC Registered)

MOU as a Partnership with Claims, India

2011

Inauguration of Bio Research Center

2007

Certification of IRB (DHHS Registered)

2006

2005

Registration of DERMAPRO Skin Research Center

2004

2001

Establishment of DERMAPRO Ltd.

Our Company

DERMAPRO, established in May 2001, is a skin research institute that specializes in human dermatological testing for evaluation of safety and efficacy of cosmetics, cosmeceuticals, food supplements raw materials, esthetic devices and toiletries.

All human clinical trials performed by DERMAPRO are planned, processed, reported and managed according to GCP. Based on this, we have achieved ISO 9001:2015 certification, which ensures the standardization and reliability of our operation and makes our company internationally competitive in human testing. We runs our own IRB committee for all tests planned.

The main working field of DERMAPRO includes not only the evaluation of general skin physiology such as moisturizing, sebum control and firming, but also the evaluation of anti-wrinkle, whitening, sun protection factors, breast firming, hair growth & loss, acne and atopy control.

All of our clinical studies and evaluations including governmental R&D projects are being executed by leading expert group with new technologies and methods.

As being a leader in this area, we will make unceasing efforts to foresee the expectation of market needs based on reliability and confidence.

Working Field

Safety and Efficacy Test for Functional Cosmetic,
Food Supplement,
Cosmeceuticals,
Cosmetics,
New Materials,
Cosmetic Ingredients,
All External Preparation

New Protocol Development

Development of Alternative Study Method

Clinical Consulting and Training



DERMAPRO established a safety assessment system consisting of dermatologists who are leading experts in safety assessment and professionals extraordinary know-how.

We conducts safety assessments of a total number of around 1,200 test samples annually, including cosmetics, raw materials, extracts, textiles, detergents and industrial products such as irritation to skin and eyes, allergic potential and usability assessment.

Testing items include primary and cumulative irritation test for evaluating the irritation potential, phototoxicity and photosensitization test for evaluating the irritation and sensitization potential the materials UV or VIS radiation, HRIPT for evaluating sensitization potential and in-use test for evaluating the potential subjective or objective irritation of the test products in actual use conditions.

DERMAPRO studied continuously research, including publishing safety evaluation standards in international journals based on accumulated databases.

Safety Evaluation

Certified Test Methods by the Most Experienced Expert Group

Human Skin Primary Irritation Test
Human Skin Cumulative Irritation Test
Human Skin Repeat Insult Patch Test
Human Skin Phototoxicity Test
Human Skin Photosensitization Test

Human Skin Sensitivity Test
Human Skin Sting Potential Test
Human Skin In-Use Test



Face and Body Evaluation

Cosmetics, Quasi Drug, Food Supplement, Cosmetic Device

Human Skin Wrinkle Test
Human Skin Firming Test
Human Skin Texture Test
Human Skin Hydration Test
Human Skin Scale Test
Human Skin Pore Test
Human Skin Lightening Effect Test
Skin Radiance and Gloss Effect Test
Human Skin Cooling Effect Test
Human Skin Dark Circle Test

Human Skin Cellulite Test
Breast Firming Effect Test
Human Skin Anti-Pollution Test
Damaged Skin Barrier Improvement Effect Test
Cleansing Effect Test
Antiperspirant Test
Puffiness Reducing Effect Test
Non-Comedogenicity Test
Make-up Effect Test
Human Skin Sensitivity Test
Human Skin Antimicrobial Effect Test

Human Skin Wrinkle Improvement Test
Human Skin Lightening Effect Test
Human Skin Wrinkle Improvement Test of Food Supplement
Human Skin Lightening Effect Test of Food Supplement
Human Skin Hydration Improvement Test of Food Supplement
UV-Damaged Skin Recovery Effect Test of Food Supplement
Acne Skin Improvement Effect Test
Human Teeth Whitening Test





Efficacy evaluations are carried out by well-trained researchers and regular-validated measurement devices.

Evaluation scopes of efficacy are included in functional, basic skin-cares, make-up, body cosmetics, cosmeceuticals, functional food supplements and beauty devices.

DERMAPRO has high-tech bio-engineering devices and software including Confocal laser microscope (VIVASCOPE®1500) and 3D converting photograph system (Vectra XT).

VIVASCOPE can be measured in skin pigment and tissue cell such as melanin, collagen, elastin. Also, VECTRA can be measured and converted 3D images on the face and body sites of human.

DERMAPRO continuously develops newly evaluating parameter and the study of human skin aging model from outer skin to inner skin as well as from face to body.



UVA, UVB, sweat and water resistance clinical tests and *in vitro* UVA tests are mainly conducted in accordance with international standards such as ISO, FDA, EC, etc..

The evaluations are conducted by professionals secured based on periodic management of measuring devices, essential curriculum and test know-how using self-developed patent devices.

Infrared evaluation measures both light reflectivity and transmittance, which can be also applied to organic, inorganic and complex sunscreen.

The Blue light blocking effect evaluation method is a system that independently developed to enable evaluation in combination with *in vivo* and *in vitro*, which measure skin blackening and light transmission. It prevents skin damage caused by excessive light exposure and improves the discriminability of the blue light blocking effect to produce accurate results.

Total Solar Protection Evaluation

From UV to Infrared Radiation



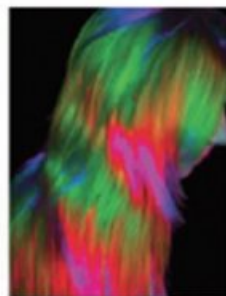
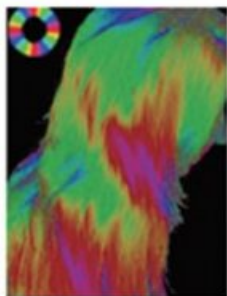
UVA Protection Factor Test
Sun Protection Factor (SPF) Test
Water Resistance Test
Sweat Resistance SPF Test
Infrared (IR) Test
Blue Light (BL) Test
UVA Protection Factor *in vitro* Test



Scalp Dandruff and Itching Reducing Effect Test
 Scalp Physiology Condition Test
 Hair Physiology Condition Test
 Anti-Hair Loss Effect Test



Intensity image

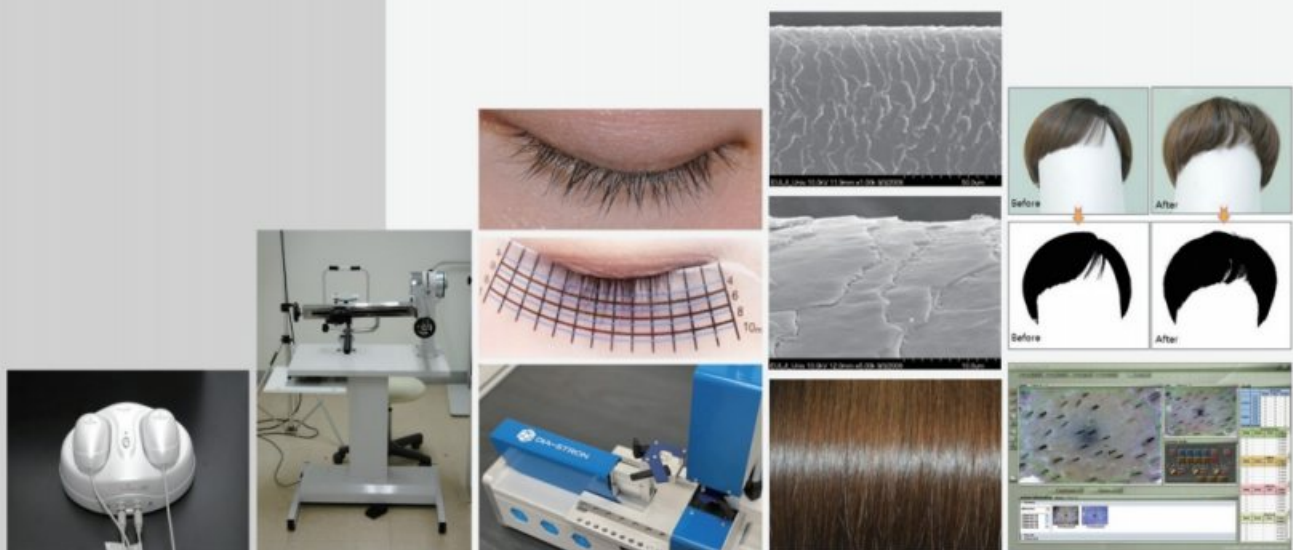


Orientation image



Hair and Scalp Evaluation

From Hair Pathology, Physiology to Physical Properties



All evaluations of hair and scalp are conducted by professionals secured through rigorous calibration of measuring devices and essential curriculum. The evaluation field includes hair loss function, hair and scalp cleansing products, beauty equipment, etc.

DERMAPRO has the latest bioengineering devices combined with new technology and software. These devices include RUMBA®, which enables color-sensitive image visualization of curling changes across the hair in a two-dimensional image analysis method obtained from digital images, a scanning electron microscope (SEM) for real-time imaging of the outermost cuticle layer and an all-in-one system (FibraOne®).

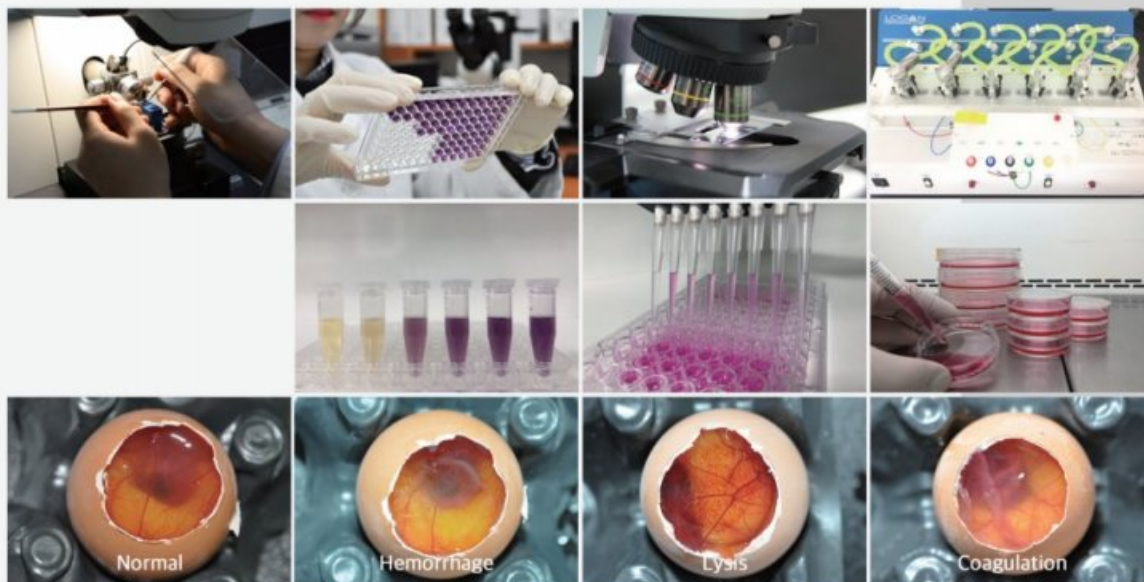
Measurement parameters include tensile strength, elasticity, combing, friction force, electrostatic repulsive force, volume, curling, etc. and chemical changes in hair such as color lasting, dyeing and bleaching.

The evaluation of anti-hair loss functional cosmetics measures total hair counts, catagen/ telogen hair ratio, hair growth rate, terminal/ vellus hair ratio and hair thickness using the Photrichogram® analysis system.

Based on this, we continue to develop evaluation methods for hair loss, hair, scalp, etc. as well as research on aging models.

In vitro Assay

& Alternative Method
Standardized and Validated Test Methods



DERMAPRO conducts efficacy experiments using *in vitro* and *ex vivo* models for various cosmetic materials and formulations using them as well as cosmetics, raw materials and extracts.

Evaluation items include anti-wrinkle, lightening, antioxidant, anti-inflammatory, moisturizing, cytotoxicity, phototoxicity, eye irritation, *in vitro* skin absorption and antibacterial test for hand sanitizer.

DERMAPRO Bio Research Center has reported a LMO research facility with biosafety level 2 and is conducting efficacy evaluation tests using genetically modified cell lines and harmful bacteria.

For the safety evaluation of cosmetics, tests are conducted in accordance with the ISO and OECD test guidelines.

In addition, we are developing and providing various test methods to identify the mechanism of human efficacy for cosmetics.



Anti-Wrinkle Effect Test
Lightening Effect Test
Hydration Effect Test
Anti-Oxidant Effect Test

Anti-Inflammatory Effect Test
Phtotoxicity Evaluation Test
in vitro Skin Absorption Test
in vitro Eye Irritation Test
in vitro SPF Determination Test

DERMA PRO

Safety Evaluation

Human Skin Primary Irritation Test
Human Skin Cumulative Irritation Test
Human Skin Repeat Insult Patch Test
Human Skin Phototoxicity Test
Human Skin Photosensitization Test
Human Skin Sensitivity Test
Human Skin Sting Potential Test
Human Skin In-Use Test

Efficacy Evaluation

Human Skin Wrinkle Test
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Human Skin Texture Test
Human Skin Hydration Test
Human Skin Scale Test
Human Skin Pore Test
Human Skin Lightening Effect Test
Skin Radiance and Gloss Effect Test
Human Skin Cooling Effect Test
Human Skin Dark Circle Test
Human Skin Cellulite Test
Breast Firming Effect Test
Human Skin Anti-Pollution Test
Damaged Skin Barrier Improvement Effect Test
Cleansing Effect Test
Antiperspirant Test
Puffiness Reducing Effect Test
Non-Comedogenicity Test
Make-up Effect Test
Human Skin Sensitivity Test
Human Skin Antimicrobial Effect Test
Human Skin Wrinkle Improvement Test
Human Skin Lightening Effect Test
Human Skin Wrinkle Improvement Test of Food Supplement
Human Skin Lightening Effect Test of Food Supplement
Human Skin Hydration Improvement Test of Food Supplement
UV-Damaged Skin Recovery Effect Test of Food Supplement
Acne Skin Improvement Effect Test
Human Teeth Whitening Test

Total Solar Protection Evaluation

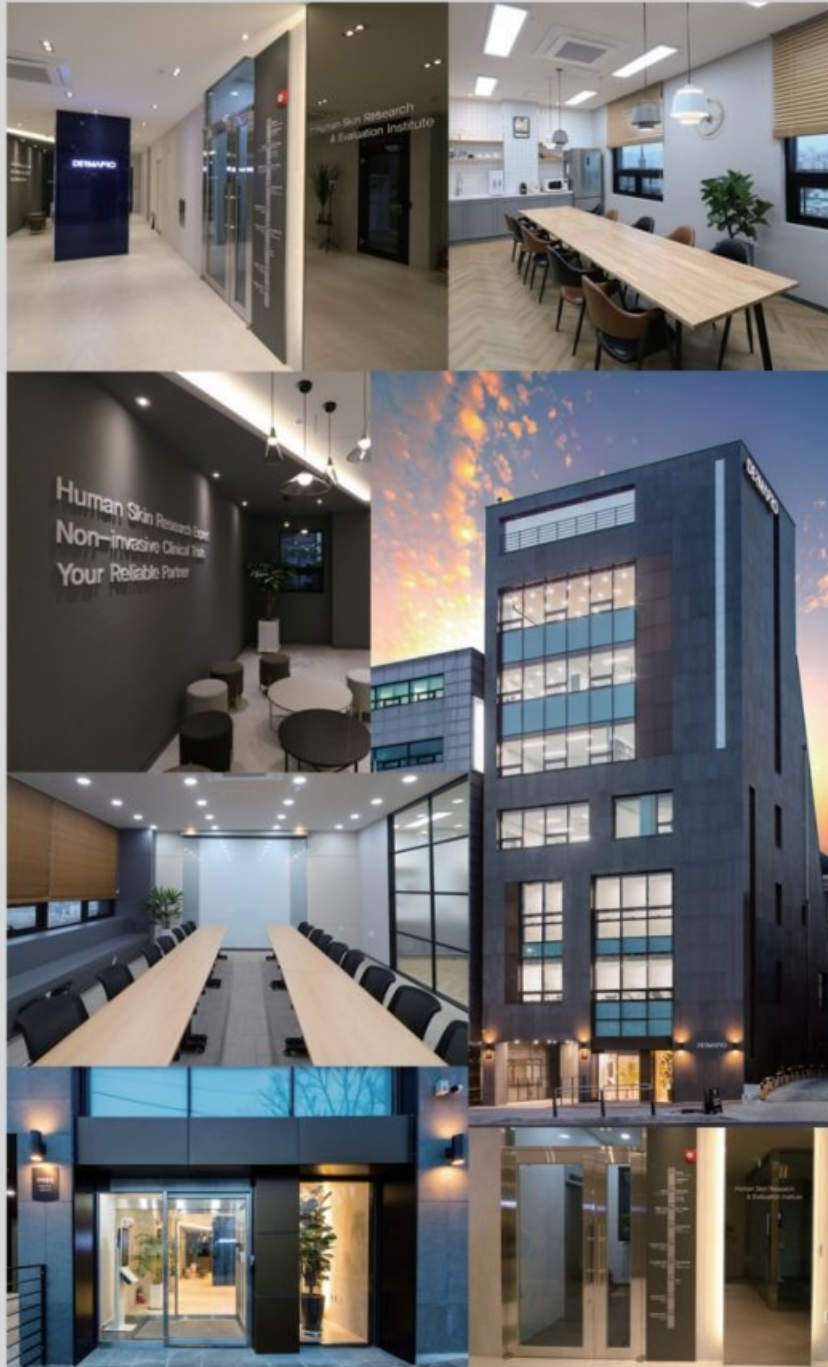
UVA Protection Factor Test
Sun Protection Factor (SPF) Test
Water Resistance Test
Sweat Resistance SPF Test
Infrared (IR) Test
Blue Light (BL) Test
UVA Protection Factor *in vitro* Test

Hair and Scalp Evaluation

Scalp Dandruff and Itching Reducing Effect Test
Scalp Physiology Condition Test
Hair Physiology Condition Test
Anti-Hair Loss Effect Test

in vitro Assay

Anti-Wrinkle Effect Test
Lightening Effect Test
Hydration Effect Test
Anti-Oxidant Effect Test
Anti-Inflammatory Effect Test
Phtotoxicity Evaluation Test
in vitro Skin Absorption Test
in vitro Eye Irritation Test
in vitro SPF Determination Test



This image is the interior and panoramic view of the office building.

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