

RAPHAGEN O RECOVERY TONER

&

RAPHAGEN O WATER CREAM

Products Introduction

RAPHAGEN
O RECOVERY
TONER

리파젠 오 리커버리
리파젠 오 리커버리

50ML / 1.69 fl. oz.

RAPHAGEN O WATER CREAM

www.myrpg.kr

70mL / 2.37 fl. oz.

RAPHAGEN CS Center : +82-2-704-1005

RAPHAGEN

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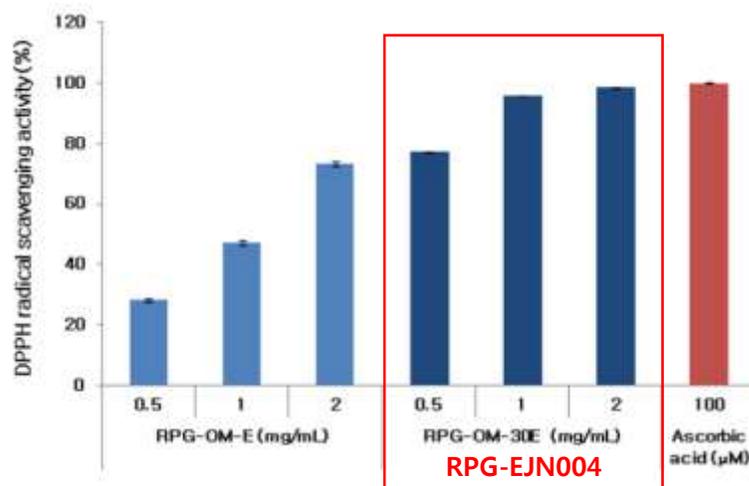
- I. Introduction of raw materials with RAPHAGEN
- II. RAPHAGEN O RECOVERY TONER Features and clinical trial results introduction
- III. RAPHAGEN O WATER CREAM Features and clinical trial results introduction
- IV. Products Introduction

Introduction of raw materials with RAPHAGEN

RPG-EJN004 (ICID Name : Lactobacillus/Schisandra Seed Extract Ferment Filtrate Extract)

Features and Effects

1. Schisandra is of high quality because it is used as a domestic product.
2. Schisandra Seed Extract is separated/purified from the fermentation process using its own patented lactobacillus to produce a material that is more effective than the Schisandra Extract.
3. RPG-EJN004 has a **high antioxidant effect**.



오미자추출물 및 오미자발효정제물(RPG-EJN004)에 대한 DPPH 측정 결과

DPPH assay confirmed that the antioxidant effect of Schisandra Extract (RPG-OM-E) was 28.2% - 73.3% under 0.5 – 2.0 mg/mL conditions, while the Schisandra Seed Extract (RPG-EJN004) was **77.2% - 98.5%** under 0.5 – 2.0 mg/mL conditions.

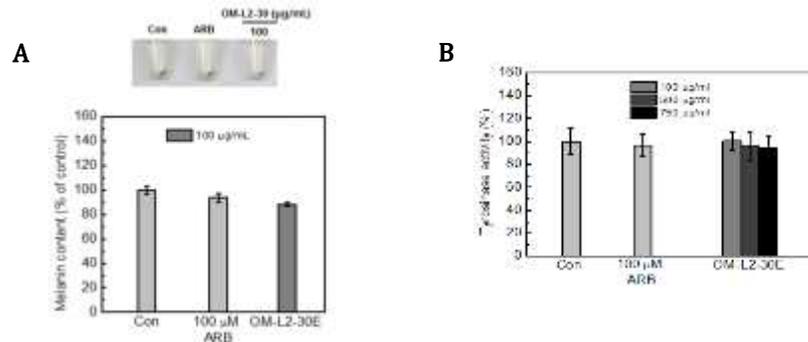
This means that **RPG-EJN004 has a higher antioxidant effect** than Schisandra Extract.

[Test Institute : Chemon Non-Clinical Research Institute(2018. 01. 29. ~ 2018. 02. 02.)]

Introduction of raw materials with RAPHAGEN

RPG-EJN004 (ICID Name : Lactobacillus/Schisandra Seed Extract Ferment Filtrate Extract)

4. RPG-EJN004 has a high whitening effect.



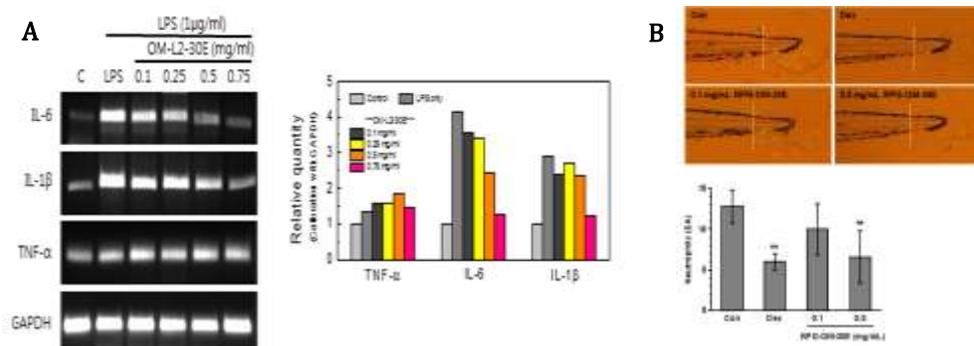
RPG-EJN004에 대한 미백 효능평가 A. HMV-II 세포에서 melanin 함량에 미치는 오미자발효정제물(RPG-EJN004)의 효과, B. 오미자발효정제물(RPG-EJN004)의 tyrosinase 활성에 미치는 효과

Measurement of the decrease in melanin content using HMV-II cells indicates that the decrease in melanin content by 100 μg/mL Schisandra Seed Extract (RPG-EJN004) is about 12%. As a result of inhibiting activity of tyrosinase in cells, melanin was inhibited by Schisandra Seed Extract at concentrations above 500 μg/mL.

This means that **Schisandra Seed Extract has whitening effects similar to the whitening functional substance, Albumin (100 μM).**

[Test Institute : The Korea Research Institute of Chemical Technology (KRICT)]

5. RPG-EJN004 has a high anti-inflammatory effect.



RPG-EJN004에 대한 항염증 효능평가 A. 역전사 PCR에 의한 IL-6, IL-1β, TNF-α의 발현양 확인, B. 제브라피쉬의 tail-wound 방법을 이용한 오미자발효정제물(RPG-EJN004)의 항염증 효능 시험

The expression volume was reduced by quantifying the expression amount using the Reverse-Translation PCR (RT-PCR) for the inflammatory factors by treating the Schisandra Seed Extract (RPG-EJN004) in RAW264.7 cells that caused inflammation. In addition as a result of measuring the anti-inflammatory effect using zebrafish, Schisandra Seed Extract (RPG-EJN004) showed a significant inhibitory effect at a concentration of 0.5 mg/mL.

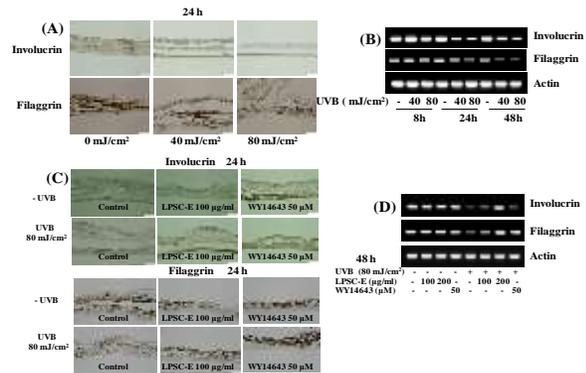
This means that Schisandra Seed Extract (RPG-EJN004) has **high anti-inflammatory effect.**

[Test Institute : The Korea Research Institute of Chemical Technology (KRICT)]

Introduction of raw materials with RAPHAGEN

RPG-EJN004 (ICID Name : Lactobacillus/Schisandra Seed Extract Ferment Filtrate Extract)

6. RPG-EJN004 has a high skin barrier improvement (protection) effect.

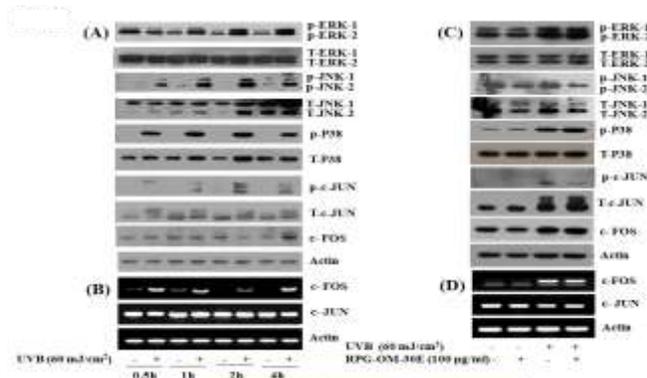


인공 피부에서 RPG-EJN004의 피부장벽 개선 효과

To measure the effectiveness of skin barrier improvement (protection), an evaluation was irradiated by applying UVB to artificial skin tissue. Artificial skin tissue not treated with Schisandra Seed Extract decreased UVB irradiation volume and time-dependent involucrin and filaggrin expression. And the artificial skin tissue treated with Schisandra Seed Extract showed the recovery effect of involucrin and filaggrin reduced by UVB. In particular, It was found that of the positive control group WY14643 when processing Schisandra Seed Extract (RPG-EJN004) 200 µg/mL at the mRNA level. This means that **the Schisandra Seed Extract (RPG-EJN004) has good improvement and protection effects** on the skin barrier tissue.

[Test Institute : Keimyung University]

7. RPG-EJN004 has a high skin wrinkle (regeneration) effect.



RPG-EJN004에 의한 피부 주름 개선(재생)에 관한 발현 인자에 대한 평가

After irradiating UVB 60 mJ/cm², It was found that the factors JNKs, c-JUN phosphorylation and expression increased in HaCaT cells that did not treat with the Schisandra Seed Extract (RPG-EJN004). However, in cells treated with the Schisandra Seed Extract (RPG-EJN004 100 µg/mL), the phosphorylation and expression of JNK-1/2 and c-JUN were found to be reduced.

This means that Schisandra Seed Extract (RPG-EJN004) has excellent improvement and protection effect on skin wrinkles.

[Test Institute : Keimyung University]

RAPHAGEN O RECOVERY TONER



The Characteristics of RAPHAGEN O RECOVERY TONER

- ✓ Using 'Schisandra Seed Fermentation Extract' on the skin tired from the outside gives skin vitality.
- ✓ It contains ingredients that are good for skin soothing, such as Schisandra seed fermentation extract using lactobacillus, Paeonia Suffruticosa Root extract and Centella Asiatica Extract.
- ✓ It's a viscous type, but it's absorbed quickly, and even if it's applied several times, the skin doesn't feel stuffy.
- ✓ This product is certified through skin wrinkle-related human Clinical trial tests (six types) to help moisturize the skin.
- ✓ This product has been certified through a skin-soothing-related human clinical trial(2 types), it helps to whiten the skin.
- ✓ It is a whitening / wrinkle double functional cosmetic with niacinamide and adenosine.

Results of human Clinical-trial test for RAPHAGEN O RECOVERY TONER

연구 결과 보고서
PNK-18O24-SB2R

라파젠 O 토너의 피부 장벽 개선 및 외부자극
(화학적 자극)에 의한 피부 진정 효과에 대한 인체적용시험

의뢰기관: (주)에그리나

2018년 11월 19일

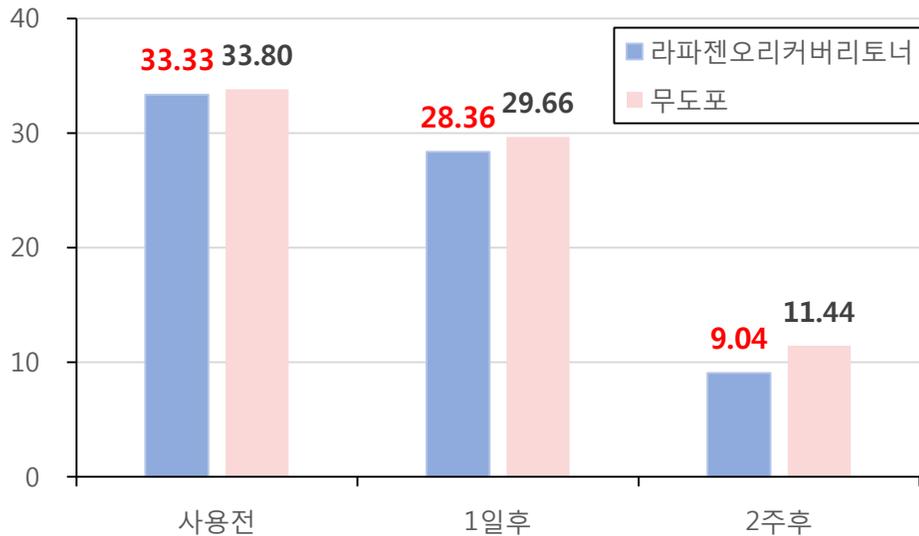


Subject	Improving skin barrier of the RAPHAGEN O toner and human clinical-trial test to skin soothing effects by external stimuli (chemical stimuli)
Test institute	P&K Skin Research Center
Test Period	2018. 10. 24. ~ 2018. 11. 08.
Purpose	Improving the skin barrier of the RAPHAGEN O toner and evaluate the effect of skin soothing by external stimuli (chemical stimuli).
Selection of test subjects	Those who comply with the following selection criteria 1. Women aged 30 to 55 2. A person who has been delegated by the Tester or the Tester shall be fully informed of the information to the test subjects and voluntarily 3. Healthy person who does not have grade or chronic physical disease including skin disease 4. Those who can observe the trace during the test period
Test result	This study was conducted to evaluate the effects of skin barrier improvement and external stimuli (chemical stimulation) on skin soothing while using "RAPHAGEN O Toner" for 2 weeks in adult women aged 30 to 55 years. After the test, the validity and preference investigation questionnaire were completed. Therefore, the test product "RAPHAGEN O Toner" is considered to be a product that helps skin barrier improvement by improving skin barrier and using external stimuli (chemical stimulation) for 2 weeks.

Results of human Clinical-trial test for RAPHAGEN O RECOVERY TONER

Skin Moisture loss

* 경표피 수분 손실 측정결과 (g/m²h)



✓ Helps to improve skin moisture loss

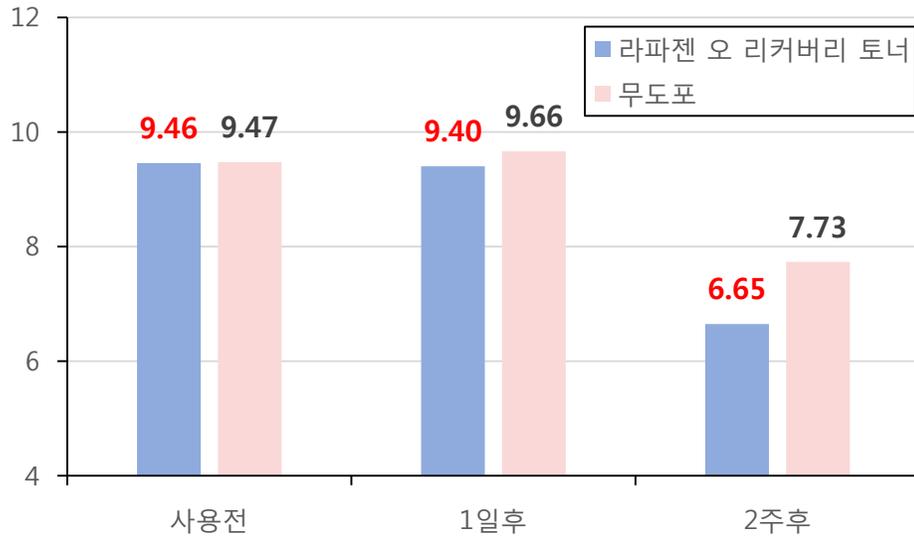
Results of skin barrier (amount of water loss of light skin)

- As a result of examining the changes in the amount of water loss of the skin after using the test product, the test site was significantly decreased after 1 day and 2 weeks ($p < 0.025$)
- Significantly reduced after 1 day and 2 weeks compared to previous use of areas not applied ($p < 0.05$)
- There was a significant difference between the test site and the not applied area after 2 weeks ($p < 0.05$)

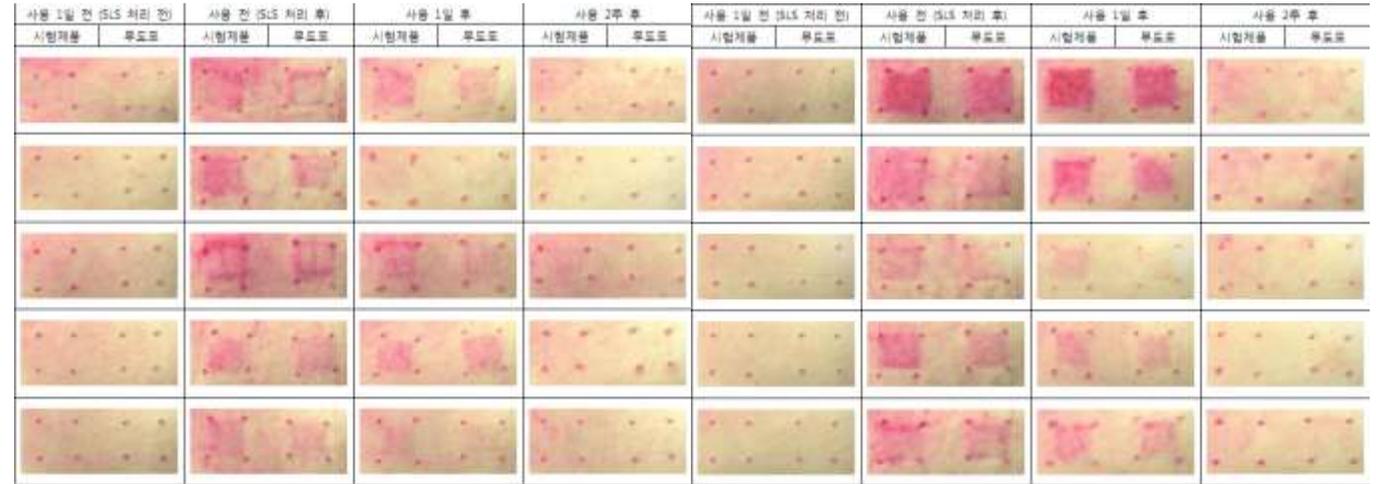
Results of human Clinical-trial test for RAPHAGEN O RECOVERY TONER

skin redness

* 피부 붉은기 측정결과 (g/m²h)



✓ Helps to improve skin redness



Results of skin soothing by external stimuli (chemical stimuli)

- After the use of the test product, changes in the redness of the skin were observed. As a result, the test area is significantly reduced after 2 weeks compared to before use. ($p < 0.05$)
- Significantly reduced after 1 day and 2 weeks compared to previous use of areas not applied ($p < 0.05$)
- There was a significant difference between the test site and the not applied area after 2 weeks ($p < 0.05$)

Results of human Clinical-trial test for RAPHAGEN O RECOVERY TONER

연구 결과 보고서
PNK-18O24-K1R2

라파젠 O 토너의 피부 주름, 피부 색소침착(기미/주근깨/잡티),
피부 보습 홀딩효과(피부 보습, 경표피 수분손실량), 피부 탄력,
피부 치밀도 개선에 대한 인체적용시험

의뢰기관: (주)에그리나

2018년 12월 11일

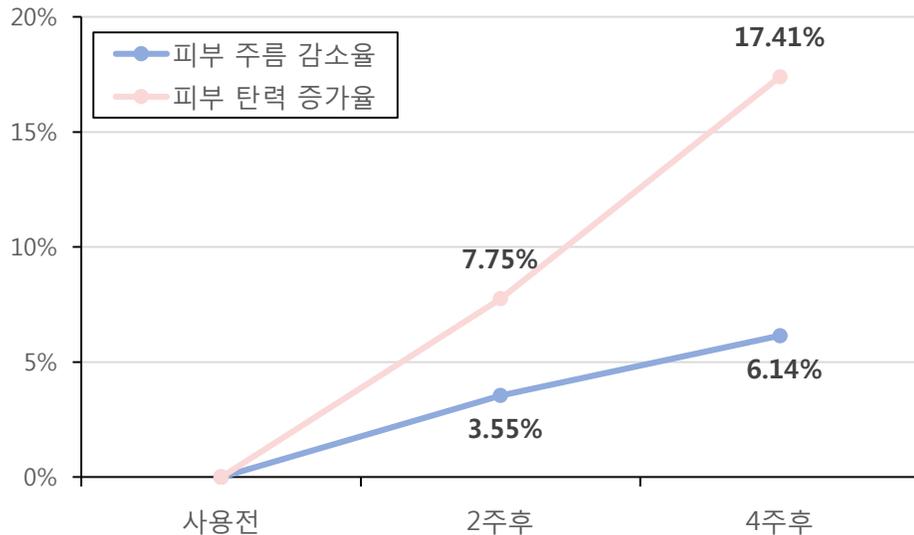


Subject	Human Clinical-Trial test for improvement of skin wrinkles, skin pigmentation (freckles / blemish), skin moisturizing holding effect (skin moisturizing, light skin moisture loss), skin elasticity and skin tightness of RAPHAGEN O toner
Test institute	P&K Skin Research Center
Test Period	2018. 10. 24. ~ 2018. 11. 21.
Purpose	To evaluate the effect of toner of RAPHAGEN O toner on the skin wrinkles, skin pigmentation (freckles / blemish), skin moisturizing holding effect (skin moisturizing, light skin moisture loss), skin elasticity and skin tightness.
Selection of test subjects	Those who comply with the following selection criteria 1. Women aged 30 to 55 2. A person who has been delegated by the Tester or the Tester shall be fully informed of the information to the test subjects and voluntarily 3. Healthy person who does not have grade or chronic physical disease including skin disease 4. Those who can observe the trace during the test period
Test result	This study was to evaluate the effects of skin irritation, skin pigmentation (freckles / blemish), skin moisturizing, light skin moisture loss, skin elasticity, And skin density were measured. Therefore, the test product "RAPHAGEN O Toner" is used for 4 weeks to improve the skin wrinkles, skin pigmentation (freckles / blemish), skin moisturizing holding effect (skin moisturizing, light skin moisture loss), skin elasticity, It is judged to be a helpful product.

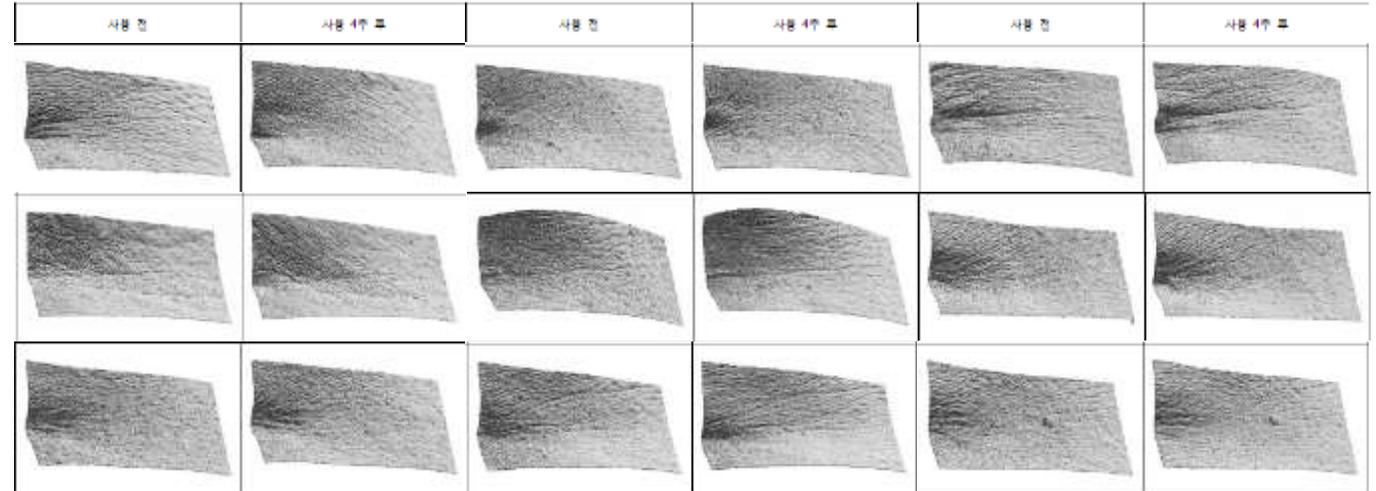
Results of human Clinical-trial test for RAPHAGEN O RECOVERY TONER

wrinkle improvement

* 피부 개선율 (%)



✓ Helps to improve of wrinkles (2 types)



Results of Skin Wrinkles

- After using the test product, it was significantly reduced after 4 weeks of use compared to before use ($p < 0.05$)

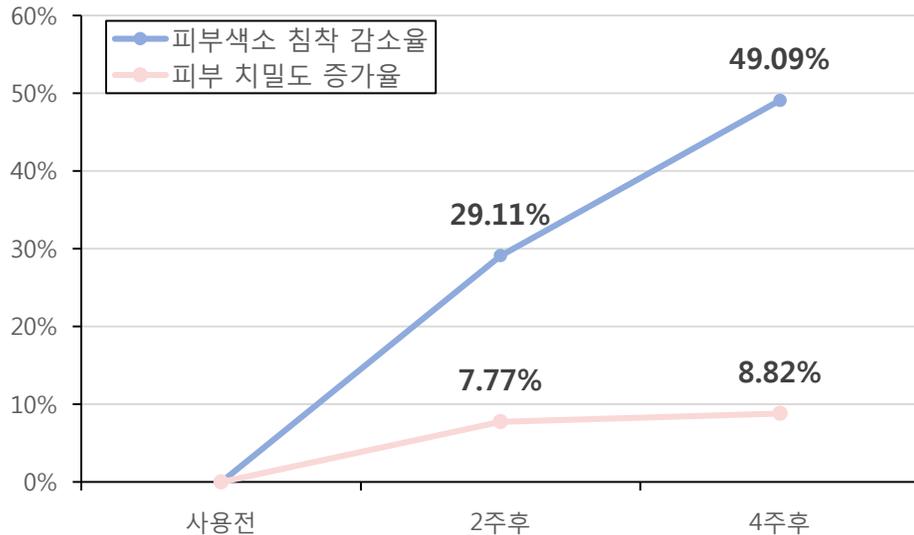
Results of Skin elasticity

- After using the test product, it was significantly reduced after 4 weeks of use compared to before use ($p < 0.05$)

Results of human Clinical-trial test for RAPHAGEN O RECOVERY TONER

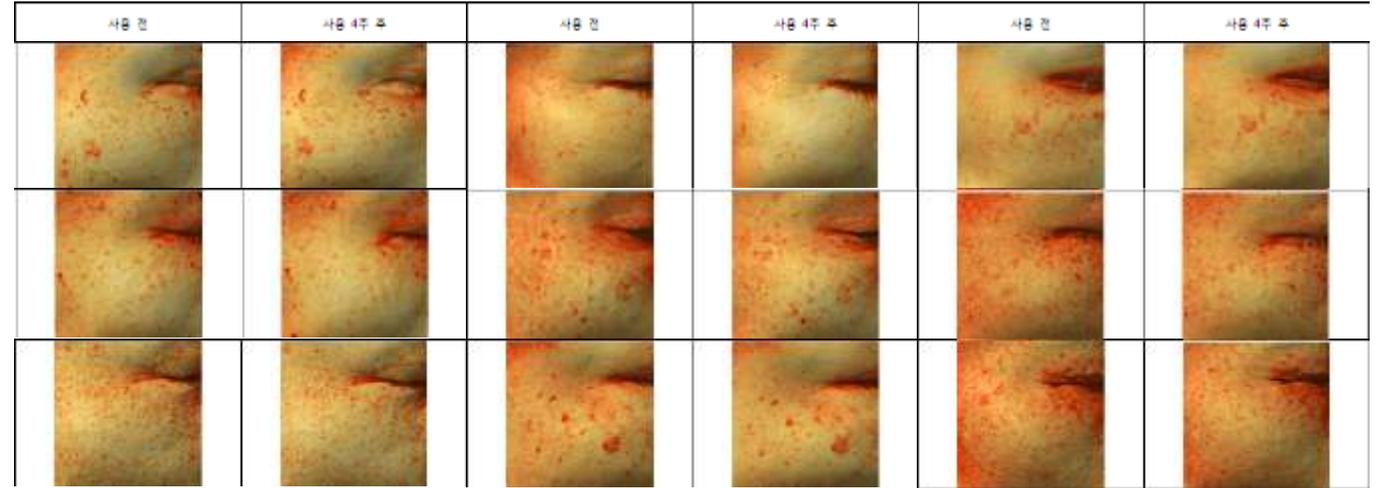
Improvement of skin pigmentation

* 피부 개선율 (%)



✓ Helps to improve of wrinkles (2 types)

피부 색소침착(기미/주근깨/잡티) 사진자료



Results of Skin pigmentation (freckles / blemish)

- After using the test product, it was significantly reduced after 4 weeks of use compared to before use ($p < 0.05$)

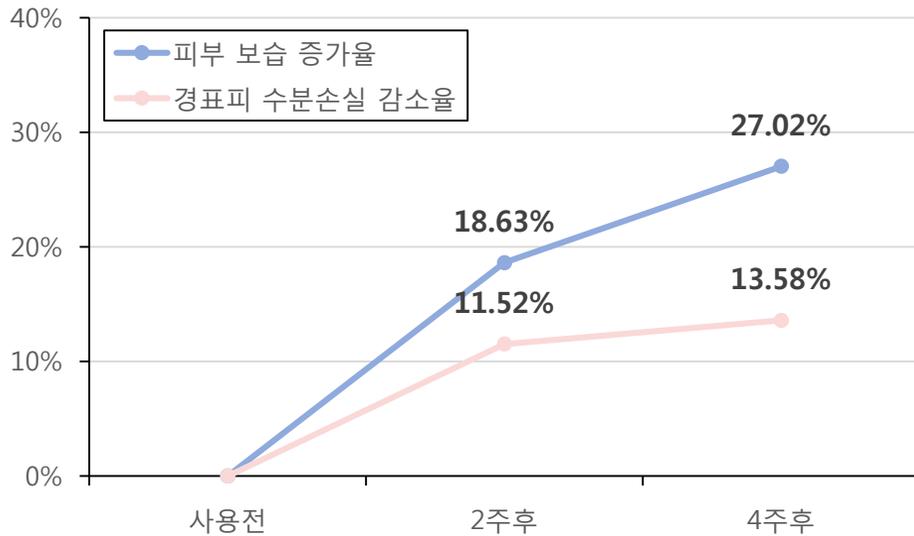
Results of skin density

- After using the test product, it was significantly reduced after 4 weeks of use compared to before use ($p < 0.05$)

Results of human Clinical-trial test for RAPHAGEN O RECOVERY TONER

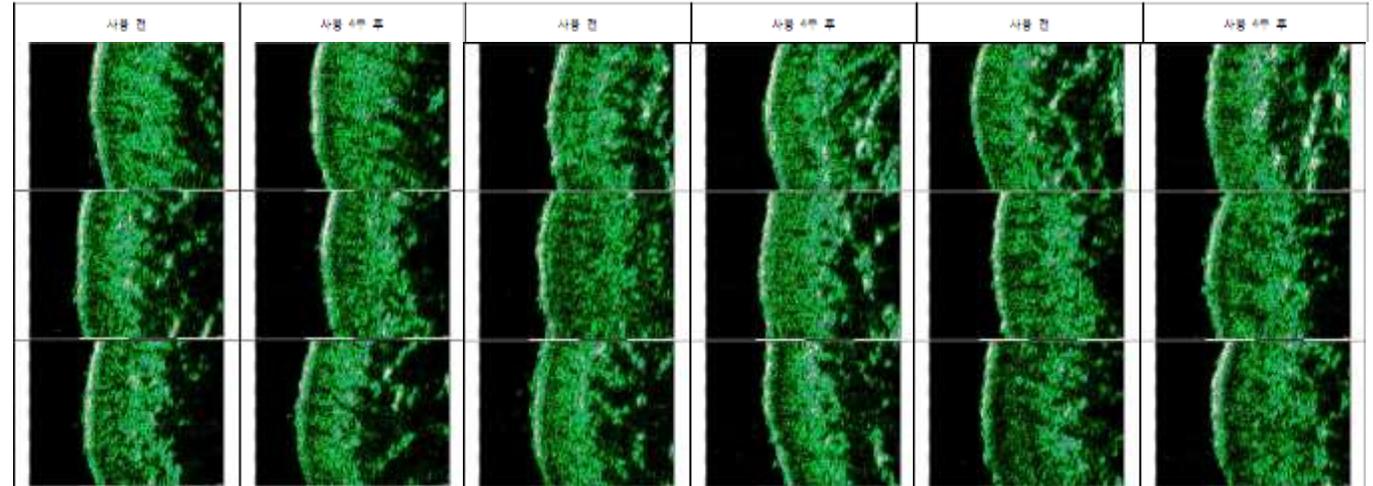
skin moisturizing holding effect

* 피부 개선율 (%)



✓ Helps to skin moisturizing holding (2 types)

피부 치밀도 사진자료



Results of Skin Moisturizing

- After using the test product, it was significantly reduced after 4 weeks of use compared to before use ($p < 0.05$)

Results of Light Skin Moisture Loss

- After using the test product, it was significantly reduced after 4 weeks of use compared to before use ($p < 0.05$)

RAPHAGEN O WATER CREAM



The Characteristics of RAPHAGEN O WATER CREAM

- ✓ Using **Schisandra Seed Fermentation Extract** on the skin tired from the outside gives skin vitality.
- ✓ It contains ingredients that are good for skin moisturizing, such as Schisandra seed fermentation extract using lactobacillus, Macadamia Ternifolia Seed Oil, Limnanthes Alba (Meadowfoam) Seed Oil and Panthenol.
- ✓ For skin moisturizing, it is better to apply to other parts of the body as well as face.
- ✓ It is available for all ages. **And even if you apply it many times, it's less stimulating to your skin.**
- ✓ It is a certified product through human clinical trials (4 types) related to **moisturizing**.
- ✓ It is a certified product through human clinical trials (5 types) related to **whitening**.
- ✓ It's a **whitening cosmetic product** with **Niacinamide**.

Results of human Clinical-trial test for RAPHAGEN O WATER CREAM

연구결과보고서
PNK-18226-SB1R

라파젠 O 수분크림의
피부 장벽, 걸 보습, 속 보습, 경표피 수분손실량 개선에
대한 인체적용시험

의뢰기관 : ㈜에그리나

2018년 03월 27일

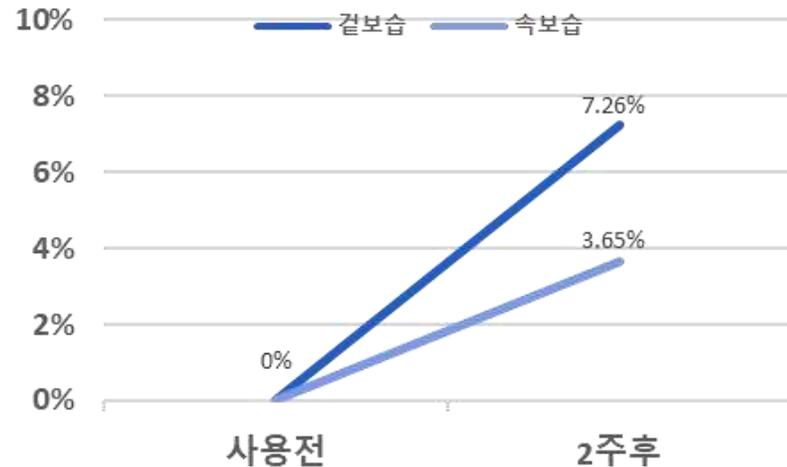


Subject	Human clinical trial for improvement of skin barrier, inside and outside moisturization, and water loss of transepidermal of RAPHAGEN O WATER CREAM
Test institute	P&K Skin Research Center
Test Period	2018. 02. 26. ~ 2018. 03. 14.
Purpose	To evaluate the improve effect of skin barrier, inside and outside moisturization, and moisture loss of transepidermal on RAPHAGEN O WATER CREAM.
Selection of test subjects	Those who comply with the following selection criteria 1. Women aged 20 to 55 2. A person who has been delegated by the Tester or the Tester shall be fully informed of the information to the test subjects and voluntarily 3. Healthy person who does not have grade or chronic physical disease including skin disease 4. Those who can observe the trace during the test period
Test result	This study was conducted to evaluate the effects of skin barrier improvement, inside and outside moisturizing, and water loss of transepidermal on skin moisturizing while using "RAPHAGEN O cream" for 2 weeks in adult women aged 20 to 55 years. After the test, the validity and preference investigation questionnaire were completed. Therefore, the product "RAPHAGEN O WATER Cream" is considered to be a product that helps to improve skin barrier and triple skin moisturizing (skin moisturizing, skin moisturizing, transepidermal moisture loss) by using 2 weeks

Results of human Clinical-trial test for RAPHAGEN O WATER CREAM

Moisture

* 피부 수분 개선율(%)



✓ 2종 보습 개선에 도움을 줌

Results of outside skin moisturizing

- As a result of examining changes in outside skin moisture using test product, it was significantly increased after 2 weeks of use compared to before use of test product ($p < 0.05$)

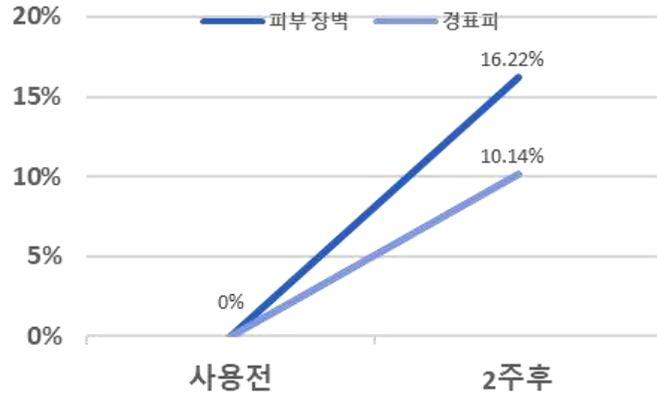
Results of inside skin moisturizing

- As a result of examining changes in inside skin moisture using test product, it was significantly increased after 2 weeks of use compared to before use of test product ($p < 0.05$)

Results of human Clinical-trial test for RAPHAGEN O WATER CREAM

Water Loss

* 수분 손실 감소율 (%)



✓ 2종 수분 손실 방지에 도움을 줌



Results of water loss of transepidermal

- As a result of examining changes in water loss of transepidermal using test product, it was significantly decreased after 2 weeks of use compared to before use of test product ($p < 0.05$)

Results of skin barrier (water loss of transepidermal)

- As a result of examining changes in skin barrier (water loss of transepidermal) using test product, it was significantly decreased after 2 weeks of use compared to before use of test product ($p < 0.025$)
- Non-applied area was significantly decreased after 2 weeks ($p < 0.025$)
- In addition, There was a significant difference ($p < 0.05$) between the test area and non-applied area after 2 weeks.

Results of human Clinical-trial test for RAPHAGEN O WATER CREAM

연구결과보고서
PNK-18219-W1R

라파젠 O 수분크림의
기미/잡티 수 분포도 개선, 기미면적 개선, 피부속 멜라닌
개선, 피부결 멜라닌 개선, 피부 밝기(톤) 개선에 대한
인체적용시험

의뢰기관 : ㈜에그리나

2018년 04월 04일

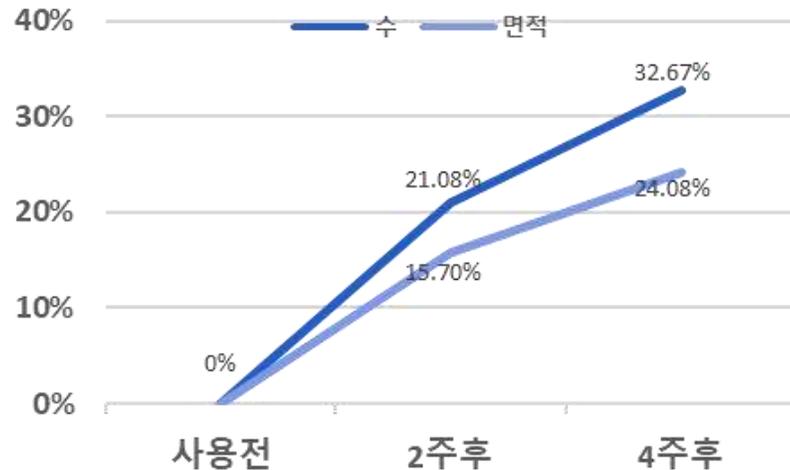


Subject	Human clinical trials on the improvement of the distribution of freckles/blemish in the RAPHAGEN O WATER cream, improvement of the area of freckles, improvement of melanin inside/outside the skin, and improvement of skin brightness (tone).
Test institute	P&K Skin Research Center
Test Period	2018. 02. 19. ~ 2018. 03. 19.
Purpose	To evaluate the effect of RAPHAGEN O WATER cream on the freckles/blemish distribution, the improvement of the freckles area, the improvement of melanin inside/outside the skin and the skin brightness (tone).
Selection of test subjects	Those who comply with the following selection criteria 1. Women aged 30 to 55 2. A person who has been delegated by the Tester or the Tester shall be fully informed of the information to the test subjects and voluntarily 3. Healthy person who does not have grade or chronic physical disease including skin disease 4. Those who can observe the trace during the test period
Test result	This study was performed. For women with spots and freckles of 30 to 55 years old, "RAPHAGEN O WATER Cream" was used for 4 weeks while improving the distribution of freckles/blemish, improvement of freckles area, improvement of melanin in inside/outside the skin and improvement of Skin brightness (tone) After the test, the validity and preference investigation questionnaire were completed. Therefore, The test product "RAPHAGEN O WATER Cream" is used as a product to help improve the skin whitening with the use of 4 weeks (improvement of the freckles/blemish distribution, improvement of the freckles area, improvement of melanin inside/outside the skin and skin brightness).

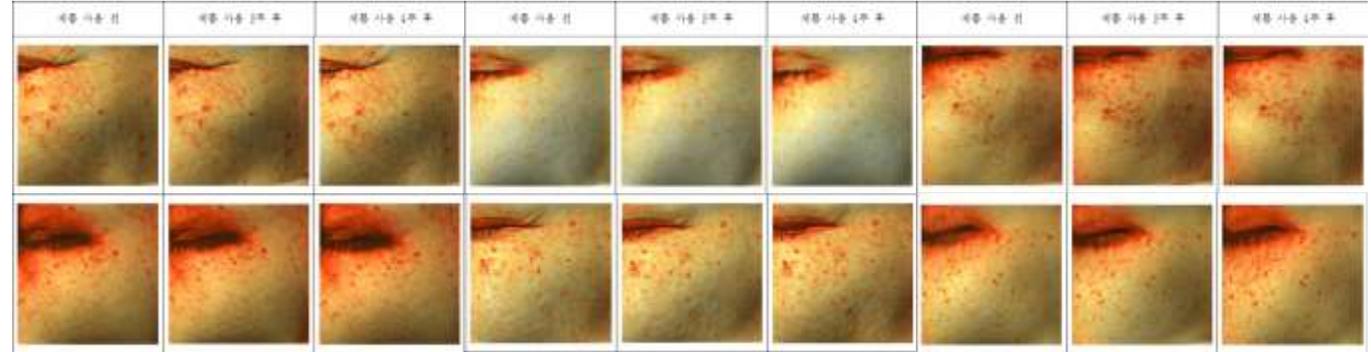
Results of human Clinical-trial test for RAPHAGEN O WATER CREAM

Freckles/Blemish

* 기미/잡티 개선율 (%)



✓ 2종 기미/잡티 개선에 도움을 줌



Results of the distribution of freckles/blemish

- As a result of examining changes in the distribution of freckles/blemish using test product, it was significantly decreased after 2 weeks and 4 weeks of use compared to before use of test product ($p < 0.025$)

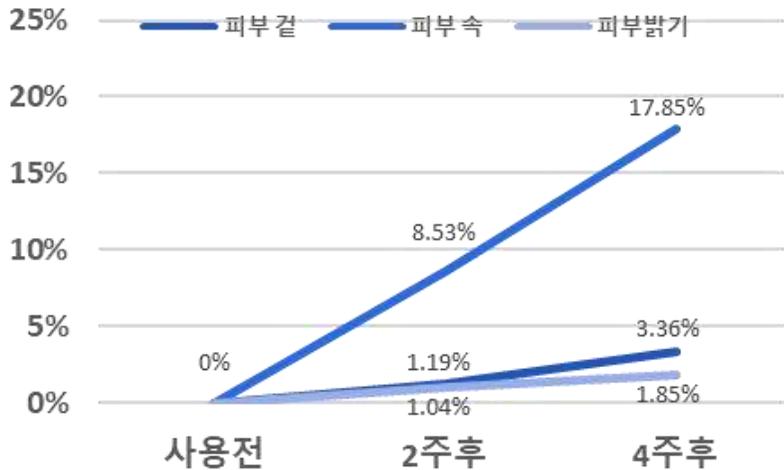
Results of freckles area

- As a result of examining changes in freckles area using test product, it was significantly decreased after 2 weeks and 4 weeks of use compared to before use of test product ($p < 0.025$)

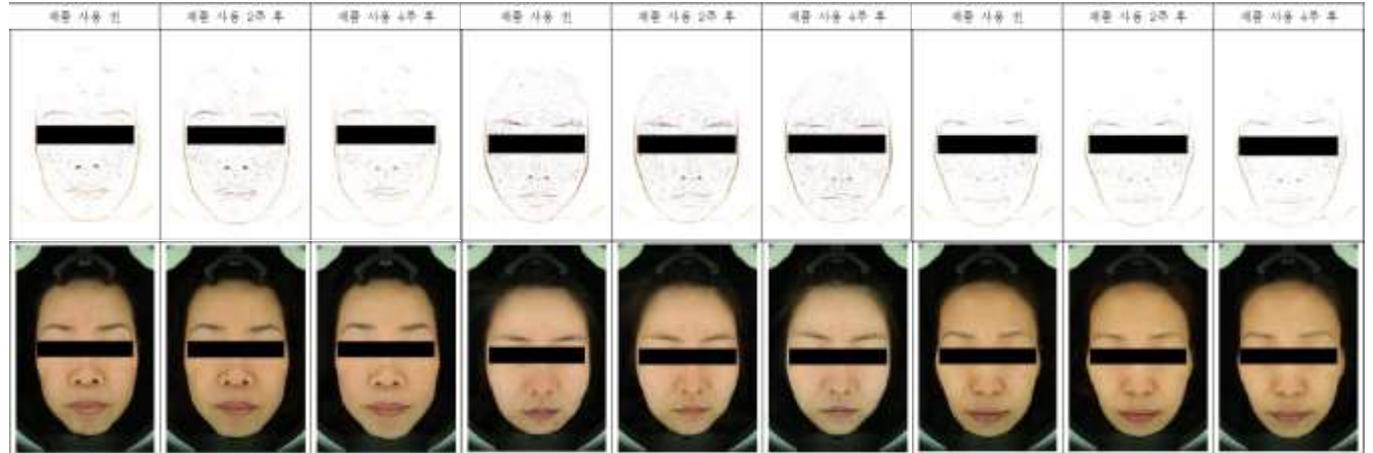
Results of human Clinical-trial test for RAPHAGEN O WATER CREAM

Whitening

* 미백 개선율(%)



✓ 3종 미백에 도움을 줌



Results of melanin the inside skin

- As a result of examining changes in melanin the inside skin using test product, it was significantly decreased after 4 weeks of use compared to before use of test product ($p < 0.05$)

Results of melanin the outside skin

- As a result of examining changes in melanin the outside skin using test product, it was significantly decreased after 4 weeks of use compared to before use of test product ($p < 0.05$)

Results of skin brightness (tone).

- As a result of examining changes in skin brightness (tone) using test product, it was significantly increased after 2 weeks and 4 weeks of use compared to before use of test product ($p < 0.05$)

Results of human Clinical-trial test for RAPHAGEN O WATER CREAM

시험결과보고서
PNK-18207-11R

라파젠 O 수분크림의 인체 피부 일차 자극시험

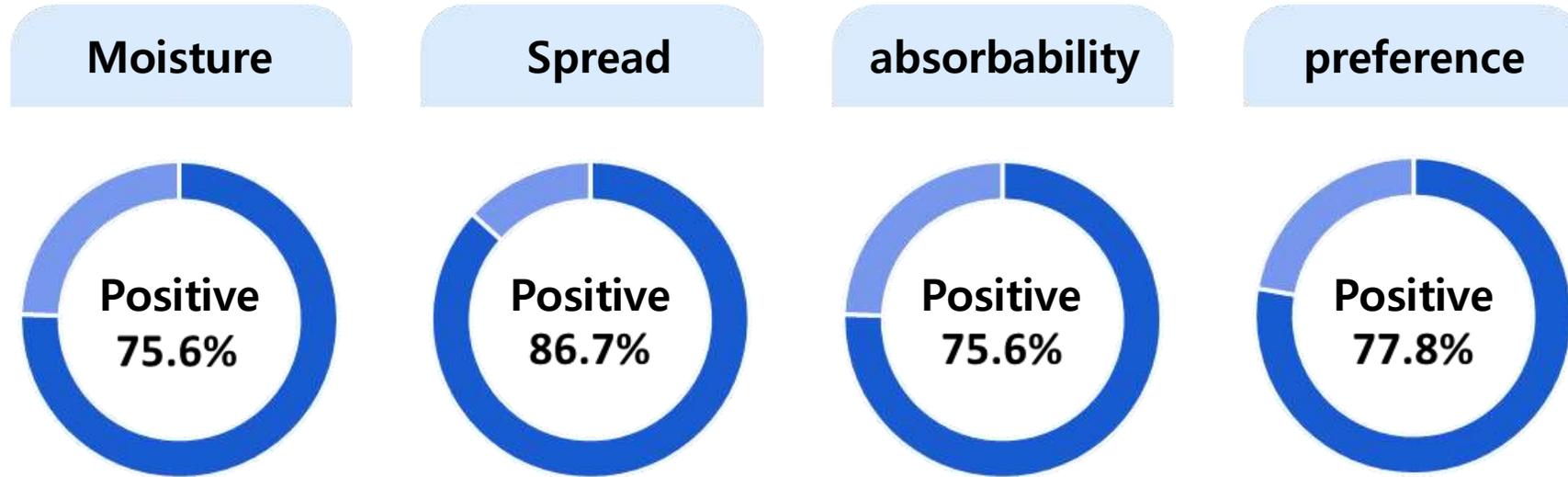
의뢰기관 : ㈜에그리나

2018년 02월 26일



Subject	Skin primary stimulation test of RAPHAGEN O WATER Cream				
Test institute	P&K Skin Research Center				
Test Period	2018. 02. 07. ~ 2018. 02. 09.				
Product	RAPHAGEN O WATER Cream				
Purpose	The purpose of this study was to investigate the primary stimulation of RAPHAGEN O WATER cream on skin.				
Selection of test subjects	1. Selection of test subjects : More than 32 adults who meet the selection criteria and do not qualify for exclusion conditions 2. Patch area : The area where there is no discoloration or skin damage on a flat area such as the vertebrae, except the vertebrae				
Test result	<p>1. Subjects</p> <ul style="list-style-type: none"> - recruitment : 34 - Dropouts : 2 - End of Test : 32 <p>2. Results</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Product Name</th> <th style="text-align: center;">Degree of skin stimulation</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">RAPHAGEN O WATER Cream</td> <td style="text-align: center;">Non-stimulation</td> </tr> </tbody> </table> <p>The test product, RAPHAGEN O WATER Cream, is considered non-stimulation. (this product is applied to the skin for 24 hours, and the visual evaluation of the skin response of the skin for 1 hour and 24 hours after removal of the patch)</p>	Product Name	Degree of skin stimulation	RAPHAGEN O WATER Cream	Non-stimulation
Product Name	Degree of skin stimulation				
RAPHAGEN O WATER Cream	Non-stimulation				

Results of human Clinical-trial test for RAPHAGEN O WATER CREAM



P&K Skin Research Center/2018. 02. 19 ~ 03. 19./44 people/Survey/Have a personal difference

Skin primary stimulation test is completed

P&K Skin Research Center/2018. 02. 7 ~ 03. 9./32 people/Have a personal difference

PRODUCT INFORMATION

	Classification	RAPHAGEN O RECOVERY Toner	RAPHAGEN O WATER Cream
	1. Weight	70 ml / 2.37 fl. oz.	50 ml / 1.69 fl. oz.
	2. Key Points	A whitening / wrinkle double functional cosmetic added with niacinamide and adenosine.	A whitening cosmetic product with Niacinamide
	3. Expiration Date	12 months	12 months
	4. Manufacturer	YEGREENA Inc.	YEGREENA Inc.
	5. Dealer	RAPHAGEN CO., LTD.	RAPHAGEN CO., LTD.
	6. Country of manufacture	KOREA	KOREA
	7. Ingredients	Schisandra Chinensis Fruit Extract, Dipropylene Glycol, Glycerin, Sodium Hyaluronate, Niacinamide, Propanediol, Pentylene Glycol, Cocos Nucifera (Coconut) Fruit Extract, Pinus Sylvestris Leaf Extract, Polyglyceryl-10 Laurate, DiethylhexylSodium Sulfosuccinate, Lactobacills/Schisandra Seed Extract Ferment Filtrate Extract, Allyl t-butylimidazo Benzimidazole, Centella Asiatica Extract, Paeonia Suffruticosa Root Extract, Dipotassium Glycyrrhizate, Glyceryl Polyacrylate, Trehalose, Hydrogenated Lecithin, Diphenyl Dimethicone, Triethylhexanoin, Polyglyceryl-10 Oleate, Adebosome, Carbomer, Tromethamine, Tocopheryl Acetate, Disodium EDTA, Lavandula Angustifolia (Lavender) Oil	Water, Glycerin, Dipropylene Glycol, Ceteryl Alcohol, Betaine, Macadamia Ternifolia Seed Oil, Dimethicone, Cetearyl Glucoside, Glyceryl Stearate, Niacinamide, PEG-100 Stearate, Stearic Acid, Beeswax, Lactobacills/Schisandra Seed Extract Ferment Filtrate Extract, Tri-C14-15 Alkyl Citrate, Butyrospermum Parkii (Shea) Butter, Hydrogenated Polydecene, Limnanthes Alba (Meadowfoam) Seed Oil, Dimethicone/VinylDimethicone Crosspolymer. Hydrogenated Vegetable Oil, Lecithin, Sodium Polyacrylate, Trydeceth-6, Trehalose, Caprylic/Capricglycerides, Caprylylglycol, Panthenol, Fragrance, Disodium EDTA, Potassium Hydroxide
	8. Feature	Skin soothing effect (2 types) Wrinkle improvement effect (6 types)	Completed Skin Clinical Test (10 types) - Confirmed skin moisturizing effect (4 types) - Confirmed skin whitening effect (5 types) - Skin primary stimulation test is completed
	9. CS Center	+82-2-704-1005	



Thank You

*Our customers are our **only concern**, and Raphagen's **First and Formost Value**.*