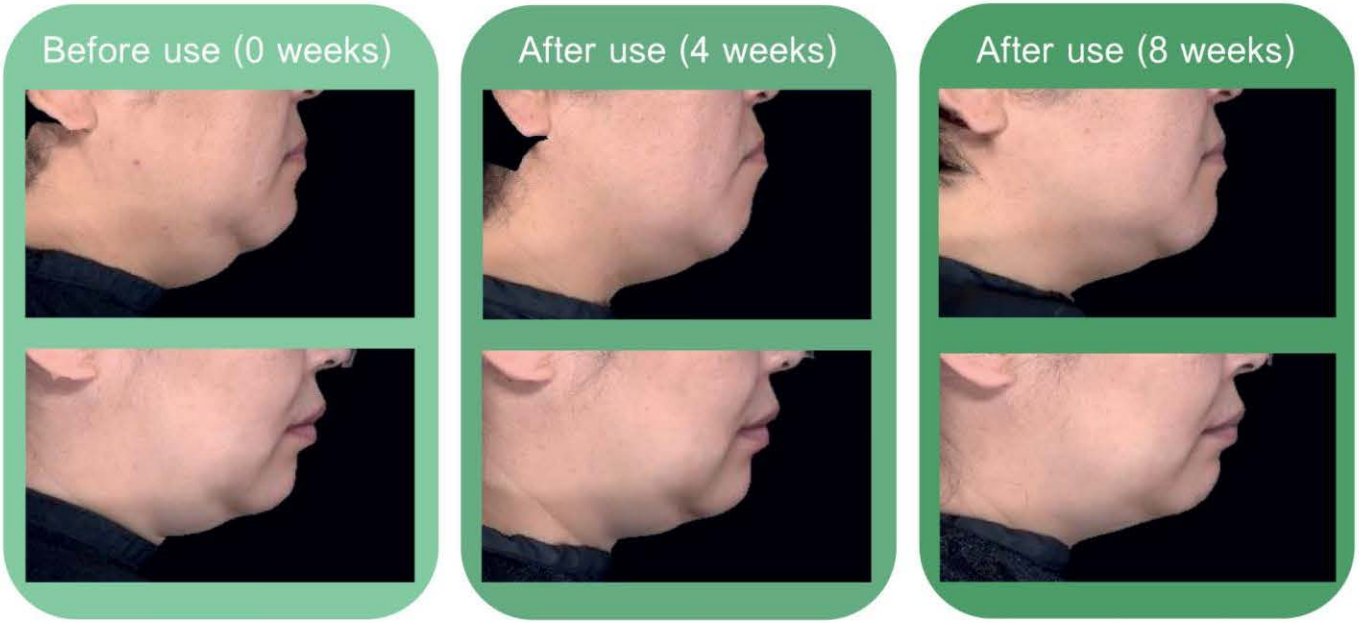
LIPO SHRINKER

Double Chin Lifting Effect (Capacity)

In the test product group, there was a statistically significant decrease compared to before product use. The volume decreased from 22.672cc at baseline (0 weeks) to 19.327cc after 4 weeks of product use
Further decreased to 17.767cc after 8 weeks of product use ($p<0.05$)



Improvement Rate

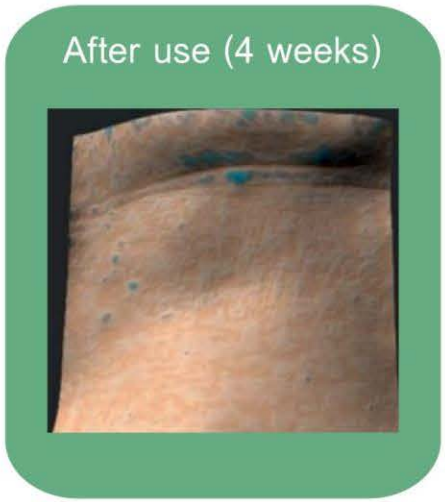
Clinical evaluation results of
SkinMed Clinical Trial Center (n=21)

STUNMEDICAL

LIPO SHRINKER

Double Chin Lifting Effect (Volume)

In the group of subjects using the test product, a statistically significant reduction was observed ($p<0.05$) in comparison to the pre-use measurements. The area before product usage (0 weeks) was measured at 3.8396mm^2, whereas after 4 weeks of product usage, it reduced to 3.3357mm.^{2}
Furthermore, after 8 weeks of product usage, the area decreased to 2.3936mm.^{2}



Improvement Rate

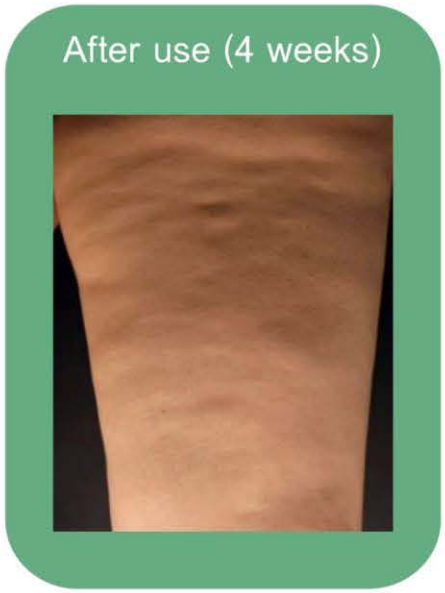
Clinical evaluation results of
SkinMed Clinical Trial Center (n=21)

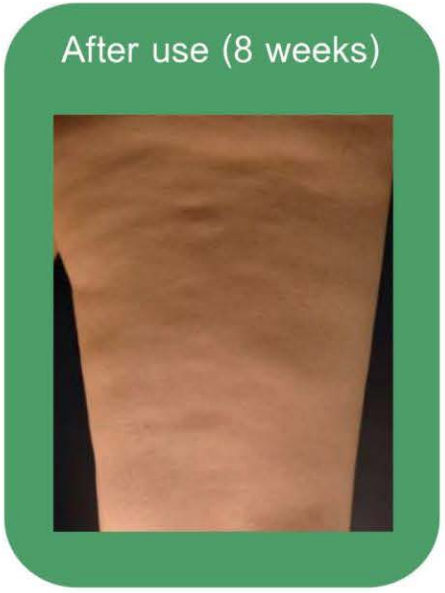
STUNMEDICAL

LIPO SHRINKER

Cellulite visual evaluation results

In the test product group, there was a statistically significant decrease when compared to before Product usage: pre-usage (0 weeks) 5.15 grade, 4 weeks after product usage 5.05 grade, And 8 weeks after product usage 4.85 grade ($p<0.05$).





Improvement Rate

Clinical evaluation results of
SkinMed Clinical Trial Center (n=21)

STUNMEDICAL

LIPO SHRINKER

Skin roughness evaluation results

In the group using the test product, there was a statistically significant decrease compared to before product use, With measurements of 470.239mm^2 before use, 455.252mm^2 after 4 weeks of use, And 437.880mm^2 after 8 weeks of use ($p<0.05$)

Improvement Rate

Clinical evaluation results of
SkinMed Clinical Trial Center (n=21)

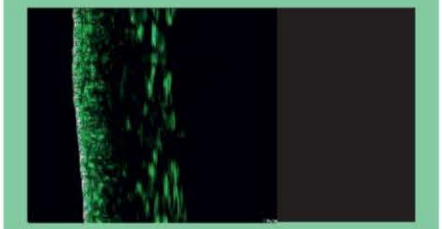
STUNMEDICAL

LIPO SHRINKER

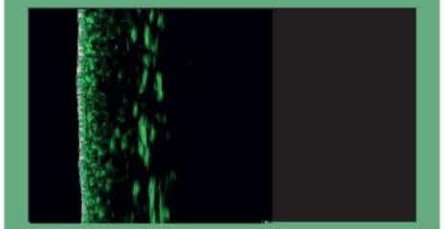
The evaluation of the length of thedermal and subcutaneous adipose tissue interface

In the test product group, there was a statistically significant decrease compared to before product use,
With measurements of 24.499mm before product use (0 weeks), 22.621mm after 4 weeks of product use,
And 20.328mm after 8 weeks of product use ($p<0.05$).

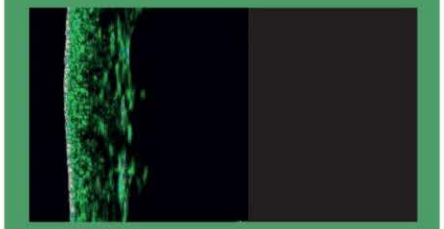
Before use (0 weeks)



After use (4 weeks)



After use (8 weeks)

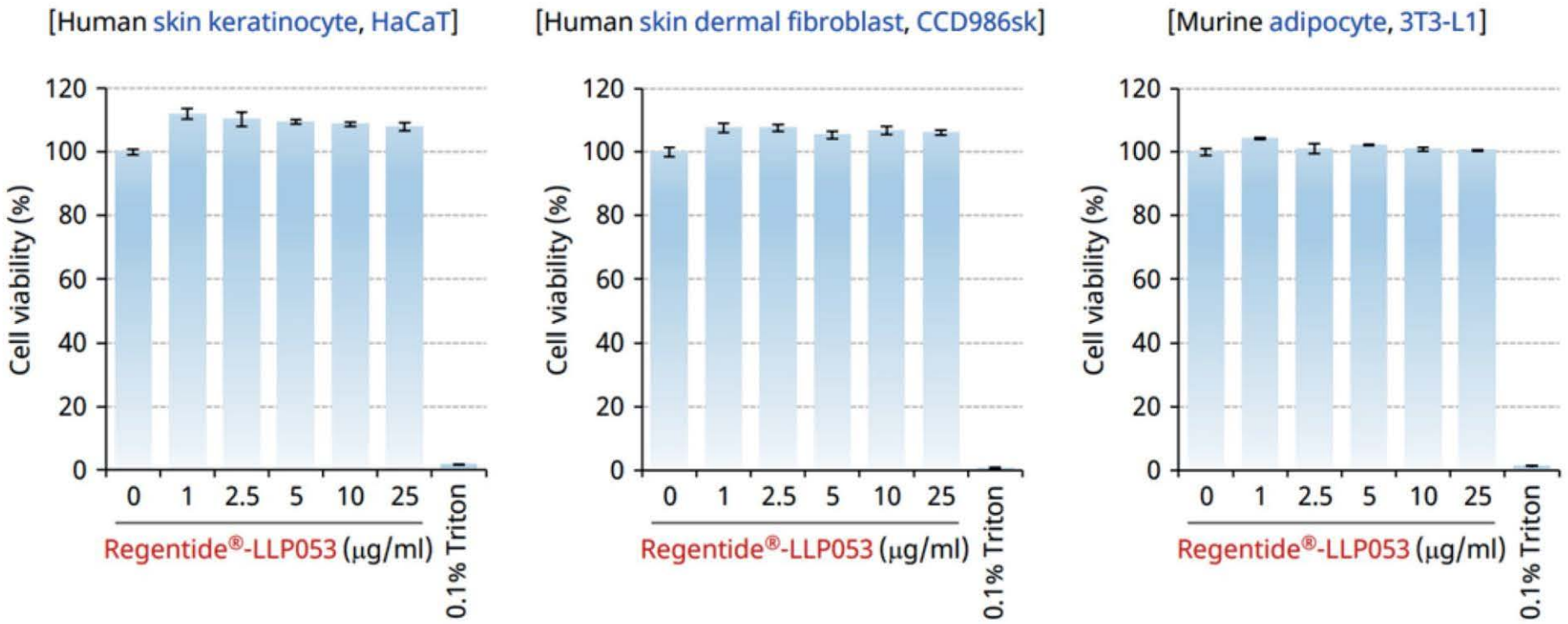


Improvement Rate

Clinical evaluation results of
SkinMed Clinical Trial Center (n=21)

STUNMEDICAL

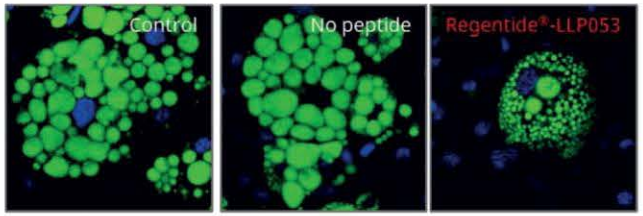
Figure 1. Cell Toxicity



As shown in [Figure 1], it was observed that the group treated with Regentide®-LLP053 showed no cell toxicity compared to the positive control group treated with 0.1% Triton-X.

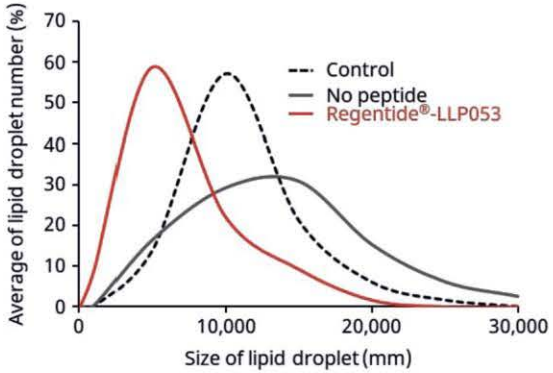
Figure 2. Lipolytic Efficacy

A.



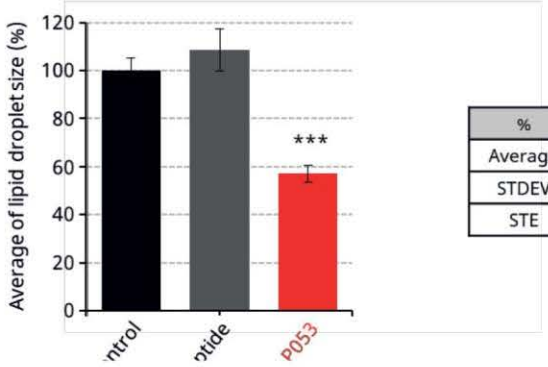
Blue : Nucleus (DAPI)
Green : Lipid droplet (LipidSpot™ 488)

B.



nm		Day 2	
	Control	No peptide	Regentide®-LLP053
100	0	0	0
1,000	0	0	8.4
5,000	14	16.4	58.8
10,000	57.2	29.2	22
15,000	21.2	30.8	9.2
20,000	6	15.2	1.6
25,000	1.6	6	0
30,000	0	2.4	0
	100	100	100

C.

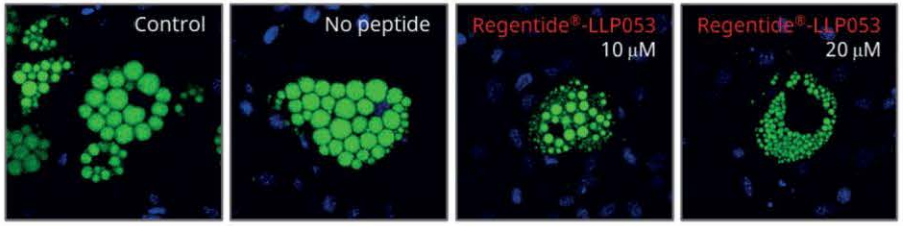


%	Control	No peptide	Regentide®-LLP053
Average	100.00	108.71	57.04
STDEV	16.21	27.56	10.68
STE	5.13	8.71	3.38

As shown in [Figure 2A], it was observed that the group treated with Regentide®-LLP053, 2 days after treatment with 10㎛M Regentide®-LLP053, exhibited reduced size and number of lipid droplets compared to the control group (Control) and the experimental group without peptide treatment (No peptide). The size and number of lipid droplets were analyzed using Zen 3.3 blue edition software. In [Figure 2B], the analysis of lipid droplets based on their size revealed that in the control group (Control), 57.2% of lipid droplets were of size 10,000nm. In the experimental group (No peptide), 29.2% were of size 10,000nm and 30.8% were of size 15,000nm. However, in the group treated with Regentide®-LLP053, 58.8% of lipid droplets were of size 5,000nm, indicating a reduction in lipid droplet size due to Regentide®-LLP053 treatment.

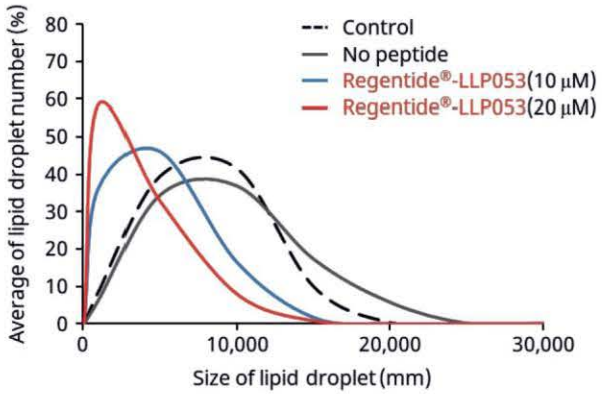
Figure 3. Lipolytic Efficacy (by Concentration)

A.



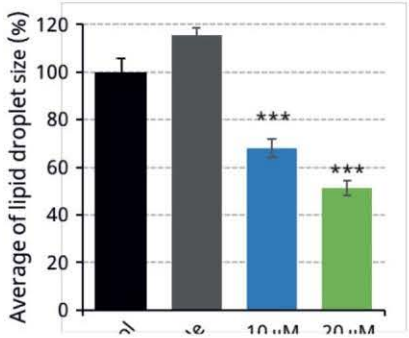
Blue : Nucleus (DAPI)
Green : Lipid droplet (LipidSpot™ 488)

B.



%		Day 2		
nm	Control	No peptide	Regentide®-LLP053	
			10 μM	20 μM
100	0	0	0	0
1,000	8	6	36	58
5,000	40	34	46	33
10,000	42	37	16	8
15,000	10	17	2	1
20,000	0	6	0	0
25,000	0	0	0	0
30,000	0	0	0	0
	100	100	100	100

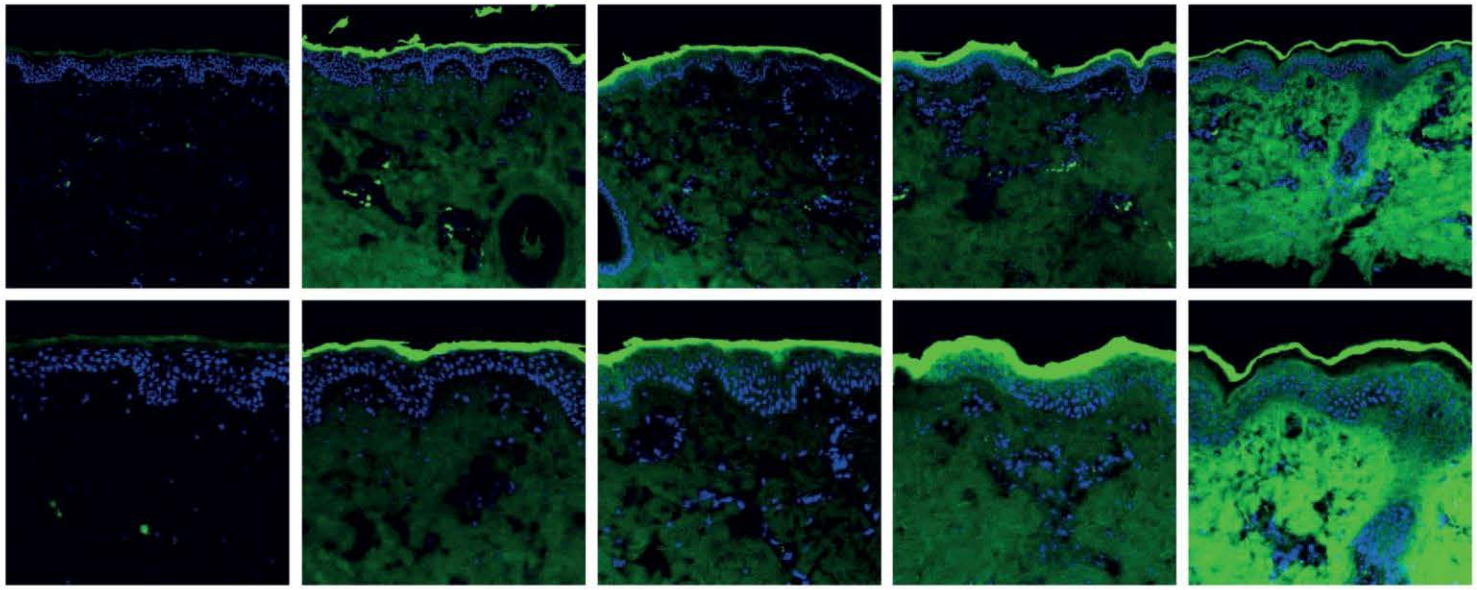
C.



Lipid Droplet size			Regentide®-LLP053	
%	Control	No peptide	10 μM	20 μM
Average	100.00	115.57	67.92	51.19
STDEV	18.61	9.19	12.25	9.92
STE	5.89	2.91	3.87	3.14

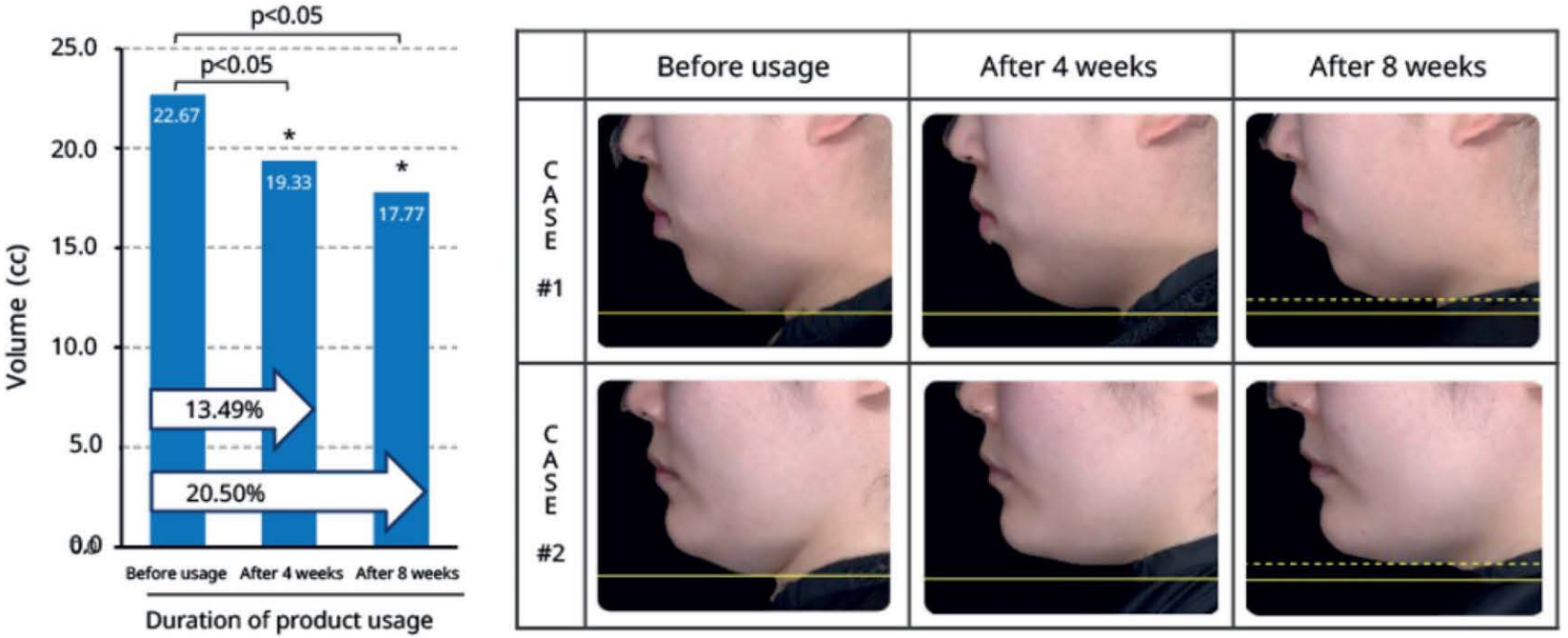
In [Figure A], it was observed that treatment with Regentide®-LLP053 at 10㎛M and 20㎛M concentrations for 2 days resulted in a reduction in the size and number of lipid droplets compared to the control group (Control) and the experimental group (No peptide) without Regentide®-LLP053 treatment. The results obtained using the Zen 3.3 blue edition program revealed that, as shown in [Figure B], the percentage of lipid droplets in the control group was 40% for 5,000nm size and 42% for 10,000nm size, while the experimental group (No peptide) had 34% for 5,000nm size and 37% for 10,000nm size. In contrast, the group treated with Regentide®-LLP053 at 10㎛M had 36% for 1,000nm size and 46% for 5,000nm size, and the group treated with 20㎛M had 58% for 1,000nm size. Thus, it was confirmed that the size of lipid droplets decreased further with increasing concentrations of Regentide®-LLP053. Regarding the size aspect, as shown in [Figure C], when the size of lipid droplets in the control group was considered as 100%, the experimental group (No peptide) showed an increase to 115.57%, while the group treated with Regentide®-LLP053 at 10㎛M had a decrease to 67.92%, and the group treated with 20㎛M had a decrease to 51.19%. This confirms that the concentration of Regentide®-LLP053 is inversely correlated with the size of lipid droplets, indicating an increase in the fat-reducing effect.

Figure 4. Skin Permeation Assessment



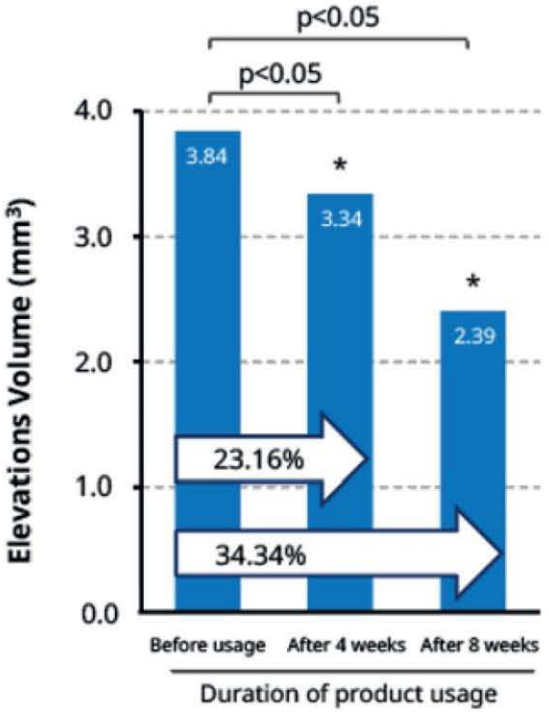
As shown in [Figure 4], it was observed that fluorescence-labeled Regentide®-LLP053 exhibited skin permeability starting from 2 hours after treatment, and the skin permeability increased over time

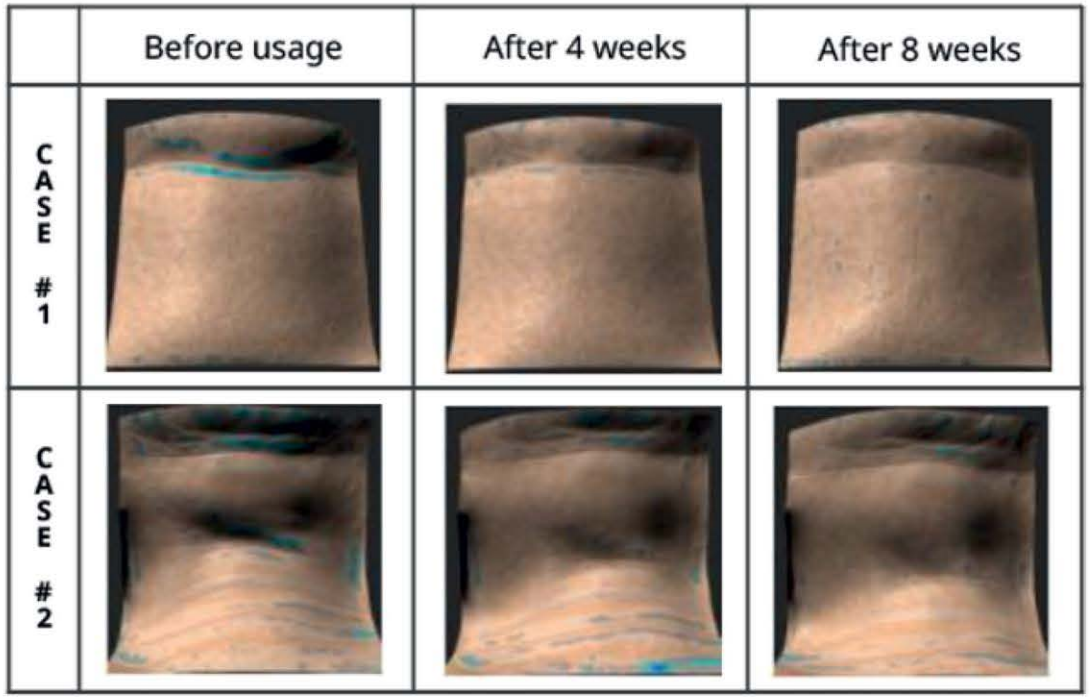
Figure 5. Analysis Results of Double Chin Lifting Improvement (Capacity)



The analysis results of double chin lifting effect in terms of volume, as shown in Figure 5, revealed a statistically significant reduction ($p<0.05$) from 22.672cc before product usage (0 weeks) to 19.327cc after 4 weeks of product usage, and further decreased to 17.767cc after 8 weeks of product usage. Additionally, compared to the baseline (0 weeks), there was an improvement rate of 13.49% after 4 weeks of product usage and 20.50% after 8 weeks of product usage

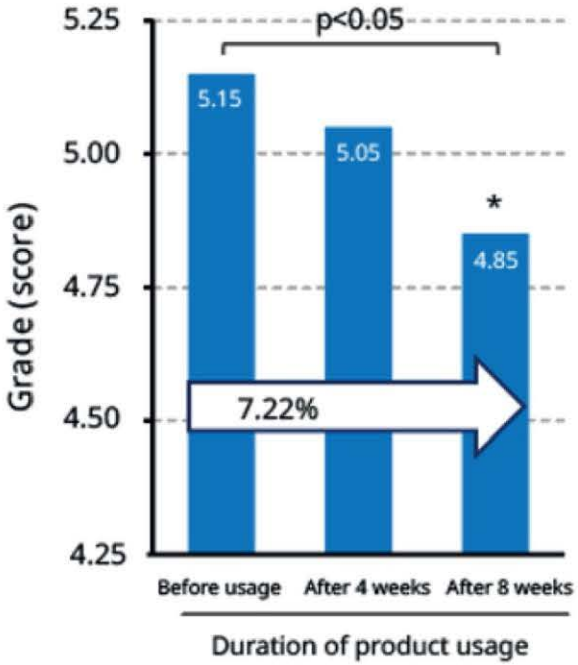
Figure 6. Analysis Results of Double Chin Lifting Improvement (Volume)

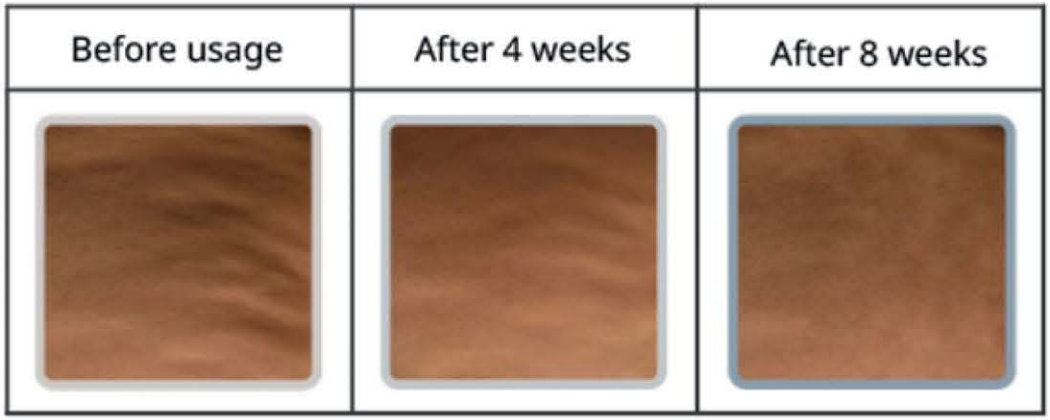




The analysis results of double chin lifting effect in terms of volume, as shown in Figure 5, revealed a statistically significant reduction (p〈0.05) from 22.672cc before product usage (0 weeks) to 19.327cc after 4 weeks of product usage, and further decreased to 17.767cc after 8 weeks of product usage. Additionally, compared to the baseline (0 weeks), there was an improvement rate of 13.49% after 4 weeks of product usage and 20.50% after 8 weeks of product usag.

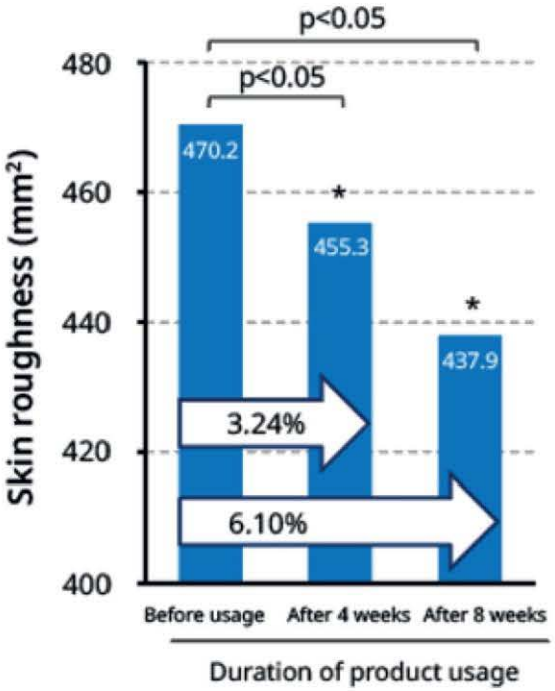
Figure 7. Visual assessment results of cellulite reduction

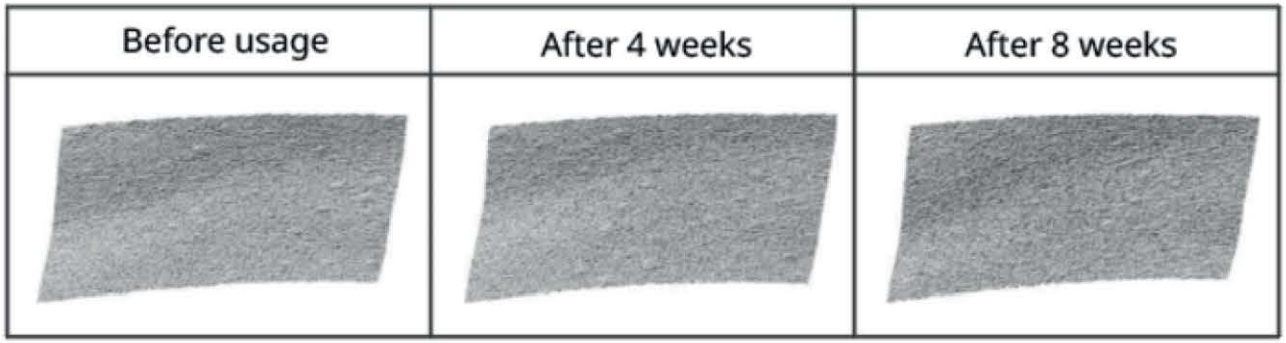




According to the visual assessment results, as shown in Figure 7, the grade of cellulite decreased significantly after 8 weeks of product usage, with pre-treatment (0 weeks) at 5.15, 4 weeks after treatment at 5.05, and 8 weeks after treatment at 4.85 ($p<0.05$). Additionally, there was an improvement rate of 7.22% compared to pre-treatment after 8 weeks of product usage.

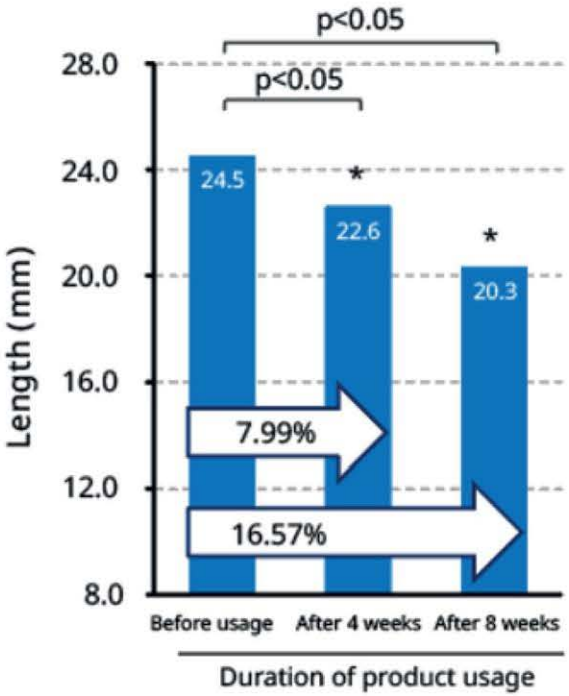
Figure 8. Skin roughness evaluation results

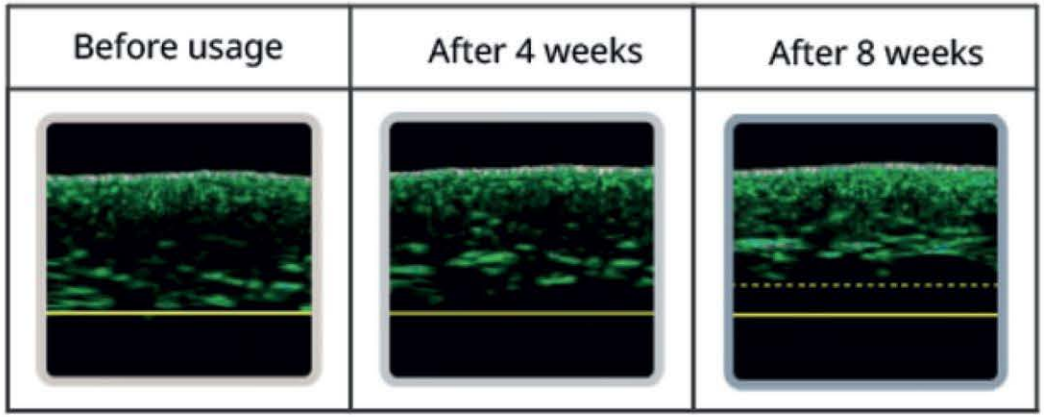




The results of skin roughness measurement, as shown in [Table 6, Figure 8], indicated a statistically significant decrease after product usage: 470.239mm^3 before product usage (0 weeks), 455.252mm^3 after 4 weeks of product usage, and 437.880mm^3 after 8 weeks of product usage ($p<0.05$). Furthermore, compared to the baseline measurement (0 weeks), there was an improvement rate of 3.24% after 4 weeks of product usage and 6.10% after 8 weeks of product usage.

Figure 9. Evaluation Results of the Length of the Dermal-Hypodermal Junction

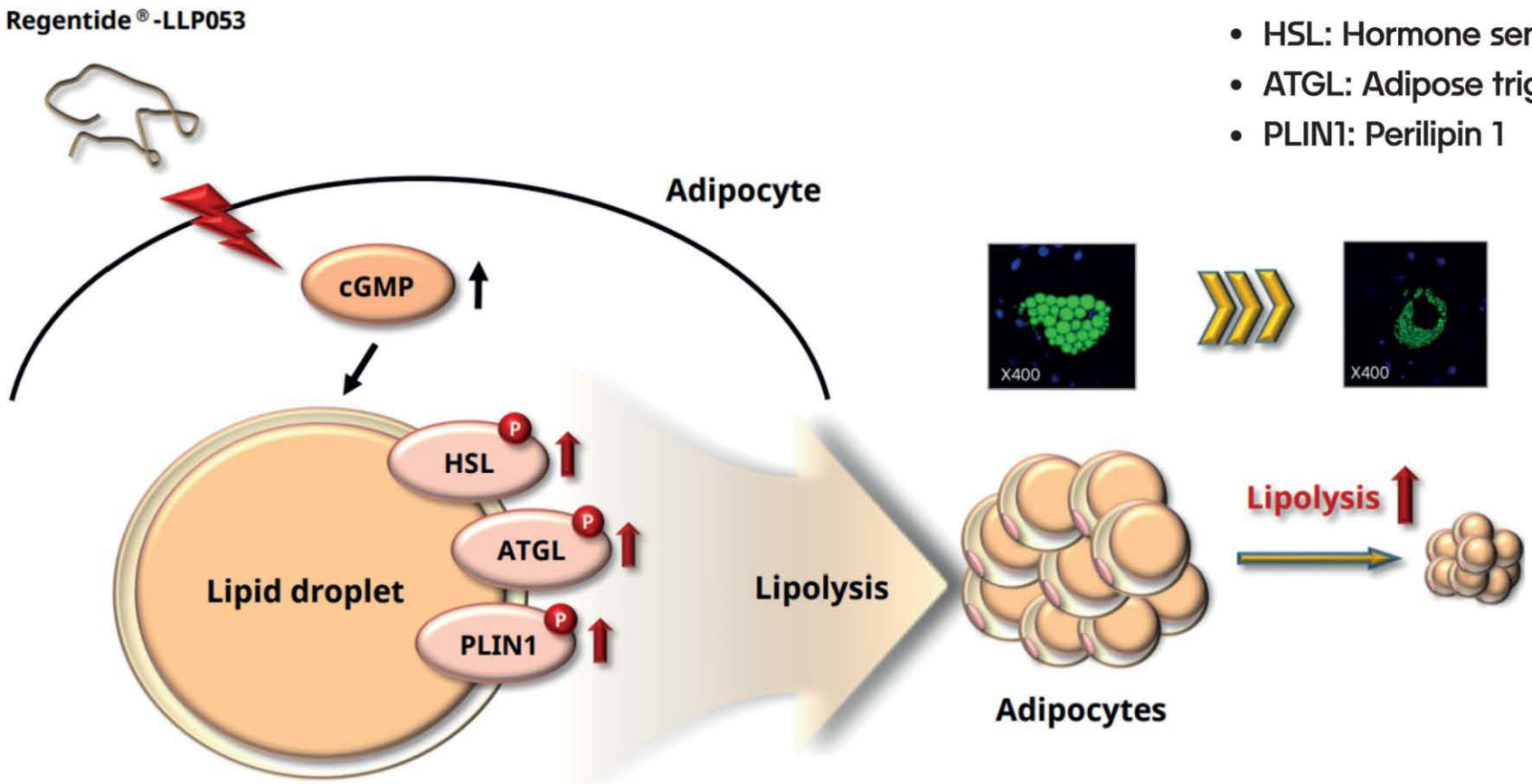




The measurement results of the length of the dermal-hypodermal junction are as follows: Prior to pro duct use (0 weeks), the length was 24.499 mm, after 4 weeks of product use it decreased to 22.621mm, and after 8 weeks of product use it further decreased to 20.328 mm. These reductions were statistically significant (p〈0.05). Additionally, compared to the baseline measurement (0 weeks), there was an impro vement rate of 7.99% after 4 weeks of product use and 16.57% after 8 weeks of product use.

LIPO SHRINKER

Molecular Mechanism of Fat-Dissolving Peptides



The fat-dissolving effect of Regentide®-LLP053 is achieved by activating fat-degrading enzymes (HSL, ATGL, PLIN1) that promote the breakdown of fat (lipid droplets, adipose droplets, lipid droplets), resulting in reduced size. It specifically targets differentiated adipocytes for fat degradation, distingu ishing it from other fat-dissolving agents. This targeted approach ensures both safety and high effectiveness without causing damage to other cells

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Product Specification

- Product Name : Lipo Shrinker
- Core Component : Regentide-053
- Volume : 5.5ml / vial
- Package : 1vial / box