Assessment of activity of an anti-aging repair mask on a panel of volunteers

STUDY 17E3931

Quote D17-617-1

Study performed on:

- 20 Caucasian women
- Reference :

  Masque Réparateur siliconefree

  Torstone

  Lab-01086.5

  15.09.17

- Over 21 days

Report transmitted by BIO-EC, on November 15th, 2017

SUMMARY

STUDY 17E3931	
QUOTE D17-617-1	
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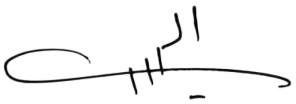
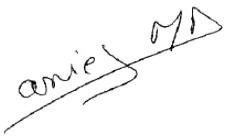
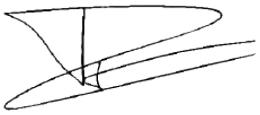
Director of the test facility	**M. Elian LATI** November 27th, 2017 
In vivo Manager	**Mrs Magalie DANIEL** November 27th, 2017 
Studies Engineer	**Mrs Elise LUPO** November 27th, 2017 
Delegate quality assurance	**M. Laurent PENO-MAZZARINO** November 27th, 2017 

Summary of the study

- **TITLE:**

Assessment of activity of an anti-aging repair mask on a panel of volunteers

- **AIM OF THE STUDY:**

The aim of the study is to assess on a panel of 20 volunteers aged over 45 years old, the efficacy of an anti-aging mask repair on restorative effect and wrinkles.
This efficacy will be measured through:

- PIE by Tewameter®
- Wrinkle assessment by Aeva He®
- Dermatological control on redness and dryness
- Self-assessment questionnaire

The various measurements were recorded during a first visit at T0, T24h and at T+21 days after applying the mask twice a week.

- **PROGRESS OF THE STUDY:**

20 women, over 45 years old, meeting the inclusion and non-inclusion criteria defined by the promoter were included in the study.

- **RESULTS AND CONCLUSION:**

The aim of the study was to assess on a panel of 20 volunteers, the efficacy of an anti-aging mask on restorative and anti-wrinkle effect.

Under the conditions of the study, the dermatologist concludes to a very good cutaneous tolerance of the product tested.

After 6 applications of the mask "Masque Réparateur silicone free", we can conclude that the protective role of the cutaneous barrier has been strengthened.
In addition, an anti-aging action was observed with a smoothing of the skin microrelief as well as a decrease in the volume and depth of the wrinkles.
After alteration of the skin barrier, a significant repair effect was observed as early as 2 hours.

1 AIM OF THE STUDY

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The various measurements were recorded during a first visit at T0, T24h and at T+21 days after applying the mask twice a week.

2 EXPERIMENTAL DESIGN

2.1 Study design

The efficacy of the product was assessed on 20 women meeting the inclusion and non-inclusion criteria previously defined by the promoter. The measurements were taken in a controlled-atmosphere room (22°C ± 2°C), after stabilization of the volunteers for at least 10 minutes.

The volunteers used the product from T0 to T+21 days, according to promoter's recommendations.

Each volunteer was asked to notify Laboratory BIO-EC of any discomfort or undesirable event that would occur. They did not stop or change the frequency of application without prior notice.

During each visit, assessments were done using the same method.

2.2 Volunteers selection and method

- **Recruitment** (Week 41): Women over 45 years old with a dry skin with wrinkles.

- **First visit at T0 :** (Week 42), the technician in charge of the study:

- Makes stabilize the volunteer on a control-atmosphere room during 10 minutes,
- Checks out of the criteria of inclusion and non-inclusion,
- Checks out of the well understanding of the study,
- Signing of the agreement by the volunteers,
- The dermatologist makes a control of the skin on face.
- Makes initial biometrical measurements on face :
    - Tewameter®
    - AevaHe®

- Makes initial biometrical measurements on 2 areas (Control and product) of the forearm :
    - Performing stripping until a PIE>15
    - Tewameter®
    - Application of the mask at a rate of 2mg/cm². Leave for 10 minutes then remove the excess

▪ **At T2h, T4h, T6h and T24h :** (Week 42), the technician in charge of the study:

- Makes biometrical measurements on 2 areas (Control and product) of the forearm:
    - Tewameter®
- Gives the product and the questionnaire

From T0 to T+21 days: Volunteers apply the mask twice a week

▪ **Final visit at T+21 days** : (Week 45), the technician in charge of the study:

- Makes stabilize the volunteer on a control-atmosphere room during 10 minutes,
- Records adverse events,
- The dermatologist makes a control of the skin on face.
- Makes biometrical measurements on face :
    - Tewameter®
    - AevaHe®
- Retrieves study product and self-assessment questionnaire.
- Gives compensation to volunteer.

3 VOLUNTEERS

3.1 Inclusion and non-inclusion criteria

3.1.1 Inclusion criteria

- Caucasian women
- Over 45 years old,
- With dry skin and wrinkles,

The volunteers should commit themselves to:

- Use the product in conformity with the recommendation use
- Not using any other product on the studied zone

3.1.2 Non-inclusion criteria

- Pregnancy or breast feeding women,
- Persons having dermatological problems and/or know allergy to cosmetic products.
- Persons under medical treatment potentially capable of influencing the measured parameters

3.2 Volunteers included in the study

Overall, 20 Caucasians women meeting the inclusion and non-inclusion criteria defined in the protocol were included in the study. They were informed of the possible adverse effects from using the product and the technical conditions in which the assessment is performed. They willingly signed the consent form which was written in compliance with the Declaration of Helsinki and the December 20th, 1988 act of the Code de la Santé Publique.

3.2.1 Demographic characteristics

The demographic characteristics of the volunteer group (mean ± SD) are as follows:

Masque Réparateur siliconefree Torstone Lab-01086.5 15.09.17	N = 20 women
	Age : 52 ± 6 years old

3.2.2 Schedule compliance

No volunteer left the study prematurely. All volunteers returned for their appointments.

3.2.3 Concomitant treatments

The volunteers included in the study did not take any concurrent treatment likely to induce a modification of the cutaneous state.

4 PRODUCTS

4.1 Study product

The product was identified as:

Masque Réparateur siliconefree

Torstone

Lab-01086.5

15.09.17

The product was a cream packed by the promoter in vials.

4.2 Product use

Products were dispatched to volunteers at T0. Volunteers apply twice a week the product on hemi-face. The amount of product to be applied was left to the volunteers by their cosmetic habits. Any remarks were noted during the final appointment.

5 METHODS

5.1 Assessment of Trans Epidermal Water Loss by Tewameter®

The trans epidermal water loss (TEWL) assessment allow to evaluate the skin barrier function efficacy (assigned to the stratum corneum): the TEWL value is indeed inversely proportional around the barrier function.

Measures of the quantity of evaporated water (TEWL en g/hm2) are realized with a Tewamètre TM300^{TM} (*Courage & Khazaka electronics)* based on an open room diffusion technique. About twenty successive measures (one measure per second) were realized on a same area. The mean value will be saved for the assessment.

Measurements were done at T0 and T+21 days on face.
Measurements were done at T0, T2, T4h, T6h and T24h on forearm.

5.2 Assessment of skin relief and mechanical properties using AEVA_HE®

Based on a patented fringe projection unit combined with stereo imaging techniques, the AEVA-HE system offers best performances and flexibility to address different studies/measurements from wrinkles reduction to body reshaping. It is designed to quantify efficacy assessment for cosmetics, aesthetical and dermatology products and treatments.

It is dedicated to the following applications:

- Face (wrinkles, fine lines and pores, glabella, eyebags, nasogenian fold, lips, sagging)
- Part of Body reshaping, firmness (circumference of waist, legs, and breast)
- Automatic or interactive areas extraction
- Amplitude, roughness, volume, areas, circumference evaluation

Measurements were done at T0 and T+21 days.

5.3 Dermatological assessment

The dermatologist carries out an examination of the skin and wrinkles at T0 and T + 21 days.

- Wrinkle: Score given between 0 (absence) and 6 (very pronounced).

(Atlas du vieillissement cutanée Volume 1, Edition MED'COM)

5.4 Self-assessment questionnaire

Assessment of the sensation felt, efficacy and cosmetic quality of the product was performed through a self-assessment questionnaire completed on Eval&Go by volunteers after the firt application and after 21 days of product application.

Eval & GO is a SaaS application of feedback management. It permits to create On-line surveys, to publish them by link or by email, to collect the answers and analyze the results in real time. Access to the service is via an internet connection and a recent web browser (Internet Explorer 9+, Chrome, Safari, Firefox). It is on the basis of subscriptions without no installation on computers. Any use of Eval & GO software or services is subject to the terms and conditions.

6 RESULTS

6.1 Atmospheric conditions around Paris

Maximal and minimal temperatures around Paris during the study were:

- October (T0): 5.1 °C to 22.2°C
- November (T+21 days): 1.2°C to 17°C

6.2 Statistical method

The basic statistical parameters (mean and standard deviation) were calculated for each data point and recorded. Then, the assessment of the overall effect of the test product was made by calculating the variation of percentage compared to the initial measurement.
In order to determine whether the identified changes were significant or not, a Student's t-test was performed. The statistical analysis (through Prism v5.04 software by GraphPad) was made with Student's t-test on paired samples. The assumptions were the randomness and normal distribution of the samples.

6.3 Protocol deviation

All inclusion and evaluation criterion were respected.

6.4 Undesirable events

No adverse effects occurred during the study.

6.5 Results of anti-wrinkle effect

6.5.1 Results of the dermatologist assessment

Means of score of wrinkles for the global population are gathered in the table below. Individual values for each volunteer are presented in the appendixes.

	Values		Delta of variation T+21 days	% of variation T+21 days
	T0	T+21 days		
Control	2.90 ± 0,85	2.60 ± 0,88	-0.30 ± 0,47	**-10 %****
Mask	2.75 ± 0,85	2.45± 0,89	-0.30 ± 0,47	**-11 %****

Significant p<0.1 * Significant p<0.05 **Significant p<0.01 ***Significant p<0.001

After 6 application of the mask repair, no significant difference is observed between the 2 sides.

➔ **Under the conditions of the study, the dermatologist concludes to a very good cutaneous tolerance of the product tested.**

6.5.2 Results of the protection of the cutaneous barrier

Means of PIE parameter for the global population are gathered in the table below. Individual values for each volunteer are presented in the appendixes.

	Values		Delta of variation T+21 days	% of variation T+21 days	% of responders
	T0	T+21 days			
Control	10.78 ± 2.55	10.22 ± 3.41	-0.56 ± 2.06	-5 %	55%
Mask	10.81 ± 2.69	9.91 ± 3.17	-0.91 ± 2.00	**-8 %**$^{\#}$	61%

Significant p<0.1 * Significant p<0.05 **Significant p<0.01 ***Significant p<0.001

After 6 application of the mask repair, we can observe a significant decrease of the PIE parameter by **8%** (p=0.00721).

No significant difference is observed between the 2 sides.

➔ **Under the conditions of the study, we can conclude that the mask improves the role of the skin barrier.**

6.5.3 Results of the anti-aging effect by AEVA-HE

Means of anti-aging parameters for the global population are gathered in the table below. Individual values for each volunteer are presented in the appendixes.

6.5.3.1 Volume of wrinkles

	Values		Delta of variation T+21 days	% of variation T+21 days	% of responders
	T0	T+21 days			
Control	0.827 ± 0,660	0.791 ± 0,599	-0.037 ± 0,661	**-4.45 %**	55%
Mask	0.950 ± 0,871	0.788 ± 0,642	-0.162 ± 0,690	**-17.08 %**	50%

After 6 application of the mask repair, we can observe a non-significant improvement of the wrinkle volume of 17.08% (p=0.3059).

6.5.3.2 Depth of wrinkles

	Values		Delta of variation T+21 days	% of variation T+21 days	% of responders
	T0	T+21 days			
Control	-0.061 ± 0,023	-0.062 ± 0,025	-0.002 ± 0,015	**2.65 %**	40%
Mask	-0.077 ± 0,048	-0.072 ± 0,040	0.005 ± 0,019	**-6.73 %**	55%

After 6 application of the mask repair, we can observe a non-significant improvement of the wrinkle depth of 6.73% (p=0.2321).

A significant difference between the 2 zones is observed after 6 applications (p=0.0936)

6.5.3.3 Roughness

	Values		Delta of variation T+21 days	% of variation T+21 days	% of responders
	T0	T+21 days			
Control	0.072 ± 0,027	0.071 ± 0,027	0.000 ± 0,014	**-0.68 %**	40%
Mask	0.084 ± 0,038	0.077 ± 0,030	-0.008 ± 0,020	**-8.93 %**	55%

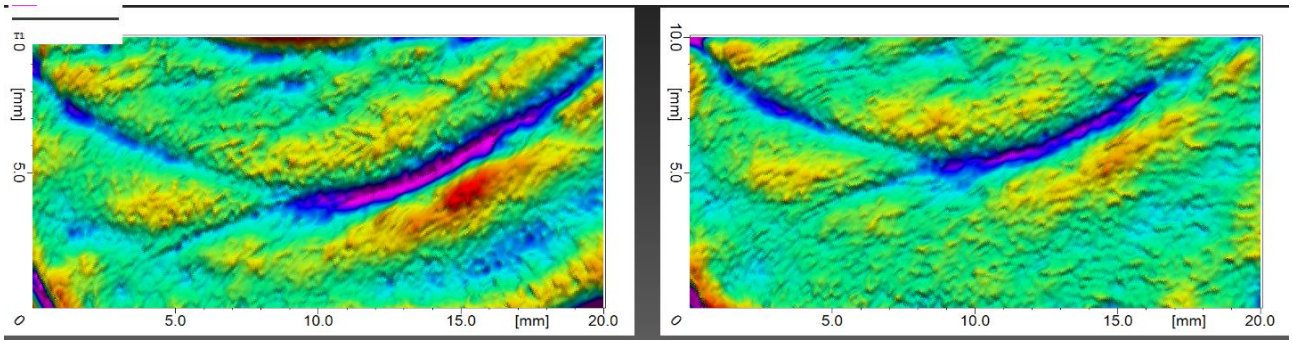
After 6 application of the mask repair, we can observe a non-significant improvement of roughness of 8.93% (p=0.1122).

A significant difference between the 2 zones is observed after 6 applications (p=0.0611)

➔ **Under the conditions of the study, we can conclude that this mask has a smoothing action on the microrelief of the skin and tends to decrease the depth of wrinkles.**

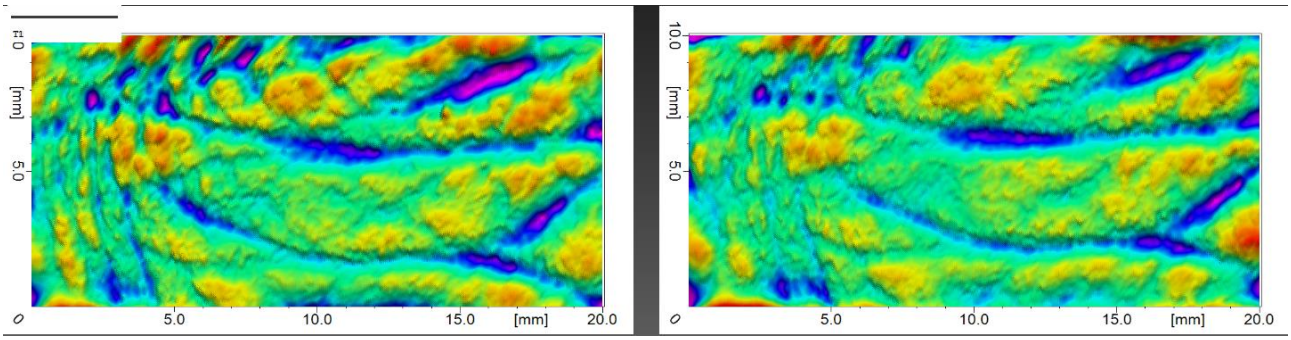
Illustration of wrinkles with Aeva

Volunteer 18:



T0 **T21**

Volunteer 15:



6.6 Results of repair effect

Means of PIE parameter for the global population are gathered in the table below. Individual values for each volunteer are presented in the appendixes.

Alteration of the skin barrier by stripping

	Values		Delta of variation	% of variation
	T0	After stripping		
Control	6.99 ± 2.45	13.38 ± 3.88	6.39 ± 3.83	**91 %*** **
Mask	7.82 ± 1.77	16.77 ± 5.75	8.95 ± 4.76	**115 %*** **

Significant p<0.1 * Significant p<0.05 **Significant p<0.01 ***Significant p<0.001

➔ After stripping, we can observe a significant increase of the PIE on each zone. This result validates the alteration of the cutaneous barrier.

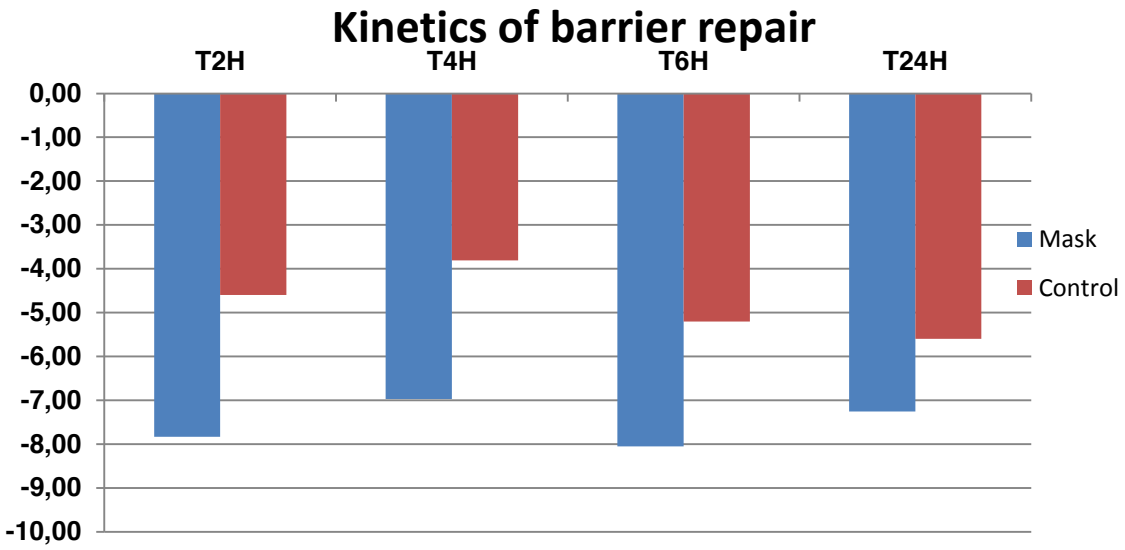
Kinetic 24 hours

	Values				
	After stripping	T+2 hours	T+4 hours	T+6 hours	T+24 hours
Control	13.38 ± 3.88	8.79 ± 2.69	9.58 ± 2.35	8.18 ± 1.98	7.79 ± 2.47
Mask	16.77 ± 5.75	8.94 ± 3.06	9.80 ± 3.18	8.72 ± 2.88	9.51 ± 3.92

	Delta			
	T+2 hours	T+4 hours	T+6 hours	T+24 hours
Control	-4.60 ± 3.48	-3.81 ± 3.50	-5.20 ± 3.37	-5.60 ± 3.35
Mask	-7.83 ± 5.10	-6.97 ± 4.37	-8.05 ± 4.26	-7.26 ± 3.57

	% of variation			
	T+2 hours	T+4 hours	T+6 hours	T+24 hours
Control	**-34%*** **	**-28%*** **	**-39%*** **	**-42%*** **
Mask	**-47%*** **	**-42%*** **	**-48%*** **	**-81%*** **

Significant p<0.1 * Significant p<0.05 **Significant p<0.01 ***Significant p<0.001



After 2 hours of application of the mask, we can observe a significant decrease of the PIE of 47% versus 34% in the control zone.
After 4 hours of application of the mask, we can observe a significant decrease of the PIE of 42% versus 28% in the control zone.
After 6 hours of application of the mask, we can observe a significant decrease of the PIE of 48% versus 39% in the control zone.
After 24 hours of application of the mask, we can observe a significant decrease of the PIE of 81% versus 42% in the control zone.

A significant difference between the 2 zones is observed after 2 hours (p=0.0012)
A significant difference between the 2 zones is observed after 4 hours (p=0.0035)
A significant difference between the 2 zones is observed after 6hours (p=0.0013)
A significant difference between the 2 zones is observed after 24 hours (p=0.0465)

➔ **We can conclude that the mask allows a faster repair of the skin barrier.**

6.7 Self-assessment questionnaire (Percentage result)

6.7.1 After the 1st application

❖ *Global evaluation of the product*

	Very pleasant	Pleasant	Nor pleasant, Neither unpleasant	Unpleasant	Very unpleasant
GLOBAL APPRECIATION	30	**60**	10	0	0
Aspect	35	**45**	20	0	0
Texture	**45**	40	10	5	0
Fragrance	30	**55**	15	0	0

After the 1st application :

- **90 %** of volunteers found that the product was very pleasant or pleasant.
- **80%** of volunteers thought that the aspect of the product was very pleasant or pleasant.
- **85 %** of volunteers thought that the texture of the product was very pleasant or pleasant.
- **85 %** of volunteers thought that the fragrance of the product was very pleasant or pleasant.

- **95 %** of volunteers included in the study found that the product was easy to apply.
- **90 %** of volunteers included in the study found that the product penetrates easily.

During the relaxed time :

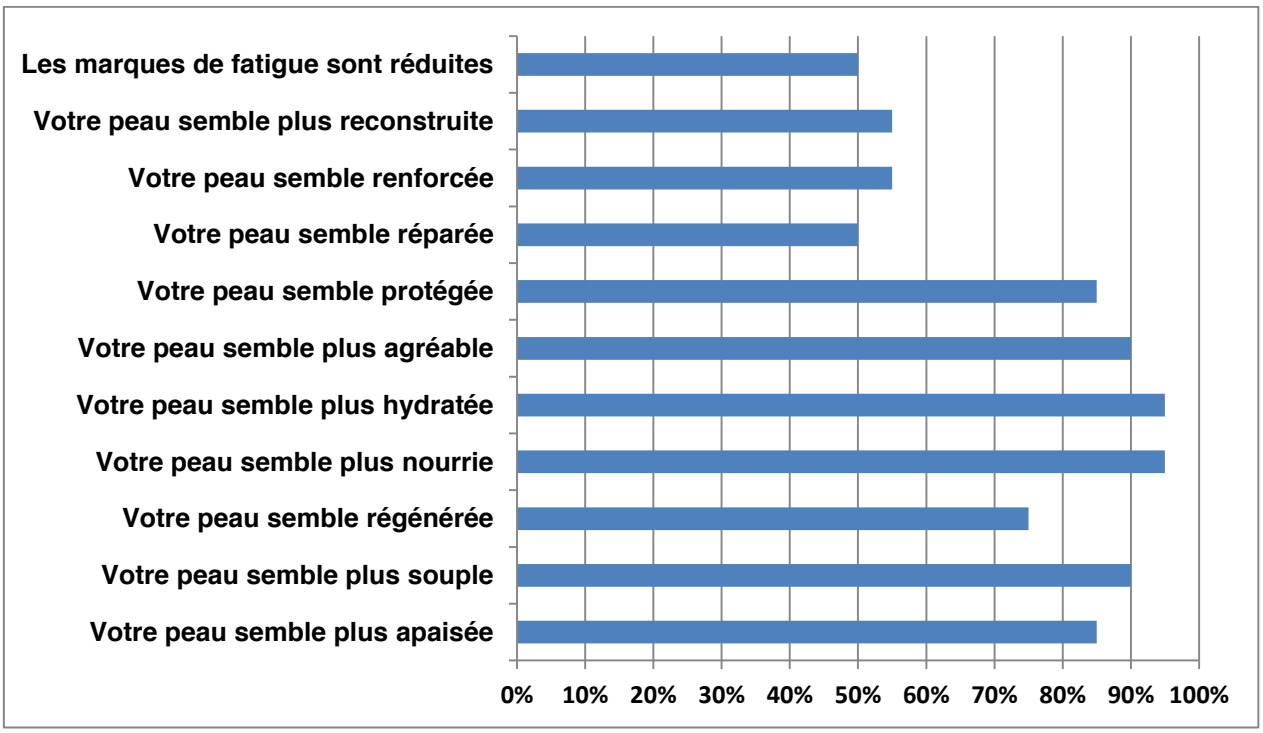
- **95 %** of the volunteers felt a sensation of comfort.
- **75 %** of the volunteers felt a sensation of well-being.
- **55 %** of the volunteers felt a sensation of freshness.

❖ *Assessment of the efficacy of the product*

- **70 %** of volunteers noticed an improvement of their skin smoothness
- **55 %** of volunteers noticed an improvement of their skin firmness

After the 1st application :	Agree	Quite agree	Not so much agree	Disagree
Your skins seems more soothed	10	**75**	10	5
Your skin seems softer	15	75	10	0
Your skin seems regenerate	15	60	25	0
Your skin seems more nourished	35	**60**	5	0
Your skin looks more hydrated	35	**60**	5	0
Your skin seems more pleasant	45	**45**	10	0
Your skin seems protected	20	**65**	10	0
Your skin seems repaired	10	**40**	50	0
Your skin seems strengthened	15	**40**	45	0
Your skin seems reconstructed	10	**45**	45	0
Signs of fatigue are reduced	5	**45**	35	15

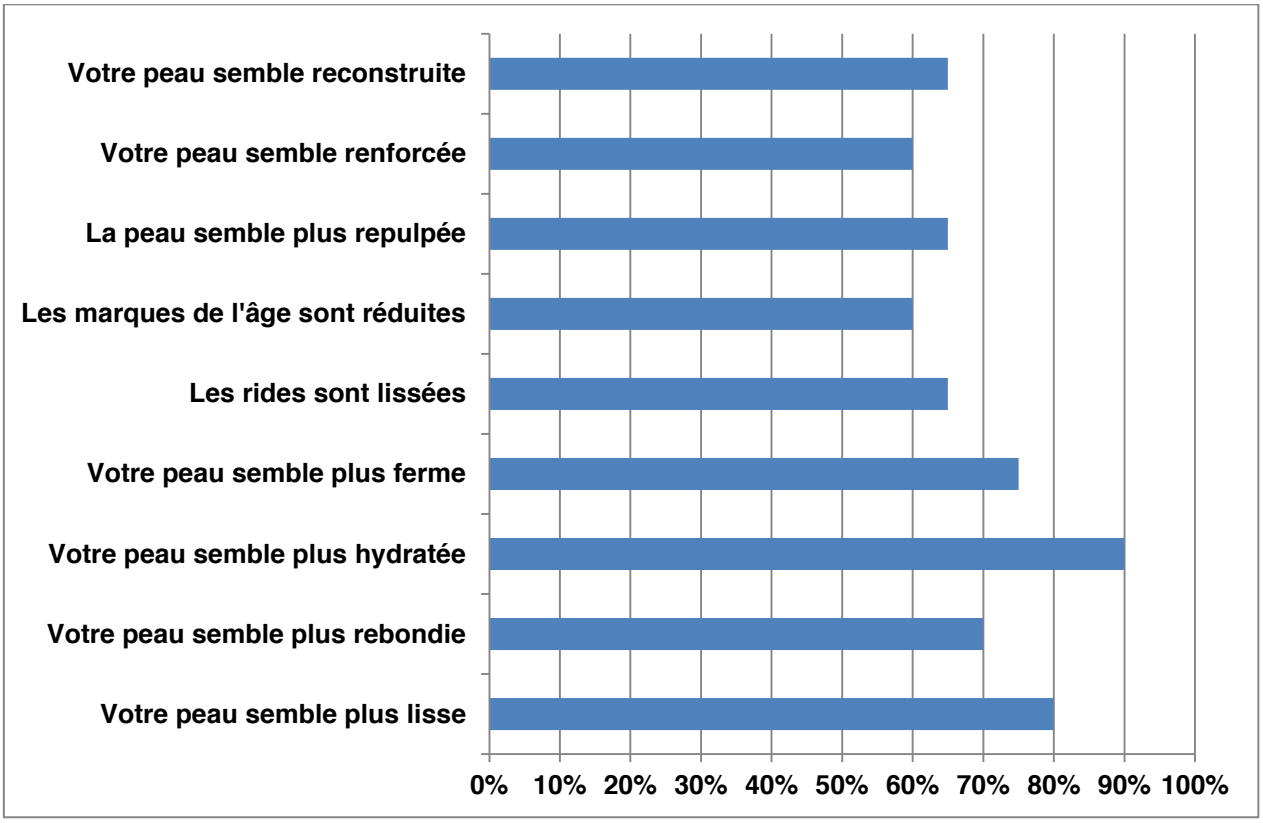
Graphical representation of the questionnaire's results:



6.7.2 After 3 weeks

	Agree	Quite agree	Not so much agree	Disagree
Your skin seems smoother	45	**35**	20	0
Your skin seems more plump	30	40	30	0
Your skin looks more hydrated	45	45	10	0
Your skin seems firmer	40	35	25	0
Wrinkles are smoothed	5	60	25	10
The marks of age are reduced	0	0	30	10
The skin seems plumped	30	35	25	10
Your skin seems strengthened	30	**30**	25	15
Your skin seems reconstructed	20	**45**	15	20

Graphical representation of the questionnaire's results:



❖ *In conclusion*

- **0 %** of volunteers included in the study felt an unpleasant sensation or incomfort.
- No volunteers interrupted the treatment.
- **90 %** of volunteers included in the study would like to continue to use this product.
- Regardless of price, **90 %** of volunteers would buy this mask

7 CONCLUSION

The aim of the study was to assess on a panel of 20 volunteers, the efficacy of an anti-aging mask on restorative and anti-wrinkle effect.

Under the conditions of the study, the dermatologist concludes to a very good cutaneous tolerance of the product tested.

After 6 applications of the mask "Masque Réparateur silicone free", we can conclude that the protective role of the cutaneous barrier has been strengthened.
In addition, an anti-aging action was observed with a smoothing of the skin microrelief as well as a decrease in the volume and depth of the wrinkles.
After alteration of the skin barrier, a significant repair effect was observed as early as 2 hours.

8 STUDY REPORT ARCHIVING

Raw data filing

The raw data consists of:

- Image analysis results
- Assays results
- Biometrological results using devices

All the raw data is kept in a paper file and a backup is saved when it is possible (depending on the used device).

Products ; samples ; blocks and blades filing

The products entrusted to BIO-EC are preserved one year after using the tested product.

The blocs, the stained and immunostained slides revealed by alkaline phosphatase and peroxidase are kept at BIO-EC's for fifteen years.

The frozen blocs will stay in possession of BIO-EC for two years at minus 80°C. If the culture media are harvested during the study, they will be stored for two years at minus 80°C.
After that, and without any other instructions from the client, they will all be destroyed.

Final report filing

The paper file is archived and kept for 20 years

The study report (raw data, images, preliminary reports, final report) and all the computer data are saved thanks to a double internal backup (KERTEL BOX2CLOUD, RAID 1) and by an automated and daily external system, Backupia (KERTEL Group).

Our computer system is protected by the anti-viruses Microsoft Security Essential, F-Secure and McAfee Saas.

Appendixes

Characteristics of volunteers

Volunteer	Age	Mask
1	51	Right
2	46	Left
3	47	Left
4	50	Right
5	66	Right
6	56	Left
7	55	Left
8	55	Right
9	50	Left
10	53	Right
11	57	Right
12	45	Left
13	48	Right
14	46	Left
15	49	Left
16	51	Right
17	50	Right
18	48	Left
19	64	Left
20	47	Right

Results of PIE forearm

Control														
Volunteers	**VALUES**						**DELTA VARIATION**				**% VARIATION**			
	T0	**T0 (après stripping)**	**T2H**	**T4H**	**T6H**	**T24H**	**T2H**	**T4H**	**T6H**	**T24H**	**T2H**	**T4H**	**T6H**	**T24H**
1	7,5	19,3	13,8	16,0	14,6	13,1	-5,5	-3,3	-4,7	-6,2	-28%	-17%	-24%	-32%
2	6,0	11,4	9,2	9,2	7,5	6,9	-2,2	-2,2	-3,9	-4,5	-19%	-19%	-34%	-39%
3	5,6	10,2	4,9	7,5	9,3	5,4	-5,3	-2,7	-0,9	-4,8	-52%	-26%	-9%	-47%
4	6,9	10,6	10,1	10,9	8,0	6,4	-0,5	0,3	-2,6	-4,2	-5%	3%	-25%	-40%
5	8,7	17,9	8,1	12,6	9,9	11,5	-9,8	-5,3	-8,0	-6,4	-55%	-30%	-45%	-36%
6	6,4	11,3	7,6	8,9	6,0	7,8	-3,7	-2,4	-5,3	-3,5	-33%	-21%	-47%	-31%
7	5,5	19,7	6,7	7,0	5,5	5,8	-13,0	-12,7	-14,2	-13,9	-66%	-64%	-72%	-71%
8	6,5	10,5	7,9	6,9	5,8	9,3	-2,6	-3,6	-4,7	-1,2	-25%	-34%	-45%	-11%
9	9,0	13,7	9,8	12,1	7,9	11,4	-3,9	-1,6	-5,8	-2,3	-28%	-12%	-42%	-17%
10	7,0	11,5	9,2	10,1	7,4	7,2	-2,3	-1,4	-4,1	-4,3	-20%	-12%	-36%	-37%
11	6,1	8,4	7,9	8,1	6,4	3,7	-0,5	-0,3	-2,0	-4,7	-6%	-4%	-24%	-56%
12	7,4	11,9	9,6	12,2	7,7	8,5	-2,3	0,3	-4,2	-3,4	-19%	3%	-35%	-29%
13	6,3	13,0	9,7	9,9	9,5	7,9	-3,3	-3,1	-3,5	-5,1	-25%	-24%	-27%	-39%
14	5,2	9,9	6,2	7,4	7,5	5,1	-3,7	-2,5	-2,4	-4,8	-37%	-25%	-24%	-48%
15	5,6	11,2	8,9	7,2	7,2	9,2	-2,3	-4,0	-4,0	-2,0	-21%	-36%	-36%	-18%
16	7,0	12,1	5,8	9,1	8,4	7,6	-6,3	-3,0	-3,7	-4,5	-52%	-25%	-31%	-37%
17	5,5	8,9	6,8	7,1	7,6	4,1	-2,1	-1,8	-1,3	-4,8	-24%	-20%	-15%	-54%
18	4,3	19,7	16,7	9,6	9,6	6,5	-3,0	-10,1	-10,1	-13,2	-15%	-51%	-51%	-67%
19	16,2	18,3	7,4	10,6	9,1	9,8	-10,9	-7,7	-9,2	-8,5	-60%	-42%	-50%	-46%
20	7,1	18,1	9,4	9,1	8,7	8,5	-8,7	-9,0	-9,4	-9,6	-48%	-50%	-52%	-53%
Mean	6,99	13,38	8,79	9,58	8,18	7,79	-4,60	-3,81	-5,20	-5,60	**-34%**	**-28%**	**-39%**	**-42%**
SD	2,45	3,88	2,69	2,35	1,98	2,47	3,48	3,50	3,37	3,35				

MASQUE

Volunteers	VALUES						DELTA VARIATION				% VARIATION			
	T0	T0 (après stripping)	T2H	T4H	T6H	T24H	T2H	T4H	T6H	T24h	T2H	T4H	T6H	T24H
1	8,8	27,8	18,2	19,0	17,0	16,5	-9,6	-8,8	-10,8	-11,3	-35%	-32%	-39%	-41%
2	6,4	13,2	7,2	9,3	6,8	6,5	-6,0	-3,9	-6,4	-6,7	-45%	-30%	-48%	-51%
3	6,8	10,8	5,4	7,6	6,8	4,8	-5,4	-3,2	-4,0	-6,0	-50%	-30%	-37%	-56%
4	9,3	14,9	9,8	11,1	10,5	9,9	-5,1	-3,8	-4,4	-5,0	-34%	-26%	-30%	-34%
5	11,2	33,2	7,7	13,3	12,5	17,1	-25,5	-19,9	-20,7	-16,1	-77%	-60%	-62%	-48%
6	7,5	15,4	7,0	10,1	8,2	8,3	-8,4	-5,3	-7,2	-7,1	-55%	-34%	-47%	-46%
7	7,8	14,6	6,0	7,0	5,1	7,0	-8,6	-7,6	-9,5	-7,6	-59%	-52%	-65%	-52%
8	6,7	13,4	6,8	7,4	3,9	12,7	-6,6	-6,0	-9,5	-0,7	-49%	-45%	-71%	-5%
9	12,6	21,2	12,3	14,3	10,5	16,3	-8,9	-6,9	-10,7	-4,9	-42%	-33%	-50%	-23%
10	8,3	13,4	10,9	10,8	9,3	11,6	-2,5	-2,6	-4,1	-1,8	-19%	-19%	-31%	-13%
11	6,5	12,3	6,4	6,3	6,6	4,6	-5,9	-6,0	-5,7	-7,7	-48%	-49%	-46%	-63%
12	6,2	16,3	11,7	8,4	10,3	10,1	-4,6	-7,9	-6,0	-6,2	-28%	-48%	-37%	-38%
13	7,2	15,9	10,6	13,4	11,7	8,7	-5,3	-2,5	-4,2	-7,2	-33%	-16%	-26%	-45%
14	6,5	11,6	7,8	8,0	6,4	4,9	-3,8	-3,6	-5,2	-6,7	-33%	-31%	-45%	-58%
15	7,5	12,5	7,7	10,0	8,5	9,4	-4,8	-2,5	-4,0	-3,1	-38%	-20%	-32%	-25%
16	8,1	16,7	6,9	6,1	8,2	8,9	-9,8	-10,6	-8,5	-7,8	-59%	-63%	-51%	-47%
17	6,3	12,1	7,9	7,3	7,5	4,3	-4,2	-4,8	-4,6	-7,8	-35%	-40%	-38%	-64%
18	6,2	19,5	12,7	9,0	7,8	11,5	-6,8	-10,5	-11,7	-8,0	-35%	-54%	-60%	-41%
19	9,9	23,1	7,2	9,2	8,6	10,2	-15,9	-13,9	-14,5	-12,9	-69%	-60%	-63%	-56%
20	6,5	17,4	8,5	8,3	8,1	6,9	-8,9	-9,1	-9,3	-10,5	-51%	-52%	-53%	-60%
Mean	7,82	16,77	8,94	9,80	8,72	9,51	-7,83	-6,97	-8,05	-7,26	**-47%**	**-42%**	**-48%**	**-81%**
SD	1,77	5,75	3,06	3,18	2,88	3,92	5,10	4,37	4,26	3,57				

Results of PIE face

MASK

Volunteers	VALUES		DELTA VARIATION	% VARIATION
	T0	T28	T28	T28
1	12,8	10,5	-2,3	-18%
2	9,8	7,0	-2,8	-29%
3	8,1	9,5	1,4	17%
4	10,7	9,4	-1,3	-12%
5	9,8	13,8	4,0	41%
6	8,2	8,3	0,1	1%
7	8,4	7,2	-1,2	-14%
8	9,9	9,2	-0,7	-7%
9	11,0	12,0	1,0	9%
10	15,4	10,5	-4,9	-32%
11	8,1	7,4	-0,7	-9%
12	12,2	12,5	0,3	2%
13	10,5	10,9	0,4	4%
14	15,0	10,8	-4,2	-28%
15	10,5	10,8	0,3	3%
16	9,3	8,2	-1,1	-12%
17	7,9	6,0	-1,9	-24%
18	16,9	20,3	3,4	20%
19	9,9	7,8	-2,1	-21%
20	7,4	13,6	6,2	84%
Mean	10,81	9,91	-0,91	**-8%**
SD	2,69	3,17	2,00	

CONTROL

Volunteers	VALUES		DELTA VARIATION	% VARIATION
	T0	T28	T28	T28
1	13,9	13,8	-0,1	-1%
2	11,1	8,3	-2,8	-25%
3	8,9	9,4	0,5	6%
4	10,4	9,0	-1,4	-13%
5	10,3	14,6	4,3	42%
6	9,1	10,6	1,5	16%
7	8,9	7,1	-1,8	-20%
8	7,8	7,7	-0,1	-1%
9	10,7	14,7	4,0	37%
10	11,5	7,8	-3,7	-32%
11	9,9	6,8	-3,1	-31%
12	12,9	9,8	-3,1	-24%
13	9,8	10,2	0,4	4%
14	14,1	13,8	-0,3	-2%
15	8,3	9,8	1,5	18%
16	8,9	8,1	-0,8	-9%
17	8,8	7,5	-1,3	-15%
18	17,9	20,2	2,3	13%
19	11,1	9,4	-1,7	-15%
20	7,6	10,5	2,9	38%
Mean	10,78	10,22	-0,56	**-5%**
SD	2,55	3,41	2,06	

Results of AEVA : Volume

MASK

Volunteers	Negativ volume (mm3)		Deviation	Variation
	T0	T21	T21-T0	%T21
1	1,122	1,025	-0,10	-8,57%
2	1,523	2,162	0,64	41,93%
3	2,975	0,790	-2,18	-73,44%
4	0,741	0,873	0,13	17,92%
5	1,313	2,220	0,91	69,02%
6	1,832	1,050	-0,78	-42,70%
7	2,682	1,905	-0,78	-28,98%
8	0,110	0,324	0,21	194,01%
9	0,205	0,289	0,08	40,88%
10	0,282	0,713	0,43	152,50%
11	0,235	0,235	0,00	-0,17%
12	0,319	0,190	-0,13	-40,39%
13	0,189	0,311	0,12	65,09%
14	0,638	0,473	-0,16	-25,85%
15	0,848	0,542	-0,31	-36,06%
16	0,071	0,076	0,00	6,94%
17	0,330	0,616	0,29	86,50%
18	2,116	0,810	-1,31	-61,72%
19	0,957	1,008	0,05	5,32%
20	0,509	0,141	-0,37	-72,42%
MEAN	**0,950**	**0,788**	**-0,162**	**-17,08%**
SD	**0,871**	**0,642**	**0,690**	

CONTROLE

Volunteers	Negativ volume (mm3)		Deviation	Variation
	T0	T21	T21-T0	%T21
1	1,755	1,749	-0,01	-0,33%
2	0,813	1,065	0,25	31,02%
3	0,605	0,275	-0,33	-54,54%
4	0,459	1,225	0,77	166,91%
5	0,899	2,455	1,56	173,05%
6	0,681	0,481	-0,20	-29,36%
7	0,308	0,374	0,07	21,34%
8	0,487	0,843	0,36	73,05%
9	0,494	0,488	-0,01	-1,07%
10	0,332	1,001	0,67	202,08%
11	0,882	0,102	-0,78	-88,47%
12	0,643	0,149	-0,49	-76,88%
13	0,514	0,730	0,22	42,10%
14	0,373	0,306	-0,07	-18,10%
15	0,494	0,038	-0,46	-92,39%
16	0,460	0,792	0,33	72,37%
17	0,328	0,430	0,10	31,14%
18	2,294	1,191	-1,10	-48,10%
19	1,050	0,869	-0,18	-17,23%
20	2,678	1,248	-1,43	-53,39%
MEAN	**0,827**	**0,791**	**-0,037**	**-4,45%**
SD	**0,660**	**0,599**	**0,661**	

Results of AEVA : Depth

MASK

Volunteers	Mean depth		Deviation	Variation
	T0	T21	T21-T0	%T21
1	-0,078	-0,071	0,006	-8,20%
2	-0,125	-0,134	-0,009	7,38%
3	-0,167	-0,135	0,032	-19,34%
4	-0,035	-0,049	-0,014	40,45%
5	-0,133	-0,155	-0,022	16,91%
6	-0,106	-0,094	0,013	-11,81%
7	-0,156	-0,132	0,024	-15,32%
8	-0,023	-0,022	0,001	-3,52%
9	-0,040	-0,036	0,004	-9,77%
10	-0,033	-0,037	-0,005	14,02%
11	-0,047	-0,047	0,000	0,00%
12	-0,067	-0,065	0,002	-2,65%
13	-0,033	-0,042	-0,009	27,27%
14	-0,067	-0,070	-0,002	3,50%
15	-0,080	-0,064	0,017	-20,63%
16	-0,026	-0,027	-0,002	6,05%
17	-0,038	-0,040	-0,002	5,32%
18	-0,162	-0,098	0,064	-39,68%
19	-0,067	-0,066	0,001	-1,19%
20	-0,052	-0,047	0,005	-9,41%
MEAN	**-0,077**	**-0,072**	**0,005**	**-6,73%**
SD	**0,048**	**0,040**	**0,019**	

CONTROLE

Volunteers	Mean depth		Deviation	Variation
	T0	T21	T21-T0	%T21
1	-0,060	-0,070	-0,010	15,97%
2	-0,046	-0,048	-0,002	4,35%
3	-0,053	-0,055	-0,003	5,32%
4	-0,046	-0,065	-0,019	40,58%
5	-0,082	-0,128	-0,045	55,44%
6	-0,043	-0,042	0,001	-2,40%
7	-0,044	-0,048	-0,004	8,14%
8	-0,058	-0,047	0,011	-18,30%
9	-0,034	-0,039	-0,006	17,46%
10	-0,063	-0,067	-0,003	5,33%
11	-0,080	-0,076	0,004	-4,48%
12	-0,054	-0,036	0,018	-33,34%
13	-0,079	-0,085	-0,006	7,45%
14	-0,051	-0,060	-0,009	17,36%
15	-0,060	-0,042	0,017	-29,12%
16	-0,045	-0,053	-0,007	15,55%
17	-0,044	-0,055	-0,011	25,13%
18	-0,133	-0,120	0,013	-10,06%
19	-0,073	-0,067	0,006	-8,03%
20	-0,074	-0,052	0,022	-29,70%
MEAN	**-0,061**	**-0,062**	**-0,002**	**2,65%**
SD	**0,023**	**0,025**	**0,015**	

Results of AEVA : Roughness

MASK

Volunteers	Ra (µm)		Deviation	Variation
	T0	T21	T21-T0	%T21
1	0,137	0,137	0,00	-0,60%
2	0,094	0,110	0,02	17,03%
3	0,168	0,092	-0,08	-45,34%
4	0,058	0,058	0,00	0,56%
5	0,139	0,142	0,00	2,51%
6	0,106	0,092	-0,01	-13,13%
7	0,113	0,095	-0,02	-15,94%
8	0,029	0,038	0,01	31,11%
9	0,050	0,056	0,01	12,38%
10	0,046	0,056	0,01	20,34%
11	0,056	0,035	-0,02	-36,71%
12	0,082	0,075	-0,01	-8,90%
13	0,066	0,064	0,00	-3,86%
14	0,084	0,079	0,00	-5,91%
15	0,090	0,081	-0,01	-10,49%
16	0,042	0,043	0,00	3,34%
17	0,057	0,061	0,00	7,85%
18	0,122	0,085	-0,04	-29,99%
19	0,095	0,097	0,00	1,81%
20	0,055	0,043	-0,01	-22,17%
MEAN	**0,084**	**0,077**	**-0,008**	**-8,93%**
SD	**0,038**	**0,030**	**0,020**	

CONTROLE

Volunteers	Ra (µm)		Deviation	Variation
	T0	T21	T21-T0	%T21
1	0,128	0,128	0,00	0,07%
2	0,067	0,069	0,00	2,92%
3	0,081	0,058	-0,02	-28,62%
4	0,069	0,091	0,02	31,22%
5	0,106	0,132	0,03	24,06%
6	0,043	0,041	0,00	-3,94%
7	0,053	0,060	0,01	12,52%
8	0,040	0,047	0,01	18,48%
9	0,038	0,041	0,00	5,83%
10	0,094	0,096	0,00	2,37%
11	0,091	0,062	-0,03	-31,87%
12	0,050	0,043	-0,01	-15,43%
13	0,044	0,051	0,01	16,53%
14	0,065	0,054	-0,01	-15,95%
15	0,089	0,072	-0,02	-19,02%
16	0,045	0,050	0,00	10,55%
17	0,049	0,070	0,02	44,38%
18	0,114	0,096	-0,02	-15,44%
19	0,095	0,095	0,00	0,08%
20	0,071	0,067	0,00	-6,62%
MEAN	**0,072**	**0,071**	**0,000**	**-0,68%**
SD	**0,027**	**0,027**	**0,014**	