

## Supplemental Materials

M. Massufero Vergilio, M. Moretti Aiell, T. Anselmo, G. Ricci Leonardi. (2022)  
Pretest questionnaire for anti-ageing cosmetic claims substantiation:  
a description of validation of efficacy and sensory perception questionnaires  
*Biomedical and Biopharmaceutical Research 19(2)*, 397-409. doi: 10.19277/bbr.19.2.298

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## Appendix A - Initial questionnaire: Self-evaluation of skin appearance

27/01/2020

Questionário Perfil dos Participantes

### Self-evaluation of skin appearance questionnaire

\*Mandatory

1. Name: \*

\_\_\_\_\_

2. Age: \*

\_\_\_\_\_

3. Mobile: \*

\_\_\_\_\_

4. E-mail:

\_\_\_\_\_

5. Medical and general records: \*

	Yes	No
Pregnancy or breastfeeding	<input type="radio"/>	<input type="radio"/>
Dermatitis	<input type="radio"/>	<input type="radio"/>
Psoriasis	<input type="radio"/>	<input type="radio"/>
Vitiligo	<input type="radio"/>	<input type="radio"/>
Acne	<input type="radio"/>	<input type="radio"/>
Other skin diseases	<input type="radio"/>	<input type="radio"/>
Allergy to any cosmetic product	<input type="radio"/>	<input type="radio"/>
Diabetes or hormonal disease	<input type="radio"/>	<input type="radio"/>
Heart or vascular disease	<input type="radio"/>	<input type="radio"/>
Neoplasms	<input type="radio"/>	<input type="radio"/>
Oophorectomy (Surgical removal of one or both ovaries)	<input type="radio"/>	<input type="radio"/>
Hysterectomy (surgical removal of the uterus)	<input type="radio"/>	<input type="radio"/>
Metal pins or plates in the craniofacial region	<input type="radio"/>	<input type="radio"/>
History of aesthetic plastic surgery in the facial region	<input type="radio"/>	<input type="radio"/>
History of use of botulinum toxin, filler or lift wires	<input type="radio"/>	<input type="radio"/>

6. In addition to those mentioned above, do you have any illnesses? Which one? \*

\_\_\_\_\_

27/01/2020

Questionário Perfil dos Participantes

**7. Do you currently use medication (prescribed or not)? \***

- Yes  
 No

**8. If yes, list name, dosage and frequency of medicine(s):**

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**9. Have you ever performed any facial aesthetic procedure or used any cosmetic product with a rejuvenating function? \***

Aesthetic procedure: laser, radiofrequency, ultrasound, etc.

- Yes  
 No

**10. If yes, which one? \***

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**11. Consumption of alcoholic beverages: \***

- Yes  
 No  
 Sometimes

**12. Smoking: \***

- Yes  
 No  
 Former smoker

**13. What is your color or race/ethnicity? \***

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**14. In situations where you are exposed to intense sunlight, your skin: \***

- Always burns (shows redness)  
 Burns moderately  
 Burns little  
 Burns rarely  
 Never burns (never reddens)

27/01/2020

Questionário Perfil dos Participantes

15. Still regarding situations of intense sun exposure, your skin: \*

- Never tans
- It tans very little
- Tans moderately
- Always tans

16. Regarding HYDRATION, is your facial skin: \*

	1	2	3	4	5	6	7	
Not hydrated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very hidrated

17. Regarding FIRMNESS, is your facial skin: \*

	1	2	3	4	5	6	7	
Not firm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very firm

18. Regarding ELASTICITY, your facial skin is: \*

	1	2	3	4	5	6	7	
No elasticity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	A lot of elasticity

19. Regarding FLACIDITY, is your facial skin: \*

	1	2	3	4	5	6	7	
Not saggy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very saggy

20. Regarding LUSHNESS/LUMINOSITY, does your facial skin present: \*

	1	2	3	4	5	6	7	
Does not show lush/luminosity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Vey lush/luminosity

21. Regarding WRINKLES/EXPRESSION LINES IN THE EYE REGION, does your skin present: \*

	1	2	3	4	5	6	7	
No wrinkles/lines expression	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Lots of wrinkles/fine lines

27/01/2020

Questionário Perfil dos Participantes

22. Regarding WRINKLES/EXPRESSION LINES IN THE LIPS REGION, does your skin present: \*

	1	2	3	4	5	6	7	
No wrinkles/lines expression	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Lots of wrinkles/fine lines

23. Regarding WRINKLES/EXPRESSION LINES IN THE FOREHEAD REGION, does your skin present: \*

	1	2	3	4	5	6	7	
No wrinkles/lines expression	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Lots of wrinkles/fine lines

24. Regarding FACIAL SKIN TONE UNIFORMITY, is your skin: \*

	1	2	3	4	5	6	7	
Not uniform	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very uniform

25. Regarding the QUANTITY OF DARKEN SPOTCHES, does your facial skin present: \*

	1	2	3	4	5	6	7	
No spots	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Lots of spots

26. If yes, describe in which region of the face you have spots: \*

For example, around the eyes, forehead, nose, etc.

\_\_\_\_\_

27. Regarding SIGNS OF TIREDNESS, is your skin: \*

	1	2	3	4	5	6	7	
No signs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	With many signs

28. Regarding VITALITY, is your skin: \*

	1	2	3	4	5	6	7	
No vitality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	With a lot of vitality

## Appendix B - Initial questionnaire: Sensory evaluation of cosmetics

### Sensory evaluation of cosmetics questionnaire

Name:

Sua resposta

Cosmetic product used:

- PL1
- JC6
- RC4
- MM2

How did you feel about the CONSISTENCY / TEXTURE of the cosmetic product when you applied it to your skin?

1 2 3 4 5 6 7 8 9

I disliked it very much          I really enjoyed it

What did you think of the CONSISTENCY / TEXTURE of the cosmetic product when applying it to the skin?

- Extremely viscous (consistent)
- Very viscous(consistent)
- Viscous (consistent)
- Adequate
- Fluid (thin)
- Very fluid (thin)
- Extremely fluid (thin)

What did you think of the CONSISTENCY / TEXTURE of the cosmetic product when applying it to the skin?

- Extremely viscous (consistent)
- Very viscous(consistent)
- Viscous (consistent)
- Adequate
- Fluid (thin)
- Very fluid (thin)
- Extremely fluid (thin)

How did you feel about the PERFUME/FRAGRANCE of the cosmetic product?

1 2 3 4 5 6 7 8 9

I disliked it very much          I really enjoyed it

What do you think of the PERFUME/FRAGRANCE of the cosmetic product?

- Extremely strong
- Very strong
- Strong
- Neither weak nor weak Weak
- Very weak
- Extremely weak

How did you feel about the ABSORPTION TIME of the cosmetic product during application on the skin:

Understand "absorption time" as the drying speed of the cosmetic after application on the skin.

1 2 3 4 5 6 7 8 9

I disliked it very much          I really enjoyed it

About the ABSORPTION TIME of the cosmetic product during application to the skin:

Understand "absorption time" as the drying speed of the cosmetic after application on the skin.

- Absorbed extremely slow
- absorbed very slowly
- absorbed slowly
- Didn't absorb fast or slow
- absorbed quickly
- It absorbed very quickly
- Absorbed extremely fast

How did you feel about the SPREADABILITY of the cosmetic product when applying it to the skin:

1 2 3 4 5 6 7 8 9

I disliked it very much          I really enjoyed it

Regarding the SPREADABILITY of the cosmetic product during its application to the skin:

- Extremely difficult to spread
- very difficult to spread
- hard to spread
- Neither easy nor difficult to spread
- easy to spread
- very easy to spread
- Extremely easy to spread

How did you feel about the STICKNESS of the skin, right after applying the cosmetic product:

1 2 3 4 5 6 7 8 9

I disliked it very much          I really enjoyed it





Regarding the STICKNESS of the skin, right after applying the cosmetic product:

- extremely sticky
- very sticky
- moderately sticky
- little sticky
- not sticky

How did you feel about the OILY of the skin, right after applying the cosmetic product:

1 2 3 4 5 6 7 8 9

I disliked it very much          I really enjoyed it

Regarding the OILY of the skin, right after applying the cosmetic product:

- extremely oily
- very oily
- moderately oily
- little oily
- non oily

How did you feel about the SOFTNESS of your skin, right after applying the cosmetic product:

1 2 3 4 5 6 7 8 9

I disliked it very much          I really enjoyed it

About the SOFTNESS of the skin, right after applying the cosmetic product:

- extremely soft
- very soft
- moderately soft
- little soft
- It's not soft

Globally, how do you rate the cosmetic product?

- Very good
- moderately good
- slightly good
- neither good nor bad
- slightly bad
- moderately bad
- Too bad

If this product were for sale, what is your purchase intent for this cosmetic product?

- would definitely buy
- definitely would not buy
- would probably buy
- I probably wouldn't buy
- maybe / maybe not

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## Appendix C - Final questionnaire: Self-evaluation of skin appearance

### Self-evaluation of skin appearance questionnaire

To participate in the study, we first need to get to know you better and find out how you see your beauty.

\*Obrigatório

According to other women your age who are a part of your daily life, would you say that the GENERAL APPEARANCE of your facial skin is: \*

- (7) Extremely good/excellent
- (6) very good
- (5) good
- (4) Neither good nor bad
- (3) bad
- (2) very bad
- (1) Extremely bad/terrible

Based on the statement "Performing treatments to maintain youthful skin, without signs of aging, is very important to me": \*

(Signs of aging are an increase in the amount of wrinkles and expression lines, sagging, decreased shine, dry skin, etc.)

- I totally agree
- partially agree
- I do not agree nor disagree
- partially disagree
- totally disagree

Com base na afirmação "O cuidado e saúde da minha pele é minha prioridade" \*

- I totally agree
- partially agree
- I do not agree nor disagree
- partially disagree
- totally disagree



Regarding HYDRATION, your facial skin is: \*

(Uma pele desidratada se caracteriza como uma pele esbranquiçada, sem brilho, com descamação e textura áspera)

- (7) Extremely hydrated
- (6) Very hydrated
- (5) hydrated
- (4) Neither hydrated nor dehydrated
- (3) Dehydrated
- (2) Very dehydrated
- (1) Extremely dehydrated

In terms of FIRMNESS, is your facial skin: \*

(Firmness is characterized by firm skin, with tone, consistency, support, opposite of sagging)

- (7) Extremely firm
- (6) Very firm
- (5) firm
- (4) Neither firm nor saggy
- (3) Flabby
- (2) Very saggy
- (1) Extremely saggy

Regarding ELASTICITY, your facial skin is: \*

(Elasticity is characterized by flexibility of the skin, undergoes deformation when subjected to traction, and partially or completely returns to its original shape)

- (5) Very good elasticity
- (4) Good elasticity
- (3) Average elasticity
- (2) Little elasticity
- (1) Does not have elasticity

Regarding WRINKLES / EXPRESSION LINES IN THE EYE REGION, does your skin \*  
have:

- (5) Many wrinkles/expression lines
- (4) Medium amount of wrinkles/expression lines
- (3) Fewer wrinkles/expression lines
- (2) Almost no wrinkles / frown lines
- (1) Does not have wrinkles/expression lines

Regarding WRINKLES/EXPRESSION LINES IN THE REGION OF THE LIPS, does your skin present: \*

- (5) Many wrinkles/expression lines
- (4) Medium amount of wrinkles/expression lines
- (3) Fewer wrinkles/expression lines
- (2) Almost no wrinkles / frown lines
- (1) Does not have wrinkles/expression lines

Regarding WRINKLES/EXPRESSION LINES IN THE FOREHEAD REGION, does your skin have: \*

- (5) Many wrinkles/expression lines
- (4) Medium amount of wrinkles/expression lines
- (3) Fewer wrinkles/expression lines
- (2) Almost no wrinkles / frown lines
- (1) Does not have wrinkles/expression lines

Regarding FACIAL SKIN TONE UNIFORMITY, is your: \*  
(A skin with an even tone is characterized by even color, without spots or redness)

- (5) Too much uniformity
- (4) Average uniformity
- (3) Little uniformity
- (2) Almost not uniform
- (1) It is not uniform

Regarding the QUANTITY OF DARKEN SPOTS, your facial skin presents: \*

- (5) Lots of spots
- (4) Medium amount of spots
- (3) Few spots
- (2) Hardly any spots
- (1) No spots

If you have spots, describe in which region of your face you have spots: \*  
(Exemplo: região dos olhos, da testa, nariz, bochecha, etc)

Sua resposta

Regarding SIGNS OF TIREDNESS, in the morning, your facial skin is: \*  
(Signs of tiredness are lack of brightness, vitality, with swelling, dehydrated, etc.)

- (6) Intensity too high
- (5) High intensity
- (4) Average intensity
- (3) Little intensity
- (2) Almost non-existent
- (1) Does not show signs of tiredness

Regarding the BAGS UNDER THE EYES, would you say that in the morning, you have: \*

- (6) Intensity too high
- (5) High intensity
- (4) Average intensity
- (3) Little intensity
- (2) Almost non-existent
- (1) No bags under the eyes

Regarding DARK CIRCLES, would you say that you usually have: \*

- (6) Intensity too high
- (5) High intensity
- (4) Average intensity
- (3) Little intensity
- (2) Almost non-existent
- (1) Does not have dark circles

Current health conditions: *	Yes	No
Pregnancy or breastfeeding	<input type="radio"/>	<input type="radio"/>
Dermatitis	<input type="radio"/>	<input type="radio"/>
Psoriasis (chronic autoimmune skin disease characterized by reddish patches covered with whitish scales)	<input type="radio"/>	<input type="radio"/>
vitiligo	<input type="radio"/>	<input type="radio"/>
Acne	<input type="radio"/>	<input type="radio"/>
Other skin diseases	<input type="radio"/>	<input type="radio"/>
Allergy to any cosmetic product	<input type="radio"/>	<input type="radio"/>
Diabetes or hormonal disease	<input type="radio"/>	<input type="radio"/>
heart or vascular disease	<input type="radio"/>	<input type="radio"/>
Neoplasms (tumor)	<input type="radio"/>	<input type="radio"/>
Oophorectomy (Surgical removal of one or both ovaries)	<input type="radio"/>	<input type="radio"/>
Hysterectomy (surgical removal of the uterus)	<input type="radio"/>	<input type="radio"/>
Metal pins or plates in the craniofacial region	<input type="radio"/>	<input type="radio"/>
History of aesthetic plastic surgery in the facial region	<input type="radio"/>	<input type="radio"/>
History of use of botulinum toxin, filler or lift wires	<input type="radio"/>	<input type="radio"/>

In addition to those mentioned above, do you have any disease or condition that you would like to inform us about? Which one? \*

Sua resposta

Do you currently use medication (prescription or not)? \*

Example: Contraceptives, etc.

Yes

No



If yes, list names and reasons for using the drugs:

Sua resposta

Have you ever performed any facial aesthetic procedure with rejuvenating function? \*

Example: laser, radiofrequency, ultrasound, etc.

Yes

No

Have you ever used a cosmetic product with a rejuvenating function? \*

Example: retinol, vitamin C, anti-aging products by Avon, Natura, Mary key, etc.

Yes

No

If yes, which products? \*

Example: retinol, vitamin C, anti-aging products by Avon, Natura, Mary key, etc.

Sua resposta

Consumption of alcoholic beverages: \*

Yes

No

Sometimes

Smoking: \*

Yes

No

Former smoker

What is your color or race/ethnicity? \*

Sua resposta





In situations where you expose yourself intensely to the sun without using sunscreen, your skin: \*

- Always burns (shows redness)
- Burns moderately (not too little, not too much, with medium frequency)
- burns little
- rarely burns
- Never burns (never reddens)

Still on situations of intense sun exposure without using sunscreen, your skin: \*

- never tans
- tan rarely
- tans little
- Tans moderately (not too little, not too much, medium frequency)
- always tans

Name: \*

Sua resposta

Age: \*

Sua resposta

Mobile: \*

Sua resposta

E-mail:

Sua resposta

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Página 1 de 1

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## Appendix D - Final questionnaire: Sensory evaluation of cosmetics

### Sensory evaluation of cosmetics questionnaire

To answer the questions in the questionnaire, take into account your personal perception, what you felt when using the cosmetic product, therefore, there is no right or wrong alternative.

Name:

Sua resposta

Cosmetic product used:

- PL1
- JC6
- RC4
- MM2

On a scale of 1 to 9, how would you rate how you felt about the CONSISTENCY / TEXTURE of the cosmetic product when applying it to the skin?

1 2 3 4 5 6 7 8 9

I disliked it very much          I really enjoyed it

What did you think of the CONSISTENCY / TEXTURE of the cosmetic product when applying it to the skin?

Rate the CONSISTENCY/TEXTURE characteristic of the cosmetic product you used from 1 to 7.

- 7 Extremely viscous (consistent)
- 6 Very viscous(consistent)
- 5 Viscous (consistent)
- 4 Adequate
- 3 Fluid (thin)
- 2 Very fluid (thin)
- 1 Extremely fluid (thin)

On a scale of 1 to 9, how would you rate how you felt about the PERFUME / FRAGRANCE of the cosmetic product?

1 2 3 4 5 6 7 8 9

I disliked it very much          I really enjoyed it



What do you think of the PERFUME/FRAGRANCE of the cosmetic product?

Give a score from 1 to 7 to the PERFUME / FRAGRANCE of the cosmetic product you used.

- 7 Extremely strong
- 6 Very strong
- 5 Strong
- 4 Adequate
- 3 Weak
- 2 Very weak
- 1 Extremely weak

On a scale of 1 to 9, how would you rate how you felt about the DRYING TIME of the cosmetic product?

Understand "DRYING TIME" as the drying speed of the cosmetic after application on the skin.

1 2 3 4 5 6 7 8 9

I disliked it very much          I really enjoyed it

About the DRYING TIME of the cosmetic product during application to the skin:

Understand "DRYING TIME" as the drying speed of the cosmetic after application on the skin.

- 7 Absorbed extremely slow
- 6 absorbed very slowly
- 5 absorbed slowly
- 4 absorbed properly
- 3 absorbed quickly
- 2 It absorbed very quickly
- 1 Absorbed extremely fast

On a scale of 1 to 9, how would you rate how you felt about the SPREADABILITY of the cosmetic product when applying it to the skin?

1 2 3 4 5 6 7 8 9

I disliked it very much          I really enjoyed it

Regarding the SPREADABILITY of the cosmetic product during its application to the skin:

Give a score from 1 to 7 to the SPREADABILITY on the skin of the cosmetic product you used.

- 7 Extremely difficult to spread
- 6 very difficult to spread
- 5 hard to spread
- 4 Spreads properly
- 3 easy to spread
- 2 very easy to spread
- 1 Extremely easy to spread

On a scale of 1 to 9, what grade would you give to how you felt in relation to the STICKNESS of the skin, right after applying the cosmetic product?

Consider the tackiness of a cosmetic as its adherence to the skin, as if you were applying latex glue to the skin.

1 2 3 4 5 6 7 8 9

I disliked it very much          I really enjoyed it

Regarding the STICKNESS of the skin, right after applying the cosmetic product:

Consider the tackiness of a cosmetic as its adherence to the skin, as if you were applying latex glue to the skin.

- 5 extremely sticky
- 4 very sticky
- 3 moderately sticky
- 2 little sticky
- 1 not sticky

How did you feel about the OILY of the skin, right after applying the cosmetic product:

1 2 3 4 5 6 7 8 9

I disliked it very much          I really enjoyed it

Regarding the OILY of the skin, right after applying the cosmetic product:

Give a score from 1 to 5 to the OILY on the skin of the cosmetic product you used.

- 5 extremely oily
- 4 very oily
- 3 Oily
- 2 little oily
- 1 non oily



On a scale of 1 to 9, how would you rate your skin's SOFTNESS after applying the cosmetic product?

1 2 3 4 5 6 7 8 9

I disliked it very much          I really enjoyed it

About the SOFTNESS of the skin, right after applying the cosmetic product:  
Rate skin SOFTNESS from 1 to 5.

- 5 extremely soft
- 4 very soft
- 3 soft
- 2 little soft
- 1 It's not soft

Globally, how do you rate the cosmetic product?  
Rate the cosmetic product you used from 1 to 7.

- 7 Very good
- 6 moderately good
- 5 slightly good
- 4 adequate
- 3 slightly bad
- 2 moderately bad
- 1 Too bad

If this product were for sale, what is your purchase intent for this cosmetic product?

- would definitely buy
- would probably buy
- maybe / maybe not
- I probably wouldn't buy
- definitely would not buy

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