

LABORATOIRES
FILORGA
PARIS

SCIENTIFIC BROCHURE
NCEF-REVITALIZE SERUM

APPROVED
BY OUR
AESTHETIC
DOCTORS^[1]

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[1] Aesthetic doctors members of the Filorga Scientific Committee.

FOR THE 1ST TIME, A FILORGA SERUM AS EFFECTIVE AS A PROTOCOL OF REVITALIZING INJECTIONS^[2] TO SMOOTH, EVEN, BRIGHTEN

A POTENT AND PATENT-PENDING DAILY SERUM^{[3] [4]}

THE OPTIMAL CONCENTRATION

THE PERFECT BALANCE

- / **Reactivates** the skin's cellular revitalization from within
- / **Healthier skin** inside for more radiant, even toned & smoothed skin outside

NCEF^[5] RENOVATED TECHNOLOGY & FORMULA WITH HIGHER BENEFITS ON INGREDIENTS DELIVERY AND SKIN QUALITY

- / An exclusive and patented blend of **10 INGREDIENTS USED IN MESO-INJECTIONS**
- / A **New Delivery System**: Multilamellar vesicle-based system that incorporates hydrophobic and hydrophilic actives and improve penetration of active ingredients

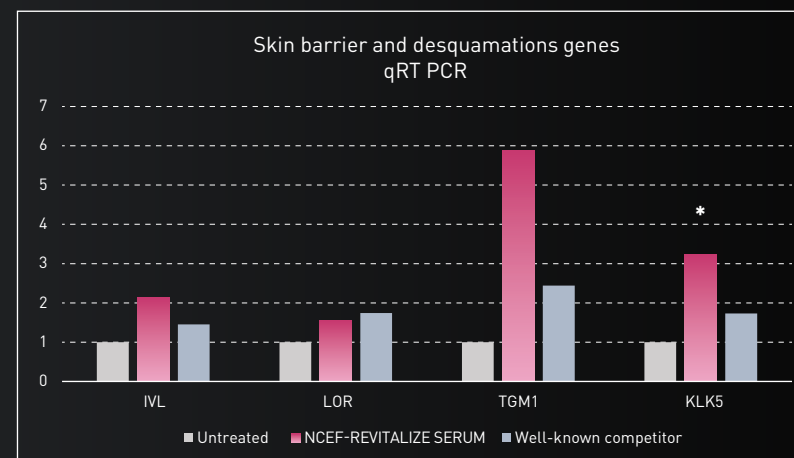


MULTILEVELED ACTIONS TO PROMOTE A COMPREHENSIVE **REVITALIZING EFFECT**

SKIN COHESION AND TISSUE ARCHITECTURE

NCEF-REVITALIZE SERUM induces the expression of key genes involved in skin barrier and desquamation^[6]:

- **Involucrin (IVL)**: skin barrier protein involved in the cornified cell envelope formation^[7]
- **Loricrin (LOR)**: skin barrier protein, component of the cornified cell envelope
- **Transglutaminase 1 (TGM1)**: skin barrier protein involved in the cornified cell envelope formation
- **Kallikrein Related Peptidase 5 (KLK5)**: protease involved in skin desquamation



* $p < 0.05$

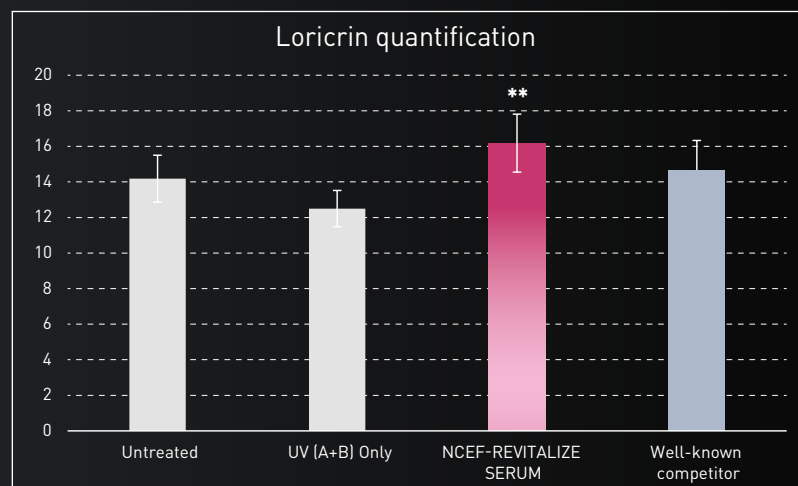
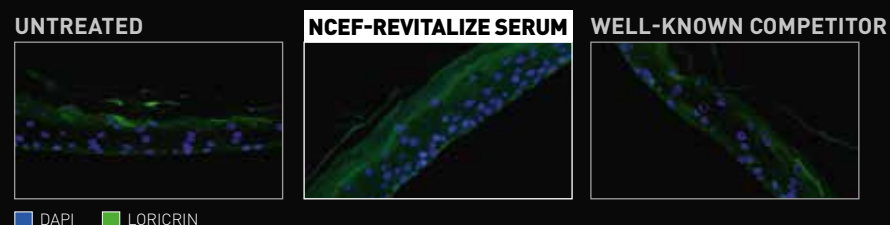
[2] Clinical study comparing two groups of 25 women [Phototype I-IV - caucasian skin]: 1st group received a protocol of 3 revitalizing injections every 3 weeks and the 2nd group used Filorga NCEF-REVITALIZE SERUM twice a day. After 9 weeks: Improvement in skin appearance comparable between the two groups in terms of radiance, evenness and smoothness. [3] US Patent 11,026,873/China ZL201580085613.2/ Patent-pending in Europe. [4] US Patent 11,938,212 B2/ Patent-pending in China and Europe. [5] NCEF [New Cellular Encapsulated Factors] - Unique complex inspired by fillers (hyaluronic acid) and revitalizing techniques (amino acids, vitamins, antioxidants).

[6] qRT PCR on EpiDermFTTM, after 48h treatment. [7] Cornified cell envelope: highly insoluble and extremely tough structure formed beneath the cell membrane during terminal differentiation of keratinocytes. Its main function is to provide human skin with a protective barrier against the environment.

MULTILEVELED ACTIONS TO PROMOTE A COMPREHENSIVE **REVITALIZING EFFECT**

SKIN COHESION AND TISSUE ARCHITECTURE

Immunofluorescence staining and quantification show that **NCEF-REVITALIZE SERUM** promotes the **significant increase of the skin barrier protein, Loricrin, expression**^[8] reflecting the enhancement of the protective barrier function.



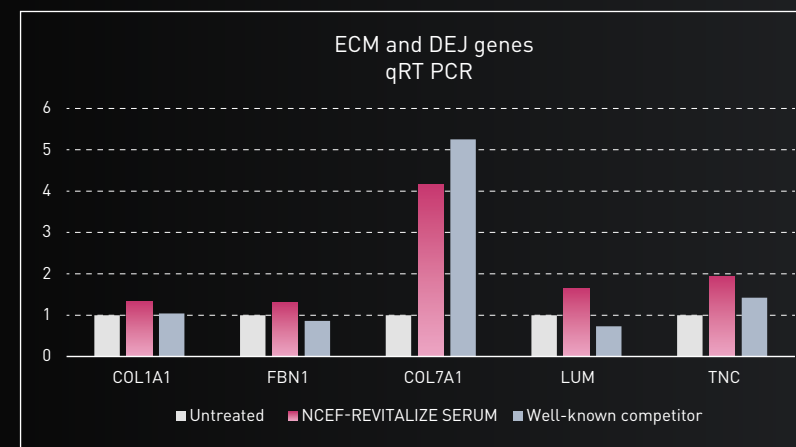
****p<0.01**

MULTILEVELED ACTIONS TO PROMOTE A COMPREHENSIVE **REVITALIZING EFFECT**

SKIN COHESION AND TISSUE ARCHITECTURE

NCEF-REVITALIZE SERUM promotes the **expression of key genes of the Extracellular matrix (ECM) and Dermal-epidermal junctions (DEJ)**^[9]:

- **Type I Procollagen Alpha 1 Chain (COL1A1)**
- **Fibrillin 1 (FBN1)**, ECM protein involved in the skin elastic fiber network
- **Collagen Type VII Alpha 1 Chain (COL7A1)**, involved in cohesion between the epidermis and the dermis
- **Lumican (LUM)**, proteoglycan that regulates assembly of collagen fibrils in the papillary dermis
- **Tenascin C (TNC)**, ECM protein in the dermal-epidermal junction.



[9] qRT PCR: EpiDermFT™, after 48h treatment.

[8] *In vitro* immunofluorescence staining: EpiDermFT™, after 24h treatment. DAPI is a fluorescent stain binding DNA.

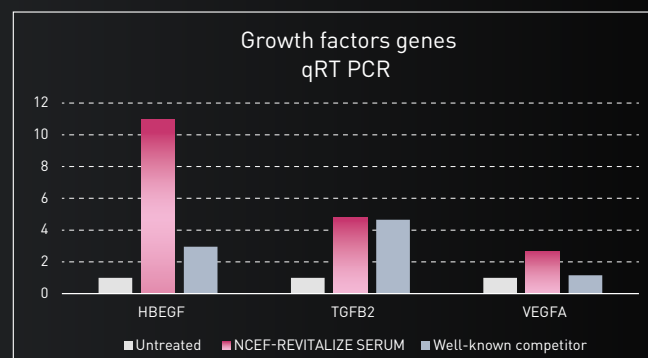
MULTILEVELED ACTIONS TO PROMOTE A COMPREHENSIVE **REVITALIZING EFFECT**

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SKIN HOMEOSTASIS

NCEF-REVITALIZE SERUM promotes the expression of key Growth factors involved in skin homeostasis^[10]:

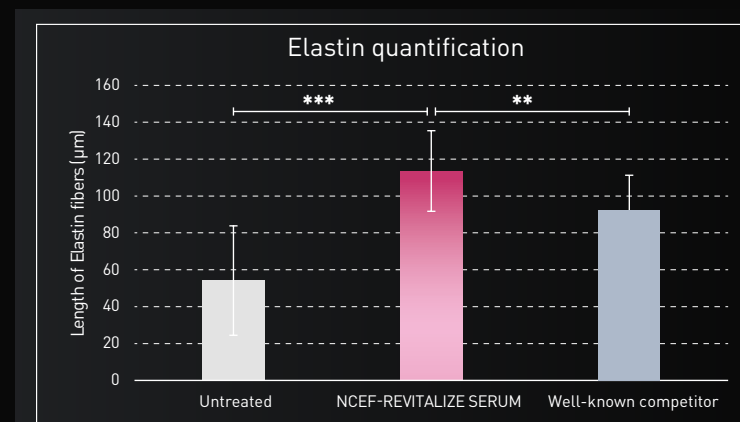
- **Heparin Binding EGF Like Growth Factor (HBEGF)**, for skin homeostasis and wound healing
- **Transforming Growth Factor Beta 2 (TGFB2)** stimulates elastin and collagen IV
- **Vascular endothelial growth factor (VEGFA)**, involved in skin angiogenesis and supporting skin rejuvenation and radiance.



SKIN ELASTICITY



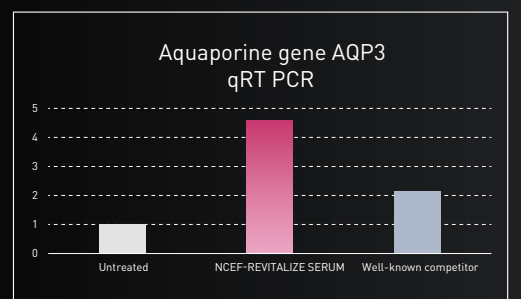
NCEF-REVITALIZE SERUM induces a **significant increase of the elastin fibers length vs untreated cells and treated with a well-known competitor**, an indication of youthful skin^[11]



**p < 0.01
***p < 0.001

SKIN HYDRATION

NCEF-REVITALIZE SERUM promotes the expression the **AQP3** gene which encodes the **water channel protein aquaporin 3**, membrane transporter of water^[1]



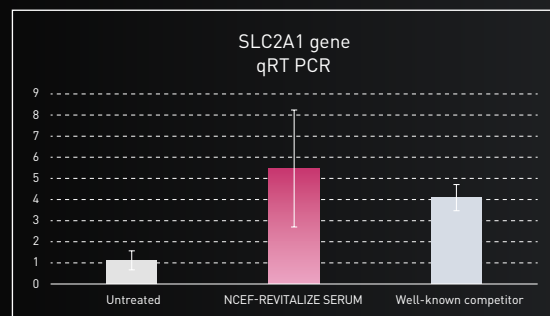
[10] qRT PCR: EpiDermFT™, after 48h treatment.

[11] Ex-vivo [human skin explants, donor: female, 63 years old, Caucasian, Fitzpatrick II phototype, treated daily for 7 days].

MULTILEVELED ACTIONS TO PROMOTE A COMPREHENSIVE **REVITALIZING EFFECT**

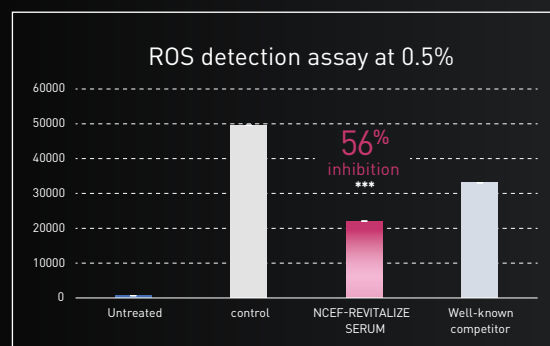
CELL VITALITY AND ENERGY BOOSTED

NCEF-REVITALIZE SERUM promotes the expression of the **SLC2A1 gene**^[12] (Solute Carrier Family 2 Member 1) which encodes a glucose transporter, involved in glucose uptake by cells. Since glucose is a vital energy source, it is an important protein in energy boosting.



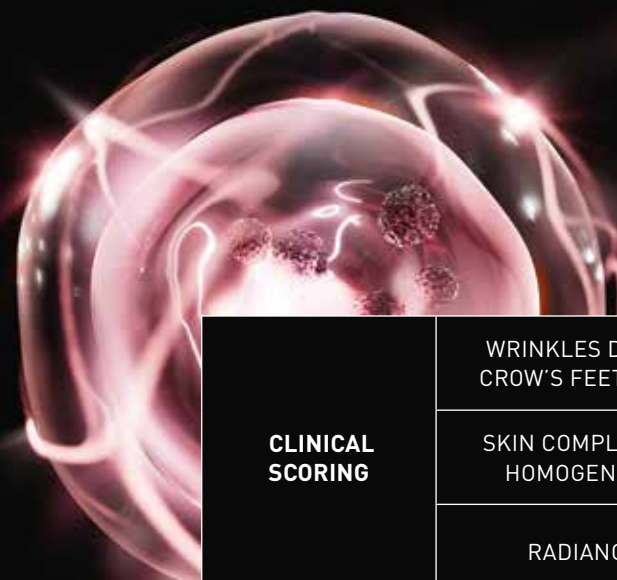
ANTIOXIDANT PROPERTIES STRENGTHENED

NCEF-REVITALIZE SERUM formula presents a significant antioxidant activity^[13].



*** $p < 0.001$

A COMPREHENSIVE REVITALIZING EFFECT OBSERVED AND ASSESSED UNDER **DERMATOLOGICAL CONTROL**^[14]



		D28
CLINICAL SCORING	WRINKLES DEPTH CROW'S FEET AREA	- 8.5 % ***
	SKIN COMPLEXION HOMOGENEITY	+ 12.9 % ***
	RADIANCE	+ 7.2 % *
IMAGE ANALYSIS: TEXTURE MAPPING AND TOPOGRAPHY ANALYSIS	TOTAL SURFACE OF DETECTED ROUGHNESS	- 5.9 % ***
	TOTAL SURFACE OF WRINKLES (CROW'S FEET AREA)	- 9.0 % ***
VISCO-ELASTIC PROPERTIES	FIRMNESS	+ 7.3 % *
	ELASTICITY	+ 8.6 % *

* $p < 0.05$

*** $p < 0.001$

[14] Clinical study: 32 women aged between 48 and 65 years (mean age: 59) / phototype I to III, application of the serum twice a day on the face and neck. Time measurements for clinical scoring, image analysis and cutometry: 0 and 28 days.

[12] qRT PCR: EpiDermFTTM, after 48h treatment. [13] ROS detection assay: The total antioxidant capacity of formula testing, without any cells. Induced with hydrogen peroxide (oxidative stress) and formula inhibited total ROS. Lower bars indicate stronger protection from Oxidatives Stress: 0.3% H2O2, 0.5% of the formulations tested.

ONE STEP AHEAD ON CELLULAR EXPERTISE

A POTENT AND A NEW TECHNOLOGY DESIGNED TO BETTER DELIVER EFFICACY INTO THE HEART OF THE SKIN

SUMMARY

EFFECTS

Scientifically and clinically proven efficacy:

skin cohesion and tissue architecture

skin hydration

elasticity

skin homeostasis and skin vitality

firmness

antioxidant protection

anti-aging and smoothness

radiance and evenness



ASSESSING THE BENEFITS OF THE **NCEF-REVITALIZE SERUM** IN COMBINATION AND VS MESO-INJECTIONS

MESO-INJECTIONS BENEFITS

radiance

skin tone evenness

smoothness

tonicity

firmness

STUDY PROTOCOL

SUBJECTS

/ Caucasian woman, Phototype I to IV
/ Aged between 35 to 65 years old
/ Dull complexion / dehydrated skin / fines lines / wrinkles

3 homogenous groups of 25 women each

GROUP 1

MESO- INJECTION
every 3 weeks
during 9 weeks

GROUP 2

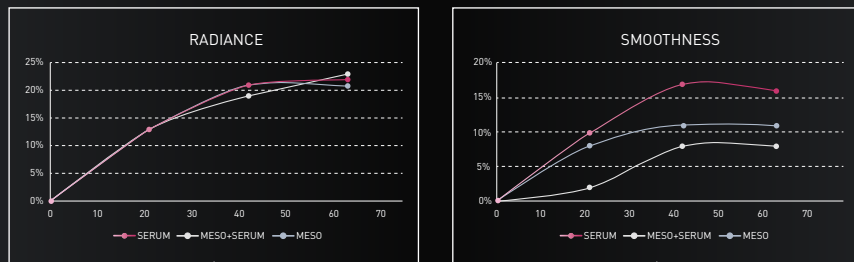
MESO-INJECTION
every 3 weeks +
**NCEF-REVITALIZE
SERUM** twice a day
during 9 weeks

GROUP 3

**NCEF-REVITALIZE
SERUM**
Twice a day
during 9 weeks

CLINICAL EVALUATION OF **RADIANCE, SMOOTHNESS** AND **SKIN TONE EVENNESS** PARAMETERS UNDER DERMATOLOGICAL CONTROL

RADIANCE AND SMOOTHNESS



Not significant difference

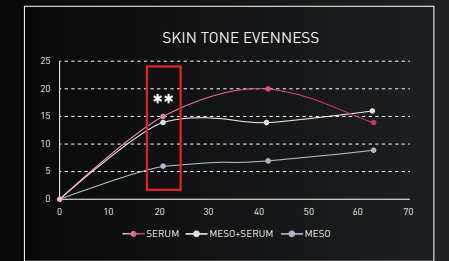
The 3 groups present the same evolution profile for RADIANCE and SMOOTHNESS parameters improvement overtime.

NCEF-REVITALIZE SERUM IS AS EFFECTIVE AS MESOTHERAPY ON RADIANCE AND SMOOTHNESS SKIN PARAMETERS.

SKIN TONE EVENNESS

The groups applying **NCEF-REVITALIZE SERUM** present the same evolution profile overtime.

The group applying **NCEF-REVITALIZE SERUM** presents a statistical difference with the group treated with Mesotherapy after 3 weeks.



****p<0.01**

AFTER 3 WEEKS OF USE

NCEF-REVITALIZE SERUM IS MORE EFFECTIVE THAN THE FIRST MESO-INJECTION FOR SKIN TONE EVENNESS PARAMETER



FIRMNESS ASSESSED BY INSTRUMENTAL MEASURES INCREASE OVERTIME

FIRMNESS

	NCEF-REVITALIZE SERUM	MESO-INJECTIONS
3 WEEKS	9% ± 0.072	9% ± 0.093
6 WEEKS	17% ± 0.091	23% ± 0.108
9 WEEKS	19% ± 0.074	29% ± 0.087

No significant difference

Instrumental measures show that Firmness parameter increase overtime for both the groups applying **NCEF-REVITALIZE SERUM** and treated with Mesotherapy. No statistical difference is noted between the two groups.

NCEF-REVITALIZE SERUM IS AS EFFECTIVE AS MESOTHERAPY AT ALL TIME POINTS ON FIRMNESS PARAMETER

FIRMNESS ASSESSED BY INSTRUMENTAL MEASURES INCREASE OVERTIME

9 WEEKS	MESO-INJECTIONS vs NCEF REVITALIZE SERUM + MESO-INJECTIONS	NCEF-REVITALIZE SERUM + MESO-INJECTIONS 6 WEEKS vs MESO-INJECTIONS 9 WEEKS
% IMPROVEMENT	+ 52% *** FOR NCEF-REVITALIZE SERUM + MESO-INJECTIONS	% IMPROVEMENT + 48% *** FOR NCEF-REVITALIZE SERUM + MESO-INJECTIONS

*** $p < 0.001$

After 9 weeks, firmness is significantly increased by + 52% for the group combining **NCEF-REVITALIZE SERUM** + Mesotherapy vs Mesotherapy alone

** $p < 0.01$

Firmness measures of the combination at 6 weeks are significantly superior by + 48% vs mesotherapy alone at 9 weeks

The combination **NCEF-REVITALIZE SERUM** + Meso-injections is more effective to Meso-injections after 9 weeks on FIRMNESS reflecting their SYNERGISTIC EFFECT

Applying the **NCEF-REVITALIZE SERUM** in combination with Meso-injections enhances Firmness after 6 weeks versus Meso-injections alone after 9 weeks



TONICITY ASSESSED BY INSTRUMENTAL MEASURES INCREASE OVERTIME

TONICITY

	NCEF-REVITALIZE SERUM	MESO-INJECTIONS	NCEF REVITALIZE SERUM + MESO-INJECTIONS
3 WEEKS	6%±0.115	4%±0.112	1%±0.155
6 WEEKS	2%±0.112	-1%±0.107	5%±0.172
9 WEEKS	3%±0.116	6%±0.125	24%*** 30%±0.222

N.S no significant difference

*** $p < 0.001$

/ Instrumental measures show that Tonicity parameter increase overtime for all the tested conditions

/ No statistical difference is noted between all the groups after 3 and 6 weeks

/ After 9 weeks, a significant 24% increase is observed between the combination **NCEF-REVITALIZE SERUM + Meso-injections** therapy vs Meso-injections alone.

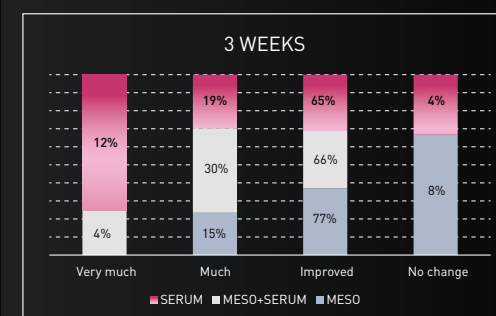
For Tonicity, **NCEF-REVITALIZE SERUM** is as effective as Meso-injections at all time points.

The combination **NCEF-REVITALIZE SERUM + Meso-injections** is **more efficient** than Meso-injections or the Serum alone after 9 weeks.

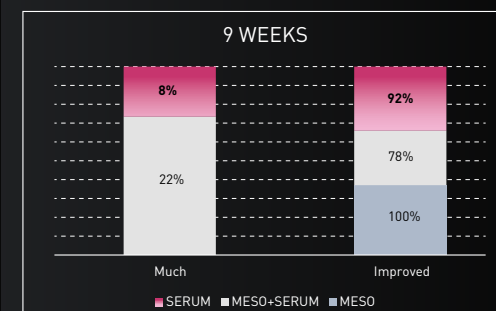
Tonicity improvement is enhanced by the combination **NCEF-REVITALIZE SERUM** with Meso-injections after 9 weeks reflecting their **Synergistic effect**.

GLOBAL AESTHETIC IMPROVEMENT SCALE (GAIS) SCORING BY THE STUDY SUBJECTS

RADIANCE SUBJECT GAIS



The Radiance parameter assessed by group applying the **NCEF-REVITALIZE SERUM** show that 96% observe an improvement of the Radiance, including 12% scoring it "very much improved" after 3 weeks.



After 9 weeks, the Radiance parameter presents the best scores for the group applying the **NCEF-REVITALIZE SERUM** alone and the group combining the **NCEF-REVITALIZE SERUM + Meso-injections**.

Consumers Score a stronger improvement in Radiance with the following ranking:

1. **NCEF-REVITALIZE SERUM + Meso-injections**
2. **NCEF-REVITALIZE SERUM**
3. **Meso-injections**

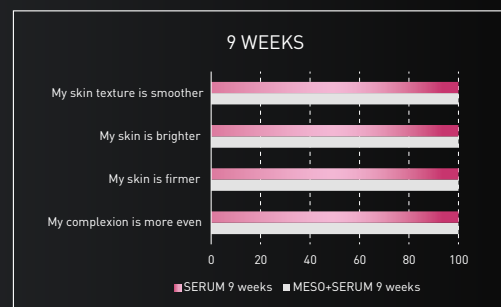
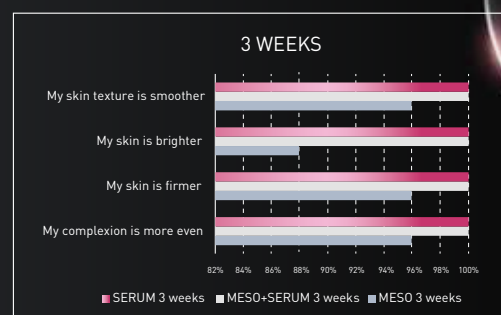
Smoothness and Skin tone evenness present the same profiles than Radiance: Results / Ranking at all time points (data not shown)

1. **NCEF-REVITALIZE SERUM + Meso-injections**
2. **NCEF-REVITALIZE SERUM**
3. **Meso-injections**

100% OF WOMEN WHO UNDERGO MESO-INJECTIONS ARE CONVINCED BY NCEF-REVITALIZE SERUM

ONE STEP AHEAD ON CELLULAR EXPERTISE A POTENT AND A NEW TECHNOLOGY DESIGNED TO BETTER DELIVER EFFICACY INTO THE HEART OF THE SKIN

AUTO-EVALUATION



100% of the study subjects using the NCEF-REVITALIZE SERUM alone or in combination with Meso-injections observe the improvement in different skin parameters after 3 and 9

EVENNESS

FIRMNESS

BRIGHTNESS

SMOOTHNESS

SUMMARY

DESCRIPTION & FORMULA

- / The new multi-patented and patent-pending^[15] NCEF technology incorporates ingredients essential to the cellular metabolism:
- 3 amino acids: arginine, glycine and taurine;
 - 1 peptide: carnosine;
 - 1 antioxidant: ergothioneine;
 - 2 minerals: sodium PCA and magnesium sulphate;
 - 2 vitamins: vitamin B3 (niacinamide) and vitamin E (α-tocopherol);
 - 1 co-enzyme: NAD (Nicotinamide Adenine Dinucleotide);
 - 1 low molecular weight hyaluronic acid

/ Ultra-light texture presenting a soft & luminous finish.

EFFECTS

Scientifically and clinically proven efficacy:

skin cohesion and tissue architecture

skin homeostasis and skin vitality

skin hydration and skin elasticity

firmness and tonicity

anti-aging and smoothness

radiance and evenness

antioxidant protection

HOW TO USE

/ Apply to face, neck and décolleté morning and night after cleansing, as a serum and before the cream.

/ Complimentary to the **NCEF-REVITALIZE CREAM**.

[15] US Patent 11,026,873/China ZL201580085613.2/ Patent-pending in Europe and US Patent 11,938,212 B2/ Patent-pending in China and Europe /France 962736-00-FR-01-SH (FR2403557).

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