





CE

CE-certified product

THE SAFTE FILLER (CE-certified product)

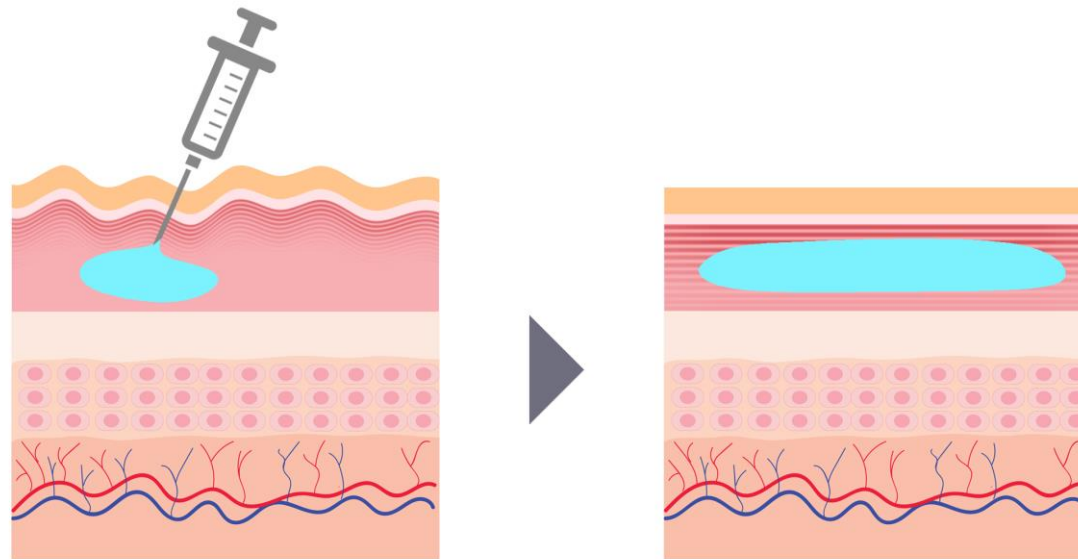
THE SAFE FILLER

Regain Volume, Regain Confidence

What is a Filler ?

Filler literally means a “filling material”, a substance injected subcutaneously to improve or correct wrinkles, dents, acne scars and/or facial lines.

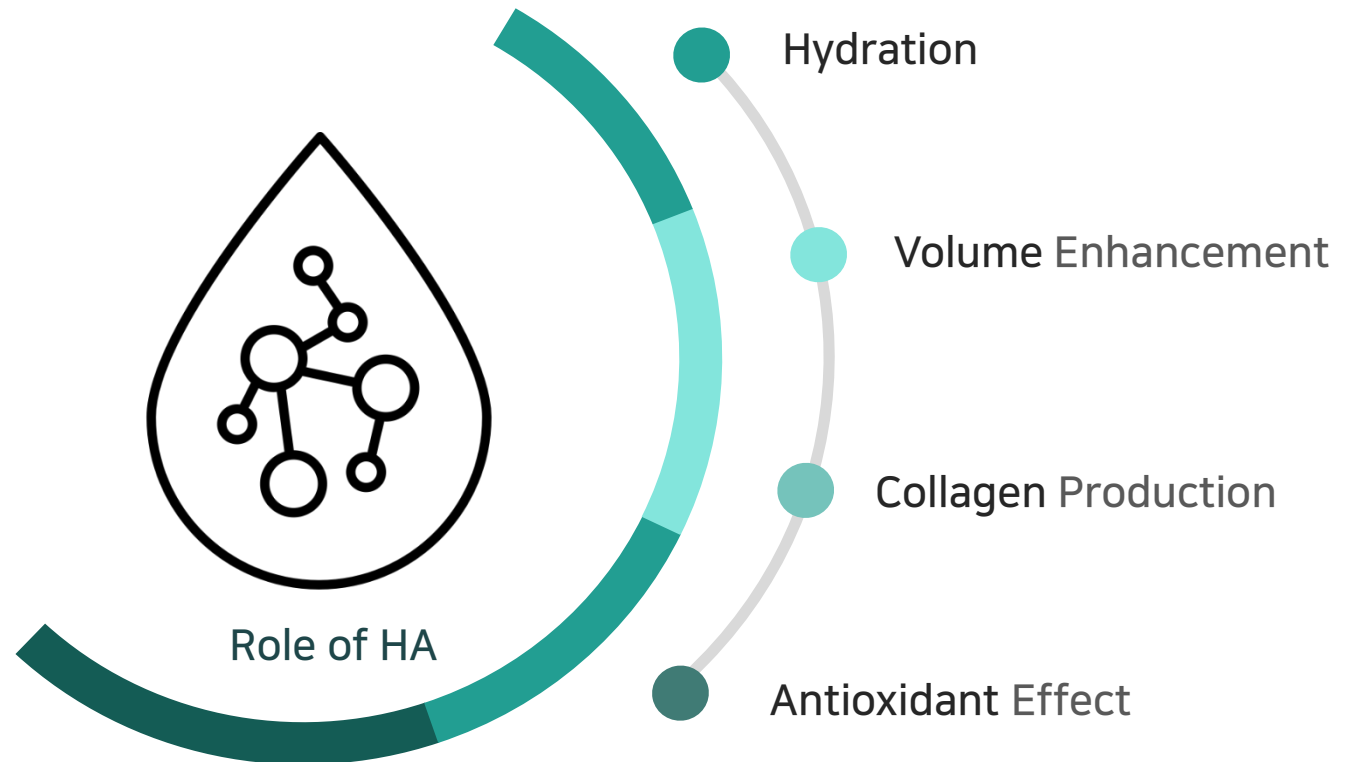
Fillers can be variously classified according to ingredients such as HA, collagen, calcium, PLLA, and etc. Among them, **HA fillers** are most widely used because of their **excellent safety**.



What is Hyaluronic Acid?

HA (Hyaluronic Acid) is a hydrophilic substance, which is also commonly called a **natural moisturizer**. It can absorb **1000 times** the weight of its own weight and has excellent moisture retention.

It is **100% biodegradable** safe component that exists in the human body.



WHY KAIRAX?

KAIRAX is an HA filler with maximized safety, convenience, and effectiveness based on excellent technology.





Technology

- h-DTP
- Degradation Test



Safety

- Purification Process
- Raw Materials



Convenience

- Extrusion Force
- Types



Effectiveness

- Viscoelasticity
 - Scientific Papers
-

Technology – h – DTP

STEP 1 . Chemical cross-linking



- Minimization of BDDE , a chemical cross-linking agent (About 60% of common filler BDDE input amount)

STEP 2 . Physical Cross-linking

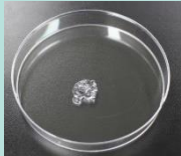
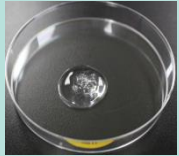
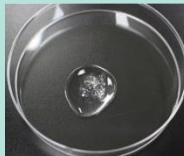

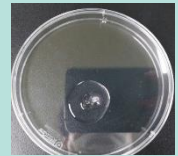
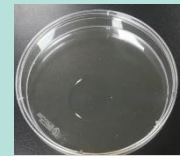
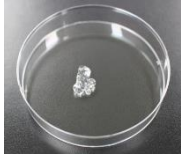
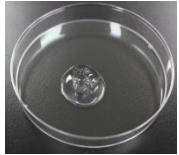
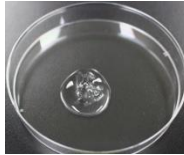
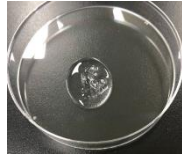
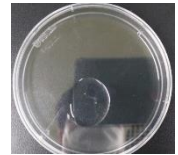
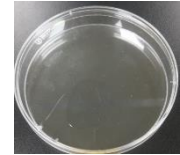
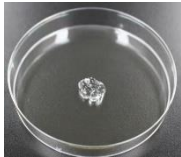
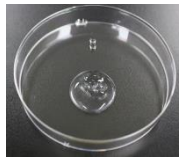
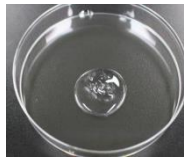
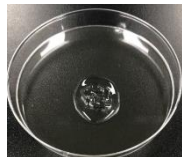
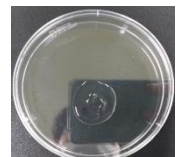
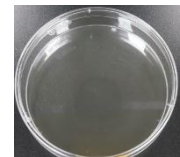

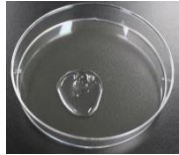
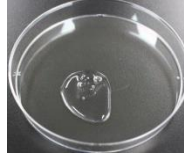
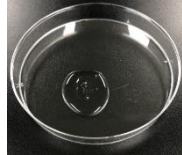
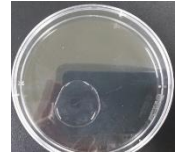
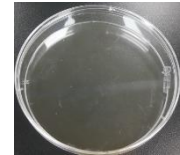


high-Density
Tapping Process

- LINKUSGLOBAL core production technology to improve viscoelasticity through physical crosslinking
- Realization of safe, high viscoelastic and cohesive filler
- Patent application number: Patent-2018-0077404

Technology – Degradation Test?

Change over time after injecting 1 ml of hyaluronidase 750 IU into 0.5 ml of KAIRAX

Filler \ Time	0 hour	After 3 hours	After 6 hours	After 12 hours	After 24 hours	After 48 hours
KAIRAX						
A Company Filler						
H Company Filler						
M Company Filler						

QTFILL PLUS retains big part of its shape 24 hours after hyaluronidase injection, which shows that it has **high viscoelasticity** and **long duration** compared to other fillers.

On the other hand, 48 hours after the injection, it is completely degraded, indicating that the filler has a **high purity** which results in **minimized side effects**.

Ref. Manufacturer Research Institute



Technology

- h-DTP
- Degradation Test



Safety

- Purification Process
- Raw Materials



Convenience

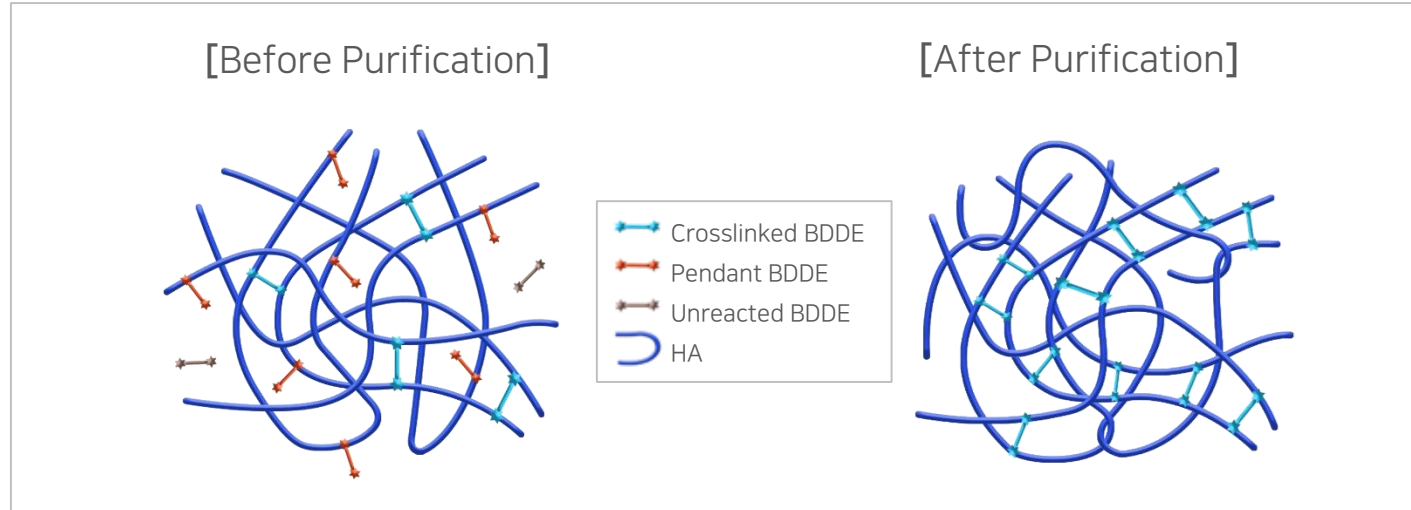
- Extrusion Force
- Types



Effectiveness

- Viscoelasticity
 - Scientific Papers
-

Safety – Purification Process



Impurities such as non-crosslinked BDDE (unreacted BDDE & pendant BDDE) residues and endotoxin residues were **minimized through a strict purification process.**

- BDDE residue : **Below detection limit**
- Endotoxin residue : **Below 0.1Eu/ml**
- Protein residue from HA raw material : **Below 0.1%**

Safety – Raw Materials

SHISEIDO CO., LTD. Kakogawa Factory
1190 Nagaya, Kakogawa-shi, Shizuoka, 436-0047, Japan
Phone: +81-537-24-1131, Fax: +81-537-24-2252

Reference Information

Please find the molecular weight result from the following product for your reference, which is calculated by Laurent's formula.

Product name : Shiseido Sodium Hyaluronate SZE Grade-EP
Lot No. : G078BA
Intrinsic viscosity : 2.4 m³/kg
Molecular weight : 1.57 MDa

Date: Apr 4, 2019
QA manager: Shigeyuki Higashi

Quality Assurance
Technical Department
SHISEIDO CO., LTD. Kakogawa Factory
Phone: +81-537-24-1131
Fax: +81-537-24-2252

MOEHS CATALANA, S.L.
Polígono Rubí Sur
C/Car Marínol / Brunet, 12A - 08191 Rubí (Barcelona - SPAIN)
Tel. (34) 93 589 05 20
Fax (34) 93 589 05 13

CERTIFICATE OF ANALYSIS

Product: LIDOCAINE HYDROCHLORIDE MONOHYDRATE Ph. Eur. 9/USP 42 Code: 74850
Batch No: 879 Manufacturing: 05/2019 Re-test Date: 05/2024
Customer: Shipment (kg): 15,00 Pallets: 3

TESTS	SPECIFICATIONS	RESULTS
CHARACTERS Appearance Colour SOLUBILITY In Water In Ethanol (96%) In Chloroform In Ether	Crystalline powder White or almost white Very Soluble Freely Soluble Soluble Insoluble	Conforms Conforms Conforms Conforms Conforms Conforms
IDENTIFICATION IR Spectrum HPLC Chloride reaction	Conforms to Std. Conforms to Std. Positive	Conforms Conforms Conforms
SPECIFIC TESTS Water (H ₂ O) Aspect of solution S Colour of solution S pH (0.5% Sol.)	5,58 to 7,04 Clear (Max. Ref. 1 opal) Colourless (Max. Ref. 0-9) 4,6 to 5,5	4,26 % Conforms Conforms 4,90

We hereby certify that the above information is authentic and accurate. This batch has been manufactured, including packaging and quality control, in the above mentioned site in full compliance with the GMP requirements. The batch processing, packaging and analysis records were reviewed and found to be in compliance with ICH Q7, EU GMP Part II and 21 CFR Parts 210 & 211.

Released by QM on: 14/04/2019
QA Assessed on: 14/04/2019
Signed by Quality Control:
Filer: [Signature]
QC Manager: [Signature]

Page: 1/2

SIGMA-ALDRICH
3650 Sigma Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email: techserv@sigmaaldrich.com
Outside USA: service@sigmaaldrich.com

Certificate of Analysis

Product Name: 1,4-Bis(methyl diethyl) ether - x95%
Product Number: 229092
Batch Number: MK02392
Name: ALDRICH
CAS Number: 14257-79-3
MOL Number: MFCD00051446
Formula: C10H18O4
Formula Weight: 202.26 g/mol
Quality Release Date: 30 MAY 2017

Test	Specification	Result
Appearance (Color)	Colorless	Colorless
Appearance (Form)	Liquid	Liquid
Infrared Spectrum	Conforms to Structure	Conforms
Purity (GC)	≥ 95.0 %	96.8 %

Michael Clark, Manager
Quality Control
Milwaukee, WI, USA

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Version Number: 1 Page 1 of 1

Pay extra attention to quality control, by using **EDQM listed materials** such as HA (150kDA heavy-molecular raw material), lidocaine, and BDDE to **ensure safety**.



Technology

- h-DTP
- Degradation Test



Safety

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Convenience

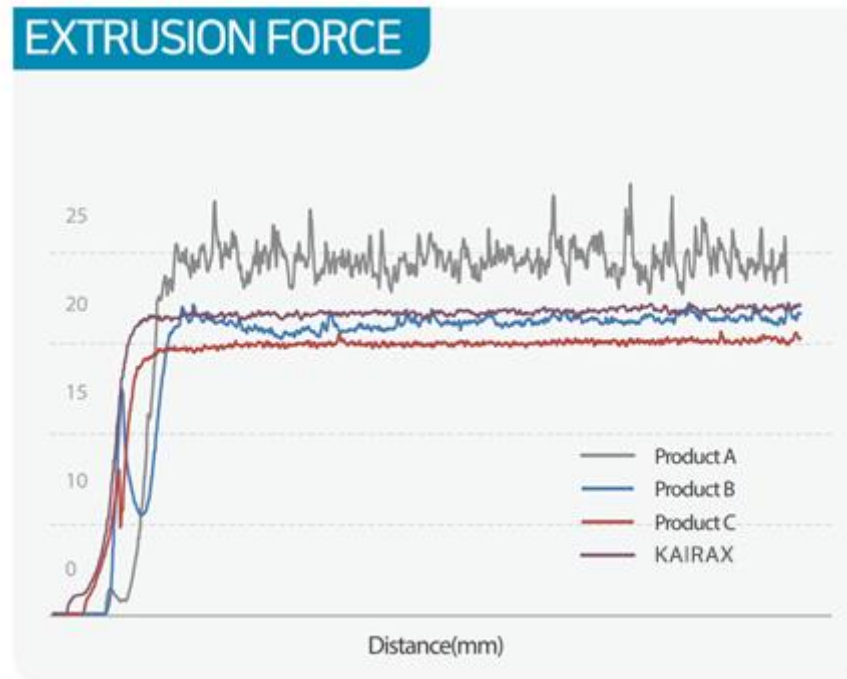
- Extrusion Force
- Types



Effectiveness

- Viscoelasticity
 - Scientific Papers
-

Convenience – Extrusion Force

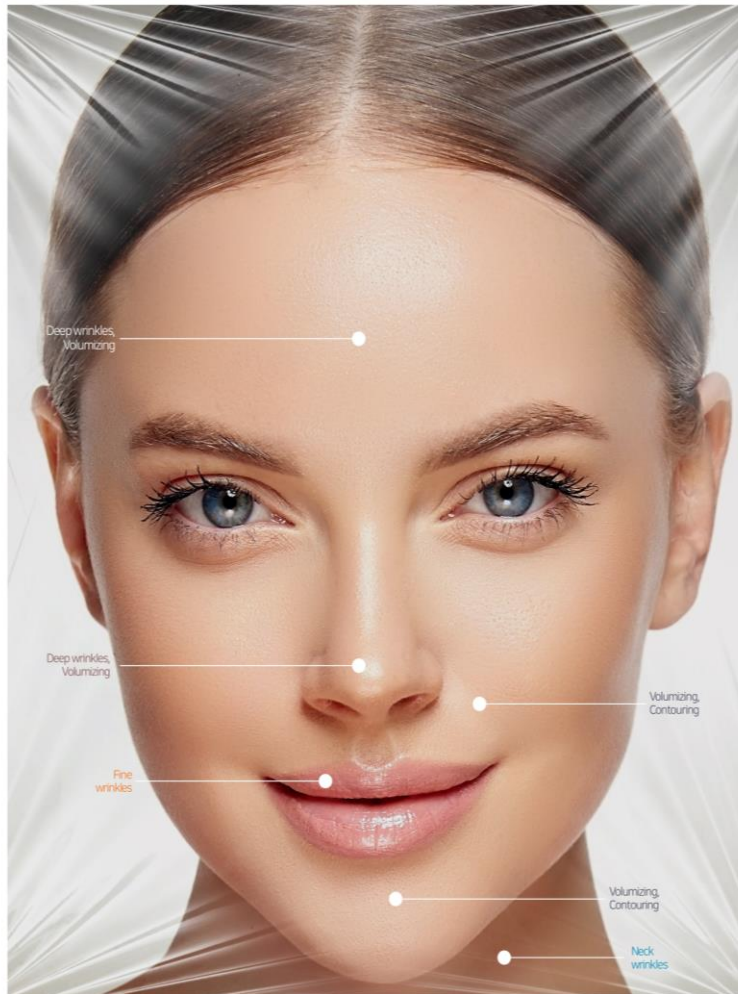








The KAIRAX extrusion force, indicated by a purple line, is a [straight line](#) since the initial rise.

This means that when the filler is first injected, the extrusion force is high,
but the injection pressure thereafter is uniform.

Equal pressure increases the convenience of the procedure with a [stable and smooth shooting](#).

Convenience – Types



PRODUCT NAME	KAIRAX FINE	KAIRAX DEEP	KAIRAX SUB Q
TYPE			
GEL			
PURPOSE	Fine wrinkle correction	Deep Wrinkle correction, Volumizing	Volumizing
INDICATION	Periorbital line, Crow's feet, Lip contour	Glabella lines, Nasolabial folds, Marionette lines, Nose/forehead contour	Nasolabial folds, Chin, Body contour
DURATION	3~6 months	6~12 months	Over 12 months
VISCOELASTICITY	60 ~ 120 pa	120 ~ 220 pa	350 ~ 450 pa

- KAIRAX is divided into 3 types:
- FINE, DEEP, and Sub-Q depending on the viscoelasticity.
- It can be applied from the entire face to the neck with the appropriate type of product depending on the application area, required amount, and desired treatment direction, etc.



Technology

- h-DTP
- Degradation Test



Safety

- Purification Process
- Raw Materials



Convenience

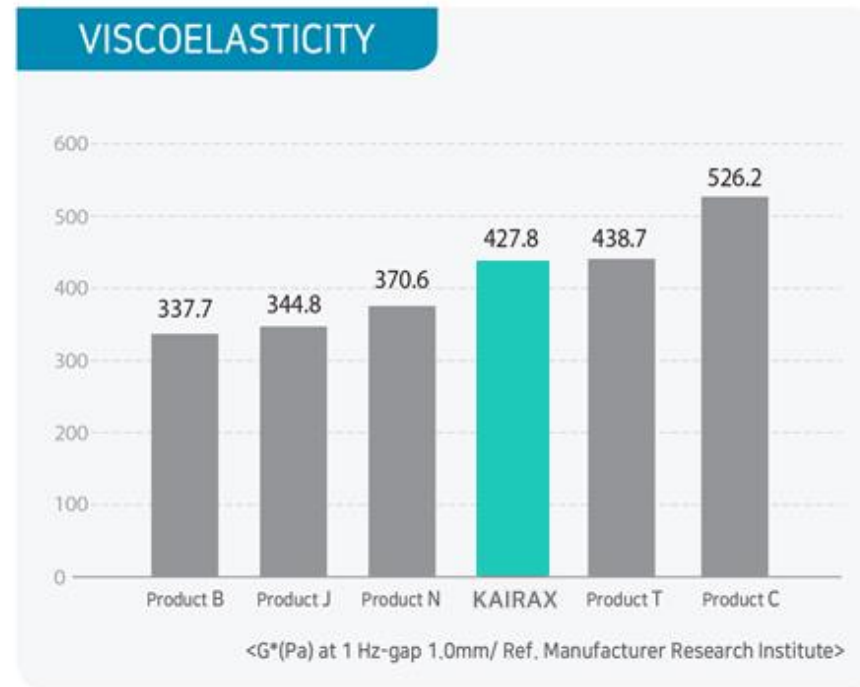
- Extrusion Force
- Types



Effectiveness

- Viscoelasticity
 - Scientific Papers
-

Effectiveness – Viscoelasticity

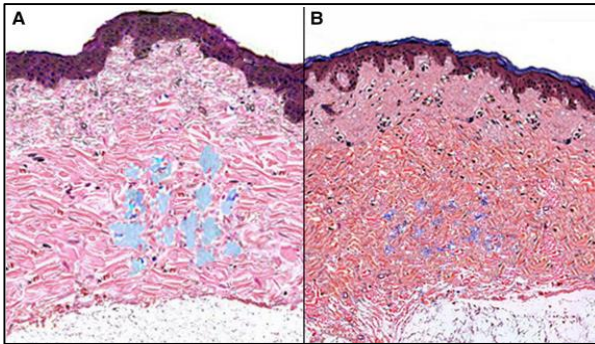


KAIRAX Sub-Q has a viscoelasticity of 427.8 Pa, which belong to a filler with high viscoelasticity.

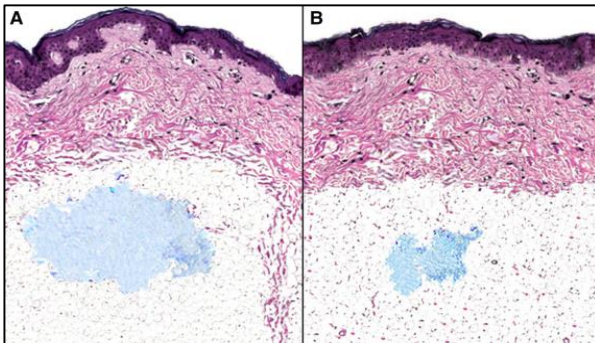
The high viscoelasticity of KAIRAX **maintains the excellent volume effect for a long time.**

Effectiveness – Scientific Papers

『Histological and Quantitative Appraisal of the Intradermal and Subcutaneous Distribution of the Hyaluronic Acid Injected into the Nasolabial Fold』



- A. Small nodules of HA into the NLF dermis 72 h after application.
- B. Significant decrease in diameter and number of the small nodules 9 months after application



- A. A Nodule diameter 72 h after application into the subcutaneous fat.
- B. Moderate decrease in the nodule diameter 9 months after application

Published on March 20, 2020 in [Aesthetic Plastic Surgery](#), a world-renowned academic journal. Author, [ANTONIO CARLOS ABRAMO](#), is a prominent plastic surgeon who actively conducts medical research, surgery, and education in Brazil.

[Summary]

- Comparison by injecting KAIRAX Sub-Q into the dermal layer and subcutaneous layer of folds of wrinkles (sample: 10 persons)
- Filler degradation occurs on the surface of and inside the gel. Dermis splits the filler gel into several nodules due to the tight collagen fibers meshwork, while subcutaneous fat layer is flexible and lightly dense, allowing homogeneous and compact distribution of the gel.
- Therefore, injection into subcutaneous fat layer has longer permanence than injection into dermis.
- KAIRAX Sub-Q acts as an [effective and long-lasting volumizer](#) due to its [high concentration and cohesivity](#), when injected into the subcutaneous layer of the NFL (nasolabial fold).

This paper demonstrates that [KAIRAX is effective HA filler for nasolabial folds](#).

Before & After

Male / 30Y

Forehead
Temple

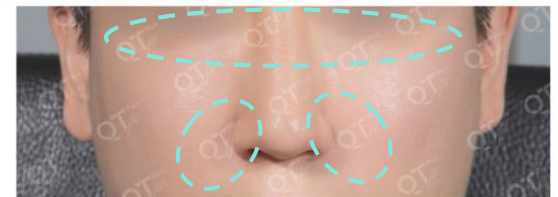
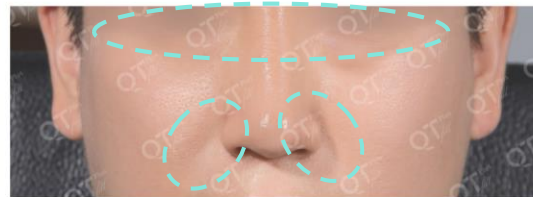
KAIRAX **Sub-Q**
KAIRAX PLUS **DEEP**



Male / 36Y

Under eye
Nasolabial folds

KAIRAX **Sub-Q** & **FINE**
KAIRAX **Sub-Q** & **FINE**



Female / 28Y

Nose

KAIRAX **Sub-Q** & **DEEP**



Female / 25Y

Under eye
Cheek
Chin
(Asymmetry
correction)

KAIRAX **DEEP** & **FINE**
KAIRAX **DEEP** & **FINE**
KAIRAX **DEEP** & **FINE**



KAIRAX, A Choice by Prudent People



“Quality & Trust”

These are core values that LINKUSGLOBAL always keeps in mind when developing, producing and selling all products.

Customers who have once selected KAIRAX, are loyal to it.

In the future, LINKUSGLOBAL will keep the original mind so that our customers continue to get products they are looking for.