



 **KAIRAX**

[WWW.KAIRAX.CO.UK](http://WWW.KAIRAX.CO.UK)

**THE SAFE FILLER**  
**Regain Volume, Regain Confidence**

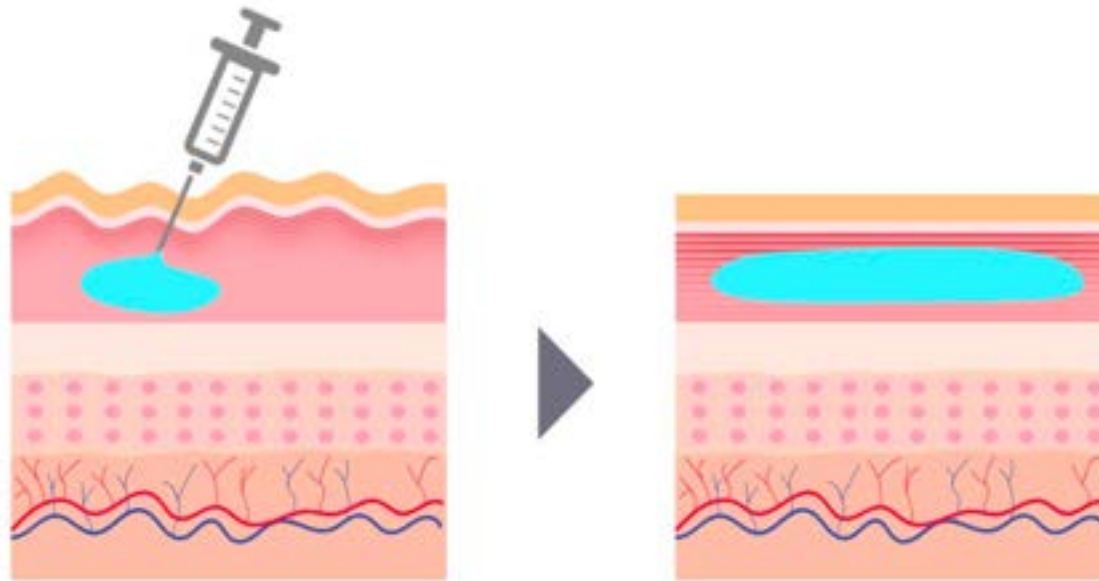


CE-certified product

## 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.

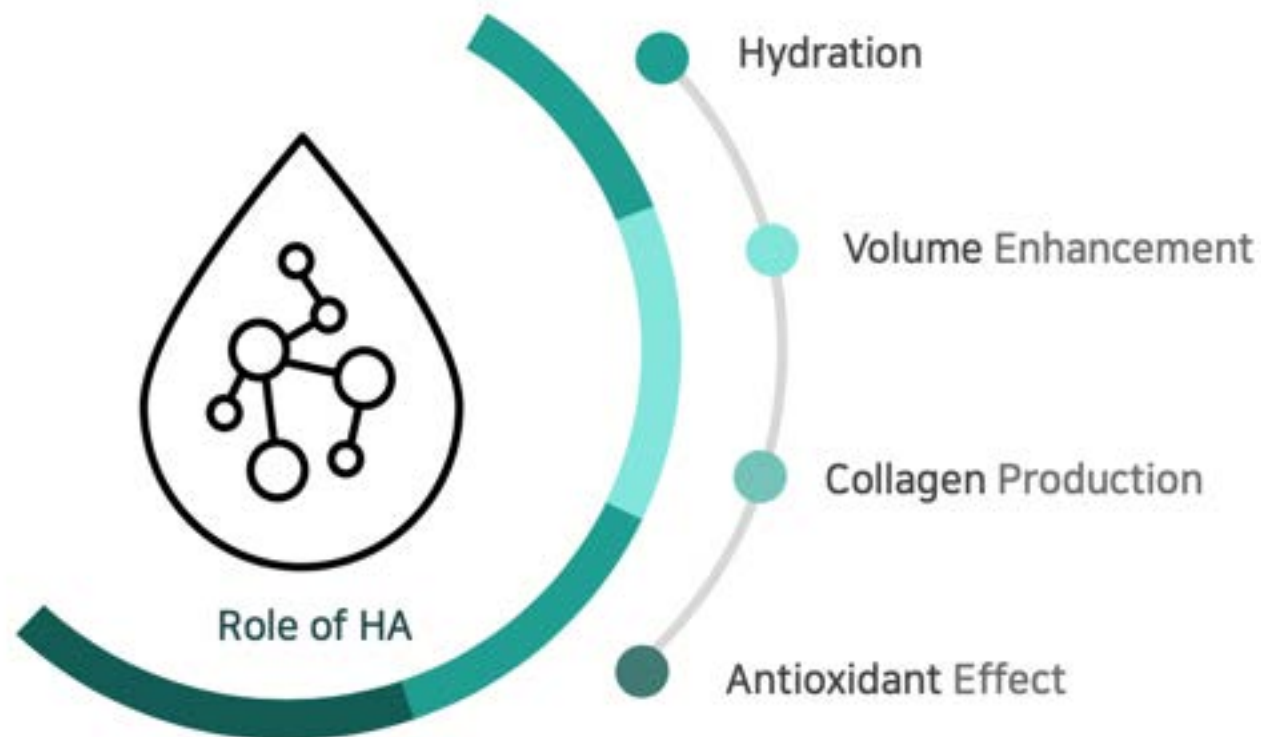
Fillers can be variously classified according to ingredients such as HA, collagen, calcium, PLLA, and etc. Among them, HA fillers are most widely used because of their excellent safety.



## What is Hyaluronic Acid?

HA (Hyaluronic Acid) is a hydrophilic substance, which is also commonly called a natural moisturiser.

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 maximised 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



- VICTORIASUN 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





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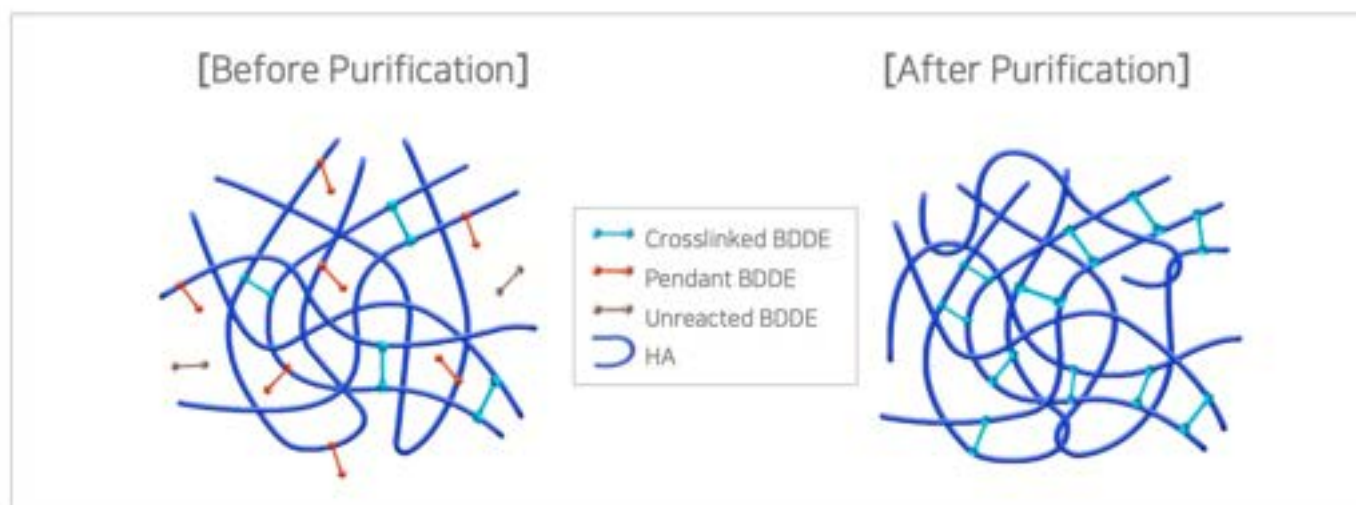
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## Safety – Purification Process



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

**Reference Information**

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

Product name : **Blebbistatin Sulfoxone B22 Grade SP**  
 Lot No. : **02756A**  
 Substrate viscosity : **0.4 uPa**  
 Molecular weight : **1.87 kDa**

Date: Apr 4, 2019  
 Signature: [Signature]

Quality Assurance  
 Technical Department  
 SIGMA-ALDRICH CO., LTD. Sakaguchi Factory  
 Phone: +81 907 34 1111 Fax: +81 907 34 9999

**CERTIFICATE OF ANALYSIS**

TEST	APPROXIMATION	RESULT
Appearance	Hygrosopic powder	Conforms
Color	White or almost white	Conforms
IR (KBr)	None detectable	Conforms
UV (254nm)	None detectable	Conforms
pH (Distilled water)	Neutral	Conforms
Loss on Drying	Hydrous to 10%	Conforms
Residue on Ignition	Hydrous to 10%	Conforms
Water (Karl Fischer)	1.30 to 1.50	1.34
Refractive index (20°C)	None detectable	Conforms
Optical rotation (20°C)	None detectable	Conforms
Intrinsic Viscosity (0.5% in water)	1.5 to 2.5	1.87

We hereby certify that the above information is accurate and complete. This certificate has been independently audited, prepared and verified in strict accordance with the strict procedures used in our reference data and reports. The basic procedures, practices and methods involve the use of standard and tested to be in compliance with ISO 9001:2008 and ISO 13485:2003.

Released by: [Signature]  
 Quality Assurance Department  
 Sig. No. [Signature]

**Certificate of Analysis**

Product Name: **1,4-Bis(2-hydroxyethyl)pyridine - 98%**

Product Number: **24889**  
 Batch Number: **24889020**  
 Size: **250g**  
 Lot Number: **24889020**  
 MFG. Method: **24889020**  
 Grade: **98%**  
 Storage Temp: **Room Temp**  
 Shelf Life: **30 Days**

Test	Specification	Result
Appearance (Visual)	Colorless	Conforms
Refractive Index (20°C)	1.500	1.500
Density (20°C)	1.000	1.000
Water (Karl Fischer)	≤ 0.1%	0.05%

SIGMA-ALDRICH warrants that at the time of the public release of information that the product conforms to the information contained on this certificate. The actual specifications shall only be available in Sigma-Aldrich Ltd. The factors mentioned above should be considered as approximate and should not be used for quality control purposes. The release date of product is pending. We do not warrant the purity and quantity of the product.

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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**.



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### Convenience

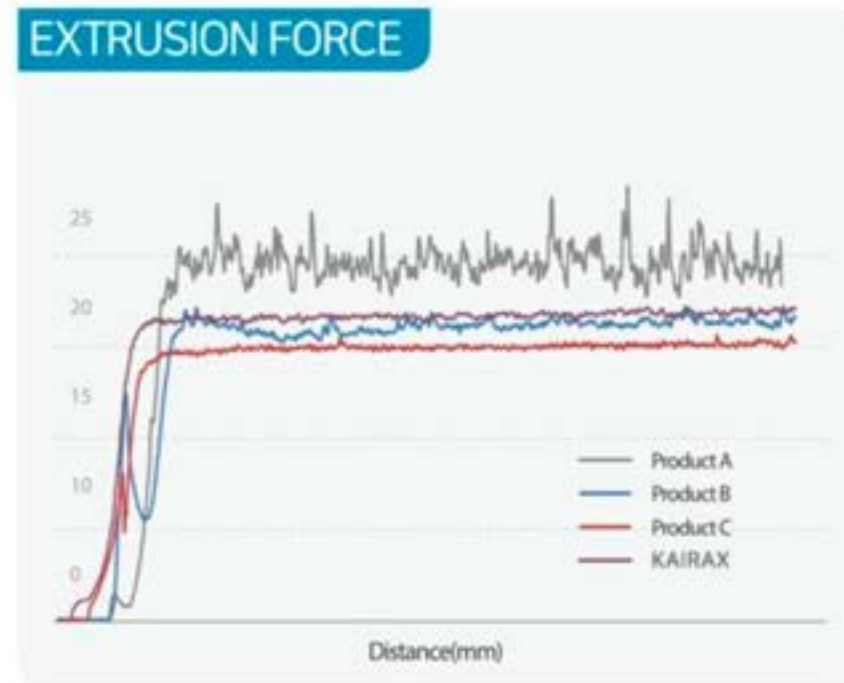
- Extrusion Force
- Types



### 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/ Lip 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.



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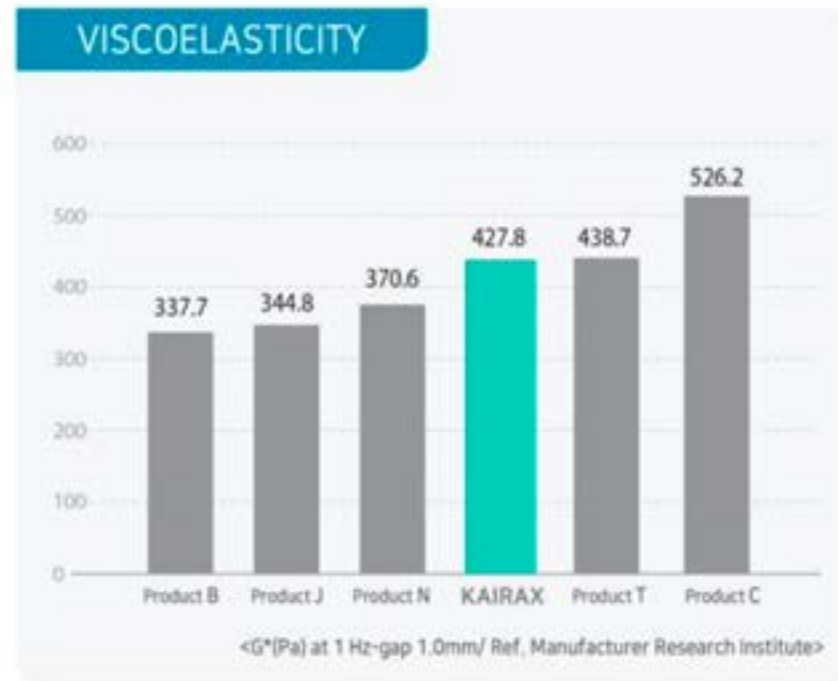


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## Effectiveness – Viscoelasticity

[www.kairax.co.uk](http://www.kairax.co.uk) | [sales@kairax.co.uk](mailto:sales@kairax.co.uk)

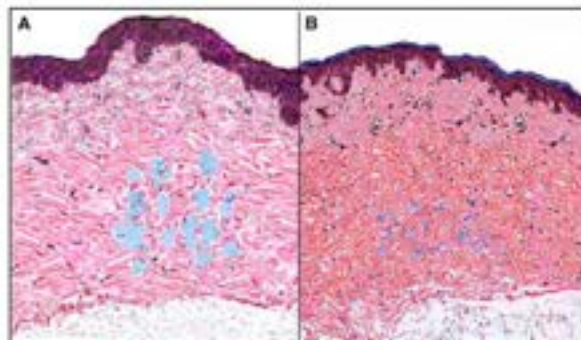


KAIRAX Sub-Q has a viscoelasticity of 427.8 Pa, which belong to a filler with high viscoelasticity.

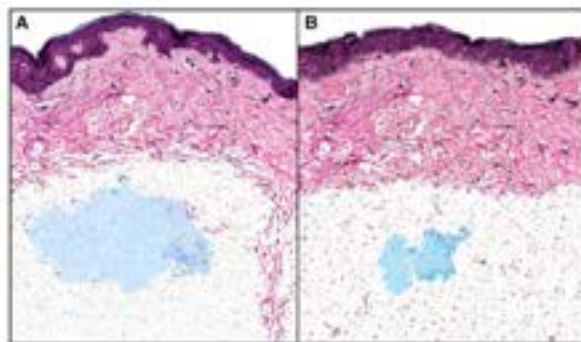
The high viscoelasticity of KAIRAX maintains the excellent volume effect for a long time.

## 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**





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