
Internal use only
The filler for foxy and
wise ladies, VOM
VOM
CGBIO
CELL & GROWTH FACTOR
BIOTECHNOLOGY

The filler for foxy and wise ladies, VOM

VOM V　　VOM O　　VOM M

CGBIO CELL & GROWTH FACTOR BIOTECHNOLOGY

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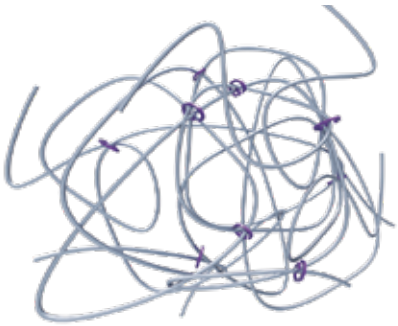
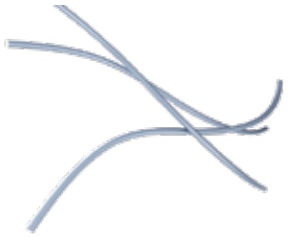
01

The World's First Multi-Layered Phasic Filler

Crosslinked HA (=layer) & non-crosslinked HA



- **Crosslinked HA (=layer)**

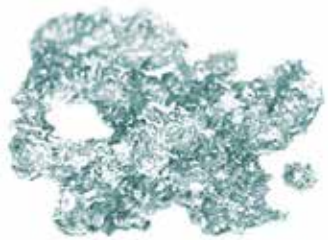


- **Non-crosslinked HA**

- "Layer" refers to crosslinked HA polymer chains that determine the lifting effect.
- Each layer has constant reversible resilience to external stress, but non-crosslinked HA polymer chains are irreversibly deformed once stressed.
- Therefore, the characteristics of each layer are the biggest factor in determining the nature of the filler product.

Crosslinked HA gel & particle

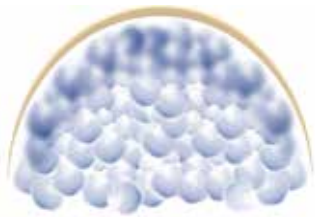
- HA gel



- HA particle

Monophasic vs Biphasic

- Monophasic



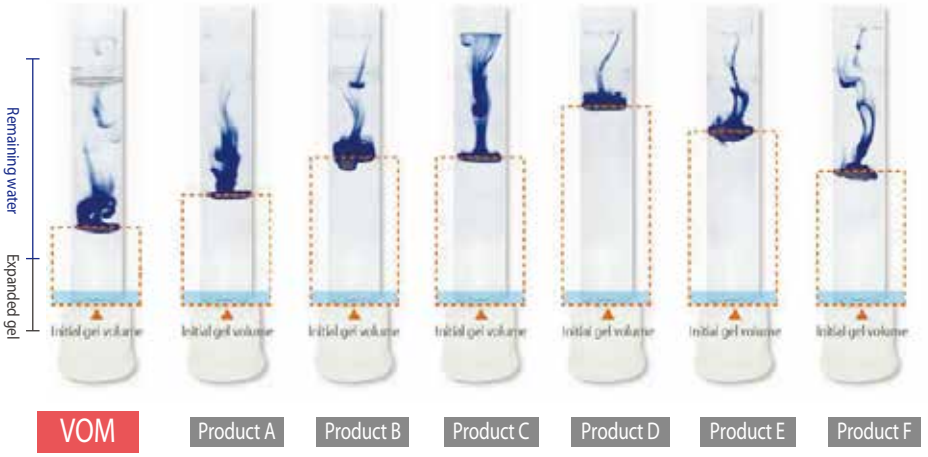
- Biphasic

- The layers can be divided into "crosslinked gels" and "crosslinked particles" before being mixed to achieve biphasic or monophasic status.
- The layers are crucial because following the injection, they allow the filler to remain in the body and provide a lifting effect.

02

Less swelling

Hydration status



- The VOM was sufficiently hydrated to minimize the possibility of unexpected edema due to changes in osmotic pressure or pH in the body after filler injection.

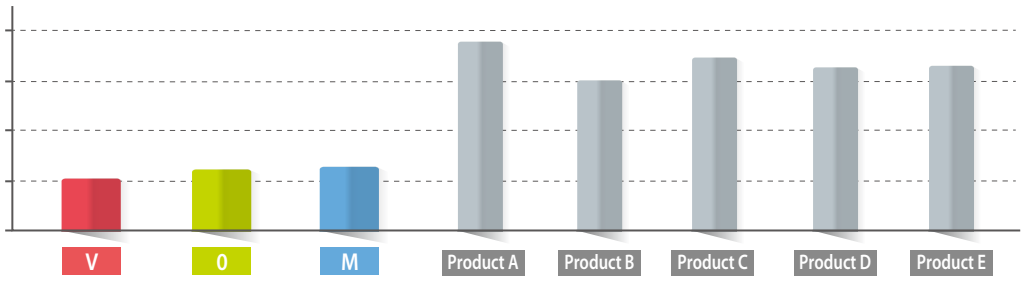
Ref. Data on file (R&D Center of CGBio Co., Ltd., Seoul, Korea)

03

Safety

Degree of Modification (MoD)

Product	V	O	M	Product A	Product B	Product C	Product D	Product E
MOD	2.14%	2.44%	2.45%	7.36%	6.02%	6.95%	6.42%	6.48%



- BBDDE (1, 4-butanediol diglycidyl ether), a cross-linking agent in HA, is one of the most likely causes of allergic reactions.
- Therefore, the degree of modification (MoD) value, which measures the total amount of fully and pendant crosslinked BDDE, is an indirect predictor of a delayed inflammatory response that may occur after HA filler injection.

Ref. Data on file (Department of Dermatology, Chung-Ang University College of Medicine, Seoul, Korea)

04

Various application

Rheologic properties

	Storage Modulus (G')	Loss Modulus (G")	Typical Treatment Areas
VOM V	239 Pa	67 Pa	**Areas requiring smoothness with moderate viscosity and elasticity** (e.g., middle of forehead, bags under eyes, lips, and fat under eyes)
VOM O	416 Pa	83 Pa	**Areas requiring volume and resilience due to high viscosity and elasticity** (e.g., front cheekbones and nasolabial folds)
VOM M	572 Pa	144 Pa	**Areas where both viscosity and elasticity are very high, so volume is particularly needed** (e.g., nose, forehead, and chin)

Modulus

*VOM has high G' and G" values, so it holds volume and has good resilience.

Storage Modulus (G')	416 Pa	A=163 Pa	B=206 Pa	C= 90 Pa
Loss Modulus (G")	83 Pa	A=35 Pa	B=36 Pa	C=33 Pa

* Comparison data based on VOM O.

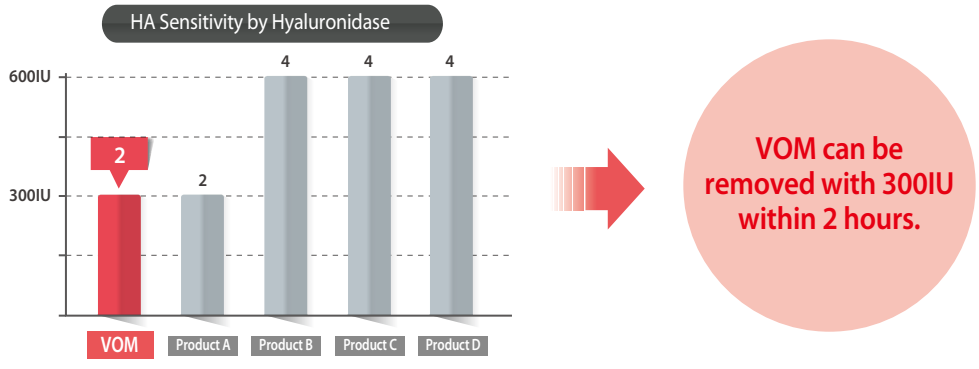
- **VOM has high G' and G" values, so it maintains volume well and has good elasticity.**

Ref. Data on file (R&D Center of CGBio Co., Ltd., Seoul, Korea)

05

Quick correction

HA Sensitivity to Hyaluronidase



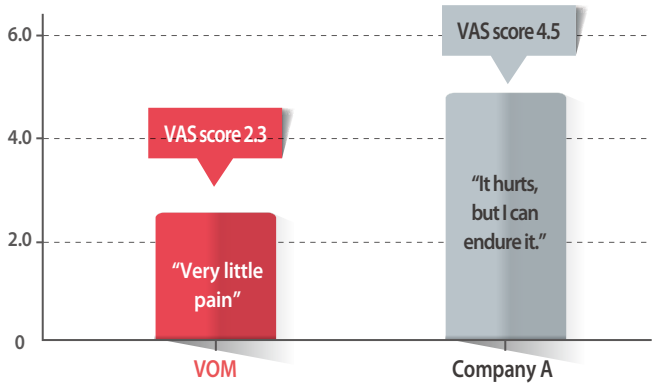
- The reason for using HA fillers is that they are safe and can be easily removed if correction is needed.
- Therefore, HA fillers can be easily corrected.
- **VOM can be removed with 300 IU within 2 hours.**

Ref. Data on file (R&D Center of CGBio Co., Ltd., Seoul, Korea)

06

Less pain

Pain index; VAS score



Ref. Clinical report for approval by the Ministry of Food and Drug Safety

- **We promise a comfortable procedure with minimal pain.**
  1. VOM can be applied immediately without topical anesthesia.
  2. Lidocaine is uniformly mixed by the R-square method to minimize pain during the procedure.
- The visual analogue scale (VAS) is used to determine the pain intensity experienced by individuals. It is widely used to measure the pain caused by medical devices and prescription drugs.
  (Generally, based on score **3.0, considered as "not painful"**)

Ref. Data on file (Clinical data, publication in progress)

07

Safe manufacturing process

ISO 13485/ cGMP facility certified by the Ministry of Food and Drug Safety



- The manufacturing process and environment are important for good HA fillers.
- VOM is manufactured in a **state-of-the-art cGMP-certified facility** under aseptic conditions.
- Possible penetration of hazardous substances has been blocked through a **without-pause manufacturing process.**
- VOM fillers are manufactured using **pharmaceutical-grade water for injection (WFI).**

The filler for foxy and wise ladies, ***VOM***

VOM

- Multi Layered Phasic
- R² Technology (Rotation & Revolution)
- HA: 20mg/ml
- Needle: 27G ½' / 30G ½'
- Purpose: Fine Wrinkle Correction
- Injection Depth: Mid Dermis

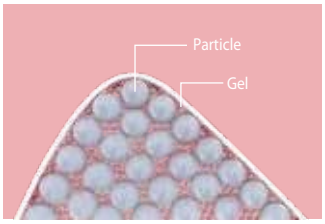
- Multi Layered Phasic
- R² Technology (Rotation & Revolution)
- HA: 20mg/ml
- Needle: 27G ½' (2ea)
- Purpose: Deep Wrinkle Correction
- Injection Depth: Deep Dermis

- Multi-Layered Phasic
- R² Technology (Rotation & Revolution)
- HA: 20mg/ml
- Needle: 25G ½' (2ea)
- Purpose: Volumizing & contouring
- Injection Depth: Sub-Q Layer

The world's first multi-layered phasic HA filler, VOM is manufactured using a patented R-square technology

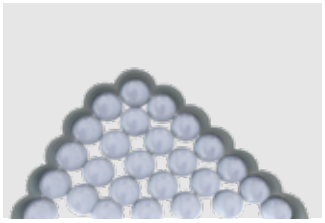
Multi-layered

Multi-layered Phasic



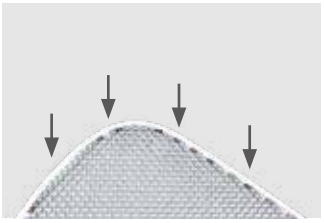
The combination of HA Particles and HA Gel provides excellent lifting and holding force.

Biphasic



After a period of time, the surface may become uneven and produce unnatural results

Monophasic



After a period of time, the filler may collapse because of its low elasticity.

VOM has a multi-layered phasic form, in which two layers coexist together in the body.

- VOM possesses a multi-layered structure in which the crosslinked gel uniformly surrounds the crosslinked particles through R-square technology
- The multi-layered structure reduces the situations in which cross-linked particles with relatively high recovery power come into direct contact with the treatment area and become unnatural.

※ **R-Square** is a patented manufacturing technology that uses an orbital rotation process to mix two high-viscosity formulas, which are then evenly dispersed.