



*Dermalax*<sup>TM</sup>  
CROSS LINKED HYALURONIC ACID

THE CHAEUM<sup>®</sup>  
— PREMIUM —

Dermalax<sup>TM</sup> & THE CHAEUM<sup>®</sup> reshapes your face, youth and life!



## Supreme & Pure monophasic crosslinked HA soft tissue filler

manufactured by a state-of-the-art technology of Hugel; its stabilized and even HA structure is achieved through **long crosslinking time at low temperature.**

**Customizable viscoelasticity & HA concentration** of Dermalax<sup>TM</sup> & THE CHAEUM<sup>®</sup> provide various treatments and indications giving optimum results and maximizing satisfaction.

High  
Elasticity

Longer  
Duration

Advanced  
Safety

Natural  
Look

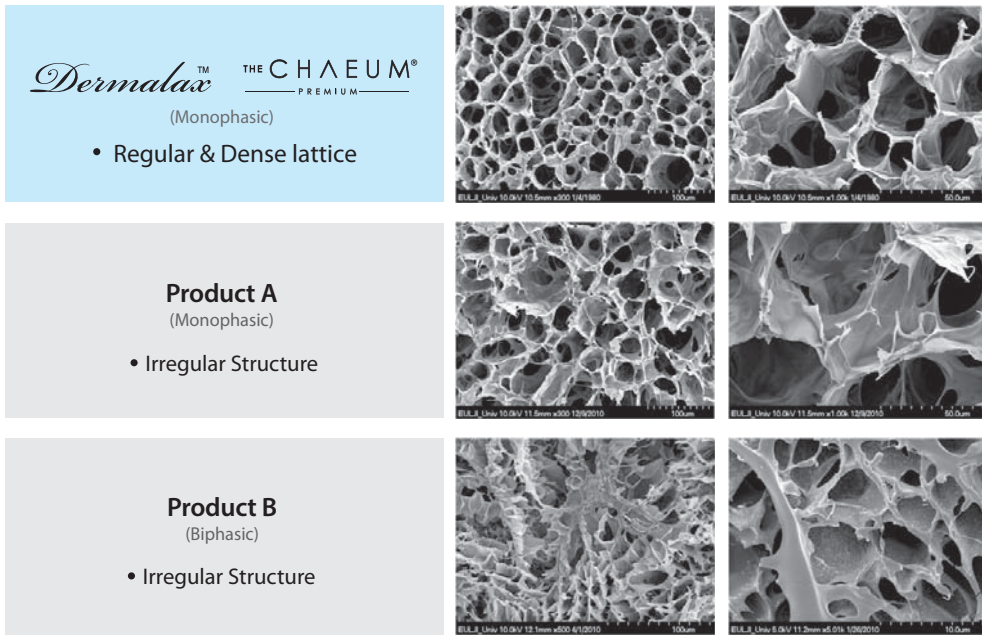
Dermalax <sup>TM</sup>	Plus	Deep Plus	Implant Plus
HA Concentration	20 mg/mL	24 mg/mL	24 mg/mL
G' Value	80 ± 15 Pa	160 ± 15 Pa	280 ± 15 Pa
Lidocaine	Lidocaine 0.3%		
Injection Depth	Superficial dermis	Mid, deep dermis	Subcutaneous layer
Storage	Storage between 2-25°C, and protect from direct sunlight and freezing		
Shelf Life	24 months		
Approval Status	CE Certified		

THE CHAEUM <sup>®</sup>	Premium No.1	Premium No.2	Premium No.3	Premium No.4
Crosslinking Rates	⬡⬡⬡⬡⬡	⬡⬡⬡⬡⬡	⬡⬡⬡⬡⬡	⬡⬡⬡⬡⬡
Gel Type				
HA Concentration	24 mg/mL	20 mg/mL	20 mg/mL	20 mg/mL
G' Value	80 ± 15 Pa	180 ± 15 Pa	300 ± 15 Pa	400 ± 15 Pa
Lidocaine	Lidocaine 0.3%			
Injection Depth	Superficial, Mid dermis	Mid, deep dermis	Subcutaneous layer	
Storage	Storage between 2-25°C, and protect from direct sunlight and freezing			
Shelf Life	24 months			

# EVEN CROSSLINKING

Even crosslinking technology offers the regular and dense lattice

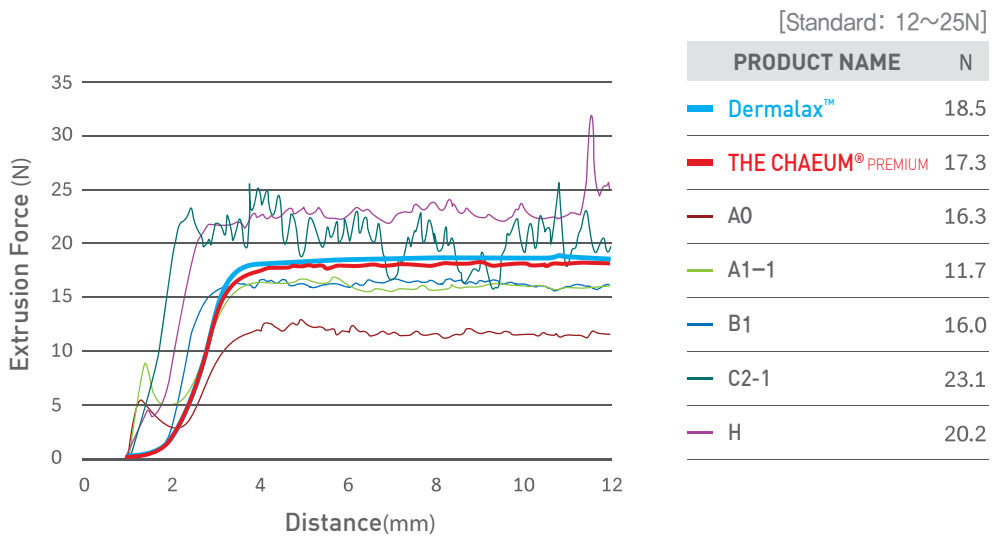
## SEM (Scanning Electron Microscope)



Ref) In-house

Constant extrusion force allows smooth injection

## EXTRUSION FORCE VS. DISTANCE

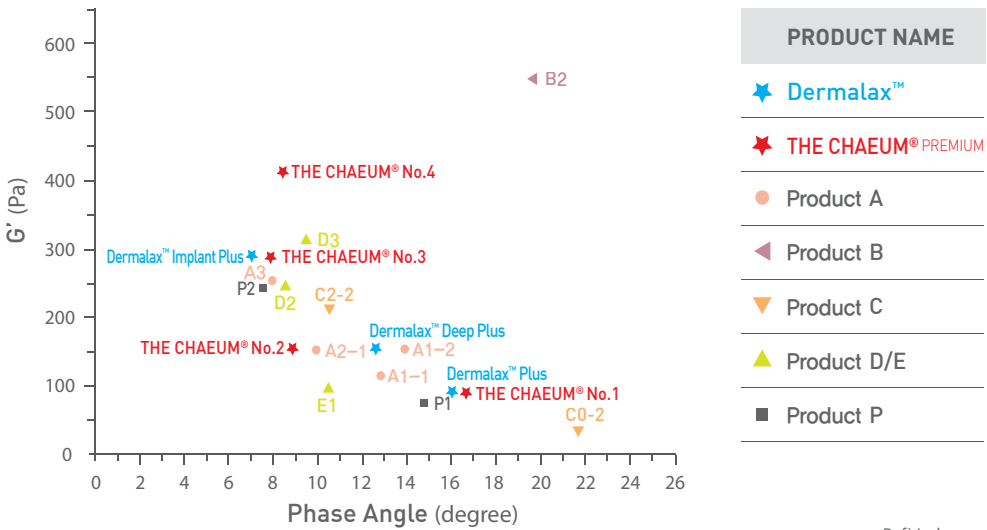


Ref) In-house

# HIGH ELASTICITY

Superior elasticity due to low phase angle results in faster elastic recovery rate

## G' VS. PHASE ANGLE



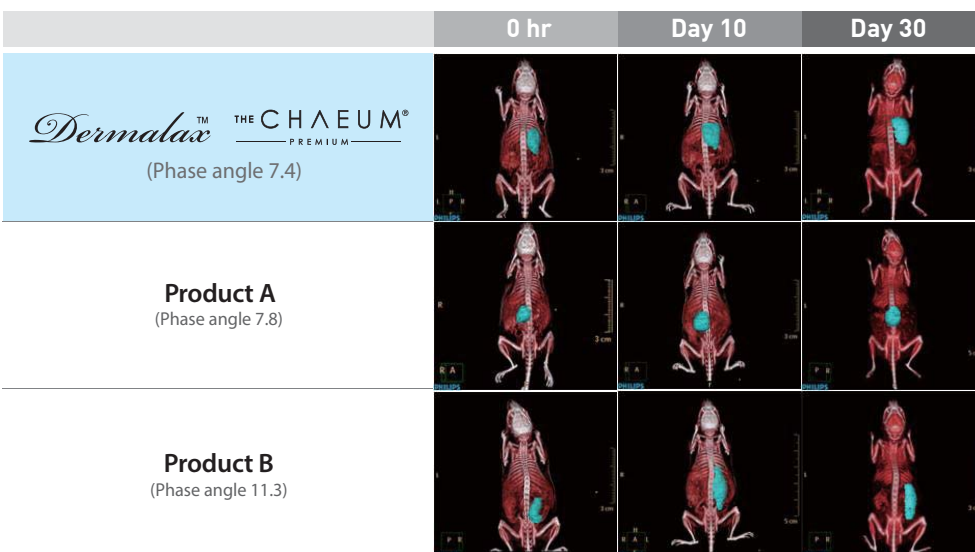
Ref) In-house

\*Phase angle:  $G'$  (elasticity) and  $G''$  (viscosity) are determined by the phase angle. The phase angle of perfect elastic body is  $0^\circ$ , indicating the maximum  $G'$ , whereas that of perfect fluid is  $90^\circ$ , indicating the maximum  $G''$ .

By lowering the phase angle, Dermalax™ and THE CHAEUM® Premium shows the higher elasticity than other products.

Maintaining the shape with the stable formation *in vivo* indicates the importance of the phase angle

## Formation test *in vivo*

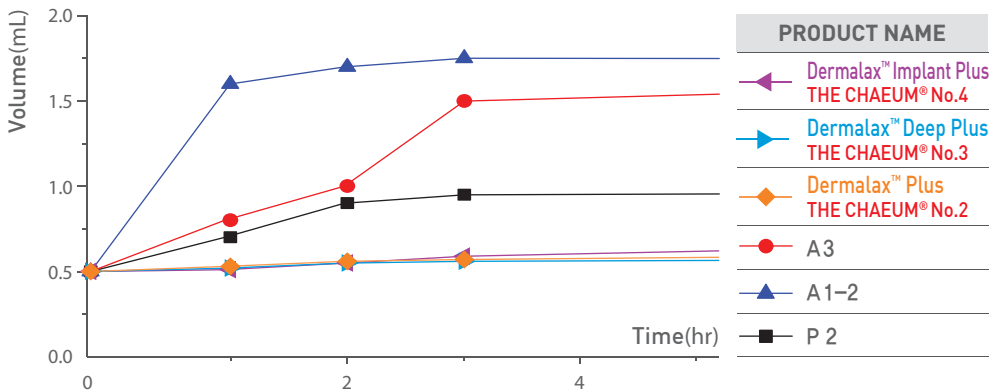


Ref) Safety & Efficacy evaluation of HA (Hyaluronic Acid) Dermal filler (*in vivo*), Chung-Ang University Hospital, 2014

# 100% CROSSLINKED HA

100% crosslinked HA without non-crosslinked HA as lubricant  
minimizes the initial swelling

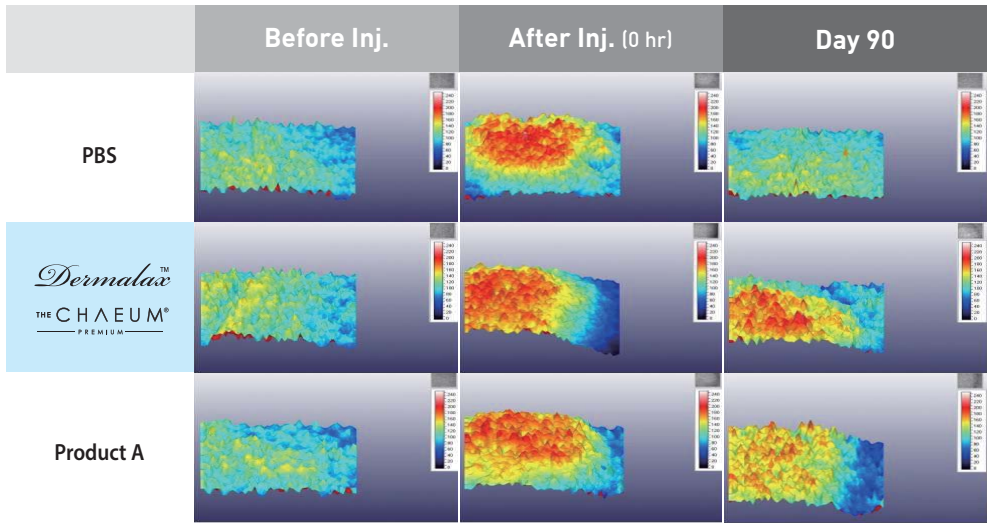
## Water Swelling Test



hr	Dermalax™ Implant Plus THE CHAEUM® No.4	Dermalax™ Deep Plus THE CHAEUM® No.3	Dermalax™ Plus THE CHAEUM® No.2	A3	A1-2	P2
0	0.5	0.5	0.5	0.5	0.5	0.5
1	0.51	0.52	0.53	0.8	1.6	0.7
2	0.55	0.55	0.56	1.0	1.7	0.9
3	0.59	0.58	0.59	1.5	1.75	0.95

Ref) In-house

## Duration test *in vivo*



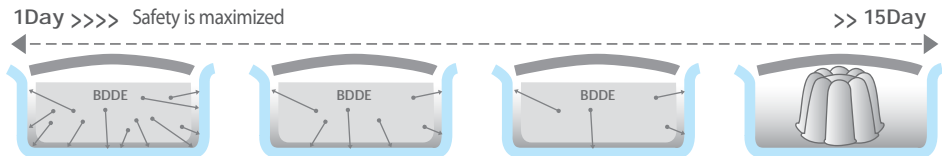
Ref) Safety & Efficacy evaluation of HA (Hyaluronic Acid) Dermal filler (*in vivo*), Chung-Ang University Hospital, 2014

# ADVANCED SAFETY

Inflammation and allergic reaction are minimized through the strict control of endotoxin, BDDE residue, and protein load

## Dialysis

14~15 days of dialysis to minimize BDDE residue



Spontaneous movement of BDDE from an area of high concentration to low concentration minimizing BDDE residue

## Safety Data

	Dermalax™ & THE CHAEUM® PREMIUM	Product A	Product B	Product C
Endotoxin (EU/mL)	<0.03	0.5	0.5	0.2
BDDE (ppm)	<0.5	<2	0.5	<2
Protein Load (ppm)	<0.05	N/A	<0.06	0.05

Ref) In-house

- Endotoxin ↓ = Inflammation ↓ (redness, edema, pain, fever)
- Protein load ↓, BDDE ↓ = Allergic reaction ↓

## INDICATIONS



*Dermalax*™ CROSS LINKED HYALURONIC ACID IMPLANT PLUS THE CHAEUM® PREMIUM N°3

*Dermalax*™ CROSS LINKED HYALURONIC ACID PLUS THE CHAEUM® PREMIUM N°1, N°2

*Dermalax*™ CROSS LINKED HYALURONIC ACID IMPLANT PLUS THE CHAEUM® PREMIUM N°3

*Dermalax*™ CROSS LINKED HYALURONIC ACID DEEP PLUS THE CHAEUM® PREMIUM N°1, N°2

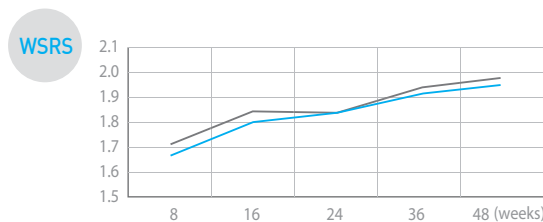
*Dermalax*™ CROSS LINKED HYALURONIC ACID IMPLANT PLUS THE CHAEUM® PREMIUM N°4

# CLINICAL RESULTS

In a pivotal clinical study conducted for 48 weeks (pre-protocol group n=60), the safety and efficacy of Dermalax™ & THE CHAEUM® were compared with that of the reference device which was approved for its claim of 18 month-duration by US FDA

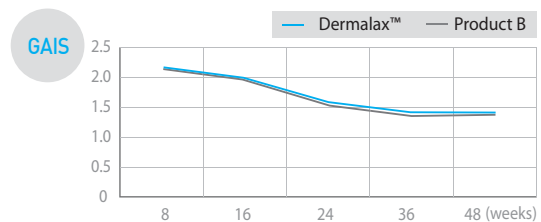
**24 weeks** - **91%** of subjects showed the wrinkle improvement at 24 weeks

**48 weeks** - **83%** of subjects showed the wrinkle improvement after 1 year  
 - Subjects who showed 2-level or higher improvement:  
**Dermalax™ & THE CHAEUM® 64%** vs. Reference device 54%



The Wrinkle Severity Rating Scale (WSRS)

- 5 Extreme
- 4 Severe
- 3 Moderate
- 2 Mild
- 1 Absent



Global Aesthetic Improvement Scale (GAIS)

- 3 Very much improved
- 2 Much improved
- 1 Improved
- 0 No change
- 1 Worse

## CONCLUSION

- ▶ The safety profile of Dermalax™ & THE CHAEUM® and the reference device was comparable.
- ▶ The clinical trial verified that Dermalax™ & THE CHAEUM® is an effective and safe medical device for the wrinkle improvement.

Ref) A Randomized, Multi-center, Patient & Evaluator-blind, Matched pairs, Active-controlled design Clinical Study to Evaluate the Efficacy and Safety of Injection with Dermalax (Deep) as Compared to Restylane® in correction of Nasolabial fold, Chung-Ang University Hospital, Eulji General Hospital, 2014

*Design Your Beauty!*

*Dermalax*<sup>TM</sup>  
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THE CHAEUM<sup>®</sup>  
— PREMIUM —



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