CERESFILL+®

PREMIUM
HYALURONIC ACID FILLER

WITH LIDOCAINE 1.0 mL

CE 2292

Design your Beauty with CERES

Manufactured by CHAMEDITECH ㈜차메디텍 | Distributed by MY Korea Trade Co., Ltd.

CE 2292

Product : Dermal Filler (Hyaluronic Acid Filler) with Lidocaine
Needle : Refer to instruction for use
Packaging Units : 1.0 mL × 1 Syringe / Box
Storage : 1~30℃, Away from direct sunlight
Directions & Cautions : Refer to instruction for use

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CHAMEDITECH
㈜차메디텍

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PRODUCT · BRAND OVERVIEW

Korean Precision in Every Syringe

CERESFILL+® CHAMEDITECH 주식회사 차메디텍

CERESFILL+ is a CE-certified, biphasic cross-linked hyaluronic acid filler with 0.3% lidocaine, developed and manufactured in Korea under a strict quality management system for dermal fillers and skin boosters.



Cross-linked HA

20 mg/mL

Non-animal hyaluronic acid in a tightly controlled cross-linked network for stable, natural volume

Lidocaine HCl

0.3%

Built-in local anesthetic that relieves pain during treatment

Safety & Precision

5 SP

Five quality parameters manage every factor that defines safety and performance

Certified

CE 2292

Conformity assessed under MDD 93/42/EEC, supplied with CE-marked sterile needles

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One Formula, Three Layers of Beauty

Three particle profiles let practitioners match the gel to the treatment area and the result they want.



CERESFILL+ 120′

Fine Particle

High Hydration & Natural Glow

- Fine to moderate wrinkles
- Skin texture and hydration
- Areas requiring a soft, natural finish

Volumizing ● ○ ○ Needles **27G + 29G**



CERESFILL+ 240′

Medium Particle

Balanced Volume & Lifting

- Nasolabial folds
- Marionette lines
- Moderate to deep wrinkles

Volumizing ● ● ○ Needles **27G + 29G**



CERESFILL+ 360′

Large Particle

Powerful Volume & Structural Support

- Deep wrinkles and severe folds
- Facial volume restoration
- Areas requiring structural support

Volumizing ● ● ● Needles **25G + 27G**

All models: injection into the mid to deep dermis. Recommended indications are a general guide; product, depth and volume are at the discretion of the treating physician.

Specifications

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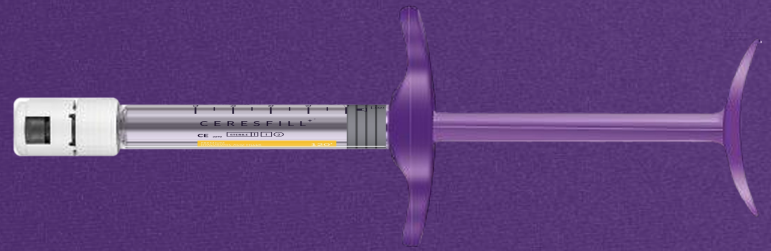
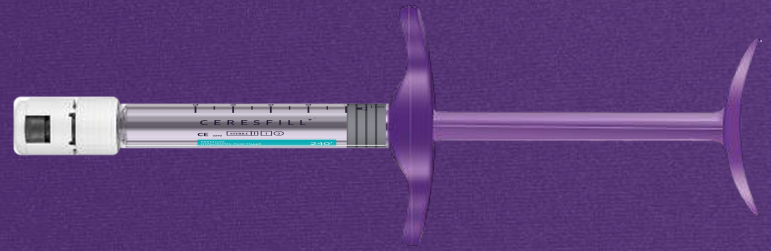
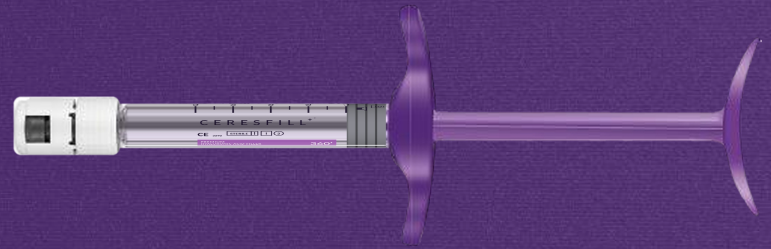
Product name	Dermal Filler (Hyaluronic Acid Filler) with Lidocaine
Brand / Model	CERESFILL+ 120′ / 240′ / 360′ · HADF-L
Composition (per 1 mL)	Cross-linked hyaluronic acid 20 mg/mL Lidocaine hydrochloride 3 mg/mL (0.3%) Normal saline q.s.
Gel	Sterile, biodegradable, viscoelastic, transparent gel of non-animal origin
Packaging unit	1.0 mL × 1 pre-filled syringe per box
Needles	120′ / 240′: 27G + 29G · 360′: 25G + 27G CE-marked sterile needles with color-coded hubs
Indication	Facial tissue augmentation by injection into the mid to deep dermis
Sterilization	Gel: moist heat · Needles: ethylene oxide
Storage / Shelf life	1–30 °C, away from direct sunlight, do not freeze · 24 months
Certification	CE 2292 (MDD 93/42/EEC)



CERESFILL+ 120′ 27G + 29G



CERESFILL+ 240′ 27G + 29G



CERESFILL+ 360′ 25G + 27G

What's in the Box

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Pre-filled Syringe
1.0 mL CERESFILL+ gel in a graduated syringe with Luer-lock tip cap

Two Sterile Needles
Gauge set per model, sterilized with ethylene oxide

Sterile Blister
Clear PETG tray sealed with a medical-grade Tyvek® lid

Traceability Labels
Peel-off labels with model, LOT and expiry date for patient records

Instructions for Use
Indications, application method and precautions

Color Codes				
	Model	120'	240'	360'
	Needle	29G	27G	25G

TECHNOLOGY

Advanced Manufacturing & Quality Control System

Safety First, Precision Always

01 5 SP Parameters

02 Residual BDDE

03 Pendant BDDE

04 LMW-HA

05 Swelling Ratio

06 Inflammatory Response

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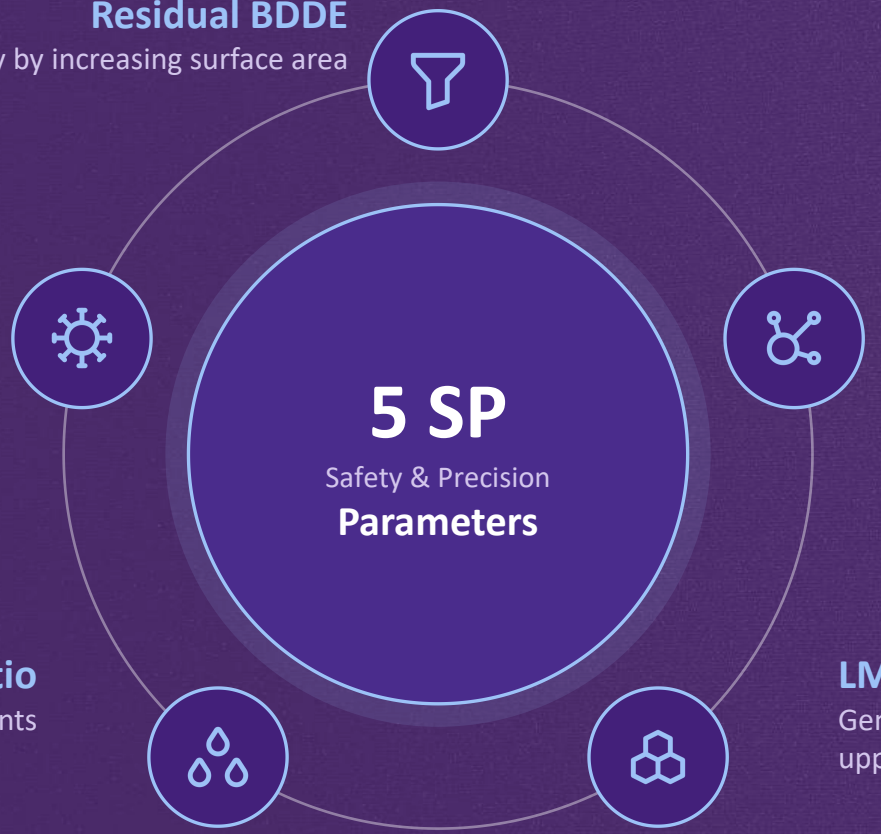
Safety First, Precision Always

Our process technology precisely controls every factor that defines product safety and performance. The 5 SP parameters are kept within optimal ranges to minimize risk and ensure consistent, reliable quality.



Residual BDDE
Maximized purification efficiency by increasing surface area

Inflammatory Response
Verified by analysis of IL-6, IL-8, CXCL1 and CXCL2

Pendant BDDE
Higher cross-linker ratio (CrR) and cross-linking degree (CrD) through process optimization

Swelling Ratio
An upper limit minimizes the risk of early adverse events

LMW-HA
Generation of low-molecular-weight HA managed by an upper limit

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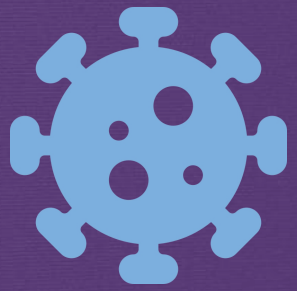
Risks of Residual BDDE

Residual BDDE is unreacted cross-linker left in the product after the HA cross-linking reaction — a risk factor for cytotoxicity, inflammation and delayed adverse events.

1

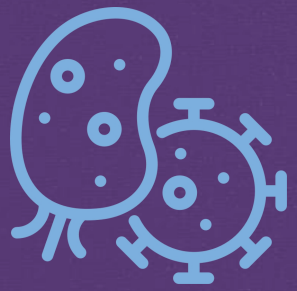
Cytotoxicity



Reduced cell viability

2

Tissue Irritation & Inflammation



Inflammation, granulomas and nodules

3

Protein / DNA Denaturation



Potential structural denaturation

4

Delayed Adverse Events



Acts as a persistent irritant

Purification Process & Efficiency

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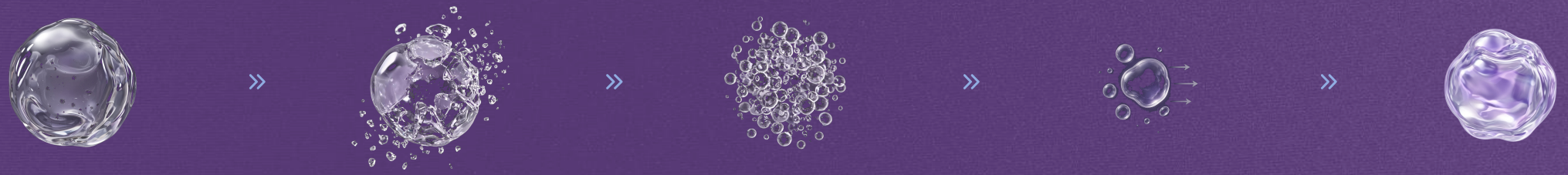
Purification is the key step that removes impurities such as residual BDDE — it determines the safety and quality of the final gel.



Formed Gel
Cross-linked HA with impurities

Grinding / Dispersion
Uniform grinding reduces particle size

Surface Area ↑
Larger contact area with the purification solution

Efficiency ↑
Faster diffusion and removal of unreacted BDDE

BDDE ↓
Pure, uniform HA gel

Long-term Safety
Reduces the risk of delayed adverse events

Immune Safety
Removes substances that stimulate the immune system

Quality Consistency
Uniform, stable physical properties

Detection Result: BDDE Not Detected

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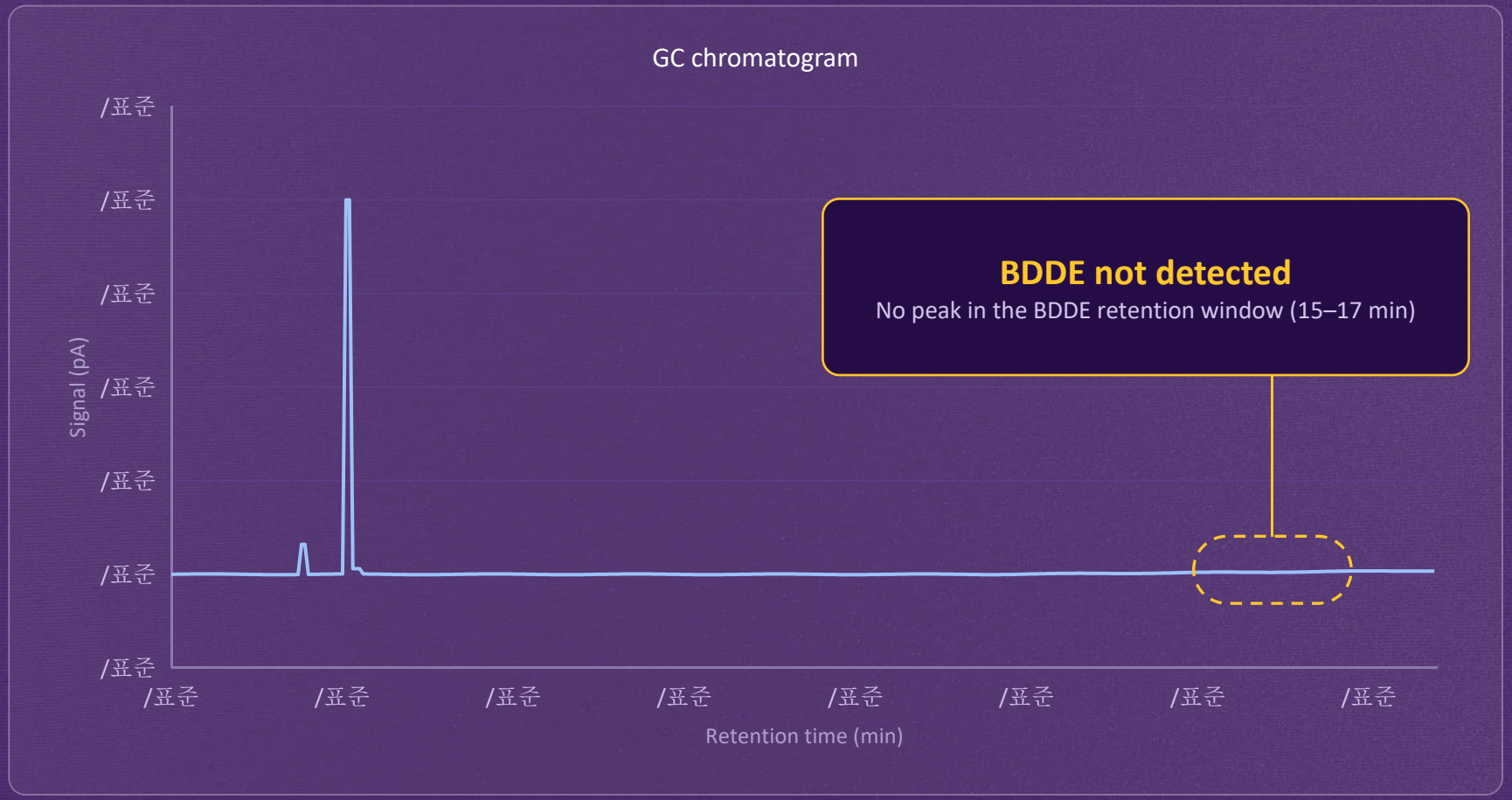
Gas chromatography (GC) confirmed residual BDDE below the limit of detection.



Not Detected

Below the GC detection limit

Purify & Verify

Rigorous purification and thorough analytical verification ensure residual BDDE stays below the detection limit.

Source: manufacturer's GC analysis (CHA Meditech); chromatogram redrawn for illustration.

What Is Pendant BDDE?

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A BDDE residue bonded to HA at only one end. Its free, reactive end can stimulate the immune system and cause delayed adverse events.

Cross-linked BDDE

Bonded at both ends — stable network



Pendant BDDE

Bonded at one end — reactive free end



How Pendant BDDE Can Induce Adverse Events

01
Incomplete Cross-linking
Pendant BDDE remains

»

02
In-vivo Degradation
Enzymes, oxidation

»

03
BDDE Release
Residual reactive substance

»

04
Immune Activation
Macrophages and other immune cells

»

05
Delayed Inflammation
Nodules, granulomas and swelling

Measures to Reduce Pendant BDDE

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Process Optimization

Maximizes cross-linking efficiency

- Optimal temperature
- Optimal pH
- Adequate reaction time
- Uniform reaction environment
- Enhanced washing / purification

Higher CrR / CrD

Strengthens bonding between HA chains

Uniform Cross-linking Network

More BDDE bonded at both ends

Improves CrR

Stabilized Cross-linking Density

Consistent gel structure

Improves CrD

Process Optimization + Higher CrR / CrD → Minimized Pendant BDDE → Maximized Safety

CrR: cross-linker ratio (BDDE bonded at both ends ÷ total bound BDDE) · CrD: effective cross-linking degree

Why Low-Molecular-Weight HA Matters

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LMW-HA fragments (20–200 kDa) generated during manufacturing or degradation can stimulate immune cells and induce inflammatory cytokines.

Inflammatory Activation



- Increased cytokines: IL-1β, IL-6, MIP-1α
- MyD88 / NF-κB pathway activation
- Persistent inflammation

Barrier Weakening



- Weakened epithelial cell junctions
- Increased vascular permeability
- Aggravated irritation and tissue damage

Fibrosis



- Fibroblast activation
- Excess collagen (ECM) deposition
- Tissue hardening, nodules and scarring

Adverse Event Pathway

LMW-HA Buildup » Immune Recognition » Cytokine Induction » Immune Stimulation » Delayed Swelling / Nodules

LMW-HA Control Strategy & Criteria

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Reduce Stress

- **pH control** → minimizes chemical stress
- **Reaction condition control** → suppresses HA degradation
- **Heat control** → limits heat-induced degradation
- **Process exposure control** → shortens exposure time

Strengthen Network



Non-uniform Uniform

Optimized reaction concentration → uniform cross-linking → less LMW-HA formed during degradation

Managed Molecular Weight Range

6 kDa	20 kDa	200 kDa	> 1000 kDa
Oligo	**LMW-HA key control range**		HMW-HA

Verified by simulation and GPC analysis

IMPROVEMENT TARGET

≤ 10%

LMW-HA content

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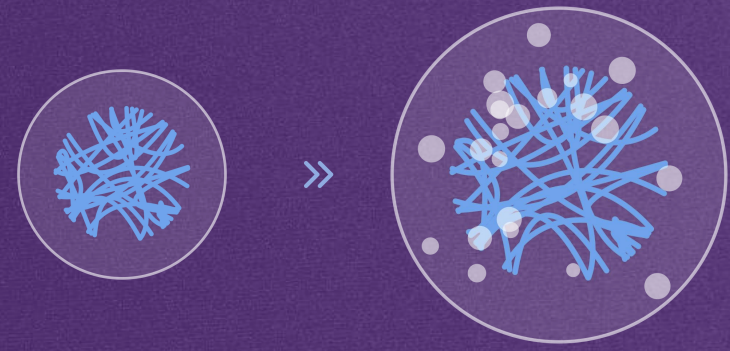
Swelling Ratio (S/R) Control

The swelling ratio describes how much the HA gel expands by absorbing water. A high ratio can cause early swelling, pain and redness right after injection.



Before

After absorption

Causes of High S/R

- Hydrophilicity
- Low Cross-linking
- Particle Size
- Viscoelasticity

Our S/R Management

Raw Materials
Qualified HA input

S/R Measurement
Consistent across batches

Data Monitoring
Measurement-based control

Upper Limit
Balanced with viscoelasticity

Effects

- Suppresses excess water uptake and expansion
- Minimizes tissue pressure and irritation
- Reduces immediate swelling and pain
- Improves patient satisfaction and safety

Target S/R range set for each model

120′ | 240′ | 360′

In-vitro Inflammatory Response Evaluation

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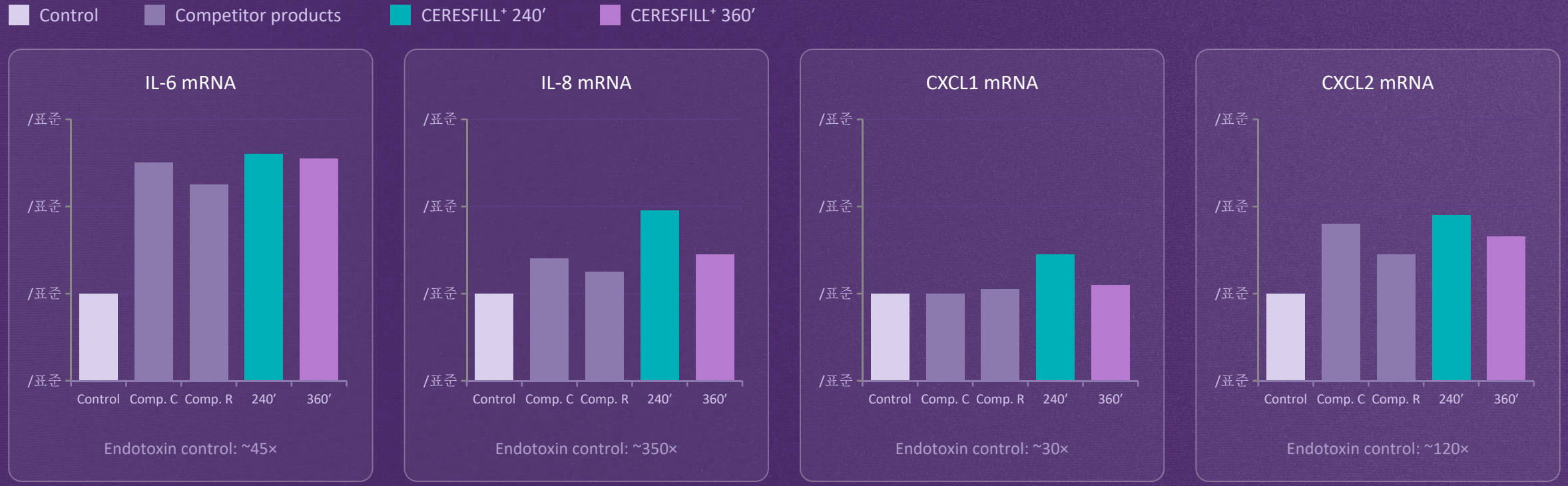
Human dermal fibroblasts were treated with the filler gels, and mRNA levels of inflammation-related factors (IL-6, IL-8, CXCL1, CXCL2) were measured (Control = 1).



Expression similar to competitor products and far below the endotoxin positive control — a favorable inflammatory safety profile

Source: manufacturer's in-vitro study (CHA Meditech); test samples M+ and V+ correspond to CERESFILL+ 240′ and 360′. Bars redrawn from the original charts; endotoxin positive control 2.5 EU/mL.

Directions for Use

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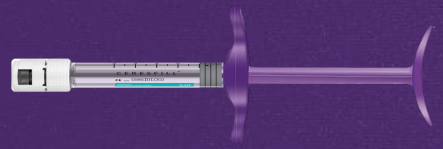
Before Treatment

- Treatment must be performed by a physician trained in dermal filler injection.
- Explain indications, contraindications and possible side effects to the patient.
- Check the packaging, labeling and expiry date. Do not use if damaged.
- Open only in a sterile environment, as the product is sterile.

Application

1	**Disinfect**	Thoroughly cleanse and disinfect the treatment area.
2	**Assemble**	Remove the syringe tip cap and firmly attach the supplied needle by rotating it.
3	**Inject**	Inject slowly into the mid to deep dermis; dose varies by area.
4	**Massage**	Gently mold the treated area if needed.
5	**Discard**	Dispose of the syringe, needle and any remaining gel after use.



⚠ **Recommended maximum: 2 mL per treatment site per session**

Precautions & Contraindications

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Do Not Inject

- Patients hypersensitive to lidocaine, amide anesthetics or HA
- Into blood vessels or the periorbital area
- Skin with inflammation or infection
- Patients prone to hypertrophic scars or with bleeding disorders
- Patients with a history of severe allergy, anaphylaxis or streptococcal disease
- Pregnant or nursing women, and minors

Precautions

- Do not increase plunger pressure if the needle is blocked — replace the needle
- Avoid excessive volume, which may cause severe edema
- Herpes may recur in patients with a history of herpetic eruption
- Do not combine with laser, chemical peel or exfoliation treatments
- Single use; do not reuse or re-sterilize

After-care

- Avoid washing, shaving and make-up for 12 hours
- Avoid sun, UV, sauna and steam baths for 2 weeks
- Avoid extreme heat or cold until any swelling subsides
- Transient redness, swelling or pain may last about 1 week
- Consult a doctor if symptoms persist beyond 1 week

Please read the Instructions for Use for the complete list of warnings and possible side effects.

CONTACT

Manufacturer & Distributor

MANUFACTURER

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