

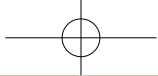
CE KFDA

Lips Lie, Face Doesn't Long-lasting Collagen Stimulator

FacetemTM
Natural Face, Natural System



CGBIO CELL & GROWTH FACTOR
BIOTECHNOLOGY

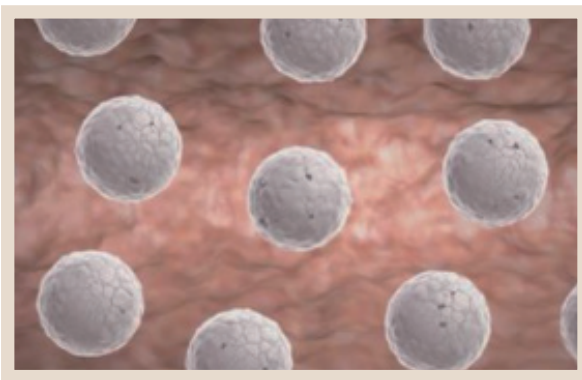


Lips Lie, Face Doesn't Long-lasting Collagen Stimulator

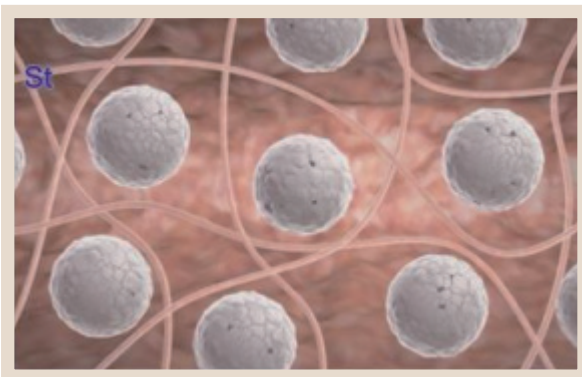
An Expert of **Calcium Hydroxyapatite**

CGBIO has been researching **Apatite** since **1995** obtaining **28 domestic patents** and **US Patent on porosity of apatite (US703 7867-1)**. Facetem's CaHA is **99.49%** purity.

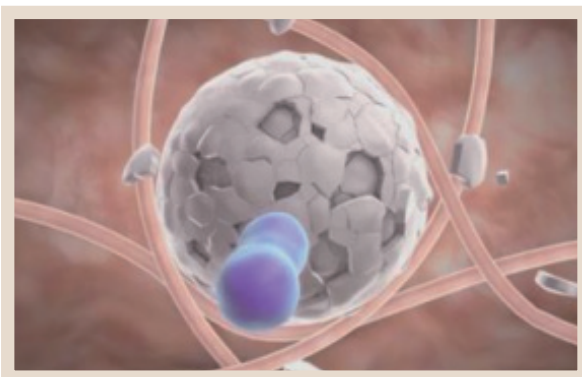
CaHA as a **Collagen Stimulator**



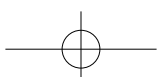
1. Facetem is comprised of CaHA microspheres suspended in a carboxymethyl cellulose gel carrier. (First injection)

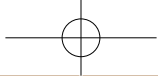


2. After injection, it provides immediate volume and correction but continues to work by stimulating the body to produce its own natural collagen.

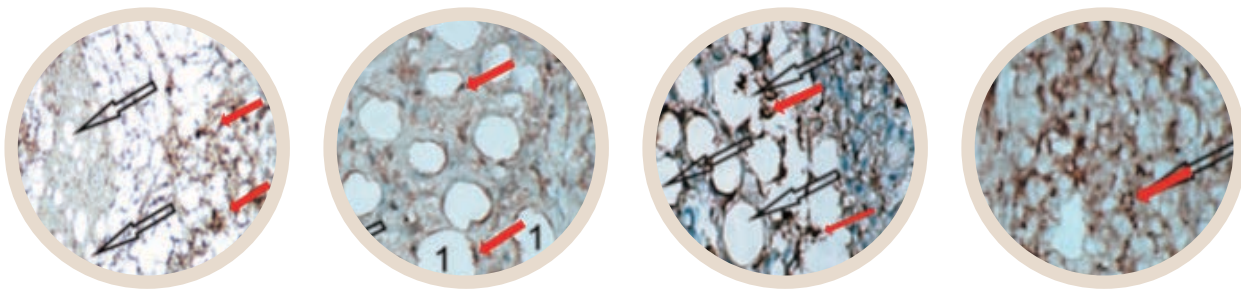


3. Over time, the gel carrier is absorbed and the body metabolizes the CaHA microspheres leaving (Ca ion/Pion) behind only your own natural collagen.



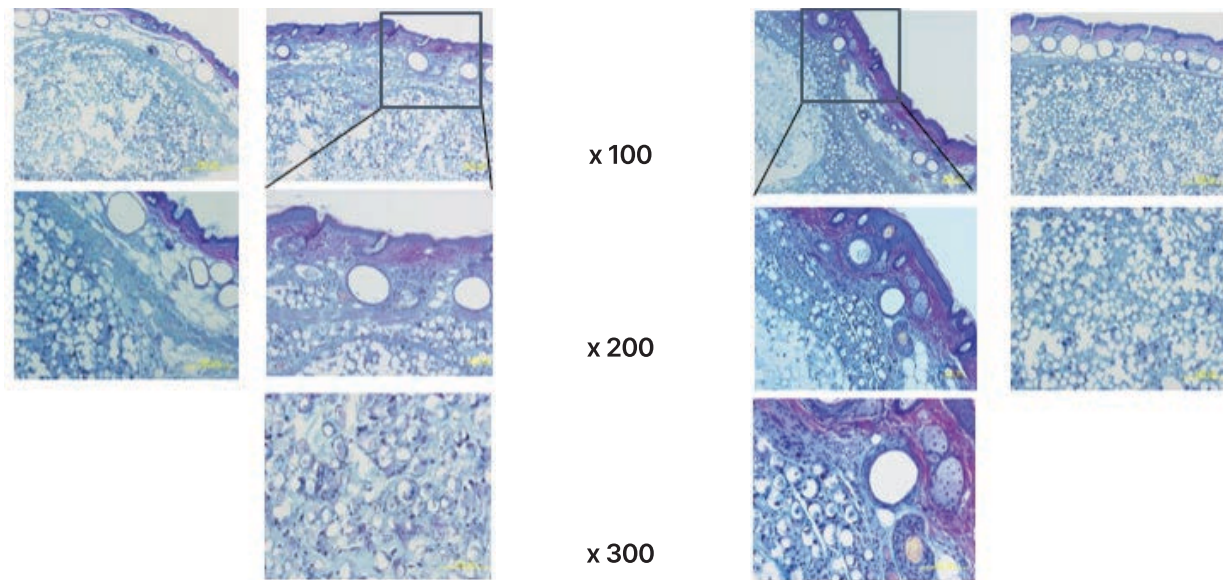


▼ Collagen type I(left) and type III(middle) immunohistochemistry. (Starlike indicates microspheres, arrow indicates fibroblast)



Facetem induces **synthesis of Collagen** by **12 weeks**, but remaining above baseline even by the end of the **20 weeks**.

▼ Collagen type I & III stain (Herovici stain) in In vivo rat model(12 weeks / purple: type I, blue: type III)



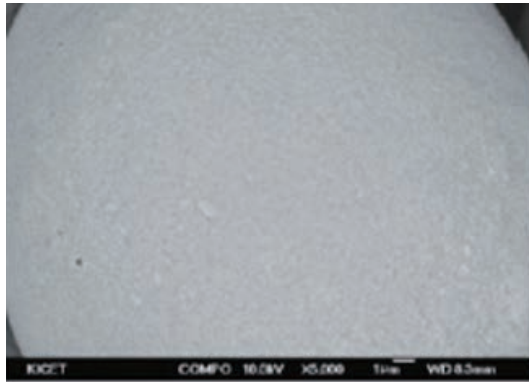
CASE 1 Product A

CASE 2 **Facetem**

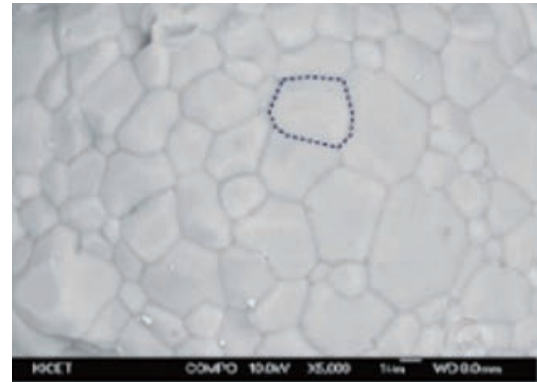
Facetem stimulates and produces more **Collagen type I & type III** compared to other competitors of CaHA Filler.

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A patented **Lattice-Pore Structure**



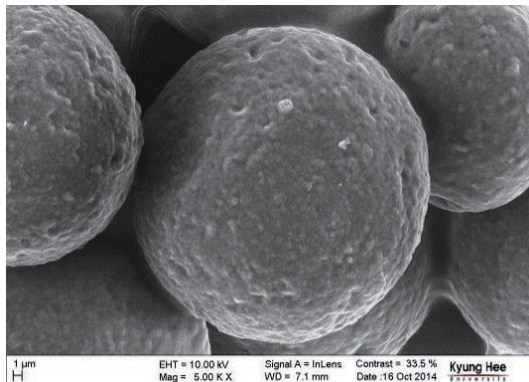
CASE 1 Product A – Sand like structure



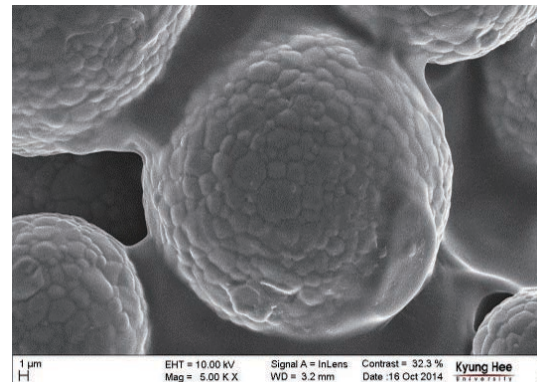
CASE 2 **Facetem** – Lattice –pore structure

The unique structure of Facetem, degrades **layer by layer** preventing a sudden volume loss.

▼ Particle morphology analysis using FE-Scanning electron microscopy (In vivo test, rat)



CASE 1 Product A – Sand like structure

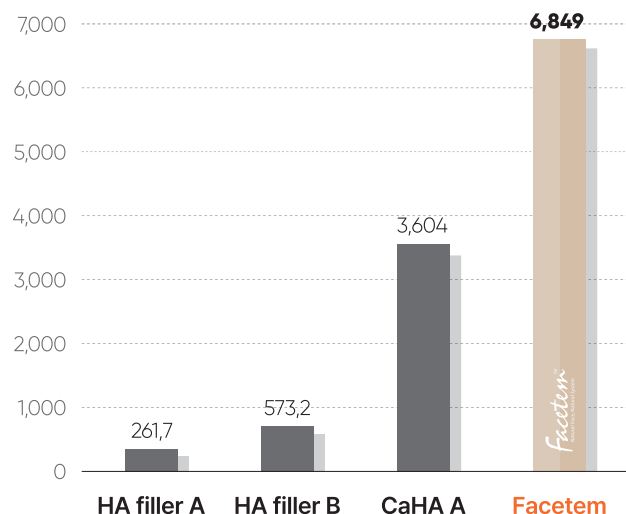
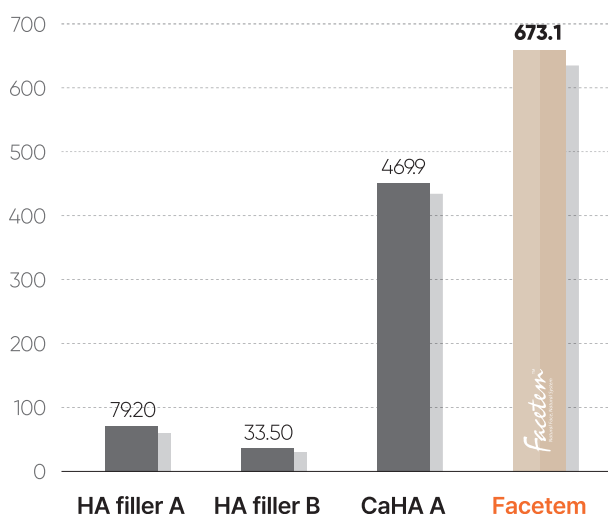


CASE 2 **Facetem** – Lattice –pore structure

The **lattice-pore structure** does not collapse at once, having a **graual degrades** from the micro grain of **outer wall** to have a **long duration**.



Superior Visco-elasticity



▼ Visco-elasticity Comparison test with our competitor product

Product	Storage modulus (St: 1Hz) G'(Pa)	Loss modulus (St: 1Hz) G''(Pa)	Complex rigidity modulus (St: 1Hz) G*(Pa)	Complex viscosity (St: 1Hz) η^* (Pa s)	Phase angle (St: 1Hz) $\delta(^{\circ})$	Shear viscosity (St:450s) η (Pa s)	$\tan\delta$	%elasticity
Product A	2,653	1,278	2,945	469.9	25.72	3,604	0.482	67.489
Facetem	3,905	1,598	4,219	673.1	22.26	6,849	0.409	70.961

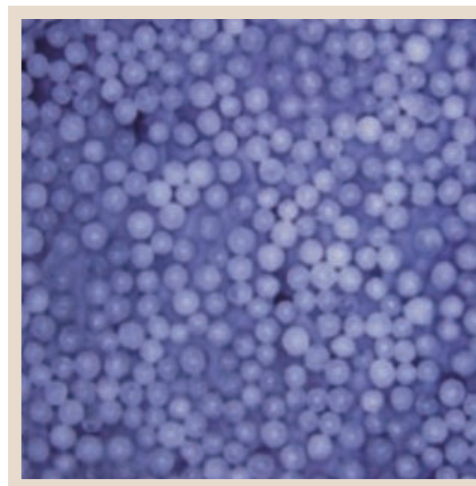
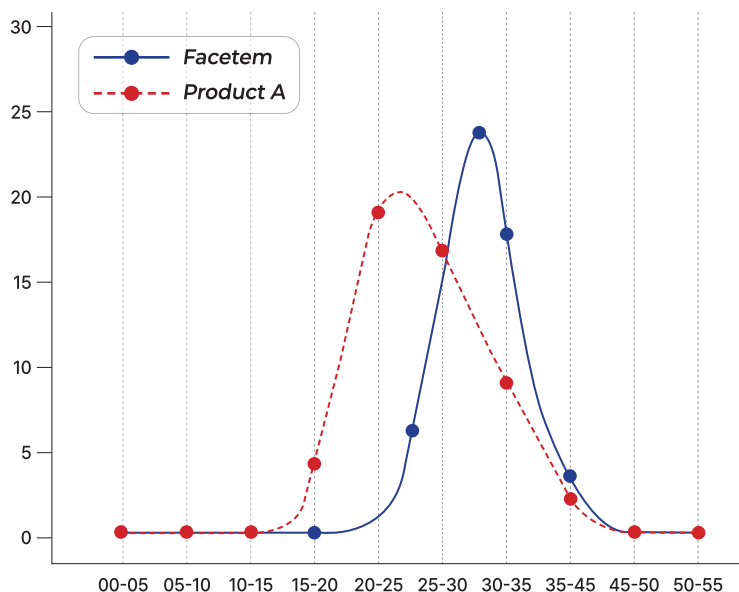
- Storage modulus (G'): elasticity . The energy stored in the material.
- Complex viscosity (η^*) : Composite action of viscosity and elasticity (G^*/ω)
- Shear viscosity (η) : ratio of shear stress o shear rate. Simply called viscosity

stainless steel plate
Oscillation mode,0.1~10Hz
at 1 Hz Frequency, Temp. 25°C

Facetem has **superior viscoelasticity** compared to other products.

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Homogeneous Microsphere



Microsphere size distribution (SEM)

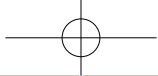
Facetem CaHA Microsphere

▲ The graphic's sharp shows that Facetem has homogeneous microspheres compared to Product A. As long as if the graphic shows a sharp effect, it means that microspheres are homogeneous.

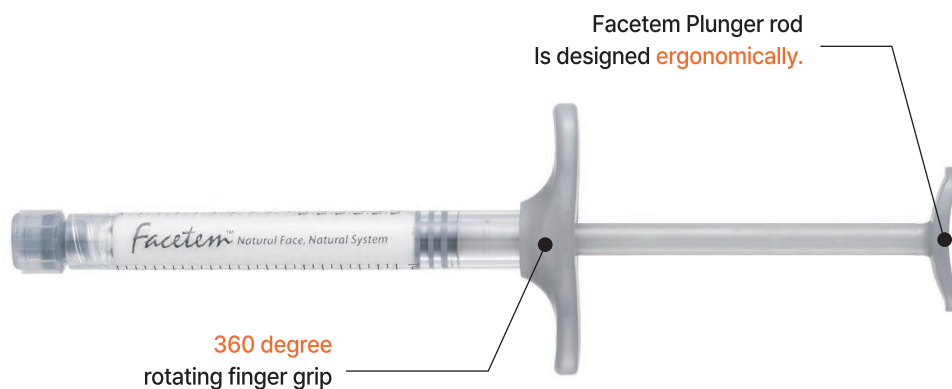
Product	Size Distribution	Average Size
Facetem	25~40μm	30μm
product A	15~40μm	25μm

· The size distribution of Facetem is 25 - 40μm and the average microsphere size is 30 μm. (Product A: 15-40 μm)

- **Uniform beads size** from Facetem S, does not adhere to each other, having **smooth distribution**.
- Facetem requires **low injection force (21N)** and has **smooth injectability**.



Convenient Syringe Design



The convenience of procedure is maximized by **ergonomic syringe design** and **360° rotating finger grip**.

Advantages of Facetem S

• Facetem for new Collagen stimulator

- Calcium Hydroxyapatite leads to long-term deposition of new collagen.

• Facetem for long lasting duration

- Patented Lattice-pore structure prevents sudden volume loss and allows layer by layer degradation pattern.

• Facetem for superior volumizing and smooth injection

- Superior Viscoelasticity allows better volumizing effect.
- Homogeneous microsphere requires only 21N of injection force with smooth injectability.

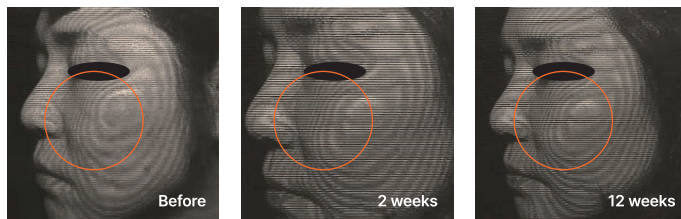


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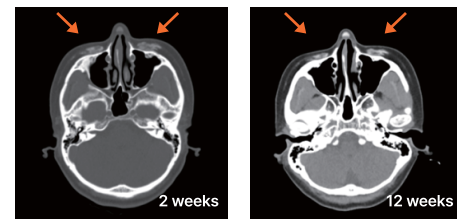
Facetem can be used for **volumizing various areas of the face.**

✓ Correction effect of **Indian band** (mid-cheek groove)

CASE 1 Moire topography¹

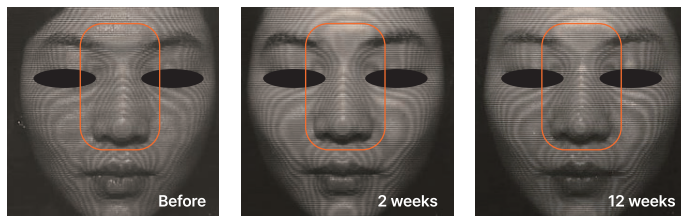


CASE 1 MRI

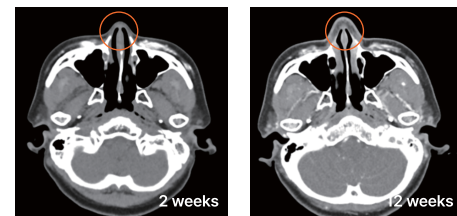


✓ Reshaping effect in the **glabella** and **nasal dorsum** region

CASE 2 Moire topography¹

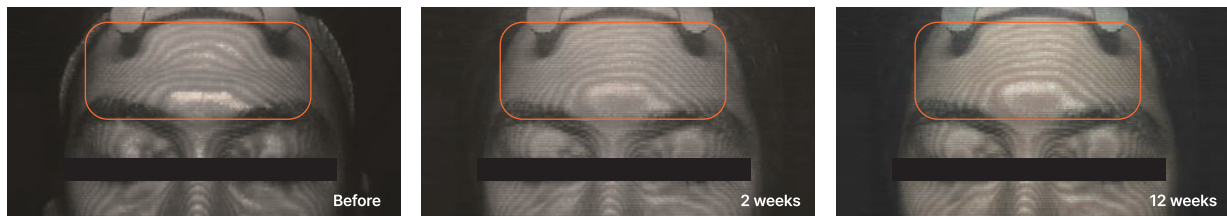


CASE 2 MRI



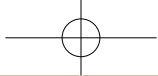
✓ Contouring in the **forehead** region

CASE 3 Moire topography¹



✓ Information of clinical study

Research purpose	Evaluation of the efficacy for Facetem injection in facial wrinkles correction : a case study
Research subject	Patients want to improve the facial wrinkles
Research institute	Single center (chung-ang university hospital)
Application method	Facetem was applied in the facial region where patients wanted to improve the wrinkles.
Efficacy evaluation	Evaluation of photos, magnified photos (JANUS), Moire topography (F-ray), ultrasonography (iu22), computed topography,CT (Brilliance) and MRI (Intera).
Reference	Clinical evaluation of facial wrinkle improvement for the Facetem, a kind of calcium hydroxyapatite (CaHA) filler. (2015, CSR)



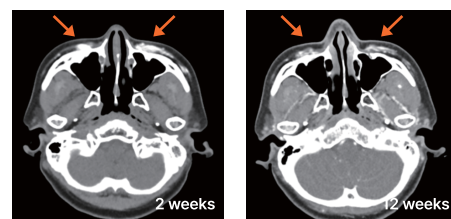
Facetem can be used for **volumizing various areas of the face.**

✓ Augmentation effect around the lid-cheek junction

CASE 4 Moire topography¹



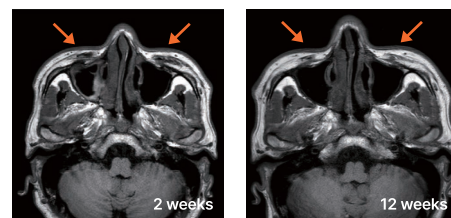
CASE 4 MRI



CASE 5 Moire topography¹



CASE 5 MRI



1) Moire topography *

- The visual method for evaluation of face contour, laxity and wrinkles that enables to image level of surface and wrinkles of face capturing contour line of subject namely "Moire effect".

"Moire effect" : When a latticed frame is placed in front of the face and a light is illuminated from one side, a shadow of the lattice is generated on the face.

* Reference : Ahn et al., Correlation between a cutometer and quantitative evaluation using moire topography in age-related skin elasticity. Skin research and technology, 2007, 13: p280-284

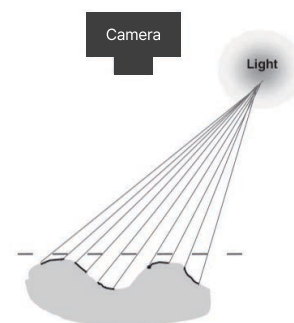
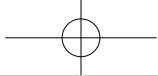


Fig. 1. Principle of generating Moire's topography.



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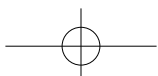
Indication

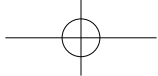


CaHA filler is especially helpful and useful in patients who have begun to show signs of aging related facial bone and volume loss. It can be used to accentuate the bone structures of the face to emphasize the cheekbones, temples and jawline.

Specification

Item	Contents
Concentration	30% Calcium Hydroxyapatite
Gel Carrier	70% Polymer Gel(Carboxymethyl Cellulose Sodium, Glycerin, Water)
Microsphere Size	25 - 40μm (Average 30μm)
Injection Area	Deep Dermis
Product Line	0.8 cc * 2 syringes 1.5 cc * 1 syringe





FacetemTM

Natural Face, Natural System

Facetem

Natural Face, Natural System 0.8ml x 2

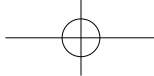


Facetem

Natural Face, Natural System 1.5ml x 1



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