



SENSOGEL 200™

PRE-NEUTRALIZED, ACRYLAMIDE-FREE THICKENER
FOR A FRESH, FEATHER-LITE SENSORY

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create possibilities

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SENSOGEL 200™

FEATURES AND BENEFITS

SENSOGEL 200™ Sensory Profile

- Creamy and substantive during initial application
- Very quick break during rub-in, creating a light and fresh sensory
- Absorbs into skin quickly without any tackiness

SENSOGEL 200™ is a pre-neutralized, acrylamide-free liquid thickener designed to impart a feathery light, “quick break” sensory during application with a velvety soft afterfeel.

A robust and versatile rheological modifier, Sensogel 200 can be used to make anything from thin spray formulas to thick butters by simply adjusting the usage rate.

It can also maintain strong viscosity through an extremely wide pH range, and is especially effective at low pH for formulations requiring specialized treatment actives.

No Pre-mixing Required!

- SENSOGEL 200™ as a raw material has very strong stability with no separation over long term storage
- Creates predictable and dependable thickening consistency from batch to batch

Formulation Versatility

- Sensogel 200's rheological profile makes it easy to move from super-low viscosity spray formulas all the way to thick body butters, all by simply adjusting the usage rate.
- Thicken polar solvents, great for cosmetic removers and slimming gels

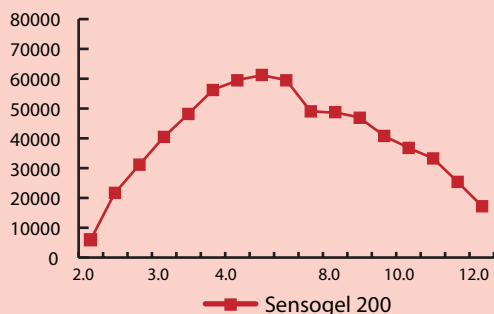
Emulsifier, Stabilizer, and Thickener in One Ingredient

- Stabilize oil-in-water emulsions
- Emulsify oils without additional surfactants

**Free of Hazardous
Acrylamide Monomers**

Exceptional Performance in Extreme pH Environments

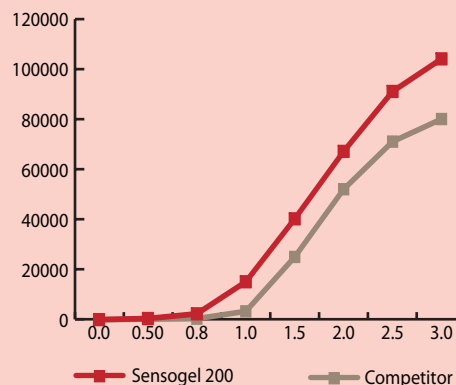
SENSOGEL 200™ maintains its efficacy in even the most extreme pH ranges, providing strong thickening action from pH 2.5 to 11.5.



Note that Sensogel's efficacy between 2.5 and 4 pH is especially high, which makes it very suitable for low pH treatment formulas (like whitening creams and tanning lotions) containing AHA or DHA.

Consistent Thickening Power

SENSOGEL 200™'s thickening efficacy is 10-20% more powerful than many popular thickeners in the same class.



Competitor A INCI Name:
Hydroxyethyl Acrylate/Sodium Acryloyldimethyl Taurate Copolymer (and)
Squalane (and) Polysorbate 60

INCI NAME:

HEA/SODIUM ACRYOYLDIMETHYLTAURATE/STEARETH-20 METHACRYLATE COPOLYMER (AND) C13-14 ISOPARAFFIN (AND) POLYSORBATE 80 (AND) DECYL GLUCOSIDE (AND) GLYCERIN

Standard Applications

- Spray formulations
- Low pH applications - self-tanning, bleaching, skin peels and brighteners
- Transforming Texture Skincare - body butters, lotions, cream-to-serum, milk-to-water
- Suncare and after-sun products
- Haircare - serums and styling agents
- Mascara, foundations, and make-up removers

SENSOGEL 200™ Processing Instructions

- Create your emulsion using any one of the following three methods:
 - Add in oil phase, then mix into water phase.
 - Mix into water phase until gel is formed, followed by oil phase addition.
 - Add Sensogel 200 during emulsification formation step (electrolytes should be added post Sensogel addition).
- Takes about 5 – 15 minutes of mixing at room temperature to dissolve completely.
- Hot addition dissolves faster.



Super Fresh Acqueous Day Cream (SF-022)

- Transforming Texture - looks like butter, but feels like a feather light, hydrating lotion upon application
- Gentle, moisturizing sensory during rub-in, without any residual tackiness.
- Phytocare-HA is a natural film forming active that boosts skin hydration while providing a more silicone-like slip to overall sensory

Super Fresh Acqueous Day Cream Viscosity Comparison

	Sensogel 200		Competitor A
Dosage	1.6%	2.0%	2.0%
Viscosity	67,500 cP	98,800 cP	54,200 cP (after one day)

- Sensogel 200 provides substantially more thickening efficacy verses Competitor A, which helps streamline formulation costs.
- Testing also showed that Sensogel 200 reaches full viscosity very quickly. On the other hand, Competitor A's viscosity increased by an additional 37% after 1 day. This can adversely affect both quality control testing as well as final product viscosity after packaging.

Phase	Ingredient	Wt%
A	Water	77.05%
	Disodium EDTA	0.05%
B	PhytoCare-HA™ CG 1M	0.10%
	Glycerin	12.00%
C	Sunflower seed oil	3.00%
	Cyclopentasiloxane	1.00%
	Caprylic Triglyceride	2.00%
	Stearic Acid	0.50%
	Cetearyl Alcohol	0.75%
	Glyceryl Monostearate	0.75%
	Oleth-20	0.50%
	Sensogel-200™	2.00%
D	Preservative	0.20%
	Fragrance	0.10%

Processing Procedure

- Mix Phase B by a propeller (below 50 C) into a homogenous solution, then add it into Phase A.
- Heat Phase (A+B) and Phase C separately at ~80 C to a homogenous solution.
- Pour Phase C into the mixture of Phase (A+B) at ~80 C while mixing by a homogenizer at 4000 rpm. Continue mixing for 5 minutes.
- Cool down to 50 C.
- Add Phase D into the system and gently mix until the system cools down to 30 C. Adjust pH with 10% citric acid solution (pH 4.2~5.0).

No Emulsifier Hydrating Face Lotion (SC-F 0025)

Phase	Ingredient	Wt%
A	Water	63.25
	Disodium EDTA	0.05
	Glycerin	20.0
	Macadamia Nut Oil	5.00
	Caprylic Triglyceride	6.00
	White Mineral Oil	2.00
	Dimethicone	2.00
B	Sensogel 200	1.50
	Phenoxyethanol	0.20

Sensogel 200 emulsifies, thickens, and stabilizes emulsions without using extra emulsifiers, even in cold process. It creates a quick-break O/W emulsion which will transfer into water when being applied.

- A white and glossy face lotion with the same look of conventional lotions on the market, but lighter in texture.
- Fast absorption on skin with a fresh & hydrating after feel.
- By increasing Sensogel 200 in system with other emulsifiers, it's easy to make a spray (0.2 - 0.7%), a lotion (0.8 - 1%), a cream (~1.1%), or butter (3 - 4%) to obtain a desirable sensory.

Cold Processing Procedure

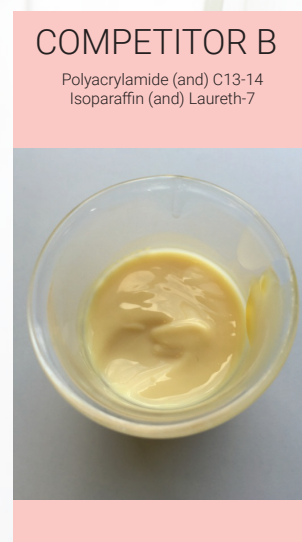
1. Mix Phase A by propeller at room temperature into a homogenous solution.
2. Mix Phase B by propeller at room temperature to disperse Sensogel 200.
3. Pour Phase B into the mixture of Phase A at RT while mixing by a propeller at 1500 rpm. Continue mixing for 15 minutes.
4. Adjust pH to 5.2~6.0.

Self-Tanning Lotion DHA Compability Comparison

This stability experiment was conducted to test the DHA color stability in a low pH self-tanning formulation, comparing Sensogel, a non-acrylamide thickener verses Competitor A, an acrylamide thickener, and Competitor B, a very popular standard thickening agent.

The test was conducted at pH4, at 50 Celsius for 30 days.

RESULTS: Both Sensogel and Competitor A are equally color stable, while Competitor B suffers clearly undergoes a dark color change.



Sunless Self-Tanning Lotion (SC-F0020)	
Ingredients	%
Water	69.90%
Preservative	0.1%
Glycerin	3%
Sensogel 200™	1.5%
Capric/Caprylic Triglycerides	5.00%
Cyclopentasiloxane	5.00%
Cetearyl alcohol (and) Cocoglucoside	0.5%
Dihydroxy Acetone	5.00%
Water	10.00%
Citric acid to pH 4	Q.S.

24 Hour Super Moisturizing Night Cream (SC-B 0024)

Phase	Ingredient	Wt%
A	Water	70.1
	Disodium EDTA	0.05
B	PhytoCare-HA TM CG 1M (Snow Mushroom Extract)	0.05
	Glycerin	12.0
	Sunflower seed oil	3.00
	Dimethicone	1.00
	Caprylic/Capric Triglyceride	2.00
	Shea Butter	2.00
	Petrolatum Jelly	4.00
	Stearic Acid	0.50
	Cetearyl Alcohol	0.75
	Glyceryl Monostearate	0.75
	Oleth-20	0.50
	Sensogel 200	3.00
	Phenoxyethanol	0.20
	Fragrance	0.10

- A powerful moisturizer that showcases the sensory boosting effects of Sensogel 200. Soothing, fresh sensory of a premium product, with the formulation cost of a mass market cream.
- Contains a high amounts of economical humectants like petrolatum jelly and glycerin, yet it absorbs very quickly with a moisturizing, non-tacky after-feel
- Viscosity: 132,000 cP (5 rpm)
- pH 4.92

Processing Procedure

1. Mix aqueous Phase A and phase B separately below 50 Celsius, then mix Phase B into Phase A under propeller mixing until homogenous.
2. Mix Phase C at 80 Celsius until homogenous, and then pour slowly under homogenization (4000 rpms) into combined Phase A and B. Mix for 5 minutes.
3. Cool down to 50 Celsius, then add Phase D into system.
4. Cool down to 30 Celsius, then adjust pH with citric acid solution until pH is between 4.4 and 5.4.

Smoothie Body Butter (SC-B 0025)

Phase	Ingredient	Wt%
A	Water	58.05
	Disodium EDTA	0.05
	Glycerine	4.00
	Propylene Glycol	2.00
B	OleoFlex EG 200	10.0
	Cetearyl Alcohol	2.0
	Stearic acid	1.50
	Butyrospermum Parkii Shea Butter	2.50
	Cocos Nucifera (coco-nut) Oil	2.50
	Helianthus Annuus (Sunflower) oil	1.00
	Capric/Caprylic Triglyceride	6.00
	Dimethicone oil	3.50
	GMS/PEG-100 Stearate	2.50
	Polysorbate-80	1.00
	Sensogel 200	3.00
C	FDC Y5 dye (0.1% aqueous sol.)	Q.S.
	Preservative	0.20
	Fragrance	0.20

- A body butter that has the rich look of a thick smoothie, but feels like a fresh hydro gel! Softens, smoothes and moisturizes your skin while maintaining a fresh sensory when applied.
- Less tacky after feel than the current traditional body butters on the market.
- Viscosity is 620,000 cP at 5 rpm
- pH 5.17

Processing Procedure

1. Heat Phase A to 85 Celsius and mix until homogenous.
2. Heat Phase B to 85 Celsius and make sure all Sensogel 200 is dispersed.
3. Pour Phase B into Phase A while mixing via homogenizer at 75 - 85 Celsius at 4000 rpm. Continue mixing for 10 - 15 minutes.
4. Cool down to 50 Celsius.
5. Mix Phase C into system, then cool down to 30 Celsius
6. Adjust pH to 5.0 - 5.8.

