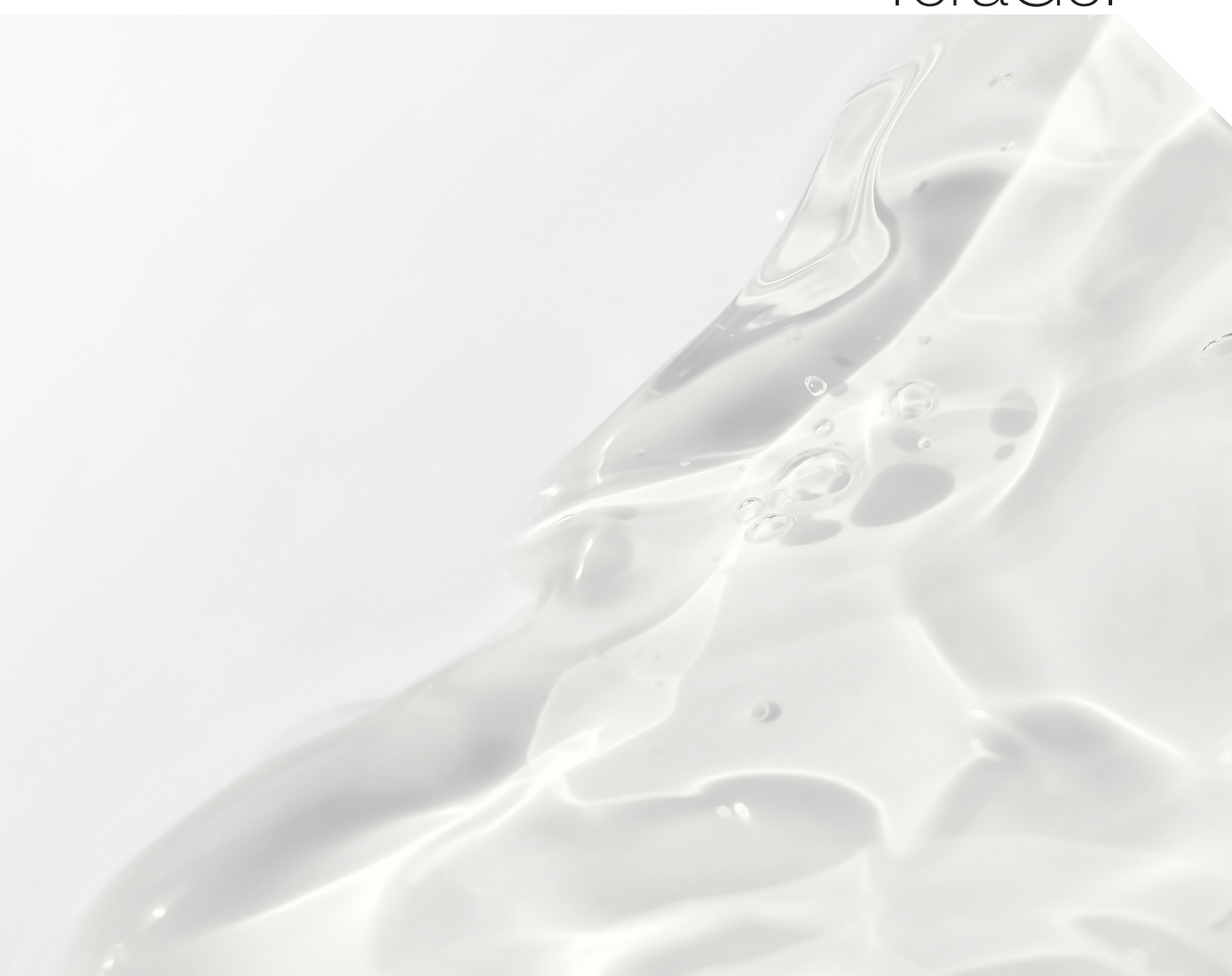


TeraGel™



Natural Gelling Agent

Actera

**TeraGel** is a natural alternative for thickening.

### **INCI**

Solanum Tuberosum (Potato) Pulp Extract (and) Furcellaria Lumbricalis Extract

### **Physical Description**

White powder

### **Use Level**

Recommended range: 3 – 5%

### **pH**

Recommended range: 3.5 – 7

## **Benefits**

- Clean-label, natural gel with excellent aesthetics
- Delivers hydration to the skin with no stickiness
- No pilling, no soaping, no odor
- Powdery finish, ideal for primer under makeup
- Compatible with surfactant for mild cleansing forms

## **Processing Guidelines**

- Disperse in water at room temperature with spatula or propeller mixer. Quicker dispersion can be achieved by premixing the TeraGel in glycerin or glycols.
- Heat to above 65°C to ensure TeraGel is properly dispersed.
- Allow >4 hours to allow for maximum viscosity and gelling properties.
- For formulas exceeding 1% lipophilic content, add emulsifier to ensure stability.
- Homogenization for long periods of time can break the TeraGel. If required, do not go over 10 minutes (lab setting).



## Troubleshooting

### Seeing Clumps?

- After combining all ingredients, closely monitor the temperature and ensure it is heated thoroughly to 75-80°C
- Mix well while at temperature and ensure homogeneity before cooling

### Separation/Instability?

- If separation occurs, either lower the level of oil phase (<0.5% without any emulsifier)
- Consider incorporating an emulsifier if a higher oil phase is desired

### Too Thin?

- After formulation is complete, let stand at room temperature for a minimum of 4 hours
- Wait time of 12 hours is ideal in order to observe the final viscosity

### Still Too Thin?

- Increasing the level of glycerin or other glycols can help improve viscosity
- Use level of 3.5-4.0% is recommended in order to achieve optimum gelling properties



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## Rejuvenator

Formulation #06-171

This fast-absorbing, buttery gel cream leaves the skin feeling velvety smooth while stimulating collagen synthesis and reducing the appearance of fine lines and wrinkles. Featuring **Hydroxysomes® Retinaldehyde**, a novel method of delivering retinal and calcium to the skin simultaneously with no irritation. Thickened with **TeraGel™**, a natural gelling agent from potato starch and red algae.

Phase	INCI	Trade Name	%
A	Deionized Water		Q.S.
	Solanum Tuberosum (Potato) Pulp Extract (and) Furcellaria Lumbricalis Extract	<b>TeraGel™</b>	5.0
	Glycerin		2.0
B	Propanediol		2.0
	Caprylyl Glyceryl Ether (and) Caprylhydroxamic Acid (and) Propanediol	<b>TeraStat™ N</b>	2.0
	Coco-Caprylate		15.0
C	Squalane		5.0
	Caprylic/Capric Triglyceride		5.0
	Arachidyl Alcohol (and) Behenyl Alcohol (and) Arachidyl Glucoside		5.0
	Tocopherol (and) Helianthus Annuus (Sunflower) Seed Oil		0.2
	D	Citric Acid OR Sodium Hydroxide	
E	Hydroxyapatite (and) Retinaldehyde	<b>Hydroxysomes® Retinaldehyde</b>	0.1
Total			100.0

### Procedure

1. Combine Phase A into main vessel under high shear mixing. Allow to hydrate for at least 30 minutes or until clump free.
2. Combine Phase B ingredients and add to Phase A. Mix until visibly uniform. Heat to 75°C - 80°C.
3. In a separate vessel, combine Phase C ingredients, and heat to 75-80°C.
4. Add Phase C to Phase AB at the same temperature, and mix under high shear. Start cooling.
5. Once at RT, adjust pH using Phase D.
6. Add Phase E and homogenize at 16,000 rpm for 1-2 minutes or until fully dispersed and uniform in color.

### Physical Properties

pH = 5.94      Viscosity = 23,800 cP      Appearance: Yellow cream

### Stability

Passed 12 weeks at RT and 40°C and 3 cycles F/T

### Use Instructions

Apply a dime-sized amount at night to clean face and neck.

### Intended packaging

Opaque tube or airless pump

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## Quencher

Formulation #06-29

Fast absorbing gel-cream for when the skin needs an extra kiss of hydration. Mushroom-derived **AquaGlucan™** delivers immediate and long-term moisturization plus increased collagen production. Emulsified and gelled naturally with plant-powered **TeraTexture™** and **TeraGel™** for a luxurious skin feel.

Phase	INCI	Trade Name	%
A	Deionized Water		Q.S.
	Solanum Tuberosum Pulp Extract (and) Furcellaria Lumbricalis Extract	<b>TeraGel™</b>	3.5
	Pisum Sativum Peptide (and) Sodium Stearoyl Lactylate (and) Xanthan Gum (and) Trisodium Citrate (and) Magnesium Stearate	<b>TeraTexture™</b>	2.0
	Glycerin		8.0
	Helianthus Annuus (Sunflower) Seed Oil		5.0
	Caprylyl Glyceryl Ether (and) Caprylhydroxamic Acid (and) Propanediol	<b>TeraStat™ N</b>	2.0
	Butyrospermum Parkii (Shea) Butter		1.0
	B	Water (and) Propanediol (and) Glycerin (and) Beta-Glucan	<b>AquaGlucan™</b>
C	Citric Acid (OR) Sodium Hydroxide		QS pH ~ 6.5
Total			100.0

### Procedure

1. Add water into the main vessel. Slowly sift in TeraTexture and TeraGel one at a time under high shear propeller mixing. Allow to disperse and hydrate for 15-20 minutes or until visibly clump-free.
2. Add the remaining Phase A ingredients, mix until uniform, and heat to 80-85°C.
3. Start cooling while mixing under high shear.
4. Add phase B below 30°C and mix until uniform.
5. Adjust pH using Phase C.

### Physical Properties

pH = 6.5      Viscosity = 8,460 cP      Appearance: Off-white gel cream

### Stability

Passed 12 weeks at RT and 40°C and 3 cycles F/T  
Passed 1 year at RT

### Use Instructions

Apply liberally twice daily or as needed onto clean face and neck.

### Intended packaging

Pot or pump

# Actera

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