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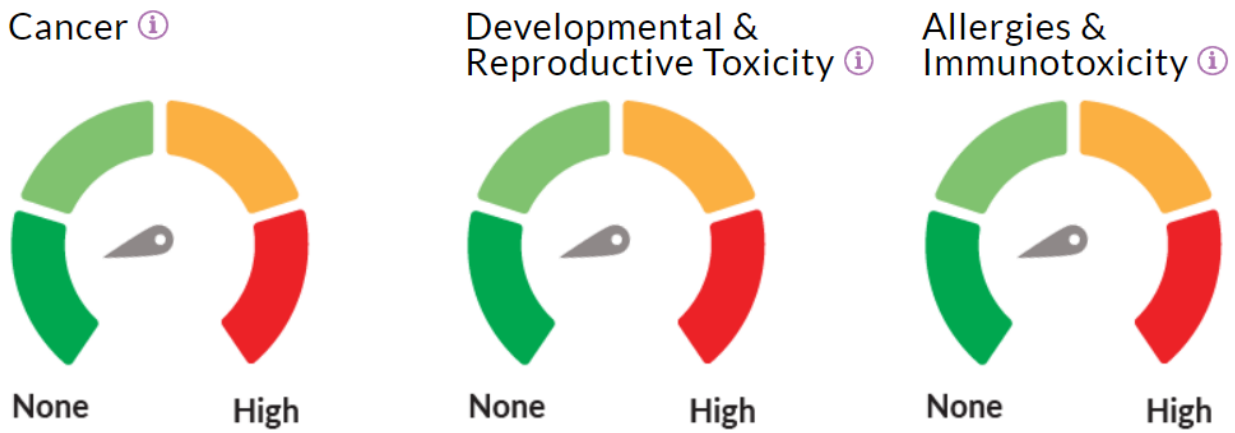
Reflez PCA GO

Super Conditioning Agent

Function

1. Conditioning & Moisturizing
2. Improve skin barrier
3. Thickener

Alcohol + Acid

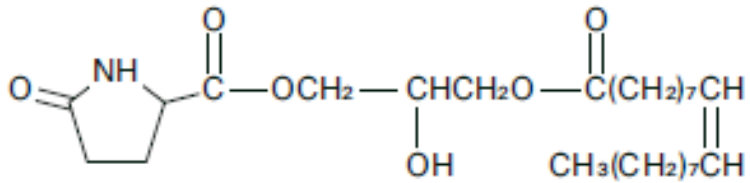


Source: EWG (The Environmental Working Group)

Reflez PCA GO

PCA Glyceryl Oleate

Cas number: 84608-82-2



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Reflez PCA GO

THE GINZA Creamy Cleansing Foam

ANNEMARIE BORLIND Seide Natural Hair Care Mild shampoo

ATTITUDE SUPER LEAVES Curl Ultra-Hydrating Shampoo

ATTITUDE Lavender Pet Waterless Anti-Itching Detangling Spray

OATS CALMING SHAMPOO Gentle Care for Sensitive Dog Skin

CLEN Nature Conditioner Organic pomegranate & Goji berries

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Why ester-based surfactant system： PCA GO?

(1) Why should add a hydrophilic ester into the surfactant system?

- Cleansing and bathing products: refattening, stabilizing foam, moisturizing, and improving skin feel.
- Shampoo: Improve wet rinse, moisturize, stabilize foam.

(2) Common hydrophilic ester used in surfactant systems are: Glyceryl Laurate, Glyceryl Oleate, PEG-7 Glyceryl Cocoate, Propylene Glycol Laurate, Polyglyceryl-3 Caprate, etc. Why is PCA GO worth recommending:

	Glyceryl Laurate	Glyceryl Oleate	PEG-7 Glyceryl Cocoate	Propylene Glycol Laurate	Polyglyceryl-3 Caprate	PCA GO
Refattening	★★★★★	★★★★★	★★★	★★★★★	★★★★	★★★★★
Foam Stability	★★★	★★	★★★★★	★★★	★★★★	★★★★
Moisturizing	★★★	★★★★★	★★	★★★	★★★★★	★★★★★
Better rinse-off	★★	★★★★	★	★★★★★	★★	★★★★★
accumulative	★★★	★★	★★★★★	★	★★	★★★★★

3) Which products are PCA GO suitable for:

Facial cleanser, cleansing mousse, shower gel, soap, various shampoos, two-in-one baby and child care, etc.

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Features

- Improve skin barrier - reducing transepidermal moisture loss
- Moisturizing due to pyrrolidone carboxy acid (PCA), which has a moisturizing effect.
- Natural conditioning ingredient for skin and hair. Does not accumulate on hair
- Improves combability of hair; In combination with other lipophilic agents, it works as standard cationic additives.
- Has a thickening effect
- Can be used in both hot and cold process

Applications

- Hair Care - Suitable for natural concepts, for silicone-free concepts
- Rinse Off
- Skin Care
- Wet wipe

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Specification

- **Appearance: clear liquid**
- **Active substance content: >90%**
- **Insoluble in water**
- **Recommended dosage: 0.5-2.0%**
- **Gives transparent formulations in surfactant systems at concentrations up to 3.0%**
- **Packaging: 25kg HDPE drum**
- **100% natural origin**

Mode of application: In formulations containing surfactants, Reflez® PCA GO is added to the system after all surfactants have dissolved. When used in emulsions, it is added to the oil phase. When using linden tonics and hair sprays in aqueous products, a premix with a solubilizer is required.

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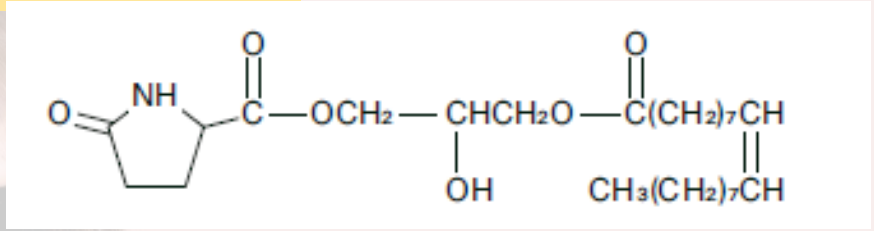
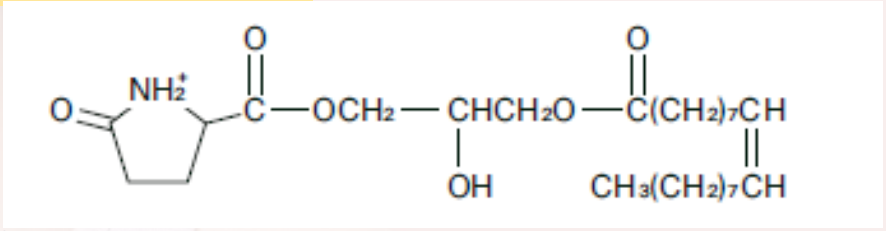
Chemical Structure

At pH > 5.5



At pH < 5.5



How does it work?

At pH below 5.5, the amino acid derivative provides positive charge. It is more suitable for hair conditioner formulations.

While at other pH levels, it has no charge, hence it deposits on hair through hydrophobic interaction.

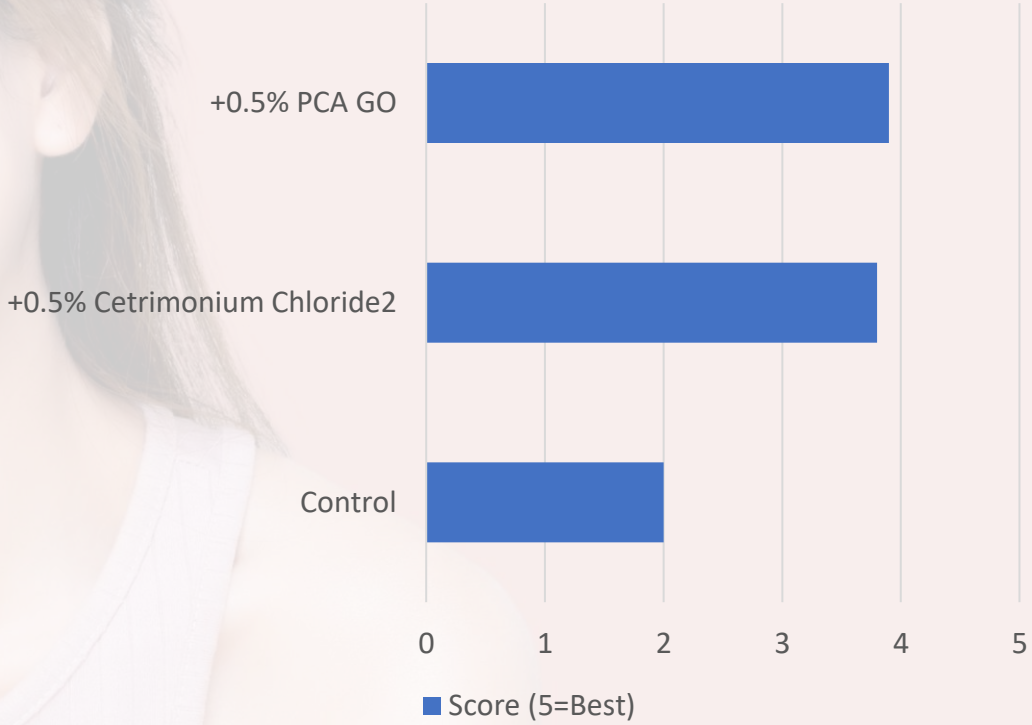
Reflez PCA GO

Effectiveness in Skin Hydration

PCA GO improves skin barrier function.
Transepidermal water loss (TEWL) tests show that PCA Glyceryl Oleate reduces water loss after use.

Conditioning Efficiency

Sensory evaluation after using conditioning products
(Number of panelist : 25)



PCA Glyceryl Oleate has virtually the same conditioning effectiveness as Cetrimonium Chloride

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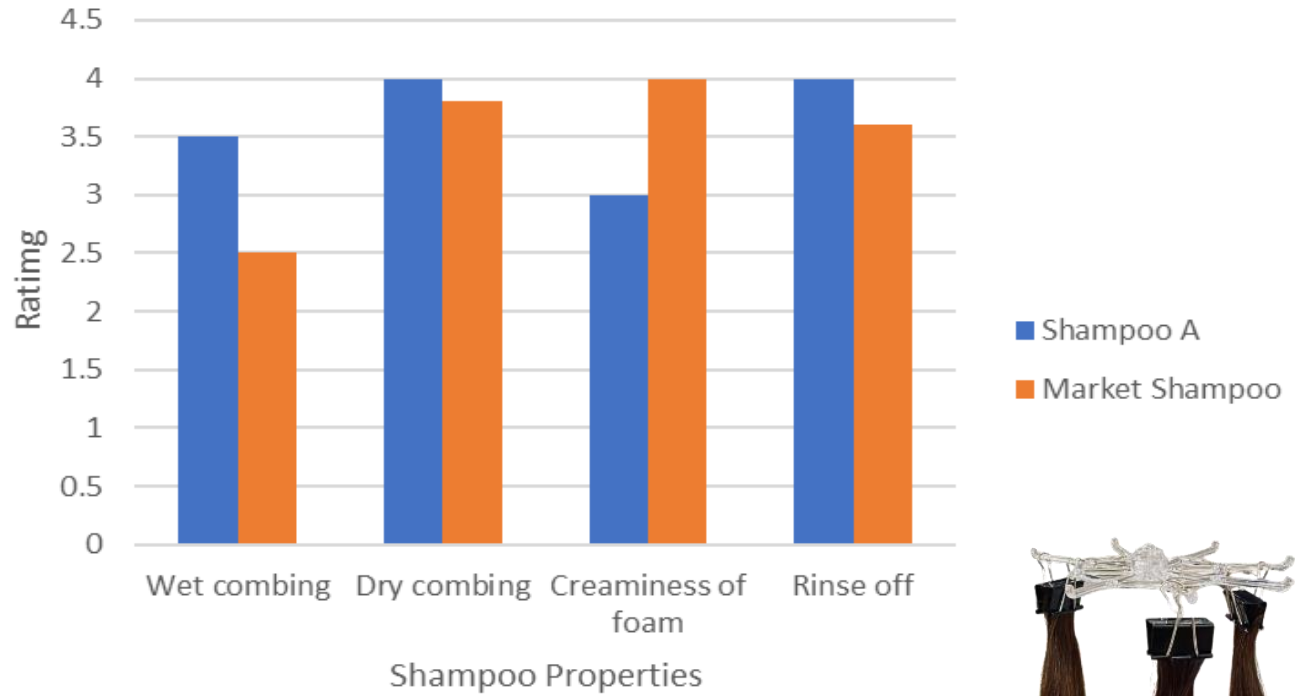
Reflez PCA GO

Reflez PCA GO (blind test)



Phase	Ingredient	INCI	Function	%W/W
A	Guar Hydroxypropyltrimonium Chloride	*Derivative guar gum*	Thickener	0.25
	Phenoxyethanol	*Phyenoxyethanol*	Preservative	0.60
B	Water	*Aqua*	Solvent	61.65
C	Citric Acid	Citric Acid	pH adjuster	0.2
D	Coco glucoside	*Coco glucoside*	Surfactant	1
E	Sodium Laureth Sulfate	Sodium Laureth Sulfate	Surfactant	16
	Glycol Distearate	*Polyoxyethylene Glycol Fatty Acid Esters*	Pearlizing Agent	1
	Cocoamide MEA	*Cocoamide monoethanolamine*	Surfactant	1.2
	Cocamidopropyl Betaine	*Cocamidopropyl Betaine*	Surfactant	11
	Sodium Hyaluronate	*Sodium Hyaluronate*	Humectant	0.6
	Avocado Oil	*Avocado Oil*	Mosturizing agent	0.3
	Reflez PCA GO	*PCA Glyceryl Oleate*	Conditioner and glossing agent	0.5
F	Water	*Aqua*	Solvent	5.0
	Avocado Extract	*Persea Gratissima*	Mosturizing agent	0.2
	Sodium Chloride	*Sodium Chloride*	Thickener	0.3
G	Fragrance			0.8

Procedure: Combine Phase A, then add Phase B and C and stir well. Should have a transparent solution. Then add Phase D and stir. Add Phase E, heat to 90°C while stirring. The solution should not be transparent. Combine phase F and heat to 90°C and add into the mixture at 40°C. Finally added Phase G.

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Silky Smooth Conditioner

Guided Formulation

Phase	Ingredient	INCI	Function	%W/W
A	Water	*Aqua*	Solvent	80.15
	Glycerine	*Glycerine*	Mosturizing agent	3.0
	Hydroxyethylcellulose	*Hydroxyethylcellulose*	Thickener	0.75
	Citric Acid	Citric Acid	pH adjuster	0.1
B	Reflez OW 10	*PEG 100 Stearate (and) Glyceryl Stearate*	Emulsifier	2.0
	Cetearyl Alcohol	*Cetearyl Alcohol*	Thickener and stabilizer	7.0
	Behentrimonium Chloride	Behentrimonium Chloride	Anti-static agent	2.0
	Reflez PCA GO	*PCA Glyceryl Oleate*	Conditioning agent	0.7
C	Water	*Aqua*	Solvent	2.0
	Panthenol	*Panthenol*	Mosturizing agent	0.5
D	Fragrance			0.8
	Euxyl 9010	*Phenoxyethanol (and) Ethylhexylglycerin*	Preservative	1.0

Procedure: Combine Phase A and Phase B in a different beaker and heat to 80°C. Add Phase B to Phase A while heating and homogenizing for 5 minutes. Remove from heat and stir to cool down to 40°C. Add Phase C and D and mix well. Measure pH and adjust to 4.4 – 4.9 with citric acid if needed.

Innovation Concept

Silky smooth effect on the hair which promotes we and dry combing

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Eco Shampoo Bar

Guided Formulation

Phase	Ingredient	INCI	Function	%W/W
A	Sodium Cocoyl Isethionate	*Sodium cocoyl isethionate*	Surfactant	43.0
	Cocamidopropyl Betaine	*Cocamidopropyl Betaine*	Surfactant	18.0
B	Shea Butter			
	Reflez PCA GO	*PCA Glyceryl Oleate*	Conditioning agent	0.7
	Coconut Oil	*Coconut Oil*	Conditioning agent	2.0
	Stearic Acid	*Stearic Acid*	Conditioning agent	6.0
	Cetyl Alcohol	*Cetyl Alcohol*	Mosturizing agent	3.0
	Fragrance			1.0
C	Water	*Aqua*	Solvent	5.0
	Polyquaternium-10	*Polyquaternium-10*	Anti-static agent	1.5
D	Glycerine	*Glycerine*	Mosturizing agent	3.0

Procedure: Crushed cocoyl isethionate and combined with cocamidopropyl betaine. Combine Phase B and heat to 80°C until all melt. Combine Phase C and heat to 80°C, mix until homogenous and add to Phase A. Add Phase B to the mixture and stir until cool and put into mould. Freeze for a day before using.

Innovation Concept

Conditioning effect that offers improvement of wet and dry combability

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THANK YOU

Our Mission :

"WE INVENT FOR A SUSTAINABLE FUTURE"

- In CIDOLS, we come together as a team to create solutions that nurture, protect and improve performance as a contribution to a sustainable future

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