

Application for cosmetics

Hair oil

Formulation No.0219

Ingredients		(W/W%)
A	Promois EK-118(IN)	1.0
	Isododecane	10.0
	Isostearic Acid	1.0
	C12-15 Alkyl Benzoate	5.0
	Oryza Sativa (Rice) Bran Oil	1.0
B	Cyclopentasiloxane	29.0
	Cyclopentasiloxane / Dimethiconol	25.0
	Cyclopentasiloxane / Dimethicone	20.0
	Dimethicone	8.0

- 1) Mix A, and stir.
- 2) Add B, and stir until uniformly dispersed.

Efficacy on hair oil formulation



[Experimental method]
Bleached hair was treated with hair oil. After 3 hours, tresses were observed in 50% humidity.

Hair oil containing Promois EK-118(IN) gives moist feeling and makes hair manageable.

Information

INCI name	Isostearoyl Hydrolyzed Keratin, Isononyl Isononanoate	Molecular weight	400
		Active component	30%

Oil-Soluble Active Ingredient



Oil-Soluble Keratin Promois EK-118(IN)

INCI name: Isostearoyl hydrolyzed keratin

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Effect on hair

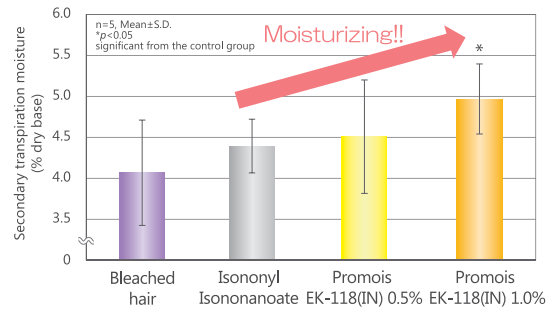
Appearance used as hair oil



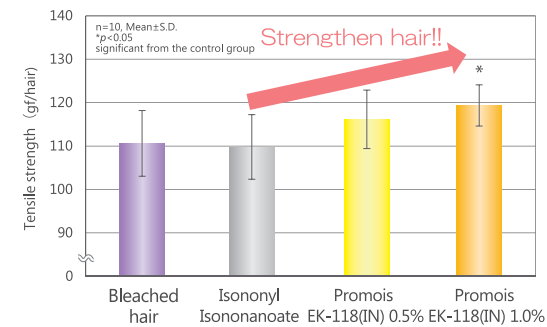
[Experimental method]
Bleached hair was treated 2.0% SLES at 40 deg C for 10 minutes and washed with running water for 1 minute. After towel drying, it was treated isononyl isononanoate or isononyl isononanoate including Promois EK-118(IN) 1.0%, dried with hair dryer and observed in 50% humidity.

Promois EK-118(IN) gives hair moisturizing and smoothness.

Hair Moisture Measurement - Secondary transpiration moisture -



Improving hair strength - Tensile strength -

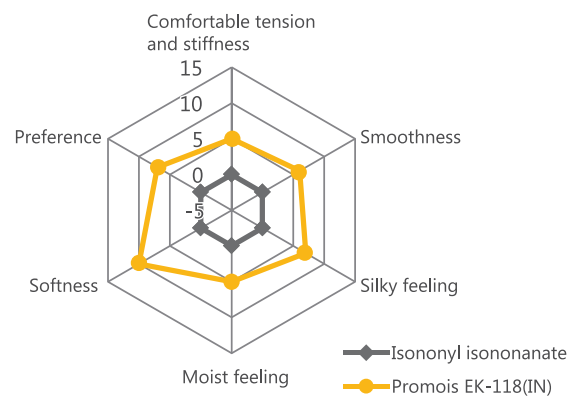


[Experimental method]
Bleached hair was treated with 0.5% isononyl isononanoate or isononyl isononanoate including Promois EK-118(IN) of the amount of hair and keep at room temperature for 30 min. After that it was treated with 2.0% SLES at 40 deg C for 10 min, washed with running water at 40 deg C for 1 min and dried with towel and hair dryer. The process was repeated 5 times and hair moisture and hair strength were measured.

Promois EK-118(IN) repairs hair and improves moisturizing effect and hair strength.

Improving sensory-texture

- Sensory evaluation -

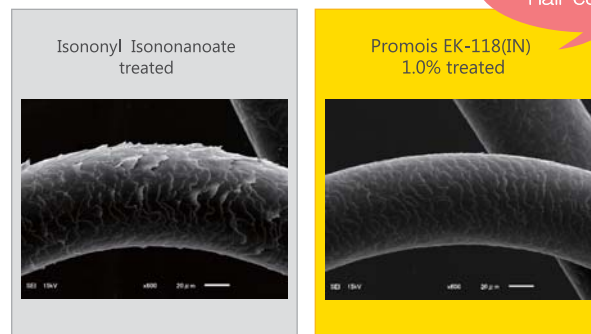


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* Scanning electron microscope: JEOL JSM-5800LV (JEOL)

Promois EK-118(IN) suppresses lift-up of cuticle and gives good sensory-texture.

Repairing hair surface

- SEM* observation -



Suppress lift-up of hair cuticle!!

Physical property

Solubility of oil-soluble keratin



Application for hair care

Shampoo / Oil shampoo
Conditioner
Hair-oil



Solubility of keratin



Application for hair care

Shampoo
Conditioner
Hair mist



Solubility to each oil

	Oil	Solubility
Hydrocarbon	Isostearic Acid	○
	Isododecane	○
	Hydrogenated Polyisobutene (Light liquid paraffin)	○
	Mineral oil (Light liquid paraffin)	○
	Squalane	△
	Mineral Oil (Liquid paraffin)	△
Ester	Isononyl Isononanoate	○
	C12-15 Alkyl Benzoate	○
	Neopentyl Glycol Dicaprate	△
Plant oil	Simmondsia Chinensis (Jojoba) Seed Oil	△
	Oryza Sativa (Rice) Bran Oil	△
	Argania Spinosa Kernel Oil	△
	Olea Europaea (Olive) Fruit Oil	△
	Camellia Japonica Seed Oil	△
	Helianthus Annuus (Sunflower) Seed Oil	△
	Macadamia Integrifolia Seed Oil	△
	Vitis Vinifera (Grape) Seed Oil	△
Silicone	Phenyl Trimethicone	△
	Cyclopentasiloxane	△
	Dimethicone	※
	Dimethiconol/Cyclopentasiloxane	※

○ : Soluble in any ratio
△ : Soluble with each different Promois EK-118(IN) concentration

Solubility improvement of silicone oil

Hint!!

Combination with silicone oil	Solubility improvement
Isostearic Acid	◎
Hydrogenated Polyisobutene (Light liquid paraffin)	○
Mineral oil (Light liquid paraffin)	○
C12-15 Alkyl Benzoate	○
Isononyl Isononanoate	○
Isododecane	○

◎ : Improving solubility of silicone oil used with each oil
◎ : Most improving solubility of silicone oil

[How to dissolve]
1. Mix oil with Promois EK-118(IN) uniformly.
2. Mix 1. with silicone oil.

