



All-Natural Stability Enhancer **TAISET 50-C**

Characteristics

- For any O/W and W/O emulsions
- Maintains a very stable viscosity of final applications even at high temperatures, giving a prestigious spreadability and a well-balanced sensorial perception.
- 100% natural origin

How to use

Usage level: 0.2-5%

Add TAISET 50-C into oil phase and heat up to 70-75°C until dissolved well.

To replace a part of your higher fatty alcohol or fatty acids will be a first small step toward improvements on your formula.

◆ Compatibility with oils

TAISET 50-C can be used in various emulsions with a wide range of oils.

Oil	Efficacy
Squalane	+++
Octyldodecyl Myristate	+++
Caprylic/Capric Triglyceride	+++
Olea Europaea (Olive) Fruit Oil	+++
Dimethicone	+
Hydrogenated Polyisobutene	++

All
Natural

PEG-free

Vegan

Cruelty
free

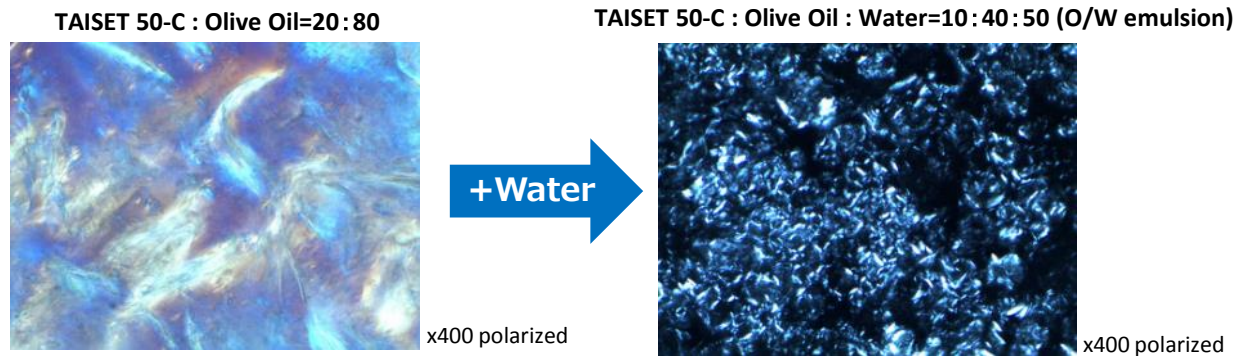
China
Compliance

Gluten
free

How does TAISET 50-C work?

◆ Forming association structures

TAIEST 50-C can contribute to enhancing the stability of emulsions while forming polarized association structures along the interface between oil and water.



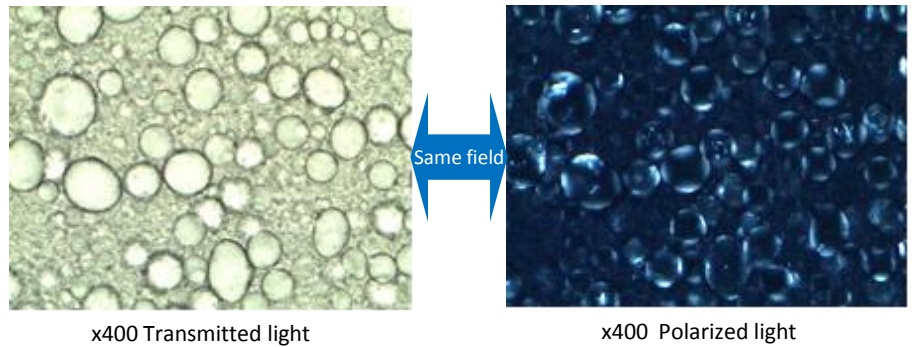
Application 1: Moisture Cream (MSC001C)

	Ingredients	%
Water phase	Water	Up to 100.0
	SUNSOFT Q-182S-C ^{*1}	4.5
	Cetearyl Alcohol	2.5
	Moisturizer	q.s.
Oil phase	Water soluble thickener	q.s.
	Caprylic/Capric Triglyceride	14.0
	SUNOIL DDI ^{*2}	3.0
	TAISET 50-C	3.0
	Olive fruits oil	10.0

INCI

*1: Polyglyceryl-10 Distearate

*2: Polyglyceryl-10 Decaisostearate



Microscopic observation of the O/W emulsions having TAISET 50-C confirms polarized associations around the oil droplets.

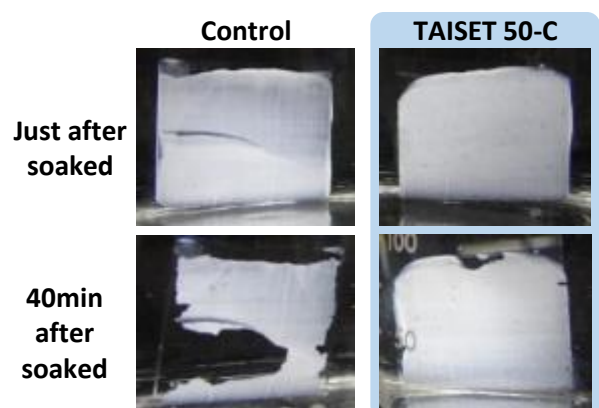
◆ Water-resistant film in Sunscreen formula

Application 2: O/W Sunscreen Cream

	Ingredients	%
Water phase	Water	Up to 100.0
	SUNSOFT A-181E-C ^{*3}	5.0
	Cetyl alcohol	2.0
	Butylene Glycol	3.0
Oil phase	Water soluble thickener	q.s.
	Triethylhexanoin	7.5
	SUNOIL DDI ^{*2}	0.5
	TAISET 50-C	0.5
	Oils	20.0
	Micro particle UV-ray scattering agent	6.0

INCI

*3: Polyglyceryl-5 Stearate



Apply each sample on a glass plate and dry well, then soaked in water with gentle stirring.

Sweat-proof and water-resistant properties can be acquired when combined with TAISET 50-C.

Efficacy in O/W system

Comparison with higher alcohol

◆ Enhancing formulation stability

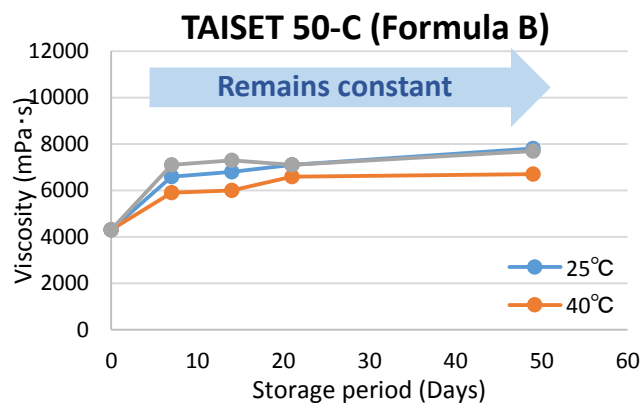
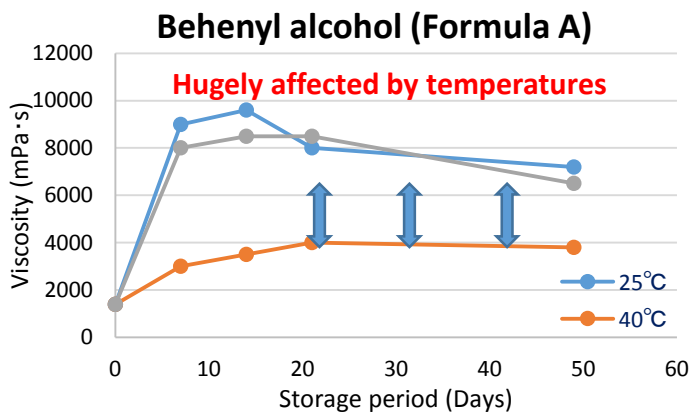
O/W emulsions formulated with TAISSET 50-C or behenyl alcohol were prepared and each change in viscosity over time was evaluated as well when stored at various temperature ranges.

Ingredients	Formula A	Formula B
Water	Up to 100.0	Up to 100.0
Glycerin	q.s.	q.s.
SUNSOFT No.750-C* ⁴	0.5	0.5
SUNSOFT Q-17Y-C* ⁵	1.6	1.6
SUNSOFT Q-10D-C* ⁶	0.4	0.4
Thickener	q.s.	q.s.
Oil*	17.0	17.0
TAISSET 50-C	—	4.0
Behenyl alcohol	4.0	—

INCI *Caprylic/Capric Triglyceride, Mineral oil

*4: Glyceryl Laurate, *5: Polyglyceryl-10 Oleate

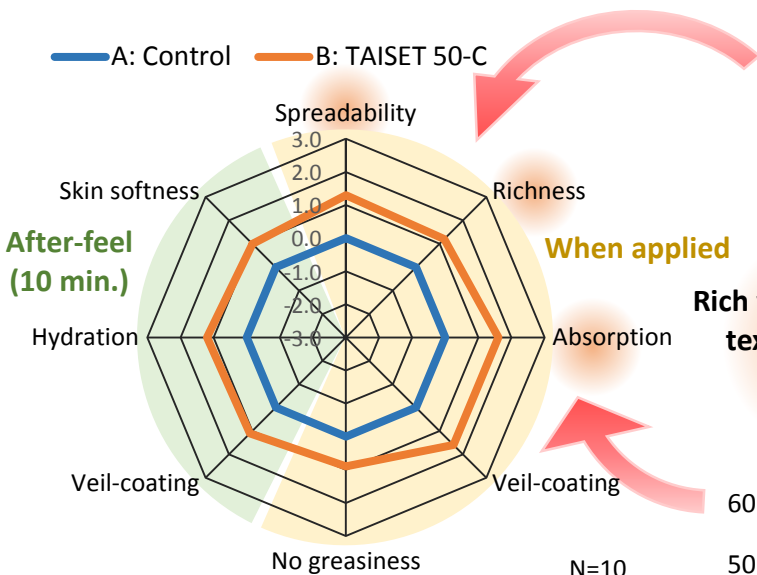
*6: Polyglyceryl-2 Caprate



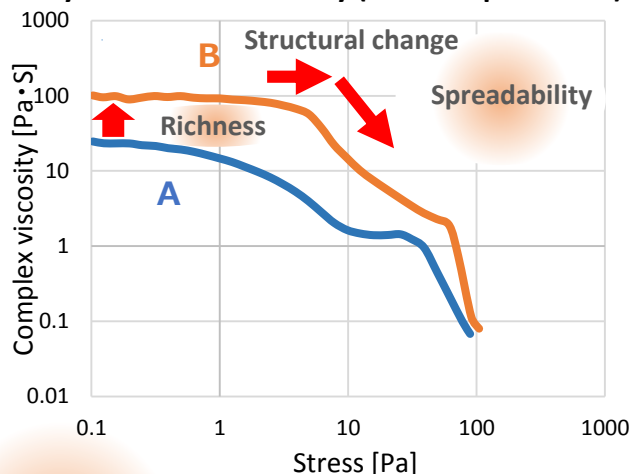
TAISSET 50-C shows less viscosity change over time and at various temperature.

◆ Providing a prestigious texture

A comparison of sensorial profiles on creams having TAISSET 50-C and behenyl alcohol was confirmed by sensory evaluation and instrumental analysis. TAISSET 50-C provides well-spreading and rich texture with quick absorption. Also, it only gives moisturizing after-feel and skin softness. (No greasiness)

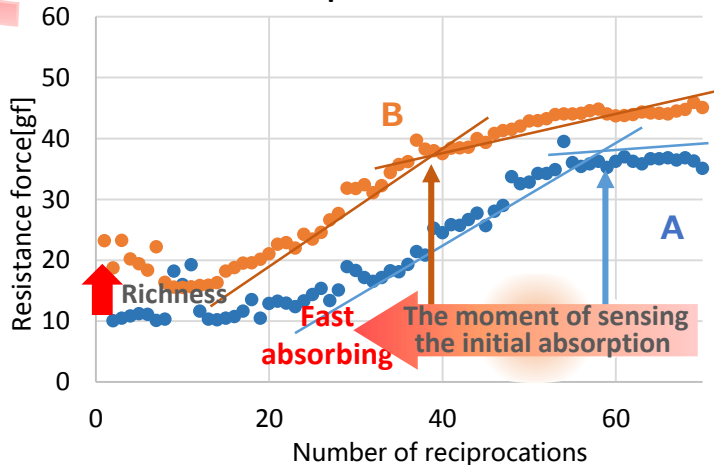


Dynamic viscoelasticity (stress dependence)



Instrument: Rheometer MCR302 (AntonPaal)

Skin absorption of each cream



Pre-treatment:
Apply 0.02g of sample on a forearm

Conditions:
Speed: 10mm/sec
Distance: 30mm
Load: 30g
Reciprocations: 50 times



Instrument:
Static/Dynamic Friction Tester, TL201Tt
(Trinity-lab)

Efficacy in W/O system

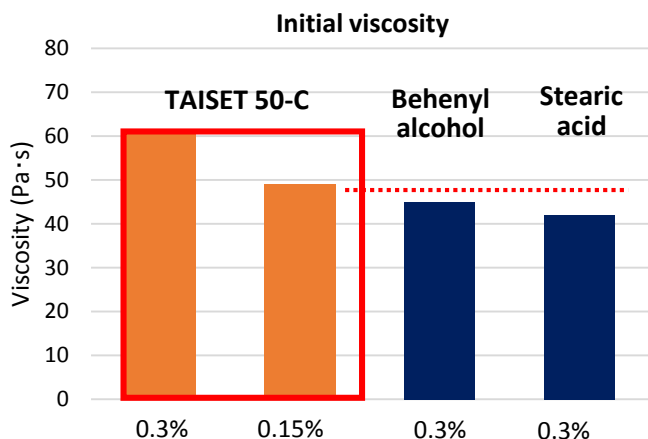
Comparison with higher alcohol & fatty acid

Based on the W/O cream formula (WOC001C), its physical properties and stability were confirmed when the amount of TAISET 50-C was changed or replaced with higher alcohols or fatty acids.

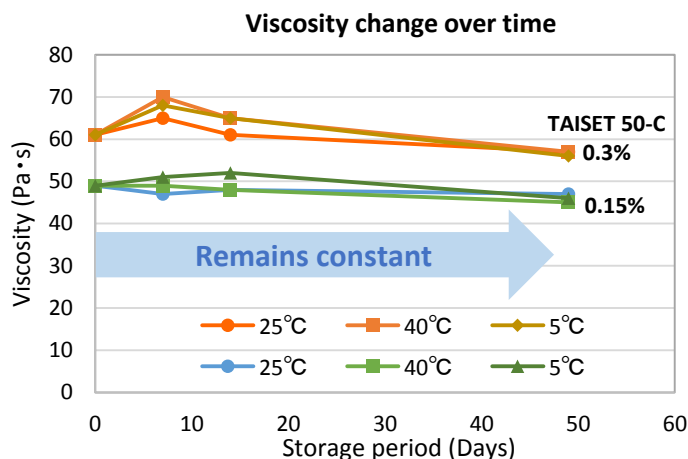
Ingredient	%	%	%
Water	Up to 100.0	Up to 100.0	Up to 100.0
Sodium Chloride	1.0	1.0	1.0
Cyclopentasiloxane	12.0	12.0	12.0
Caprylic/Capric Triglyceride	6.0	6.0	6.0
SUNSOFT No.818R-C*7	2.0	2.0	2.0
TAISET 50-C	0.15 or 0.3	-	-
Behenyl alcohol	-	0.3	-
Stearic Acid	-	-	0.3

INCI

*7: Polyglyceryl-5 Polyricinoleate

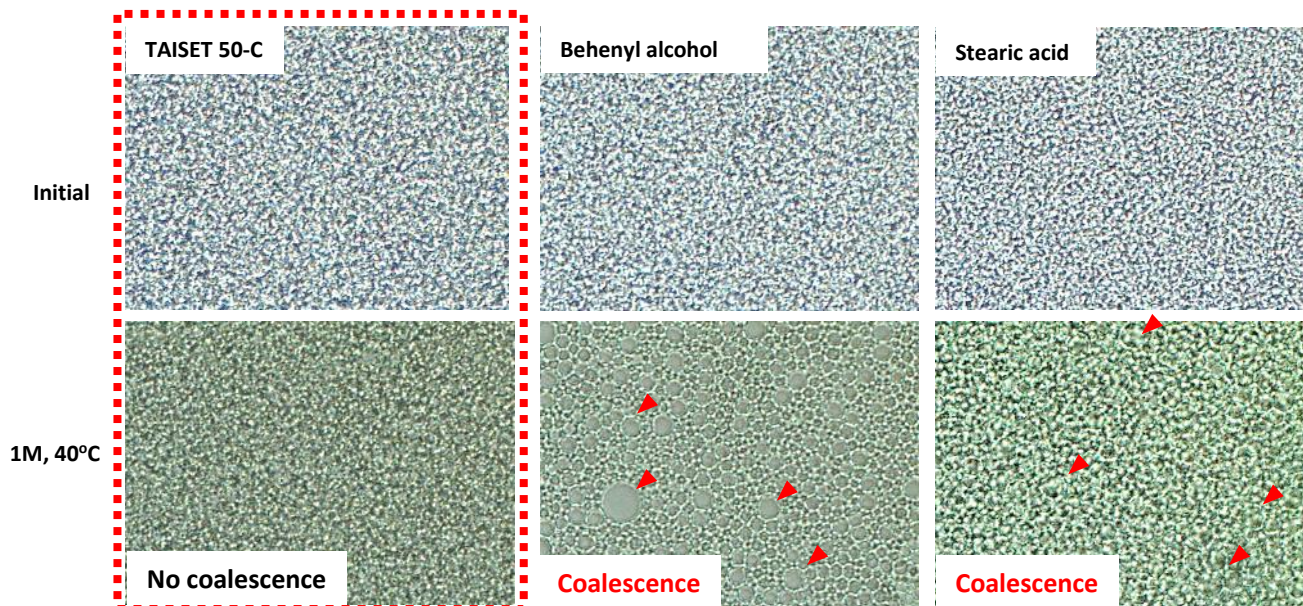


TAISET 50-C enables to increase viscosity with only half of higher alcohol/fatty acid



TAISET 50-C orientates itself at oil/water interface in the most effective and fastest way while contributing to the stability of emulsions.

Microscopy of each emulsion (x 400)



TAISET 50-C effectively prevents emulsions from coalescence.

INCI: POLYGLYCERYL-6 OCTASTEARATE, GLYCERYL BEHENATE
 IECSC* 2015: Listed (No. 02472, 03861)
 * Inventory of Existing Cosmetic Ingredient in China