



## GUIDE FORMULATIONS



# ADEKA – WHO WE ARE

**ADEKA** Corporation is a Japanese chemical company with more than a century of experience in the cosmetics and detergents market, having nowadays more than 12 offices, 4 R&D and 15 production sites worldwide.

**ADEKA** is a global company with business organizations in Japan, Korea, Taiwan, Thailand, Singapore, China, India, USA and Europe. With global R&D centers, responsive sales and logistics organizations and a worldwide distribution network, ADEKA offers a broad portfolio of products to customers worldwide.

**ADEKA** has been present in the surfactants market in Europe for more than 20 years now. In 1999, ADEKA centralized their European sales activities in a new head office, ADEKA Europe GmbH, in Düsseldorf, Germany.

**ADEKA** has a dedicated Research & Development group equipped with latest technology and modern facilities for testing and evaluation of additives performances, which help to provide innovative solutions to the market.



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The complexity of the formulations in this guide is explained using the symbols of spatulas. The complexity ranges from one spatula (very easy) to 4 spatulas (advanced).

Complexity:



1 Spatula = very easy

Complexity:



2 Spatulas = easy

Complexity:



3 Spatulas = moderate

Complexity:



4 Spatulas = advanced

# LIQUID FOUNDATION

LFD002C

## CHARACTERISTICS

- The combination of TAISET OG-C and SUNOIL DDI(MB) improves the dispersibility of the powders and creates a highly-uniform thin film, resulting in the prevention of color transfer of foundation.

	INCI NAME	WT-%	FUNCTION	INGREDIENT NAME
1	POLYGLYCERYL-10 DECAISOSTEARATE	4.0	Dispersion	SUNOIL DDI(MB)
2	POLYGLYCERYL-20 OCTADECABEHENATE/HYDROXYSTEARATE	5.0	Thickening	TAISET OG-C
3	POLYGLYCERYL-6 OCTASTEARATE, GLYCERYL BEHENATE	2.0	Emulsification, Stabilization	TAISET 50-C(MB)
4	POLYGLYCERYL-6 POLYRICINOLEATE	5.0	W/O Emulsification	SUNSOFT NO.818SK-C(MB)
5	IRON OXIDES, OCTYLDODECANOL, JOJOBA ESTERS, TRIHYDROXYSTEARIN	4.8	Makeup powder	IRON OXIDE DISPERSION
6	TITANIUM DIOXIDE, OCTYLDODECANOL, JOJOBA ESTERS, TRIHYDROXYSTEARIN, ALUMINA, SILICA	1.68	Makeup powder	TITANIUM OXIDE DISPERSION
7	DISTEARDIMONIUM HECTORITE	1.2	Oil	DISTEARDIMONIUMHECTORITE
8	CYCLOPENTASILOXANE	15.81	Oil	DIMETHYLCYCLOPOLYSILOXANE
9	DIMETHICONE/PHENYL VINYL DIMETHICONE CROSSPOLYMER, DIPHENYLSILOXY PHENYLTRIMETHICONE	10.0	Texture improver	(DIMETHICONE/ PHENYLVINYLDIMETHICONE) CROSSPOLYMER, DIPHENYLSILOXYPHENYLTRIMETHICONE
10	ETHYLHEXYL METHOXYCINNAMATE	7.0	UV absorber	PARAMETHOXYCINNAMATE2-ETHYLHEXYL
11	SILICA	2.4	Texture improver	SILICA
12	PENTYLENE GLYCOL	2.0	Emulsification	1,2-PENTANEDIOL
13	GLYCERIN	10.0	Emulsification	GLYCERIN
14	GLYCERIN	q.s	pH adjuster	PH BUFFER AGENT
15	WATER	29.11	Solvent	PURIFIED WATER


## PROPERTIES

- Appearance: Light beige soft cream
- Viscosity (B Type viscometer, No.3x12 rpm, 30 sec.): 65,000 - 75,000 mPa-s
- Stability: 3 months at 5 °C, 40 °C and ambient, 1 month at 50 °C

## PROCEDURE

1. Mix and dissolve 1-13 at about 70 - 80 °C.
2. Mix and dissolve 14,15 at about 70 - 80 °C.
3. Using a dispersion mill, drop [2] to [1] little by little and blend for 3 minutes at 8,000 rpm.
4. Cool down the solution to 30 °C.



Complexity:  
  
 ISO 16128 = 94.6 %

# MOISTURE CREAM

MSC001C

## CHARACTERISTICS

- SUNSOFT Q-182S-C(MB) has a high water-holding capacity allowing superior hydration effects.
- The α-gel formed by SUNSOFT Q-182S-C(MB) and higher alcohols enhances the stability of this emulsion.
- SUNOIL DDI(MB) has a powerful moisture holding capacity, leaving skin feel soft and smooth.
- TAISET 50-C(MB) gives a rich and luxurious texture to this formulation while enhancing its stability at high temperatures.

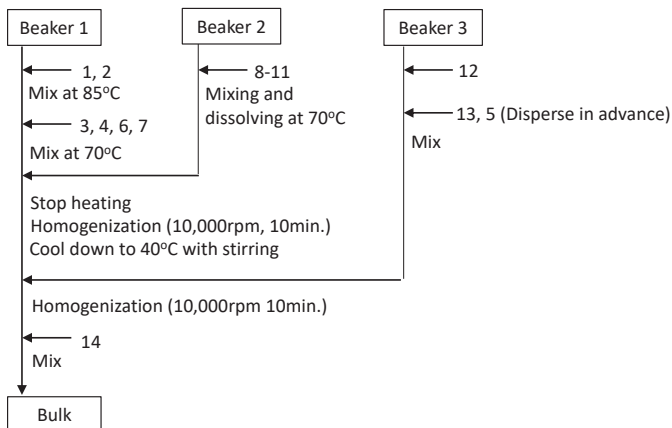
	INCI NAME	WT-%	FUNCTION	INGREDIENT NAME
1	WATER	45.52	Solvent	PURIFIED WATER
2	<b>POLYGLYCERYL-10 DISTEARATE</b>	<b>4.5</b>	<b>Emulsification</b>	<b>SUNSOFT Q-182S-C(MB)</b>
3	CETEARYL ALCOHOL	2.5	Emulsification	CETYL / STEARYL ALCOHOL
4	GLYCERIN	5.0	Moisturizing	GLYCERIN
5	BUTYLENE GLYCOL	5.0	Moisturizing	1,3-BUTANEDIOL
6	DIVERSE	0.15	Preservative	PRESERVATIVE
7	DIVERSE	0.02	pH adjuster	PH BUFFER AGENT
8	CAPRYLIC / CAPRIC TRIGLYCERIDE	14.0	Oil	CAPRYLIC/CAPRICTRIGLYCERIDE
9	<b>POLYGLYCERYL-10 DECAISOESTEARATE</b>	3.0	<b>Oil, Emollient</b>	<b>SUNOIL DDI(MB)</b>
10	<b>GLYCERYL BEHENATE,POLYGLYCERYL-6 OCTASTEARATE</b>	3.0	<b>Emulsification, Stabilization</b>	<b>TAISET 50-C(MB)</b>
11	OLEA EUROPAEA (OLIVE) FRUIT OIL	10.0	Oil	OLIVE FRUITS OIL
12	BENTONITE	10.0	Thickening	BENTONITE (5% AQ.)
13	XANTHAN GUM	0.3	Thickening	XANTHAN
14	FRAGRANCE	0.01	Fragrance	PERFUME

## PROPERTIES

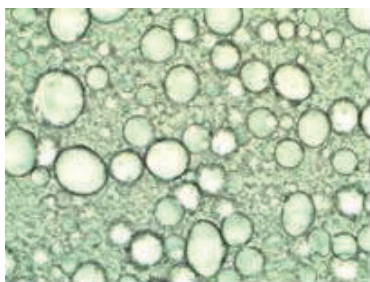
- Appearance: Milky white hard cream
- pH: 6.0 - 6.5
- Viscosity (Model BL Viscometer): 20,000 - 50,000 mPa·s
- Stability: 3 months at 5 °C, 40 °C and ambient, 1 month at 50 °C



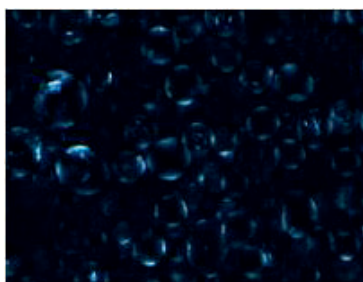
## PROCEDURE



## Stabilization of the O/W emulsion by TAISET 50-C(MB)



x 400



x 400, polarized

The results of microscope observation through transmitted light and polarized light in the same field have shown that TAISET 50-C(MB) is surrounding oil droplets while contributing to the enhanced stability of this emulsion



Complexity:



ISO 16128 = 100 %

## O/W MILK

OWM003C

### CHARACTERISTICS

- Petroleum-free O/W skincare milk lotion composed of 100% natural ingredients.
- By having less amount of surfactant and adding Sunsoft APF(G)-C(MB), this formulation gives a refreshing sensorial perception without any greasy after-feel.
- The combination of Sunsoft APF(G)-C(MB) and Q-182S-C(MB) keeps its stability and low viscous texture.

	INCI NAME	WT-%	FUNCTION	INGREDIENT NAME
1	APRICOT KERNEL OIL POLYGLYCERYL-6 ESTERS	1.5	Emulsification, Moisturizing	SUNSOFT APF(G)-C(MB)
2	POLYGLYCERYL-10 DISTEARATE	0.5	Emulsification	SUNSOFT Q-182S-C(MB)
3	GLYCERYL CAPRYLATE	0.1	Antibacterial	GLYCERYLCAPRYLATE
4	CAPRYLIC/CAPRIC TRIGLYCERIDE	4.0	OIL	CAPRYLIC/CAPRIC TRIGLYCERIDE
5	SIMMONDSIA CHINENSIS (JOJOBA),SEED OIL	4.0	Oil	JOJOBA SEED OIL
6	SQUALANE	1.0	Oil	VEGETABLE SQUALANE
7	GLYCERIN	10.0	Moisturizing	GLYCERIN
8	GELLAN GUM	0.01	Thickening	GELLANGUM
9	XANTHAN GUM	0.7	Thickening	XANTHAN
10	PENTYLENE GLYCOL	3.0	Moisturizing, Antibacterial	1,2-PENTANEDIOL
11	PROPANEDIOL	4.0	Emulsification	1,3-PROPYLENE GLYCOL
12	WATER	71.19	Base material	PURIFIED WATER

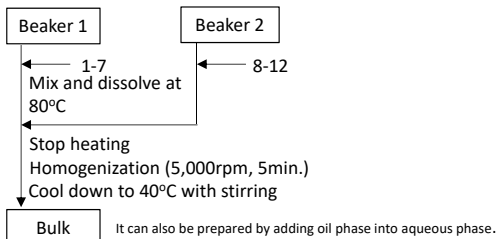
### PROPERTIES

- Appearance: Milky white lotion
- pH: 5.5 - 6.5
- Viscosity (Model BL Viscometer): 1,500 - 2,500 mPa·s
- Stability: 3 months at 5 °C, 40 °C and ambient, 1 month at 50 °C

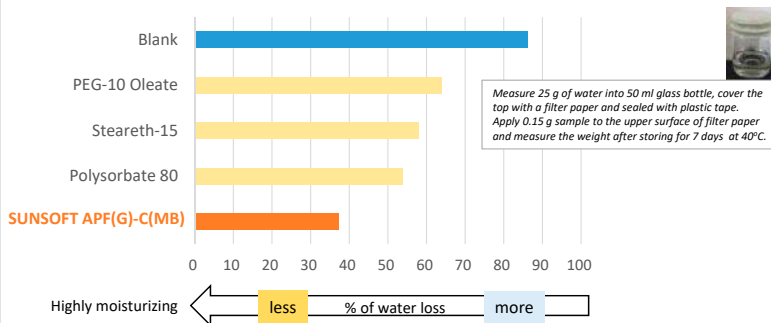




## PROCEDURE



## Moisture Retention



**Sunsoft APF(G)-C(MB) has water evaporation prevention ability so can perform high moisture retention.**



Complexity:



ISO 16128 = 65.5 %

## BATH MILK

BTM101C

### CHARACTERISTICS

- Quickly disperses into the bath due to its low viscosity, and bath water turns into thin milky white.
- Exhibits superior stability owing to fine emulsification derived by liquid crystal emulsification method.

	INCI NAME	WT-%	FUNCTION	INGREDIENT NAME
1	WATER	UP TO 100	Solvent	PURIFIED WATER
2	GLYCERIN	15.0	Emulsification	GLYCERIN
3	METHYLPARABEN	0.1	Preservative	PRESERVATIVE
	PROPYLPARABEN	0.05	Preservative	PRESERVATIVE
4	MINERAL OIL	30.0	Oil	LIQUID PARAFFIN
5	POLYGLYCERYL-10 DIISOSTEARATE	6.0	Emulsification	SUNSOFT Q-192Y-C(MB)
6	POLYGLYCERYL-10 LAURATE	2.0	Emulsification	SUNSOFT Q-12Y-C(MB)

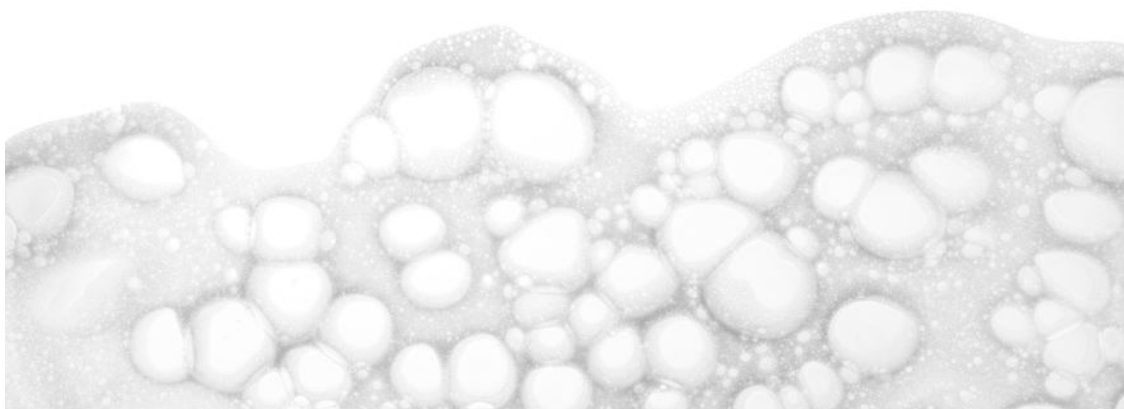
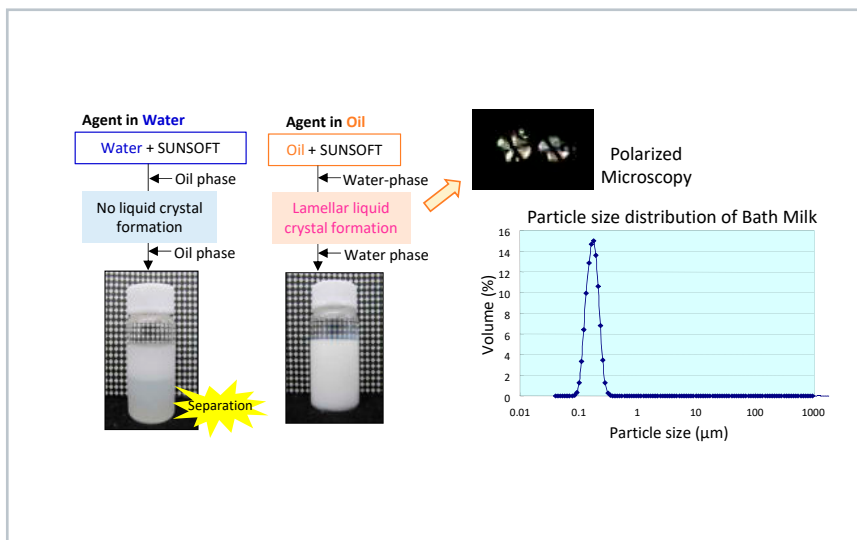
### PROPERTIES

- Appearance: Milky white liquid
- pH: 4.0 - 5.5
- Viscosity (Model BL Viscometer, No.2 x 60 rpm, 30 sec): 100 mPa·s
- Stability: 3 months at 5 °C, 40 °C and ambient, 1 month at 50 °C

### PROCEDURE

1. Mix and dissolve 1-3 at about 70 °C.
2. Mix and dissolve 4-6 at about 70 °C.
3. Under agitation by a paddle mixer (300 rpm), add [1] into [2] quickly (within approx. 30 sec.).
4. Cool down the mixture to 30 °C with continuous stirring.







Complexity:



ISO 16128 = 66.6 %

# SUNSCREEN CREAM O/W

OSC002C

## CHARACTERISTICS

- Reef-friendly mineral sunscreen formulation with highly safe ingredients. Available for sensitive skin.
- The film formed by TAISET OG-C provides excellent water and sweat resistant property after applied on the skin.
- The combination use of TAISET OG-C and SUNOIL DDI(MB) enhances UV protection while allowing silky coating perception owing to the improved dispersibility of powders.
- SUNOIL DDI(MB) enables micro fine particles to be quickly dispersed and doesn't leave white residue upon applying this O/W sunscreen cream.
- TAISET OG-C allows for sunscreens speedy & fast adhesion to the skin, which can be directly linked to less rubbing with minimal efforts.
- SPF 30 (Measured by SPF Analyzer, UV-2000S, Labsphere).

	INCI NAME	WT-%	FUNCTION	INGREDIENT NAME
1	AMMONIUM ACRYLOYLDIMETHYLTAURATE/VP COPOLYMER	30.0	Thickening	AMMONIUM ACRYLOYLDIMETHYLTAURATE/ VP COPOLYMER (2% AQ.)
2	HYDROXYPROPYLMETHYLCELLULOSESTEAROXYETHER	0.2	Thickening	HYDROXYPROPYL METHYLCELLULOSE STEAROXY ETHER
3	PENTYLENE GLYCOL	2.0	Emulsification	1,2-PENTANEDIOL
4	XANTHANGUM	0.2	Thickening	XANTHAN
5	WATER	39.3	Solvent	PURIFIED WATER
6	<b>POLYGLYCERYL-10 DECAISOSTEARATE</b>	<b>1.0</b>	<b>Dispersion</b>	<b>SUNOIL DDI(MB)</b>
7	<b>POLYGLYCERYL-20 OCTADECABEHENATE/HYDROXYSTEARATE</b>	<b>1.0</b>	<b>Thickening</b>	<b>TAISET OG-C</b>
8	<b>POLYGLYCERYL-6 OCTASTEARATE, GLYCERYL BEHENATE</b>	<b>0.5</b>	<b>Emulsification, Stabilization</b>	<b>TAISET 50-C(MB)</b>
9	ZINC OXIDE, DIMETHICONE, DIPHENYLSILOXY PHENYL TRIMETHICONE, DIMETHICONE/VINYL DIMETHICONE CROSSPOLYMER, POLYGLYCERYL-2 ISOSTEARATE	20.0	UV filter	ZINC OXIDE DISPERSION
10	TITANIUM DIOXIDE, HYDRATED SILICA, ALUMINUM HYDROXIDE, HYDROGEN DIMETHICONE, ETHYLHEXYL PALMITATE	1.0	UV filter	TITANIUM OXIDE DISPERSION
11	DIMETHICONE/PHENYL VINYL DIMETHICONE CROSSPOLYMER, DIPHENYLSILOXY PHENYL TRIMETHICONE	2.0	Texture improver	(DIMETHICONE/ PHENYLVINYL DIMETHICONE) CROSSPOLYMER, DIPHENYLSILOXYPHENYLTRIMETHICONE
12	POLYMETHYL METHACRYLATE	1.0	Texture improver	ALKYL POLYACRYLATE
13	<b>POLYGLYCERYL-10 STEARATE</b>	<b>1.0</b>	<b>Emulsification</b>	<b>SUNSOFT Q-18S-C(MB)</b>
14	<b>GLYCERYL STEARATE SE</b>	<b>0.8</b>	<b>Emulsification</b>	<b>SUNSOFT NO.30-C</b>

## PROPERTIES

- Appearance: Milky white soft cream
- Viscosity (Model BL Viscometer, No.3x12 rpm, 30 sec): 55,000 - 75,000 mPa-s
- Stability: 3 months at 5 °C, 40 °C and ambient, 1 month at 50 °C

\*1: Zinc oxide, Isostearicacid, Polyhydroxystearicacid, Liquid isoparaffin

\*2: Titanium oxide, Aluminum hydroxide, Isostearicacid, Diisostearylmalate, Liquid isoparaffin

## PROCEDURE

1. Mix and dissolve 1-5 at about 85 °C.
2. Mix and dissolve 6-14 at about 85 °C.
3. Using a dispersion mill, drop [2] to [1] little by little and blend for 3 minutes at 3000 rpm.
4. Cool down the solution to 30 °C.

## Water resistant property of O/W Sunscreen Cream

Sample: OSC002C vs Control (TAISET OG-C in OSC002C was replaced by a competitor's oil thickener)  
Apply each sample at 0.2g/cm<sup>2</sup> on a glass plate and dry well, then soaked in water with gentle stirring

The film was flaked off, it means maintaining the water-resistant layer.

OSC002C

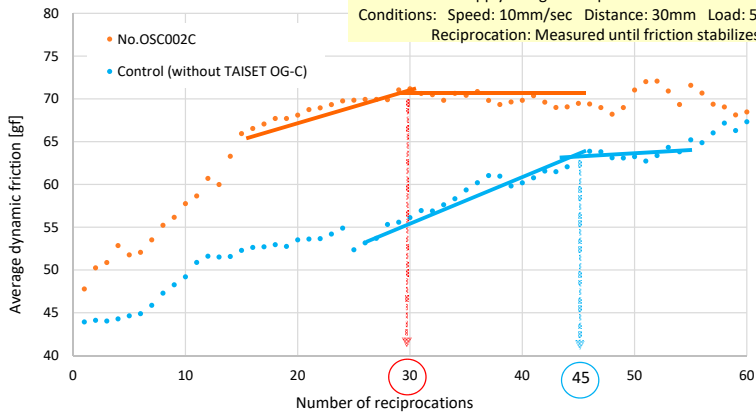
The film was just dissolved

Competitor's oil thickener

TAISET OG-C gives long-lasting effect on sunscreen while forming water-resistant film.

## Adhesion test

Instrument: Static/Dynamic Friction Tester TL-201Tt (Trinity-lab)  
Pre-treatment: Apply 0.05g of sample on a forearm  
Conditions: Speed: 10mm/sec Distance: 30mm Load: 50g  
Reciprocation: Measured until friction stabilizes



TAISET OG-C allows for sunscreens speedy & fast adhesion to the skin, which can be directly linked to less rubbing with minimal efforts.



Complexity:



ISO 16128 = 46.0 %

# SUNSCREEN CREAM W/O

WSC002C

## CHARACTERISTICS

- Reef-friendly mineral sunscreen formulation with highly safe ingredients. Available for sensitive skin.
- TAISSET OG-C enhances the formulation stability while thickening oil phase.
- SUNOIL DDI(MB) enables micro fine particles to be quickly dispersed and doesn't leave white residue upon applying this O/W sunscreen cream.
- The combination use of TAISSET OG-C and SUNOIL DDI(MB) enhances UV protection while allowing silky coating perception owing to the improved dispersibility of powders.

	INCI NAME	WT-%	FUNCTION	INGREDIENT NAME
1	POLYGLYCERYL-10 DECAISOSTEARATE	5.0	Dispersion	SUNOIL DDI(MB)
2	POLYGLYCERYL-20 OCTADECABEHENATE/HYDROXYSTEARATE	3.0	Thickening	TAISSET OG-C
3	POLYGLYCERYL-6 OCTASTEARATE, GLYCERYL BEHENATE	2.0	Emulsification, Stabilization	TAISSET 50-C(MB)
4	POLYGLYERYL-5 POLYRICINOLEATE	5.0	W/O Emulsification	SUNSOFT NO.818R-C
5	ZINC OXIDE, DIMETHICONE, DIPHENYLSILOXY PHENYL TRIMETHICONE, DIMETHICONE/VINYL DIMETHICONE CROSSPOLYMER, POLYGLYCERYL-2 ISOSTEARATE	24.0	UV filter	ZINC OXIDE DISPERSION
6	TITANIUM DIOXIDE, HYDRATED SILICA, ALUMINUM HYDROXIDE, HYDROGEN DIMETHICONE, ETHYLHEXYL PALMITATE	16.0	UV filter	TITANIUM OXIDE DISPERSION
7	C12-15 ALKYL BENZOATE	11.25	Oil	C12-15 ALKYL BENZOATE
8	DIMETHICONE/PHENYL VINYL, DIMETHICONE CROSSPOLYMER, DIPHENYLSILOXY PHENYLTRIMETHICONE	10.0	Texture improver	(DIMETHICONE / PHENYLVINYL DIMETHICONE) CROSSPOLYMER, DIPHENYLSILOXYPHENYLTRIMETHICONE
9	POLYMETHYL METHACRYLATE	2.0	Texture improver	ALKYL POLYACRYLATE
10	PENTYLENE GLYCOL	1.0	Emulsification	1,2-PENTANEDIOL
11	GLYCERIN	10.0	Emulsification	GLYCERIN
12	GLYCERIN	q.s	pH adjuster	PH BUFFER AGENT
13	WATER	10.75	Solvent	PURIFIED WATER

## PROPERTIES

- Appearance: Milky white soft cream
- Viscosity (Model BL Viscometer, No.3x12 rpm, 30 sec): 10,000 -20,000 mPa.s
- Stability: 3 months at 5 °C, 40 °C and ambient, 1 month at 50 °C

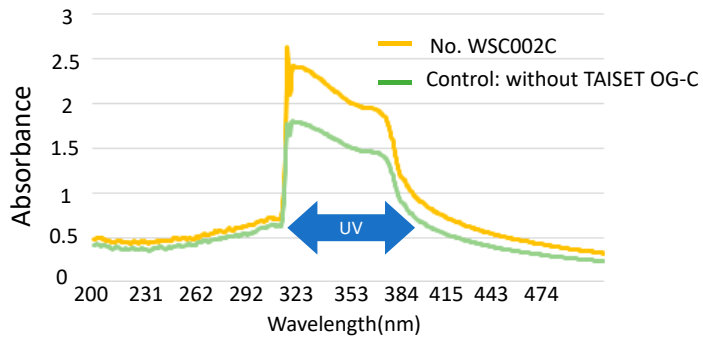
\*1: Zinc oxide, Isostearicacid, Polyhydroxystearicacid, Liquid isoparaffin

\*2: Titanium oxide, Aluminum hydroxide, Isostearicacid, Diisostearylmalate, Liquid isoparaffin

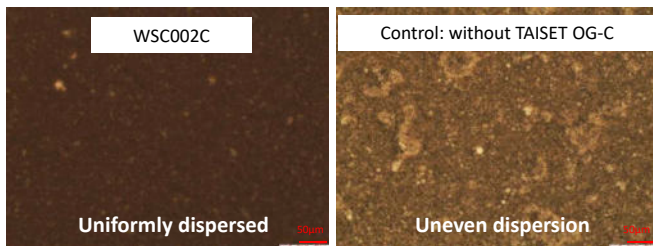
## PROCEDURE

1. Mix and dissolve 1-11 at about 85 °C.
2. Mix and dissolve 12, 13 at about 85 °C.
3. Using a dispersion mill, drop [2] to [1] little by little and blend for 3 minutes at 5000 rpm.
4. Cool down the solution to 30 °C.

UV protection of W/O sunscreen cream



**TAISET OG-C improves UV protection.**



**TAISET OG-C enhances dispersibility of powders and forms highly-uniform film.**



Complexity:



ISO 16128 = 86.7 %

## CLEANSING BALM

TCB003

### CHARACTERISTICS

- Unlike conventional balm cleansers, this velvety-and-super-melting cleansing balm powered by Taiset OG-C is simply transformable with a light finger touch from balm-like hardness to liquid oil in a wink.
- Enchanting spreadability and very short play time can guarantee no need of harsh rubbing.
- Polyethylene-free arrangement. Use spatula.
- Make-up dirt can be rinsed away in the most gentle and refreshing way while showing off dramatic 'Milkiness'.
- It will never strip your sensitive skin of moisture.
- Taiset OG-C doesn't discriminate oils, even covering low molecular weight type.

	INCI NAME	WT-%	FUNCTION	INGREDIENT NAME
1	<b>POLYGLYCERYL-2 OLEATE</b>	<b>5.0</b>	<b>Removing make-up</b>	<b>SUNSOFT Q-17D-C(MB)</b>
2	POLYGLYCERYL-2 CAPRATE	5.0	Removing make-up	POLYGLYCERYL-2 CAPRATE
3	<b>POLYGLYCERYL-6 CAPRYLATE</b>	<b>5.5</b>	<b>Improving refreshment</b>	<b>SUNSOFT Q-81F-C(MB)</b>
4	ETHYLHEXYL PALMITATE	5.5	Oil	2-ETHYLHEXY PALMITATE
5	CAPRYLIC/CAPRIC TRIGLYCERIDE	47.9	Oil	CAPRYLIC/CAPRICTRIGLYCERIDE
6	MICROCRYSTALLINE WAX	5.0	Wax	MICROCRYSTALLINE WAX
7	<b>POLYGLYCERYL-20 OCTADECABEHENATE/HYDROXYSTEARATE</b>	<b>3.0</b>	<b>Wax gelling agent</b>	<b>TAISET OG-C</b>
8	TRIBEHENIN	3.0	Wax	GLYCERYLTRIBEHENATE
9	<b>GLYCERYL BEHENATE</b>	<b>3.0</b>	<b>Gelling auxiliary</b>	<b>SUNSOFT NO.8100-C(MB)</b>

### PROPERTIES

- Appearance: White balm
- Stability: 3 months at 5 °C, 40 °C and ambient, 1 month at 50 °C

### PROCEDURE

1. Heat and dissolve all the above (1-9) at 80-90 °C
2. Fill in a container.
3. Leave to stand until cool.







Complexity:



SKIN CARE

ISO 16128 = 67.5 %

## CLEANSING OIL GEL

COG001C

### CHARACTERISTICS

- Highly transparent oil cleansing gel with thixotropic properties.
- TAISET OG-C has a high thickening effect, and does not impair the feeling of washing.
- It exerts a good rinsing effect with Sunsoft and also improves the stability of the formulation.
- Improves viscosity by combining SUNOIL DDI and glycerin.
- Easy to spread and has excellent massage properties.
- Octyldodecanol and C12-15 Alkyl Benzoate improves transparency and stabilize the formulation.

	INCI NAME	WT-%	FUNCTION	INGREDIENT NAME
1	POLYGLYCERYL-6 DICAPRATE	3.0	Removing make-up	SUNSOFT Q-102H-C(MB)
2	POLYGLYCERYL-10 DIOLATE	13.0	Removing make-up	SUNSOFT Q-172Y(G)-C(MB)
3	POLYGLYCERYL-10 PENTAOLEATE	1.5	Removing make-up	SUNSOFT Q-175S(G)-C(MB)
4	POLYGLYCERYL-20 OCTADECABEHENATE/HYDROXYSTEARATE	0.5	Thickening	TAISET OG-C
5	POLYGLYCERYL-10 DECAISOSTEARATE	1.0	Thickening auxiliary	SUNOIL DDI(MB)
6	OCTYLDODECANOL	1.0	Crystallization inhibition	OCTYLDODECANOL
7	C12-15 ALKYL BENZOATE	5.0	Crystallization inhibition	C12-15 ALKYL BENZOATE
8	CETYL ETHYLHEXANOATE	61.5	Oil	CETYL 2-ETHYL HEXANOATE
9	HELIANTHUS ANNUUS (SUNFLOWER) SEED OIL	5.0	Oil	HELIANTHUS ANNUUS SEED OIL
10	GLYCERIN	8.0	Emulsification	GLYCERIN
11	DIPROPYLENE GLYCOL	0.5	Emulsification	DPG

### PROPERTIES

- Appearance: Light yellow semitransparent viscous gel
- Viscosity: 3,500 - 5,000 mPa·s (Model BL Viscometer, No.3x12 rpm, 30 sec, Measured the day after preparation.)
- Stability: 3 months at 5 °C, 40 °C and ambient, 1 month at 50 °C

### PROCEDURE

1. Mix and dissolve all the above (1-11) at 80-90 °C
2. Cool down the solution to 30 °C with continuous stirring.



# CLEANSING GEL CREAM

TCC002C

## CHARACTERISTICS

- While SUNSOFT Q-8H-C(MB) and Q-102H-C(MB) are pulling and breaking down the layers of make-up, all traces of them crumble into fragments.
- Rinses away in the most gentle and refreshing way, leaving skin soft and hydrated.
- Quickly dissolves and disperses into make-up/impurities.
- Shows powerful cleansing performance being equivalent to cleansing oils.

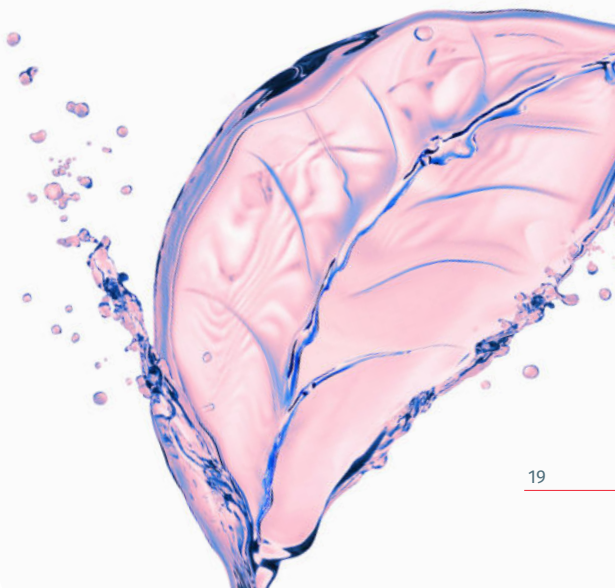
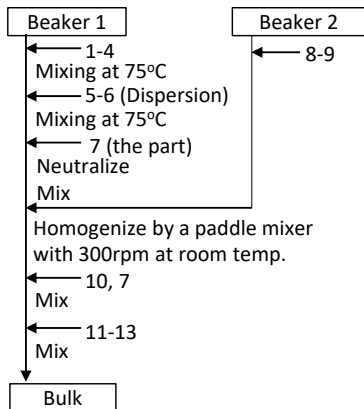
	INCI NAME	WT-%	FUNCTION	INGREDIENT NAME
1	POLYGLYCERYL-6 CAPRYLATE	3.2	Removing make-up	SUNSOFT Q-8H-C(MB)
2	POLYGLYCERYL-6 DICAPRATE	4.8	Removing make-up	SUNSOFT Q-102H-C(MB)
3	GLYCERIN	20.0	Moisturizing	GLYCERIN
4	WATER	49.915	Solvent	PURIFIED WATER
5	BUTYLENE GLYCOL	1.0	Moisturizing	1,3-BUTANEDIOL
6	XANTHAN GUM	0.1	Thickening	XANTHAN
7	POTASSIUM HYDROXIDE	0.2	Neutralization	CAUSTIC POTASH (10% AQ.)
8	ETHYLHEXYL PALMITATE	5.0	Oil	2-ETHYLHEXYL HEXADECANOATE
9	ACRYLATES/C10-30 ALKYL ACRYLATE CROSSPOLYMER	0.3	Thickening	ACRYLATES/C10-30 ALKYL ACRYLATE CROSSPOLYMER
10	CARBOMER	15.0	Thickening	CARBOXYVINYL POLYMER (2% AQ.)
11	EDTA-2NA	0.005	Chelating	CHELATING AGENT
12	ETHYLHEXYL METHOXYCINNAMATE	0.05	stabilizing	ETHYLHEXYL METHOXYCINNAMATE
13	METHYL PARABEN	0.1	Preservative	PRESERVATIVE
14	PHENOXYETHANOL	0.3	Preservative	PRESERVATIVE
15	FRAGRANCE	0.03	Fragrance	FRAGRANCE

## PROPERTIES

- Appearance: Milky white soft cream
- pH: 5.2 - 6.2
- Viscosity (Model BL Viscometer): 25000 - 35000 mPa-s
- Stability: 3 months at 5 °C, 40 °C and ambient, 1 month at 50 °C



## PROCEDURE





Complexity:



ISO 16128 = 97.4 %

# CLEANSING LOTION

TCL009C

## CHARACTERISTICS

- With a few light wipes of a cotton ball, you can remove even the toughest waterproof make-up.
- Cleansing performance can be enhanced in the combination of 3 different types of SUNSOFT.
- No need to rinse it off after using this cleansing lotion.
- It can keep skin's natural moisture in ideal balance.

	INCI NAME	WT-%	FUNCTION	INGREDIENT NAME
1	POLYGLYCERYL-6 CAPRYLATE	3.0	Removing make-up	SUNSOFT Q-8H-C(MB)
2	POLYGLYCERYL-6 DICAPRATE	0.3	Removing make-up	SUNSOFT Q-102H-C(MB)
3	POLYGLYCERYL-10 LAURATE	0.7	Improving temperature stability	SUNSOFT Q-12Y-C(MB)
4	WATER	95.895	Solvent	PURIFIED WATER
5	METHYLPARABEN	0.1	Preservative	PRESERVATIVE
6	CITRIC ACID	0.001	pH adjuster	PH BUFFER AGENT
7	SODIUM CITRATE	0.004	pH adjuster	PH BUFFER AGENT

## PROPERTIES

- Appearance: Clear liquid
- pH: 5.0 -6.0
- Stability: 3 months at 5 °C, 40 °C and ambient, 1 month at 50 °C

## PROCEDURE

1. Mix and dissolve 1-5 at about 70 °C.
2. Cool down the solution to 30 °C with continuous stirring.
3. Add 6 into [2] until dissolved.





Complexity:



ISO 16128 = 93.0 %

SKIN CARE & HAIR CARE

## NON-SILICONE HAIR MASK

THP002C

### CHARACTERISTICS

- This is a non-silicone formulation.
- SUNSOFT TAP-C(MB) gives a smooth and even feel to the entire hair from roots to tips with better manageability.
- The distinctive light yet smooth texture powered by SUNSOFT TAP-C(MB) can last till the very next day.

	INCI NAME	WT-%	FUNCTION	INGREDIENT NAME
1	BEHENTRIMONIUM CHLORIDE	2.5	$\alpha$ -gel	BEHENTRIMONIUM CHLORIDE(80%)
2	ISOPENTYLDIOL	5.0	Base material, Emulsification	ISOPENTYLDIOL
3	GLYCERIN	20.0	Base material, Emulsification	GLYCERIN
4	CHELATING	Q.S	Chelating	CHELATING AGENT
5	PRESERVATIVE	Q.S	Preservative	PRESERVATIVE
6	WATER	UP TO 100	Solvent	PURIFIED WATER
7	STEARYL ALCOHOL	5.0	$\alpha$ -gel	STEARYL ALCOHOL
8	HYDROGENATED POLYDECENE	1.0	Oil	HYDROGENATED POLYDECENE
9	APRICOT KERNEL OIL POLYGLYCERYL-6 ESTERS	2.0	Conditioning	SUNSOFT TAP-C(MB)
10	FRAGRANCE	Q.S	Fragrance	FRAGRANCE

### PROPERTIES

- Appearance: Milky white cream
- pH: 4.5 - 5.5
- Viscosity (B Type viscometer, No.6x30 rpm, 30 sec.): 10,000 - 20,000 mPa.s
- Stability: 3 months at 5 °C, 40 °C and ambient, 1 month at 50 °C

### PROCEDURE

1. Mix and dissolve 1-6 at 85 °C, add 7 and mix evenly.
2. Cool down [1] to 60 °C with continuous stirring. Add 8 and mix well.
3. Add 9 as well and mix evenly.
4. Cool down to ambient while stirring.
5. Add 10 and mix evenly.





# NON-SILICONE HAIR CONDITIONER CATIONIC SURFACTANTS FREE

THP003C

## CHARACTERISTICS

- Silicone and cationic surfactants free formulation.
- SUNSOFT TAP-C(MB) and SUNOIL DDI(MB) gives a smooth and even feel to the entire hair from roots to tips with better manageability.
- The distinctive light yet smooth texture powered by SUNSOFT TAP-C(MB) can last till the very next day.

	INCI NAME	WT-%	FUNCTION	INGREDIENT NAME
1	SODIUM METHYL STEAROYL TAURATE	2.8	α-gel	SODIUM METHYL STEAROYLTAURATE
2	ISOPENTYLDIOL	6.5	Base material, Emulsification	ISOPENTYLDIOL
3	EDTA-2NA	0.05	Chelating	CHELATINGAGENT
4	METHYLPARABEN	0.20	Preservative	PRESERVATIVES
5	CITRIC ACID	0.20	pH adjuster	CITRICACID (10%)
6	WATER	81.25	Solvent	PURIFIED WATER
7	CETEARYL ALCOHOL	6.00	α-gel	CETEARYL ALCOHOL
8	HYDROGENATED POLYDECENE	1.00	Oil	HYDROGENATED POLYDECENE
9	<b>POLYGLYCERYL-10 DECAISOSTEARATE</b>	<b>1.00</b>	<b>Emollient</b>	<b>SUNOIL DDI(MB)</b>
10	<b>APRICOT KERNEL OIL POLYGLYCERYL-6 ESTERS</b>	<b>1.00</b>	<b>Conditioning</b>	<b>SUNSOFT TAP-C(MB)</b>
11	FRAGRANCE	Q.S	Fragrance	FRAGRANCE

## PROPERTIES

- Appearance: Milky white cream
- pH: 4.5- 5.5
- Viscosity (B Type viscometer, No.6x30 rpm, 30 sec.): 2,000 - 4,000 mPa·s
- Stability: 3 months at 5 °C, 40 °C and ambient, 1 month at 50 °C

## PROCEDURE

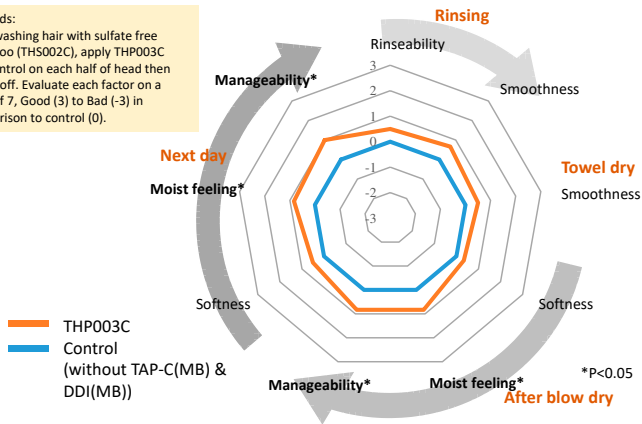
1. Mix and dissolve 1-6 at 85 °C, add 7 and mix evenly.
2. Cool down [1] to 60 °C with continuous stirring. Add 8, 9, 10 and mix well respectively.
3. Cool down to ambient while stirring. Add 11 and mix evenly.



## Sensorial Evaluation

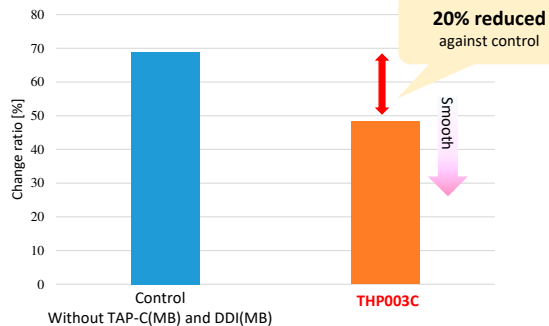
### Methods:

After washing hair with sulfate free shampoo (THS002C), apply THP003C and control on each half of head then rinsed off. Evaluate each factor on a scale of 7, Good (3) to Bad (-3) in comparison to control (0).



**Keeps the hair manageable and moist from right after drying to the next day.**

## Smooth combing



Sample: THP003C vs Control (THP003C without Sunsoft TAP-C(MB) and Sunoil DDI(MB))

Hair Samples: 30cm-long bleached Asian hair bundle, 10g

Procedure: Measurement→Shampoo (Sulfate-free: THS002C)→Each conditioner→Blow-dry→30 min.→Measurement

Conditions: <Speed> 20mm/s, <Distance> 50mm

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

Graph: Showing the rate change of each factor by setting the resistance value of before the treatment as 100%

**The combination of SUNSOFT TAP-C(MB) and SUNOIL DDI(MB) provides smooth combing and hair straightening.**



# SHAMPOO SULFATE FREE

THS002C

## CHARACTERISTICS

- This is a sulfate-free shampoo with the hair treatment ingredient, SUNSOFT APF(G)-C(MB) allowing soft and smooth sensorial effects for hairs.
- SUNSOFT M-12J shows a superior sebum removability.
- The combination of SUNSOFT M-12J and SUNSOFT APF(G)-C(MB) reduces the hair breakage and damage during hair-washing..

	INCI NAME	WT-%	FUNCTION	INGREDIENT NAME
1	BUTYLENE GLYCOL	1.0	Emulsification	1,3-BUTANEDIOL
2	GUAR HYDROXYPROPYLTRIMONIUM CHLORIDE	0.3	Conditioning	O-[2-HYDROXY-3-(TRIMETHYLAMMONIO) PROPYL] GUAR GUM CHLORIDE
3	POLYQUATERNIUM-10	0.1	Conditioning	O-[2-HYDROXY-3-(TRIMETHYLAMMONIO) PROPYL] HYDROXYETHYLCELLULOSECHLORIDE
4	WATER	38.45	Solvent	PURIFIED WATER
5	TEA-COCOYL GLUTAMATE	44.0	Washing	TRIETHANOLAMINEN-COCOYL-L-GLUTAMATE SOLUTION
6	SODIUM LAUROAMPHOACETATE	6.9	Washing	SODIUM 2-UNDECYL-1-HYDROXYETHYL IMIDAZOLIUM
7	<b>POLYGLYCERYL-10 LAURATE</b>	<b>2.0</b>	<b>Washing, Foaming, Emulsification</b>	<b>SUNSOFT M-12J</b>
8	<b>APRICOT KERNEL OIL POLYGLYCERYL-6 ESTERS</b>	<b>1.0</b>	<b>Improve softness and smoothness, Reduce hair damage</b>	<b>SUNSOFT APF(G)-C(MB)</b>
9	GLYCERYL CAPRATE	3.0	Improve foam retention	GLYCERYL CAPRATE
10	PEG-120 METHYL GLUCOSE TRIISOSTEARATE	2.0	Thickening	PEG-120 METHYL GLUCOSE TRIISOSTEARATE
11	POLYQUATERNIUM-7	0.5	Conditioning	DIMETHYLDIALYLAMMONIUM CHLORIDE / ACRYLAMIDE COPOLYMER SOLUTION
12	FRAGRANCE	0.3	Fragrance	FRAGRANCE
13	EDTA-1NA	0.05	Chelating	CHELATING AGENT
14	METHYLPARABEN	0.1	Preservative	PRESERVATIVE
15	PHENOXYETHANOL	0.3	Preservative	PRESERVATIVE

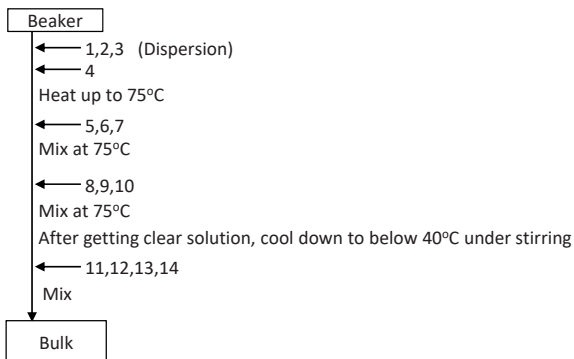
## PROPERTIES

- Appearance: Yellow clear viscous liquid
- pH: 5.0 - 6.0
- Viscosity (Model BL Viscometer, rotor No.2 x 12 rpm): 2,500 - 3,500 mPa·s
- Stability: 3 months at 5 °C, 40 °C and ambient, 1 month at 50 °C





## PROCEDURE



## The damage-reducing effect during hair-washing and sebum removability of SUNSOFT M-12J & APF(G)-C(MB)

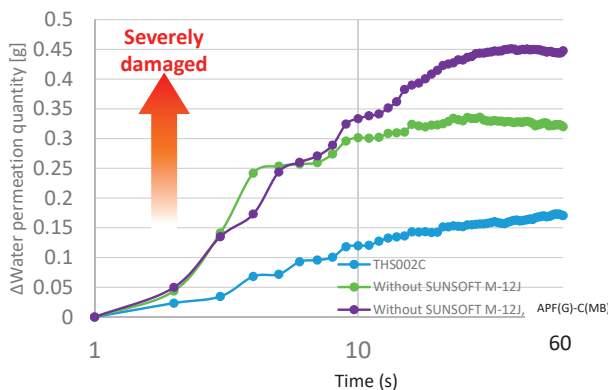


Photo image before and after shampoo with 5ml sample, respectively.

$$\Delta \text{Water permeation quantity} = \text{Water permeation quantity after 30 cycles of treatment} - \text{Water permeation quantity of untreated hair (Initial value)}$$

Sample: Bleached hair, 2g

Test procedure: Shampoo → Conditioner → Blow-dry → Combing  
→ Repeat 30 cycles → Measurement

The hair bundle was still hydrophobic even after repeated treatments, which means SUNSOFT APF(G)-C(MB) can protect the hair from damages during shampoo.



OUR PRODUCTS IN COSMETICS,  
PERSONAL CARE & HOUSEHOLD

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**Taiyo** has three business divisions supplying more than 2,000 products to help customers create a wider choice of safe and reliable ingredient.

Interface Solutions Division: as Japan's first pioneer in food emulsifiers, Taiyo has continued to develop the technologies cultivated in the food industry, expanding the food grade safe and reliable ingredients to cosmetics and chemical industries.

Nutrition division: Creating new markets and contributing to society by exploring the scientific possibilities of natural ingredients

Natural ingredient division: Supplying safe and reliable natural ingredients to food and cosmetics industries.

**Taiyo**, as a research and development company, has over 150 researches works to develop groundbreaking new products that are safe and reliable. Our team includes more than 30 overseas researchers who have been invited to work with Taiyo through our post-doctorate program. Taiyo uses a solution-driven approach to help customers develop new products and improve existing ones to generate even more value for the future.

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## This image shows a full page of blank handwriting practice paper. It features approximately 20 evenly spaced, horizontal blue lines across the entire width of the page. The lines are thin and light blue, set against a plain white background. There are no margins, text, or other markings present.





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