

With the aim of becoming a company that customers will know “It will work out if we ask Yokozeki”



CEO: Koichiro Ito

Our company values aspects that can only be achieved by a **Small company.**

My name is Koichiro Ito, CEO of Yokozeki Oil & Fat Industries Co., LTD.

Our company vision is to be “A specialized factory that produces unique oils that retain its personality to meet your needs”

Since the establishment of our company in 1948, we have been manufacturing oil and fat products for over 60 years. Oil and fat can be derived from various raw materials such as animals, plants, and fish.

Our founder Ginichiro Yokozeki has said, “The quality of oil and fat products is determined by the ‘rightness’ and ‘humble attitude’ toward the mystic blessing of nature,” and used this true understanding of raw materials as the axis of our management.

By carrying on this philosophy, not only have we renovated our factories, but also aggressively invested in research and development.

In the process, we have received recognition with HACCP and ISO9001 in 2004 and 2007 respectively, and gained the trust of our customers.

We aim to be a company in which customers can say, “If we asked Yokozeki, they will be able to help us” or “Yokozeki may be the only one who can solve this.”

With this as our mission, we would like to continue providing high-quality products and satisfaction to our customers. To meet the various needs of our customers, we would like to serve our role as the “customer’s specialized factory.”



Corporate Profile and History

Company name: Yokozeki Oil & Fat Industries Co., LTD.

Representative Director : Koichiro Ito
 Managing director : Minoru Ohmori
 Director(Factory Manager) : Takeo Suzuki
 Hiroko Yoshida

Head Office/
 Main Factory : 644-49 Hotsubo, Hitana, Nakagocho-
 Kitaibaraki-shi, Ibaraki, Japan 319-1556
 Tel:+81-293-42-1423(main line) Fax:+81-293-42-3260

Minaminakago
 Factory : 2128-2, Hotsubo, Hitana, Nakagocho-
 Kitaibaraki-Shi, Ibaraki, Japan 319-1556
 Tel:+81-293-43-7720 Fax:+81-293-43-7720

Tokyo branch : Joyo Ueno Building 4F, Higashiueno 3-18-4,
 Taito-ku, Tokyo, Japan 110-0015
 Tel:+81-3-5834-3802 Fax:+81-3-5834-3803

Founded: 1948
 Capital: 50.0 million yen
 Employees: 110people

Major business: (I)Manufacturing of oil for food/industry
 (ii)Manufacturing of cosmetic raw materials
 (iii)Manufacturing of natural wax
 (iv)Reaction/manufacturing of chemicals
 (v)Processing/ manufacturing of resin
 (vi)Small packing/oil extraction
 (vii)Products related to the items above
 (viii)Consignment business , research,
 technical consultation

Correspondent banks: Mizuho Bank, Ltd. Hitachi Branch.
 Joyo Bank, Ltd. Isohara Branch.
 Tukuba Bank, Ltd. Isohara Branch.
 Japan Finance Corporation. Mito Branch.
 Shoko Chukin Bank. Ltd. Mito Branch.

1948 Yokozeki Ginichiro(deceased) founded Yokozeki Oil and Fat Industries in Nishi Ochiai, Shinjuku-ku ,Tokyo.
 Started production of hydrogenated oil from fish oil.
 1950 Extracted cetyl alcohol from sperm oil and started its production.
 1961 Reorganized the company into a corporation with capital of 2 million yen.
 Renamed the company Yokozeki Oil & Fat Industries Co.,Ltd.
 1969 Started production of secondary products, e.g., hydrogenated oil from castor oil and fatty acid.
 1976 Started production of oils and fats for food based on the JAS standards.
 1980 Recognized by JAS as a certified factory for processed oil and fat for food(refined oil).
 1981 Recognized by JAS as a certified factory for processed oil and fat for food(hydrogenated oil).
 1982 Recognized by JAS as a certified factory for margarine and shortening.
 1990 Moved the plant to Kitaibaraki-shi,Ibaraki.
 1992 Constructed a mini-plant.
 1993 Started production of natural wax.
 1996 Reorganized Tokyo office into Tokyo branch.
 1996 Constructed a wax plant(2T/B).
 1998 Improved the mini-plant to have the three lines.
 2001 Consolidated the hydrogenation facility of 3.3 tons; constructed a flaker.
 2003 Constructed an ester factory.
 2004 HACCP recognition received(plant).Implemented a private electric generator facility.
 2007 ISO9001 certified for the plant and the Tokyo branch.
 Constructed a synthesis reaction plant.
 2009 Moved the Tokyo branch to Nihonbashi.
 2010 Constructed a plant for liquid hydrogen.
 2012 Constructed a building for office functions of the headquarters.
 2013 Constructed a dangerous goods manufacturing site. Implemented an energy transformation system and shifted to LNG.Started constructing a new deodorizing tower. Construction of new deodorization tower.
 2015 New establishment of Minaminakago Factory.
 2018 Acquired RSPO certification.
 2018 Got a patent for "Technol SD".
 2019 ISO14001 certified for the main factory, Minaminakago factory and the Tokyo branch.
 2019 Moved the wax and ester plants to Minaminakago factory.
 2022 Membership of the Global compact.
 2023 Awarded Ecovadis Silver.



This is our **Communication on Progress** in implementing the Ten Principles of the **United Nations Global Compact** and supporting broader UN goals.
 We welcome feedback on its contents.



◇Natural Oil	INCI	Reach Exemption	MNPA China	COSMOS	Packing kg	Physical Form	ISO16128 (%)			
							Natural index	Natural origin index	Organic index	Organic origin index
Tsubaki Oil	CAMELLIA JAPONICA SEED OIL	✓	✓	✓	16.5Tin	Liquid	100	100	0	0
Camellia Oil	CAMELLIA OLEIFERA SEED OIL	✓	✓	✓	16.5Tin 180DM	Liquid	100	100	0	0
Macadamia Nut Oil	MACADAMIA TERNIFOLIA SEED OIL	✓	✓	✓	16.5Tin	Liquid	100	100	0	0
Sunflower Seed Oil	HELIANTHUS ANNUUS (SUNFLOWER) SEED OIL	✓	✓	✓	16.5Tin 181.5DM	Liquid	100	100	0	0
Yuzu Oil	CITRUS JUNOS SEED OIL			✓	1Tin	Liquid	100	100	0	0
	CITRUS JUNOS SEED EXTRACT	✓	✓							
Amla Oil	PHYLLANTHUS EMBLICA FRUIT EXTRACT	✓	✓		16.5Tin	Liquid	100	100	0	0
Almond Oil	PRUNUS AMYGDALUS DULCIS (SWEET ALMOND) OIL	✓	✓		15Tin	Liquid	100	100	0	0
Grape Seed Oil	VITIS VINIFERA (GRAPE) SEED OIL	✓	✓		15Tin	Liquid	100	100	0	0

◇Vegetable Butter	INCI	Reach Exemption	MNPA China	COSMOS	Packing kg	Physical Form	ISO16128 (%)			
							Natural index	Natural Origin index	Organic index	Organic origin index
Macadamia Nut Butter-R	MACADAMIA TERNIFOLIA SEED OIL (and) C10-18 TRIGLYCERIDES	✓	✓	✓	15Tin	Paste	70	100	0	0
Sunflower Butter-R	HELIANTHUS ANNUUS (SUNFLOWER) SEED OIL (and) C10-18 TRIGLYCERIDES	✓	✓	✓	15Tin	Paste	60	100	0	0
Camellia Butter-R	CAMELLIA OLEIFERA SEED OIL (and) C10-18 TRIGLYCERIDES	✓	✓	✓	15Tin	Paste	60	100	0	0

◇Wax	INCI	Reach Exemption	MNPA China	COSMOS	Packing kg	Physical Form	ISO16128 (%)			
							Natural index	Natural origin index	Organic index	Organic origin index
Candelilla Wax MK-2	EUPHORBIA CERIFERA (CANDELILLA) WAX	✓	✓	✓	20 Bag	Pellet	100	100	0	0
Candelilla Wax MK-4	EUPHORBIA CERIFERA (CANDELILLA) WAX	✓	✓	✓	20 Bag	Pellet	100	100	0	0
Candelilla Wax MK-5	EUPHORBIA CERIFERA (CANDELILLA) WAX	✓	✓	✓	20 Bag	Pellet	100	100	0	0
Candelilla Wax de BA	EUPHORBIA CERIFERA (CANDELILLA) WAX	✓	✓		20 Bag	Pellet	100	100	0	0
Candelilla Wax MD-21	CANDELILLA WAX HYDROCARBONS	✓	✓	✓	10 Box	Pellet	100	100	0	0
Candelilla Wax Ester	CANDELILLA WAX ESTERS	✓	✓		10 Box	Pellet	100	100	0	0
Candelilla Wax de Resin	EUPHORBIA CERIFERA (CANDELILLA) WAX	✓	✓		10 Box	Pellet	100	100	0	0
Candelilla Resin T-1	EUPHORBIA CERIFERA (CANDELILLA) WAX EXTRACT	✓	✓		10 Box	Pellet	100	100	0	0
Carnauba Wax R-100	COPERNICIA CERIFERA (CARNAUBA) WAX	✓	✓	✓	20 Bag	Pellet	100	100	0	0
Sunflower Wax	HELIANTHUS ANNUUS (SUNFLOWER) SEED WAX	✓	✓	✓	20 Bag	Pellet	100	100	0	0
Japan Wax-Y	RHUS VERNICIFLUA PEEL WAX	✓	✓	✓	10 Box	Pellet	100	100	0	0
Bees Wax CY-100	BEE SWAX	✓	✓	✓	20 Bag	Pellet	100	100	0	0
Sugarcane Wax	SACCHARUM OFFICINARUM (SUGAR CANE) EXTRACT	✓	✓	✓	20 Bag	Pellet	100	100	0	0
	SACCHARUM OFFICINARUM (SUGARCANE) WAX	✓		✓						
Rice Bran Wax S-100	ORYZA SATIVA (RICE) BRAN WAX	✓	✓	✓	20 Bag	Pellet	100	100	0	0
Rice Wax R-100	ORYZA SATIVA (RICE) BRAN WAX (and) HYDROGENATED PALM OIL (and) HYDROGENATED RAPESEED OIL		✓		20 Bag	Pellet	50	100	0	0
Jojoba Seed Oil	SIMMONDSIA CHINENSIS (JOJOBA) SEED OIL	✓	✓	✓	16 Tin	Liquid	100	100	0	0
Viscosity Wax U-1R	RHUS VERNICIFLUA PEEL WAX (and) C10-18 TRIGLYCERIDES	✓	✓		10 Box	Pellet	95	95	0	0
Viscosity Wax C-1R	BRASSICA CAMPESTRIS (RAPESEED) SEED OIL (and) C10-18 TRIGLYCERIDES	✓	✓		10 Box	Pellet	80	95	0	0

◇Technol® Series	INCI	Reach Exemption	MNPA China	COSMOS	Packing kg	Physical Form	ISO16128 (%)			
							Natural index	Natural origin index	Organic index	Organic origin index
Technol® MH	HYDROGENATED CASTOR OIL HYDROXYSTEARATE		✓		16 Tin	Paste	0	100	0	0
Technol® MIS	HYDROGENATED CASTOR OIL ISOSTEARATE		✓		16 Tin	Paste	0	100	0	0
Technol® LTO-R	C10-18 TRIGLYCERIDES (and) SIMMONDSIA CHINENSIS (JOJOBA) SEED OIL	✓	✓	✓	16 Tin	Liquid	30	100	0	0
Technol® SD (Non-GMO)	HELIANTHUS ANNUUS (SUNFLOWER) SEED OIL UNSAAPONIFIABLES	✓	✓	✓	16 Tin	Liquid	100	100	0	0
Technol® PG (Non-GMO)	LECITHIN	✓	✓	✓	500g	Paste	0	100	0	0
	PHOSPHATIDYLGLYCEROL	✓		✓						

Tsubaki Oil



Origin

This product is extracted and purified from Tsubaki seeds (*Camellia Japonica*). It contains more than 83% oleic acid; therefore, this oil is a plant oil of very high oxidative stability. Especially in Japan, Tsubaki oil has been used as a hair oil to promote natural luster and moisture for centuries.

Properties

- Transparent, pale yellow in color
- Odorless
- High in oleic acid
- Dry oil
- Superior oxidative stability

Application

- Cosmetics
- Toiletries
- Skin care products
- Hair care products
- Sun care products
- Lip care products

Oxidative Stability, CDM120

About 5.5 hours



COSMOS
APPROVED

INCI NAME	CAMELLIA JAPONICA SEED OIL
REACH Exemption	✓
CHINA INCI	山茶 (CAMELLIA JAPONICA) 籽油
CAS	223748-13-8
EINECS	607-020-4
NET	16.5kg/Tin can
Shelf life	2 years

Specification

Acid value	5 max.
Iodine value	78 - 83
Saponification value	189 - 194
Unsaponifiable matter, %	1.0 max.
Specific gravity, 20/20	0.910 - 0.915
Arsenic, ppm	2 max.
Heavy metal, ppm	20 max.

Fatty acid composition(%) Our measured value

Fatty acid	Code	Value (%)
Palmitic acid	C16	6.3
Palmitoleic acid	C16:1	0.1
Stearic acid	C18	1.9
Oleic acid	C18:1	88.8
Linoleic acid	C18:2	2.6
Linolenic acid	C18:3	0.1
Arachidic acid	C20	-
Eicosenoic acid	C20:1	0.2
Others		0.0



History of Tsubaki Oil



Tsubaki Oil has a long history of over 1,000 years in Japan.

It has been used as:

A cooking oil for Japanese Tempura.

•
A metal protector for Japanese “*Katana*” samurai swords.

•
A hair treatment to make hair shiner, healthier and more vibrant.

【HARVEST and EXTRACTION PROCESS】 We only use Japanese Tsubaki seeds.



Tsubaki Trees blossom from January to March.



The seeds fall and are collected by hand from October to February.



The seeds are sun-dried and sorted.



The oil is then refined in our factory to bring you the highest quality Tsubaki oil.



Tsubaki Oil is extracted by cold pressing the seeds.
※The amount of oil extracted is approximately 20%-30% of the total weight of the seeds.

Camellia Oil



Origin

This product is a natural oil, which is extracted and purified from Camellia seeds (*Camellia Oleifera* Abel). It contains more than 80% oleic acid; therefore, this oil is a plant based oil of very high oxidative stability. Camellia grows on evergreen trees and blooms from October to January. *Camellia oleifera* is the most abundant among the camellia genus in the Theaceae family. The kernel contains around 35% of the oil. This is a dry oil and similar to Tsubaki oil because their flowers both belong to genus Camellia, family Theaceae.

Properties

- Transparent, pale yellow in color
- Odorless
- High in oleic acid
- Dry oil
- Superior oxidative stability

Application

- Cosmetics
- Toiletries
- Skin care products
- Hair care products
- Sun care products
- Lip care products

Oxidative Stability, CDM120

About 6 hours



COSMOS
APPROVED

INCI NAME	CAMELLIA OLEIFERA SEED OIL
REACH Exemption	✓
CHINA INCI	油茶 (CAMELLIA OLEIFERA) 籽油
CAS	225233-97-6
EINECS	—
NET	16.5kg/Tin can, 180kg/Drum
Shelf life	2 years

Specification

Acid value	0.1 max.
Iodine value	78 - 88
Saponification value	185 - 197
Color, Lovibond133.4mm	R 1.2 max.
Peroxide value	2.0 max.
Moisture, %	0.1 max.
Unsaponifiable matter, %	1.0 max.
Specific gravity, 20/20	0.911 - 0.919
Arsenic, ppm	1 max.
Heavy metal, ppm	10 max.

Fatty acid composition(%) Our measured value

Fatty acid	Carbon Chain	Measured Value (%)
Palmitic acid	C16	5.5
Stearic acid	C18	1.9
Oleic acid	C18:1	82.5
Linoleic acid	C18:2	7.8
Linolenic acid	C18:3	0.3
Arachidic acid	C20	-
Eicosenoic acid	C20:1	0.5
Others		0.0

Macadamia Nut Oil



Origin

This product is a natural oil which is a pressed and purified seed oil derived from *Macadamia Ternifolia* (F. Muell Proteaceae). Macadamia nuts have been cultivated in Hawaii, Australia, the Pacific Islands and Kenya and is commonly used as a food and cosmetic ingredient.

Properties

- Transparent , pale yellow in color
- Odorless
- High in palmitoleic acid
- Dry oil

Application

- Cosmetics
- Toiletries
- Skin care products
- Hair care products
- Sun care products
- Lip care products

Oxidative Stability , CDM120

About 5.5 hours



COSMOS
APPROVED

INCI NAME	MACADAMIA TERNIFOLIA SEED OIL
REACH Exemption	✓
CHINA INCI	澳洲坚果(MACADAMIA TERNIFOLIA) 籽油
CAS	128497-20-1, 129811-19-4
EINECS	273-313-5
NET	16.5kg/Tin can
Shelf life	1 year

Specification

Acid value	0.1 max.
Iodine value	70 - 80
Saponification value	190 - 200
Color , Lovibond133.4mm	Total 5.0 max.
Peroxide value	0.5 max.
Moisture , %	0.1 max.
Unsaponifiable matter , %	1.5 max.
Arsenic , ppm	2 max.
Heavy metal , ppm	20 max.

Fatty acid composition(%) Our measured value

Fatty acid	Our measured value	
Myristic acid	C14	0.8
Palmitic acid	C16	8.8
Palmitoleic acid	C16:1	22.2
Stearic acid	C18	3.3
Oleic acid	C18:1	55.4
Linoleic acid	C18:2	3.2
Linolenic acid	C18:3	0.1
Arachidic acid	C20	2.7
Eicosenoic acid	C20:1	2.5
Behenic acid	C20	0.8
Others		0.2

Sunflower Seed Oil



COSMOS
APPROVED

INCI NAME	HELIANTHUS ANNUUS (SUNFLOWER) SEED OIL
REACH Exemption	✓
CHINA INCI	向日葵(HELIANTHUS ANNUUS)籽油
CAS	8001-21-6
EINECS	232-273-9
NET	16.5kg/Tin can
Shelf life	1 year

Specification

Acid value	0.1 max.
Iodine value	78 - 88
Saponification value	185 - 195
Color , Lovibond133.4mm	R 1.2 max.
Peroxide value	1.0 max.
Unsaponifiable matter , %	2.5 max.
Arsenic , ppm	2 max.
Heavy metal , ppm	20 max.
Infrared spectroscopy	PASS

Origin

This product is a refined oil with high oleic acid content derived from the Sunflower (*Helianthus annuus Linne*《Compositae》) seed. The original sunflower seed contains about 70% linoleic acid, though the recent hybrid seed produces an oil with high oxidative stability derived from a higher oleic content (less polyunsaturated fatty acids). Our hi-oleic sunflower oil is produced from this hybrid seed.

Properties

- Transparent , pale yellow in color
- Odorless
- High in oleic acid
- High in natural vitamin E
- Dry oil
- Superior oxidative stability

Application

- Cosmetics
- Toiletries
- Skin care products
- Hair care products
- Sun care products
- Lip care products

Oxidative Stability , CDM120

About 12 hours



Fatty acid composition(%) Our measured value

Fatty acid	Our measured value	
Palmitic acid	C16	2.8
Palmitoleic acid	C16:1	Tr
Stearic acid	C18	3.8
Oleic acid	C18:1	88.8
Linoleic acid	C18:2	3.5
Linolenic acid	C18:3	0.1
Arachidic acid	C20	0.3
Eicosenoic acid	C20:1	0.3
Others		0.0

Yuzu Oil



COSMOS
APPROVED

INCI NAME	CITRUS JUNOS SEED OIL	CITRUS JUNOS SEED EXTRACT
REACH Exemption	✓	✓
CHINA INCI	—	香橙(CITRUS JUNOS) 籽提取物
CAS	—	—
EINECS	—	—
NET	1kg/Tin can	
Shelf life	1year	

Specification

Acid value	1.0 max.
Iodine value	90 - 105
Saponification value	185 - 200
Moisture , %	—
Color , Lovibond133.4mm	R — , Y —
Peroxide value	—



Origin

This product is extracted and purified from Citrus junos seeds (Japanese Yuzu).

It is a citrus fruit and plant in the family Rutaceae.

Yuzu is also known for its characteristically strong aroma, and the oil from its skin is marketed as a fragrance. In Japan, bathing with yuzu, is a custom that dates to at least the early 18th century. The yuzu bath is said to guard against colds, treat the roughness of skin, warm the body, and relax the mind.

Properties

- Transparent , pale yellow in color
- Odorless
- Japanese Origin
- Prevent skin from transepidermal water loss
- Inhibitory effect of tyrosinase activity
- Relief of itching
- Effect on the anti-aging

Application

- Cosmetics
- Toiletries
- Skin care products
- Hair care products
- Sun care products
- Lip care products



Fatty acid composition(%) Our measured value

Palmitic acid	C16	20.0
Palmitoleic acid	C16:1	0.5
Stearic acid	C18	4.1
Oleic acid	C18:1	37.0
Linoleic acid	C18:2	36.1
Linolenic acid	C18:3	2.0
Arachidic acid	C20	0.3
Others		0.0

Amla Oil



Origin

This product is extracted and purified from Amla seeds(Phyllanthus emblica). It contains high linolenic acid. It has been used for Ayurveda which is a system of medicine with historical roots in India.

Properties

Transparent, pale yellow color

Characteristic

High in linoleic acid

INCI NAME	PHYLLANTHUS EMBLICA FRUIT EXTRACT
CHINA INCI	余甘子 (PHYLLANTHUS EMBLICA) 果提取物
CAS	90028-28-7
EINECS	289-817-3
NET	16.5kg/Tin can
Shelf life	1 year

Almond Oil



Origin

This product is extracted and purified from Almond seeds. It contains more than 50% oleic acid and rich in vitamin E, B2 and minerals.

Properties

Transparent, pale yellow color

Characteristic

High in oleic acid

INCI NAME	PRUNUS AMYGDALUS DULCIS (SWEET ALMOND) OIL
CHINA INCI	甜扁桃 (PRUNUS AMYGDALUS DULCIS) 油
CAS	8007-69-0 / 90320-37-9
EINECS	—
NET	15kg/Tin can
Shelf life	1 year

Grape Seed Oil



Origin

This product is extracted and purified from Grape (Vitis vinifera) seeds. The seeds are removed in the process of making wine. It contains antioxidant vitamin E and Palmitic acid. It has attracted attention as an anti-aging oil.

Properties

Transparent, pale yellow color

Characteristic

High in linoleic acid & Oleic acid

INCI NAME	VITIS VINIFERA (GRAPE) SEED OIL
CHINA INCI	葡萄 (VITIS VINIFERA) 籽油
CAS	8024-22-4
EINECS	—
NET	15kg/Tin can
Shelf life	1 year

Amla Oil



Application

Skin care & Body care products
Hair care products

Fatty acid composition(%) Our measured value		
Palmitic acid	C16	10.7
Palmitoleic acid	C16:1	0.1
Stearic acid	C18	4.8
Oleic acid	C18:1	23.8
Linoleic acid	C18:2	52.3
Linolenic acid	C18:3	6.3
Arachidic acid	C20	0.5
Eicosenoic acid	C20:1	0.7
Behenic acid	C22	0.5
lignoceric acid	C24	0.2
Others		0.1



Almond Oil



Application

Skin care & Body care products
Hair care products

Fatty acid composition(%) Our measured value		
Palmitic acid	C16	6.5
Palmitoleic acid	C16:1	0.8
Stearic acid	C18	1.5
Oleic acid	C18:1	66.4
Linoleic acid	C18:2	23.3
Linolenic acid	C18:3	0.0
Arachidic acid	C20	0.3
Eicosenoic acid	C20:1	0.5
Behenic acid	C22	0.0
lignoceric acid	C24	0.0
Others		0.7



Grape Seed Oil



Application

Skin care & Body care products
Hair care products

Fatty acid composition(%) Our measured value		
Palmitic acid	C16	7.3
Palmitoleic acid	C16:1	0.1
Stearic acid	C18	3.5
Oleic acid	C18:1	18.5
Linoleic acid	C18:2	69.7
Linolenic acid	C18:3	0.5
Arachidic acid	C20	0.2
Eicosenoic acid	C20:1	0.2
Behenic acid	C22	0.0
lignoceric acid	C24	0.0
Others		0.0



Candelilla Wax MK-2, MK-4, MK-5, de BA



Origin

Candelilla wax is a natural wax derived from the Candelilla shrub which is found in arid zones in northern Mexico to the southwestern United States.

The Candelilla shrub stems have a thin wax film and almost no leaves. They grow in arid areas where the temperature difference between the summer and winter season is 65 degrees. Harvested candelilla shrubs are sun dried and then boiled to obtain slack waxes.

Properties

Yellow solid with slight with a characteristic scent

Grade

- ◆ **Candelilla Wax MK-2**
General
- ◆ **Candelilla Wax MK-4**
Peculiar smell is improved, comparing to general grade.
- ◆ **Candelilla Wax MK-5**
Light color, comparing to general grade.
- ◆ **Candelilla Wax de BA**
Benzyl alcohol is removed.

Application

Lipsticks, Foundations, Hair styling products, Emulsion, Exfoliating agent

	MK-2	MK-4	MK-5	de BA
INCI NAME	EUPHORBIA CERIFERA(CANDELILLA)WAX			
REACH Exemption	✓			
CHINA INCI	小烛树(EUPHORBIA CERIFERA)蜡			
CAS	8006-44-8			
EINECS	232-347-0			
NET	20kg/Bag			
Shelf life	3 years			

Specification	MK-2	MK-4, MK-5	de BA
Acid value	14 - 24	14 - 24	14-24
Iodine value	10 - 22	10 - 22	10-22
Saponification value	46 - 65	46 - 65	46-65
Color , Gardner	12 max.	9 max.	12 max.
Melting point , °C	68 - 72	68 - 72	68-72
Loss on drying , %	0.3 max.	0.3 max.	0.3 max.
Residue on Ignition , %	0.3 max.	0.3 max.	0.3 max.
Arsenic , ppm	2 max.	2 max.	2 max.
Heavy metal , ppm	20 max.	20 max.	20 max.
Infrared spectroscopy	pass	pass	pass
Benzyl Alcohol, ppm			10 max.



COSMOS
APPROVED

YOKOZEKI

Candelilla Wax MD-21, Ester, de Resin, Resin T-1



Various Candelilla Waxes

This product is made by fractionating the hydrocarbon, ester, and resin components of candelilla wax, respectively. Each product has unique characteristics and can expand the range of makeup formulations.

Properties

Yellow solid with slight with a characteristic scent

Grade

◆ Candelilla Wax MD-21

This product is a fraction of Candelilla wax hydrocarbon portion to higher concentration. Melting point 66°C, Hydrocarbon content approx. 80%

◆ Candelilla Wax Ester

This product is the ester component of Candelilla wax. High melting point 79°C. It can achieve high hardness.

◆ Candelilla Wax de Resin

This product is made by removing the resin component from Candelilla wax. It has a very light color tone. It can achieve high hardness.

◆ Candelilla Wax Resin T-1

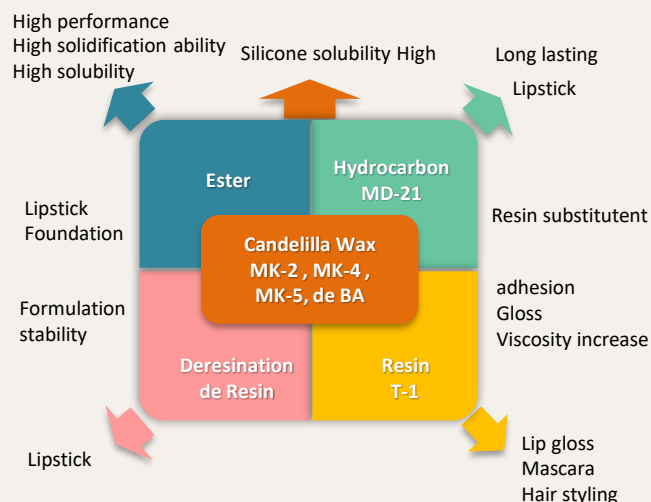
This product is the resin component of candelilla wax. No hardness. It has a skin film effect. Improves gloss.

Applications

Lipsticks, Lip gloss, Hair styling products, mascara

	MD-21	Ester	de Resin	Resin T-1
INCI NAME	CANDELILLA WAX HYDROCARBONS	CANDELILLA WAX ESTERS	EUPHORBIA CERIFERA (CANDELILLA) WAX	EUPHORBIA CERIFERA (CANDELILLA) WAX EXTRACT
REACH Exemption	✓			
CHINA INCI	小烛树(EUPHORBIA CERIFERA)蜡烃	小烛树(EUPHORBIA CERIFERA)蜡类	小烛树(EUPHORBIA CERIFERA)蜡	小烛树(EUPHORBIA CERIFERA)蜡提取物
CAS	8006-44-8			
EINECS	232-347-0			
NET	10kg/Box			
Shelf life	3 years			

Specification	MD-21	Ester	de Resin	Resin T-1
Acid Value	2 - 15	5 - 24	14 - 24	14 - 24
Iodine Value	1 - 18	-	-	-
Saponification Value	5 - 20	70 - 100	40 - 60	-
Color, Gardner	4 max.	10 max.	6 max.	-
Melting Point, °C	60 - 70	75 - 85	70 - 75	-
Loss on Drying, %	0.3 max.	0.3 max.	-	-
Residue on Ignition, %	0.1 max.	0.3 max.	0.3 max.	-
Arsenic, ppm	2 max.	2 max.	2 max.	2 max.
Heavy Metal, ppm	20 max.	20 max.	20 max.	20 max.



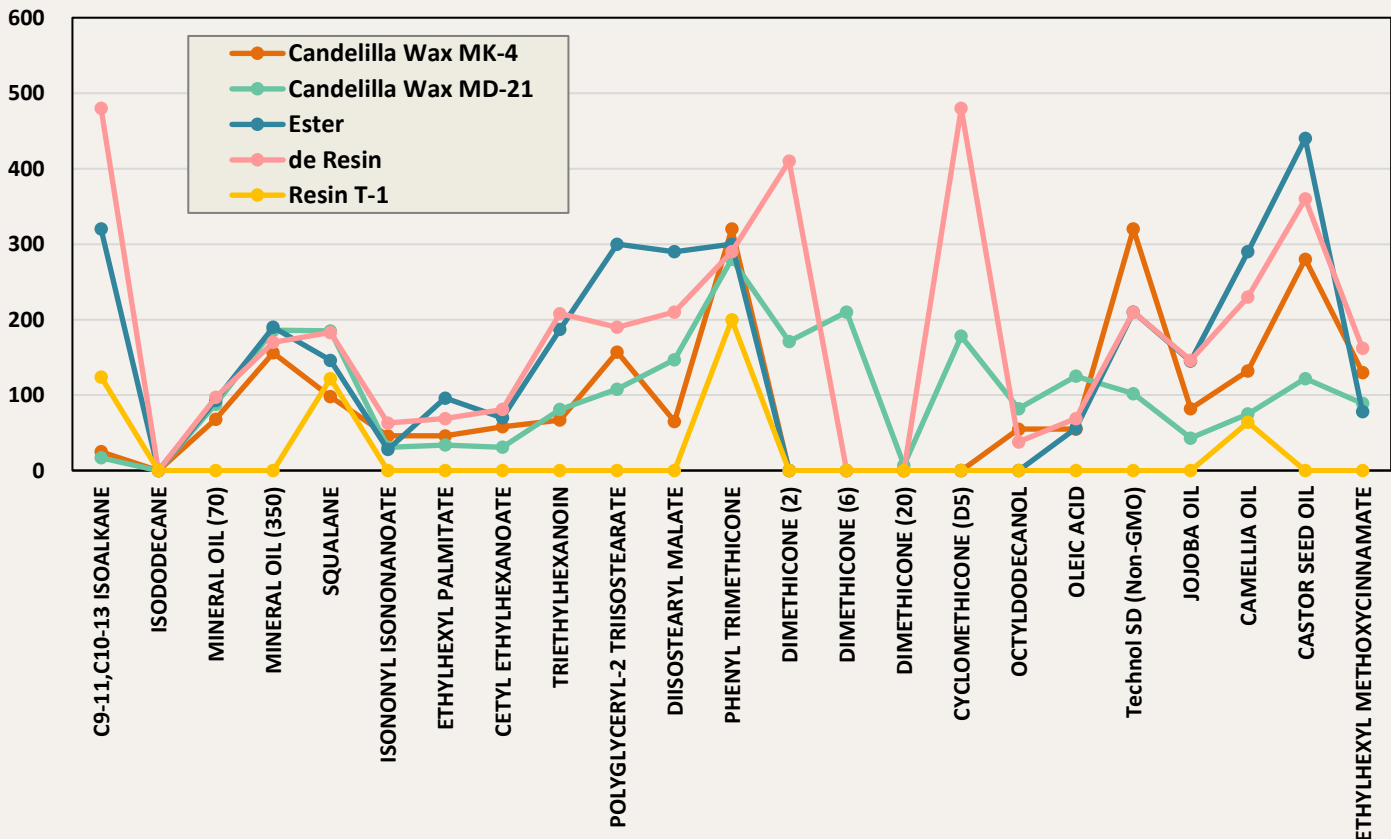
Solubility

		MK-2, 4, 5, de BA	MD-21	Ester	de Resin	Resin T-1
Hydrocarbons	C9-11,C10-13 ISOPARAFFIN	S	S	D	D	S
	ISODODECANE	S	S	S	S	S
	MINERAL OIL (70)	D	S	S	S	S
	MINERAL OIL (350)	D	S	S	S	S
	SQUALANE	D	S	D	S	S
Ester	ISONONYL ISONONANOATE	S	D	S	S	S
	ETHYLHEXYL PALMITATE	S	D	S	S	S
	CETYL ETHYLHEXANOATE	S	S	S	S	S
	TRIETHYLHEXANOIN	S	S	S	S	S
	POLYGLYCERYL-2 TRIISOSTEARATE	S	S	S	S	S
	DIISOSTEARYL MALATE	S	S	S	S	S
Silicone	PHENYL TRIMETHICONE	D	S	S	S	D
	DIMETHICONE (2)	I	S	I	D	I
	DIMETHICONE (6)	I	I	I	I	I
	DIMETHICONE (20)	I	I	I	I	I
	CYCLOMETHICONE (D5)	I	S	I	S	I
Vegetable Oil	Technol SD (Non-GMO)	S	S	S	S	S
	JOJOBA OIL	S	S	S	S	S
	CAMELLIA OIL	S	S	S	S	S
	CASTOR OIL	S	S	S	S	S
Alc.	OCTYLDODECANOL	S	S	S	S	S
FA	OLEIC ACID	S	S	S	S	S
UV	ETHYLHEXYL METHOXYCINNAMATE	S	S	S	S	S

[Ratio] Oil : Wax = 80 : 20, Temp. 80°C, [Evaluation method] Visually observe the appearance

Soluble	Dispersion	Insoluble
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Gelling Ability



Candelilla Wax MK-2,MK-4,MK-5,MD-21

【HARVEST and EXTRACTION PROCESS】



The Candelilla shrub's harvest season is almost year round.



The Candelilla shrub secretes wax to protect itself from severe weather condition.



Carnauba Wax R-100



Origin

This product is a natural wax derived from leaves and leaf buds of palm plant. (Carnauba Palm *Copernicia cerifera*)

Properties

Light yellow to light brown solid with peculiar smell

Application

High melting point hard wax

Excels in emulsifiability and dispersibility

Lipsticks, foundation, hair wax, emulsion, scrub agent

Others

Shape Pellet



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INCI NAME	COPERNICIA CERIFERA (CARNAUBA) WAX
REACH Exemption	✓
CHINA INCI	巴西棕榈树 (COPERNICIA CERIFERA) 蜡
CAS	8015-86-9
EINECS	232-399-4
NET	20kg/Bag
Shelf life	3 years



Specification

Acid value	10 max.
Iodine value	5 - 14
Saponification value	78 - 95
Color , Gardner	12 max.
Melting point , °C	80 - 86
Loss on drying , %	0.3 max.
Residue on Ignition , %	0.1 max.
Arsenic , ppm	2 max.
Heavy metal , ppm	20 max.

Sunflower Wax



INCI NAME	HELIANTHUS ANNUUS (SUNFLOWER) SEED WAX
REACH Exemption	✓
CHINA INCI	向日葵 (HELIANTHUS ANNUUS) 籽蜡
CAS	1286686-34-7
EINECS	310-127-6
NET	20kg/Bag
Shelf life	3 years

Specification

Properties	Pale yellow to yellow solid with peculiar smell
Acid value	5 max.
Iodine value	30 max.
Saponification value	75.0 – 110.0
Color , Gardner	6 max.
Melting point , °C	74 - 80
Residue on Ignition , %	0.3 max.
Arsenic , ppm	2 max.
Heavy metal , ppm	20 max.

Origin-overview

This product is a natural wax derived from sunflower seed.
This products is mono-esters of C42-62, which consists of Long chain fatty acids C20-30 and long chain alcohols C22-32
Excels in solubility and foam hard gels.

Properties

Pale yellow solid with slight peculiar smell

Applications

Lipsticks, Foundations, Hair waxes, Emulsion,
Scrubbing agent

Summary

- Light color , less smell
- Excellent solubility
- High gelling ability
- Dissolve in Cyclomethicone(D5)
- Wide application

Ester composition(%)	Our measured value
C42	2.5
C44	13.1
C46	20.6
C48	17.0
C50	10.8
C52	9.6
C54	7.1
C56	4.7
C58	2.8
C60	2.0
C62	1.0
Others	8.8

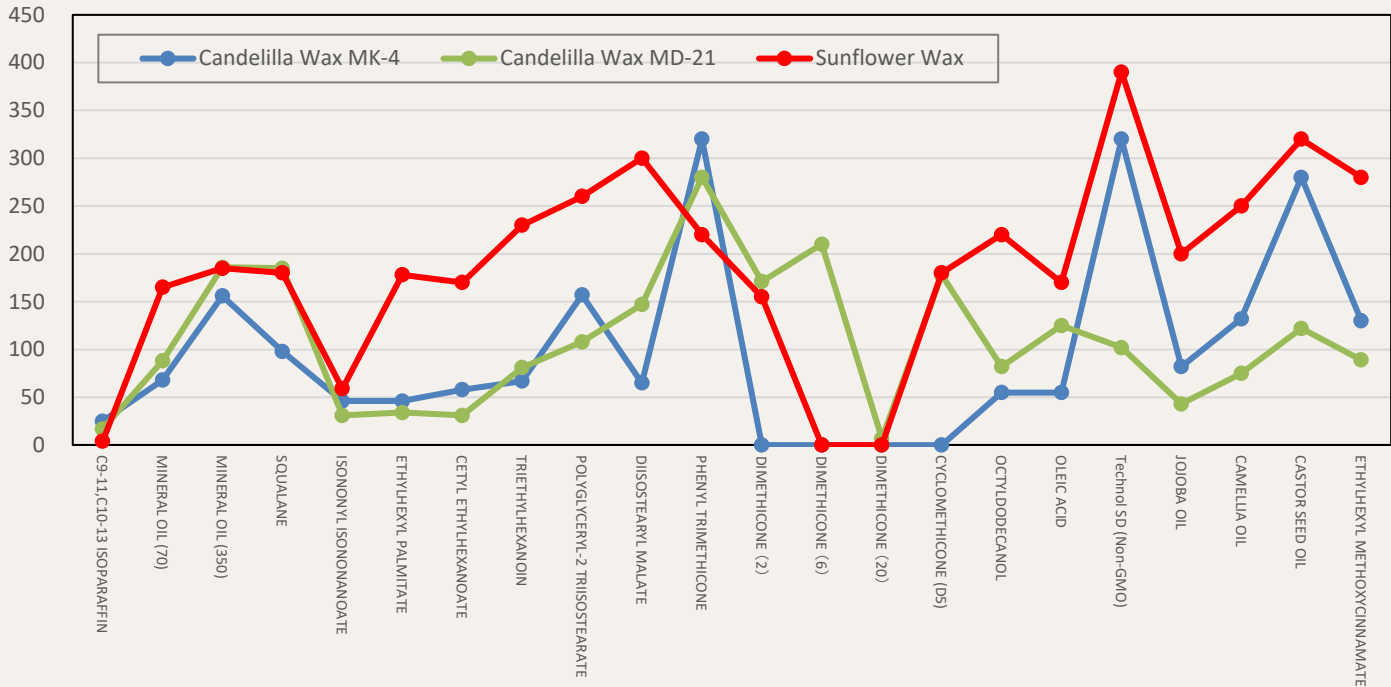
Sunflower Wax

Formula of Balm , colorless

- Soft touch
- Smooth & light texture

	PRODUCT NAME	INCI NAME	%
1	MACADAMIA NUT BUTTER-R	MACADAMIA TERNIFOLIA SEED OIL (AND) C10-18 TRIGLYCERIDES	82.95
2	SUNFLOWER BUTTER-R	HELIANTHUS ANNUUS (SUNFLOWER) SEED OIL (AND) C10-18 TRIGLYCERIDES	10.00
3	SUNFLOWER WAX	HELIANTHUS ANNUUS (SUNFLOWER) SEED WAX	7.00
4	-	TOCOPHEROL	0.05
		TOTAL	100.00

Wax Gelling Ability



Wax Solubility

Product		Ester		Hydrocarbons			Ester					Silicone			Vegetable Oil			Alc.	FA	UV	Other						
		Technol MIS	Technol MH	C9-11,C10-13 ISOPARAFFIN	MINERAL OIL (70)	MINERAL OIL (350)	SQUALANE	ISONONYL ISONONANOATE	ETHYLHEXYL PALMITATE	CETYL ETHYLHEXANOATE	TRIETHYLHEXANOIN	POLYGLYCERYL-2 TRISOSTEARATE	DIISOSTEARYL MALATE	PHENYL TRIMETHICONE	DIMETHICONE (2)	DIMETHICONE (6)	DIMETHICONE (20)	CYCLOMETHICONE (D5)	Technol SD (Non-GMO)	JOJOBA OIL	CAMELLIA OIL	CASTOR OIL	OCTYLDODECANOL	OLEIC ACID	ETHYLHEXYL METHOXYCINNAMATE	GLYCERIN	PEG-400
Candelilla Wax	MK-4	S	S	S	D	D	D	S	S	S	S	S	S	D	I	I	I	I	S	S	S	S	S	S	S	I	I
Candelilla Wax	MD-21	S	S	S	S	S	S	D	D	S	S	S	S	S	S	I	I	S	S	S	S	S	S	S	S	I	I
Sunflower Wax		S	S	S	S	S	S	S	S	S	S	S	S	S	S	I	I	S	S	S	S	S	S	S	S	I	I

Oil : Wax = 80 : 20 S Soluble D Dispersion I Insoluble

Rice Bran Wax S-100 , Rice Wax R-100



Origin

This product is a natural wax derived from rice bran. This is a hard wax and main components are esters of higher alcohols and higher fatty acids.

Properties

Yellow to brown solid with peculiar smell

Application

Mascara, Foundations, Eyeliner, Emulsion, Scrubbing agent

Others

Shape Pellet

Grade

- ◆ **Rice Bran Wax S-100**
General grade Melting point 78°C
- ◆ **Rice Wax R-100**
Hydrogenated oil mixture.
(Rice bran wax, Hydrogenated palm oil,
Hydrogenated rapeseed oil) Melting point 73°C



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	S-100	R-100
INCI NAME	ORYZA SATIVA (RICE) BRAN WAX	ORYZA SATIVA (RICE) BRAN WAX (and)HYDROGENATED PALM OIL (and)HYDROGENATED RAPESEED OIL
REACH Exemption	✓	
CHINA INCI	稻 (ORYZA SATIVA) 糠蜡	稻 (ORYZA SATIVA) 糠蜡, 氢化棕榈油, 氢化菜籽油
CAS	8016-60-2	8016-60-2 / 68514-74-9 / 84681-71-0
EINECS	232-409-7	232-409-7 / 271-056-3 / 283-532-8
NET	20kg/Bag	
Shelf life	3 years	

-	S-100	R-100
Acid value	10 max.	7 max.
Iodine value	13 max.	7 max.
Saponification value	70 - 95	120 - 150
Color , Gardner	13 max.	13 max.
Melting point , °C	77 - 83	73 - 80
Loss on drying , %	1 max.	1 max.
Residue on Ignition , %	0.3 max.	0.3 max.
Arsenic , ppm	2 max.	2 max.
Heavy metal , ppm	10 max.	10 max.

Bees Wax CY-100



Origin

This product is a bleached and refined wax derived from bees nest.

Properties

White to pale yellow solid with slight peculiar smell

Characteristics

Animal wax and makes fine crystal.
Shows viscosity and easy emulsify.

Application

High melting point hard wax
Excels in emulsifiability and dispersibility
Cream, Lipsticks, foundation, emulsion, Mascara

Others

Shape Pellet



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INCI NAME	BEES WAX
REACH Exemption	✓
CHINA INCI	蜂蜡
CAS	8006-40-4
EINECS	232-383-7
NET	20kg/Box
Shelf life	1 year



Specification

Acid value	17 - 22
Iodine value	5 - 15
Saponification value	80 - 100
Color , Gardner	5 max.
Peroxide Value	5 max.
Melting point , °C	60 - 67
Residue on Ignition , %	0.05 max.
Arsenic , ppm	2 max.
Heavy metal , ppm	20 max.

Bees Wax CY-100

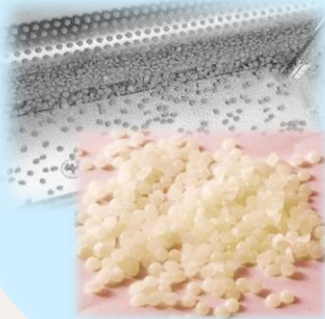
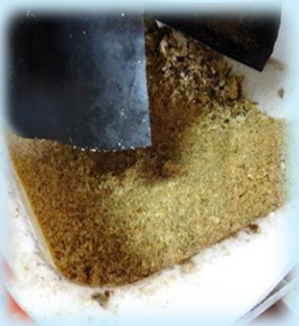
【Processing Beeswax From Honeycomb】



Honey



Bees Wax



Beeswax is said to have been used to preserve the mummy in the Egyptian Empire era.

Beeswax is natural wax produced by honey bees. It is edible and is used a variety of food products as well as cosmetics.

Beeswax has played an important role in the survival of mankind for many years.



Sugarcane Wax



Origin

It is obtained by separation and purification from the residue of the juice of the stalk of the grass cane (*Saccharum officinarum* LINNE). The main component is Myristyl palmitate. It contains a large amount of policosanol.

Properties

Brown solid with slight peculiar smell
Melting point 77°C

Characteristics

- ◆ Alternative to Bees wax
- ◆ Plant-derived
- ◆ Non-GMO
- ◆ Sustainability ingredients
- ◆ China INCI approved
- ◆ Reach exemption

Applications

- ◆ Lip sticks
- ◆ Mascara
- ◆ Eyebrow
- ◆ Hair styling products

INCI NAME	SACCHARUM OFFICINARUM (SUGAR CANE) WAX	SACCHARUM OFFICINARUM (SUGAR CANE) EXTRACT
CHINA INCI	—	甘蔗 (SACCHARUM OFFICINARUM) 提取物
CAS	91722-22-4	
EINECS	294-424-5	
NET	20kg / Bag	
SHELF LIFE	3 years	

Specification

Appearance	Brown, Solid
Odor	Characteristic odor
Acid Value	50 max.
Saponification Value	50 ~ 110
Melting Point	70 ~ 80°C
Loss on Drying	0.3% max.
Residue on Ignition	0.3% max.
Arsenic	1 ppm max.
Heavy Metal	10ppm max.

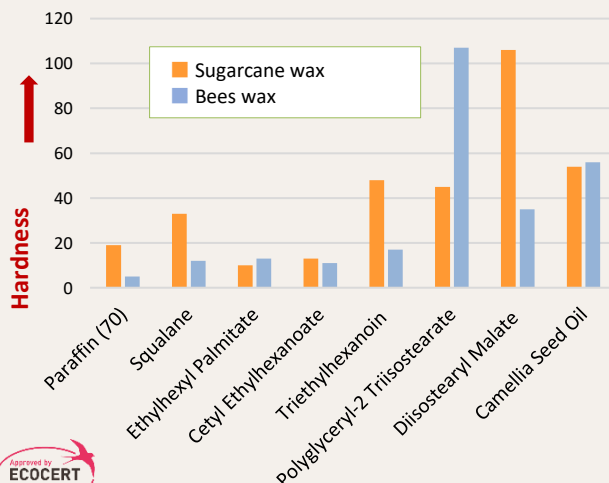
Solubility

Hydrocarbons	Mineral oil (70)	S
	Squalane	S
Estes	Ethylhexyl Palmitate	S
	Cetyl Ethylhexanoate	S
	Triethylhexanoin	S
	Polyglyceryl-2 Triisostearate	S
	Diisostearyl Malate	S
	Silicone	Dimethicone (2)
Dimethicone (6)		I
Cyclomethicone (D5)		I
Vegetable Oil	Camellia Seed Oil	S

Oil : Wax = 80 : 20 Temp.80°C S Soluble I Insoluble



Gelling ability



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Viscosity Wax U-1R, C-1R



Introduction

We focused on viscosity of Japan wax and revealed its effective molecule. You can supply superior stick cosmetics in texture and properties by controlling such molecule.

Feature

- Application to stick type cosmetics Effects
- Increment of strength with elasticity (not easy to break)
- Texture improvement (adhesion increment)
- Bloom less after time passing (stable wax)
- Prevention of quality fluctuation between LOTs (quality stabilization of products)

	U-1R	C-1R
INCI NAME	RHUS VERNICIFLUA PEEL WAX (and) C10-18 TRIGLYCERIDES	BRASSICA CAMPESTRIS (RAPESEED) SEED OIL (and) C10-18 TRIGLYCERIDES
REACH Exemption	✓	✓
CHINA INCI	漆 (RHUS VERNICIFLUA) 果皮蜡 (和) C10-18 脂酸甘油三酯类	油菜 (BRASSICA CAMPESTRIS) 籽油 (和) C10-18 脂酸甘油三酯类
CAS	225234-38-8, 85665-33-4	8002-13-9, 85665-33-4
EINECS	—, 288-123-8	232-229-0, 288-123-8
Melting Point	52°C	54°C
Net	10kg/Box	10kg/Box
Shelf life	3 years	3 years

Blooming test : Pencil



After 3 months, at RT

Formula : Eyebrow

	PRODUCT NAME	INCI NAME	%
1	Viscosity wax U-1R	RHUS VERNICIFLUA PEEL WAX (and) C10-18 TRIGLYCERIDES	12
2		HYDROGENATED CASTOR OIL	5
3		STEARIC ACID	10
4		SUCROSE TRIBEHENATE	5
5		DIISOSTEARYL MALATE	6
6		HYDROGENATED PALM OIL	10
7		CETYL ETHYLHEXANOATE	10.96
8		TOCOPHEROL	0.04
9		MICA	5.5
10		TALC	0.5
11		IRON OXIDES	19
12		TITANIUM DIOXIDE	16
		TOTAL	100

Viscosity Wax U-1R, C-1R

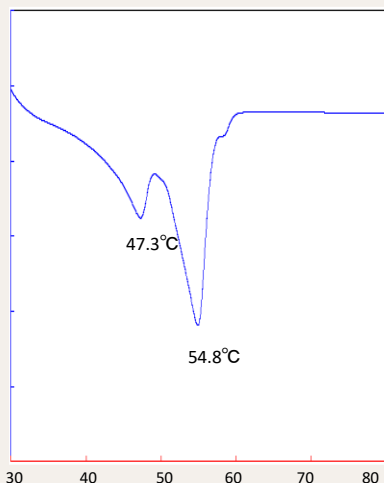
Tempering

Stabilization of crystal



Flexible

Before

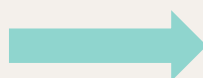


Temperature °C



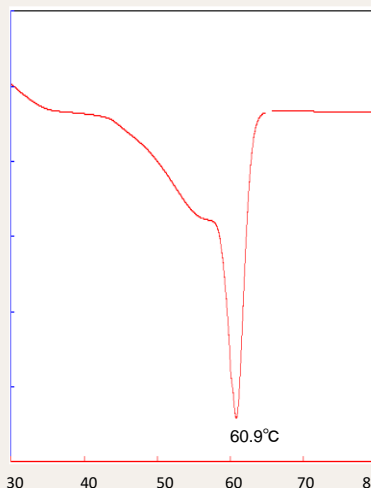
Break

40°C, 4hr



Tempering

After

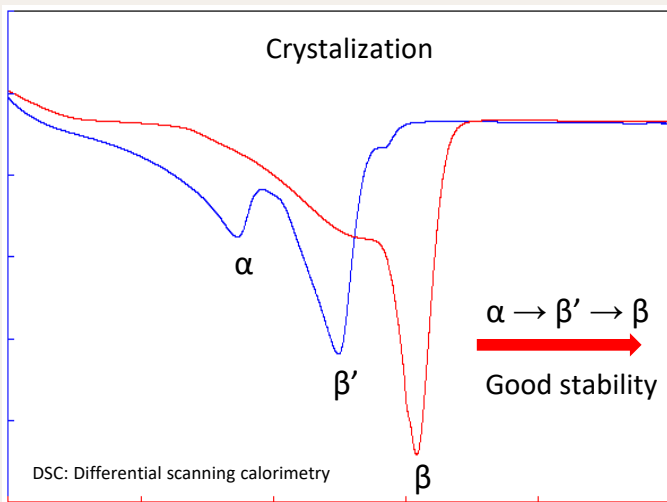


Temperature °C



Bend

Crystallization



Formula : Lip Stick

	PRODUCT NAME	INCI	
1	Sunflower Wax	Helianthus Annuus (Sunflower) Seed Wax	8
2	Candelilla WaxMK-4	CANDELLILLA (EUPHORBIA CERIFERA) WAX	2
3	Viscosity WaxU-1R	RHUS VERNICIFLUA PEEL WAX (and) C10-18TRIGLYCERIDES	5
4	Technol® LTO-R	C10-18 TRIGLYCERIDES (and) SIMMONDSIA CHINENSIS (JOJOBA) SEED OIL	5
5	Technol® SD (Non-GMO)	HELIANTHUS ANNUUS (SUNFLOWER) SEED OIL UNSAPONIFIABLES	10
6	Technol®MH	HYDROGENATED CASTOR OIL HYDROXYSTEARATE	20
7	Camellia Butter-R	CAMELLIA OLEIFERA SEED OIL (and) C10-18TRIGLYCERIDES	20
8		Polyglyceryl-2 Triisostearate	14
9		Diisostearyl Malate	9.7
10		Color Pigments	6.3
		TOTAL	100

Jojoba Seed Oil



Origin

This product is a natural ester. The oil is produced from cold pressed and purified Jojoba seeds (*Simmondsia Chinensis* or *Californica Nuttall* (*Euphorbiaceae*)).

Jojoba grows naturally or is cultivated in the southern United States of America and the arid regions of Mexico. Its seeds ripen 6 months after fertilization and are harvested once a year.

Properties

- Transparent , colorless
- Odorless
- Highest oxidative stability

Application

- Cosmetics
- Toiletries
- Skin care products
- Hair care products
- Sun care products
- Lip care products

Oxidative Stability , CDM120

About 15 hours



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INCI NAME	SIMMONDSIA CHINENSIS (JOJOBA) SEED OIL
REACH Exemption	✓
CHINA INCI	霍霍巴 (SIMMONDSIA CHINENSIS) 籽油
CAS	61789-91-1
EINECS	289-964-3
NET	16kg/Tin can
Shelf life	3 years






Specification	
Acid value	0.5 max.
Iodine value	70 - 100
Saponification value	80 - 110
Color , APHA	100 max.
Arsenic , ppm	2 max.
Heavy metal , ppm	20 max.

Composition(%) Our measured value		
	FFA	ALC
C16	1.1	0.1
C16:1	0.2	-
C18	-	-
C18:1	10.2	1.0
C18:2	-	-
C18:3	-	-
C20	-	0.2
C20:1	72.3	42.1
C22	-	1.1
C22:1	14.7	45.8
Others	1.5	9.9

Vegetable Butter



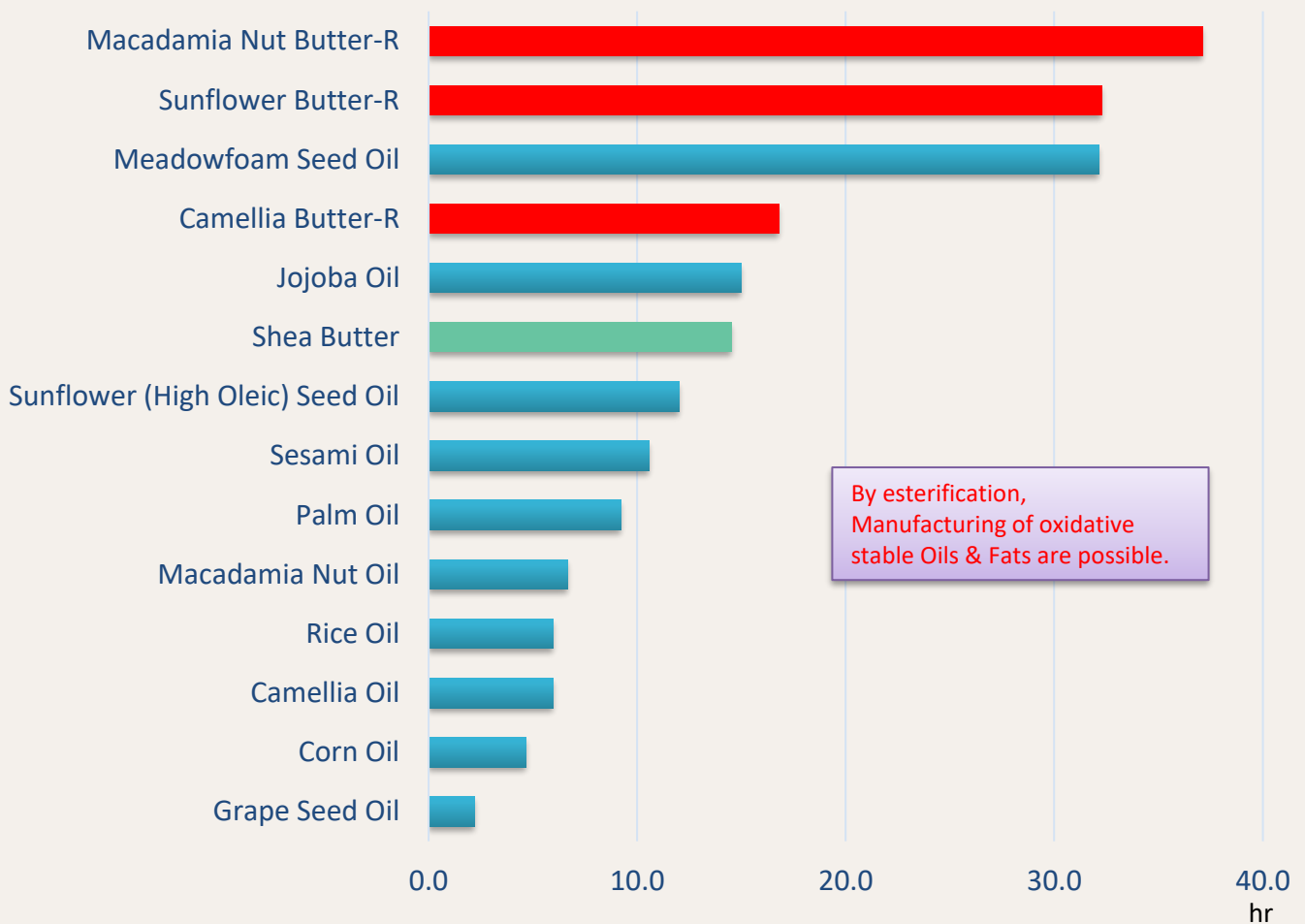
	Macadamia Nut Butter-R	Sunflower Butter-R	Camellia Butter-R
			
Origin	This product is a interesterified oil between Macadamia nut oil and hydrogenated macadamia nut oil. Application of interesterification technic enables to produce unique fats and oils, which cannot be achieved by hydrogenation technic.	This product is a interesterified fats between sunflower seed oil and hydrogenated sunflower seed oil. Application of interesterification technic enables to produce unique fats and oils, which cannot be achieved by hydrogenation technic.)	This product is a interesterified fats between Camellia seed oil and hydrogenated Camellia seed oil. Application of interesterification technic enables to produce unique fats and oils, which cannot be achieved by hydrogenation technic.)
Properties	Light yellow to white fat with odorless of slight peculiar odor		
Application	Skin care, Body care, Baby care, Hair care, Lip balm, Cleansing cream		

	Macadamia Nut Butter-R	Sunflower Butter-R	Camellia Butter-R
INCI NAME	MACADAMIA TERNIFOLIA SEED OIL (and) C10-18 TRIGLYCERIDES	HELIANTHUS ANNUUS (SUNFLOWER) SEED OIL (and) C10-18 TRIGLYCERIDES	CAMELLIA OLEIFERA SEED OIL (and) C10-18 TRIGLYCERIDES
REACH Exemption	✓	✓	✓
CHINA INCI	澳洲坚果 (MACADAMIA TERNIFOLIA) 籽油 (和) C10-18 脂酸甘油三酯类	向日葵 (HELIANTHUS ANNUUS) 籽油 (和) C10-18 脂酸甘油三酯类	油茶 (CAMELLIA OLEIFERA) 籽油 (和) C10-18 脂酸甘油三酯类
CAS	128497-20-1/129811-19-4, 85665-33-4	8001-21-6, 85665-33-4	225233-97-6, 85665-33-4
EINECS	-, 288-123-8	232-273-9, 288-123-8	-, 288-123-8
NET	15kg/Tin can	15kg/Tin can	15kg/Tin can
Shelf life	2years	2years	2years
MP	40°C	50°C	40°C

Vegetable Butter

Oxidative stability list , CDM120°C

→ Good



Aging test (surface) RT , after 1 week



Technol[®] MH, MIS



Origin

Technol MH, MIS are derived from Fully Hydrogenated Castor Oil that was developed and manufactured for the raw material, especially for the cosmetics. Castor Oil has unique structure. It has 3 hydroxyl groups in the molecule (and 1 ether bond).

Due to this unique structure and high safety characters, Castor Oil is well known and used as raw material for the cosmetics for a long time. It is perform high viscosity and get to fit the pigment and dye.

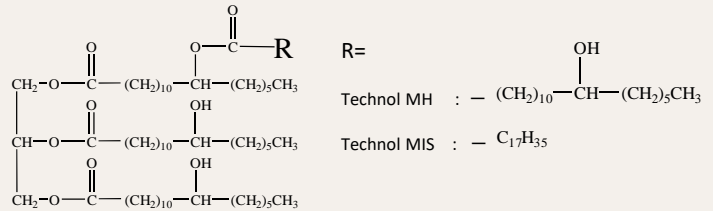
Properties

High polarity oil, High Stability to oxidation, Glossy, semitransparent paste and High dispersion force of pigment.

Application

Pale yellow paste and lightly smell. High polarity oil, High Stability to oxidation, Glossy, semitransparent paste, Glossy, semitransparent paste

Structure:



	Technol [®] MH	Technol [®] MIS
INCI NAME	Hydrogenated Castor Oil Hydroxystearate	Hydrogenated Castor Oil Isostearate
REACH Exemption	—	—
CHINA INCI	氢化蓖麻油羟基硬脂酸酯	氢化蓖麻油异硬脂酸酯
CAS	921608-21-1	868047-49-8
EINECS	—	—
NET	16kg/Tin can	16kg/Tin can
Shelf life	3 years	3years

Specification	Technol [®] MH	Technol [®] MIS
Acid value	6.0 max.	6.0 max.
Iodine value	10.0 max.	8.0 max.
Saponification value	175.0 - 195.0	175.0 - 195.0
Hydroxy value	100.0 - 130.0	70.0 - 95.0
Melting point, °C	-	43.0 - 48.0
Loss on drying, %	2.0 max.	1.0 max.
Residue on Ignition, %	0.5 max.	0.1 max.
Arsenic, ppm	2 max.	2 max.
Heavy metal, ppm	20 max.	20 max.

Technol[®] MH, MIS

The test of cover power to hair

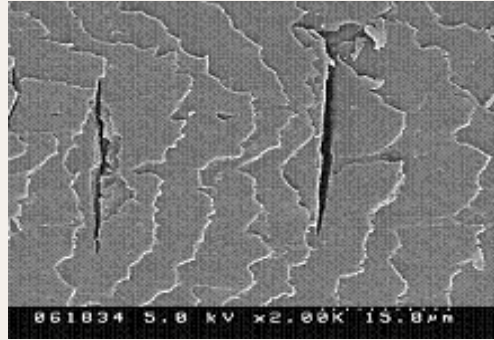
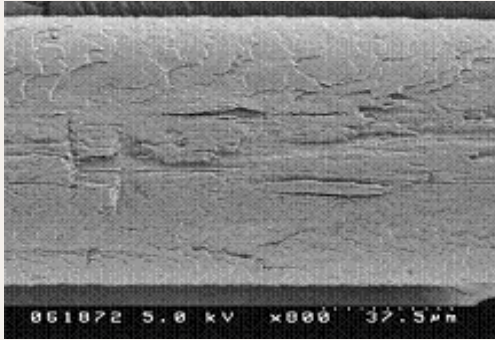
Sample : 10% ethanol solution

Apparatus : HITACHI S-4500(FE-SEM).

Object : Hair obtained from about 29 inches ponytail

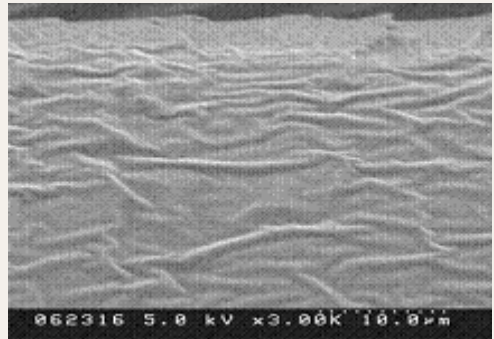
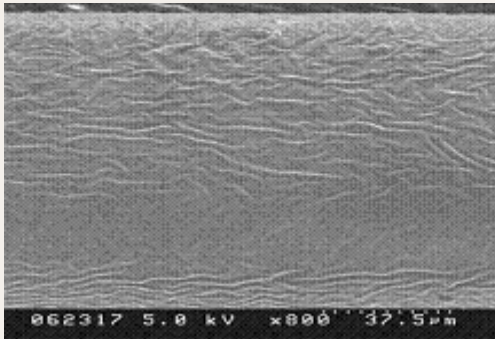
(Since human's hair extends 0.5 inches in one month, it means that these hair ends were exposed for about five years.)

①Blank



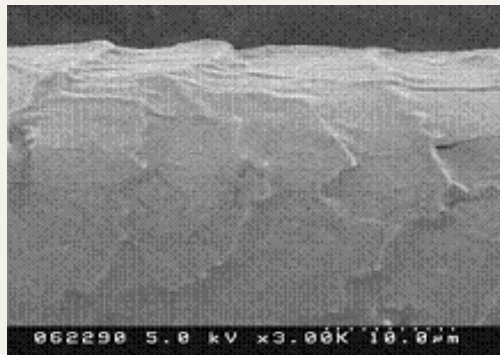
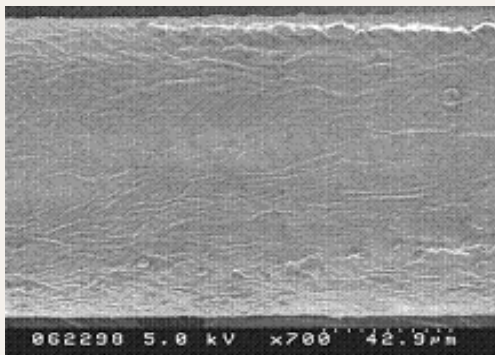
The surface has considerable damage.
There is crack, or the surface cuticle has separated and fallen.

②Sample dipping hair for 2 minutes, stirring gently.
After that, dried with a drier without rinsing.



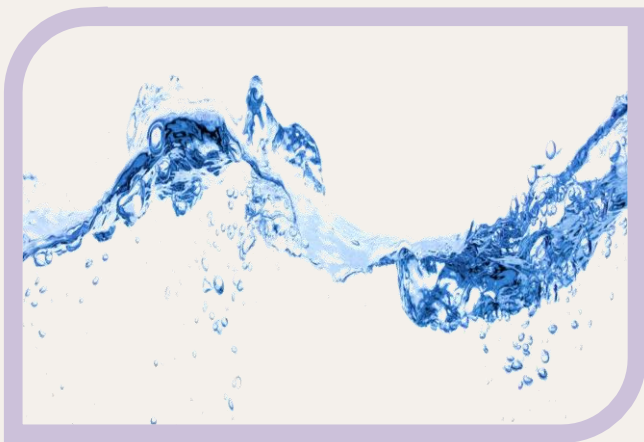
A crack and peeling are buried and it turns out
that the irregular surface is covered smoothly.

①After ②, The hair rinsed for 2 minutes with water was observed.



The surface seems to have rippled slightly. But the effect remains
and the whole can be covered.

Technol[®]LTO-R



INCI NAME	C10-18 TRIGLYCERIDES (and) SIMMONDSIA CHINENSIS (JOJOBA) SEED OIL
REACH Exemption	✓
CHINA INCI	C10-18 脂肪酸甘油三酯类(和) 霍霍巴 (SIMMONDSIA CHINENSIS) 籽油
CAS	85665-33-4,61789-91-9
EINECS	288-123-8,289-964-3
NET	16kg/Tin can
Shelf life	2 years

Specification

Appearance	Clear to Light Yellow Liquid
Acid value	0.5 max.
Iodine value	15 – 25
Saponification value	270 - 300
Moisture , %	0.1 max.
Arsenic , ppm	2 max.
Heavy metal , ppm	20 max.

Introduction

Technol LTO-R is 100% plant derived. This product absorbs into the skin well, similar to a low – viscosity silicone or cyclometicone. The high oxidation stability of Technol LTO-R produces a more highly stable cosmetic.

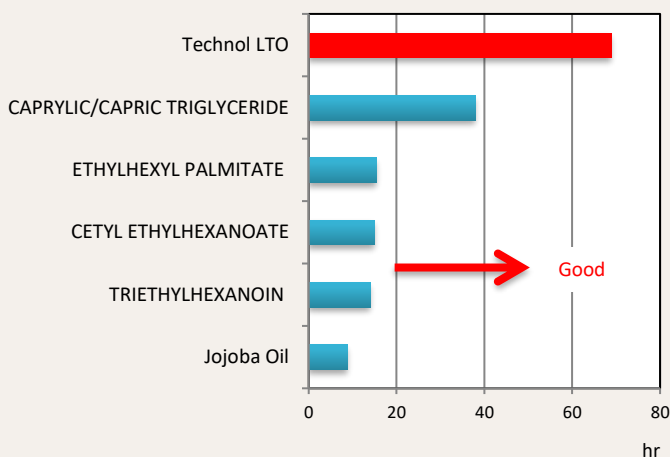
Characteristics

- Light weight
- Alternative to Silicone
- High oxidation stability
- Plant derived

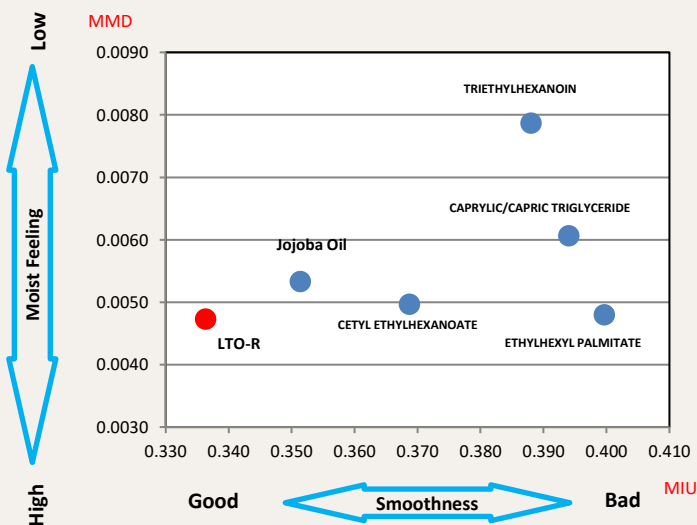
Applications

- Skin & Body care
- Hair care
- Massage oil
- Liquid foundation

Oxidative stability list , CDM120°C



Friction test: Spreadability of Oil



Technol LTO-R is more spreadable than other oils.

MIU is correlated with the slipperiness and non-slipperiness which we feel while touching objects. The larger MIU the less slippery it is.

MMD is correlated with the smoothness and roughness that we feel while rubbing objects. The bigger MMD value is, the rougher it is.

Evaluation of cleansing oil using the Technol[®] LTO-R

Cleansing oils of formulation ① to ④ were prototyped and measured for friction count, makeup loss, TEWL.

	Formula ①	Formula ②	Formula ③	Formula ④
	(%)	(%)	(%)	(%)
TechnolLTO-R	37.99			
Triethylhexanoin		37.99		
Cetyl Ethylhexanoate			37.99	
Ethylhexyl Palmitate				37.99
Tocopherol	0.01	0.01	0.01	0.01
Mineral Oil	25	25	25	25
Cyclopentasiloxane	5	5	5	5
PEG-7 Glyceryl Cocoate	20	20	20	20
Polyglyceryl-2 Oleate	12	12	12	12
	100	100	100	100



【Measurement condition】

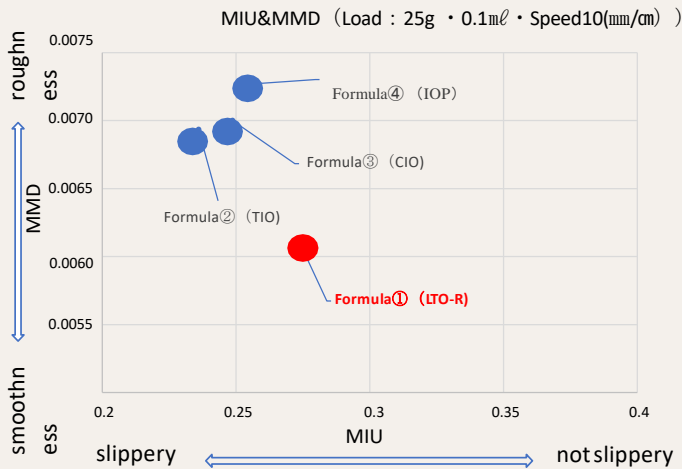
Temperature : 20°C Humidity : 50%

Measuring equipment : Tewameter

Measuring part : Inner arm Coated amount : 0.1g

Area (length × width) : 3cm × 3cm

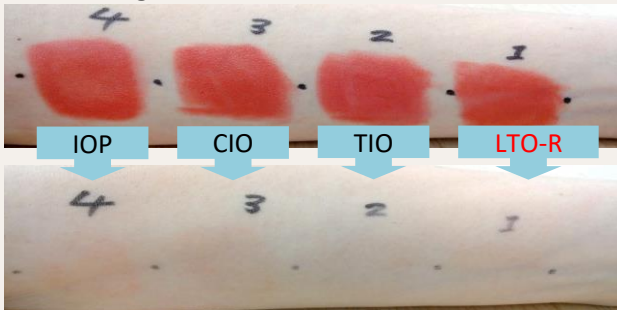
1, MIU & MMD (Friction Tester)



【 Method 】 MIU and MMD were measured.

Smoothness improves when LTO-R is used.

2, Cleansing



【Method】

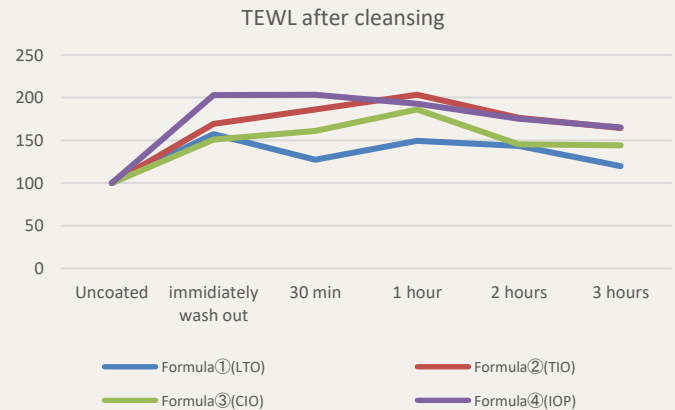
Apply lipstick and let it stand for 10 minutes, drop 1 drop of formulation ① ~ ④, Rubbed like a circle ten times with the finger's belly, rinse with water and observe the falling condition.

Using LTO-R improves make-up fade.

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Also, there are expressions that are not appropriate under the Pharmaceutical Affairs Law.

3, TEWL



【Method】

Apply formulations ① to ④ to the inner arm and measure the change in the amount of transpiration of water over time. ※ Calculate the change in water transpiration amount over time, with the moisture transpiration amount before application being 100, respectively. After oil cleansing, as the prescription ② to ④ usually cleans up to the necessary sebum of the skin, the TEWL value rises sharply.

There is a tendency to suppress excessive degreasing by using LTO-R. For this reason, **Suppresses the rapid rise of TEWL after cleaning.**

By using TECHNOLLTO-Ras as a base for oil cleansing, it is possible to make a preparation that has a smooth feeling, excellent makeup removal, and suppresses water evaporation after washing.

Technol[®] SD (Non-GMO)



Other

Technol SD(Non-GMO) is plant derived raw material, such as sunflower. Technol SD(Non-GMO) creates a high-luster lipstick formulation by high refractive index. Since Technol SD(Non-GMO) is very high viscosity and high adhesive property, it is recommendable for hair wax and mascara formulations.

Applications

- Lip sticks
- Mascara
- Hair styling products
- Skin & Body care

Grade

- **Technol SD (Non-GMO)** Derived from Sunflower

Characteristics

- High refractive index **1.52**
- Excellent solubility
- High sticky
- Plant derived
- REACH free
- China INCI approved

INCI NAME	HELIANTHUS ANNUUS (SUNFLOWER) SEED OIL UNSAPONIFIABLES
REACH Exemption	✓
CHINA INCI	向日葵 (HELIANTHUS ANNUUS) 籽油不皂化物
CAS	68476-80-2
EINECS	270-700-0

Specification

Appearance	Yellow to Light Brown, liquid
Acid value	1 max.
Moisture , %	1 max.
Arsenic , ppm	1 max.
Heavy metal , ppm	10 max.



Technol[®] SD (Non-GMO)

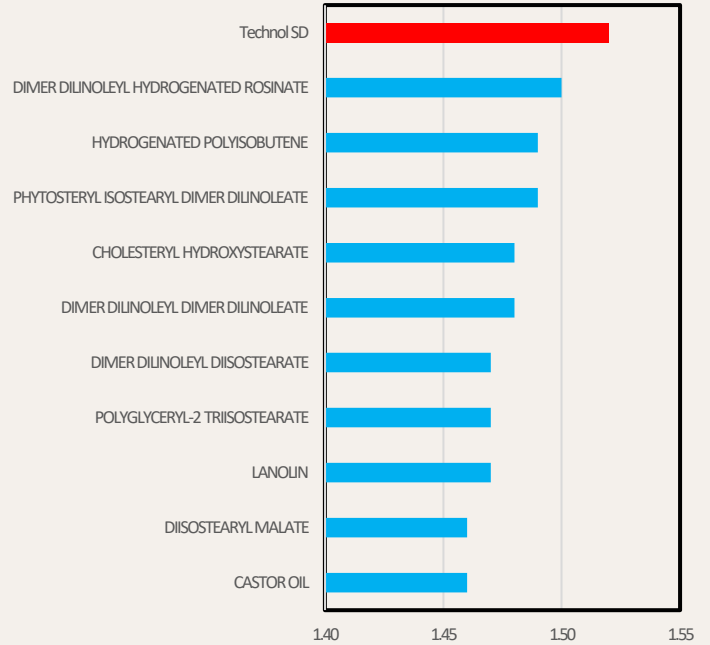
Solubility

Hydrocarbons	C9-11,C10-13 ISOPARAFFIN	S
	MINERAL OIL (70)	S
	MINERAL OIL (350)	S
	SQUALANE	S
Ester	ISONONYL ISONONANOATE	S
	ETHYLHEXYL PALMITATE	S
	CETYL ETHYLHEXANOATE	S
	TRIETHYLHEXANOIN	S
	POLYGLYCERYL-2 TRIISOSTEARATE	S
	DIISOSTEARYL MALATE	S
Silicone	PHENYL TRIMETHICONE	S
	DIMETHICONE (2)	S
	DIMETHICONE (6)	D
	DIMETHICONE (20)	I
	CYCLOMETHICONE (D5)	S
Vegetable Oil	JOJOBA OIL	S
	CASTOR SEED OIL	S
UV	ETHYLHEXYL METHOXYCINNAMATE	S

Oil : SD = 80 : 20 heat at 80°C

Soluble
Dispersion
Insoluble

Refractive index



Lipstick

INCI	Blank YLPHG 2	SD YLPHG 1
Technol SD	0	20
Bees Wax CY-100	2	2
Hydrogenated Polyisobutene	40	20
Polyethylene	8	8
Carnauba Wax R-100	3	3
Cetyl Ethylhexanoate	45	45
Pigment Paste	2	2
	100	100

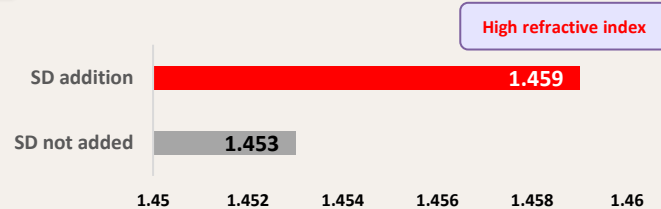
Expected effects

Gives shiny appearance, Improvement of adhesion, Suppression of transpiration of moisture.

1) Gloss, coloring



2) Refractive index



Technol[®] PG



COSMOS
APPROVED

✘ Non-GMO

INCI Name	LECITHIN	PHOSPHATIDYLGLYCEROL
CHINA INCI	卵磷脂	—
REACH Exemption		✓
CAS	8002-43-5	92347-24-5
EINECS	232-307-2	296-212-8
Net	500g	
Shelf life	2 years	

Specification

Appearance	Yellow , Paste	
Iodine Value	85min , 75min (Non-GMO)	
Moisture (%)	1 max.	
Residue on Ignition (%)	9 max.	
Phosphatidylglycerol (%)	85 min.	
Arsenic , ppm	1 max.	
Heavy metal , ppm	10 max.	

Vesicle	PC	PG
Phase A		
Phosphatidylcholine (PC)	2	-
Phosphatidylglycerol (PG)	-	2
Glycerin	9	9
Propanediol	10	10
Phase B		
water	79	79
Particle size	445nm	198nm

Introduction

PG is a rare natural ingredient present in plant lecithin. It is composed of Lecithin. It is contained high Phosphatidylglycerol (PG). It can work as a booster to permeate active ingredients through the skin. PG works as an emulsifier that can create small emulsified particles. PG has the effect to activate genes related to keratinocyte differentiation and it can improve rough skin. PG can also repair oxidative damage caused by ultraviolet rays.

Characteristics

- Phosphatidylglycerol
- Plant-derived
- Emulsifier
- Keratinocyte differentiation
- Anti-Oxidative stress
- REACH free
- China INCI approved

Applications

- Skin & Body care
- Sun care
- Cream

Grade

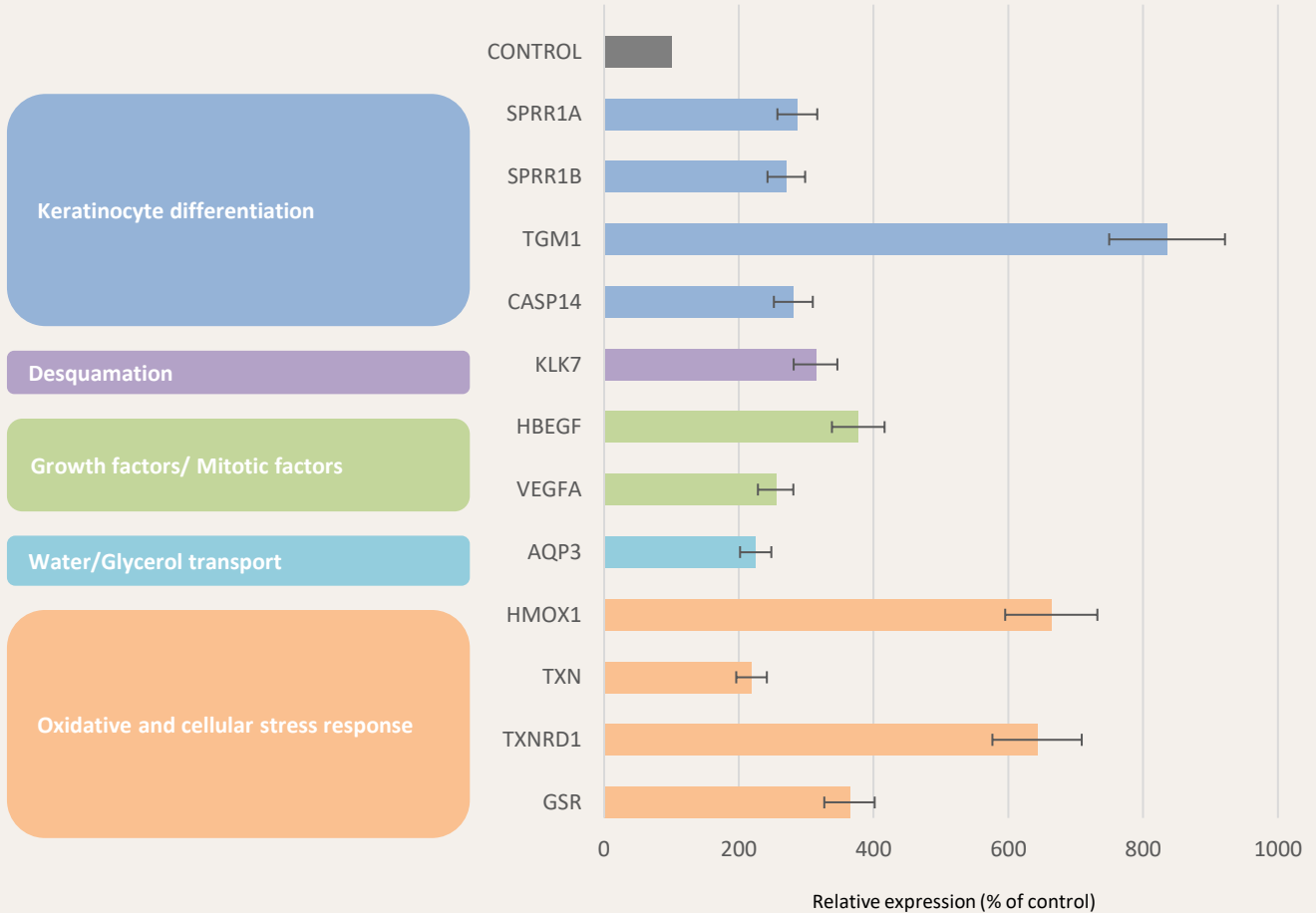
- **Technol PG**
Derived from soybean
- **Technol PG (Non-GMO)**
Derived from Sunflower



70°C, 3000rpm, 10min

Technol[®] PG

Effect of **Technol PG (0.003%)** on gene expression profile in normal human epidermal keratinocytes.
Analysis of mRNA expression profile by RT-qPCR



Genes	Explanation
SPRR1A	Activates proline, an NMF ingredient which moisturizes the skin.
SPRR1B	
TGM1	Cross-links proteins to each other, increases skin strength and enhance moisturizing function.
CASP14	Increases filaggrin degrading enzyme and increase NMF component.
KLK7	Helps synthesizes Laminin 332 protein, type 4 collagen and elastin to maintain the elasticity of the dermis and youthful skin.
HBEGF	Accelerates the turnover of the skin and suppresses pigmentation of the skin.
VEGFA	Promotes proliferation / survival of vascular endothelial cells and is effective for healing skin ulcers.
AQP3	Improves the water retention capacity of the epidermis. It is necessary to replenish AQP3, as its expression level decreases with age.
HMOX1	Promotes the production of HO-1 protein that protects the skin from oxidation damage by ultraviolet rays.
TXN	Promotes the production of protein thioredoxin that reduces oxidation damage by ultraviolet rays.
TXNRD1	Promotes the production of thioredoxin reductase, an enzyme that enhances the function of thioredoxin.
GSR	Increases the enzyme glutathione reductase that activates glutathione, an antioxidant that protects cells from oxidative damage by ultraviolet rays.

The fatty acid composition list of oils and fats (%)

Numerical Symbol	12	14	16	16:1	18	18:1	18:2	18:3	20	20:1	22	22:1	24
Fatty acids	Lauric acid	Myristic acid	Palmitic acid	Palmitoleic acid	Stearic acid	Oleic acid	Linoleic acid	Linolenic acid	Arachidic acid	Eicosenic acid	Behenic acid	Erucic acid	Lignoceric acid
Palm oil		0.9	44.4	0.2	3.9	40.1	9.4	0.2	0.3	0.1			
Cacao butter		0.1	24.1	0.1	37.5	34.0	2.6	0.1	1.0		0.2	0.1	
Shea butter			5.7		43.0	43.3	6.1		1.4	0.3			
Mango seed oil	7.0	3.1	4.7		42.8	33.4	5.5	0.2	0.5		0.6		0.2
Avocado oil			18.3	7.5	0.7	63.4	9.4	0.5		0.2			
Macadamia nut oil		0.8	8.38	22.2	3.3	55.4	3.2	0.1	2.7	2.5	0.8		
Hazelnut oil			5.4		2.7	82.7	9.2						
Olive oil			10.1	0.1	2.7	77.7	7.2	0.4	0.3	0.2	0.1		0.3
Tsubaki oil			6.9	0.1	2.1	86.5	3.8	0.1		0.3			
Camellia oil			7.4	0.1	1.8	82.5	7.6	0.2		0.5			
Tou-tsubaki oil			10.2	0.1	2.4	78.8	7.7	0.3		0.4			
Higholeic sunflower seed oil			3.2	0.1	2.7	87.5	5.1	0.1	0.2	0.2	0.8		0.2
Sunflower seed oil			5.9		5.5	16.6	70.9	0.5	0.3	0.3			
Sesame oil			9.1	0.1	5.4	39.6	44.2	0.3	0.6	0.2	0.1	0.1	
Argan oil			12.9		5.6	45.5	35.2		0.3	0.4			
Peanut oil			11.1		2.9	42.2	34.7	2.6	1.3			0.7	
Corn oil			10.5	0.2	2.0	31.8	52.8	1.8	0.5	0.4			
Cotton seed oil		0.7	18.7	0.6	2.3	16.9	59.1	0.7	0.4	0.1	0.2		
Cotton seed stearin		0.4	33.9	0.4	2.5	17.6	44.3	0.2	0.2	0.2	0.2	0.1	
Safflower oil			7.1		2.4	12.8	77.9	0.6	0.1				
Grape seed oil			7.9		3.9	20.1	67.2	0.4	0.3				
Soybean oil		0.1	9.9	0.1	4.1	22.6	55.3	6.7	0.4	0.3	0.4		
Rapeseed oil		0.1	4.3	0.2	1.5	60.7	21.4	9.8	0.4	1.0	0.2		
Higherucic soybean oil			2.4	0.2	0.9	14.6	11.8	8.2	0.8	7.4	0.6	50.5	0.1
Rosehip oil			3.1	0.1	1.6	14.3	45.8	33.7	0.7	0.3	0.1		
Perilla ocimoides oil			6.7		2.0	22.4	12.5	56.4					
Meadowfoam seed oil			0.2			2.0	0.3		0.8	61.8		17.3	
Jojoba fatty acid			1.1	0.2		10.2				72.3		14.7	
Human		3.0	25.0	9.0	4.0	48.0	11.0						

Wax Lineup

	Candelilla Wax	Carnauba Wax	Rice Wax	Bees Wax
Products Melting point Feature INCI Name	MK-2 71°C , general grade EUPHORBIA CERIFERA(CANDELILLA)WAX	R-100 83°C general grade COPERNICIA CERIFERA(CARNAUBA) WAX	S-100 78°C general grade ORIZA SATIVA (RICE) BRAN WAX R-100 73°C Hydrogenated oil mixture ORIZA SATIVA (RICE) BRAN WAX HYDROGENATED PALM OIL HYDROGENATED RAPESEED OIL	CY-100 64°C general grade BEES WAX
	MK-4 71°C , low smell EUPHORBIA CERIFERA(CANDELILLA)WAX			
	MK-5 71°C , light color EUPHORBIA CERIFERA(CANDELILLA)WAX			
	MD-21 66°C Hydrocarbons approx. 80% CANDELILLA WAX HYDROCARBONS			
Origin	Candelilla shrub	Carnauba palm leaves	Rice bran	Bee hives
Components	Esters 22% Free Fatty acids 10% Free alcohols 10% Hydrocarbons 40% (C31) Resins 18%	Esters 50% Hydroxyl acid esters 33% Free fatty acids 3% Free alcohols 10% Hydrocarbons 1%, Resins 3%	Esters 94% Free fatty acids 4% Free alcohols 1% hydrocarbons 1%	Esters 70% Free Fatty acids 15% Free alcohols 12% Hydrocarbons 13%
Properties	Good balance of hardness and Brittleness Less bloom Nice gloss, less smell Many odd number hydrocarbons Lipsticks, lip liners	High melting point, Hard Emulsify easily Nice gloss Rise melting point on mix Lipsticks	High melting point, large crystal Supple hardness ,less brittle Sharp DSC carve Highly safety Mascaras	Animal wax, microcrystalline Viscosity, Emulsify easily
Application	Foundations Hair styling agents	Mascaras, Concealers Hair styling agent	Make up foundations Foundation	Foundations Lip cares Creams

	Sugarcane Wax	Japan Wax-Y	Sunflower Wax	Viscosity Wax
Products Melting point Feature INCI Name	77°C •general grade SACCHARUM OFFICINARUM (SUGARCANE) WAX •SACCHARUM OFFICINARUM (SUGARCANE) EXTRACT	51°C general grade RHUS VERNICIFLUA PEEL WAX	77°C general grade HELIANTHUS ANNUUS (SUNFLOWER) SEED WAX	U-1R 50°C general grade RHUS VERNICIFLUA PEEL WAX (and)C10-18 TRIGLYCERIDES C-1R 55°C Inexpensive grade BRASSICA CAMPESTRIS (RAPESEED) SEED OIL (and)C10-18 TRIGLYCERIDES
	Foundations Hair styling agents			
Origin	Sugarcane stalks	Peel of fruit of Rhus verniciflua	Sunflower seeds	U-1R : RHUS VERNICIFLUA PEEL WAX, Chemicals C-1R: RAPESEED OIL, Chemicals
Components	Myrcyl palmitate	Triglycerides of Monoprotic acid Triglycerides of Diprotic acid Free fatty acids	Esters Free fatty acids Free alcohols	Triglycerides of Monoprotic acid Triglycerides of Diprotic acid Free fatty acids Free alcohols
Properties	•Alternatives to beeswax • It is effective in making thickening gel and improving keeping power	Viscosity Dense crystalline	High melting point hard wax Well soluble to solvents, and gelling	• Increment of strength with elasticity (not easy to break) • Texture improvement (adhesion increment)
Application	Lipsticks Mascaras Eyebrow Hair Wax	Cosmetic pencils Eyeliner Lip sticks	Lipsticks Mascaras Hair styling agents	Mascaras Make up foundations Foundation

Wax Gelling Ability

