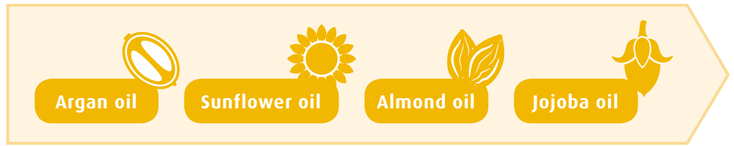
CONCLUSIONS

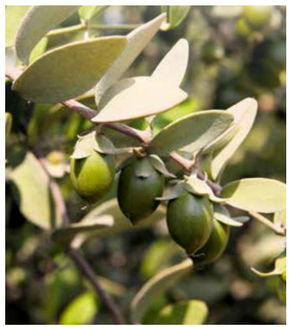
ISPE, an independent laboratory in Milan, Italy evaluated and compared sensory features of **SUNFLOWER OIL**, **ALMOND OIL**, **ARGAN OIL** and **JOJOBA OIL** in March 2018.
15 assessors evaluated each sample following a standard protocol and ranked the oils according to their degree of the following sensory parameters: short-term emollient effect and long-term emollient effect.

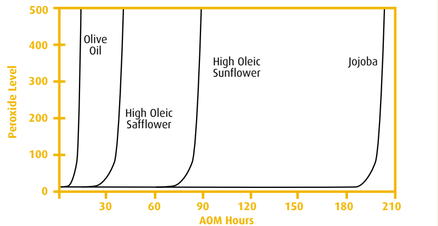
Jojoba oil performed best for short- and long-term emollient effect. The results show a statistically significant difference from Sunflower, Almond and Argan oil.

SHORT-TERM EMOLLIENT EFFECT



LONG-TERM EMOLLIENT EFFECT





Source: American Jojoba Growers Association „Cosmetic Chemistry of Natural Jojoba"

ABOUT IJEC

Jojoba is responsibly grown by members of the International Jojoba Export Council (IJEC), founded in 1998 to protect quality standards and promote the use of Jojoba. Read more about IJEC at www.ijec.net

INCI

- Simmondsia Chinensis Seed Oil
- EC no. 289-964-3
- CAS no. 90045-98-0 EU 61789-91 (US)
- **REACH**: exempted according to Annex IV and V

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JOJOBA

THE SUPERIOR SKIN-FRIENDLY EMOLLIENT

WWW.IJEC.NET

ABOUT JOJOBA

Although Jojoba is often called an “oil” it is technically a liquid wax ester, very similar to the lipids produced naturally by human skin. Jojoba’s chemical structure makes it an unrivaled ingredient mainly for skin- and body care products.
Jojoba is a non-occlusive, non-oily, long term-emollient with outstanding oxidative stability. Jojoba finds a multiplicity of applications in quality skin, lip, nail and hair care products.

CHEMISTRY

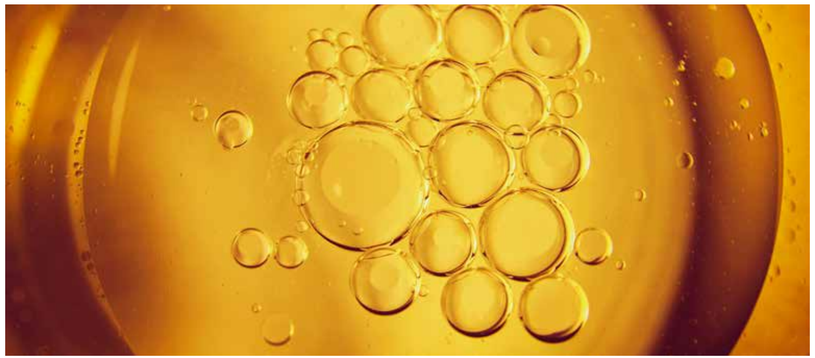
- long chained unbranched wax ester
- natural antioxidants
- iodine value between 78 and 90
- saponification number from 85-100
- high thermal stability

m = 7 - 13
n = 8 - 14

CHEMICAL STRUCTURE OF JOJOBA

CHEMICAL STRUCTURE OF NATURAL SKIN OIL

Source: American Jojoba Growers Association „Cosmetic Chemistry of Natural Jojoba“



JOJOBA AT A GLANCE

EFFECT

- moisturizing
- extremely emollient for skin and hair
- skin soothing
- high oxidative stability
- biostatic
- non-comedogenic
- analgesic
- hypoallergenic
- protects against free-radical damage
- deep penetration of the skin without clogging the pores
- natural UV filter
- balances dry/oily patches

FACTS

- wax similar to human sebum
- extremely high oxidative stability
- extraordinarily long shelf life
- contains natural antioxidants
- rich in vitamins A and E
- natural UV-protection
- complete absorption
- moisture regulation

CULTIVATION AND ENVIRONMENT

- prevents desertification
- biodegradable
- pesticide free from organic certified fields
- sustainable raw material
- eco-friendly
- protects sperm whales from extinction

EASY TO FORMULATE INTO APPLICATIONS

- protection and care for dry, sensitive, damaged skin and hair
- sun care
- protection against stretch marks
- lip care
- fundamental in beauty products
- effective carrier
- exfoliant beads and Jojoba meal

AVAILABLE CERTIFICATIONS

- allergen free
- pesticide free
- no animal testing
- GMO free
- organic certificate
- and more ...

APPLICATIONS

PHARMACEUTICAL USES

Jojoba is used in topical ointments and creams to treat delicate skin conditions, with no reported allergic reactions or negative side effects. Jojoba is also used extensively in sunscreens, anti-inflammatory preparations, and treatments for acne and psoriasis. Jojoba’s similarity to naturally produced human skin lipids makes it an ideal carrier for active pharmaceutical ingredients (API).

APPLICATION RECOMMENDATION

- use concentration – no limits
- temperature range > 10,6°C liquid, < 7°C solid
- soluble in oily phases

AVAILABLE JOJOBA CATEGORIES

- Jojoba Oil Gold (natural colour)
- Jojoba Oil Gold Organic
- Jojoba Oil Lite (water clear)
- Jojoba Oil Lite (Organic)
- Hydrogenated Jojoba
  - Jojoba Flakes
  - Jojoba Beads
- Hydrolized Jojoba
- Jojoba meal (presscake)
- Jojoba Esters

TYPICAL PROPERTIES OF JOJOBA

Freezing point, C	10.6 - 7.0
Melting points, C	6.8 – 7.0
Boiling point at 757 mm under N_2, C	389
Heat of fusion by DSC, cal/g	21
Refractive index at 25 C	1.4650
Dielectric constant (27 C)	2.680
Specific conductivity (27 C) mho/cm	$8.86.10^{-13}$
Specific gravity, 25 / 25 C	0.863
Viscosity Rotovisco (25 C)	
» MV-1 rotor in MY cup, cp	35
» Plate and cone with PK-1, cp	33
» Brookfield spindle #1, 25 C, cp	37
» Cannon-Fenske, 25 C, cp	50
» Cannon-Fenske, 100 C, centistokes	27
» Saybolt, 100 C, SUS	127
» Saybolt, 210 C, SUS	48
Smoke point (AOCS Cc 9a – 48), C	195
Flash point (AOCS Cc 9a – 48), C	295
Fire point (COC), C	338
Iodine value	82
Saponification value	92
Acid value	<2
Acetyl value	2
Unsaponfiable matter, %	51
Total acids, %	52
Iodine value of alcohols	77
Average molecular weight of wax esters	606
Peroxide value	< 2.0
Moisture	< 300 ppm
Phosphorus	50-100 ppm
Viscosity index	232
Color (Lovibond 5.25° cell)	< 65 Y, 5.0 R
Organoleptic	Mild, typical fatty
hydrophilic/lipophilic balance number (HLB)	~ 6