

Jojoba oil

Jojoba oil ⁱ^{hə}^ˈ^h^{oʊ}^b^ə/ is the liquid produced in the seed of the *Simmondsia chinensis* (Jojoba) plant, a shrub, which is native to southern Arizona, southern California, and northwestern Mexico. The oil makes up approximately 50% of the jojoba seed by weight.

Appearance

Unrefined jojoba oil appears as a clear golden liquid at room temperature with a slightly nutty odor. Refined jojoba oil is colorless and odorless. The melting point of jojoba oil is approximately 10°C and the iodine value is approximately 80. Jojoba oil is relatively shelf-stable when compared with other vegetable oils mainly because it does not contain triglycerides, unlike most other vegetable oils such as grape seed oil and coconut oil.^[1] It has an oxidative stability index of approximately 60, which means that it is more shelf-stable than safflower oil, canola oil, almond oil or squalene but less than castor oil and coconut oil.



Glass vial containing jojoba oil

Chemistry

Physical properties of jojoba oil

freezing point	7-10.6°C ^{[2][3]}
refractive index	1.4650 at 25°C ^[2]
specific gravity	0.863 at 25°C ^[2]
smoke point	195°C ^[3]
flash point	295°C ^[2]
iodine number	82
viscosity	48 cSt at 99°C ^[3] 127 cSt at 37.8°C ^[3]
viscosity index	190-230 ^[4]

Fatty Acids present in jojoba oil^[5]

Fatty acid	percentage
palmitic acid (C16:1)	0.24
oleic acid (C18:1)	0.66
11-Eicosenoic Acid (C20:1)	30.3
Docosenoic Acid (C22:1)	14.2
Docosdienoic acid (C22:2)	33.7
9-Godoelic Acid (C20:1)	14.6

Uses

Jojoba oil is used as a replacement for whale oil and its derivatives, such as cetyl alcohol. The ban on importing whale oil to the US in 1971 led to the discovery that jojoba oil is "in many regards superior to sperm oil for applications in the cosmetics and other industries."

Jojoba oil is found as an additive in many cosmetic products, especially those marketed as being made from natural ingredients. In particular, such products commonly containing jojoba are lotions and moisturizers, hair shampoos and conditioners. Or, the pure oil itself may be used on skin, hair, or cuticles.

Jojoba oil is a fungicide, and can be used for controlling mildew.

Like olestra, jojoba oil is edible but non-caloric and non-digestible, meaning the oil will pass through the intestines unchanged and can cause a stool condition called steatorrhea.

Jojoba biodiesel has been explored as a cheap, sustainable fuel that can serve as a substitute for petroleum diesel.

Photo gallery



Plant



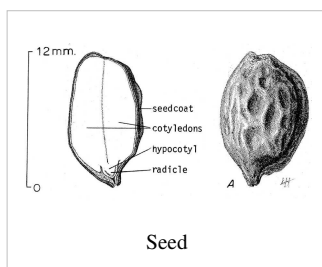
Female Flower



Male Flower



Fruits



References

- [1] "Learn the powerful benefits of jojoba oil" (<http://thejojobaoil.com/>). Retrieved 2011-07-01.
- [2] Jaime Wisniak. *The chemistry and technology of jojoba oil*. Page 24 (http://books.google.be/books?id=b8t59-2bLUMC&pg=PA24&dq=jojoba+oil+flash+point&hl=en&sa=X&ei=86DAUIvqGo2yhAf86oGgBQ&redir_esc=y#v=onepage&q=jojoba+oil+flash+point&f=false)
- [3] Nasir El Bassam (1998). *Energy Plant Species: Their Use and Impact on Environment and Development*. pg 168 (http://books.google.be/books?id=QDS8URpY4zYC&pg=PA168&dq=jojoba+oil+viscosity&hl=en&sa=X&ei=zJXLUI_KI66S0QWQnYCIBg&redir_esc=y#v=onepage&q=viscosity+of+jojoba+oil&f=false)
- [4] I. J. Heilweil. *Review of Lubricant Properties of Jojoba Oil and its Derivatives*. (<http://books.google.be/books?id=gLSt4EiTYzgC&pg=PA246&dq=jojoba+oil+freezing+point&hl=en&sa=X&ei=0-vAUMihCIT74QSWkiG4CQ&ved=0CDYQ6AEwAA#v=onepage&q=jojoba+oil+freezing+point&f=false>)
- [5] SEAHand Book-2009,by The solvent Extractors'Association of India page No:932

External links

- International Jojoba Export Council (<http://ijec.net/>)
- Naqvi, H.H. and I.P. Ting (1990). "Jojoba: A unique liquid wax producer from the American desert" (<http://www.hort.purdue.edu/newcrop/proceedings1990/v1-247.html>). *Advances in new crops*. Timber Press, Portland, OR. pp. 247–251.
- Description and chemical structure of jojoba oil (http://jojobassaf.com/jojoba_oil.php)
- Can This Unassuming Little Desert Shrub Really Save The World? (<http://www.motherearthnews.com/Nature-Community/1977-11-01/Jojoba.aspx>) - The first article from 1977

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