



## PRICKLY PEAR OIL

### PRODUCT DATA SHEET



**PRICKLY PEAR OIL** is the oil expressed from the seeds of *Opuntia ficus-indica*, a species of cactus widely spread, most likely original from central Mexico region and naturalized in the Mediterranean area.

With a total content of unsaturated fatty acids up to 88%, **PRICKLY PEAR OIL** exhibits an exceptional level — up to 70% — of linoleic acid, followed by palmitic and oleic acids, respectively. The major linoleic acid present in **PRICKLY PEAR OIL** has beneficial properties for human skin, reason why it is highly valued by personal care industry. This fatty acid plays an important physiological role as potent mediator of the inflammation, being essential for maintenance of the skin barrier and its hydrolipidic mantle. Linoleic acid has also been suggested to be related to the protection against ultraviolet rays and thus helping in photoprotection action of **PRICKLY PEAR OIL**.

**PRICKLY PEAR OIL** also contains a complex and interesting phenolic profile, with a high antioxidant potency, and radical-scavenging capacity through chelation of metal ions involved in free-radical generation. Beta-sitosterol accounts up to 70% of the total sterol content of **PRICKLY PEAR OIL**, and carotenoids are also found in the unsaponifiable fraction, as singlet oxygen quenchers that protect the oil from photo-oxidation. Vitamins E and K are as well present in **PRICKLY PEAR OIL**, improving its stability and furtherly providing cosmetic benefits when topically applied.

## TECHNICAL DATA

**Appearance:** Clear oily liquid

Parameter	Value
Acid value (as oleic acid)	0.5-0.7%
Peroxide value	< 10 meq
Unsaponifiables	3.0-3.5%
Iodine vaule	102-107
Oleic acid	18.5-20.5%

## APPLICATION



**PRICKLY PEAR OIL** may be directly applied on skin and hair in all sort of cosmetic products and personal care applications. With a recommended dosage between 3 to 10%, **PRICKLY**

**PEAR OIL** can be easily incorporated as an active ingredient or an excellent carrier in skin and hair care products.

**INCI Name: Opuntia ficus-indica seed oil**

**CAS No.: [90082-21-6]**

**EINECS/ELINCS No.: 290-109-1**

### References:

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- Yeddes N. et al. 2012. Supercritical SC-CO<sub>2</sub> and Soxhlet n-Hexane Extract of Tunisian Opuntia ficus indica Seeds and Fatty Acids Analysis. Journal of Lipids Vol. 2012, Article ID 914693, 6 pp.
- Ennouri M. et al. 2005. Fatty acid composition and rheological behaviour of prickly pear seed oils. Food chemistry 93,431-437.
- Ramadan M.F. & Mörsel J.T. 2003. Oil cactus pear (Opuntia ficus-indica L.). Food chemistry 82, 339-345.
- Letawe C. et al. 1998. Digital image analysis of the effect of topically applied linoleic acid on acne microcomedones. Clinical and Experimental Dermatology 23(2)56-58.

## PRICKLY PEAR OIL

**CODE** 008580      **SPECIFICATION**      **Nº** 00858001

PARAMETERS	SPECIFICATIONS	EDITION - 04/09/2018
Acid value (as oleic acid)	0,5-0,7%	
Peroxide value	<10 meq O <sub>2</sub> /Kg	
Absorbance (270 nm)	0,39-0,45	
ΔK	0,020-0,030	
Water content and volatile substances	0,06-0,08% (w/w)	
Fatty acid composition		
Myristic acid (C14:0)	0,1-0,2%	
Palmitic acid (C16:0)	11,0-13,0%	
Palmitoleic acid (C16:1)	0,5-0,7%	
Heptadecanoic acid (C17:0)	0,1-0,2	
Heptadecenoic acid (C17:1)	max. 0,2	
Stearic acid (C18:0)	2,1-4,1%	
Oleic acid (C18:1)	18,5-20,5%	
Linoleic acid (C18:2)	61,7-63,7%	
Linolenic acid (C18:3)	0,2-0,4%	
Arachidic acid (C20:0)	0,2-0,4%	
Gadoleic acid (C20:1)	0,1-0,3%	
Behenic acid (C22:0)	0,1-0,3%	
Saponification value	165-175 mg KOH/g	
Unsaponifiables	3,0-3,5%	
Iodine value	102-107	

### PACKING

### REMARKS