

TIGER NUT OIL

PRODUCT DATA SHEET



TIGER NUT OIL is the fixed oil obtained from the tubers of *Cyperus esculentus* L. This plant, commonly called chufa or tigernut, thrives in wetlands and grows mainly around streams and ponds. Old civilizations such as the Egyptians left samples of this healthy product in their tombs and sarcophagi, but it was in the XIIIth century when the Arabs introduced their crop in the Mediterranean area. Valencia was and continues to be the only area in Europe where chufa is grown, currently farmed in the fertile land of L'Horta Nord, which surrounds Valencia.

The small round tubers found along the roots have a slightly almond flavor and are eaten raw or cooked, or made into a traditional chufa drink called *orxata*. These tubers contain high levels of protein, carbohydrate and oleic acid ^(1, 2, 3, 6), and 20 to 28 percent in the form of **TIGER NUT OIL**.

TIGER NUT OIL is obtained by pressing the cleaned tubers, in the same manner as traditional olive oil extraction, and contains more than 800 g/kg unsaturated fatty acid, oleic acid and linoleic acid accounting for the most abundant ^(1, 3). **TIGER NUT OIL** has a mild, pleasant flavor and is considered as a food oil to be similar, but of superior quality, to olive oil⁽⁶⁾. **TIGER NUT OIL** shows antioxidant and scavenging activities of hydroxyl radicals ⁽³⁾.

TECHNICAL DATA

Appearance:

Parameter	Value
Peroxide value	Max 5 meq O ₂ /Kg
Palmitic acid	Max 16%
Oleic acid	60-70%
Linoleic acid	10-20%

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APPLICATION

Industrial applications for **TIGER NUT OIL** include high-value applications for cosmetics⁽¹⁾ (perfume carriers), instrument lubricants and as an industrial anticorrosive⁽⁴⁾.

TIGER NUT OIL has potential for the production of biodiesel fuel⁽⁵⁾, since the seeds contain not only a significant amount of oil (28.1 %), while their productivity is about 4 times greater than that of rapeseed.

TIGER NUT OIL is recommended as a potential substitute for most oils used for cosmetics and health care production. **TIGER NUT OIL** shows good physicochemical properties, being ideal for soap, toothpaste and other cosmetic applications⁽¹⁾.

INCI Name: Cyperus esculentus root oil

CAS No.: [223748-92-3]

EINECS/ELINCS No.: --

References:

1. Warra, A.A. 2014. Quality characteristics of oil from Brown and Yellow *Cyperus esculentus* L. Tubers. Research and Reviews: Journal of Botanical Sciences 3(1).
 2. Bamishaiye, EI; Bamishaiye, O. M. 2011. Tiger nut: as a plant, its derivatives and benefits. African Journal of Food, Agriculture, Nutrition & Development; Vol. 11 Issue 5, p5157.
 3. Jing S. et al. 2013. The *in vitro* and *in vivo* antioxidant properties of *Cyperus esculentus* oil from Xinjiang, China. J Sci Food Agric. 93(6):1505-9.
 4. Mohammed, R.A. et al. 2013. Inhibitive effect by natural *Cyperus esculentus* L. oil on the corrosion of A356.0-type Al-Si-Mg alloy in simulated seawater environment. J. Mater. Environ. Sci 4(1):93-98.
 5. Sendikiene, E. Gumbyte, M.; Makareviciene, V. 2011. Evaluation of *Cyperus esculentus* Oil as a Feedstock for Biodiesel Fuel Production. Proceedings of the International Scientific Conference: Rural De; 2011, Vol. 5 Issue 1, p437.
 6. Arafat, S.M., et al. 2009. Chufa Tubers (*Cyperus esculentus* L.): As New Source of Food. World Applied Sciences Journal 7 (2):151-156.
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TIGER NUTS OIL**CODE** 008008 **SPECIFICATION** **Nº** 00800801

PARAMETERS	SPECIFICATIONS	EDITION - 08/05/2013
F.F.A	max. 1 %	
Peroxide Value	max. 5 meq O2/Kg	
Chromatography	Fatty Acid Fraction	
Acid Palmitic	max.16	
Acid Stearic	max.7	
Acid Oleic	60- 70	
Acid Linoleic	10 - 20	

PACKING**REMARKS**

Keep full and well closed in dry place and away from light.