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# MACADAMIA NUT OIL REFINED

## PRODUCT DATA SHEET

**MACADAMIA NUT OIL REFINED** is a refined and winterized vegetable oil obtained from mature seeds of *Macadamia ternifolia* by cold expression, unique due to its high content in Palmitoleic acid, a monounsaturated fatty acid that avoids oxidation.

**MACADAMIA NUT OIL REFINED** is made from macadamia nut, native to Australia and constitutes a healthy alternative to other cooking oils. Due to its relatively high smoke point (210-218 ºC, 410-425 F) releasing of free radicals is delayed, thus decreasing oxidative cell damage.

**MACADAMIA NUT OIL REFINED** contains a remarkable amount of mono-unsaturated fats, healthier than saturated fats. A variety of epidemiologic studies show protective effects of Macadamia nut consumption on coronary heart disease, as well as their positive effects on lipid profile and lipoproteins, decreasing total and low density lipoproteins (LDL) cholesterol and subsequently reducing cardiovascular disease risk[1,2].

**MACADAMIA NUT OIL REFINED** exhibits a long shelf life and good resistance to rancidity due to the low content of polyunsaturated fatty acids. It is an oil with minimal colour and virtually odourless.

### TECHNICAL DATA

**Appearance:** Clear pale yellow oily liquid
**Acidity index:** ≤ 2.0 mg KOH/g oil
**Peroxide value:** ≤ 10.0 meq $O_2$/Kg oil
**Relative density (20ºC):** 0.909 - 0.915
**Cold test:** 5 º C for 24 hours
When reheated above 5 º C the oil returns to normal.

| Fatty Acid | Composition |
|---|---|
| **Stearic acid** | 2 - 5 % |
| **Palmitic acid** | 8 - 10 % |
| **Palmitoleic acid** | 16 - 24 |
| **Oleic acid** | 53 - 67 % |
| **Linoleic acid** | 1.5 - 4 % |

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## APPLICATION

**MACADAMIA NUT OIL REFINED** main food applications are:

- Frying, being suitable by its high heat stability.
- Salad dressing, providing a good taste with a unique fatty acid profile.
- Dip for bread, used also in place of butter and margarine.
- Baking, as well replacing butter in cakes, cookies and other bakery products.

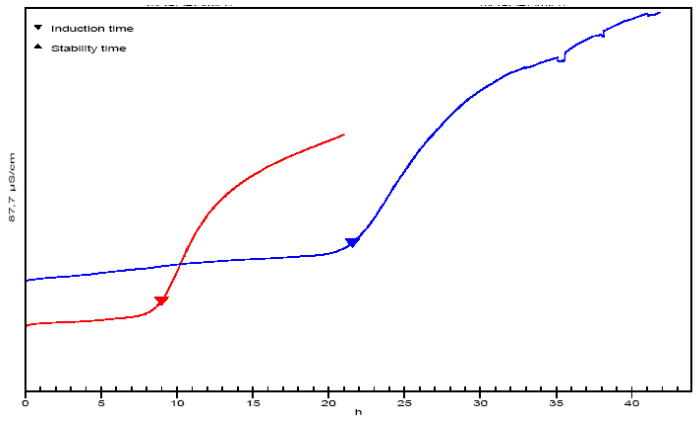
## OIL STABILITY INDEX (OSI)

The Oil Stability Index (OSI) was determined using a Rancimat instrument. The rapidity of oxidation of oil depends on the degree of unsaturation, the presence of antioxidants, and prior storage conditions. In OSI analysis, the rate of oxidation is slow until resistance to oxidation is overcome. This time is known as the oxidation induction period and it is a tool to determine the useful life of the oil.

**MACADAMIA OIL OSI**: 21.6 hours (100 °C)

ISO 6886 (1996)
Animal and vegetable fats and oils
Determination of oxidation stability

**Conditions**
Sample amount 2.5 ± 0.01 g
Temperature 100°C ± 0.2°C
Gas flow 20 L/h
Vessel: 50 mL distilled water
Evaluation Conductivity
Induction time (tangent method)




Blue: determination at 100 °C
Red: determination at 110 °C

[1] Nus et al., 2004. Nuts, cardio and cerebrovascular risks. A Spanish perspective. Arch. Latinoam. Nutr 54:137-48.
[2] Griel et al., 2006. Tree nuts and the lipid profile: a review of clinical studies. Br. J. Nutr. 2006, 96:S68-78.

**INCI Name**: Macadamia Ternifolia Seed Oil.