

## Summary of the application: Tigernut (*Cyperus esculentus*) Oil

Applicant: TIGERNUTS TRADERS, S.L. Av. Pobla de Vallbona 39, 46183, Spain.

The novel food application concerns request for authorisation for a food use of Tigernut (*Cyperus esculentus*) oil. The use of Tigernut oil is proposed as an ingredient in foods such as, baked goods, breads, pastries, pasta, snacks, cooking oils, non-dairy creamers, cheese, salad dressings, margarines, etc..

The use of tiger nuts oil is comparable to other shelved and commodity oils such as soybean, cottonseed, olive, corn, peanut, and hempseed oil sold in today's supermarket. Tiger nut oil is an alternative wherever such oils, butter or butter-like products are used. It can also be used as a high-quality salad oil in dressings, marinades, and sauces. The proposed maximum amounts in product(s) as consumed is 200 ml. Oleic acid (64-67%) is present in the highest concentration, followed by palmitic (13-14%), linoleic (10-12%), stearic (5-6%), arachidic (0.6-0.8%), palmitoleic (0.29-0.4%) and linolenic (0.2%) acids.

Tigernut oil metabolism, subchronic toxicity, genotoxicity fall within that of fatty acids. These are normal dietary components which will be metabolized by humans via established processes. Taken together, the study data do not provide any evidence of toxicity after repeated administration of fatty acids which is supported by the physiological function of fatty acids within the body. The Codex Committee on Fats and Oils (CCFO) has reported that, on the basis of current levels of intake when used as a flavor, linoleic acid, stearic acid, palmitic acid and oleic acid are not of safety concern.

Independent, industrial-scale batches of tigernuts oil were produced and fully characterized: proximal analysis, physical characteristics, oxidation properties, fatty acids profile, minerals profile, vitamins profile. Analyses were also conducted in order to demonstrate that potential contaminants were not detected or detected at levels which are not of toxicological concern.

The analytical results demonstrate that the production process is robust and repeatable, producing a product which complies with the proposed regulatory specifications. Tiger nuts oil is produced by cold pressing the hulled or de-hulled oil-bearing seed of the tiger nut (*Cyperus esculentus*) plant. The resultant oil can be further processed by means of filtering. Cold pressing is a widely used technique for industrial production of Tigernut oil, so, commercially Tigernut oil is sold as cold pressed oil.

As control measures carried out, in the first place, on the tigernut process, a first inspection and analytical control of the tigernuts is made, a cleaning for the removal of impurities, they pass through an optimal selection machine, classification of rays X, and by a metal detector, in order to guarantee the safety of the food. After processing the tigernut to obtain the oil, before its distribution it is subjected to a control stage, analyzing quality parameters to ensure that it is within normality. A stability study was launched in order to determine the shelf life of the product and the available data confirmed that under, the shelf-life is at least 12 months. For storage it is advised to keep in a dry and fresh place (10-18°C).

Tigernut oil intakes based on the European Food Safety Authority (EFSA) food consumption databases are used to represent potential highest intake estimates from proposed uses. Consumption of the tiger nut oil under the proposed uses and use levels do not contribute substantially to the overall exposure to the analysed undesirable substances through diet.

Therefore, based on the analytical data, the risk evaluation along the production process and the safety studies reports and the maximum proposed use level of tigernuts oil, the applicant is considering that the novel food subject does not pose a safety risk to human health.