

## **SUNFLOWER SEED OIL: A PREMIUM OIL FOR FOOD APPLICATIONS**

***Nurhan TURGUT DUNFORD*<sup>1</sup>**

<sup>1</sup> *Oklahoma State University, USA*

*nurhan.dunford@okstate.edu*

### **ABSTRACT**

Sunflower seed oil is considered a premium oil owing to its light color, mild flavor and good oxidative stability. Conventional, also referred to as regular, sunflower seed oil is rich in unsaturated fatty acids (about 58% linoleic, an essential polyunsaturated fatty acid, and 29% oleic acid) and low in saturated fatty acids. High oleic (90% oleic acid), high-stearic/high-oleic (24% stearic and 62% oleic), high- stearic/high-linoleic (30% stearic and 50% linoleic), high-palmitic/high-linoleic (32% palmitic and 46% linoleic) and high-palmitic/high-oleic (29% palmitic and 56% oleic) sunflower seed oils have also been developed. Sunflower seed oil is one of the most desirable oils in the world and it is preferred over other vegetable oils such as soybean, cottonseed, and canola oils in many countries. It has typically been one of the oils that is marketed for retailing and domestic consumption either as pure sunflower seed oil or in vegetable oil blends used for cooking. In industry, sunflower seed oil has been widely used for frying, especially for frying snack foods. Emulsions, sauces and margarines are formulated with sunflower seed oil as well. Due to its bland taste, sunflower seed oil is an excellent flavor carrier and used for encapsulation of volatile oils and flavor compounds. The high stearic/high oleic sunflower oils can be fractionated to obtain products with high levels of solids and different melting profiles that can be used in wide variety of food formulations, including fillings, spreads, coatings, and confectionary products. This presentation will also highlight recent research on new food applications including oleogels and edible films and potential uses of oil bodies isolated from sunflower seeds as natural emulsifiers for edible formulations.

**Key Words :** Sunflower oil, quality, oxidative stability, fatty acids, other uses