Sunflowers: The New Super Food

For over 45 years, SunOpta Sunflower, a division of SunOpta Grains and Foods Group, has been a worldwide supplier of sunflower products for the snack, confection, baking, cereal, and food ingredient industries. As an industry leader, we offer a complete range of sunflower kernel and inshell products. We specialize in SL® 80 High Oleic sunflower kernel and XL inshell. We also offer value-added processing such as oil roasted, dry roasted, honey roasted, and flavored sunflower products.

FUNCTIONALITY

- Healthy ingredient in cereals, snack bars, trail mixes, and baked goods
- Cost-effective nut substitute
- Option of SL® 80 High Oleic sunflower kernel, which provides up to five times longer shelf life than traditional sunflower kernel

NUTRITION AND DISEASE PREVENTION

The addition of sunflower is a tasty way to help meet the Recommended Dietary Allowance (RDA) for vitamin E, folate, iron, vitamin B6, thiamin, copper, magnesium, and fiber, thereby preventing or delaying:

- Cardiovascular Disease  
- Prostate Cancer  
- Alzheimer’s  
- Motor Neuron Disease (ALS)  
- Onset of Aging

NUTRITIONAL HIGHLIGHTS

- **Vitamin E** (76% RDA in one ounce/30g): Research suggests that most American diets—up to 97% of women’s diets and 89% of men’s—are deficient in this essential vitamin. Sunflowers are the best whole food source of vitamin E, which acts to slow the effects of aging, boost the immune system, repair damage to cells, and prevent cancer and cardiovascular disease.

- **Folate** (17% RDA in one ounce 30g): This essential nutrient is necessary for the production and maintenance of new cells. This is especially important during periods of rapid cell division and growth, such as infancy and pregnancy. Folate prevents changes to DNA that increase the risk of cancer.

- **Ideal Fat Profile**: Sunflower seeds contain high levels of “good” fats (polyunsaturated and monounsaturated) and low levels of “bad” (saturated) fats. Almost 90% of the fat in sunflower seeds is the healthiest type of fat for the heart. Additionally, sunflower is naturally free of harmful trans-fats which raise “bad” cholesterol (LDL) and lower “good” cholesterol (HDL).

- **Antioxidants**: Sunflower seeds contain four times more antioxidants than blueberries, walnuts, and peanuts. Antioxidants destroy free radicals, which cause cell damage. As a result, antioxidants boost the immune system, improve cardiovascular health, prevent heart attacks and stroke, lower blood pressure and bad cholesterol, and promote eye health.

- **Phytochemicals**: Phytochemicals (chemicals derived from plants) benefit health and play an active role in the prevention of disease. Sunflower seeds’ phytochemicals include: betaine (protects against cardiovascular disease), phenolic acid (an anti-oxidant and anti-carcinogen), choline (promotes memory and cognitive function), arginine (benefits heart health), and lignans (protects against heart disease and cancer and lowers LDL cholesterol and triglycerides).
**SUPERIOR NUTRITIONAL DENSITY**

Sunflowers are a nutritionally dense food, power-packed with protein, fiber, vitamin E, minerals, healthy fats, and phytochemicals. Sunflower products are a functional, versatile, and delicious food choice.

- Two times more protein than walnuts, pecans, and macadamia nuts
- Six times more vitamin E than peanuts
- Seven times more folate than almonds, cashews, and pecans
- More fiber than an apple, comparable to a serving of bran flake cereal

**The Sunflower Advantage**

Compared to other nuts, sunflower provides more nutrients (including protein, vitamin E, folate, and polyunsaturated fatty acids) with fewer calories:

<table>
<thead>
<tr>
<th>Nut/Seed</th>
<th>Protein (g/100g)</th>
<th>Fat (g/100g)</th>
<th>Kcal (per 100g)</th>
<th>Vitamin E (mg/100g)</th>
<th>Folate (mcg/100g)</th>
<th>PUFA* (g/100g)</th>
<th>MUFA** (g/100g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunflower</td>
<td>24.0g</td>
<td>49.57 g</td>
<td>570 kcal</td>
<td>34.50 mg</td>
<td>227 mcg</td>
<td>32.74 g</td>
<td>9.46 g</td>
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<tr>
<td>Almond</td>
<td>16.9g</td>
<td>50.64 g</td>
<td>578 kcal</td>
<td>25.87 mg</td>
<td>29 mcg</td>
<td>12.21 g</td>
<td>32.16 g</td>
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<tr>
<td>Cashews</td>
<td>17.2g</td>
<td>43.85 g</td>
<td>553 kcal</td>
<td>.90 mg</td>
<td>25 mcg</td>
<td>7.85 g</td>
<td>23.8 g</td>
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<tr>
<td>Macadamia</td>
<td>7.0g</td>
<td>75.77 g</td>
<td>718 kcal</td>
<td>.54 mg</td>
<td>11 mcg</td>
<td>1.50 g</td>
<td>58.88 g</td>
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<tr>
<td>Peanut</td>
<td>24.3g</td>
<td>48.75 g</td>
<td>563 kcal</td>
<td>6.56 mg</td>
<td>239 mcg</td>
<td>14.71 g</td>
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<tr>
<td>Pecan</td>
<td>9.2g</td>
<td>71.97 g</td>
<td>691 kcal</td>
<td>1.40 mg</td>
<td>22 mcg</td>
<td>21.61 g</td>
<td>40.80 g</td>
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<tr>
<td>Walnut</td>
<td>10.6g</td>
<td>65.21 g</td>
<td>654 kcal</td>
<td>.70 mg</td>
<td>98 mcg</td>
<td>47.17 g</td>
<td>8.93 g</td>
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</table>


**PRODUCT VERSATILITY**

A great nut alternative, sunflower can be used as a tasteful and healthy ingredient in cereals, snack bars, trail mixes, and baked goods. Select from SunOpta’s product line of roasted/salted inshell and kernel, honey roasted and flavored kernel, sunflower meal, and SunPoppers. Incorporating the wholesome nutrition and health benefits of sunflower is easy.

**APPLICATIONS**

- Nutritious snack (roasted, salted, & flavored)
- Confectionary (ingredient in chocolate & sweets)
- Multigrain (breakfast bars, cookies, energy bars, & crackers)
- Baking (breads, bagels, & muffins)
- Industrial Baking Mixes (ingredient in pre-made mixes)
- Toppings (salads, yogurt, & stir-fry)
- Breading and Coatings (chicken & fish breadings)

**VITAMIN E**: Cardiovascular Benefits

![Vitamin E Chart]


<table>
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<th>mg/serving</th>
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<tbody>
<tr>
<td>Sunflower</td>
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</tr>
<tr>
<td>Almond</td>
<td>10.0 mg</td>
</tr>
<tr>
<td>Pecan</td>
<td>8.0 mg</td>
</tr>
<tr>
<td>Walnut</td>
<td>6.0 mg</td>
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<tr>
<td>Soybean</td>
<td>4.0 mg</td>
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<tr>
<td>Hazelnut</td>
<td>2.0 mg</td>
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*Total tocopherol