

Frequently-Asked-Questions SO₂ (Sulfur Dioxide) AND CANNED FOOD PRODUCTS

WHY CANNED FOOD PRODUCTS GET BROWN?

All canned food products must be treated by extreme heat to sterilize any possible remaining bacterial contamination to ensure the shelf life of the product. However, the heat will, at the same time, destroy the physical appearance of the product as well. It will cause such reaction that will develop brown color to the product. In other word, it will burn out the product.

HOW TO PREVENT?

Sulfur Dioxide is added into the product during processing to prevent such browning reaction. The most common form of Sulfur Dioxide used in food industry is Sodium Metabisulfite (E223) (Na₂S₂O₅) and Potassium Metabisulfite (E224) (K₂S₂O₅). These additives are added not to preserve the food, but to help preventing brown color. Most people misunderstand them as a food preservative. USFDA approves the addition of Sodium Metabisulfite in canned food products with of Sulfur Dioxide residue not exceed 30 ppm. For coconut milk, Sodium Metabisulfite is added at the beginning of the process at approximate 0.02% or 200 ppm. However, most portions will deteriorate during the heating process. The final residue of Sulfur Dioxide in final product will be around 10 – 30 ppm. You may notice that the amount of what we add at the beginning is not as serious as the amount left at the end.

WHAT IF NO SO₂ ADDED?

The appearance of the product will not be so attractive. Its color will be more brown than usual. Some brown color will develop further and sooner, and will result in shorter shelf life of such product. In some countries, like Australia and New Zealand, Sulfur Dioxide is totally banned. Therefore, the color of the coconut milk in those markets will look darker than the rest of the world.

DARK CHIPS IN LOW SO₂ COCONUT MILK

In the normal coconut milk, some protein skins or chips may develop in the same way as the soybean tofu. If the Sulfur Dioxide is added at a very low percentage, these protein skins may turn into some dark chips at the surface during heat treatment. This is a normal Phenomenon to the rich coconut milk. During cooking the dishes with such coconut milk, these chips will break after stirred or boiled.

HOW TO PUT SO₂ ON THE LABEL?

Sodium Metabisulfite is strictly controlled by the legislation. For many countries, they allow your product to have the Sulfur Dioxide residue up to 30-40 ppm, but you have to put its name on the label. If your product has Sulfur Dioxide residue below 10 ppm, it can be classified as "low Sulfur Dioxide product" and you do NOT need to put its name on the label.

**** The information contained in this publication is based on our own research and development work, and is to the best of our knowledge reliable. Anyone should, however, conduct his own tests to determine the suitability for his own specific purposes. Statements contained herein should NOT be considered as a warranty of any kind, expressed or implied, and no liability is accepted for the infringement of any patents.