

Labeling Recommendations -- 1995

NATIONAL ORGANIC STANDARDS BOARD FINAL RECOMMENDATION ADDENDUM NUMBER 12 ALLOWABLE METHODS OF OIL EXTRACTION FOR PROCESSED FOODS

Date adopted: October 31, 1995
Location: Austin, Texas

Introduction:

The Committee has debated whether oils added as an ingredient in organic foods should only be from oils extracted according to a non-chemical extraction method. There are two basic ways in which oils are currently being extracted from their source material.

Mechanical pressing, also known as expeller pressing, removes oil through the use of continuously driven screws that crush the seed or other oil-bearing material into a pulp from which the oil is expressed. Friction created in the process can generate heat between 120-190⁰ F. Therefore, the use of the term "cold pressed", sometimes used in reference to mechanical pressing, is a misnomer.

Solvent extraction of oil was invented in Germany in 1870 as a way to maximize the efficient removal of oil from the raw material, especially since the pulp left over from mechanical pressing has about 5-13% residual oil remaining. During solvent extraction, flaked and cooked kernels are exposed to hexane, a highly flammable, colorless, volatile solvent that dissolves out the oil, leaving only 1-3% oil remaining in the residual meal. Hexane compounds are considered carcinogenic by the EPA and are classified as a hazardous substance. Oil manufacturers claim that hexane is flashed off when the oil/solvent blend is heated to 212⁰ F. and then distilled to remove all traces of hexane. Some traces may remain in the residual meal leftover from production, a substance than sold to the livestock industry as cattle feed. Full refining of the oil will generally remove most traces of hexane.

According to some manufactures, expeller-pressed oil costs approximately 8-10 cents more per pound than solvent extracted oil. Although more expensive, the fact remains that a non-chemical means of extraction, i.e., the expeller press, is available.

Recommendation:

Upon implementation of the National Organic Program, all products labeled as "organic" or "made with organic ingredients" which contain oil as an added ingredient must be able to document that the oil has been extracted according to non-chemical means, i.e., mechanical pressed (expeller pressed), hydraulic pressed, or stone pressed.