

Policy for Nanomaterials in Food and Food Packaging

Finalized February 2015



Policy for Nanomaterials in Food and Food Packaging

Nanotoxicology studies indicate a range of harms can be caused by ingestion, inhalation, and/or dermal exposure to a variety of nanomaterials. We are concerned that food companies may use, or inadvertently, as a result of supply chain management failures, incorporate nanomaterials in their food products, food ingredients, food contact surfaces, feed or food packaging before such materials have been proven safe for manufacture, consumption, and release into natural ecosystems on a life-cycle basis.

To minimize the risks to consumers, employees, researchers, companies, and natural ecosystems, we have developed the following policy recommendations for the food industry that we believe can and should be followed with regard to the use of nanomaterials.

Recommended Action:

1. Company adopts a public policy, readily viewable on its website, clearly explaining the Company's practices regarding use of nanomaterials in its food and beverage products and packaging, whether those use are in the research and development phase or in a commercialized product. The policy will include a description of the external and internal dimensions, the shape, and distribution of any nanomaterials used or allowed for use. The policy will include the company's understanding of the technical effects to be achieved by incorporation of nanomaterials and/or application of nanotechnologies in its products. The policy will include in an appendix a bibliography of peer reviewed studies used by company scientists and risk managers to determine environmental health, public health, and worker safety risks of the nanomaterials incorporated into their products.
2. Company issues supplier standards clearly setting forth either a prohibition on the use of nanomaterials in food substances and food and beverage packaging, or adoption of and documentation of the company policy outlined in point one.

3. If the Company uses any substance with nanomaterials with particle size below 500 nm in its food or beverage products or packaging, it shall provide a statement on the label specifying which nanomaterials are incorporated in the substance. Such statement should be near the mandatory nutrition labeling and readily viewable by consumers. Company shall also provide on its website any references to scientific studies that demonstrate the nanomaterials' safety at the particle size used.
4. Company adopts and publishes a "hierarchy of hazard controls"¹ approach to prevent exposure of its employees to nanomaterials via inhalation and dermal exposure during the manufacturing process.

Definition of Nanomaterials

A nanomaterial is an engineered or manufactured¹ material containing particles in the nanoscale range (1-1000 nm) in one or more external dimension, or in an internal or surface structure², or a material whose nanoscale particles have different properties or functions than macro-scale particles of the same material. This definition also applies to incidental nanoparticles, and those not intentionally engineered, but that are manufactured by-products and incorporated in company products.

¹ Naturally-occurring organic nanoscale particles (e.g. milk proteins, essential minerals) are not considered engineered or manufactured materials for this purpose. The term "naturally occurring" excludes engineering or manufacturing processes that reduce the size of materials, as well as naturally-occurring inorganic nanomaterials, such as asbestos.

² Aggregates and agglomerates of nanoparticles are considered to be nanostructured substances.

Principles for the Oversight of Nanotechnologies and Nanomaterials

In January 2008, a coalition of over 40 civil society groups endorsed the International Center for Technology Assessment's (ICTA) report Principles for the Oversight of Nanotechnologies and Nano Materials. The coalition called for strong, comprehensive, oversight of the technology and its products and urged action based on eight principles: 1) a precautionary foundation, 2) mandatory nano-specific regulations, 3) health and safety of the public and workers, 4) environmental protection, 5) transparency, 6) public participation, 7) inclusion of broader impacts and, 8) manufacturer liability.

¹ In a hierarchy of control approach to workplace hazards, the first stage is removal of the hazardous materials and/or processes, secondly their replacement with safer alternatives, and thirdly removal/reduction of the potential for exposure through engineering or procedural controls. As a last measure, but only after the previous controls have been implemented, personal safety equipment such as full body protective suits and respirators is used to protect workers who remain at risk of exposure.