# As You Sow Report Finds Nanoparticles In Your Donuts

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*Image credit: Flickr user, Robert Banh*

Are nanoparticles already in some food products? A report by As You Sow, a non-profit organization that promotes corporate responsibility, found that they are indeed. The organization ran laboratory tests on two products, Dunkin' Donuts Powdered Cake Donuts and Hostess Donettes, and found that titanium dioxide ($TiO_2$) nanoparticles in the powdered sugar that coats both products.

The health impacts of ingesting titanium dioxide are not well understood. (Most research focuses on inhalation.) Canada's Hazard Communication standard classifies $TiO_2$ as "possibly carcinogenic," a classification at level 3 on a 5 point scale (Asbestos is a 1 – the highest level – while caffeine is a 4). Nanoparticles, however, have unique potential to cause bodily harm- their small size allows them to go places in the body that larger particles cannot, which creates new opportunities for exposure.

As You Sow wanted to find out how companies were using these not-well-understood particles in their food products. In addition to the tests, they also sent a survey to 2,500 food companies about their use of nanoparticles in their products. The companies sent surveys included the 100 largest food processing companies, the 50 largest food distributors, the 75 largest food retailers, the 25 top food packaging companies, the 50 top fast food companies, and 187 nutritional supplement companies. Only 26 companies responded to the survey after "multiple follow up calls and emails." An additional 38 companies responded to follow up Facebook inquiries.

Of the 26 companies that did respond, two said they used nanoparticles in their products. One of the companies uses silvers as an anti-bacterial in its products, and the other uses nanoparticles in its packaging. Neither company has a policy on nanoparticles or plans to develop one. Ten companies said they didn't know if nanoparticles were in their products or supply chains, and 14 said they weren't suing nanoparticles. Of the 14 that said nanoparticles are not in their products, two said they have formal policies on nanoparticles, three have informal policies, and one is developing a policy. The other eight have no plans to develop policies on nanoparticles.

Of the 38 companies that responded to FB inquiries, 30 said their company doesn't use nanoparticles in its food products. However, the companies didn't say if nanoparticles are in their supply chains. As You Sow did an online search for almost 200 of the companies that received the survey but didn't respond. Through the online search, the organization found numerous news articles which indicated that at least 69 of the companies are either interested in nanotechnology, or are currently producing products that contain nanoparticles.

What companies need to do about nanoparticles

As You Sow includes a list of recommendations in the report for food companies. One of the recommendations is to develop a policy on nanoparticles. Based on the survey results, it is clear that food companies need to develop

policies. The other recommendations are:

Disclose your company's position or policy on nanoparticles to consumers, investors, and stakeholders

Survey suppliers to see if they are using nanoparticles in their production of food or supplement products or packaging

Survey suppliers to see if they know whether their food, supplement products, or food packaging contains nanoparticles

Communicate preferences regarding nanoparticles to all suppliers

Have someone in the company uniquely responsible for product safety related to nanoparticles if the company is using or considering using nanoparticles in its products

Disclose all environmental, health, and safety risks to consumers on nano-enhanced products and packaging

As You Sow plans to test more products, including M&Ms, Pop-Tarts and Trident gum for nanoparticles, and launched a crowdfunding campaign on Indiegogo to raise money to do so. To date the organization has raised $2,115 towards its $9,000 goal with 33 more days left in the campaign.In December the EPA and the US Consumer Product Safety Commission announced that they are collaborating in a worldwide research effort to assess any potential impacts of nanomaterials on people's health and the environment.