# Nanotechnology in Food Industry- Perspectives

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**Abstract:**

Nanotechnology, as defined by size (1 to 100 nm), is inherently vast and encompasses a wide range of scientific disciplines, including surface science, organic chemistry, molecular biology, semiconductor physics, energy storage, engineering, molecular engineering and micro-fabrication. Numerous novel materials and devices with a wide range of applications, including nanomedicine, nanoelectronics, biomaterials, energy production, etc., may be produced using nanotechnology. The field of nonmaterials encompasses subfields that create or research materials with particular features brought on by their nanoscale size. There are numerous advantages of nanotechnology for the food business and more are anticipated over time. Every component of the food system, from food production to processing, packaging and transportation to shelf life and nutritional bioavailability, is impacted by this new, quickly evolving technology. Nonmaterials' antibacterial qualities allow them to keep food fresh during storage and transportation. Nonmaterials are employed as sensors to control the food environment and find contamination. They are able to identify microorganisms and other food pollutants. As a result, they are utilised as sensors at factories that produce food and packaging. They may keep an eye on the state of the food as it is being moved and stored. Nanotechnology advancements can help protect public health from diseases in food, water, and the environment while also preserving food security. The use of nanomaterials in food packaging offers a number of advantages, including stronger mechanical barriers, the ability to detect microbial contamination, and maybe improved nutrient bioavailability.

**Keywords**- Nanotechnology, Nonmaterial, Food industry.