

## APPROPRIATION OF NANOPARTICLE AS FOOD ADDITIVE: A POSSIBILITY

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### ABSTRACT

**Aim:** To review the use of eco-friendly synthesis of Nanoparticle as a food additive and their health implications.

**Study Design:** A review

**Duration of Study:** The review was carried out in the duration of 3 weeks lockdown, reviewing all literature and data.

**Methodology:** Information was gathered from journals, literatures or publications which were done holistically. Useful information was gathered over the period of review. The introduction focused on the success of nanotechnology in various aspect of life. Food, additives is a new area of interest because food industries have constantly been in quest to discover the best possible way to preserve food, increase or improve shelf-life, increase or improve nutritional value(s) while saving cost at the same time without adverse effect to health.

**RESULTS:** This review has explored the various ways in which Nanoparticle could be of immense use in food production, processing and storage. For instance nanostructured materials have been used in food industries to improve quality of food; enhance solubility, improve bioavailability and protective bioactive components for packaging and storage. Examples include nanoemulsions, nanosensors, nanocoating and nanocomposites which have been used to improve additives during processing, to monitor food pathogens and for food packaging respectively. In health, the adverse effect of nanostructured materials has not been well documented, however, it has been used to improve drug delivery and to treat certain diseases; cancer, enhance food digestion and food uptake. This review has provided vast knowledge that can be of immense advantages in food production.

**CONCLUSION:** Nanotechnology as come with many advantages and has given scientist the room to explore its functions/uses in different aspect of life. In years to come, the world would be a better place with advancement in technology and nanotechnology would be at the hub of that advancement.

**Keywords:** Eco-friendly, Nanotechnology, Nanobiotechnology, Additives, Nanoparticle; Food Additives.