

## ENVIRONMENTAL IMPACT OF NANOPARTICLES: EFFECT ON SOIL AND WATER MICROORGANISMS\*

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### ABSTRACT

Nanotechnology is one of the most researched scientific fields, with over 1300 commercial products that have various applications in medical fields, fuel additives, textile and cosmetics industry, plastics and others. While being very useful, there is still insufficient information about how engineered nanoparticles can affect the environment. Since these advanced materials are much smaller than traditional ones, they possess unique chemical properties, high reactivity, and low solubility, the impact towards soil and water ecosystems is even more difficult to assess. Standardized test protocols for soluble chemicals may not be suitable for testing nanomaterials, thus scientists are working on developing new procedures to evaluate the impact of nanoparticles on water and soil ecosystems, especially key organisms.

**Keywords:** nanotechnology, nanoparticles, toxicity, biodegradability

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