

TITANIUM DIOXIDE (IV) NANOPARTICLES. PRODUCTION, PROPERTIES AND APPLICATION

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Summary

Titanium dioxide has been used in the industry for a long time. In the form of nanoparticles this compound was found to exhibit a completely new and unique properties, which significantly extended the range of its possible applications. Apart from typical industrial applications (architecture, textiles, automotive), titanium dioxide nanoparticles are used in medicine, pharmacy, dentistry and as food ingredients. Due to its broad usage and thus stable presence in the environment, a question arise if titanium dioxide nanoparticles are safe for living organisms? In recent years several experiments were conducted to find whether titanium dioxide nanoparticles may exert any influence on plants. The results obtained are rather contradictory as they indicate occurrence of both toxic and promoting effects. Thus, a large-scale experiments are needed to resolve the question whether presence of the nanoparticles in the environment is safe or not for plants, animals and humans.