

2. Practical applications of nanotechnology: Solutions

We consume or use nanotechnology based products in our daily lives. Titanium dioxide based nanomaterials, for example, are heavily used in products such as sun screen lotions, toothpaste and cosmetics. You might be surprised to know that titanium dioxide nanoparticles are also used to give the white colour to the frosting on some doughnuts.

Silicon dioxide nanoparticles are used as an anti-caking agent in some food products containing flour, to prevent lumps from being formed in the flour. They are often used, for example, in burger buns.

Another class of nanoparticles, silver nanoparticles, have anti-microbial properties. These nanoparticles are used in sports socks and plasters to prevent bacterial growth.

1) Based on the above discussion, what kind of nanoparticles do you think can be used for water filtration? Why?

Silver nanoparticles are widely used for water filtration because of their anti-microbial properties.

2) What are the possible disadvantages of using nanoparticles in our day-to-day products?

We are still not sure about the permissible limits of nanomaterials in the human body. Research into this issue is ongoing.

3) Find out what kind of nanomaterials are used to give strength to tennis rackets.

Carbon based nanomaterials such as carbon nanotubes are used to strengthen tennis rackets.