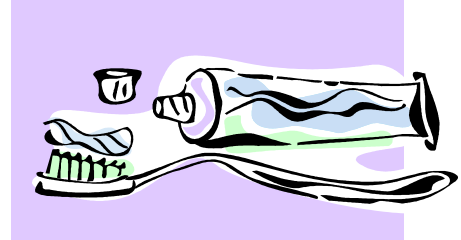


RATES

APPLICATIONS

TOXIC TOOTHPASTE

Are your teeth nice and clean? This may be due to effective teeth brushing. Historically, toothpaste used to be made of salt, crushed brick or burnt bread. Now, many commercial toothpastes contain anti-bacterial chemicals – Triclosan and Fluoride. What are these?



TRICLOSAN

This anti-bacterial chemical in toothpaste, soap and deodorant is poisonous to bacteria which might otherwise give us bad breath, tooth decay and body odour. Is that good?

However, triclosan is also poisonous to freshwater and marine green algae called diatoms. These microscopic organisms photosynthesize to produce much of the oxygen we have in our planet's atmosphere. Without diatoms, we would probably die from suffocation. Diatoms are also the plant-like organisms on which most aquatic creatures such as fish and whales survive. In addition, Triclosan is thought to interfere with the hormone production of bullfrogs and possibly dolphins.

Q1. How much Triclosan do you use in a year?

Assume the following:

- You brush your teeth with toothpaste once each day.
- You squeeze out 1.5 millilitres of toothpaste each time you brush.
- Your toothpaste contains 0.3% triclosan.

How much Triclosan do you use in a year?

FLUORIDE

Sodium monofluorophosphate, the fluoride salt in toothpaste, is also anti-microbial.

Q2. If there are 1500 ppm (parts per million) of fluoride in toothpaste, how much Fluoride do you use in a year?

ANSWERS

Q1. 1.64 mL

Q2. 0.82 ppm