

## Toxicology of Water

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Water is an importance need for life on earth. The formation and structure of cell composition and transport of nutrients into the cells as well as body metabolism all depends on water. The impurity present in water disturbs the tendency of the mechanism and result in long/short-term diseases. The regular research efforts result in finding some processes/technologies to remove the contaminations from water.

This research includes concepts and potentialities of the technologies in a comprehensible form. It also includes some important meaningful hybrid technologies and promising awaited technologies in coming years. The well-known fact about fresh water is it is an important necessity for our health. Due to the advancement of technology and industrial growth, fresh water resources all over the world are endangered. Pollution of water [1] occurs when unwanted materials enter in to water, changes the quality of water and it is harmful to environment and human health. As reported by world health organization (WHO) 80% of diseases occur due to water \ water borne disease. In various countries drinking water does not meet WHO standards. The One-sixth of the world population suffers from the freshwater unreachable situation and approximately 3.1% deaths occur due to the unhygienic and poor quality of water.

By the releasing of domestic and industrial pollutant wastes, discharge from water tanks, marine dumping, radioactive waste and atmospheric deposition etc. these are major causes of water pollution. Various heavy metals wastes and industrial waste discharge in water body can also accumulate in lakes and river, proving harmful to humans and animals. Chemical in industrial waste are the major reason of immune suppression, [2] reproductive failure and acute poisoning. Some infected diseases, like cholera, typhoid fever and other diseases like gastroenteritis, diarrhea, vomiting, skin and kidney problem are spreading through polluted water.

### Source

Sewer water, Industrial waste, rapid growth in population, Agricultural fields chemical (pesticides), Polyethylene and plastic bags, Poor management system. There are 75 to 80% water pollution is caused by the domestic sewage

**Daldip Singh\***

Department of Biotechnology,  
Chandigarh University, Mohali,  
Punjab, India

**\*Corresponding author:** Daldip Singh

✉ daldip.singh@hotmail.com

Department of Biotechnology,  
Chandigarh University, Mohali,  
Punjab, India

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discharges and these waste mostly comes from the industries like, sugar, textile, electroplating, pesticides, pulp and paper are polluting the water.

The types and concentrations of these impurity depend on the nature of the geological materials through which the groundwater flows and quality of the recharge water. Some of the impurities can be easily identified by assessing color, odor, turbidity and the taste of the water. However, most of the impurities cannot be easily detected and require testing to reveal whether water is contaminated or not.

Biological impurity [3] of water is caused by the existence of living organisms, such as algae, bacteria, protozoan or viruses. Each microorganism can cause different problems in water. There are various types of impurities such as organic, inorganic, biological, and radiological. Organic contamination can be measured by chemical parameter of water. Impurities through organic materials can cause serious health problems like cancers, hormonal disruptions, and nervous system. Sources of radioactive contamination material could be soils or rocks the water moves through or some industrial waste.

### References

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