

Answer on Question #45589 – Chemistry – Organic Chemistry

Question:

My research question is "Today the quality of water in rivers under numerous environmental circumstances affect the society as it is very crucial to know how does it affect living organisms and human health and how can it be prevented from impacting the society".

Answer:

Water is a necessity of life. People and animals need clean drinking water because it has a significant role in biochemical processes in their organisms. Farmers need water to irrigate crops. People enjoy using lakes and rivers for recreation. Unfortunately, this precious resource is easily contaminated by agricultural runoff, mining activities, waste treatment plants and improper disposal of industrial waste. Most people can fight off the microbial contaminations; however, people with compromised immune systems can get dangerously ill. Contaminants like solvents, pesticides, heavy metals and household chemicals are more sinister. This type of pollution can cause long-term health problems for people. Wildlife can also die from exposure.

Water pollution affects people because when people drink the polluted water they get sick and get different types of diseases and people also use the polluted water to clean their dishes, themselves and their clothes and this can also cause diseases.

Water pollution effects the ecosystem in many ways. One way is that it kills many aquatic animals and plants, it has almost made some species endangered. Another way is that this polluted water is drunk by many terrestrial animals, and many of them die.

It also affects the balance of the ecosystem. Sometimes the pollution causes the wrong things to grow more than normal and upsets the natural balance. For instance, phosphates can be used to help boost cleaning. But they can make their way into the ocean. Certain algae grow even faster from the phosphates. Then the algae kills or competes with other organisms, and these may be organisms that coral reefs or fish need to survive.

Decisions on the type and degree of treatment and control of wastes, and the disposal and use of adequately treated waste water, must be based considering all the technical factors of each drainage basin, in order to prevent any further contamination or harm to the environment.

Prevention of water pollution.

- Never throw rubbish away anyhow. Always look for the correct waste bin. If there is none around, please take it home and put it in your trash can. This includes places like the beach, riverside and water bodies.
- Use water wisely. Do not keep the tap running when not in use. Also, you can reduce the amount of water you use in washing and bathing. If we all do this, we can significantly prevent water shortages and reduce the amount of dirty water that needs treatment
- Do not throw chemicals, oils, paints and medicines down the sink drain, or the toilet. In many cities, your local environment office can help with the disposal of medicines and chemicals. Check with your local authorities if there is a chemical disposal plan for local residents.
- Buy more environmentally safe cleaning liquids for use at home and other public places. They are less dangerous to the environment.
- If you use chemicals and pesticides for your gardens and farms, be mindful not to overuse pesticides and fertilizers. This will reduce runoffs of the chemical into nearby water sources. Start looking at options of composting and using organic manure instead.