

Green Synthesis, Green Chemistry and Environmental Sustainability

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Abstract

Green Chemistry is helpful to eliminate the use of dangerous substances in a chemical process or the production of the poisonous and harmful products. These are reagents, by products etc. It only makes use of the raw material and natural sources of energy for the manufacturing procedures.

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Introduction

Green chemistry, also known as sustainable chemistry started in the early 90's, is predominantly gained importance in the world of chemistry. This involves the development of the procedures and technologies that are less harmful and output in the maximum chemical reactions that do not generate any waste or less waste that the general chemical reactions fails to do. Green chemistry does manage to do the chemical processes that reduce the negative effects on humans, animals and environment as whole. By reducing the use of poisonous or harmful compounds in a chemical process there are higher chances to make sure that the overall environment and the mankind along with the animals are protected from the adverse effects.

The chemistry science is proud to expand a kind of chemistry that is less harmful to the human health. And this we call as Green chemistry, a revolution in the history of chemistry. This chemistry is also called as friendly chemistry, clean chemistry etc. Sustainable chemistry is a branch of chemistry that helps generating the products and processes that eliminates the use of harmful or environmentally non-friendly chemicals in the chemical reactions.

Green chemistry focusses on the overall impact of chemistry to prevent pollution in the environment. In paints these are mostly used. Traditional solvents are toxic in nature and does harm to the environment but the green solvents are less toxic to health and

the environment. In this chemistry all the solvents are taken from the renewable resources and biodegradable resources which means they are naturally occurring products. It is also harmful to make solvents using biodegradable procedures. If the solvent is being used in a situation where solution is feasible, then the environmental damage associated with it should be taken into consideration.

Once the product is used then there are chances that the solvent be released to the environment, and the environmental impact caused due to the solvent is more powerful than the energy used to make the solvent. In such cases, chemists make use of water as a solvent.

Environmental Sustainability means the nature of preserving the natural resources to protect the environment, human beings and also the animals from harmful chemical releases. Because of these chemical emissions into the environment a lot of pollution and harm is being done to the nature.

Green chemistry is such a useful discovery to the environment, human beings and also other living beings on the mother earth as it reduces or eliminates the harmful or hazardous emissions into the environment which may have adverse effects on the nature. Thus, green chemistry is an innovation in the fields of chemical sciences. Hence, green chemistry is widely known as the greatest advancement in the branch of chemistry.