

The Impact Of Polystyrene Microplastic On Living Organisms: Environmental And Ecological Concerns [†]

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Abstract: Polystyrene microplastics are small pieces of polystyrene, a synthetic polymer frequently used to make different plastic items. These tiny plastics can interact quickly with both organic and inorganic pollutants in the environment. By comprehensively examining research articles, reviews, and relevant publications, this paper gathers information on how polystyrene microplastics are distributed across various ecosystems, such as the atmosphere, soil, and water bodies. A comprehensive understanding of the biological implications of polystyrene microplastic, with the help of data from studies conducted in both *vitro* and *vivo*, has also been added. The review explores advancements in various instrumental techniques that help in evaluating the tiny plastic called polystyrene microplastic. Improving waste management practices, thermolysis of polystyrene, and strict restrictions on plastic use are the suggested solutions for reducing the impacts of polystyrene microplastic. Through the thorough studies from 2019, it is noted that further study is required on the chronic effects of polystyrene microplastic in humans and also a way to reduce the toxic effects of microplastic in living organisms.

Keywords: polystyrene; microplastics; *vivo*; *vitro*; pollutants.

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Founding

None.

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Conflicts of Interest

The authors declare no conflict of interest.