Tackling the growing issue of Microplastic Pollution: a global scientific effort

Despite growing public and scientific attention, the true role of microplastics to the environment and human health remains unclear. Earlier in 2019 the World Health Organization (WHO) issued a report calling for more scientific research into microplastics, which will be the first step in addressing the complex issue.

Standardization in microplastics testing will ease the way for concrete regulatory actions in the future. An awareness builds from consumers, organizations and scientists all over the world, so does the pressure to act now.

“The lack of standard methods for sampling and analyzing microplastics in the environment means that comparisons across studies are difficult. To better assess human health risks and inform management actions, a number of research organizations are working together to develop a robust global framework for microplastics research and reporting.”


What are microplastics?

Generally, microplastics can be classified into two key groups: primary microplastics and secondary microplastics. Primary microplastics are small plastic materials that are manufactured to be small, such as microbeads, which were historically used in personal care products. Others like Microfibers, the shedded fibers from clothing or carpets, are also considered primary microplastics. Secondary microplastics are plastic materials that have been broken down into microplastics through processes related to plastic pollution, such as photo-degradation or chemical degradation.

Microplastics pollution is a global problem with widespread negative implications for human health and the environment.

What are the risks?

Potential risks of microplastics:

- There is a need for a better scientific understanding of the harmful effects of microplastics on human health and the environment.
- There is insufficient scientific information to draw firm conclusions about the impact of microplastics on human health and the environment.
- There is a call for further assessment of the impact of microplastics on human health and the environment.
- There is a need for a better scientific understanding of the harmful effects of microplastics on human health and the environment.

How can we combat microplastics?

- A WHO report highlights the need for a global framework for microplastics research and reporting.
- There is a need for a better scientific understanding of the harmful effects of microplastics on human health and the environment.

The US federal government passed the Microbead-Free Waters Act of 2015, which restricts the importation of microbeads. In 2014, Illinois was the first state to ban the sale of products containing microbeads. Subsequently, other states and countries have banned or will soon ban the use of microbeads.

The EU has also introduced legislation on microplastics, and set a non-binding target to ban the sale of products containing microbeads by 2020.

China also took significant steps to combatting the global issue of plastic pollution and is at the forefront of research in this area.

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What is being done?

- Research and development into new solutions for microplastics testing have been carried out by companies such as Agilent.
- Agilent’s innovative approach to developing sensitive mass spectrometry can provide information about the concentration of microplastics, whereas infrared spectroscopy can provide imaging, Agilent has also developed highly sensitive imaging, Agilent has also developed highly sensitive imaging.
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In 2016, the European Union passed the Microplastics Pesticide Directive, which aims to tackle the issue of marine plastic littering.

In 2018, the G7 summit in France put forward a call for stronger international action to combat microplastics in the ocean.

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