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Composition, Applications and Environmental Impacts of Addition Polymers and Plastics

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Short Communication

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DESCRIPTION

Addition polymers, also known as plastics, are one of the most widely used materials in modern society. They are versatile, durable, and can be molded into any shape or form. Addition polymers are made by combining monomer molecules through a process called polymerization. This article will discuss the composition, use, and effects of addition polymers or plastics.

Composition of addition polymers

Addition polymers are made up of monomer molecules that are joined together through a process called addition polymerization. During this process, the double bond in the monomer molecule is broken, and the resulting free radicals react with other monomers to form a long chain of polymer molecules. The final product is a solid material that is resistant to heat, water, and chemicals. There are several types of addition polymers, each with its own unique composition. Some of the most common types of addition polymers include polyethylene, polypropylene, polystyrene, and PVC [1-5].

Polyethylene is a type of addition polymer that is commonly used in the production of plastic bags, bottles, and containers. It is a lightweight material that is resistant to moisture, chemicals, and UV radiation. It is also recyclable and can be used to create a wide variety of products.

Polypropylene is another type of addition polymer that is used in the production of a wide variety of products, including packaging materials, automotive parts, and textiles. It is a strong, lightweight material that is resistant to moisture, chemicals and heat [6].

Polystyrene is a type of addition polymer that is commonly used in the production of disposable cups, plates, and cutlery. It is a lightweight material that is easy to mold and shape. It is also a good insulator and is often used in the production of packaging materials. PVC, or polyvinyl chloride, is a type of addition polymer that is commonly used in the production of pipes, window frames, and flooring. It is a strong, durable material that is resistant to moisture, chemicals and heat [7-8].

Use of addition polymers

Addition polymers are used in a wide variety of applications, including packaging materials, automotive parts, construction materials, and textiles. They are also used in the production of consumer goods, such as toys, electronics, and appliances. One of the primary advantages of addition polymers is their versatility. They can be molded into any shape or form, making them ideal for a wide variety of applications. They are also lightweight, which makes them easy to transport and handle. Addition polymers are also durable and resistant to heat, water, and chemicals. This makes them ideal for use in harsh environments, such as construction sites, factories, and chemical plants [9,10].

Effects of addition polymers

While addition polymers have many advantages, they also have some negative effects on the environment. One of the primary concerns is the amount of waste that is generated from the production and use of plastics. Plastic waste is a major environmental issue, as it can take hundreds of years to decompose in landfills. This can lead to pollution of the soil and water, as well as harm to wildlife that may ingest or become entangled in plastic waste. The production of plastics requires a significant amount of energy and resources. The extraction of raw materials and the manufacturing process both contribute to greenhouse gas emissions, which can contribute to climate change.

CONCLUSION

Addition polymers, or plastics, are a versatile and durable material that is widely used in modern society. They are used in a wide variety of applications, from packaging materials to construction materials. However, the production and use of plastics also have negative effects on the environment, including the generation of waste and greenhouse gas emissions. There has been a growing movement towards the use of biodegradable and compostable plastics. These materials are designed to break down more quickly in the environment and reduce the amount of waste that is generated from the production and use of plastics.

REFERENCES

1. Yager DR, et al. The proteolytic environment of chronic wounds. Wound Rep Reg. 1999; 7:433-441.
2. Medina A, et al. Pathophysiology of chronic nonhealing wounds. J Burn Care Rehabil. 2005; 26:306-319.
3. Di Matteo V, et al. Acute administration of amitriptyline and mianserin increases dopamine release in the rat nucleus accumbens: Possible involvement of serotonin2C receptors. Psychopharmacol (Berl). 2000; 150:45-51.
4. Di Matteo V, et al. Biochemical and electrophysiological evidence that RO 60-0175 inhibits mesolimbic dopaminergic function through serotonin (2C) receptors. Brain Res.2000; 865:85-90.
5. Abdul Hafeez, et al. A review of COVID-19 (Coronavirus Disease-2019) diagnosis, treatments and prevention.
6. Flores-Romero JD, et al. Multigram scale synthesis of a new antibiotic equally effective and less toxic than amphotericin b. Org. Process Res. 2016;20:1529–1532.

7. Antillón, et al. An amphotericin b derivative equally potent to amphotericin b and with increased safety. PloS One. 11: e0162171.
8. Ivan Ortega-Blake, et al. Preclinical evaluation of amphotericin A21: a novel antifungal. Basic Clin Pharmacol Toxicol. 2021; 00:1-10.
9. Walfred Sánchez-Peña, et al. Toxicological evaluation of L-histidine methyl ester of Amphotericin B in vivo. The FASEB J. 2017; 31:1002.7.
10. Paola Jaimes, et al. Evaluation of the reproductive toxicity of L-histidine methyl ester hydrochloride of amphotericin-B in vivo. The FASEB J. 2019; 33:515.6.