
High-school students' knowledge about and attitudes towards the use of conventional plastics and bioplastics

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Abstract

Present plastic production is heavily dependent on fossil fuels, and most of it is not biodegradable in the open environment. Alternative plastic materials such as bioplastics are being developed and marketed to address these issues. By definition, bioplastics can be either bio-based and/or biodegradable. The global bioplastic production has grown continuously over the last years. However, bioplastics still represent a very small market share. The aim of this research was to assess current public knowledge and perceptions regarding bioplastics. First and third year high school students from 4 high schools (N = 310; age 15 - 19 years) were invited to participate in the study. Results were gathered through an online survey. Results show that high school students' knowledge of bioplastics is low (42.1 %), but perception, particularly of biodegradable plastics, is positive. Biodegradable plastics were perceived as better for the environment than conventional plastics. Students are aware that single-use plastic is less environmentally friendly than durable plastic. Most of the students did not know how to dispose of biodegradable plastic waste. This survey clearly shows that more research is needed to demonstrate the hazards of bioplastic, label the plastic products appropriately and demonstrate ways to manage the waste. Namely, the public should/must be informed about the differences between biodegradable materials and biobased materials, and about the conditions under which certain plastic is biodegraded.

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