

Thirsty for Change: Examining the Impact of Reusable Water Bottles on Sustainability and Society

The first inventors of plastic were John Wesley Hyatt and his brother, Isaiah Hyatt. They invented celluloid, the world's first plastic made of natural materials. However, in 1907, Leo Baekeland invented Bakelite, the world's first fully synthetic plastic ("Bakelite"). Everyone was optimistic with almost no worries about plastic until the '60s and '70s when concerns started to arise, signifying the beginning of the end. Since then, we have turned to alternative options, such as metal, glass, and bamboo. However, although we have started to concern ourselves with *saving the environment* by avoiding disposable plastic products, ask yourself, are you? The rise of reusable metal water bottles is destroying the environment, all the same.

The reusable water bottle industry makes you buy more water bottles by appealing to your taste in color. Think about it; there is always a new colored water bottle for you to get your hands on. Maybe it was a Hydro Flask in foggy morning mist, or a sunset-colored Owala, or the infamous pink Stanley. These companies make water bottles in fun colors to appeal to the public for purchase. A water bottle is a water bottle at the end of the day, but these companies need you to keep purchasing their products. We enjoy when a product fits our taste in color and many companies come out with fun-colored water bottles or *collabs* with your favorite celebrity meant to distinguish themselves from their competition, when in actuality they all do almost the same thing with varying colors. People love colors, especially colors that we feel a connection to. So maybe the next time you buy a water bottle, think about if you need one, or if it's that pale, lilac color influencing you.

The water bottle industry is always coming up with new water bottles *advertising* a

higher efficacy to make you purchase more. In 2019, it was the Yeti, then the Hydro flask, then the Stanley, then the Owala. All of these water bottles serve the same purpose with little tweaks here and there. An informal study was completed to show the difference in ice loss over 24 hours. The insulated water bottles lost between 36 and 59 percent of ice over the 24 hours (“Which Water Bottle”). In the grand scheme of things, how important is this? If the water bottle serves its purpose of being a vessel for water, do you need another that *allegedly* holds ice longer? A reusable water bottle, at its core, is meant to deliver multiple uses, and you shouldn't need more than one. I say this, however, with the admission that I have fallen victim to these tactics more than once. Remember that all water bottles serve the same purpose, and that, although there may be something about a specific water bottle is appealing, there is no significant difference in efficacy.

Purchasing many reusable water bottles defeats their purpose. In the mess that capitalism is, it is often lost on us the true purpose of an item. A reusable water bottle is meant to replace the plastic water bottle and keep water bottles out of landfills. When you have more than a few reusable water bottles, it defeats the purpose because, at some point, the reusable water bottle will get thrown out, and it will not biodegrade because the material keeps your water bottle cold and sturdy. Also, steel lasts *forever* (“How Green”). Given that, is it much better than the single-use plastic water bottles? It gets worse, The paint on water bottles chips off and ends up back in our water. An estimated 58 percent of microplastics in oceans and waterways are particles of paint (Hailstone). Pieces of paint, from your metal water bottles, end up in waterways, contaminating the water we drink with microplastics. Also, the production of steel is highly taxing on the environment. *The New York Times* reports: “Producing that 300-gram stainless steel bottle requires seven times as much fossil fuel, releases 14 times more greenhouse

gasses, demands the extraction of hundreds of times more metal resources, and causes hundreds of times more toxic risk to people and ecosystems than making a 32-gram plastic bottle” (“How Green”). We often scapegoat plastic single-use water bottles for everything. However, metal water bottles are clearly no different and, in some respects, arguably worse. In reality, purchasing many reusable water bottles and not using them full-time often defeats the purpose of the reusable water bottle.

Reusable water bottles often defeat their purpose of reusability. The water bottle industry appeals to your taste in color, your want for material goods, and your perception of efficacy. Although it’s hard to break free from this vicious water bottle cycle, if we want to help with the microplastic problem and plastic in our oceans, we need to. Plastic water bottles contribute to the microplastic problem, but so do having lots of fun, cute, metal water bottles. If we all have less metal water bottles to refill, we can all do our part in helping the planet.

Works Cited

“Bakelite® First Synthetic Plastic - National Historic Chemical Landmark.” *American Chemical Society*, acs.org/education/whatischemistry/landmarks/bakelite.html. Accessed 3 May 2024.

Hailstone, Jamie. “Paint Is the Largest Source of Microplastics in the Ocean, Study Finds.” *Forbes*, Forbes Magazine, 10 Feb. 2022, www.forbes.com/sites/jamiehailstone/2022/02/09/paint-is-the-largest-source-of-microplastics-in-the-ocean-study-finds/?sh=7033caa71dd8.

“How Green Is My Bottle?” *The New York Times*, The New York Times, 19 Apr. 2009, archive.nytimes.com/www.nytimes.com/interactive/2009/04/19/opinion/20090419bottle.html?emc=th&th.

“Which Water Bottle Has the Best Insulation?.” *BOTTLEPRO*, 2 Jan. 2023, www.bottlepro.net/hydration-blog/which-water-bottle-has-the-best-insulation-updated-for-2023.