



# Single-use Plastics



Single-use plastics are often misunderstood and many of these items can be recycled or reused. These important products provide access to clean drinking water, preserve food, advance medical care and offer many more significant benefits to society.

## Do More With Less

The unique properties of plastics allow us to create products the world needs using a fraction of the material required by alternatives like metal and glass. While 1 kg of glass can be turned into two glass bottles, 1 kg of PET plastic can make roughly 28 bottles.<sup>1</sup>

## Healthcare

Plastics play an integral role in healthcare. Their lightweight, flexible and durable characteristics make plastics an ideal material for medical applications like implants, IV bags, syringes, and personalized prosthetics.<sup>3,4</sup>

Plastic packaging helps to reduce the spread of infections by keeping medical supplies and medications secure and sterile. Items like gloves and masks made with plastics offer extra layers of safety to healthcare professionals and their patients.

## Reducing Food Waste

Food waste harshly impacts the environment<sup>5</sup> and because nearly 80 billion pounds of food are wasted in the U.S. each year<sup>6</sup>, it's critically important that we utilize the durable and versatile characteristics of plastics to protect food from damage and extend shelf life. Plastic packaging keeps what we eat clean and



fresh long after our groceries are brought home from the store, which helps to reduce food waste.

Using 1.5g of plastic film to wrap a cucumber can extend its shelf life from three days to 14 days.<sup>7</sup>

## Our Vision

Plastics should not end up in our environment. Our vision is to create a circular economy for plastics, where every piece of post-use plastic is recycled, reused or repurposed. We're pursuing innovative technologies and engaged in solutions that reduce plastic waste and increase recyclability. Help reduce plastic waste by recycling and finding creative ways to reuse plastic items.

<sup>1</sup> R. Accorsi, L. Versari, and R. Manzini, Glass vs. plastic: Life cycle assessment of extra-virgin olive oil bottles across global supply chains, Sustainability (Switzerland), 2015

<sup>2</sup> N. Voulvoulis, R. Kirkman, T. Giakoumis, P. Metivier, C. Kyle and V. Midgley, Examining Material Evidence. The Carbon Fingerprint, Imperial College (London), 2020

<sup>3</sup> N. Paxton, M. Allenby, P. Lewis, M. Woodruff, Biomedical Applications of Polyethylene, European Polymer Journal, 2019

<sup>4</sup> S. Kurtz, UHMWPE Biomaterials Handbook: Ultra High Molecular Weight Polyethylene in Total Joint Replacement and Medical Devices, Elsevier Academic Press, 2015

<sup>5</sup> Voulvoulis, et al., Examining Material Evidence, 2020

<sup>6</sup> RTS, Food Waste in America in 2020, 2020

<sup>7</sup> M. Dora and E. Lacovidou, 'Why Some Plastic Packaging is Necessary to Prevent Food Waste and Protect the Environment,' 2019

<sup>8</sup> S. Miller, Five Misperceptions Surrounding the Environmental Impacts of Single-Use Plastic, Environmental Science and Technology, 2020

<sup>9</sup> V. Bisinella, P. Albizzati, T. Astrup, A. Damgaard, Life Cycle Assessment of Grocery Carrier Bags, Environmental Project #1985, 2018



Plastic bottles are responsible for the least amount of greenhouse gases compared to the production of glass, steel and aluminum bottles.<sup>2</sup>

## Efficient and Recyclable

Plastic grocery bags are designed to be lightweight and sturdy without consuming many resources, resulting in a measurably lower environmental impact than bags made with other materials.<sup>8</sup> A single cotton grocery bag would have to be reused every week for 137 years to offset the environmental impact of its production.<sup>9</sup>

Plastic grocery bags and similar packaging films can often be recycled in special containers at your local grocery store. Take an extra step for sustainability and save your grocery bags to recycle during your next trip to the store.

