

Background

The composition of bales of recycled materials is constantly evolving as the mix of packaging in the market changes. It is particularly important to understand how our products are captured and recovered through the residential stream and their prevalence in bales marketed by material recovery facilities. To build on knowledge gained during prior studies, between November 2020 and February 2021, FPI participated in an audit of #3-#7 bales to obtain a current snapshot of bale composition.

The RRS-led audit was conducted at Michigan State University's Recycling Center. During the audit, RRS sorted by resin and format. To better enable comparison with previous studies, the methodology was reviewed by the Association of Plastic Recyclers (APR) and other project funders and efforts were made to align with the bale audit methodology utilized by Stina, Inc. (formerly More Recycling) to facilitate comparison with past studies. This paper summarizes findings related to PP, PS and PET cups in mixed plastics bales.

The Study

FPI's goal in participating in the study was to get a better understanding of the prevalence of plastic cups in the mixed plastics bales, as well as breakdown by plastic resin type of the cups in the bales. Note that the study focused on cups rather than other foodservice containers, since other container types are used in multiple applications and distinguishing between foodservice and non-foodservice applications (such as pre-packaged food) is not feasible in the context of a bale sort.

The bale sort included a total of nine #3-#7 (pre-picked) bales from nine North American material recovery facilities located in the Northeast, Southeast, Midwest and Western regions of the US. The sampled bales were further classified into two bale types:

- Pre-picked Rigids Plastics: With Bulky (two of the nine bales)
- Pre-Picked Rigids Plastic: No Bulky (seven of the nine bales)

The Results

Resulting data showed that cups made up a small portion of all the bales sorted, with the *Pre-picked Rigids Plastics: No Bulky* bales averaging just over 6 percent of the total bale weight. The *Pre-picked Rigids Plastics: With Bulky* contained a lower proportion of cups.

The cups were further sorted by resin: polystyrene (PS), polypropylene (PP), and polyethylene terephthalate (PET). The majority (over 60%) of plastic cups found in all #3-7 bales were made of PP. The balance of cups in the bales split between PS and PET.

In comparison to the 2015 data, overall cup prevalence in the pre-picked/no bulky (#3-7) bales was unchanged at just over 6 percent.

In the pre-picked/with bulky (#3-#7) bales, the proportions of cup resins had shifted considerably, with PP the dominant cup resin in the bale rather than PS per the 2015 results. However, due to the small number of pre-



picked/with bulky (#3-#7) bales sorted, it is unclear whether this is representative of a broader trend in that bale type.

This bale sort study shows that plastic cups are still successfully reaching plastic reclaimers, where they can be recycled into new products. By including cups and other non-bottle plastic containers in residential recycling programs, communities can provide a pathway for these cups and containers to be recycled.

Complete results from the Mixed Plastics Bale Sort Study are available to PRG members. More information on recycling of foodservice packaging may be found at <u>www.recyclefsp.org</u>.

© 2021 Foodservice Packaging Institute, Inc.