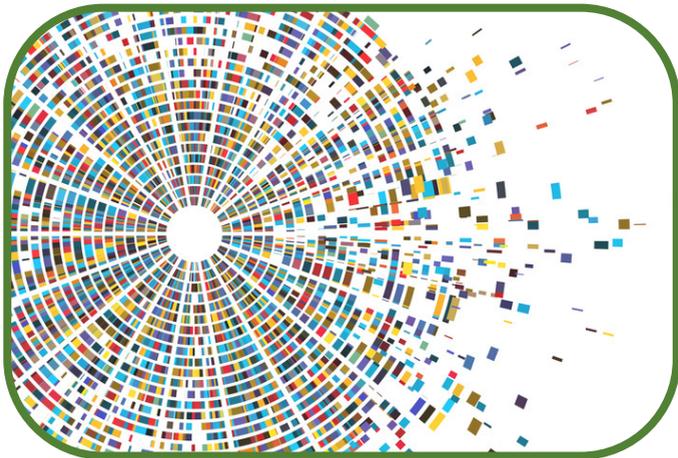




SUMMARY

Small Plastics Packaging Items – Sorting and Collection Challenges



March 2021

The full report on the issue of small items is currently available to RECOUP members only

The recyclability of small plastic items is one which often prompts questions from across the value chain and repeatedly crops up in many sector specific conversations. RECOUP will continue to highlight this topic.

RECOUP has previously tested the capture of small items of differing shapes including bottles, pots and tubs from the food and non-food sectors that are smaller than 40 - 50mm.

It is worth noting that these items collected via kerbside collections can be compacted, crushed, or broken into even smaller pieces, thereby reducing the chances of these already small items being sorted and detected.



Images from Amey in Cambridge – the fines or small items that are dropped/lost in the glass breaker

The work and research carried out highlighted that small plastic items under 40-50mm in diameter were lost typically at the sorting stage. This is the case regardless of if the Materials Recovery Facility takes in glass or not, as small items are separated through a sieving process which allows larger items to continue through the system. Although it was agreed that there appear to be more MRF's which do take in glass, than do not.

If the MRF takes in glass the small items are separated with the glass. The glass breaker in a MRF is made up of metal discs that rotate and vibrate at high-speed agitating the material, sifting and sorting ready for the next stage in the process. The discs in the glass breaker have openings with sizes which vary from 46mm – 52mm. The discs are positioned as diagonals and straights with the diagonal opening being the largest at 50mm and the straight being the smallest opening at 40mm, therefore it is easier to say items between 40-50mm could be lost. As the glass passes through it is smashed and falls between these openings.

This is where any small items 50mm or under can be lost, including:-

- toothbrushes,
- cosmetics and makeup items,
- food packaging,
- medical items,
- pill bottles,
- bottle tops and lids,
- small toys, and
- coffee discs.



Other items lost with the glass can include cigarette lighters, paper, aluminium, batteries, and food waste. This material output is known as fines. This process allows larger items such as bottles, pots and tubs, cans, card, and paper to continue through the system.

The recyclability of small items kerbside, regardless of polymer, rests on capture and ability to get through the sorting system, in order that it is NIR detected, then baled ready to be shipped to a plastics reprocessor.

Take Back Schemes

There are some schemes in place where such items can be taken to collection points. For example, some brands are offering reward schemes for customers who return their used makeup packaging to stores, and retailers are offering takeback and refill schemes on beauty products.

The recycling of small items is also undertaken by such schemes as; -

- <https://www.terracycle.com/en-GB>
- <https://www.veolia.co.uk/services/procycle>

Further Work

RECOUP continue to seek solutions to the small items issue and would welcome discussions with parts of the value chain with an interest in solving this challenge.

For further information please contact RECOUP;

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