

Views of the FCMJEG

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7. The FCMJEG's assessment of environmental plastic and OBP focuses on polyethylene terephthalate (PET) based OBP that is subsequently mechanically recycled and used in food contact applications. In the UK, PET is currently the most established polymer type to be recycled and used in (recycled) FCMs. Therefore, the information available from the literature and provided to the FCMJEG via the call for evidence was predominantly on PET based environmental plastic and OBP; very limited information was available on any other plastic materials.

8. Under the current recycled plastics legislation, mechanical recycling processes are required to ensure that any potential contamination is removed to an acceptable level, i.e. where further use of the material in food contact applications does not pose a risk to consumers. The European Food Safety Authority (EFSA, 2011) considered mechanical recycling processes for PET as efficient if the individual process can reduce an input reference contamination (3 mg/kg) of kerbside collected PET to levels that result in a worst-case dietary exposure not higher than 0.0025 µg/kg bodyweight (bw) per day. Individual recycling processes are assessed and approved for plastic materials collected from controlled environments, such as UK kerbside collection. Substantial work has been undertaken in the past to ensure that the current criteria and standards for mechanical recycling processes are being met. Therefore, recycled PET (rPET)

acquired from an approved mechanical recycling process using input plastic from established collection systems is generally considered to be without appreciable risk when used in FCMs.

9. To the FSA, FSS, and FCMJEG's knowledge, environmental plastic or OBP appears to be a relatively new input material to produce recycled FCM. Hence, the FCMJEG raised concern over potential contaminants, and questioned whether the current reference value for PET of 3 mg/kg would be applicable. The reference value of 3 mg/kg was based on substantial data from EU controlled collection systems, which did not include OBP (EC, 2004; Franz et al., 2004). There was insufficient evidence to demonstrate that environmental plastic or OBP is not contaminated with different substances as material from controlled collection systems in the UK or that current mechanical recycling processes can remove either a) higher levels of contamination or b) different substances due to environmental exposure. The FCMJEG noted that data on misuse of PET plastic materials, specifically bottles, has fed into the EU assessment and specifications for approved mechanical recycling processes. Misuse of, or chemicals stored in, plastic materials may vary in non-EU countries.

10. The FCMJEG also noted that there is currently a lack of specific data/studies on the potential presence of CMR substances in environmental plastic and OBP. In addition, information on the potential degradation of environmental plastic and OPB and the effect such degradation may have on the stability of the material itself or the uptake of contaminants is lacking. The challenges in the recycling process could therefore differ depending on the source of the input material, especially after being in the environment for prolonged periods of time.

11. As the definition of environmental plastic or OBP is not standardised, the FCMJEG was not always able to exactly establish the source/origin of the material in the reports reviewed, e.g. the country of origin, but also whether the material in question was collected from the open environment or from a more controlled environment/system within range of either a waterway or coastline.

12. The composition of both EU and UK plastic materials, including any potential plastic additives, are well studied and any potential risks or migration are well defined. If plastic material is sourced from other parts of the world, it may be challenging to ascertain if it meets EU/UK regulatory requirements, especially if it is produced for local markets. Additionally, it may not be easy to establish whether additional/unknown plastic additives have been used in its original production. Again, there has been extensive work in the EU/UK (EC, 2004; Franz et al., 2004) to ensure that any potentially harmful substances are removed

during approved mechanical recycling processes of EU sourced input material. The data presented to the FCMJEG were insufficient to demonstrate how companies mitigate potential differences in the composition between EU/UK and non-EU/UK plastics and whether these differences could change the potential uptake of contaminants from the open environment.

13. The FCMJEG acknowledges the scale of the task to provide sufficient data to assess the safety of environmental plastic and OBP. Hence, the data submitted in response to the call for evidence, including non-intentionally added substance (NIAS) testing, has been welcomed by the FCMJEG. However, the Group has not seen or received sufficient evidence that the current mechanical recycling processes are appropriate for environmental plastic and OBP, as an input material, especially with a view to reducing potential contamination.

14. Data were also lacking on whether packaging applications incorporating environmental plastic or OBP could be further recycled (depending on the material type).

15. The FCMJEG recognises the benefits of recycling environmental plastic and OBPs to reduce environmental plastic pollution and promote a circular economy. However, as food packaging only accounts for a relatively small percentage (~ 8-16%) of total plastic applications the Group considered that other, more appropriate, applications for OBP could be found ([Smithers](#); Nistico, 2020). The FCMJEG considered that the use of recovered/recycled environmental plastic and/or OBP in food contact applications over virgin or other suitable recycled plastics, i.e. recycled plastic acquired from established collection systems, is associated with much greater uncertainties and difficulties in obtaining compliance.