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European Commission public consultation on the New Circular Economy Action Plan: Comments by the Food Packaging Forum.

The Circular Economy offers an important opportunity to reduce food packaging waste, but the use of secondary raw materials in direct food contact is a major concern if chemical safety is not adequately ensured. Therefore, new approaches are needed to address human health considerations related to the presence of hazardous chemicals in food contact articles made from reused and recycled materials. Further, food packaging and other types of products designed for biodegradation must not contribute to persistent chemicals, such as per- and polyfluoroalkyl substances, being introduced into the environment.

Food packaging is of high societal value as it enables food storage and thereby contributes to the reduction of food waste. But food packaging also contributes to approximately 1/3 of European household waste. Optimization of food packaging is therefore an important area for transitioning to the circular economy because this will support the aim of „reduced waste generation", detailed in the roadmap. To achieve this, a secondary raw materials market must ensure that reused and recycled materials for food contact are safe, and this is in fact a major challenge. Here, we wish to raise awareness for this aspect.

Indeed, some food contact articles made of black plastics, sourced from the European market, have recently been found to contain brominated flame retardants (BFRs) (Turner 2018; Puype et al. 2017; Samsonek and Puype 2013). BFRs are present in Waste Electric and Electronic Equipment (WEEE), but they are not authorized for plastic food contact and due to their hazard properties should not be present in any kind of food contact article. As consequence of these findings, more controls of imports, especially for the presence of heavy metals and persistent organic pollutants, such as BFRs, should be put in place, and appropriate measures should be taken in response to detection of non-compliance (i.e. removal of these articles from the market). The hypothesis for the presence of BFRs in black plastics food contact materials is that WEEE plastics are illicitly recycled into new articles intended for food contact, likely outside of Europe (Hahaldakis et al. 2018).

Mineral oils and other types of chemicals of concern have been found in recycled paperboard for food contact use (BMELV, 2012; Vavrous et al. 2016; Vápenka et al. 2016). Contrary to plastics, there is no EU-wide, harmonized regulation for paperboard in contact with food, despite it being very widely used. Therefore, paperboard food contact regulation which also takes the presence of recycled non-food grade materials into account and details how the safety of this food contact material is ensured is urgently needed. Indeed, a report by the European Parliament in 2016 concluded that current food contact regulation does not adequately ensure the safety of European consumers.

The waste-food packaging interface is a challenge and it is currently being addressed. Indeed, chemical safety of food packaging is one of the main obstacles in transitioning to a circular economy (Geueke et al. 2018), but more efforts need to be taken to ensure it. Notably, the use of compostable single-use food packaging may lead to an increase of highly persistent per- and polyfluoroalkyl substances (PFASs) and thereby creating an unintended environmental contamination issue (Choi et al. 2019). Therefore, we urge the Commission to invest appropriate funds into research and development for tools that permit ensuring chemical safety also for food contact articles which are made from recycled materials and/or intended for biodegradation, such as (high-throughput) bioassays (Groh and Muncke 2017) or

automated chemical screening. Importantly, issues of relevance for chemical risk assessment of food contact materials need to be taken into consideration (Muncke et al. 2017), such as mixture toxicity (Kortenkamp and Faust 2018) and environmental persistence of chemical constituents (Cousins et al. 2019).

This Action Plan is an important step that will ensure adequate protection of public health, based on the precautionary principle. We thank the Commission for this opportunity to provide input.

About FPF

Food Packaging Forum (FPF) is a charitable foundation dedicated to raising awareness for the presence of hazardous chemicals in all types of food contact materials and articles, and their impact on health. We are committed to balanced and independent science communication and research in the interest of protecting the general public from avoidable, harmful chemical exposures. FPF enables a stakeholder dialogue on this issue. The foundation is based in Switzerland.

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