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TOX/2021/59

Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment

Position paper on bamboo composites in food contact materials

Introduction

1. In July and October 2021 the COT assessed the potential risks of bamboo composites on food contact materials (FCMs).
2. The Committee concluded that the migration of formaldehyde and melamine from bamboo composite cups was a potential concern to human health and it would therefore be appropriate to conduct a full risk assessment, once UK data were available.
3. As procuring the data and providing a full risk assessment will require time, the COT agreed to publish an interim statement to express the Committee's concerns and allow for risk management action, e.g. to contact manufacturers of relevant articles, if required.
4. Annex A contains the interim position paper on bamboo composites in food contact materials.

Questions for the Committee

5. Members are invited to consider the following questions/comments and to raise any other matters.

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- I. Do members have any comments on the interim position paper in Annex A?
Are there any aspects that have not been covered?
- II. Do the conclusions drawn throughout the paper accurately represent the findings of the COT review of the potential health effects of bamboo composites in food contact materials?

Secretariat

November 2021

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TOX/2021/59 Annex A

Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment

Position paper on bamboo composites in food contact materials

1. The COT reviewed the potential health risks of bamboo composites in Food Contact Materials (FCMs) due to the increased number of incidents reported of non-compliant bamboo composite items (e.g. coffee cups) being placed onto the European market (COT 2021a) .
2. Until December 2020, reports in relation to bamboo composite FCMs were predominantly related to misleading labelling on packaging and/or their advertisement, and where testing had been carried which had identified formaldehyde/melamine migration above their legal limits. Since 2021, and due to the EU's conclusion that bamboo is an unauthorised additive within plastic FCMs the FSA has predominantly received reports of non-compliance (bamboo being an unauthorised additive in plastic) on plastic-bamboo FCMs on the European market. This included the advertisement of products from UK businesses on EU facing markets. No action appeared to have been taken on that basis prior to this year.
3. In 2019, the EFSA panel on FCMs was asked by the European Commission to assess whether the authorisation of untreated wood flour and fibres (FCM no. 96) as an additive in plastic food contact materials was still in accordance with EC Regulation 1935/2004, and also to consider whether bamboo could be considered under the scope of this authorisation. EFSA concluded that wood and bamboo should be considered distinct and each material regarded on a case-by-case basis

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(EFSA, 2019). In addition, the food safety authorities of Belgium, Luxembourg and the Netherlands (Benelux) published a joint letter calling for the market withdrawal of bamboo-melamine plastics (NVWA, 2021a). In April 2021, the EC recommended that Member States should take stringent action on bamboo composite FCMs and set out a coordinated control plan. The UK FSA is aware of the stance by the EC and of the individual Member States and is considering an appropriate course of action based on scientific evidence.

4. The COT previously assessed the reports by the German Federal Institute for Risk Assessment (BfR) and the Netherlands Food and Consumer Product Safety Authority (NVWA) and noted that the BfR applied their own tolerable daily intake (TDI) of 0.6 mg/kg/day for formaldehyde whereas the NVWA and EFSA used a lower TDI of 0.15 mg/kg/day (BfR,2020; NVWA 2021b; COT 2021b). Overall, the COT concluded that the exposure assessments were conservative but not necessarily worst-case. It was agreed that although the NVWA and BfR opinions took slightly different approaches, in general the same conclusions were reached. Based on the assessment of the BfR and NVWA reports the Committee concluded that the migration of formaldehyde and melamine from bamboo composite cups was a potential concern to human health (COT 2021c).

5. Following the discussions, the COT were informed a UK study assessing the health risks associated with bamboo composites and other biobased food contact materials was currently underway. The study aims to address migration levels of formaldehyde and melamine, and also the potential presence of other chemicals, such as heavy metals and pesticide residues.

6. Based on the available evidence, the Committee concluded that it would therefore be appropriate to conduct a full risk assessment, once UK data were available.

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Abbreviations:

BfR - German Federal Institute for Risk Assessment

COT – Committee of Toxicity

EC – European Commission

EFSA – European Food Safety Authority

EU – European Union

FCM - Food Contact Material

FSA – Food Standards Agency

NVWA - Netherlands Food and Consumer Product Safety Authority

TDI – Tolerable daily intake

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References

BfR (2020) Fillable articles made from melamine formaldehyde resin, such as a coffee-to-go cups sold as 'bambooware', may leak harmful substances into hot foods. Available online: [Here](#)

Committee of Toxicity (2021a) TOX/2021/34 – The potential human health risks of bamboo bio-composites in food contact materials. Available online: [Here](#)

Committee of Toxicity (2021b) TOX/2021/54 – Bamboo composites discussion paper on the German Federal Institute for Risk Assessment (BfR) and Office for Risk assessment & research (BURO)/ Netherlands Food and Consumer Product Safety Authority (NVWA) opinions on the potential health risks of bamboo food contact materials (FCMs). Available online: [Here](#)

Committee of Toxicity (2021c) Final minutes of the meeting of the Committee on 26th October 2021. Available online: [Here](#)

European Food Safety Authority (2019) Update of the risk assessment of 'wood flour and fibres, untreated' (FCM No 96) for use in food contact materials, and criteria for future applications of materials from plant origin as additives for plastic food contact materials. Available online: [Here](#)

Netherlands Food and Consumer Product Safety Authority (2021a) Joint letter from Belgium, the Netherlands and Luxembourg on the use of bamboo or other unauthorized additives in plastic food contact materials placed in the EU market. Available online: [Here](#)

Netherlands Food and Consumer Product Safety Authority (2021b) Health Risks of Bamboo Cups. Available online: [Here](#)