

A sectoral perspective on chemicals of concern in Food Contact Materials & Articles

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Food
Packaging
Forum

12/09/2023



Key Terms

food contact article (FCA):

- yoghurt cup



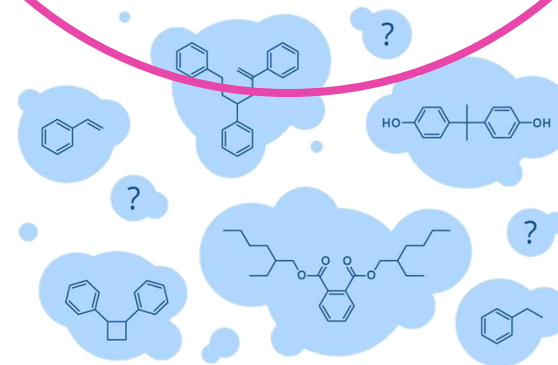
food contact materials (FCMs):

- plastic(s)
- aluminium
- coating
- adhesives
- printing inks
- ...



food contact chemicals (FCCs):

- monomers
- polymers
- oligomers
- additives
- pigments
- metals
- impurities
- reaction by-products
- degradation products
- ...





Food Packaging Matters

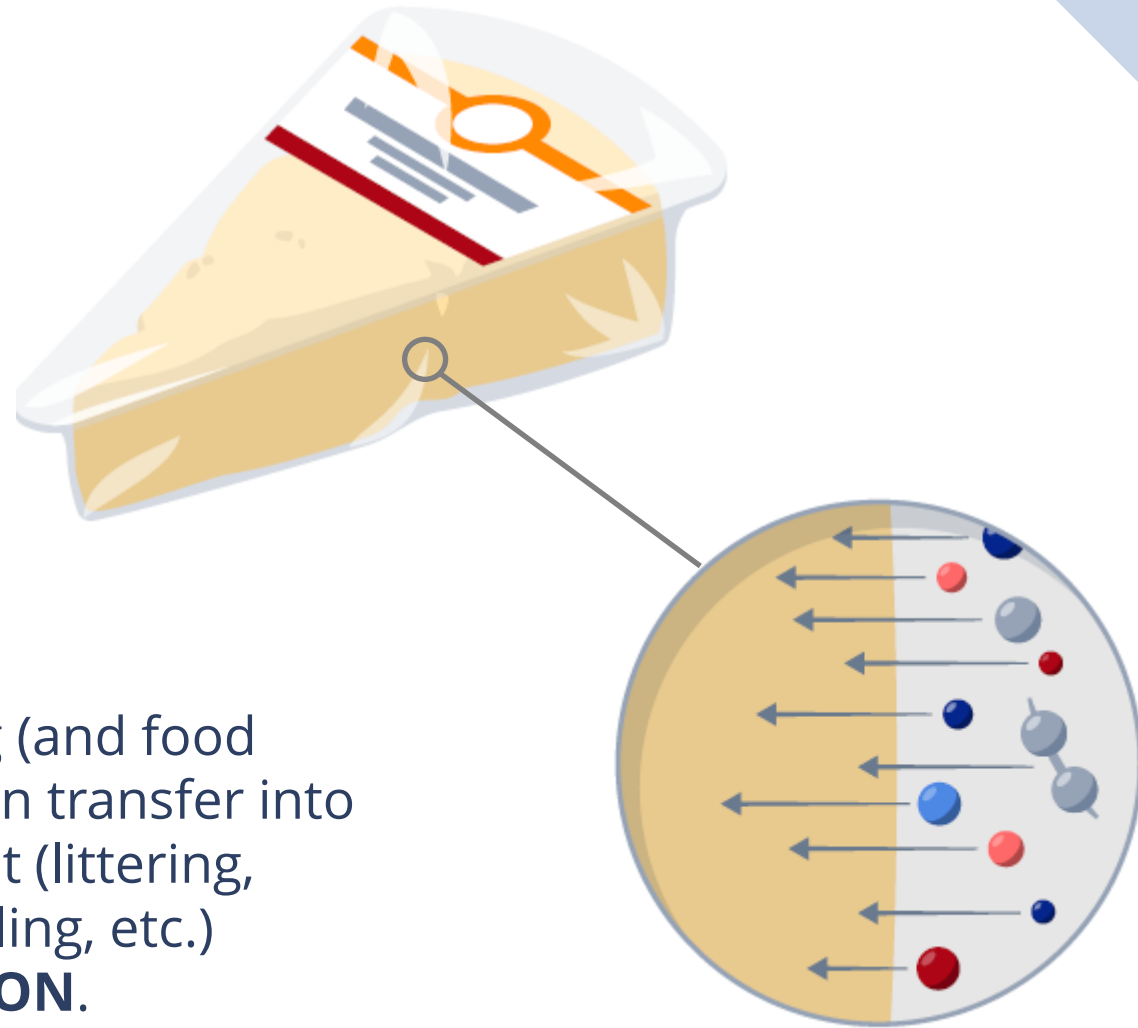
- Protects foodstuffs and prevent food waste
- Enables logistics, transport and sales of foodstuffs
- Supports effective communication and marketing
- Is critical for modern food supply and consumption





Chemical Migration

→ Chemicals in food packaging (and food processing equipment etc.) can transfer into foodstuffs and the environment (littering, landfilling, processing for recycling, etc.) This transfer is called **MIGRATION**.





What **chemicals** are in food packaging?



What are **the types** of chemicals in food contact materials?

INTENTIONALLY USED SUBSTANCES:

- Monomers
- Catalysts and production aids
- Additives
- Pigments

NON-INTENTIONALLY ADDED SUBSTANCES (NIAS):

- Reaction by-products
- Impurities
- Degradation products
- Oligomers
- Contaminants



Which FCCs are used in the manufacture of FCMs?

What do we know about their hazards?



Environment International 150 (2021) 106225

Contents lists available at [ScienceDirect](#)



Environment International

journal homepage: www.elsevier.com/locate/envint



Review article

Overview of intentionally used food contact chemicals and their hazards

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<https://www.sciencedirect.com/science/article/pii/S0160412020321802?via%3Dihub>



FCCmigex
Database on Migrating and
Extractable Food Contact Chemicals

Which FCCs have been measured in migrates/extracts of FCMs/FCAs?














CRITICAL REVIEWS IN FOOD SCIENCE AND NUTRITION
<https://doi.org/10.1080/10408398.2022.2067828>



REVIEW

OPEN ACCESS

Systematic evidence on migrating and extractable food contact chemicals: Most chemicals detected in food contact materials are not listed for use

Birgit Geuke^a , Ksenia J. Groh^b , Maricel V. Maffini^c , Olwenn V. Martin^d , Justin M. Boucher^a ,
Yu-Ting Chiang^e , Frank Gwosdz^f, Phoenix Jieh^a, Christopher D. Kassotis^e , Paulina Łańska^g, John
Peterson Myers^h , Alex Odermattⁱ , Lindsey V. Parkinson^a , Verena N. Schreierⁱ , Vanessa Srebnyj ,
Lisa Zimmermann^a , Martin Scheringer^k  and Jane Muncke^a 



- Systematic Evidence Map
- Interactive Dashboard FCCmigex
- Based on previously published protocol [Martin et al. 2018](#)

<https://www.tandfonline.com/doi/full/10.1080/10408398.2022.2067828>



The Commission will:

- extend the generic approach to risk management to ensure that consumer products – including, among other things, **food contact materials**, toys, childcare articles, cosmetics, detergents, furniture and textiles - do not contain chemicals that cause cancers, gene mutations, affect the reproductive or the endocrine system, or are persistent and bioaccumulative. In

https://environment.ec.europa.eu/strategy/chemicals-strategy_en



ELSEVIER

Contents lists available at ScienceDirect

Journal of Hazardous Materials

journal homepage: www.elsevier.com/locate/jhazmat



Research Paper

Implementing the EU Chemicals Strategy for Sustainability: The case of food contact chemicals of concern

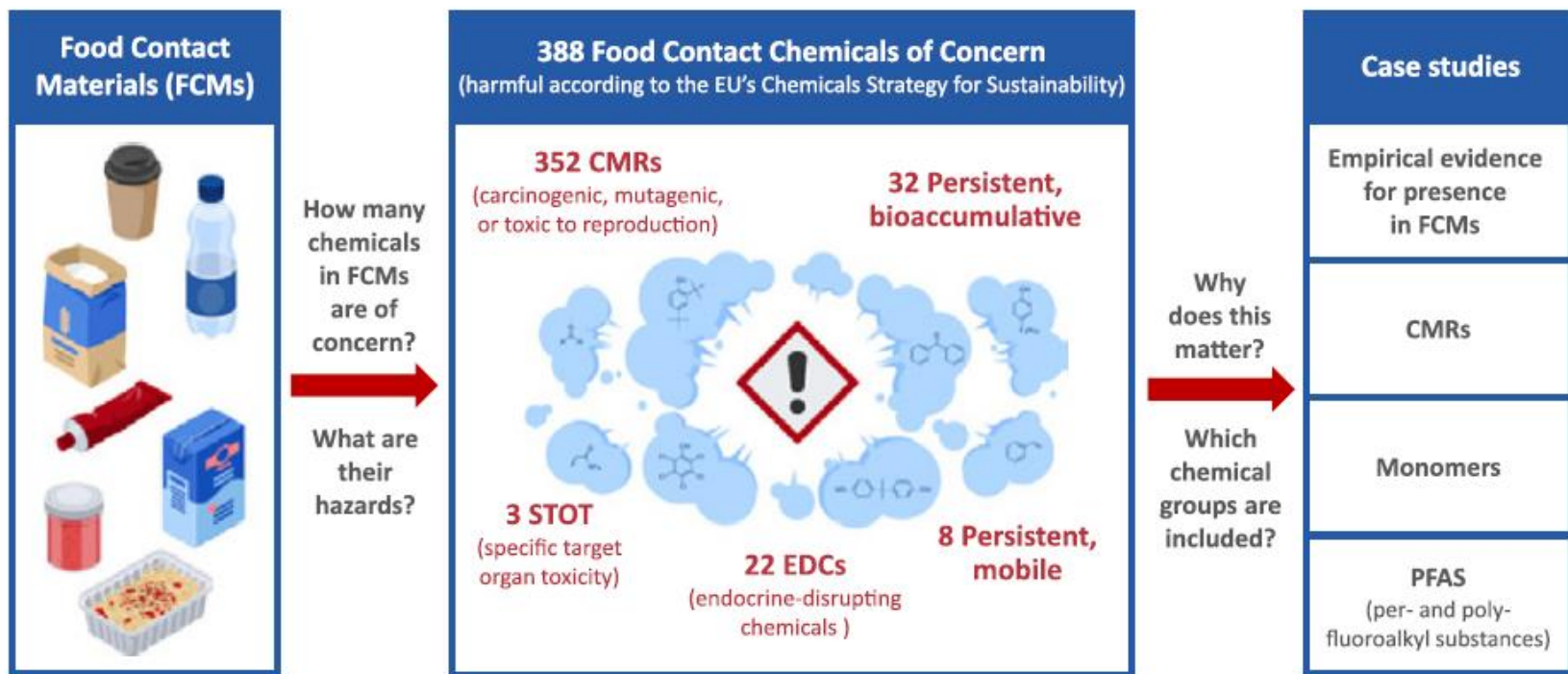
Lisa Zimmermann^{a,*}, Martin Scheringer^b, Birgit Geueke^a, Justin M. Boucher^a, Lindsey V. Parkinson^a, Ksenia J. Groh^c, Jane Muncke^a

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At least **127 food contact chemicals** that are **legally** used in food contact materials in the EU are of concern AND have empirical **evidence for migration** from food contact articles.





low levels ≠ safe levels



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"Achieving safe & sustainable food packaging:
Where are we now?"



September 28, 2023



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