



Database on Migrating and Extractable Food Contact Chemicals (FCCmigex)

Version 3 - Released March 2025

The FCCmigex database systematically maps the scientific evidence of food contact chemicals (FCCs) that have been measured in migrates and extracts of food contact materials and articles. It has been published in May 2022, including studies published between 1976 and May 2021.

- The second major update of the FCCmigex database was released on March 12, 2025, covering studies published between October 2022 and May 2024.
- Over 6,500 new studies were identified in literature searches. After duplicate removal, 4,362 titles & abstracts and 380 full texts were screened (Figure 1).
- This update includes 180 new studies, identifies 1,061 new food contact chemicals not previously identified and adds 10'682 new database entries to the FCCmigex database (Figure 2).

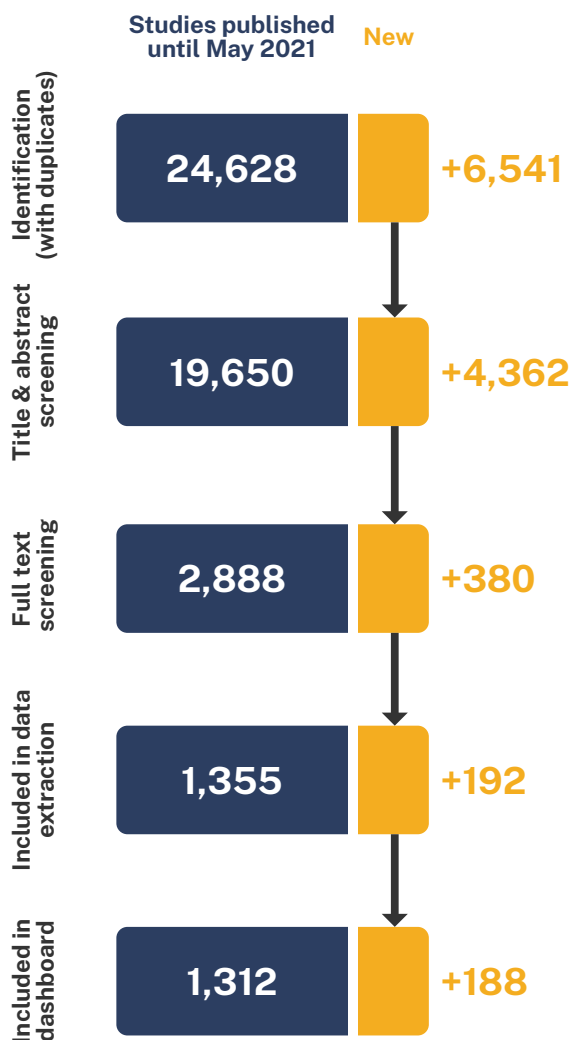


Figure 1. Flow diagram comparing this update of the FCCmigex database (yellow) with previous key numbers (dark blue) of the literature search and screening process.

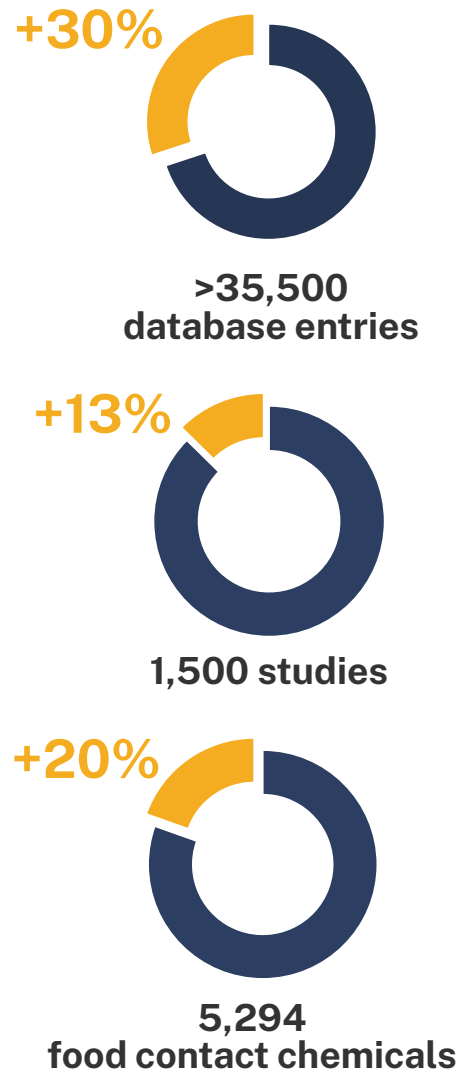


Figure 2. Newly added studies, food contact chemicals, and database entries (yellow), in comparison to the previous version of the FCCmigex database (dark blue).

Changes in the process

The previous data extraction process relied on the internal software tool SciExtract and the commercial software tagtog. As tagtog was not available anymore for this update, it was replaced by labelbox. This change did not affect the data quality but slightly modified the workflow.

Changes during data extraction

Several changes were introduced to provide additional information of interest and to facilitate the data analysis. We made sure that these changes do not interfere with existing data in the database. However, we did not go back to the previous data to systematically extract and add this information from studies that had been included before. Therefore, the analysis of specific questions may require additional data extraction steps to fill in this specific information.

These additional data were extracted and implemented in the FCCmigex dashboard:

- An optional field was added to inform about the **country or geographical region** where the FCA was bought, placed on the market or from where it was sent to the researchers for analysis. If this information was not explicitly given, the field remained empty.
- The option to label plastic and paper & board FCMs as **made of/containing recycled content or made of primary materials** was included. This information is, for example, important when extracting data from studies that compare primary (“virgin”) PET vs. recycled PET.
- The two previously used FCM categories “recPET” and “rec paper & board” were removed from the data extraction form. Existing data were edited by adding **made of/containing recycled content** to the FCM main categories “PET” and “paper & board”.
- **Regenerated cellulose** was added to the list of main FCMs.

These additional data were extracted but are not visible in the FCCmigex dashboard yet:

- An optional field for selecting an **FCC group** was introduced in the data extraction form. This allowed us to obtain information on structural properties and/or functions of the FCC as provided in the study. A set of predefined chemical groups was added to a drop-down menu, but the option to add free text was also given.
- The option to label plastic FCMs as **biobased, fossil-fuel based, and/or biodegradable** was included during data extraction.

Learn more

- [Original study](#) and [supplemental material](#)
- [FCCmigex dashboard](#)
- [List of FCCs](#)
- [Protocol](#)

[Access the FCCmigex database](#)

