

# Food Additives Intake Model (FAIM) template - Version 2.0 - October 2017

## 1. GENERAL INFORMATION

The purpose of the Food Additives Intake Model (FAIM) template is to provide a screening tool for estimating chronic dietary exposure to food additives. It allows users to estimate the mean and high level exposure to food additives for different population groups throughout several European countries. The FAIM template can be used for the estimation of chronic exposure to a new food additive or exposure resulting from new uses of an already authorised food additive. Therefore, the FAIM template can be used as a first step in the dietary exposure assessment process by applicants, risk assessors as well as risk managers.

## 2. Food consumption database

The [EFSA Comprehensive European Food Consumption Database](#) (Comprehensive Database) is used in the FAIM template to estimate dietary exposure for the six following population groups: infants (from 12 weeks of age), toddlers (also named young children), children, adolescents, adults and the elderly.

## 3. Food categories

Consumption records are codified according to the food categories as presented in Annex II, Part D, of Regulation (EC) No 1333/2008, part D. However, the level of detail available in the nomenclature of the EFSA Comprehensive Database (FoodEx1 classification system) (EFSA, 2011a) did not always match the exact description. Some of the food categories, restrictions and/or exceptions presented in the Regulation could not be identified in the FoodEx nomenclature and consequently are not represented in the FAIM template.

## 4. Occurrence levels

Users of the FAIM template are required to input the levels of occurrence for the food additive under evaluation for each food category to be considered in the assessment of exposure. The occurrence levels can be "proposed use levels", in the case of a new food additive or for an extension of use of an already authorised food additive, "reported use levels" or analytical results, in the case of an evaluation of an already authorised food additive. The regulatory maximum level exposure scenario can be assessment by inputting the Maximum Permitted Levels (MPLs).

All values have to be entered as mg/kg of food in accordance with the nomenclature defined in Commission Regulation (EU) N°1129/2011.

## 5. Exposure assessment methodology

The first version of the [FAIM template](#) was in the form of an Excel file which has been published on the EFSA website in December 2012. This template made use of summary statistics from the Comprehensive Database to estimate chronic dietary exposure in different population groups and EU countries. The method used to estimate high-level exposure from food consumption summary statistics consisted in adding the highest high level of exposure from one food category (calculated for consumers only) to the mean exposure values for the remaining categories (calculated for the total population).

In the current release of the FAIM template, dietary exposure is calculated by multiplying, for each food category, the concentration levels inputted by the user with their respective consumption

amount per kilogram of body weight for each individual in the Comprehensive Database. The exposure per food category is subsequently added to derive an individual total exposure per day. These exposure estimates are averaged over the number of survey days, resulting in an individual average exposure per day for the survey period. Dietary surveys with only one day per subject are excluded as they are considered as not adequate to assess repeated exposure. This is carried out for all individuals per survey and per population group, resulting in distributions of individual exposure per survey and population group. On the basis of these distributions, the mean and 95<sup>th</sup> percentile of exposure are calculated per survey and population group. The 95<sup>th</sup> percentile of exposure is only calculated for those population groups where the sample size was sufficiently large to allow this calculation (EFSA, 2011b).

## **6. REFERENCES**

EFSA (European Food Safety Authority), 2011a. Evaluation of the FoodEx, the food classification system applied to the development of the EFSA Comprehensive European Food Consumption Database. The EFSA Journal, 1970, 27 pp.

EFSA (European Food Safety Authority), 2011b. Use of the EFSA Comprehensive European Food Consumption Database in Exposure Assessment. The EFSA Journal, 2011, 34 pp.