



Our data and how can you
use them introducing the
Food Additive Intake Model
(FAIM) template 2.0

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Food additives re-evaluation workshop
Parma, 24th November 2017

COMPREHENSIVE CONSUMPTION DATA

The EFSA Comprehensive European food consumption database contains data:

- 24-hour recall or dietary record method
- data collected at individual level
- most recent data within each country
- random sample at national level
 - different age classes, from infants to elderly
 - special population groups



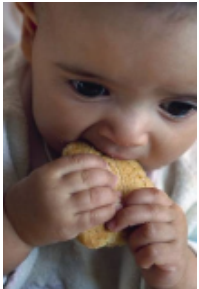
MAGNITUDE OF THE CONSUMPTION DATABASE

Number of

Member States	23
Dietary surveys	51
Population groups	128
Subjects	94,532
Different national food codes	127,912
Different standard food codes	1,578
Consumption records	10,470,332

AGE CLASSES

Age class	Age range (years)	Number of surveys*	Number of countries*
Infants	0 – 1	6	6
Toddlers	1 – 3	11 (10)	10 (9)
Children	3 - 10	20 (18)	17 (15)
Adolescents	10 - 18	20 (17)	17 (14)
Adults	18 - 65	22 (17)	21 (16)
Elderly	65 - 75	16 (14)	15 (13)
Very elderly	> 75	14 (12)	14 (12)
Special population group		2 (2)	2 (2)



* In parenthesis only surveys with more than one day per subject

RUNNING EU MENU PROJECTS (ANNUAL SUPPORT SINCE 2011)



OVERALL OBJECTIVE OF THE FAIM TEMPLATE

- **Objective:**
screening tool for the assessment of chronic dietary exposure to:
 - new food additives, or
 - new uses of already authorised food additives.
- **End users:**
 - applicants,
 - risk assessors, and
 - risk managers.



THE HISTORY



BUDGET METHOD

It is based on the existence of a **physiological upper limit** to the amount of food and drink that can be ingested each day.

In a **60 kg** subject this is equivalent to:

- 3 kg of food (1.5 kg of processed food), and
- 6 litres of beverages (milk excluded).

Only a specific proportion of the diet may contain the additive.



EFSA COMPREHENSIVE EUROPEAN FOOD CONSUMPTION DATABASE

Data collection and analysis

Food consumption ▼

Comprehensive database

Food composition

Biological hazards ▶

Chemical hazards

Chemical contaminants

Chemical residues

Compendium of Botanicals ▶

Standardisation

Toolbox – how to submit data

The EFSA Comprehensive European Food Consumption Database

The Comprehensive Food Consumption Database is a source of information on food consumption across the European Union (EU). It contains detailed data for a number of EU countries. The database plays a key role in the evaluation of the risks related to possible hazards in food in the EU and allows estimates of consumers' exposure to such hazards, a fundamental step in EFSA's risk assessment work. The database is also relevant to other fields of EFSA's work, such as the assessment of nutrient intakes of the EU population.

- [Guidance for the use of the EFSA Comprehensive European Food Consumption Database](#)

EFSA used its food classification system 'FoodEx' to categorise all foods and beverages included in the Comprehensive Database.









- [Evaluation of the FoodEx, the food classification system applied to the development of the EFSA Comprehensive European Food Consumption Database](#)

See also









- ▶ [The EFSA DWH access rules](#)

2011

Chronic food consumption statistics

Intake	All subjects	Consumers only
grams per day* (g/day)	 	 
grams per day per kilogram of body weight* (g/kg bw per day)	 	 

Acute food consumption statistics

Intake	All days	Consuming days only
grams per day* (g/day)	 	 
grams per day per kilogram of body weight* (g/kg bw per day)	 	 

CONDITIONS OF USE

- EFSA has the right to use raw individual food consumption data for carrying out **risk assessments and other scientific analyses within the activities related to EFSA's mandate.**
- A formal **authorization** from the data provider must be requested for any other use of the data.



FOOD ADDITIVES INTAKE MODEL (FAIM) 1.0



Food Additives Intake Model (FAIM) - Version 1.1* - July 2013		
 Important! Read the Instructions before using this file. The dietary surveys included in this template are detailed here .		
Links to the different sheets		
Nomenclature used in the FAIM template List of the foods under food categories	Nomenclature Food list	... summarizes the two levels of the food nomenclatures used in the FAIM model. ... corresponds to the list of foods included in each food category of the nomenclature.
Number of consumers in surveys per age class and food category	No. of consumers	... indicates the number of consumers in each category, per age class and food category.
MPLs and proposed use levels	Concentration values	In this sheet, you are allowed to enter the values for MPLs and/or use levels in order to run the calculations. The unit of each value.
Estimated exposure	Children Adults Elderly The elderly	The sheet per age class where the detailed dietary exposure is calculated with MPLs and/or proposed use levels, per food category and per survey, according to the detailed food consumption data. The total exposure (mean and high level) is also calculated.
Summarized exposure	Summary per age class & per survey Summary per age class Summary % ADI per age class	... summarizes the total exposure (mean and high level) calculated in the previous sheets. ... summarizes the range of the total exposure (mean and high level) per age class calculated with MPLs and/or proposed use levels. ... summarizes the range of the total exposure as % of the ADI (mean and high level) per age class calculated with MPLs and/or proposed use levels.
Main food contributors to 95th to the total exposure	Main food contributors	... corresponds to the food categories which contribute to higher than 5% of the total exposure for MPLs and/or proposed use levels, for each age class and the number of surveys that are higher than 5%.
Average contributors per age class	Children contrib. all Adults contrib. all Elderly contrib. all	The sheet per age class where the food categories which contribute to the total exposure for MPLs and/or proposed use levels.

2012

- It is based on real food consumption summary statistics (average and 95th percentile) from different population groups and European countries;
- Food categories based on those used in the food additives Regulation of the EU Commission;
- “High level exposure” estimated by summing the 95th percentiles (consumers only) for the main contributor and the mean exposure (whole population) for the other categories.

FOOD ADDITIVES INTAKE MODEL (FAIM) 2.0



2017

It is based on raw individual food consumption data from different population groups and European countries, directly from the EFSA data warehouse.

EFSA | EFSA Data Warehouse | FAIM Model Definition

Food Category	Value 1	Value 2	Value 3
Herbs, spices, seasonings (Not Specified)	12.2	0.000000	0.000000
Vinegars	12.3	0.000000	0.000000
Mustard	12.4	0.000000	0.000000
Soups and broths	12.5	0.000000	0.000000
Sauces	12.6	0.000000	0.000000
Salads and savoury based sandwich spreads	12.7	0.000000	0.000000
Yeast and yeast products	12.8	0.000000	0.000000
Protein products, excluding products covered in category 1.8	12.9	0.000000	0.000000
Foods for infants and young children (Not Specified)	13.1	0.000000	0.000000
Dietary foods for special medical purposes defined in Directive 1999/21/EC (excluding products from food category 13.1.5)	13.2	0.000000	0.000000
Dietary foods for weight control diets intended to replace total daily food intake or an individual meal (the whole or part of the total daily diet)	13.3	0.000000	0.000000
Foods suitable for people intolerant to gluten as defined by Regulation (EC) No 41/2009	13.4	0.000000	0.000000
Water, including natural mineral water as defined in Directive 2009/54/EC and spring water and all other bottled or packed waters	14.1.1	0.000000	0.000000
Fruit juices as defined by Directive 2001/112/EC	14.1.2.1	0.000000	15.000000
Vegetable juices	14.1.2.2	0.000000	0.000000
Fruit nectars as defined by Directive 2001/112/EC and vegetable nectars and similar products	14.1.3	0.000000	0.000000
Flavoured drinks	14.1.4	0.000000	0.000000
Flavoured drinks with sugar	14.1.4.1	0.000000	0.000000
Flavoured drinks with sweetener	14.1.4.2	0.000000	0.000000
Coffee, tea, herbal and fruit infusions, chicory; tea, herbal and fruit infusions and chicory extracts; tea, plant, fruit and cereal preparations for infusions, as well as mixes and instant mixes of these products (Not Specified)	14.1.5	0.000000	0.000000
Beer and malt beverages	14.2.1	0.000000	0.000000
Wine and other products defined by Regulation (EC) No 1234/2007, and alcohol free counterparts	14.2.2	0.000000	0.000000

Submit Discard

EXAMPLE - ADDITIVE LEVELS

Additive level
(mg/kg)



8

Food additive categories

1.1	Unflavoured pasteurised and sterilised (including UHT) milk
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5

01.7.4	Whey cheese
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21

6.3	Breakfast cereals
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15

14.1.2.1	Fruit juices as defined by Directive 2001/112/EC
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DIETARY EXPOSURE ASSESSMENT USING INDIVIDUAL DATA







Peter



Peter's weight: 18 kg

Food additive categories

	Consumption DAY 1 (g/day)	Consumption DAY 2 (g/day)	Average Consumption (g/day)
	200	100	150
	0	250	125
	80	80	80
	400	0	200

DIETARY EXPOSURE ASSESSMENT USING INDIVIDUAL DATA







Peter



Peter's weight: 18 kg

Food additive categories

	Average consumption (g/day)	Additive level (mg/kg)	Chronic exposure (mg/day)
	150	8	1.2
	125	5	0.6
	80	21	1.7
	200	15	3

Total chronic exposure in mg per day: 6.5

Total chronic exposure in mg/kg bw per day: 0.36

DIETARY EXPOSURE DISTRIBUTION

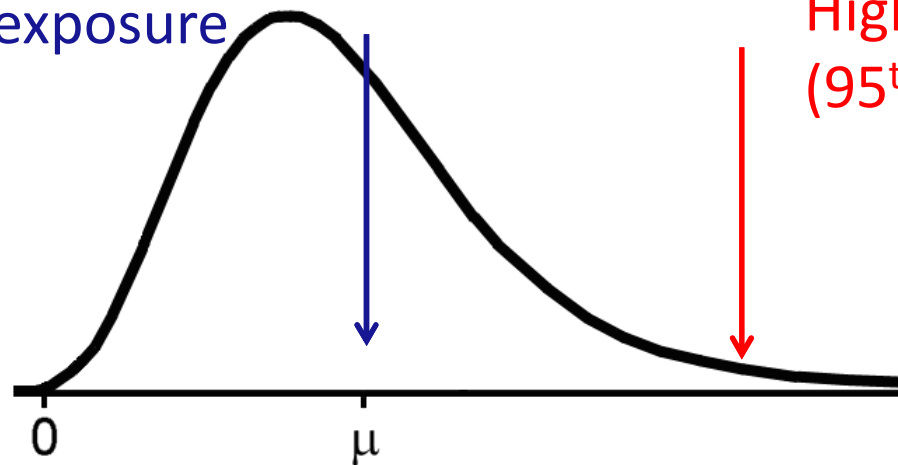


Mean exposure contribution (%)



- Unflavoured pasteurised and sterilised (including UHT) milk
- Unflavoured fermented milk products, heat-treated after fermentation
- Breakfast cereals
- Fruit juices as defined by Directive 2001/112/EC and vegetable juices

Mean exposure



High exposure
(95th percentile)

FOOD CONSUMPTION DATA USED BY FAIM 2.0

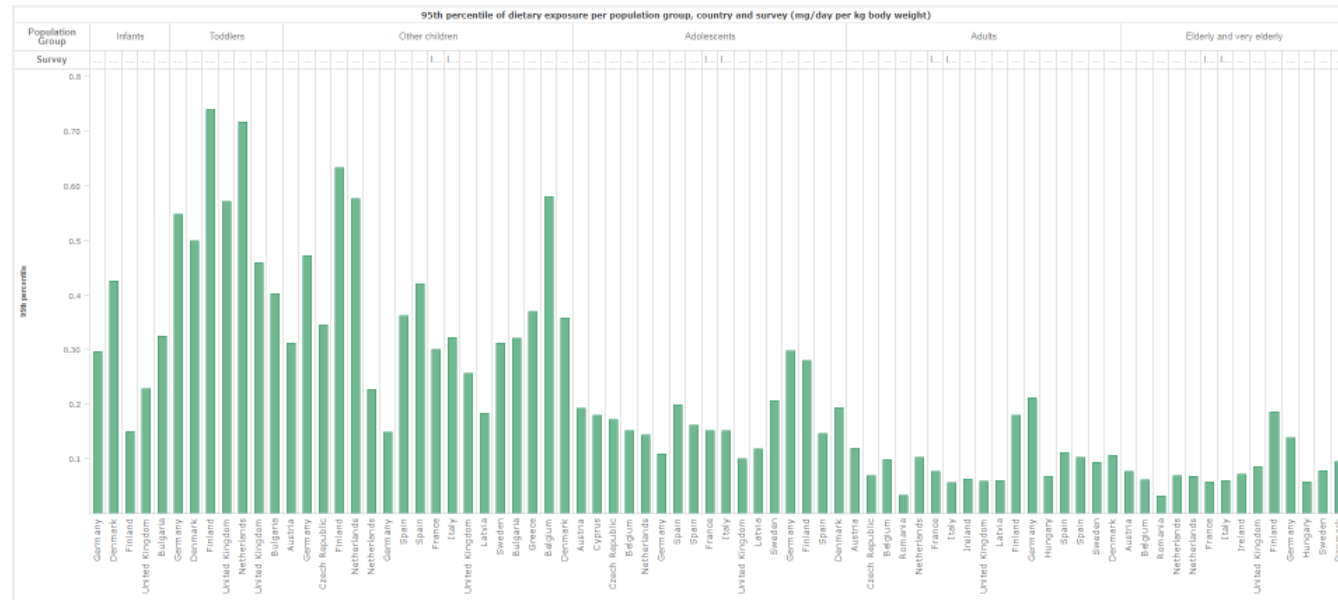
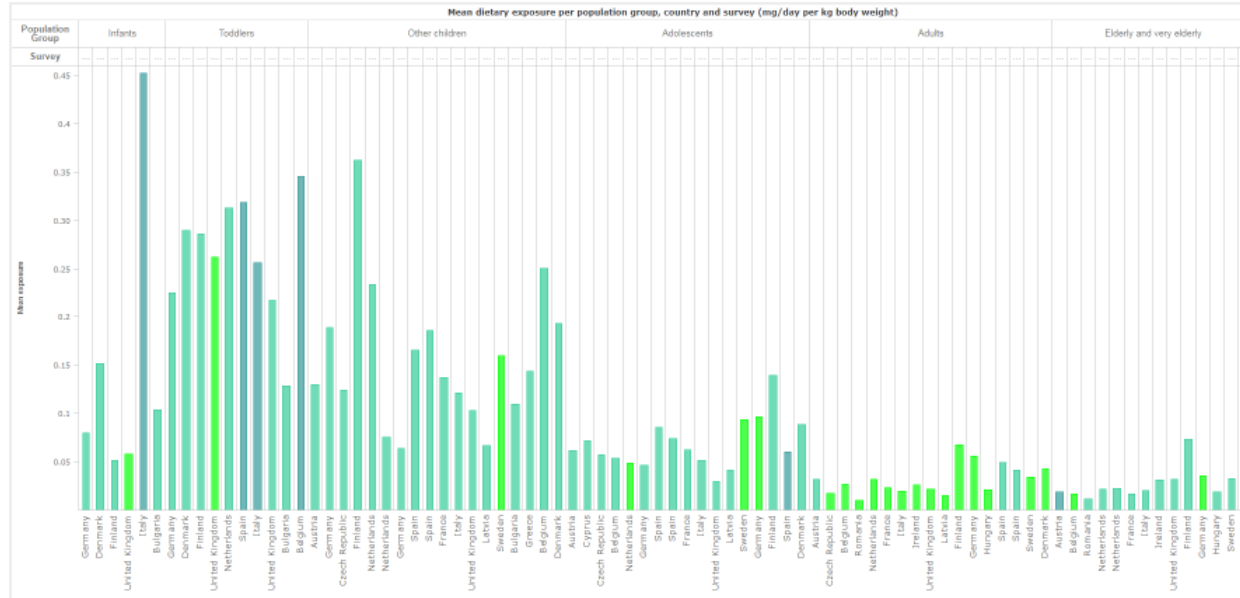
Number of

Subjects 66,025

Consumption events 6,835,409

Age class	Age range	Number of surveys	Number of countries
Infants	3 – 12 months	6	6
Toddlers	1 – 3 years	10	9
Children	3 – 10 years	18	15
Adolescents	10 – 18 years	17	14
Adults	18 – 65 years	17	16
Elderly and very elderly	> 65 years	13	13

EXAMPLE: MEAN AND 95TH PERCENTILE OF EXPOSURE FROM FAIM



MAIN ADVANTAGES OF FAIM 2.0

- More precise estimations thanks to the direct use of the raw individual food consumption data in compliance with the copyright agreements;
- Straight forward update and maintenance of the tool thanks to the direct use of the EFSA data warehouse;
- Easy and intuitive use of the tool thanks to the Microstrategy software;
- Possibility to recycle the infrastructure of the FAIM template for the assessment of chronic exposure to chemicals other than food additives (e.g. feed additives, contaminants, flavourings, novel foods, etc.) by changing the food categories.

FAIM 2.0

Beta version

Final version to be released by December 2017

Thanks to:

Luca, Alex, Stefano, Giulio, Kenneth and Francesca.

