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
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efsa
European Food Safety Authority

COMPREHENSIVE CONSUMPTION DATA

The EFSA Comprehensive European food consumption database contains data:

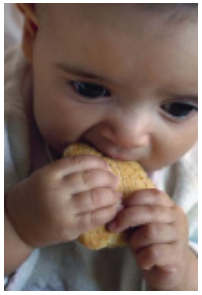
- 24-hour recall or dietary record method
- data collected at individual level
- most recent data within each country
- random sample at national level
  - different age classes, from infants to elderly
  - special population groups

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 parehthesis only surveys with more than one day per subject

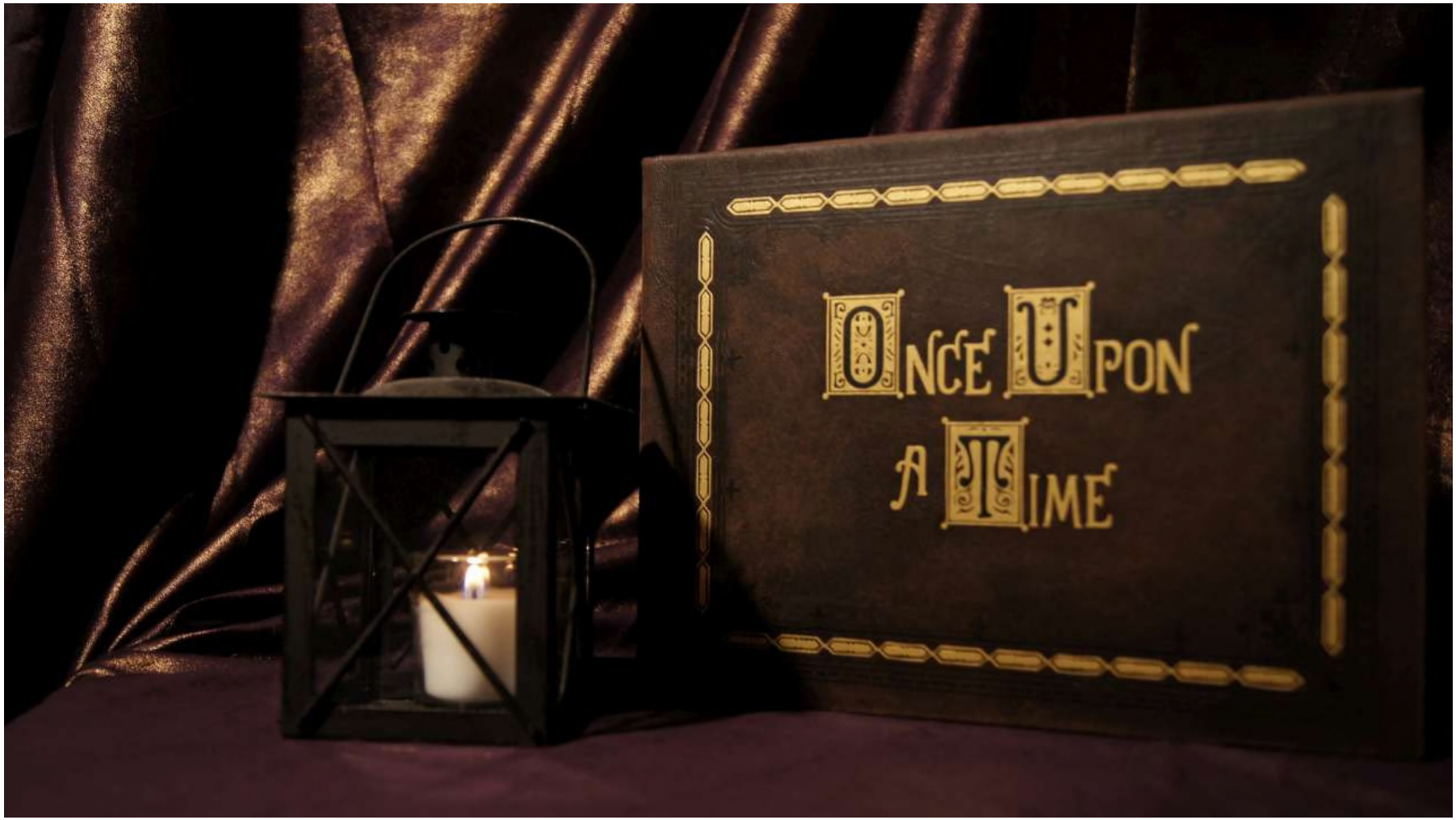
RUNNING EU MENU PROJECTS (ANNUAL SUPPORT SINCE 2011)

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

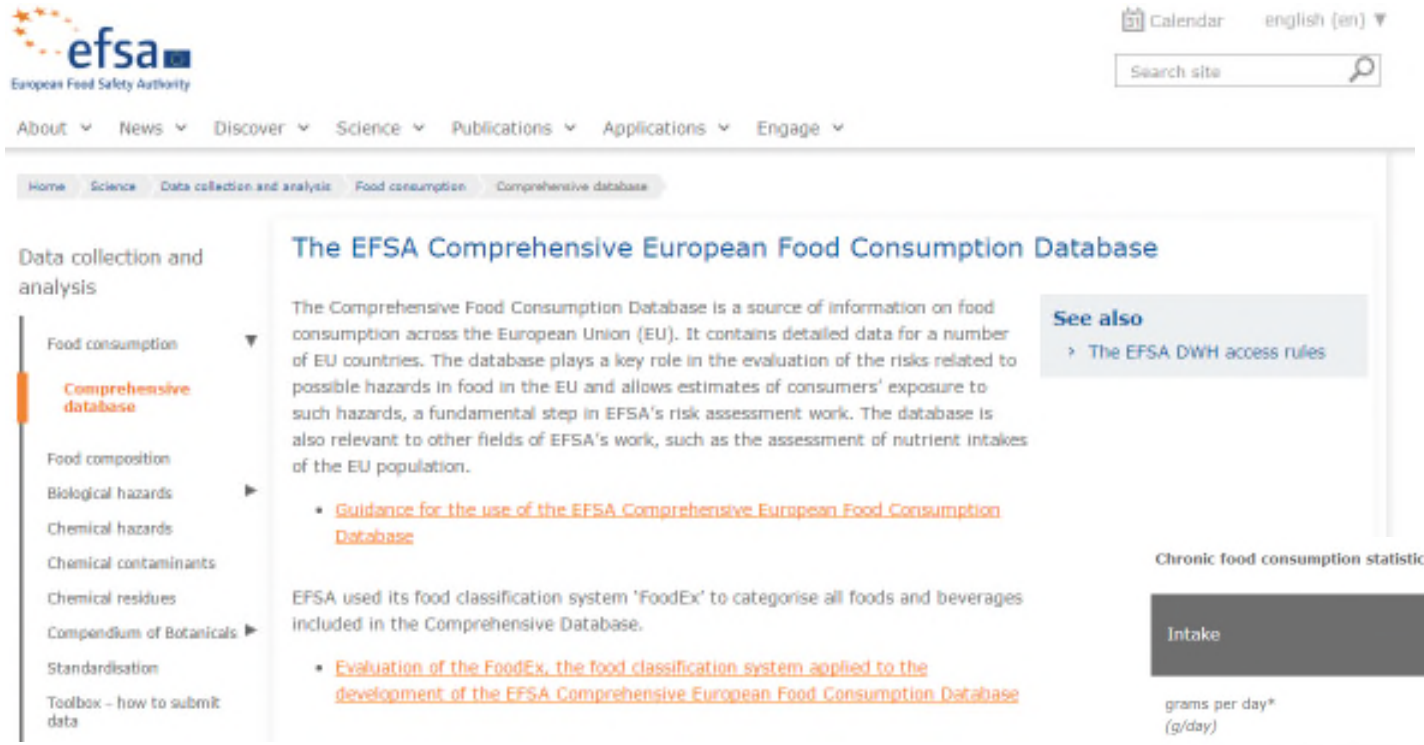
It is based on the existence of a physiological upper limit to the amount of food and drink that can be ingested each day.

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



2011

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

2012

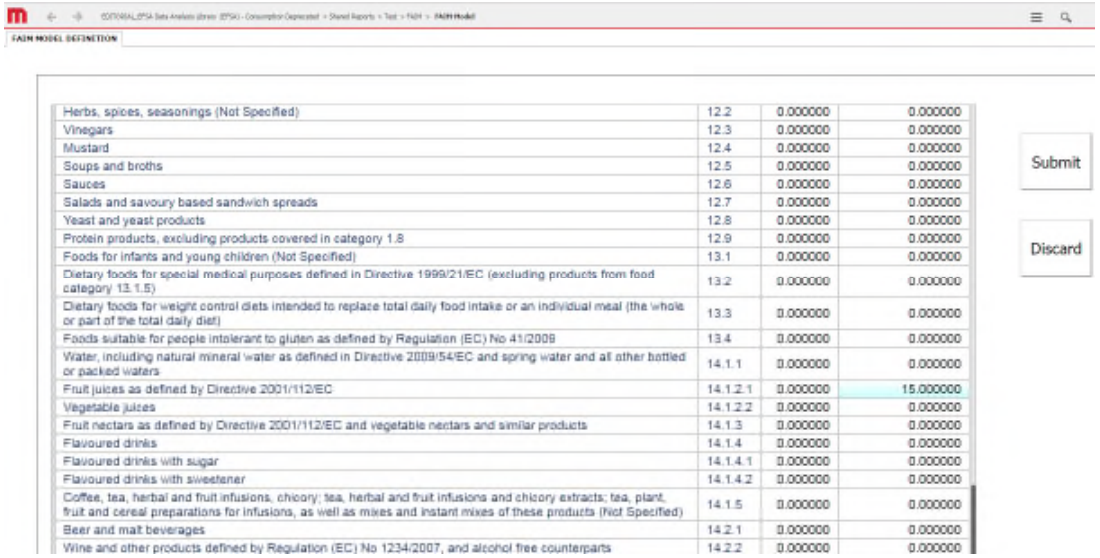
- It is based on real food consumption summary statistics (average and 95th percentile) from different population groups and European countries;
- Food categories based on those used in the food additives Regulation of the EU Commission;
- "High level exposure" estimated by summing the 95th percentiles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

FOOD ADDITIVES INTAKE MODEL (FAIM) 2.0

MicroStrategy 10

2017

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



EXAMPLE - ADDITIVE LEVELS

	Additive level (mg/kg)	Food additive categories	
	8	1.1	Unflavoured pasteurised and sterilised (including UHT) milk
	5	01.7.4	Whey cheese
	21	6.3	Breakfast cereals
	15	14.1.2.1	Fruit juices as defined by Directive 2001/112/EC

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

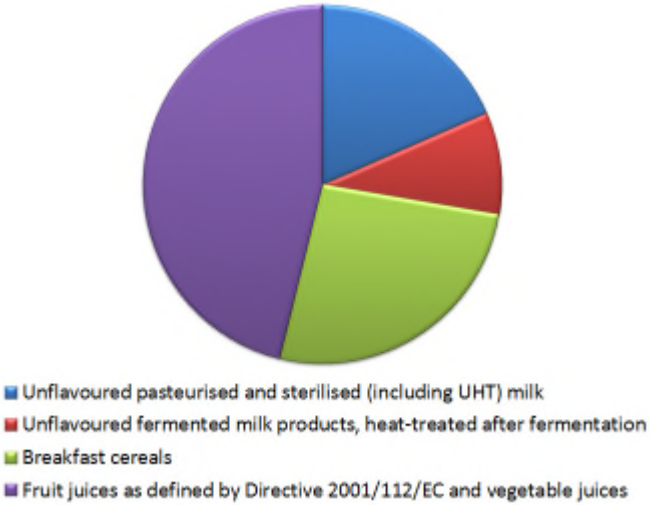
	Average consumption (g/day)	Additive level (mg/kg)	Chronic exposure (mg/day)
	150	8	1.2
	125	5	0.6
	80	21	1.7
	200	15	3

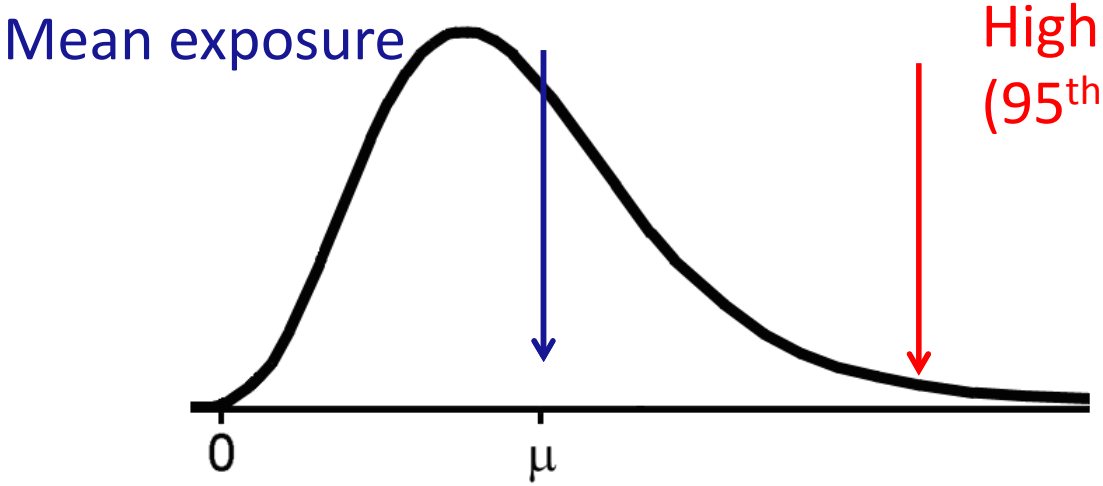
Total chronic exposure in mg per day: 6.5

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

DIETARY EXPOSURE DISTRIBUTION

Mean exposure contribution (%)



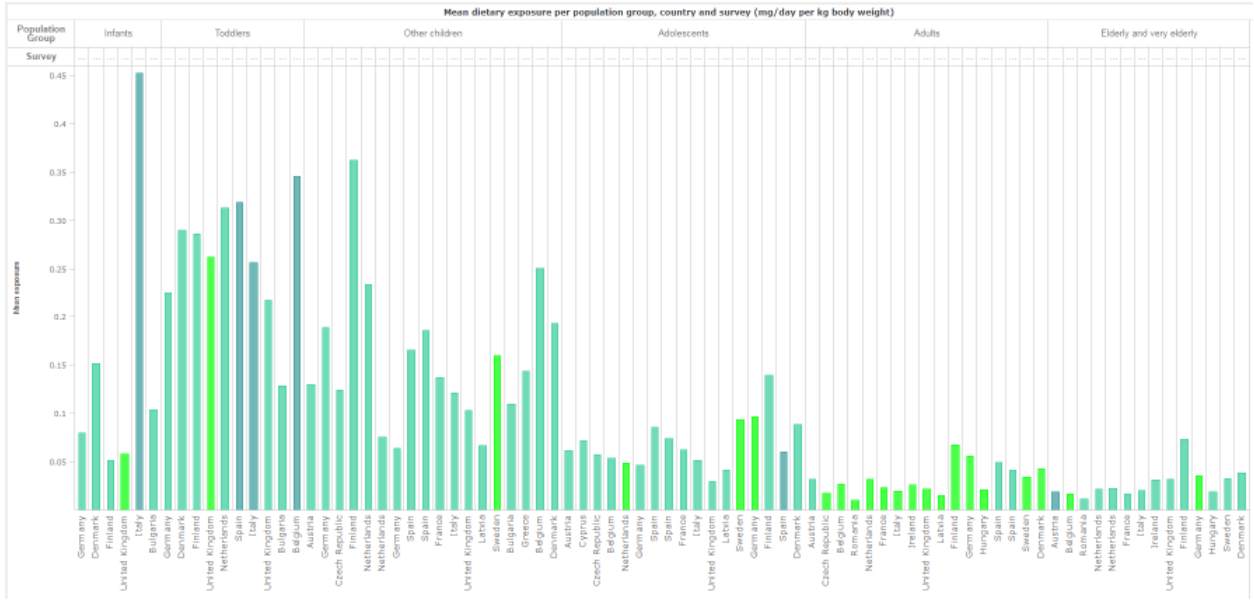


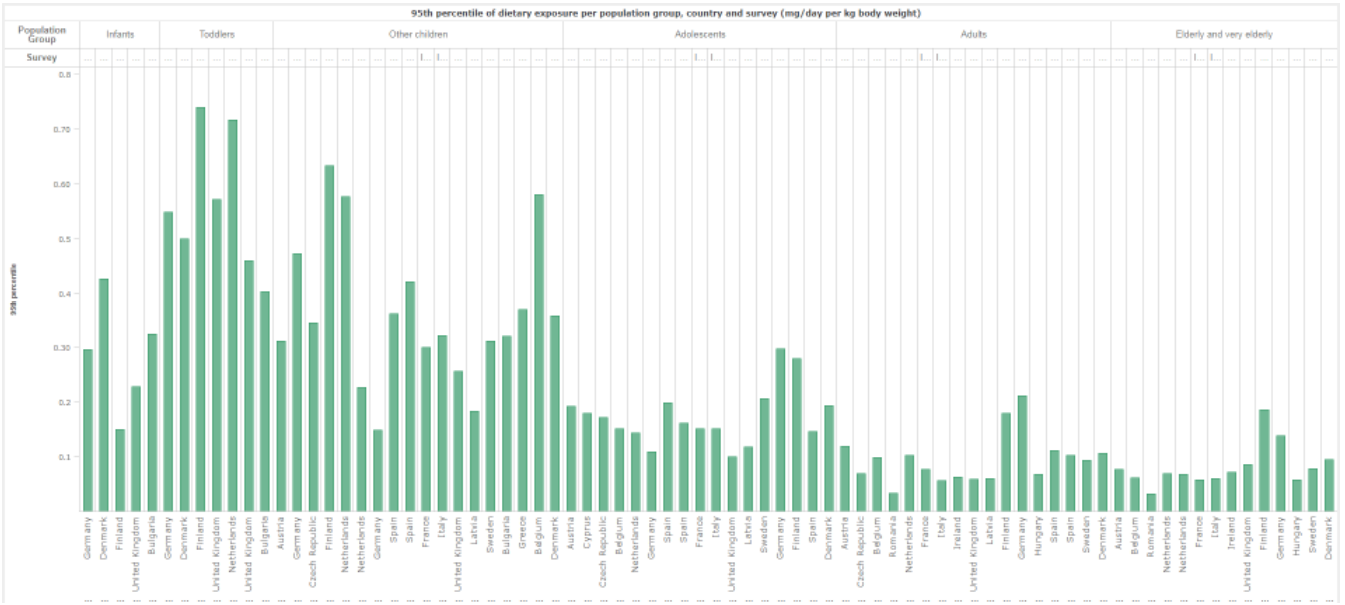
FOOD CONSUMPTION DATA USED BY FAIM 2.0

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





EXAMPLE: EXPOSURE SOURCES (%)

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:

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