

Call for Data

8th Call

Input data for the Exposure Assessment of Food Enzymes

Published: 26/07/2021

Deadline: 26/10/2021

New Deadline: 15/12/2021

Food process

- Cheese production and byproducts in milk and dairy processing

This call considers milk coagulation by enzymes. Cheeses and derivatives are the main products of this process. Whey is obtained as a byproduct during cheese making and is an ingredient for a broad range of food products. This call takes account of differential partition of enzymes in curd and whey.

Cheeses and food products that contain cheeses can be clearly identified in the EFSA Raw Primary Commodity (RPC) model¹. However, this is not the case for food products containing whey as an ingredient. The selection of these food categories was aided by information available in recipes and in databases such as Mintel's Global New Products Database (<http://www.mintel.com/global-new-products-database>). Feedback is sought, therefore, particularly on what type of food categories containing whey as an ingredient.

Instruction for completing the attached MS Excel ® file

Sheet 1 contains a legend for the information given in Sheet 2.

EFSA is seeking your feedback on the information listed in the Excel file concerning the FoodEx categories (column B), and the associated technical factors for cheese processing and byproducts (columns D–E).

¹ EFSA (European Food Safety Authority), Dujardin B and Kirwan L, 2019. Technical report on the raw primary commodity (RPC) model: strengthening EFSA's capacity to assess dietary exposure at different levels of the food chain, from raw primary commodities to foods as consumed. EFSA supporting publication 2019:EN-1532. 30pp. doi: 10.2903/sp.efsa.2019.EN-1532

1. For FoodEx categories (column B), should any food group be excluded? Or are there any food groups missing from the list?

In column G, please indicate 'Remove' for food groups to be excluded, and list any additionally proposed food groups with the corresponding FoodEx category at the end of this column.

The FoodEx categories are available in the FoodEx list (Sheet 3).

2. In columns D–E, the average technical conversion factors (f1) and the average recipe fractions (f2) mainly derived from the EFSA RPC Model and open information sources are listed.

Average technical conversion factors (f1) were calculated by firstly considering:

Enzyme partition in curd and whey :

0.2: fraction of enzyme that ends up in curd

0.8: fraction of enzyme that ends up in whey

Subsequently, specific f1 factors were calculated for each type of ingredient, according to the formulas described below

Cheese:

$$f1 = 10 \times 0.2 = 2$$

Where:

10: conversion factor from cheese to milk²

0.2: fraction of enzyme that ends up in cheese

Whey:

$$f1 = 1.1 \times 0.8 = 0.88$$

Where:

1.1: conversion factor from whey to milk²

0.8: fraction of enzyme that ends up in whey

Whey powder:

$$f1 = 1.1 \times 0.8 \times 8 = 7$$

Where:

1.1: conversion factor from whey to milk²

0.8: fraction of enzyme that ends up in whey

8: conversion factor from liquid to powder³

² Information provided by the stakeholders in a previous public consultation

³ EFSA (European Food Safety Authority), Arcella D., Ioannidou S. and Sousa R., 2018. Internal report on the harmonisation of dilution factors to be used in the assessment of dietary exposure. EFSA internal report. DOI: 10.5281/zenodo.1256085

Whey protein:

$$f1 = 1.1 \times 0.8 \times 111 = 98$$

Where:

1.1: conversion factor from whey to milk

0.8: fraction of enzyme that ends up in whey

111: conversion factor from wet whey to whey protein concentrate²

If you do not agree with any of the listed technical factors, keeping in mind that there can be some variation between foods in each category, please propose an alternative average factor for the respective FoodEx category in columns H-I.

For transparency purposes, please provide a short text using columns J-L to justify any feedback given. Any references should be provided in the last column.

Submission of data

Data should be submitted directly to EFSA using the dedicated e-mail address for this service: fip@efsa.europa.eu. This mailbox is also the contact point for any technical support/advice you need for the reporting of this data.

End