



# Food enzyme protein-glutamine $\gamma$ -glutamyltransferase

## 1 General information

**Submitter** Novozymes A/S  
**Commission ID** [EFSA-Q-2024-00545](#)

## 2 Source

**Organism** [Bacillus licheniformis](#)  
**GMM** Yes  
**Strain** NZYM-TR

## 3 EFSA Applications

- **Enzyme protein** [protein-glutamine  \$\gamma\$ -glutamyltransferase](#), **cDNA sequence** Not available, **Mass** Not available, **Chemical parameters** /, **Question number** [EFSA-Q-2024-00545](#), **EFSA Status** Finished, **Safety evaluation** [Safety evaluation of the food enzyme protein-glutamine  \$\gamma\$ -glutamyltransferase from the genetically modified Bacillus licheniformis strain NZYM-TR](#)

## 4 Manufacturing

**Production** Fermentation

## 5 Industrial activity

**Intended food use**

- Bakery and cereal based products
- Dairy processing (whey processing)



**Exposure level** Chronic exposure to the food enzyme–TOS was calculated using the FEIM webtool by combining the maximum recommended use level with individual consumption data (EFSA CEP Panel, 2021). The estimation involved selection of relevant food categories and application of technical conversion factors (EFSA CEP Panel, 2023). The applicant provided a list of the FoodEx categories that should be considered for the exposure estimation to the production of meat and fish alternatives, together with their respective technical conversion factors. This list has been revised by the Panel and the final outcome that was used for the exposure calculation.

**Intended use level** 8.6 mg TOS/kg RM

**Usage details** The food enzyme is intended to be used in eight food manufacturing processes (Processing of dairy products (Production of cheese, fermented dairy products), Processing of meat and fish products (Production of modified meat and fish products), Processing of cereals and other grains (Production of baked products, cereal-based products other than baked, brewed products), Processing of plant-and fungal-derived products (Production of plant-based analogues of milk and milk products, meat and fish alternatives))