Food enzyme Chymosin

1 General information

Submitter Chr. Hansen
Commission ID EFSA-Q-2019-00125

2 Source

Organism Aspergillus niger
GMM Yes
Strain DSM 32805

3 EFSA Applications

- **Enzyme protein** Chymosin, **cDNA sequence** **Not available**, **Mass** 35.50 kDa, **Chemical parameters** 323 amino acids, **Question number** EFSA-Q-2019-00125, **EFSA Status** Finished, **Safety evaluation** Safety evaluation of the food enzyme chymosin from the genetically modified Aspergillus niger strain DSM32805

4 Manufacturing

Production Fermentation

5 Industrial activity

Intended food use

- Dairy processing (whey processing)

Exposure level Chronic exposure to the food enzyme–TOS was calculated by combining the maximum recommended use level with individual consumption data (EFSA CEP Panel, 2021a).
Intended use level Not available

Usage details "The food enzyme is intended to be used in two food processes. In cheese production, the food enzyme is added to the milk together with the starter culture. The addition of chymosin causes the milk to coagulate and to form curd. By separating the liquid whey from the solid curd, 80–90% of the added enzyme is found in the whey fraction and 10–20% is retained in the cheese (Documentation provided to EFSA No 3), in which residual enzyme activity is expected. Whey produced during cheese making may be used in a variety of foods including infant and follow-on formula or food for special medical purposes. The food enzyme–TOS remains in cheese and whey. In the production of fermented milk products such as yoghurt, the food enzyme is added to milk before pasteurisation; alternatively following the pasteurisation it is added together with the lactic acid bacteria cultures. Chymosin performs the same function as in cheese, making the viscosity of the fermented dairy products to increase. The food enzyme–TOS remains in the fermented milk products, in which residual enzyme activity is expected. "