

Joint industry definitions of fermentation and precision fermentation

Fermentation is a long-standing process with a wide range of applications across sectors including food, feed, health and more. As the technology has evolved, different interpretations of the term *fermentation* have emerged, including variations on the term such as *precision fermentation*. In light of this, the following nine industry associations propose a shared definition that reflects the diverse sectors covered:

- AMFEP (Association of Manufacturers and Formulators of Enzyme Products)
- COFALEC (Confederation of European Yeast Producers)
- EuropaBio (European Association for Bioindustries)
- EFG (European Fermentation Group)
- EFFCA (European Food & Fermentation Cultures Association)
- FFE (Food Fermentation Europe)
- FEFANA (EU Association of Specialty Feed Ingredients and their Mixtures)
- IPA Europe (International Probiotics Association Europe)
- PFA (Precision Fermentation Alliance)

This cross-sectoral collaboration highlights the richness and versatility of fermentation. The definitions aim to capture a common understanding of the terms fermentation and precision fermentation, in the context of wider discussions such as the recent FAO literature synthesis *Precision fermentation – With a focus on food safety*.¹

Definition of fermentation: process in which micro-organisms such as bacteria, fungi, yeasts and micro-algae are used to preserve and/or transform raw materials into e.g. food, feed, chemicals, pharmaceuticals, fuel, biomass.

Definition of precision fermentation: sub-category of fermentation, using biotechnological approaches and innovations for the controlled cultivation of selected and/or modified microbial cells, to produce specific substances. These fermentation-derived products can be a single molecule or multiple molecules purified from the fermentation broth or biomass.

¹ Sturme, M., van der Berg J.P., and Kleter, G., 2025. *Precision fermentation – With a focus on food safety*. Rome, FAO. <https://doi.org/10.4060/cd4448en>

Supporting associations

