

ENZYME APPLICATIONS IN INDUSTRY

1

FOOD INDUSTRY

- Amylase : used in the production of sugars from starch, such as in making high-fructose corn syrup
- Protease: lower protein level in flour of biscuit manufacturing
- Trypsin: to predigest baby food
- Papain: tenderize meat for cooking
- Cellulase and pectinase: clarify fruit juices

2

DAIRY INDUSTRY

- Rennin: used in manufacture of cheese and to hydrolyze protein
- Lactase: to breakdown lactose to glucose and galactose
- Lipases: to enhance the ripening of the blue-mold cheese (Roquefort cheese)

3

BREWING INDUSTRY

- Proteases: to remove cloudiness produced during beer storage
- Amyloglucosidase and pullulanases: low-calorie beer and adjust fermentability
- α -and β -amylase : used in malting and mashing of barley and increase sugar yield for fermentation process

4

PAPER INDUSTRY

Amylases, xylanases, cellulases and ligninases are used to degrade starch, lowering viscosity, aiding sizing and coating paper

5

AGRICULTURE INDUSTRY

Phosphatases, dehydrogenases and sulfatases are used for soil fertility and crop growth