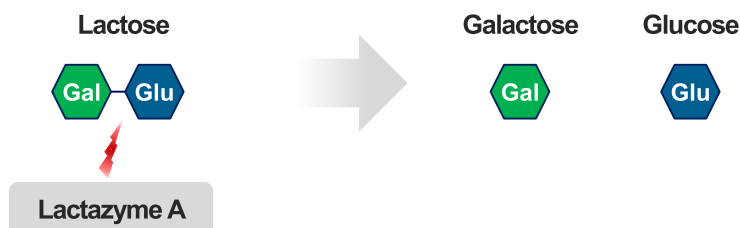


Lactzyme A™

Lactase

Lactzyme A™ is an exo-(1->4)-beta-D-galactosidase (lactase, e.c. 3.2.1.23) preparation produced by submerged fermentation of a selected strain of the *Aspergillus niger*.

When lactase reacts with lactose, a mixture of glucose and galactose is formed. Some formation of oligosaccharides (e.g. galactobiose, galactotriose) occurs at the initial stage of the reaction and at high lactose concentrations.

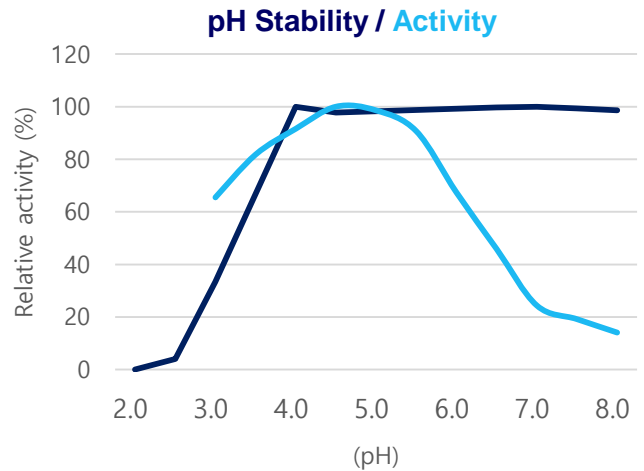
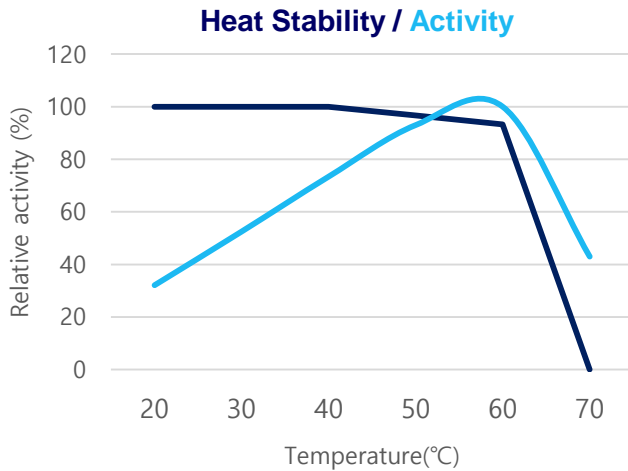


◆ Application of Lactzyme A

- Major Applications of Lactzyme A are as follows; milk hydrolysis, whey hydrolysis, animal feed applications
- Lactose hydrolysis reaction takes place under mild conditions that are compatible with process conditions in the dairy industry: Lactose-hydrolysed consumption milk, Yoghurt, Ice-cream, Whey syrup
- Lactose hydrolysis is applied to improve: Digestibility of dairy products for lactose intolerant consumers, Flavor (3 x sweetness), Processibility (fermentation activation in yoghurt), Texture (prevention of crystallization)

Category	Application	Description
Milk Hydrolysis	Lactose Intolerance Patients	Pretreatment of milk with lactase will prevent intestinal problems
	Milk Crystallization Prevention	Highly concentrated or frozen milk product can be obtained with the phenomenon of "sandiness"
	Yogurt	The hydrolysis of lactose stimulates the growth of yogurt cultures and contributes to sweetness of yogurt.
Whey Hydrolysis	Human Consumption	The single sugar in lactose-hydrolyzed whey syrup contributes greatly to the improvement of the color, flavor, texture (Bakery, Biscuits, Cakes, Candied products, Ice-cream, Frozen yogurt, Dessert, etc.)
	Animal Feed	Better feed conversion: Hydrolyzed lactose is better absorbed by several kinds of animals than normal lactose

◆ **Stability test for temperature and pH**



◆ **Recommendation of operational condition**

- Stable pH range: pH 4.0 ~ 8.0
- Optimum pH: pH 4.5
- Temperature stability: stable at 60°C for one hour
- Optimum temperature: 60~55°C

◆ **Characteristics**

- Source: *Aspergillus niger*
- Activity: > 50,000 unit/g at 37 °C, pH 4.5.)
- Appearance: Light Yellow~White, powder

◆ **Package and Storage**

- Package unit: 4 kg
- Storage: store under cool and dry condition

◆ **Expiry date**

- 12 months