PMP FERMENTATION PRODUCTS

AMIZYME TX-8

liquid alpha-amylase

TX-8 is an enzyme preparation of alpha-amylase. This enzyme is used in a variety of applications and industries

STARCH CONVERSION

The most widespread applications of α-amylases are in the starch industry, which are used for starch hydrolysis in the starch liquefaction process that converts starch into fructose and glucose syrups. The enzymatic conversion of all starch includes:

- Gelatinization - The dissolution of starch granules, thereby forming a viscous suspension
- Liquefaction - The partial hydrolysis and loss in viscosity
- Saccharification - The production of glucose and maltose via further hydrolysis

AMIZYME
LIQUID CONCENTRATE TX-8
CONCENTRÉ LIQUIDE TX-8/CONCENTRADO LIQUIDO TX-8

Initially, the α-amylase of *Bacillus amyloliquefaciens* was used but it has been replaced by the α-amylase of *Bacillus stearothermophilus* or *Bacillus licheniformis*. The enzymes from the Bacillus species are of special interest for large-scale biotechnological processes due to their remarkable thermostability and because efficient expression systems are available for these enzymes.

PULP AND PAPER INDUSTRY

The use of α-amylases in the pulp and paper industry is for the modification of starch of coated paper, i.e. for the production of low-viscosity, high molecular weight starch. The coating treatment serves to make the surface of paper sufficiently smooth and strong, to improve the writing quality of the paper. In this application, the viscosity of the natural starch is too high for paper sizing and this can be altered by partially degrading the polymer with α-amylases in a batch or continuous processes. Starch is a good sizing agent for the finishing of paper, improving the quality and erasebility, besides being a good coating for the paper.

TEXTILES

Amylases are used in textile industry for desizing process. Sizing agents like starch are applied to yarn before fabric production to ensure a fast and secure weaving process. Starch is a very attractive size, because it is cheap, easily available in most regions of the world, and it can be removed quite easily.

Starch is later removed from the woven fabric in a wet-process in the textile finishing industry. Desizing involves the removal of starch from the fabric which serves as the strengthening agent to prevent breaking of the warp thread during the weaving process. The α-amylases remove selectively the size and do not attack the fibres.

USE LEVELS

	Amount per 1000 lbs Starch	
Starch Concentration	Ounces (Fl.)	mls
Less Than 10%	1.0 - 2.0	30 - 60
10% to 20%	1.3 - 3.8	37 - 111
20% to 30%	2.5 - 6.3	75 - 187
30% to 40%	5.0 - 12.5	150 - 375
40% to 50%	6.3 - 18.9	187 - 561

AVAILABILITY

Amizyme TX-8 is available in 5 gallon pails (45 lbs) or 55 gallon drums (500 lbs)
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TO ORDER: (800) 558-1031 | INQUIRIES: info@pmpinc.com

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