

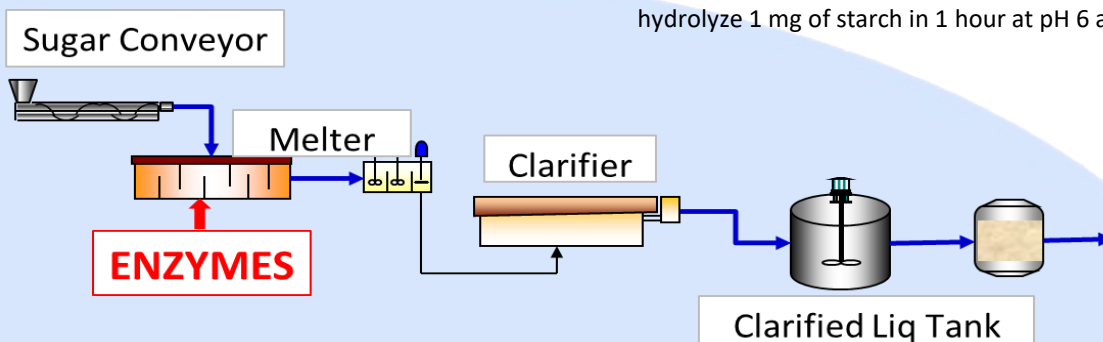
Medium Temperature Alpha Amylase

- Medium-temperature-amylase, obtained by deep fermentation of *Bacillus subtilis*.
- Widely used in papermaking, manufacture of corn syrup, sugar milling, alcohol, brewery, textile, food industry, etc.

Functionality:

- ✓ It has the ability of randomly hydrolyze the alpha-1-4-glucan bonds in polysaccharides (starch, glycogen, etc.) yielding dextrans and oligo-and monosaccharides.
- ✓ Decreases the viscosity of its solution by changing the internal structure of starch.
- ✓ Improves process parameters of sugar manufacturing processes.
- ✓ Reduces overall viscosity and ensures improved pan boiling.
- ✓ Reduction of sugar losses due to enhanced process efficiency.

Process Diagram:



Comparative Data:

Type of Enzyme	Starch Content (ppm)		% Starch Removal
	Raw Sugar	After Reaction	
Supplier 1	676	358	47 %
CSI AA-MT-1		274	59 %
CSI AA-MT-2		258	62 %

Application:

Generally add amylase at the rate of 2 – 4 L/ton, dry basis, together with calcium (Ca²⁺) at a concentration of 150 mg/L. The dosage should be decided through experiments according to the real objective conditions.

Unit definition: the amount of enzyme needed to hydrolyze 1 mg of starch in 1 hour at pH 6 and 60°C.