

## Alpha-Amylase from *Bacillus subtilis*

### Product Information

<b>Cat#</b>	DIA-497
<b>Source</b>	<i>Bacillus subtilis</i>
<b>Description</b>	Hydrolyzes $\alpha$ -1,4-glycosidic bonds in starch, randomly cleaving amylose and amylopectin into dextrans of various chain lengths and small amounts of low-molecular-weight sugars. This random depolymerization rapidly reduces starch paste viscosity ("liquefaction"), hence the name liquefying enzyme.
<b>pH Stability</b>	4.5-8.0
<b>Optimum pH</b>	5.2-6.2
<b>Optimum temperature</b>	60-70 °C
<b>Thermal stability</b>	35-90 °C
<b>Stabilizers</b>	Calcium ions enhance the stability of enzymatic activity. In the absence of $\text{Ca}^{2+}$ , enzymatic activity is completely lost.
<b>Unit Definition</b>	One unit of $\alpha$ -amylase is the amount of enzyme required to release one $\mu\text{mole}$ of p-nitrophenol from blocked p-nitrophenyl-maltoheptaoside per minute (in the presence of excess $\alpha$ -glucosidase) at pH 6.0 and 40 °C.
<b>Storage</b>	-20 °C, protected from light
<b>Synonyms</b>	Medium-temperature $\alpha$ -amylase

### Product Overview