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Certificate of Analysis

Product: Isoamylase HP (Glycogen 6-glucanohydrolase)
Cat. No: E-ISAMYHP
Lot. No: 130101F
Expiry Date: 2026-12-31

Specific activity and level of other activities:

240 U/mg protein (on oyster glucogen) at pH 4.0 and 40°C
One Unit of isoamylase activity is defined as the amount of enzyme required to release one µmole of reducing sugar per minute from oyster glycogen (10 mg/mL) in sodium acetate buffer (100 mM), pH 4.0 at 40°C. One Unit as defined here is approximately equal to 67 KU as defined by Sigma for Isoamylase (rice starch as substrate at pH 3.5 and 40°C).

Enzyme Activity	Substrate	%
Isoamylase	Oyster glycogen	100
α-Amylase	Reduced maltoheptaose	< 0.0004
Maltase	Maltose	< 0.0004
exo-α-Glucanase	Linear-α-1,4-maltodextrins	< 0.0000004

Actions were determined at 40°C and pH 4.0. α-Amylase was measured by monitoring hydrolysis of maltoheptaose by HPLC using a Waters Sugar Pac® column. Incubation of 100 U of isoamylase with 0.2 mL of maltoheptaose (10 mg/mL) at pH 4.0 resulted in no production of low molecular weight oligosaccharides in 16 h. Maltase (α-glucosidase) was measured with maltose (10 mg/mL) as substrate and *exo*-α-glucanase was measured with linear-α-1,4-maltodextrins (10 mg/mL) as substrate with measurement of released D-glucose.

This lot meets our specification.

Signature: Ciara McLoughlin **Date:** 2024-07-31

Ciara McLoughlin

Quality Manager

(*as this certificate is a computer printout, it has not been signed or dated by hand*)

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