Megazyme Building 1,
Bray Business Park,
Bray, Co. Wicklow,
A98 YV29,
Ireland.
Tel: + 353 1 2861220 Fax: + 353 1 2861264

# Certificate of Analysis

**Product:** Isoamylase (Glycogen 6-glucanohydrolase) (*Flavobacterium odoratum*)
**Cat. No:** E-ISAMYFO-800U
**Lot. No:** 200601B
**Expiry Date:** December, 2026

**Specific activity and level of other activities:**

**140 U/mg protein (on oyster glucogen) at pH 6.0 (with 1mM $CaCl_2$) and 40°C**
One Unit of isoamylase activity is defined as the amount of enzyme required to release one µmole of glucose reducing sugar equivalents per minute from oyster glycogen (10 mg/mL) in MES buffer (100 mM, pH 6.0) plus 1 mM CaCl2 at 40°C. One Unit as defined here is equivalent to ~ 67 KU of isoamylase as defined by Sigma Chemical Co.

| Enzyme Activity | Substrate | Activity, % |
|---|---|---|
| Isoamylase | Oyster glycogen (10 mg/mL) | 100 |
| Isoamylase | Amylopectin (5 mg/mL) | 35 |
| α-Amylase | Reduced maltoheptaose | < 0.0004 |
| Maltase | Maltose | < 0.0003 |
| *exo*-α-Glucanase | Linear-α-1,4-maltodextrins | < 0.0004 |
| α-Glucosidase | *p*-NP-α-glucoside | < 0.0004 |
| Ceralpha Reagent | Benzylidene blocked *p*NP maltoheptaoside | ~ 0.25[a] |

[a]Isoamylase can remove terminal *p*NP from *p*NP-maltosaccharides of DP > 5. This should not be confused with *endo*-hydrolysis of maltodextrin chains by a-amylase. Activities were measured at 40°C and pH 6.0 in the presence of 1 mM CaCl2. a-Amylase was measured by monitoring hydrolysis of maltoheptaose by Dionex chromatography. Incubation of 20 U of isoamylase with 1.0 mL of maltoheptaose (10 mg/mL) at pH 6.0 (plus 1 mM CaCl2) resulted in no production of low molecular weight oligosaccharides within 4 h. Maltase (a-glucosidase) was measured with maltose (10 mg/mL) as substrate and *exo*-a-glucanase was measured with linear-a-1,4-maltodextrins (10 mg/mL) as substrate with measurement of released D-glucose.

© 2023, Neogen Corporation; © 2023, Megazyme. All rights reserved.
Neogen is a registered trademark of Neogen Corporation. Megazyme is a registered trademark of Megazyme Ltd.

Megazyme Building 1,
Bray Business Park,
Bray, Co. Wicklow,
A98 YV29,
Ireland.
Tel: + 353 1 2861220  Fax: + 353 1 2861264

This lot meets our specification.

**Signature:** 

**Date:** 08.Jun.2023

Ciara McLoughlin

QC Manager

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

© 2023, Neogen Corporation; © 2023, Megazyme.  All rights reserved.
Neogen is a registered trademark of Neogen Corporation.  Megazyme is a registered trademark of Megazyme Ltd.