TREHALASE from a prokaryote (Lot 100201e)

Recombinant

E-TREH **09/15**

(EC 3.2.1.28)

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 63,636)
- Single major band on isoelectric focusing (pI ~ 5.6)

2. SPECIFIC ACTIVITY:

303 U/mg protein at pH 5.5 and 40°C; 61 U/mg protein at pH 7.0 and 40°C.

One Unit of trehalase is defined as the amount of enzyme required to produce two µmoles of glucose from one µmole of trehalose per mwwinute under the following assay conditions:

Sodium maleate buffer, pH 5.5	100 mM
$MgCl_2$	5.0 mM
Trehalose	5 mg/mL

Liberated glucose was measured using the D-Glucose Assay (GOPOD format) Kit. Refer to the **D-Glucose Assay (GOPOD format) Kit.**

3. OTHER ACTIVITIES (as a percentage of trehalase activity; pH 5.5, 40°C):

Enzyme Measured	Substrate	Activity, %
Trehalase	trehalose	100
β-D-Glucosidase	cellobiose	< 0.0001
Invertase / α-D-Glucosidase	sucrose	< 0.0001
α-D-Glucosidase	maltose	< 0.0001

4. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 5.5 and up to 40°C.

5. STORAGE AND USE CONDITIONS/RECOMMENDATIONS:

The enzyme is supplied as an ammonium sulphate suspension and should be stored at 4°C. For assay, this enzyme should be diluted in 100 mM sodium maleate buffer, pH 5.5 containing 0.5 mg/mL BSA. **Swirl to mix the enzyme suspension immediately prior to use.**