# GLUTAMINASE from *E. coli* (Lot 90601g)

***Recombinant***
**E-GLUTEC** **10/20**
(EC 3.5.1.2)

## PROPERTIES

**1. ELECTROPHORETIC PURITY:**
- Single band on SDS-gel electrophoresis (MW ~ 33,968)
- Single major band on isoelectric focusing (pI ~ 5.3)

**2. SPECIFIC ACTIVITY:**
**515 U/mg protein at pH 4.9 and 25°C;**
~ 1791 U/mg protein at pH 4.9 and 37°C.

**One Unit** of glutaminase is defined as the amount of enzyme required to deaminate one µmole of L-glutamine to L-glutamate + $NH_4^+$ under the following assay conditions:

| | |
|---|---|
| Sodium acetate buffer, pH 4.9 | 40 mM |
| L-Glutamine | 40 mM |

Liberated $NH_4^+$ was measured using the Ammonia (Rapid) Assay Kit (**K-AMIAR**). Refer to the Ammonia (Rapid) Assay Kit booklet at **www.megazyme.com**.

**3. OTHER ACTIVITIES (as a percentage of glutaminase activity):**

| Enzyme Measured | Substrate | Activity, % |
|---|---|---|
| Glutaminase | L-glutamine | 100 |
| NADH oxidase | NADH | < 0.0001 |
| NADPH oxidase | NADPH | < 0.0001 |

**4. CONTAMINANTS:**

| Impurities | Specification |
|---|---|
| Free Ammonium ($NH_4^+$) | < 0.001 µg/Unit |

**5. PHYSICOCHEMICAL PROPERTIES:**
Recommended conditions of use are at pH 4.9 and up to 37°C.

**6. STORAGE AND USE CONDITIONS/RECOMMENDATIONS:**
The enzyme is supplied as a lithium sulphate suspension and should be stored at 4°C. For assay, this enzyme should be diluted in 5 mM sodium acetate buffer, pH 4.9.
**Swirl to mix the enzyme suspension immediately prior to use.**