L-Glutamate Oxidase
from *Streptomyces* sp.

Product Number  G 0400
Storage Temperature  2-8 °C

**Product Description**
Molecular Weight:  140 kDa
Enzyme Commission (EC) Number:  1.4.3.11
CAS Number:  39346-34-4
Synonym:  glutamic acid oxidase

This product was originally derived from a species of *Streptomyces* that was isolated from soil near the city of Choshi, Japan. It is a lyophilized powder containing potassium phosphate buffer salts and lactose.

L-Glutamate Oxidase is a major enzyme in the synthesis or degradation of glutamic acid. It transfers an amine to α-ketoglutaric acid to form L-glutamic acid, or deamidates L-glutamic acid. Glutamate oxidase consists of two α chains, two β chains, and two γ chains of respective subunit molecular weights of about 44 kDa, 19 kDa and 9 kDa. It contains 2 moles of flavin adenine dinucleotide (FAD) per mole of enzyme. The pH range of this enzyme is from 4-10, with the pH optimum occurring in the range of 7.0 - 8.0.

Inhibitors of this enzyme include the following reagents:
- silver ion (Ag⁺)
- mercuric ion (Hg²⁺)
- 4-chloromercuribenzenzate
- 4-chloro-7-nitrobenzo-2-oxa-1,3-diazol
- N-bromosuccinimide

The immobilization of this enzyme to solid supports and membranes for the assay of L-glutamate has been reported. The immobilization of this enzyme to ultrathin and transparent NH₂-polymer films via L-ascorbic acid has been investigated.

**Precautions and Disclaimer**
For Laboratory Use Only. Not for drug, household or other uses.

**Preparation Instructions**
This product is soluble in cold 0.1 M potassium phosphate, pH 7.4 (2.3 mg/ml), yielding a clear, colorless to light brown solution.

**References**