

## Native Microbial Xanthine Oxidase

Cat. No. NATE-0733

Lot. No. (See product label)

### Introduction

**Description** Xanthine oxidase is a molybdenum-containing enzyme that is found in the cytosol, and may be strongly inhibited by flavonoids. It plays a vital role in the metabolism of some drugs, as well as purines and pyrimidines. It is also known to be a biological source of reactive oxygen species. Xanthine oxidase was shown to be involved in the reduction of cytochrome c by the generation of superoxide anions following the oxidation of xanthine. These free radicals are responsible for reducing cytochrome c.

**Applications** This enzyme is useful for enzymatic determination of inorganic phosphorus, 5'-nucleotidase and adenosine deaminase when coupled with Purine-nucleoside phosphorylase and uricase.

**Synonyms** Xanthine oxidase; XO; xanthine oxidoreductase; EC 1.17.3.2; 9002-17-9; XOD; Xanthine:oxygen oxidoreductase; hypoxanthine oxidase; hypoxanthine:oxygen oxidoreductase; Schardinger enzyme; hypoxanthine-xanthine oxidase; xanthine:O<sub>2</sub> oxidoreductase; xanthine:xanthine oxidase

### Product Information

**Source** Microbial

**Form** Lyophilized powder containing BSA and sodium glutamate as stabilizers

**EC Number** EC 1.17.3.2.

**CAS No.** 9002-17-9

**Molecular Weight** mol wt ~160 kDa

**Activity** > 7 units/mg solid

**pH Stability** pH 6.5-9.0 (25°C, 15hr)

**Optimum pH** 7.5-8.0

**Thermal stability** below 55°C (pH 8.0, 30min)

**Optimum temperature** 65°C

**Inhibitors** Reducing agents, Hg<sup>++</sup>, Ag<sup>+</sup>, MIA

**Unit Definition** One unit will convert 1.0 µmole of xanthine to uric acid per min at pH 7.5 at 25°C. Approx. 50% of the activity is obtained with hypoxanthine as substrate.

### Storage and Shipping Information

**Storage** -20°C