Creative Enzymes®

Native Zucchini Ascorbate Oxidase

Cat. No. NATE-1137

Lot. No. (See product label)

Introduction

Description	In enzymology, a L-ascorbate oxidase (EC 1.10.3.3) is an enzyme that catalyzes the chemical reaction:2 L-ascorbate + O2↔ 2 dehydroascorbate + 2 H2O. Thus, the two substRates of this enzyme are L-ascorbate and O2, whereas its two products are dehydroascorbate and H2O. This enzyme belongs to the family of oxidoreductases, specifically those acting on diphenols and related substances as donor with oxygen as acceptor. This enzyme participates in ascorbate metabolism. It employs one cofactor, copper.
Applications	AAO can be used in clinical tests for determining levels of ascorbic acid in blood or for the removal of interference effects caused by ascorbic acid in clinical analysis.
Synonyms	ascorbase; ascorbic acid oxidase; ascorbate oxidase; ascorbic oxidase; ascorbate dehydrogenase; L-ascorbic acid oxidase; AAO; L-ascorbate:O2 oxidoreductase; AA oxidase; EC 1.10.3.3; L-ascorbate oxidase

Product Information

Source	Zucchini
Appearance	Light tanish, brownish, greyish to blue green free flowing powder
EC Number	EC 1.10.3.3
CAS No.	9029-44-1
Molecular Weight	70kD
Activity	156 to 624 U/mg
Contaminants	Adenylate Kinase < 0.5 U/mg; Catalase < 0.096%; Glucose Oxidase < 0.002 U/mg; Cholesterol Oxidase < 0.002 U/mg; Lactate Oxidase < 0.002U/mg; Uricase < 0.002 U/mg
pH Stability	5.5 - 10.0
Optimum pH	5.5 to 6.0
Thermal stability	Stable at 50°C and below
Optimum temperature	45°C
Unit Definition	One unit of activity is defined as the amount of enzyme that will catalyse the oxidation of 1.0 micromole of ascorbic acid per minute at 37°C under the standard assay method conditions. Refer to Table 1 for guidance on factors to adjust units according to temperature of assay.