



Native Zucchini Ascorbate Oxidase

Product Information

Cat#	NATE-1137
Abbr	AAO, Native (Zucchini)
Alias	AAO
Similar	AAO
Source	Zucchini
Description	In enzymology, a L-ascorbate oxidase (EC 1.10.3.3) is an enzyme that catalyzes the chemical reaction: $2 \text{ L-ascorbate} + \text{O}_2 \leftrightarrow 2 \text{ dehydroascorbate} + 2 \text{ H}_2\text{O}$. Thus, the two substrates of this enzyme are L-ascorbate and O ₂ , whereas its two products are dehydroascorbate and H ₂ O. 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.
Appearance	Light tanish, brownish, greyish to blue green free flowing powder
Form	Freeze dried powder
Enzyme Commission Number	EC 1.10.3.3
Activity	> 100 units/mg protein
CAS No.	9029-44-1
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
Molecular Weight	70kD



Creative Enzymes

Diagnostic Enzymes

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pH Stability	5.5 - 10.0
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.
Optimum pH	5.5 to 6.0
Optimum temperature	45°C
Thermal stability	Stable at 50°C and below
Synonyms	ascorbase; ascorbic acid oxidase; ascorbate oxidase; ascorbic oxidase; ascorbate dehydrogenase; L-ascorbic acid oxidase; AAO; L-ascorbate:O ₂ oxidoreductase; AA oxidase; EC 1.10.3.3; L-ascorbate oxidase