

## Native Hansenula sp. Alcohol Oxidase

### Product Information

<b>Cat#</b>	NATE-0046
<b>Abbr</b>	Alcohol Oxidase, Native (Hansenula sp.)
<b>Alias</b>	alcohol oxidase; ethanol oxidase
<b>Similar</b>	Alcohol Oxidase
<b>Source</b>	Hansenula sp.
<b>Description</b>	In enzymology, an alcohol oxidase (EC 1.1.3.13) is an enzyme that catalyzes the chemical reaction: a primary alcohol + O <sub>2</sub> ↔ an aldehyde + H <sub>2</sub> O <sub>2</sub> . Thus, the two substrates of this enzyme are primary alcohol and O <sub>2</sub> , whereas its two products are aldehyde and H <sub>2</sub> O <sub>2</sub> . This enzyme belongs to the family of oxidoreductases, specifically those acting on the CH-OH group of donor with oxygen as acceptor. It employs one cofactor, FAD.
<b>Applications</b>	Alcohol oxidase is used to catalyze the oxidation of short-chain, primary, aliphatic alcohols to their respective aldehydes. It may be used to study methanol metabolism in yeasts, such as Candida, Pichia, and Hansenula. It is useful to study protein translocation into peroxisomes.
<b>Form</b>	vacuum-dried powder
<b>Enzyme Commission Number</b>	EC 1.1.3.13
<b>Activity</b>	> 0.6 units/mg solid
<b>CAS No.</b>	9073-63-6
<b>Molecular Weight</b>	~600 kDa
<b>pH Stability</b>	pH Range: 5.5-8.5
<b>Unit Definition</b>	One unit will oxidize 1.0 μmole of methanol to formaldehyde per min at pH 7.5 at 25°C.
<b>Optimum pH</b>	8.5

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<b>Stability</b>	-20°C
<b>Inhibitors</b>	1,4-butyne-1,3-diol (irreversible), propargyl alcohol (irreversible), cyclopropanol, cyclopropanone (suicide substrate), formaldehyde, H <sub>2</sub> O <sub>2</sub> , hydroxylamine, KBr, KCN, methanol (substrate inhibitor), NaN <sub>3</sub> , PCMB, propynal, urea, 4-chloromercuribenzoic acid
<b>Synonyms</b>	EC 1.1.3.13; 9073-63-6; alcohol oxidase; ethanol oxidase; Alcohol:oxygen oxidoreductase