

## Native Leuconostoc mesenteroides Mannitol Dehydrogenase

Cat. No. NATE-0435

Lot. No. (See product label)

## Introduction

Description	In enzymology, a mannitol 2-dehydrogenase (EC 1.1.1.67) is an enzyme that catalyzes the chemical
	reaction:D-mannitol + NAD+ $\leftrightarrow$ D-fructose + NADH + H+. Thus, the two substrates of this enzyme are D-
	mannitol and NAD+, whereas its 3 products are D-fructose, NADH, and H+. This enzyme belongs to the
	family of oxidoreductases, specifically those acting on the CH-OH group of donor with NAD+ or NADP+ as
	acceptor. This enzyme participates in fructose and mannose metabolism.

- Applications This preparation is useful in the determination of mannitol in urine. Can be used for the production of Dmannitol. It has been used in a study to assess glucosylglycerol and glucosylglycerate as enzyme stabilizers.
- mannitol dehydrogenase; D-mannitol dehydrogenase; mannitol dehydrogenase; mannitol 2-Synonyms dehydrogenase; EC 1.1.1.67; 9001-65-4

## **Product Information**

Source	Leuconostoc mesenteroides
Form	Lyophilized powder containing buffer salts, potassium phosphate, and dithiothreitol
EC Number	EC 1.1.1.67
CAS No.	9001-65-4
Molecular Weight	136 kDa
Activity	> 60 units/mg protein
Unit Definition	One unit will reduce 1.0 $\mu$ mole of D-fructose per min in the presence of NADH at pH 5.3 at 30°C. One unit of enzyme, as defined above, is equivalent to approximately 1.8 units of enzyme, as described by Lunn et al., one unit will oxidize 1.0 $\mu$ mole of D-mannitol per min in the presence of NAD at pH 8.6 at 40°C.

## Storage and Shipping Information

-20°C Storage