



MANNITOL DEHYDROGENASE from *P. fluorescens* (Lot 111202a)

Recombinant - Low K_m

E-MNHFP

10/19

(EC 1.1.1.67) D-mannitol:NAD⁺ 2-oxidoreductase

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 56,661)
- Single major band on isoelectric focusing (pI ~ 5.5)

2. SPECIFIC ACTIVITY:

43 U/mg protein on D-mannitol at pH 8.6 and 25°C.

One Unit of mannitol dehydrogenase is defined as the amount of enzyme required to produce one μ mole of NADH from NAD⁺ under the following assay conditions:

Tris.HCl buffer, pH 8.6	64 mM
BSA	0.8 mg/mL
D-Mannitol	5.2 mM
NAD ⁺	2.3 mM

3. OTHER ACTIVITIES (as a percentage of mannitol dehydrogenase activity):

Substrate	%
D-Mannitol	100
D-Arabitol	~ 55.7
Sorbitol	~ 2.0
Xylitol	n.d.
Glycerol	n.d.

n.d. = not detected

4. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 8.6 and up to 40°C.

5. STORAGE AND USE CONDITIONS/RECOMMENDATIONS:

The enzyme is supplied as an ammonium sulphate suspension and should be stored at 4°C. For assay, this enzyme should be diluted in 1 mg/mL BSA. **Swirl to mix the enzyme suspension immediately prior to use.**