ALCOHOL DEHYDROGENASE from *E. coli* (Lot 51101a)

Recombinant - Low K_m

E-ADHEC 10/11
(EC 1.1.1.1)

PROPERTIES

1. ELECTROPHORETIC PURITY

- Single band on SDS-gel electrophoresis (MW ~ 38,642)
- Single major band on isoelectric focusing (pI ~ 6.6)

2. SPECIFIC ACTIVITY

7.9 U/mg protein at pH 8.5 and 25°C.

One Unit of alcohol dehydrogenase is defined as the amount of enzyme required to produce one µmole of NADH from NAD^+ under the following assay conditions:

Potassium pyrophosphate buffer, pH 8.5	86 mM
Ethanol	583 mM
NAD^+	2 mM

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

Enzyme measured	Substrate	Activity, %
Alcohol dehydrogenase	ethanol	100
Lactate dehydrogenase	pyruvic acid	< 0.01
Myokinase	AMP	< 0.01
NADH oxidase	NADH	< 0.001

4. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 8.5 and up to 25°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.**

Do not store the enzyme in presence of sodium azide.

Low Km for ethanol: due to the low Km of this enzyme, only 3 units are required per assay (TV = 2.54 mL) as opposed to 177 units of the yeast enzyme.