CATALASE from Aspergillus niger (Lot 160801c)

Non-recombinant
E-CATLQ 05/20
(EC 1.11.1.16) hydrogen-peroxide:hydrogen-peroxide oxidoreductase
CAS: 9001-05-2

PROPERTIES

1. ELECTROPHORETIC PURITY:
   - Two major and two minor bands on SDS-gel electrophoresis (MW ~ 96,000 kDa), native protein exists as a tetramer[1].
   - One major band on isoelectric focusing (pI ~ 6.8).

2. SPECIFIC ACTIVITY:
   4,961 U/mg protein (using A_{240} method) at pH 7.0 and 25°C;
   One Unit of catalase activity will decompose 1 micromole of H_{2}O_{2} per minute at pH 7.0 and 25°C, while the H_{2}O_{2} concentration falls from 10.3 mM to 9.2 mM. The rate of disappearance of H_{2}O_{2} is followed by observing the rate of decrease in the absorbance at A_{240}.
   ~ 24,000 U/mg protein (using K-CATAL test kit method) at pH 7.0 and 25°C;
   One Unit of catalase activity is defined as the amount of enzyme required to form 1 micromole of H_{2}O_{2} per minute at pH 7.0 and 25°C at a substrate concentration of 75 mM H_{2}O_{2}.

3. SPECIFICITY:
   Decomposition of hydrogen peroxide into water and oxygen.

4. PHYSICOCHEMICAL PROPERTIES:
   Recommended conditions of use are at pH 6.5-7.5 and up to 45°C [2]
   pH Optima: 7.0 [2]
   Temperature Optima: 35 [2]
   Temperature Stability: 65 [2]

5. STORAGE CONDITIONS:
   The enzyme is supplied as an ammonium sulphate suspension and should be stored at 4°C. For assay, this enzyme should be diluted in potassium phosphate buffer (150 mM), pH 7.0. Swirl to mix the enzyme immediately prior to use.

6. REFERENCES: