

FUJIFILM

Wako

Code No. 035-12903 (100 mg)
039-12901 (1 g)

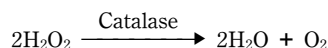
Catalase, from Bovine Liver

カタラーゼ, ウシ肝臓由来

Source : Bovine liver
Appearance : Lyophilized powder
Activity : Indicated on the label
Molecular Weight : 240,000

Assay method

1. Principle



2. Reagents

- A. 0.05 mol/L Phosphate buffer, pH 7.0
B. ca. 0.2% H_2O_2
Dilute 0.3 mL of 30% H_2O_2 to 50 mL with Reagent A.
The absorbance (240 nm) of (2 mL of Reagent A + 1 mL of Reagent B) should be 0.85 ± 0.01 .
C. Enzyme solution
Dissolve this Catalase in Reagent A to concentration of 0.00008 mg/mL.

Trans *

2. 試薬

- A. 0.05 mol/L リン酸緩衝液、pH 7.0
B. 約 0.2% H_2O_2
30% H_2O_2 0.3 mL を A 液で希釈し、50 mL にする。なお、(A 液 2 mL + B 液 1 mL の吸光度 (240 nm) は、 0.85 ± 0.01 であること。)
C. 酵素溶液
本品を A 液で溶解させ、0.00008 mg/mL にする。

3. Procedure

Reagent	Test	Control
A	—	2.0 mL
B	1.0 mL	1.0 mL
Preincubate for 5 minutes at 25 °C		
C	2.0 mL	—

Measure the absorbance change at 240 nm of wavelength between first 1 and 4 minutes at 25 °C. Calculate the change per minute, ΔA .

Trans *

25 °C で、1~4 分後の波長 240 nm における吸光度変化を測定し、1 分間当たりの吸光度変化 ΔA を求める。

4. Unit Definition

One unit is the amount of enzyme, which will cause the decomposition of 1 μmol of hydrogen peroxide per minute at 25 °C under the above conditions.

(Calculation)

$$\text{Units/mg} = (\Delta A_{\text{test}} - \Delta A_{\text{control}}) \times \frac{1}{0.0436} \times \frac{3.0}{2.0} \times \frac{1}{0.00008}$$

0.0436 : Milli-molar extinction coefficient of hydrogen peroxide
3.0 : Total volume (mL)
2.0 : The used enzyme solution (mL)

Trans *

4. 単位の定義

前記の条件下、25 °C、1 分間に 1 μmol の過酸化水素が分解される酵素量を 1 unit とする。

(計算)

$$\text{Units/mg} = (\Delta A_{\text{test}} - \Delta A_{\text{control}}) \times \frac{1}{0.0436} \times \frac{3.0}{2.0} \times \frac{1}{0.00008}$$

0.0436 : 過酸化水素のミリモル吸光係数
3.0 : 総液量 (mL)
2.0 : 酵素溶液使用量 (mL)

[**Storage**] Store at -20°C .

[**Package**]

Code No	Packaging
035-12903	100 mg
039-12901	1 g

[**Reference**]

- 1) Sumner, J. B. and Dounce, A. L. : *J. Biol. Chem.*, **121**, 417 (1937).

* : **Trans** is the Japanese translation.

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