



# T4 DNA Polymerase

Code No. TPL-101

Lot No. \*\*\*\*\*

Storage Store at -20°C

Size 100units

Source : *Escherichia coli* B infected with phage T4.

Reaction :  $\text{DNA}_{\text{OH}} + \text{ndNTP} \rightarrow \text{DNA}(\text{pdN})_n + \text{nPPi}$

Concentration : \*\*\* units/ $\mu\text{l}$

Unit Definition : One unit is the amount of enzyme activity that incorporates 10 nmoles of dNTP into acid precipitable material in 30 minutes at 37°C.

Assay Condition : 67 mM Tris-HCl(pH8.8)  
6.7 mM  $\text{MgCl}_2$   
16.6 mM  $(\text{NH}_4)_2\text{SO}_4$   
10 mM 2-mercaptoethanol  
6.7  $\mu\text{M}$  EDTA  
33  $\mu\text{M}$  dATP, dCTP, and dGTP  
33  $\mu\text{M}$  ( $^3\text{H}$ )-dTTP  
0.2 mM Mung Bean Nuclease digested and denatured calf thymus DNA  
167  $\mu\text{g/ml}$  Bovine serum albumin

Storage Buffer 200 mM  $\text{KPO}_4$ (pH6.5)  
2 mM DTT  
50 % Glycerol

10 × T4 DNA Polymerase Buffer : 500 mM Tris-HCl(pH8.5)  
70 mM  $\text{MgCl}_2$   
150 mM  $(\text{NH}_4)_2\text{SO}_4$   
5 mM DTT  
1 mM EDTA

## Contaminant Assay

1. Non-specific Endonuclease : After incubation of 1  $\mu\text{g}$  of closed circular pBR 322 DNA with \*\*\* units of this enzyme for \*\*\* hours at 37°C, no relaxing of the supercoiled structure is observed after agarose gel electrophoresis.



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