

# T4DNA 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	MgCl <sub>2</sub>
16.6	mM	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>
10	mM	2-mercaptoethanol
6.7	$\mu\text{M}$	EDTA
33	$\mu\text{M}$	dATP,dCTP, and dGTP
33	$\mu\text{M}$	( <sup>3</sup> 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	KPO <sub>4</sub> (pH6.5)
2	mM	DTT
50	%	Glycerol

Enzyme Dilution Buffer :

50	mM	Tris-HCl(pH7.5)
100	mM	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>
10	mM	2-mercaptoethanol
1	mg/ml	Bovine serum albumin

10 × T4 DNA Polymerase Buffer :

500	mM	Tris-HCl(pH8.5)
70	mM	MgCl <sub>2</sub>
150	mM	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>

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.