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## DATA QUALITY SHEET

### Taq DNA Polymerase

**Description:** Purified from *E.coli* strain carrying plasmid with the cloned gene encoding *Thermus aquaticus* DNA polymerase. *Taq* DNA polymerase catalyses 5'->3' synthesis of DNA. The enzyme has no detectable 3'->5' proofreading exonuclease activity, but possesses low 5'->3' exonuclease activity.

**Unit Definition:** One unit of enzyme catalyses incorporation of 10 nanomoles of deoxyribonucleotides into acid-insoluble polynucleotide fraction in 30 min at 74°C.

**Activity assay:** 50 mM Tris-HCl (pH 9.0 at 25°C), 50 mM NaCl, 10 mM MgCl<sub>2</sub>, 200 μM dATP, 200 μM dCTP, 200 μM dGTP, 50 μM [<sup>3</sup>H] dTTP, 0,25 mg/ml activated calf thymus DNA.

**Storage conditions:** -20° C in 50 mM Tris-HCl (pH 8.0 at 25°), 50 mM NaCl, 0.1 mM EDTA, 1 mM DTT, 50% glycerol and 1% triton X-100.

**Quality control:** Endo-, exodeoxyribonucleases, ribonucleases free.

**Applications:**

- ❖ Amplifications of DNA fragments by polymerase chain reaction (PCR) (1).
- ❖ DNA labelling with radionucleotides, digoxigenin or biotin(2,3).
- ❖ DNA sequencing (4).

**References**

1. Innis,M.A., Gelfand, D.H. and White, T.J., PCR Protocols and Applications: A Laboratory Manual, Academic, New York, 1989.
2. Celeda, D., Bettag, U and Cremer, Ch., BioTechniques, 12, 89-102, 1992.
3. Finckh, U., Lingenfelter, P.A., Myerson, D., BioTechniques, 10, 35-39, 1991.
4. Innis, M.A., Myambo, K.B., Gelfand, D.H. and Brow, M.A.D., Proc. Natl. Acad. Sci. USA, 85, 9436-9440, 1988.