BIOSAN,
Injenernaya Str., 28
630090, Novosibirsk, Russia
tel.: +7(383) 363-51-91, 363-22-40
fax: +7(383) 363-51-91
mail@biosan-nsk.ru
www.biosan-nsk.ru

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^{o}C.
Activity assay: 50 mM Tris-HCl (pH 9.0 at 25^{o}C), 50 mM NaCl, 10 mM $MgCl_2$, 200 μM dATP, 200 μM dCTP, 200 μM dGTP, 50 μM [^{3}H] dTTP, 0,25 mg/ml activated calf thymus DNA.
Storage conditions: -20^{o} 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, digoxygenin or biotin(2,3).
- DNA sequencing (4).

References

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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.