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# DATA QUALITY SHEET

## Hot Start Taq DNA Polymerase

***Description:*** Hot Start Taq DNA Polymerase is the optimized mixture of Taq Polymerase and Anti-Taq monoclonal antibodies. Antibodies block polymerase activity during set-up of the PCR reactions at ambient temperature (20-22 °C). The inhibition of Taq DNA polymerase is completely reversed when the temperature is above 70 °C. The PCR products obtained with Hot Start Taq DNA Polymerase are free from unspecific products and from primer-dimers.
Features:

- reliable and reproducable quantification in qPCR
- perfect for real time PCR
- especially for diagnostic purposes
- reaction set-up at room temperature
- activation of enzyme during first heating
- no change or optimization of protocol necessary
- high specifity, reduced primer mismatch or dimers

Applications:

- Hot start PCR
- Real time PCR
- Amplification of complex genomic and cDNA templates
- Multiplex PCR
- High specifity PCR

Concentration 5 U/µl.

***Unit Definition:*** One unit of enzyme catalyses incorporation of 10 nanomoles of deoxyribonucleotides into acid-insoluble polynucleotide fraction in 30 min at 70°C.

***Activity assay:*** 50 mM Tris-HCl (pH 8.0 at 25°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° 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.