

## DATA QUALITY SHEET



### **BioTherm DNA Polymerase**

FOR RESEARCH USE ONLY

*Cat. GC-002-0100, GC-002-0250, GC-002-0500, GC-002-1000, GC-002-5000*

<b>DESCRIPTION</b>	BioTherm (Biotaq) DNA polymerase is a thermostable DNA polymerase purified from the <i>Thermus aquaticus</i> strain. Amplification of DNA fragments (100bp to 10000bp) can be achieved with this enzyme. This enzyme has both 5'-3' polymerase and 5'-3' exonuclease activities.
<b>CONCENTRATION</b>	5 units/ $\mu$ l.
<b>UNIT DEFINITION</b>	One unit is defined as the amount of enzyme that incorporates 10 nmoles of dNTP's into acid-insoluble form in 30 minutes at 72°C under the assay conditions (25 mM TAPS (tris-(hydroxymethyl)-methyl-amino-propanesulfonic acid, sodium salt) pH 9.3 (at 25°C); 50 mM KCl; 2 mM MgCl <sub>2</sub> ; 1 mM $\beta$ -mercaptoethanol) and activated calf thymus DNA as substrate.
<b>STORAGE BUFFER</b>	10 mM K-phosphate buffer pH 7.0, 100 mM NaCl, 0,5 mM EDTA, 1 mM DTT, 0,01% Tween 20, 50% glycerol (v/v).
<b>REACTION BUFFER</b>	Reaction buffer (10x): 160 mM (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> , 670 mM Tris-HCl (pH 8,8 at 25°C), 15 mM MgCl <sub>2</sub> , 0,1% Tween-20.
<b>STORAGE TEMPERATURE</b>	Store BioTherm Polymerase below 0°C preferably at -20°C, in a constant temperature freezer.
<b>ASSOCIATED ACTIVITIES</b>	Endonuclease and exonuclease activities were not detectable after 2 and 1 hours incubation, respectively, of 1 $\mu$ g lambda DNA and 0.22 $\mu$ g of EcoRI digested lambda DNA, respectively, at 72°C in the presence of 15-20 units of BioTherm Polymerase.
<b>FUNCTIONAL ANALYSIS</b>	Tested functionally in a unit activity test.