

## DATA QUALITY SHEET



### **Synergy DNA Polymerase**

FOR RESEARCH USE ONLY

*Cat. GC-005-0100, GC-005-0250, GC-005-0500, GC-005-1000, GC-005-5000*

<b>DESCRIPTION</b>	Synergy is a mix of thermostable components possessing 5'-3' DNA polymerase activity (KlenTherm™) and 3'-5' proof-reading activity (AccuTherm™). These components are optimized to achieve amplification of 35 kb or 10 kb products from lambda templates or genomic DNA, respectively. A mixture of KlenTherm™ with AccuTherm™ provides more robust synthesis of longer amplification products (Barnes, 1994. Proc. Natl. Acad. Sci. USA 91:2216-2220).
<b>CONCENTRATION</b>	10 units/μl.
<b>UNIT DEFINITION</b>	One unit is defined as the amount of enzyme that incorporates 10 nmoles of dNTPs 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 β-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 9,1; 8% Glycerol, 2% DMSO, 35 mM MgCl <sub>2</sub>
<b>STORAGE TEMPERATURE</b>	Store Synergy Polymerase below 0°C preferably at -20°C, in a constant temperature freezer.
<b>APPLICATION</b>	- Very Long and accurate PCR
<b>SHELF LIFE</b>	3 years from date of receipt under proper storage conditions.
<b>QUALITY CONTROL</b>	Activity, SDS-PAGE purity, absence of endonucleases/ nickases and exonucleases.