DATA QUALITY SHEET

BioThermPlus DNA Polymerase

FOR RESEARCH USE ONLY

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

DESCRIPTION

BioThermPlus™ DNA Polymerase is designed for maximum PCR success. It is a blend of BioTherm™ DNA Polymerase and AccuTherm™ DNA Polymerase which allows amplification of longer templates with greater success and higher yields than either enzyme component alone. Together with a optimized buffer BioThermPlus™ DNA Polymerase provides the highest success rate of any PCR enzyme or enzyme blend. The enzyme formulation produces high PCR product yield from a wide variety of templates up to 10 kb. It´s also provides superior sensitivity by amplifying samples where starting material is limited.

CONCENTRATION

5 units/µl.

UNIT DEFINITION

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 $MgCl_2$; 1 mM β-mercaptoethanol) and activated calf thymus DNA as substrate.

STORAGE BUFFER

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)

REACTION BUFFER

160 mM (NH 4) 2 SO 4 , 670 mM Tris-HCl pH 8.8 (at 25°C), 15 mM MgCl 2 , 0.1% Tween 20
The 10x reaction buffer (on request with or without $MgCl_2$) is delivered free of charge.

STORAGE TEMPERATURE

Store BioTherm Polymerase below 0°C preferably at -20°C, in a constant temperature freezer.

ASSOCIATED ACTIVITIES

Endonuclease and exonuclease activities were not detectable after 2 and 1 hours incubation, respectively, of 1 µg lambda DNA and 0.22 µg of EcoRI digested lambda DNA, respectively, at 72°C in the presence of 15-20 units of BioTherm Polymerase.

SHELF LIFE

2 years from date of receipt under proper storage conditions.

FUNCTIONAL ANALYSIS

Tested functionally in a unit activity test.