



**Product Insert**  
**BIOTAQ™ DNA Polymerase**  
 Research Use Only

**Product:**  
 BIOTAQ™ DNA Polymerase

**Description:**  
 BIOTAQ™ DNA Polymerase is a thermostable DNA polymerase purified from *Thermus aquaticus* (1). BIOTAQ™ offers consistent results across a wide range of assays. BIOTAQ™ leaves an A' overhang such that the primer extension product is suitable for effective integration into TA cloning vectors.

**Catalogue No:**  
 BIO-21040                    500 u  
 BIO-21060                    2500 u

**Batch details:**  
 Batch No:                    See vial  
 Units per vial:              See vial  
 Concentration:              5 u/μl

**Additional reagents supplied:**  
 10x NH<sub>4</sub> Reaction Buffer: 160mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 670mM Tris-HCl (pH 8.8 at 25°C), 0.1% Tween-20.

**MgCl<sub>2</sub> Stock Solution:** 50mM MgCl<sub>2</sub> (suggested final concentration 1.5mM - 4mM).

**Reaction Conditions (for a 50μl volume)**

10x NH <sub>4</sub> Buffer	5 μl
50mM MgCl <sub>2</sub> Solution	1.5 – 4.0 μl
100mM dNTP Mix (see below)	0.5 - 1.0 μl
Template and Primers	as required
Enzyme	0.5 – 1.0 μl
Water (ddH <sub>2</sub> O)	up to 50 μl

Bioline 100mM dNTP Mix is available as a separate product (Catalogue number BIO-39028)

Denature: 94-96°C  
 Elongate : 70-72°C (allowing 15-30 seconds/ kb)

This data is intended for use as a guide only; conditions will vary from reaction to reaction and may need optimisation.

**Specificity and Performance** of the BIOTAQ™ DNA Polymerase can be increased with the use of **2x Poly-Mate** (not supplied, see associated products), which is designed for GC- or AT-rich DNA, "dirty" templates or sequences with difficult melting profiles.

**Storage conditions:**  
 BIOTAQ™ DNA Polymerase can be stored at -20°C, in a constant temperature freezer for 12 months. BIOTAQ™ will remain stable if stored as specified.

**Storage conditions of 10x NH<sub>4</sub> Buffer:** Repeated freeze-thaw cycles will affect the stability of Buffer. The Buffer will remain stable at +4°C for a minimum of one month.

**Storage buffer:** 20mM Tris-HCl, pH 7.5, 100mM NaCl, 0.1mM EDTA, 2mM DTT, 50% Glycerol and 0.1% Tween-20.

**Shipping conditions:**  
 Product is shipped at +4°C or -20°C. However, due to high stability features, trial samples are shipped at room temperature and we recommend usage of trial sample within the following 3-4 weeks.

**Unit definition**  
 One unit is defined as the amount of enzyme that incorporates 10nmoles of dNTPs into acid-insoluble form in 30 minutes at 72°C.

**Associated activities**  
 Endonuclease and exonuclease activities were not detectable after 2 and 1 hour incubations, respectively, of 1μg lambda DNA and 0.22 μg of *EcoR* I-digested lambda DNA at 72°C in the presence of 15-20 units of BIOTAQ DNA polymerase.

Associated products			
Product Name	Pack Size	Cat No	
dNTP Set	4 x 25μmol	BIO-39025	
dNTP Mix	100 mM total 40 mM total	1 x 500 μl 1 x 500 μl	BIO-39028 BIO-39043
2x Poly-Mate Additive	2 x 1.2ml	BIO-37041	
Immolase DNA polymerase	250 units 500 units	BIO-21046 BIO-21047	
Hyper Ladder I	200 lanes 500 lanes	BIO-33025 BIO-33026	
Agarose	500g	BIO-41025	

**References:** (1) Kaledin, A.S., Slyuisarenko, A.G. and Gorodetskii, S.I. (1981) *Biokhimiya* **46**, 1576

Note: This product is supplied for use in primer extension reactions. Purchase of this product does not convey a licence to perform any patented process.

**BIOTAQ is a Trademark of Bioline**

**This product contains a declaration of analysis at the time of manufacture**