dNTP N	Mix	
hipping: On Dry/Blue Ice	Catalog numbers	-
atch No.: See bottle	BIO-39044: 10 μmol	10mM total 1 x 1 mL
	BIO-39043: 20 µmol	40mM total 1 x 500 $\mu L$
	BIO-39028: 50 μmol	100mM total 1 x 500 $\mu L$
	BIO-39029: 200 μmol	100mM total 4 x 500 $\mu L$
	BIO-39053: 100 μmol	10mM total 10 x 1 mL
BIOLINE	Store at –20	0°C

# Storage and stability:

dNTP Mix is shipped on dry/blue ice. On arrival store at -20°C for optimum stability. Repeated freeze/thaw cycles should be avoided. For long-term storage, aliquoting is recommended.

#### Expiry:

When stored under the recommended conditions and handled correctly, quality is retained until the expiry date on the outer box label.

#### Safety precautions:

Please refer to the material safety data sheet for information.

#### Quality control specifications:

dNTP Mix is extensively tested for contamination prior to release. dNTPs are >99% pure by HPLC and are free of DNase, RNase, Protease, phosphatase and nicking activity. Lithium salts, >99% deoxynucleoside triphosphates (HPLC, area %), <1% deoxynucleoside monophosphates and deoxynucleoside diphosphates.

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## Description

A ready-to-use molecular grade dNTP Mix containing dATP, dCTP, dGTP and dTTP at pH 7.5 as lithium salts in purified water. The mix is designed to save hands-on time for researchers and minimize the possibility of contamination. For use in DNA polymerization reactions, DNA labeling and sequencing processes. Dependable PCR grade.

All Bioline dNTPs are supplied as lithium salts in purified water at pH 7.5. Lithium salts have greater resistance to repeated freezing and thawing cycles than sodium salts, and lithium salt dNTP preparations remain sterile over the entire shelf-life due to the bacteriostatic activity of lithium towards various microorganisms.

This reagent has been manufactured under 13485 Quality Management System and is suitable for further manufacturing use as an IVD component.

#### Features

- Convenient, pre-optimized and pre-mixed
- Ultra-pure: >99% trisphosphate by HPLC
- Extended shelf-life of 24 months at -20°C
- Free from PCR inhibitors
- DNase, RNase and Nickase free
- Manufactured by Bioline in a purpose-built facility

## **dNTP** Characteristics

dNTPs	Mol. Wt	Molar Extinction(1µmol)
dATP	514.9	15.4 (A <sub>259</sub> )
dGTP	530.9	13.7 (A <sub>252</sub> )
dCTP	490.9	9.1 (A <sub>272</sub> )
dTTP	505.9	9.6 (A <sub>267</sub> )

## **dNTP Mix Reaction Guidelines**

100 mM Mix contains 25 mM of each dNTP		
Reaction Volume	Master Mix	Reactions
50 µL	0.5 µL	1000

40 mM Mix contains 10 mM of each dNTP		
Reaction Volume	Master Mix	Reactions
50	1.25	400

50 µL	1.25 µL	400
10 mM Mix contai	ins 2.5 mM of e	ach dNTP
Reaction Volume	Master Mix	Reactions

 $50 \,\mu\text{L}$   $5.0 \,\mu\text{L}$  200

This is a guide only, for long-range applications adjust accordingly.

Bioline Ltd UNITED KINGDOM Bioline USA Inc. USA

Tel: +44 (0)20 8830 5300 Fax: +44 (0)20 8452 2822 Tel: +1 508 880 8990 Fax: +1 508 880 8993

#### **Applications**

- Standard and long range PCR assays
- cDNA synthesis
- qPCR
- Microarrays
- DNA sequencing
- Labeling

#### **Associated products**

Product Name	Pack Size	Catalog No.
HyperLadder™ 1kb	200 Lanes	BIO-33025
MyTaq™ DNA polymerase	200 Units	BIO-21105
VELOCITY DNA polymerase	250 Units	BIO-21098

#### **Product citations**

- 1. Karbanowicz, T., et al. Toxicon 140 1-10 (2017).
- Dnyaneshwar, R. et al. Med. Microbio. & Immunol. 205 (5),435 -447 (2016).
- 3. Hirst, C. S., et al. PloS one, 10 (3), e0123436 (2015).
- 4. Ferraz-de-Souza, B., et al. FASEB J. 25, 1166-1175 (2011).
- 5. Hogan, C.J., et al. Mol. Cell. Biol. 30, 657-674 (2010).
- 6. Hampson, L., et al. FEBS Lett. 581(21), 3955-3960 (2007).
- 7. Tayeb, M.T., et al. Br. J. Can. 88, 928-932 (2003).
- 8. Charlton, K.A., et al. J. Immunol. 164, 6221-6229 (2000).

Bioline GmbH GERMANY Bioline (Aust) Pty. Ltd AUSTRALIA

Tel: +49 (0)33 7168 1229 Fax: +49 (0)33 7168 1244 Tel: +61 (0)2 9209 4180 Fax: +61 (0)2 9209 4763