

# dNTP Mix

Shipping: On Dry/Blue Ice	Catalog numbers
Batch No.: See bottle	BIO-39044: 10 µmol 10mM total 1 x 1 mL
	BIO-39043: 20 µmol 40mM total 1 x 500 µL
	BIO-39028: 50 µmol 100mM total 1 x 500 µL
	BIO-39029: 200 µmol 100mM total 4 x 500 µL
	BIO-39053: 100 µmol 10mM total 10 x 1 mL



A Meridian Life Science® Company

Store at -20°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 mono-phosphates and deoxynucleoside diphosphates.

## 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

## Applications

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

## 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> )

## 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

### 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 µL	1.25 µL	400

#### 10 mM Mix contains 2.5 mM of each dNTP

Reaction Volume	Master Mix	Reactions
50 µL	5.0 µL	200

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

## Product citations

1. Karbanowicz, T., *et al.* *Toxicol* **140** 1-10 (2017).
2. 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).

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