



BIOTOOLS
BIOTOOLS B&M LABS.S.A.

C/ Valle de Tobalina, 52 - Nave 39 E-28021 Madrid (Spain)
Tel: (34) 91 710 00 74 Fax: (34) 91 505 31 18
e-mail: info@biotools.eu

BIOTOOLS dNTPs

Individual Deoxynucleotide Triphosphate Separate Solutions

dATP, dCTP, dGTP, dTTP

STORE AT -20°C

Description

BIOTOOLS dNTPs consists in separate individual solutions of the four deoxynucleotide triphosphate dATP, dACTP, dGTP, dTTP in pure water pH 7.0. The individual dNTP can be supplied at two concentrations; 10 mM or 100 mM. The dNTPs can be mixed using the four vials in a set (dATP, dCTP, dGTP, dTTP), or using only the required dNTPs (depending on the remaining dNTP to be included in the reaction as a labelled / modified form).

This individual dNTP format allows flexibility in preparation of dNTP mixtures for different applications, standard or specialised, where deoxynucleotide triphosphates are necessary for the synthesis of new DNA strands e.g. PCR, RT-PCR, DNA sequencing, DNA labelling, etc. Each dNTP can be diluted and mixed with other dNTPs to the desired user concentration.

The recommended concentration for amplification reactions is about 50-500 μM each dNTP, being the most commonly used dNTP concentration 200 μM . An increase in the concentration of dNTPs should be accompanied by an increase of the concentration of MgCl_2 , because high concentrations of dNTPs behave as potent Mg^{2+} chelating agent reducing therefore the availability of free Mg^{2+} for polymerase activity.

For amplification of DNA fragments less than 3 Kb in length do not use concentrations higher than 200 μM (each). Long amplifications, on the other hand, require higher concentrations of dNTPs, namely in the range 300-500 μM (each), as well as special DNA polymerase combinations.

Each Lot of BIOTOOLS dNTPs is tested under strict conditions to ensure Lot quality and Lot-to-Lot reproducibility.

For experiments using only some of the separate dNTPs vials (e.g. labelling reactions), we recommend following the procedure hereby indicated:

1. Mix in a sterile vial the required individual dNTPs.
2. Add an equimolar concentration of the labelled/modified dNTP. For diluting the dNTPs you can use sterile bidistilled water.
3. It is important that all dNTPs in a reaction mixture would be at an equimolar concentration, in order to avoid misincorporations. If the molar concentration of the labelled/modified dNTP is lower, supplement with unlabelled dNTP of the same nature (e.g. if 1 μmol of labelled dATP is added, in a solution containing 4 μmol of dCTP, 4 μmol of dGTP and 4 μmol of dTTP, add 3 μmol of unlabelled dATP).

Storage Conditions

Store at -20°C in a constant temperature freezer. Do not freeze/thaw repeatedly, for a frequent use aliquot vial content.

Order Information

<u>Cat. No.</u>	<u>Product</u>
20.031	dNTP Mix- Desoxynucleotides Triphosphate Solution, 10 mM final concentration (250 μl)
20.037	dNTP Mix- Desoxynucleotides Triphosphate Solution, 10 mM final concentration (2 x 250 μl)
20.038	dNTP Mix- Desoxynucleotides Triphosphate Solution, 10 mM final concentration (4 x 250 μl)
20.039	dNTP Mix- Desoxynucleotides Triphosphate Solution, 25 mM final concentration (250 μl)
20.131	dATP, 10 mM (250 μl)
20.132	dCTP, 10 mM (250 μl)
20.133	dGTP, 10 mM (250 μl)
20.134	dTTP, 10 mM (250 μl)
20.135	dATP, 100 mM (250 μl)
20.136	dCTP, 100 mM (250 μl)
20.137	dGTP, 100 mM (250 μl)
20.138	dTTP, 100 mM (250 μl)

Notice to buyers/users:

Some of the applications which may be performed with this product are covered by applicable patents in certain countries. The purchase of this product does not include or provide a license to perform patented applications. Users may be required to obtain a license depending on the country and/or application.