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BIOTOOLS dNTPs

Individual Deoxynucleotide Triphosphate Solutions

dATP, dCTP, dGTP, dTTP

Store at -20ºC

Description

Biotools dNTPs consists of aqueous solution (100 mM or 10 mM) of dATP, dCTP, dGTP, or dTTP, supplied in a separate vial. The individual dNTPs can be mixed using the four components in a set (dATP, dCTP, dGTP, and dTTP), or using only the required dNTP.

The individual dNTPs format provides flexibility in preparation of mixes for different applications, standard or specialised, where deoxynucleotide triphosphates are necessary for the synthesis of new DNA strands (e.g. PCR, qPCR, LAMP-PCR, cDNA synthesis, RT-PCR, DNA sequencing, and labelling, primer extension, etc.). Each dNTP can be diluted and/or mixed with the others to the convenient concentration.

The recommended concentration for amplification reactions is about 50-500 µM each dNTP, being the most commonly used dNTP concentration 200 µM. 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).

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.

Each Lot of the Deoxinucleotide Triphosphate Solution 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), follow these instructions:

1. Mix in a sterile vial the required individual dNTP.
2. Add an equimolar concentration of the labelled/modified dNTP. For diluting the dNTPs you can use sterile bidistilled water.
3. All dNTPs in a reaction mixture should be at an equimolar concentration, in order to avoid misincorporation. If the molar concentration of the labelled/modified dNTP is lower, supplement it with unlabelled dNTP of the same nature.

Storage Conditions

Store vials at -20ºC in a constant temperature freezer. They should be stored as aliquots in order to prevent them from being submitted to freeze/thaw cycles.

Order Information

dATP (100 mM)	**1 x 250 µL**	20.135
dCTP (100 mM)	**1 x 250 µL**	20.136
dGTP (100 mM)	**1 x 250 µL**	20.137
dTTP (100 mM)	**1 x 250 µL**	20.138
dNTP Mix (10 mM each)	**1 x 250 µL**	20.031
	2 x 250 µL	20.037
	4 x 250 µL	20.038
	1 x 1000 µL	20.051
	2 x 1000 µL	20.052
	4 x 1000 µL	20.053
dNTP Mix (25 mM each)	**1 x 250 µL**	20.039
	1 x 1000 µL	20.054
dNTP Mix (10 mM each)	**BULK**	20.031B

Warning for users: Some of the applications that can be performed with this product are protected by patents applicable in some countries. Purchase of this product does not include or provide a licence to perform patented applications. In some cases, depending on the country and/or application, users are required to purchase a licence.

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