

2mM dNTP Mix

of unmodified deoxy-Nucleoside triphosphates (dNTPs)

Component	Cat#	M3017.1002 0.4µmol each dNTP	M3017.5002 2µmol each dNTP	Colour code of cap
Mix of dATP, dCTP, dGTP, dTTP solution adjusted to pH 8.5. 10mM*		1x 1mL	5x 1mL	green

* Each tube contains a mix from all 4 dNTPs of a concentration of 2mM

Description

dNTPs are the building material for DNA molecules and used in various assays based on PCR. The purity of dNTPs is highly important for assay results' accuracy. For that reason, the use of highly purified dNTP (as these available from Genaxxon) preparation is particularly recommended for sensitive techniques such as long-range PCR, RT-PCR, multiplex, mutagenesis experiments and Real-Time applications.

Genaxxon offers a complete range of nucleoside-5'-triphosphates in highly purified form in different convenient solutions that are HPLC tested and can be used for in highly sensitive assays. The dNTP mixes are ready-to-use for DNA-polymerisation reactions, all DNA labelling- and sequencing reactions. The dNTP mixes are designed to save time and prevent the possibility for contamination by reducing pipetting steps.

All solutions are prepared using the following substances:

dATP Na₄ x 3 H₂O, 2'-Deoxyadenosine-5'-triphosphate tetrasodium salt. C₁₀H₁₆N₅O₁₂P₃ x Na₄, Cat #: **M3402**
 MW = 583.15 g/mol (491.18 g/mol free acid)

$\lambda_{\max}$ 259nm; ϵ 15.4 l mmol⁻¹ cm⁻¹ (Tris/HCl, pH7.0)

dCTP Na₄ x 3 H₂O, 2'-Deoxycytidine-5'-triphosphate tetrasodium salt. C₉H₁₆N₃O₁₃P₃ x Na₄, Cat #: **M3401**

MW = 555.11 g/mol (467.15 g/mol free acid)

$\lambda_{\max}$ 271nm; ϵ 8.9 l mmol⁻¹ cm⁻¹ (Tris/HCl, pH7.0)

dGTP Na₄ x 3 H₂O, 2'-Deoxyguanosine-5'-triphosphate tetrasodium salt. C₁₀H₁₆N₅O₁₃P₃ x Na₄, Cat #: **M3403**

MW = 599.14 g/mol (507.18 g/mol free acid)

$\lambda_{\max}$ 252nm; ϵ 13.7 l mmol⁻¹ cm⁻¹ (Tris/HCl, pH7.0)

dTTP Na₄ x 3 H₂O, 2'-Deoxythymidine-5'-triphosphate tetrasodium salt. C₁₀H₁₇N₂O₁₄P₃ x Na₄, Cat #: **M3400**

MW = 574.13 g/mol (482.17 g/mol free acid)

$\lambda_{\max}$ 262nm; ϵ 9.6 l mmol⁻¹ cm⁻¹ (Tris/HCl, pH7.0)

Purity: each dNTP solution (set and mix): min. 99% (HPLC)

pH-Wert: 8.5 +/- 0.1

Storage

dNTPs are stable at -20°C / -70°C in a constant-temperature freezer for at least 24 months.

dNTPs can be kept at RT temperature for a cumulative period of about one week.

Avoid multiple thawing/freezing. For long term usage we recommend to aliquot nucleotides.

Table 1: suggested dNTP-Mix volumes per PCR reaction

Final reaction volume	Added volume of 10 mM dNTP-Mix	Number of PCR reactions
10µL	1.0µL	1000
25µL	2.5µL	400
50µL	5.0µL	200
100µL	10.0µL	100

** Number of PCR reactions based on M3017.1002 (1mL of 2mM dNTP-Mix)