GENAXXON bioscience
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10mM dNTP Mixes

of unmodified deoxy-Nucleoside triphosphates (dNTPs)

Component	Cat#	M3016.0200 2µmol each dNTP	M3016.1010 10µmol each dNTP	Colour code of cap
Mix of dATP, dCTP, dGTP, dTTP solution adjusted to pH 8.5. 10mM*		200µL	1mL	green

* Each tube contains a mix from all 4 dNTPS of a concentration of 10mM

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)
λ_{max} 259nm; ε 15.4 λ $mmol^{-1}$ cm^{-1} (Tris/HCl, pH7.0)

dCTP Na4 x 3 H2O, 2'-Deoxycytidine-5'-triphosphate tetrasodium salt. C9H16N3O13P3 x Na4, **Cat #: M3401**
MW = 5559.11 g/mol (467.15 g/mol free acid)
λ_{max} 271nm; ε 8.9 λ $mmol^{-1}$ 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)
λ_{max} 252nm; ε 13.7 λ $mmol^{-1}$ 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)
λ_{max} 262nm; ε 9.6 λ $mmol^{-1}$ 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 PCR reaction volume	Added volume of 10mM dNTP-Mix	Number of PCR reactions **
10µL	0.2µL	5000
25µL	0.5µL	2000
50µL	1.0µL	1000
100µL	2.0µL	500

** Number of PCR reactions based on M3016.1010 (1mL of 10mM dNTP-Mix)

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