

**dNTP Specifications**

	<b>dATP</b> 100 mM Sodium Salt Solution	<b>dCTP</b> 100 mM Sodium Salt Solution	<b>dGTP</b> 100 mM Sodium Salt Solution	<b>dTTP</b> 100 mM Sodium Salt Solution	<b>dUTP</b> 100 mM Sodium Salt Solution
<b>Nomenclature</b>	2'-Deoxyadenosine-5'-triphosphate	2'-Deoxycytidine-5'-triphosphate	2'-Deoxyguanosine-5'-triphosphate	2'-Deoxythymidine-5'-triphosphate	2'-Deoxyuridine-5'-triphosphate
<b>CAS Number</b>	1927-31-7	102783-51-7	93919-41-6	18423-43-3	102814-08-4
<b>Formula (free acid)</b>	C <sub>10</sub> H <sub>16</sub> N <sub>5</sub> O <sub>12</sub> P <sub>3</sub>	C <sub>9</sub> H <sub>16</sub> N <sub>3</sub> O <sub>13</sub> P <sub>3</sub>	C <sub>10</sub> H <sub>16</sub> N <sub>5</sub> O <sub>13</sub> P <sub>3</sub>	C <sub>10</sub> H <sub>17</sub> N <sub>2</sub> O <sub>14</sub> P <sub>3</sub>	C <sub>9</sub> H <sub>15</sub> N <sub>2</sub> O <sub>14</sub> P <sub>3</sub>
<b>Formula Weight (free acid, g x mol<sup>-1</sup>)</b>	491.18	467.15	507.18	482.17	468.14
<b>Storage</b>	at -20 °C	at -20 °C	at -20 °C	at -20 °C	at -20 °C
<b>Stability</b>	24 months	24 months	24 months	24 months	24 months
<b>Appearance</b>	clear colorless solution	clear colorless solution	clear colorless solution	clear colorless solution	clear colorless solution
<b>Concentration<sup>(1)</sup> (22 °C, pH 7.0)</b>	100-110 mM (A <sub>259 nm</sub> , ε = 15.1 l x mmol <sup>-1</sup> x cm <sup>-1</sup> )	100-110 mM (A <sub>271 nm</sub> , ε = 8.9 l x mmol <sup>-1</sup> x cm <sup>-1</sup> )	100-110 mM (A <sub>252 nm</sub> , ε = 14.2 l x mmol <sup>-1</sup> x cm <sup>-1</sup> )	100-110 mM (A <sub>267 nm</sub> , ε = 9.5 l x mmol <sup>-1</sup> x cm <sup>-1</sup> )	100-110 mM (A <sub>262 nm</sub> , ε = 9.8 l x mmol <sup>-1</sup> x cm <sup>-1</sup> )
<b>A<sub>250 nm</sub> / A<sub>260 nm</sub> (22 °C, pH 7.0)</b>	0.78 ± 0.03	0.82 ± 0.03	1.15 ± 0.04	0.64 ± 0.03	0.74 ± 0.03
<b>A<sub>280 nm</sub> / A<sub>260 nm</sub> (22 °C, pH 7.0)</b>	0.15 ± 0.02	0.97 ± 0.03	0.67 ± 0.03	0.74 ± 0.03	0.38 ± 0.02
<b>pH (22 °C)</b>	8.5 ± 0.2	8.5 ± 0.2	8.5 ± 0.2	8.5 ± 0.2	8.5 ± 0.2
<b>dNTP (HPLC area)</b>	≥ 99.0%	≥ 99.0%	≥ 99.0%	≥ 99.0%	≥ 99.0%
<b>dNDP (HPLC area)</b>	≤ 0.5%	≤ 0.5%	≤ 0.5%	≤ 0.5%	≤ 0.5%
<b>rNTP (HPLC area)</b>	≤ 0.1%	≤ 0.1%	≤ 0.1%	≤ 0.1%	≤ 0.1%
<b>Low Copy Long Range PCR (18 kb, lambda DNA, template dilution series)</b>	PCR fragment with 50 pg of template or less	PCR fragment with 50 pg of template or less	PCR fragment with 50 pg of template or less	PCR fragment with 50 pg of template or less	PCR fragment with 10 pg of template or less <sup>(2)</sup>
<b>RT-PCR (749 bp fragment, human GAPDH gene, template dilution series)</b>	PCR fragment with 10 pg of template or less	PCR fragment with 10 pg of template or less	PCR fragment with 10 pg of template or less	PCR fragment with 10 pg of template or less	-
<b>Contamination with bacterial or human DNA</b>	not detectable	not detectable	not detectable	not detectable	not detectable
<b>DNases, RNases, Nicking Activity</b>	not detectable	not detectable	not detectable	not detectable	not detectable
<b>Proteases</b>	not detectable	not detectable	not detectable	not detectable	not detectable

<sup>(1)</sup> Extinction coefficients: Cavaluzzi & Borer (2004) *Nucleic Acids Res.* **32** (1):e13

<sup>(2)</sup> Low Copy PCR (1 kb, lambda DNA, template dilution series)