

# NTP Solutions Specifications

|   | ATP solution<br>Sodium Salt   | CTP solution<br>Sodium Salt  | GTP solution<br>Sodium Salt   | UTP solution<br>Sodium Salt  |
|---|---|--|---|--|
| <b>Nomenclature</b>   | Adenosine 5'-triphosphate   | Cytidine 5'-triphosphate   | Guanosine 5'-triphosphate   | Uridine 5'-triphosphate  |
| <b>CAS Number</b>   | 987-65-5  | 36051-68-0   | 36051-31-7  | 19817-92-6   |
| <b>Cat. No.</b>   | NU-1010   | NU-1011  | NU-1012   | NU-1013  |
| <b>Formula (free acid)</b>  | $C_{10}H_{16}N_5O_{13}P_3$  | $C_9H_{16}N_5O_{14}P_3$  | $C_{10}H_{16}N_5O_{14}P_3$  | $C_9H_{15}N_5O_{15}P_3$  |
| <b>Formula Weight (free acid)</b>   | 507.18  | 483.16   | 523.18  | 484.14   |
| <b>Storage</b>  | at -20 °C   | at -20 °C  | at -20 °C   | at -20 °C  |
| <b>Stability</b>  | 24 months   | 24 months  | 24 months   | 24 months  |
| <b>Appearance</b>   | clear colorless solution  | clear colorless solution   | clear colorless solution  | clear colorless solution   |
| <b>Concentration (22° C, pH 7.0)</b>                                      | 100 mM $\pm$ 2% ( $A_{259\text{ nm}}$ , $\epsilon = 15.1\text{ l x mmol}^{-1}\text{ x cm}^{-1}$ ) | 100 mM $\pm$ 2% ( $A_{271\text{ nm}}$ , $\epsilon = 8.9\text{ l x mmol}^{-1}\text{ x cm}^{-1}$ ) | 100 mM $\pm$ 2% ( $A_{252\text{ nm}}$ , $\epsilon = 14.2\text{ l x mmol}^{-1}\text{ x cm}^{-1}$ ) | 100 mM $\pm$ 2% ( $A_{262\text{ nm}}$ , $\epsilon = 9.8\text{ l x mmol}^{-1}\text{ x cm}^{-1}$ ) |
| <b><math>A_{250\text{ nm}} / A_{260\text{ nm}}</math> (22 °C, pH 7.0)</b> | 0.78 $\pm$ 0.03   | 0.82 $\pm$ 0.03  | 1.15 $\pm$ 0.04   | 0.74 $\pm$ 0.03  |
| <b><math>A_{280\text{ nm}} / A_{260\text{ nm}}</math> (22 °C, pH 7.0)</b> | 0.15 $\pm$ 0.02   | 0.97 $\pm$ 0.03  | 0.67 $\pm$ 0.03   | 0.38 $\pm$ 0.02  |
| <b>pH (22° C)</b>   | 8.0 $\pm$ 0.2   | 8.0 $\pm$ 0.2  | 8.0 $\pm$ 0.2   | 8.0 $\pm$ 0.2  |
| <b>NTP (HPLC area)</b>  | $\geq$ 99.0%  | $\geq$ 99.0%   | $\geq$ 99.0%  | $\geq$ 99.0%   |
| <b>NDP (HPLC area)</b>  | $\leq$ 1.0%   | $\leq$ 1.0%  | $\leq$ 1.0%   | $\leq$ 1.0%  |
| <b>in vitro Transcription (T7 RNA polymerase, 1423 bp template)</b>       | visible RNA fragment after 5 min incubation   | visible RNA fragment after 5 min incubation  | visible RNA fragment after 5 min incubation   | visible RNA fragment after 5 min incubation  |
| <b>DNases, RNases, Nicking Activity</b>                                   | not detectable  | not detectable   | not detectable  | not detectable   |
| <b>Proteases</b>  | not detectable  | not detectable   | not detectable  | not detectable   |

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