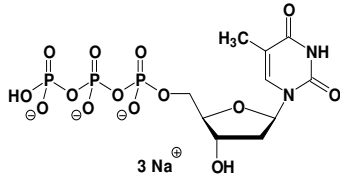


**DATA SHEET**
**dTTP, PCR Grade**
**2'-Deoxythymidine 5'-triphosphate, 100 mM sodium salt solution**

| Cat.-No. | Volume | Amount        | Conc.  |
|----------|--------|---------------|--------|
| NU-1004  | 1 ml   | 100 $\mu$ mol | 100 mM |

|                  |   |
|------------------|---|
| Description      | dTTP, PCR Grade is supplied as ultrapure aqueous solution and suitable for all molecular biology applications including PCR/qPCR, reverse transcription, DNA labeling and DNA sequencing.   |
| CAS Number       | 18423-43-3  |
| Formula (Anion)  | $C_{10}H_{14}N_2O_{14}P_3$  |
| Molecular Weight | $479.14 \text{ g}\cdot\text{mol}^{-1}$  |
| Storage          | Store at $-20^\circ\text{C}$ , short term (up to one week) exposure to ambient temperature possible   |
| Stability        | Quality guaranteed for 12 months  |
| Structure        |  <p>The structure shows a thymine base attached to a deoxyribose sugar, which is further attached to a triphosphate group. The triphosphate group consists of three phosphate units, with the terminal phosphate having a negative charge. Three sodium ions (<math>3 \text{ Na}^+</math>) are shown as counterions.</p> |

**Biophysical Specifications**

|  |  |
|--|--|
| Appearance   | clear aqueous solution   |
| Concentration ( $22^\circ\text{C}$ , pH 7.0)                             | 100-110 mM ( $A_{267 \text{ nm}}$ , $\epsilon = 9.5 \text{ l}\cdot\text{mmol}^{-1}\cdot\text{cm}^{-1}$ ) |
| $A_{250 \text{ nm}} / A_{260 \text{ nm}}$ ( $22^\circ\text{C}$ , pH 7.0) | $0.64 \pm 0.02$  |
| $A_{280 \text{ nm}} / A_{260 \text{ nm}}$ ( $22^\circ\text{C}$ , pH 7.0) | $0.74 \pm 0.02$  |
| $A_{290 \text{ nm}} / A_{260 \text{ nm}}$ ( $22^\circ\text{C}$ , pH 7.0) | $0.24 \pm 0.02$  |
| pH ( $4^\circ\text{C}$ )   | $8.5 \pm 0.1$  |
| Purity (HPLC area)   | dTTP $\geq 99.0\%$<br>dTDT $\leq 0.9\%$<br>dTMP $\leq 0.5\%$   |

**Functional Specifications**

|   |  |
|---|--|
| Low Copy Long Range PCR (18 kb, lambda DNA, template dilution series) | PCR fragment with 100 pg of template or less |
| RT-PCR (600 bp fragment, human GAPDH gene)                            | PCR fragment with 100 pg of template or less |
| Contamination with bacterial or human DNA                             | not detectable                               |
| DNases, RNases, Nicking Activity                                      | not detectable                               |
| Proteases   | not detectable                               |