

PRODUCT INFORMATION

NTP Set, Tris buffered

#R1481

Lot _ Expiry Date __

Concentration:

100 mM solutions of each of Tris buffered ATP, CTP, GTP and UTP.

Volume:

0.25 mL of each of Tris buffered ATP, CTP, GTP and UTP.

Store at -20 °C

Description

The NTP Set, Tris buffered contains 0.25 mL of 100 mM solutions of each ATP, CTP, GTP and UTP in separate vials. Each NTP was titrated to 7.3-7.5 with Tris base.

General characteristics

ATP, Tris buffered	$C_{10}H_{16}N_5O_{13}P_3 \cdot 3 C_4H_{11}NO_3$ MW 870.6 (acid form: 507.2) $\lambda_{max}=259 \text{ nm}$, $\epsilon=15.4 \times 10^3$ (pH 7.0)
CTP, Tris buffered	$C_9H_{16}N_3O_{14}P_3 \cdot 3 C_4H_{11}NO_3$ MW 858.6 (acid form: 483.3) $\lambda_{max}=271 \text{ nm}$, $\epsilon=9.0 \times 10^3$ (pH 7.0)
GTP, Tris buffered	$C_{10}H_{16}N_5O_{14}P_3 \cdot 3 C_4H_{11}NO_3$ MW 898.6 (acid form: 523.2) $\lambda_{max}=253 \text{ nm}$, $\epsilon=13.7 \times 10^3$ (pH 7.0)
UTP, Tris buffered	$C_9H_{15}N_2O_{15}P_3 \cdot 3 C_4H_{11}NO_3$ MW 847.5 (acid form: 484.1) $\lambda_{max}=262 \text{ nm}$, $\epsilon=10.0 \times 10^3$ (pH 7.0)

CERTIFICATE OF ANALYSIS

Purity is $\geq 99\%$ for each NTP, determined by HPLC.

Concentration is 100 ± 3 mM of each NTP, determined spectrophotometrically.

pH is 7.3-7.5 for each NTP, determined according to Ph. Eur. 2.2.3

Endo- and exonucleases. Each NTP was tested by incubation of 1 μ L of 100 mM NTP with single-stranded and double-stranded radiolabeled oligonucleotides for 4 hours at 37 °C, and separation of reaction mixtures on a denaturing polyacrylamide gel. Phosphoimaging has not detected DNA degradation.

Ribonucleases. Each NTP was tested by incubation of 1 μ L of 100 mM NTP with 2,000 bases RNA transcript for 4 hours at 37 °C and separation of reaction products on an agarose gel. There was no decrease in RNA transcript band intensity compared to control.

***In vitro* transcription assay.** Incubation of 1 μ g of pTZ102R DNA/Ecl136II DNA template with 10 mM of each NTP and 2 μ L of Thermo Scientific™ TranscriptAid™ enzyme mix in 1X TranscriptAid reaction buffer for 2 hours at 37 °C generated ≥ 75 μ g of single stranded RNA product of 100 bases.

Quality authorized by:

 Jurgita Zilinskiene

PRODUCT USE LIMITATION

This product is developed, designed and sold exclusively *for research purposes and in vitro use only*. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals. Please refer to www.thermoscientific.com/onebio for Material Safety Data Sheet of the product.

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