**Quality Control Assays**

The purity of the deoxynucleotide is ≥ 95% as determined by HPLC analysis.

**0.5 kb, 2 kb and 5 kb Lambda PCR Assay:**
25 cycles of PCR amplification of 1 ng Lambda DNA with 5 units of Taq DNA Polymerase in the presence of 200 µM dATP, dGTP, dTTP and 7-deaza-dGTP, 0.5 µM primers and 1X ThermoPol™ Reaction Buffer results in the amplification of the specific 0.5 kb, 2 kb and 5 kb products as determined by agarose gel electrophoresis.

**Phosphatase Activity Assay (pNPP Colorimetric Assay):** A protein phosphatase buffer solution containing 2 mM 7-deaza-dGTP and 100 µM p-nitrophenol phosphate, incubated for 4 hours at 37°C, yields no detectable phosphatase activity as determined by spectrophotometric analysis of released p-nitrophenylene anion at 405 nm.

**Non-Specific Nuclease Assay:** A 50 µl reaction in 1X NEBuffer 2 containing 1 µg of T3 DNA or HindIII digested Lambda DNA and a minimum of 5 µl of 7-deaza-dGTP incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

7-deaza-dGTP (7-deaza-2’-deoxyguanosine 5’-triphosphate) contains a 5 mM solution of 7-deaza-dGTP as a dilithium salt. Nucleotide concentration is determined by measurements of absorbance at 257 nm.

Supplied in: Milli-Q® water as a lithium salt at (pH 7.0).

**Diluent Compatibility:** Can be diluted using sterile distilled water, preferably Milli-Q water or can be diluted using sterile TE (10 mM Tris-HCl, 1 mM EDTA (pH 7.5).

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