

PRODUCT: Advantage® UltraPure PCR Deoxynucleotide Mix**CATALOG No.** 639125**AMOUNT** 4 x 100 µl**LOT NUMBER**

Specified on product label.

STORAGE BUFFER

RNase-free Water

STORAGE CONDITIONS

Store at -20°C

SHELF LIFE

1 year from date of receipt under proper storage conditions.

SHIPPING CONDITIONS

Dry ice (-70°C)

FOR RESEARCH USE ONLY**DESCRIPTION**

Advantage UltraPure PCR Nucleotide Mix, which contains all four dNTPs in a premixed aqueous solution, is ready for use in PCR amplification, cDNA synthesis, and *in vitro* mutagenesis.

CHEMICAL COMPOSITIONSdATP: $C_{10}H_{14}N_5Na_2O_{12}P_3$ dCTP: $C_9H_{14}N_5Na_2O_{13}P_3$ dGTP: $C_{10}H_{14}N_5Na_2O_{13}P_3$ dTTP: $C_{10}H_{15}N_2Na_2O_{14}P_3$ **MOLECULAR WEIGHTS**

dATP: 535.1 g/mol

dCTP: 511.1 g/mol

dGTP: 551.1 g/mol

dTTP: 526.1 g/mol

CONCENTRATION: 10 mM each dNTP**QUALITY CONTROL****1. Heat stability assay**

20 µl of Advantage UltraPure PCR Nucleotide Mix was subjected to 20 cycles of heating/cooling (95°C for 30 sec, 66°C for 30 sec, 72°C for 30 sec). Two standard 50-µl PCR reactions were performed using either 1 µl of the precycled mix or 1 µl of fresh Advantage UltraPure PCR Nucleotide Mix. Equal volumes of PCR product from the reactions were run for comparison on an agarose/EtBr gel. A single, specific band was observed for each sample. Equivalent yields of PCR product were also observed.

2. Nuclease assay

Prior to mixing, each Advantage UltraPure dNTP was mixed with plasmid DNA and incubated at 37°C for 16 hours. No degradation was detected.

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