2.5 mM dNTP Mix, PCR Grade

Cat. No.: ST025-1000 Size: 1 ml
Store at -20°C

Description

2.5 mM dNTP (2'-deoxynucleoside 5'-triphosphate) Mix consists of a solution of all four nucleotides (dATP, dCTP, dGTP, dTTP), each at a concentration of 2.5 mM. It is neutralized to pH 8.0 with NaOH, and supplied in purified water. 2.5 mM dNTP Mix is suitable for use in polymerase chain reaction (PCR), sequencing, fill-in, nick translation, cDNA synthesis, and TdT-tailing reactions.

Feature

- Compatible with almost DNA polymerases in a variety of applications.
- ≥ 99% pure as determined by HPLC analysis.
- Exceptional stability.

Application

- PCR amplification

Kit Contents

Contents	ST025-1000
2.5 mM dNTP Mix	1 ml

Quality Control

The quality of the 2.5 mM dNTP Mix, PCR Grade t is tested on a lot-to-lot basis to ensure consistent product quality.

Required Material

- PCR equipments
- PCR tube
- Primer
- PCR grade water

Protocol

Add recommended volume of dNTP solution into PCR reaction.
The following in the below table is recommended:
Final reaction volume: 20 µl

Final dNTP Concentration	The Volume of dNTP Mixture	Reactions Per Kit
0.2 mM	1.6 µl	625
0.5 mM	4 µl	250
1.0 mM	8 µl	125
1.5 mM	12 µl	83

Final reaction volume: 25 µl

Final dNTP Concentration	The Volume of dNTP Mixture	Reactions Per Kit
0.2 mM	2 µl	500
0.5 mM	5 µl	200
1.0 mM	10 µl	100
1.5 mM	15 µl	66

Final reaction volume: 50 µl

Final dNTP Concentration	The Volume of dNTP Mixture	Reactions Per Kit
0.2 mM	4 µl	250
0.5 mM	10 µl	100
1.0 mM	20 µl	50
1.5 mM	30 µl	33.3

Troubleshooting

Problem	Cause	Solution
Incorrect amplification or PCR inhibition.	Incorrect dNTP concentration	Check and optimized the dNTP concentration of the PCR reaction
No amplicon	Error in set up	Repeat the experiment, checking all reagents are added in correct volumes. Use master mix to ensure all components added correctly.

Problem	Cause	Solution
Non-specific amplification – smeared product	Template degraded	Minimize freeze thawing of DNA. Run template on agarose gel to check integrity.
Wrong size band amplified	Contamination	Check no template control for bands

Related Ordering Information

Cat. No.	Description	Size
SM101-0500	*Taq* DNA Polymerase	500 U

Caution

- Check buffers before use for precipitation.
- Aliquot reagents to avoid contamination and repeated freeze-thaw cycles.
- During operation, always wear a lab coat, disposable gloves, and protective equipment.
- All products are for research use only.