

dNTP Set, molecular biology grade

Catalog Number R0181, R0182, R0186

Pub. No. MAN0013132 Rev. C.00



WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Sheets (SDSs) are available from [thermofisher.com/support](https://www.thermofisher.com/support).

Contents and storage

Cat. No.	Contents	Amount	Storage
R0181	dATP, dCTP, dGTP, dTTP	4 x 0.25 mL, 100 mM	-25 °C to -15 °C
R0182	dATP, dCTP, dGTP, dTTP	4 x 1 mL, 100 mM	
R0186	dATP, dCTP, dGTP, dTTP	4 x 5 mL, 100 mM	

Description

The set consists of 100 mM aqueous solutions of dATP, dCTP, dGTP and dTTP each supplied in a separate vial. The nucleotide solutions are titrated to pH 7.3-7.5 with NaOH. Since the nucleotides are provided separately, the dNTP Set offers maximum flexibility in preparation of reaction mixes for different applications.

Applications

For use in PCR, real-time PCR, high fidelity and long PCR, LAMP-PCR, cDNA synthesis, RT-PCR, RDA, MDA, DNA labeling, and DNA sequencing.

General Characteristics

- dATP** $C_{10}H_{13}N_5O_{12}P_3Na_3$; MW = 557.2;
 $\lambda_{max}=259$ nm; $\epsilon=15.4 \times 10^3$ M⁻¹cm⁻¹ at pH 7.0;
- dCTP** $C_9H_{13}N_3O_{13}P_3Na_3$; MW = 533.1;
 $\lambda_{max}=271$ nm; $\epsilon=9.1 \times 10^3$ M⁻¹cm⁻¹ at pH 7.0.
- dGTP** $C_{10}H_{13}N_5O_{13}P_3Na_3$; MW = 573.2;
 $\lambda_{max}=253$ nm; $\epsilon=13.7 \times 10^3$ M⁻¹cm⁻¹ at pH 7.0.
- dTTP** $C_{10}H_{14}N_2O_{14}P_3Na_3$; MW = 548.1;
 $\lambda_{max}=267$ nm; $\epsilon=9.6 \times 10^3$ M⁻¹cm⁻¹ at pH 7.0.

Important Note

Mix well each dNTP solution prior to use.

Preparation of different concentration dNTP mixtures

dNTP mixture to be prepared	Volumes of dNTP Set, μL				Water, nuclease-free, μL	Total volume of dNTP mixture, μL
	100 mM dATP	100 mM dGTP	100 mM dCTP	100 mM dTTP		
2 mM of each dNTP	10	10	10	10	460	500
	100	100	100	100	4600	5000
	250	250	250	250	11500	12500
10 mM of each dNTP	10	10	10	10	60	100
	100	100	100	100	600	1000
	250	250	250	250	1500	2500
25 mM of each dNTP	10	10	10	10	–	40
	100	100	100	100	–	400
	250	250	250	250	–	1000

Getting 0.2 mM dNTP in PCR

Volume of PCR Mixture	dNTP Mixture to be added to PCR		
	2 mM	10 mM	25 mM
25 μL	2.5 μL	0.5 μL	0.2 μL
50 μL	5 μL	1 μL	0.4 μL
100 μL	10 μL	2 μL	0.8 μL

Limited product warranty

Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale at www.thermofisher.com/us/en/home/global/terms-and-conditions.html. If you have any questions, please contact Life Technologies at www.thermofisher.com/support.



Thermo Fisher Scientific Baltics UAB | V.A. Graiciuno 8, LT-02241 Vilnius, Lithuania
For descriptions of symbols on product labels or product documents, go to thermofisher.com/symbols-definition.

The information in this guide is subject to change without notice.

DISCLAIMER: TO THE EXTENT ALLOWED BY LAW, THERMO FISHER SCIENTIFIC INC. AND/OR ITS AFFILIATE(S) WILL NOT BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE, MULTIPLE, OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING FROM THIS DOCUMENT, INCLUDING YOUR USE OF IT.

Important Licensing Information: These products may be covered by one or more Limited Use Label Licenses. By use of this product, you accept the terms and conditions of all applicable Limited Use Label Licenses.

©2019 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific and its subsidiaries unless otherwise specified.

thermofisher.com/support | thermofisher.com/askaquestion
thermofisher.com

ThermoFisher
SCIENTIFIC

09 January 2020