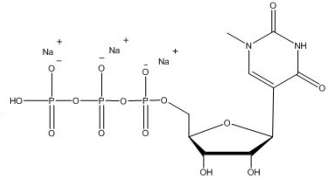


CERTIFICATE OF ANALYSIS

PRODUCT NAME:	N1-Methylpseudo-UTP, 100 mM Sodium Solution	STRUCTURE 
PRODUCT NUMBER:	NU505289S	
LOT NUMBER:	XA1502S	
BULK NUMBER:	XA0103	
DESCRIPTION:	N ¹ -Methylpseudouridine-5'-Triphosphate, 100 mM Sodium Solution	
CHEMICAL FORMULA:	C ₁₀ H ₁₄ N ₂ O ₁₅ P ₃ •Na ₃	
MOLECULAR WEIGHT:	564.1 g/mol	
EXTINCTION COEFFICIENT:	9550 at 271nm in 10mM sodium phosphate, pH 7.0	
CAS NUMBER:	N/A	
STORE:	-20°C	
SHIP:	Dry Ice	
MANUFACTURE DATE:	01/05/2022	
RETEST DATE:	07/07/2023	
EXPIRATION DATE:	01/05/2024	

ANALYSIS RESULTS

Property	Specification Limits	Observed Value
Appearance	Clear, colorless solution	Pass
HPLC Purity	≥ 99%	100%
Spectral UV Analysis	Conforms to reference	Pass
pH	7.7 ± 0.2	7.7
Concentration	100 ± 3 mM	99 mM
Lambda max	271 ± 2 nm	272 nm
Endodeoxyribonuclease	<ul style="list-style-type: none"> Assay utilizes supercoiled puc19 plasmid and is evaluated via gel electrophoresis; None Detected (sensitivity level ≤ 2 x 10⁻⁴ Units) 	Pass
Exodeoxyribonuclease	<ul style="list-style-type: none"> Assay utilizes linear dsDNA and is evaluated via gel electrophoresis; None Detected (no visible degradation of linearized plasmid in product sample on agarose gel) 	Pass
RNase Activity	<ul style="list-style-type: none"> Assay utilizes Poly A RNA substrate and is evaluated via gel electrophoresis; None Detected (sensitivity level ≤ 2 x 10⁻⁶ Kunitz Units/μL) 	Pass
Protease Activity	<ul style="list-style-type: none"> Assay utilizes Proteinase K substrate and is evaluated via protein precipitation and color change analysis; None Detected (sensitivity level ≤ 6 ng using Proteinase K or equivalent) 	Pass
Endotoxin	<ul style="list-style-type: none"> Assay utilizes LAL gel clot method in accordance with USP<85> guidelines; ≤ 1.0 EU/ml (sensitivity level ≤ 0.06 EU/ml) 	Pass
Identity by LC/MS	Mass spectrum conforms to that of an authentic sample	Pass
Material Origin (TSE/BSE)	No known animal-derived materials were used in the manufacture of this product	Pass

ISO CERTIFICATION

Manufactured by Thermo Fisher Scientific (Milwaukee) LLC in compliance with ISO 9001 quality management system.

QC Release By:



Gina Kogutkiewicz
Manager, Business Systems & Compliance
12/28/2021

QC Release Date:

Revision 13