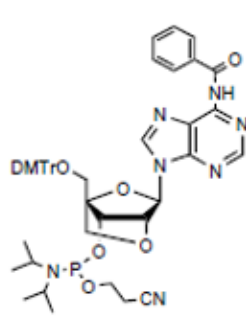


CERTIFICATE OF ANALYSIS

PRODUCT NAME:	TheraPure® Locked Nucleic Acid A (Bz) Phosphoramidite	STRUCTURE 
PRODUCT NUMBER:	27-1340-05	
LOT NUMBER:	VC3252	
BULK NUMBER:	UI0031	
DESCRIPTION:	5'-O-Dimethoxytrityl-N ⁶ -benzoyl- 2'-O, 4'-C-Methyleneadenosine -O-(β-cyanoethyl-N,N-diisopropyl) phosphoramidite	
CHEMICAL FORMULA:	C ₄₈ H ₅₂ N ₇ O ₈ P	
MOLECULAR WEIGHT:	885.95 g/mol	
CAS NUMBER:	206055-79-0	
STORE:	-20°C	
SHIP:	Ambient	
MANUFACTURE DATE:	10/08/2019	
RETEST DATE:	04/08/2021	
EXPIRATION DATE:	10/07/2021	

ANALYSIS RESULTS

Property	Specification Limits	Observed Value
Appearance	White to off-white solid	Pass
Appearance	Color intensity of the powder must not exceed Pantone #P1-4U or #P4-2U	Pass
Solution Clarity	0.2M solution in dichloromethane:acetonitrile (1:1) is free from undissolved particulate	Pass
HPLC Purity (at 255 nm)	≥ 99%	99 %
	Single impurity: None > 0.5%	None > 0.5%
Identification by UV Spectrum	From 200-350 nm, the maxima and minima of the sample and standard spectra are within ± 2 nm	Pass
³¹ P NMR Purity	≥ 99%	99%
	Sum of non-primary peaks at 5-35 ppm is ≤ 1.0%	0.7%
	No peak(s) above 170 ppm	Pass
Water Content	≤ 0.3% w/w	0.1%
Residual Solvent by GC	≤ 3.0% total % by weight solvent residue	2.1%
Material Origin (TSE/BSE)	No known animal-derived materials were used in the manufacture of this product	Pass

For the Locked Nucleic Acid Phosphoramidites: G (dmf) and T bases should be dissolved in 100% Acetonitrile at concentrations up to 0.2M. A (Bz) and 5-Me-C (Bz) bases should be dissolved in 1:1 Methylene Chloride:Acetonitrile at concentrations up to 0.2M.

Phosphoramidites are sensitive to environmental conditions when in powder or liquid form. Take precautions to avoid potential precipitation, degradation or hydrolysis that can affect performance or delivery of the phosphoramidite during synthesis. Control temperature, humidity, and exposure time to air for both the phosphoramidite and diluent.

QC Release By:

R. Kogutkiewicz

Gina Kogutkiewicz
Manager, Business Systems & Compliance

QC Release Date:

10/8/2019

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