

# Certification



**PRODUCT NAME:** TheraPure®dA β-Cyanoethyl Phosphoramidite  
**PRODUCT NUMBER:** 27-2030-07  
**LOT NUMBER:** TH1932  
**BULK NUMBER:** TH0135  
**DESCRIPTION:** 5'-O-Dimethoxytrityl-N<sup>6</sup>-benzoyl-2'-deoxyadenosine-3'-O-(β-cyanoethyl-N,N-diisopropyl) phosphoramidite  
**CHEMICAL FORMULA:** C<sub>47</sub>H<sub>52</sub>N<sub>7</sub>O<sub>7</sub>P  
**FORMULA WEIGHT:** 857.95 g/mol  
**CAS NUMBER:** 98796-53-3  
**STORE:** -20°C  
**SHIP:** Ambient  
**MANUFACTURING DATE:** 08/13/2018  
**RETEST DATE:** 02/13/2022  
**EXPIRATION DATE:** 08/12/2022

## ANALYSIS

Value	Specification	Observed Value
Appearance	White to pale yellow powder	Pass
Appearance	Color intensity of the powder must not exceed Pantone #P1-4U or #P4-2U	Pass
Solution Clarity	0.2M solution in acetonitrile is free from undissolved particulate	Pass
HPLC Purity (at 255 nm)	≥ 99%	100%
	Unknown single impurity ≤ 0.3%	Pass
	Non-critical single impurity: None > 0.5%	Pass
	Single critical impurity ≤ 0.3%	Pass
	Sum of critical impurities ≤ 1%	Pass
Identification by UV Spectrum	From 200-350 nm, the maxima and minima of the sample and standard spectra are within ± 2 nm	Pass
M-11 Impurity	≤0.01% (Isopropyl-N,N,N',N'-tetrakisopropylphosphorodiamidite)	Pass
<sup>31</sup> P NMR Purity	≥ 99%	100%
	Sum of non-primary peaks at 140-152 ppm is ≤ 0.3%	0.1%
	Sum of non-primary peaks at 5-35 ppm is ≤ 1.0%	0.0%
	Peak at ~146 ppm is ≤ 0.10% (HMT phosphoramidite impurity; MW 506.58)	Pass
	No peak(s) above 170 ppm	Pass

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Water Content	≤ 0.3%	0.3%
Residual Solvent	≤ 3.0% total % by weight solvent residue	0.9%
Material Origin (TSE/BSE)	No known animal-derived materials were used in the manufacture of this product	Pass



**QC Release By:**

Gina Kogutkiewicz  
Manager, Business Systems & Compliance

**QC Release Date:**

8/9/2018

Use of this product for the synthesis of polynucleotides may require a license from a third party. It is the responsibility of the purchaser of this product to determine the necessity of obtaining such a license and acquiring the same. No license is granted to the purchaser either directly, by implication, estoppel or otherwise.

**Revision 18**