

# Certification



**PRODUCT NAME:** TheraPure® 2'-MOE-5mC Phosphoramidite  
**PRODUCT NUMBER:** 27-1020-02  
**LOT NUMBER:** TL0402  
**BULK NUMBER:** SC0165  
**DESCRIPTION:** 5'-O-(4,4'-Dimethoxytrityl)-2'-O-methoxyethyl-5-methyl- N<sup>4</sup>-(Benzoyl)-cytidine-3'-O-(β-cyanoethyl-N,N-diisopropyl) phosphoramidite  
**CHEMICAL FORMULA:** C<sub>50</sub>H<sub>60</sub>N<sub>5</sub>O<sub>10</sub>P  
**FORMULA WEIGHT:** 922.0 g/mol  
**CAS NUMBER:** 163759-94-2  
**STORE:** -20°C  
**SHIP:** Ambient  
**BULK RETEST DATE:** 09/2020  
**BULK EXPIRATION DATE:** 03/16/2021

## ANALYSIS

Value	Specification	Observed Value
Appearance	White to light 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	≥ 99%	100%
Identification	Monoisotopic masses (MoIM) of the sample and standard agree within ± 0.2 amu in both negative and positive ionization modes	Pass
Identification	Retention times (RT) of both main peaks of the sample and standard agree within 0.2 minutes	Pass
M-11 Impurity	≤ 0.01%	Pass
<b>HPLC Impurity Profile*</b>		
Critical Impurity CII	≤ 0.20%	Pass
Critical Impurity CI	≤ 0.20%	Pass
Critical Impurity CXV	≤ 0.20%	Pass
Critical Impurity C	≤ 0.20%	Pass
Critical Impurity CXIII	≤ 0.20%	Pass

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Critical Impurity XI	≤ 0.20%	Pass
Critical Impurity XVIII	≤ 0.20%	Pass
Critical Impurity CIII	≤ 0.25%	Pass
Critical Impurity V	≤ 0.2%	Pass
Any Unspecified Critical Impurity	≤ 0.15%	Pass
Total Critical Impurities	≤ 0.60%	Pass
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<sup>31</sup> P NMR Purity	≥ 99%	100%
Trivalent PIII Species by <sup>31</sup> P NMR	Report Value	0.0
Water Content	≤ 0.3%	0.1%
Total Residual Solvents	≤ 4.0%	0.7%
Material Origin (TSE/BSE)	No known animal-derived materials were used in the manufacture of this product	Pass

\*A critical impurity is any component other than the target compound that contains a phosphoramidite moiety and a DMT (or equivalent acid labile) protecting group. Any unknown impurity is considered to be critical.

**Revision 11**