

## CERTIFICATE OF ANALYSIS

## 1. Identification

Catalogue Number Lot Number P359437 21-MAR-109-1

**Product Name** 

Phosphoric Acid Tris(4-methylphenyl)-d21 Ester

Synonyms

Phosphoric Acid Tri-p-tolyl-d21 Ester; NSC 2181-d21; Tri-p-cresyl Phosphate-d21; Tri-p-tolyl Phosphate-d21; Tris(4-methylphenyl) Phosphate-d21; Tris(p-cresyl) Phosphate-d21; Tris(p-methylphenyl) Phosphate-d21; p-Tolyl Phosphate-d21

**CAS Number** Solubility

N/A Chloroform (Slightly), Ethyl Acetate

(Slightly)

Specifications

Source of Product Molecular Formula

C<sub>21</sub>D<sub>21</sub>O<sub>4</sub>P Synthetic

Molecular Weight Purity 98% 389.49

2. Warnings

**Tests** 

Hygroscopic

3. Analytical Information

Appearance White to Pale Yellow Solid Off-White to Pale Yellow Solid **NMR** Conforms to Structure Conforms P NMR Conforms to Structure Conforms Elemental Analysis Conforms %C: 64.59, %H: 5.53 **HPLC Purity** Report Result 98.59% (210 nm) MS Conforms to Structure Conforms Isotopic Purity >95% 98.4%

## Additional Information

Normalized Intensity:  $d_0 = 0.00\%$ ,  $d_1 = 0.00\%$ ,  $d_2 = 0.00\%$ ,  $d_3 = 0.00\%$ ,  $d_4 = 0.04\%$ ,  $d_5 = 0.61\%$ ,  $d_6 = 0.00\%$ ,  $d_7 = 0.00\%$ ,  $d_8 = 0.00\%$ ,  $d_9 = 0.00\%$ 0.01%,  $d_{10} = 0.00\%$ ,  $d_{11} = 0.00\%$ ,  $d_{12} = 0.01\%$ ,  $d_{13} = 0.00\%$ ,  $d_{14} = 0.02\%$ ,  $d_{15} = 0.00\%$ ,  $d_{16} = 0.00\%$ ,  $d_{17} = 0.00\%$ ,  $d_{18} = 0.00\%$ ,  $d_{19} = 1.71\%$ ,  $d_{20} = 20.44\%$ ,  $d_{21} = 77.18\%$ 

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of ± 2%. Isotopic purity is based on mass distribution observed.

The contents of the specifications are subject to change without advance notice, and the specification values displayed here are the most up to date values.

4. Signatures

Reviewed by C of A Approved by Reviewed by **Test Date Retest Date** 6/18/2024 6/16/2031 Farnaj Tt. Sadaf Samadı Sadaf Samadi Farnaz Mahmoudi Toni Rantanen Product Quality Specialist Manager, Quality Assurance **Quality Assurance Associate** 

CD. D 0=P-O D

**Shipping Condition** 

This Product Is Stable To Be Shipped At Room

Temperature

Results

**Structure** 

**Long Term Storage Conditions** 

4°C, Hygroscopic