Chem-Impex International, Inc.

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935 Dillon Drive

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825 Dillon Drive

Wood Dale, IL 60191

Certificate of Analysis

Catalogue Number 98005

Lot Number 001331-2308001

Product Tris-(carboxyethyl)phosphine hydrochloride

TCEP•HCl

CAS Number 51805-45-9 **Molecular Formula** C₉H₁₅O₆P•HCl

Molecular Weight 286.6

Appearance White crystal

Solubility Clear and colorless (1.1M in water)

Melting Point 178.0 - 181.9 °C

¹H NMR Conforms to structure (D2O)

< 10%, NH4Cl (in DMSO)

31**P NMR** No peak at 15 ppm (D2O)

Assay by titration 100.8%

Storage Store at 0 - 8 °C under Nitrogen

Remarks See material safety data sheet for additional information

For laboratory use only

The foregoing is a copy of the Certificate of Analysis as provided by our supplier

Bala Kumar

Quality Control Manager