

# *Chem-Impex International, Inc.*

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**Manufacturing site:**

825 Dillon Drive

Wood Dale, IL 60191

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## *Certificate of Analysis*

**Catalogue Number** 01440  
**Lot Number** 002556-240161001  
**Product** **Choline dihydrogen citrate salt**

(2-Hydroxyethyl)trimethylammonium citrate

**CAS Number** 77-91-8  
**Molecular Formula** C<sub>11</sub>H<sub>21</sub>NO<sub>8</sub>  
**Molecular Weight** 295.3

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**Appearance** White crystal powder  
**Melting Point** 106 °C  
**Heavy Metals** < 10 mg/kg  
**Cation** Lead (Pb) : < 2 mg/kg  
Arsenic (As) : < 1 mg/kg  
Mercury (Hg) : < 0.1 mg/kg  
Cadmium (Cd) : < 1 mg/kg  
**Water Content (Karl Fisher)** 0.20%  
**pH** 3.70  
**Yeast and Mold** < 100 CFU/g  
**E. Coli, Salmonella, S.Aureus** Negative  
**Microbial Count** < 1000 CFU/g (Total plate count)  
**Particle Size** 100% through 20 mesh  
**Residue On Ignition** 0.03%  
**Assay by titration** 99.3% (On dry basis)  
**Storage** Store at 0-8°C  
**Additional Information** Bile tolerant gram negative bacteria: < 100 CFU/g

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**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**