## Chem-Impex International, Inc.

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**Manufacturing site:** 935 Dillon Drive 825 Dillon Drive Wood Dale, IL 60191 Wood Dale, IL 60191

## Certificate of Analysis

04050 **Catalogue Number** 

000424-170322-30810 **Lot Number** 

 $N^{\alpha}$ -Boc- $N^{\text{im}}$ -4-toluenesylfonyl-D-histidine **Product** 

Boc-D-His(Tos)-OH

**CAS Number** 69541-68-0  $C_{18}H_{23}N_3O_6S$ **Molecular Formula** 

409.5 **Molecular Weight** 

White powder **Appearance** 

**Solubility** Clear solution (0.3 g in 2 mL DMF)

122.7 °C **Melting Point** 0.79% **Water Content (Karl** 

Fisher)

 $[a]_D^{20} = -16.2$  ° (C=1 in MeOH) **Optical Rotation** 

**Infrared Spectrum** Conforms to structure Conforms to standard **Analysis by Mass Spectra** 

**Loss on Drying** 0.53% (50 °C, 2h) <sup>1</sup>H NMR Conforms to structure

**Chiral HPLC** 100% (ee) L-Enantiomer Not detected 99.55% **Purity by HPLC** 

Store at 0 - 8 °C **Storage** 

**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**