## Chem-Impex International, Inc.

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## Certificate of Analysis

Catalogue Number 16599

**Lot Number** 001702-20160103

Product S(-)-2,2'-Bis(diphenylphosphino)-1,1'-

binaphthalene

(S)-(-)-BINAP

CAS Number 76189-56-5 Molecular Formula C<sub>44</sub>H<sub>32</sub>P<sub>2</sub>

**Molecular Weight** 622.67

**Appearance** Off-white crystalline powder

**Melting Point** 239-240 °C

**Optical Rotation** [a]<sub>D</sub><sup>25</sup> = -236° (C=0.3 in Toluene)

 Chiral HPLC
 99.32% (ee)

 Purity by HPLC
 99.32%

**Storage** Store at 0-8 °C

**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**