

# *Chem-Impex International, Inc.*

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## *Certificate of Analysis*

|                          |                                                                                                            |
|--------------------------|------------------------------------------------------------------------------------------------------------|
| <b>Catalogue Number</b>  | 03561                                                                                                      |
| <b>Product</b>           | <b>L-Ornithine-<math>\alpha</math>-ketoglutarate (1:1)</b>                                                 |
| <b>Lot Number</b>        | 002512-20151018                                                                                            |
| <b>CAS Number</b>        | 5191-97-9                                                                                                  |
| <b>Molecular Formula</b> | C <sub>5</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub> •C <sub>5</sub> H <sub>6</sub> O <sub>5</sub> |
| <b>Molecular Weight</b>  | 278.26                                                                                                     |

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|-------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>Appearance</b>             | White to yellowish crystalline powder                                                               |
| <b>Heavy Metals</b>           | < 10 ppm                                                                                            |
| <b>Cation</b>                 | Lead (Pb): < 3 ppm<br>Arsenic (As): < 0.1 ppm<br>Cadmium (Cd): < 0.1 ppm<br>Mercury (Hg): < 0.1 ppm |
| <b>pH</b>                     | 5.5                                                                                                 |
| <b>Yeast and Mold</b>         | ≤ 100 cfu/g                                                                                         |
| <b>Optical Rotation</b>       | [ $\alpha$ ] <sub>D</sub> <sup>20</sup> = +11.4°                                                    |
| <b>Loss on Drying</b>         | 1.41%                                                                                               |
| <b>Salmonella</b>             | Negative                                                                                            |
| <b>Mesh Size</b>              | 40 Mesh                                                                                             |
| <b>Residue On Ignition</b>    | 0.03%                                                                                               |
| <b>Assay</b>                  | 99.3%                                                                                               |
| <b>Storage</b>                | Store at 0-8 °C                                                                                     |
| <b>Additional Information</b> | Total plate count: ≤ 1000 cfu/g<br>Coliforms: Negative                                              |

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**Lot Number: 002512-20151018**

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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**

A handwritten signature in black ink, appearing to read 'Bala Kumar', with a stylized flourish at the end.

**Bala Kumar**  
**Quality Control Manager**