Chem-Impex International, Inc.

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Certificate of Analysis

Catalogue Number 02041

Lot Number 001192-200612

Product L-Norvaline

L-Nva-OH

 $\begin{array}{lll} \textbf{CAS Number} & 6600\text{-}40\text{-}4 \\ \textbf{Molecular Formula} & C_5H_{11}NO_2 \\ \textbf{Molecular Weight} & 117.1 \end{array}$

Appearance White to off-white powder

pH 5.98

Optical Rotation $[a]_D^{20} = 24.14^{\circ}$

Infrared Spectrum Conforms to structure

Loss on Drying 0.04%

Related Substances L-Valine : 0.0086%

L-Leucine: 0.0074% L-Norleucine: 0.0121% Other amino acid: 0.002% Chiral impurity: Not detected

Residue On Ignition0.05%Assay by titration99.03%StorageStore at RT

Additional Information Transmitance: 99.4% (State of solution)

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