## Chem-Impex International, Inc.

Tel: (630) 766-2112 E-mail: sales@chemimpex.com Shipping and Correspondence: 935 Dillon Drive Wood Dale, IL 60191 Fax: (630) 766-2218 Web site: www.chemimpex.com Manufacturing site: 825 Dillon Drive Wood Dale, IL 60191

## Certificate of Analysis

Catalogue Number Product	03156 L-Tyrosine benzyl ester 4-toluenesulfonate salt
Lot Number	000424-160509-16035
	L-Tyr-OBzl•TosOH
CAS Number	53587-11-4
Molecular Formula	$C_{16}H_{17}NO_3 \cdot C_7H_8O_3S$
Molecular Weight	443.5
Appearance	White powder
Solubility	Clear solution (0.3g in 3 mL MeOH)
Melting Point	179.4-181.7 °C
Water Content (Karl Fisher)	0.68%
<b>Optical Rotation</b>	$[a]_D^{20} = -14.9^{\circ} (C=2 \text{ in MeOH})$
Infrared Spectrum	Conforms to structure
Analysis by Mass Spectra	Conforms to standard
Loss on Drying	0.64% (90 °C, 2h)
<sup>1</sup> H NMR	Conforms to structure
Purity by HPLC	99.90%
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

likumer.

Bala Kumar Quality Control Manager