



Certificate of Analysis

NICOTINE

Lot # 8727-13-01-03-104A

Manufactured December, 2013

Parameter	Method	Acceptance Criteria (Monograph) ¹	Result
Identification	USP<197U>	UV absorption spectra of test solution and the standard solution exhibit maxima and minima at the same wavelengths.	UV absorption spectra of test solution and the standard solution exhibit maxima and minima at the same wavelengths.
Specific Rotation	USP <781S>	-130° to -143°	-138°
Heavy Metals	USP <231> Method II	NMT 0.002%	< 0.002%
Water Determination	USP <921> Method I	NMT 0.5%	0.2%
Chromatographic Purity	USP <621>	No single impurity >0.5%	Unknowns: ² RRT 1.10: 0.2% RRT 1.19: 0.1% RRT 1.22: 0.7% RRT 1.23: 0.1% RRT 1.62: 0.7%
		Total impurities NMT 1.0%	Total impurities : 1.8%
Titrimetric Assay	USP <541>	99.0 % -101.0%	100.1%

Maria Clara U. Smith
Quality Control Manager

Comments: ¹Refers to USP 36-NF31s2 (Monograph is Nicotine)

²Out of specification result

NMT = Not more than

RRT = Relative retention time with respect to Nicotine peak

This material does not meet USP Specifications

Issued 04/03/14