

# CERTIFICATE OF ANALYSIS



**Lot Number:** 1939I015      **Name:** Nicotine      **Quality:** USP/Ph.Eur.  
**Date of Mfg:** 10/1/2019      **CAS# :** 54-11-5      **UN# :** 1654  
**Date of Retest:** 10/1/2023      **Formula:** C10H14N2      **Molecular wgt:** 162.2  
**Nicotine Purity:** 99.70%

Test	Test Method	Specificatin	Result
Description	BE-183785	colourless to yellow or brownish liquid	Conforms
IR-Spectrum	IR-183785	in accordance with the standard spectrum	Conforms
Clarity of solution	KLB-183785	NMT 3 FTU; clear ( 10 % mN in water)	0.7 FTU
Colour of solution	FAB-183785	NLT 5 on scale BY, Y or R (10 % mN in water)	7
Specific rotation	SBD-183785	<b>-143 - -130 • at 25°C in ethanol 96 %</b> (calculated <b>on the anhydrous basis)</b>	-133
Specific rotation	SCD-183785	<b>-152 - -140 • in ethanol abs.</b> (calculated <b>on the -anhydrous basis)</b>	-144
Arsenic	GPAS -183785	NMT2ppm	<1 ppm
Cadmium	PLCD-183785	NMT0.5 ppm	<0.20 ppm
Heavy metals (Pb)	SM-183785	NMT20ppm	<10 ppm
Water (KF)	KF-183785	NMT0.5%	0.02%
Assay (Non-aqu . titr .)	TIG-183785	<b>99.0 - 101.0 %</b> <b>(calculated on the anhydrous basis)</b>	99.70%
Identity (HPLC)	LCV-183785	<b>the retention time of the major peak</b> corresponds <b>to that of the reference</b>	Conforms
Related substances (HPLC)	LCV-183785	NMT 0.15 % cotinine	<0.06%
Related substances (HPLC)	LCV-183785	NMT0.15 % myosmine	<0.06%
Related substances (HPLC)	LCV-183785	NMT 0.15 % nicotine N-oxide	<0.06%
Related substances (HPLC)	LCV-183785	NMT 0.15 % nornicotine	<0.06%
Related substances (HPLC)	LCV-183785	NMT 0.15 % anatabine	<0.06%
Related substances (HPLC)	LCV-183785	NMT 0.10 % ̢-nicotyrine	<0.06%
Related substances (HPLC)	LCV-183785	NMT 0.10 % anabasine	<0.06%
Related substances (HPLC)	LCV-183785	<b>NMT 0.10 % greatest unknown impurity</b> (no <b>unkown impurity greater than 0.10%)</b>	<0.06%
Related substances (HPLC)	LCV-183785	NMT 0.8 % sum of impurities	<0.06%
Residual solvent	GCH-183785	500 ppm cyclohexane	15 ppm

**Storage Conditions:** Store under nitrogen in airtight containers with temperatures at or below 20° C or 68° F protected from light and moisture.

**Transportation:** Transport at temperatures at or below 30° C or 86° F.

Certificate of Analysis Prepared For:



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