

CERTIFICATE OF ANALYSIS



Lot Number: NA99/199/20 Name: Nicotine Quality: USP/Ph.Eur.
Date of Mfg: 2/1/2020 CAS# : 54-11-5 UN# : 1654
Date of Retest: 1/1/2023 Formula: C10H14N2 Molecular wgt: 162.2
Nicotine Purity: 99.93%

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	-143 - -130 • at 25°C in ethanol 96 % (calculated on the anhydrous basis)	-137.11
Specific rotation	SCD-183785	-152 - -140 • in ethanol abs. (calculated on the -anhydrous basis)	-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	99.0 - 101.0 % (calculated on the anhydrous basis)	99.93%
Identity (HPLC)	LCV-183785	the retention time of the major peak corresponds to that of the reference	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 % anabasin	<0.06%
Related substances (HPLC)	LCV-183785	NMT 0.10 % greatest unknown impurity (no unkwown impurity greater than 0.10%)	<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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