

CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by Intertek. Certificate Number. 2317548

Catalogue Number	18142
Lot Number	A0465012
Description	L-Nicotine,99+%
CAS Number	54-11-5
Quality Test/Release Date	08/Aug/2025
Suggested retest date	08/Aug/2027
Country of Origin	POLAND
Declaration of Origin	plant
BSE/TSE	extraction from tobacco

Result Name	Units	Specifications	Test Value
Appearance (Color)		Clear colorless to yellow to brown	Clear light orange
Appearance (Form)		Liquid	Liquid
Infrared spectrum		Conforms	Conforms
GC	%	>=99.0	99.6
Specific optical rotation		-140° to -152° (20°C, 589 nm) (c=2,absolute ethanol)	-145° (20°C, 589 nm) (c=2,absolute ethanol)
Specific optical rotation		on anhydrous basis	on anhydrous basis
Refractive index		1.5255 to 1.5285 (20°C, 589 nm)	1.5272 (20°C, 589 nm)
Water	%	=<0.5 (K.F.)	0.08 (K.F.)

Geert Torfs
Supervisor, QC

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third-party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of the catalogue number listed above.