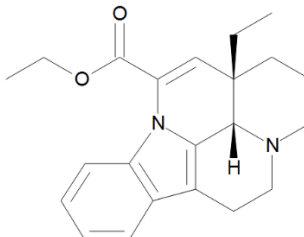




CERTIFICATE OF ANALYSIS

Certified Reference Material		
Product Name:	Vinpocetine	
Chemical Name:	Eburnamenine-14-carboxylic acid, ethyl ester, (3apha, 16alpha)-	
Product information		
Product Code:	RLP-056	Chemical structure: 
Lot No.:	RS-RLP056-01	
Mol. Form:	C ₂₂ H ₂₆ N ₂ O ₂	
Mol. Wt.:	350.45 g/mol	
CAS Number:	42971-09-5	
QC Release Date:	28/08/2024	
Recertified On:	-	
Retest due On:	28/08/2026	
Long Term Storage:	Store at 2-8 °C. Protect from moisture and light.	
Shipping Condition:	This product is stable to be shipped at ambient temperature.	
Analytical Information		
Characteristics		Results
Appearance		White powder
Melting Point		151.0°C
IR		Complies
1H NMR		Complies
13C NMR		Complies
Residual solvents		Nil
Water content		0.21%
Purity (HPLC)		99.89%
Total Impurities (HPLC)		0.11%
Assay / Potency (as is)		99.68%
* The assay/potency (as is) is equivalent to the assay based on the non-anhydrous and non-dried substances, respectively.		

Release by:

Chief Scientific Officer

Chief QA Officer



Product Information

Packaging: 100 mg in amber vial

Intended for use

This RM is intended for R&D and laboratory use only and is not suitable for human or animal consumption.

Instruction for handling and correct use:

Before using the RM, it should be allowed to warm to room temperature. No drying is required, as assigned values have already been corrected for the content of water and other volatile materials.

The RM's retest date is based on the unopened flask being stored according to the recommended condition found in the storage file.

The user is responsible for ensuring that the contents of opened vials continue to be suitable for their intended use and that value assignment and information are maintained.

Metrological traceability:

The balances used for gravimetric measurements are calibrated with weights traceable to national standards. Their calibration is verified daily internally and annually by an external accredited calibration service.



Assigned Value

99.68 %

$$\text{Assay (\%)} = (100\% - \text{Volatile content(\%)}) \cdot \frac{\text{Purity(\%)}}{100\%}$$

The content of the analyte was determined as the ratio of the analyte's peak area to the cumulative areas of the purities, added up to 100%. System peaks were ignored in the calculation.

Area percent report-sorted by signal ($n = 5$)

Pk#	Retention time	Area	Area %
1	19.001	24535266	99.89%
2	16.080	27273	0.11%
Totals			100%

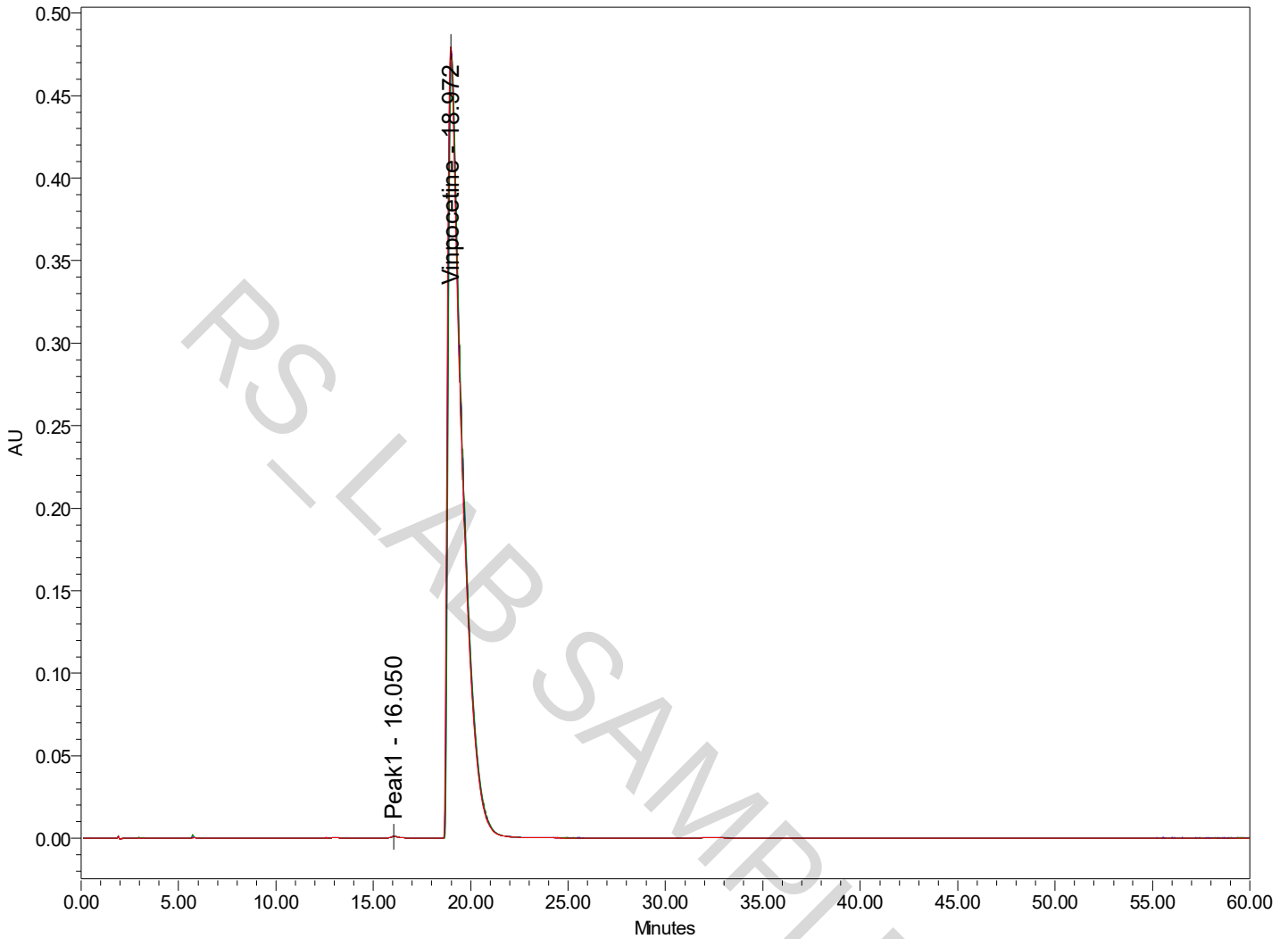
Volatile Content

Water content by KF

Result ($n = 3$)	0.21%
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Residual solvents by NMR

Result:	Nil
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— Sample Name: Sample1; Vial: 1:A,2; Injection: 1; Date Acquired: 8/26/2024 12:18:25 -04
— Sample Name: Sample1; Vial: 1:A,2; Injection: 5; Date Acquired: 8/26/2024 16:20:54 -04
— Sample Name: Sample1; Vial: 1:A,2; Injection: 4; Date Acquired: 8/26/2024 15:20:17 -04
— Sample Name: Sample1; Vial: 1:A,2; Injection: 3; Date Acquired: 8/26/2024 14:19:37 -04
— Sample Name: Sample1; Vial: 1:A,2; Injection: 2; Date Acquired: 8/26/2024 13:19:02 -04

Peak Results

	Name	RT	Area	Height	% Area
1	Peak1	16.050	26537	936	0.11
2	Peak1	16.070	28243	938	0.12
3	Peak1	16.075	28023	959	0.11
4	Peak1	16.093	26127	909	0.11
5	Peak1	16.113	27435	930	0.11

	Name	RT	Area	Height	% Area
6	Vinpocetine	18.972	24662563	479267	99.89
7	Vinpocetine	18.989	24656527	479070	99.89
8	Vinpocetine	18.997	24517038	476814	99.88
9	Vinpocetine	19.015	24479859	475555	99.89
10	Vinpocetine	19.033	24360343	473317	99.89

Reported by User: RS - System
 Report Method: Summary
 Report Method ID: 1388

Project Name: Vinpocetin RS-RLP056-01
 Date Printed:
 8/27/2024
 07:48:50 Etc/GMT+4

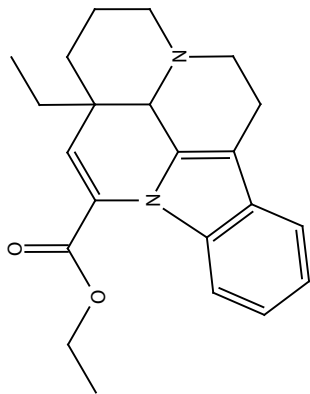
% Area Summarized by Name
Channel: 2998 Ch1 280nm@4.8nm

	SampleName	Inj	Channel	Vial	Peak1	Vinpocetine
1	Sample1	1	2998 Ch1 280nm@4.8nm	1:A,2	0.11	99.89
2	Sample1	2	2998 Ch1 280nm@4.8nm	1:A,2	0.11	99.89
3	Sample1	3	2998 Ch1 280nm@4.8nm	1:A,2	0.12	99.88
4	Sample1	4	2998 Ch1 280nm@4.8nm	1:A,2	0.11	99.89
5	Sample1	5	2998 Ch1 280nm@4.8nm	1:A,2	0.11	99.89
Mean					0.11	99.89

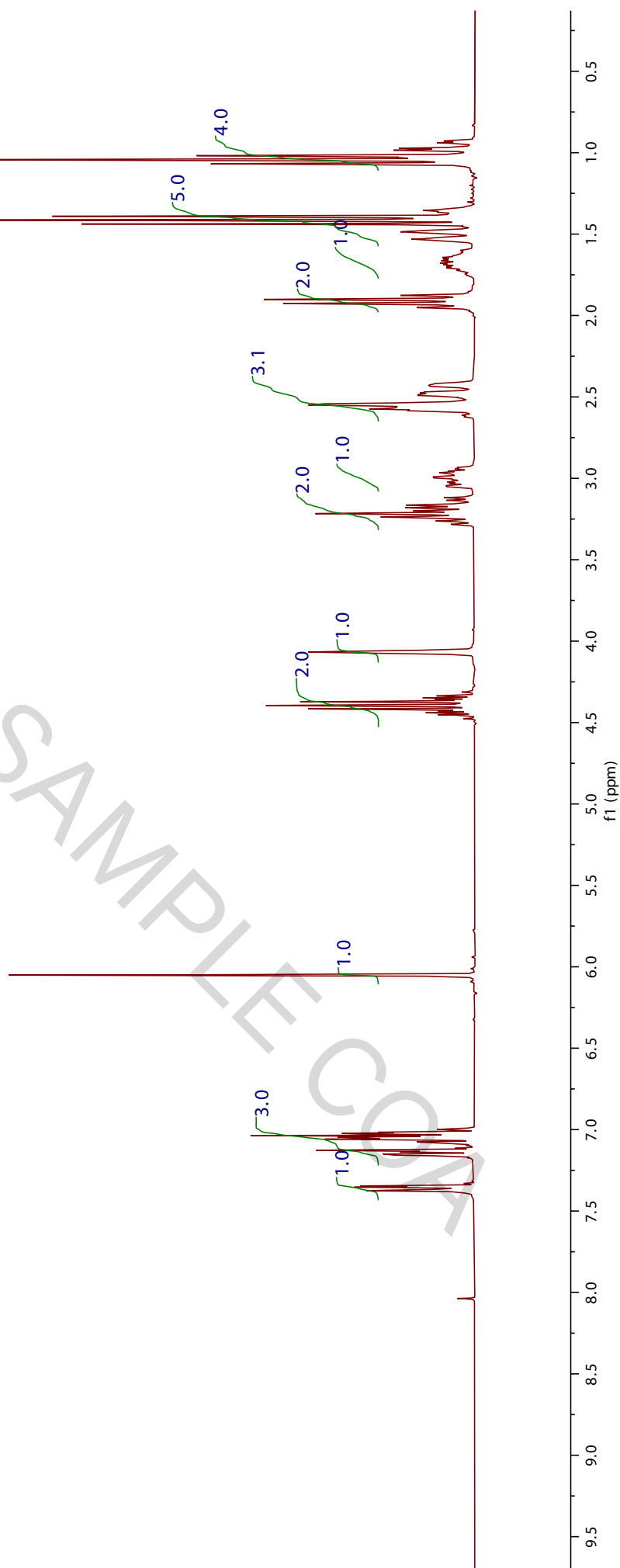
RS-LAB SAMPLE COA

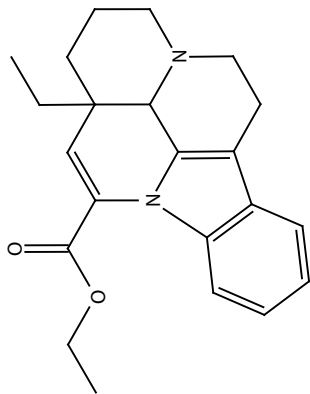
Reported by User: System
Report Method: Summary
Report Method ID: 1388

Project Name: Vinpocetin RS-RLP056-01
Date Printed:
8/27/2024
07:48:50 Etc/GMT+4

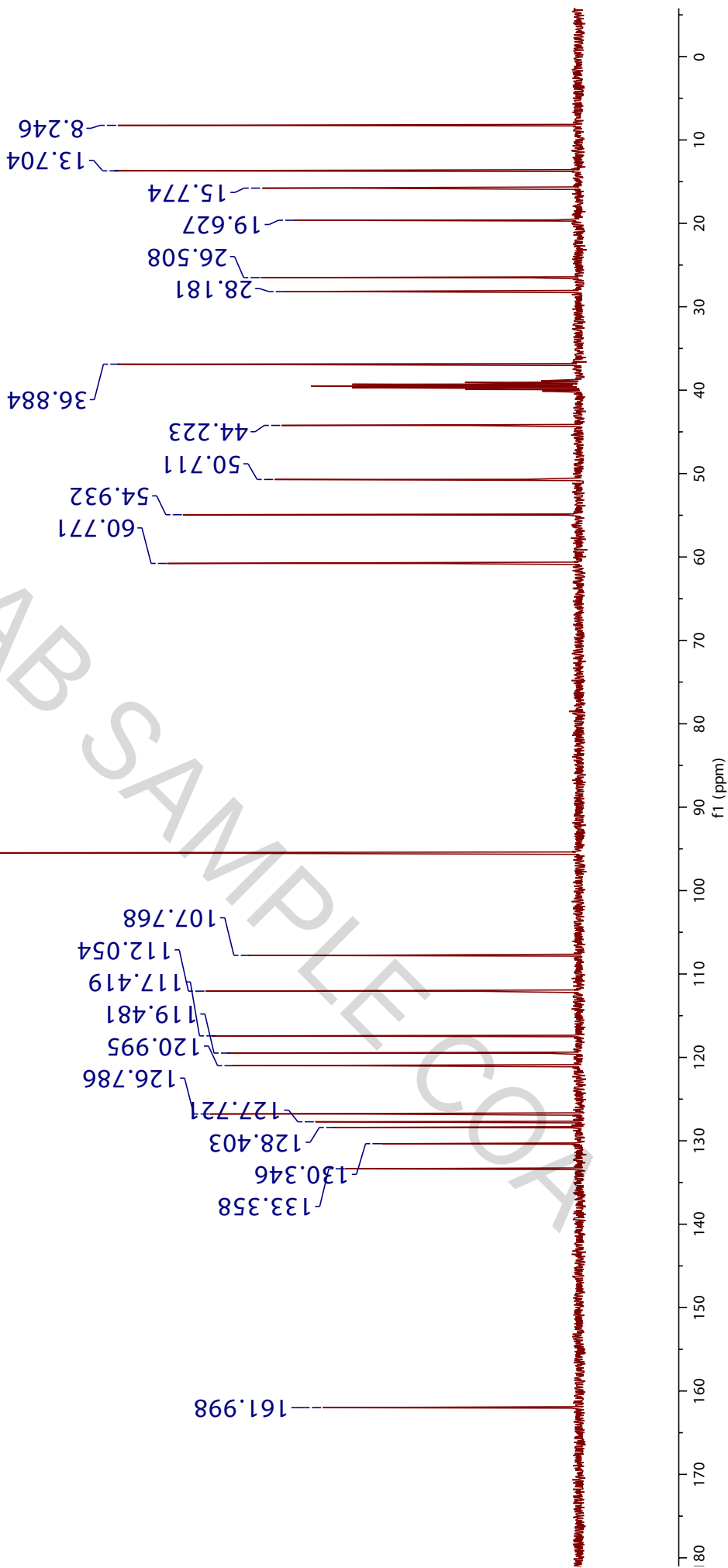


Parameter	Value
1 Title	RS-RLP056-01_1H
2 Origin	Varian
3 Site	
4 Instrument	mercury
5 Solvent	DMSO/CCL4
6 Temperature	30.0
7 Number of Scans	36
8 Relaxation Delay	3.5000
9 Pulse Width	16.5000
10 Presaturation Frequency	
11 Acquisition Time	2.4615
12 Acquisition Date	2024-08-28T15:49:18
13 Modification Date	2024-09-02T14:17:24
14 Spectrometer Frequency	300.09
15 Nucleus	¹ H





Parameter	Value
1 Title	RS-RLP056-01_13C
2 Instrument	Avance 400 Neo
3 Solvent	DMSO- CCl_4
4 Temperature	301.7
5 Pulse Sequence	zgpg30
6 Experiment	1D
7 Number of Scans	326
8 Acquisition Date	2024-08-28T 16:03:46
9 Modification Date	2024-08-28T 16:03:38
10 Spectrometer Frequency	100.63
11 Nucleus	^{13}C



Peak pick

Wave number	Abs. intensity	Rel. intensity	Width	Threshold	Shoulder
2928.40	0.062	0.063	50.453	66.59	0
2851.34	0.043	0.020	11.467	21.08	0
1715.22	0.094	0.094	19.384	100.18	0
1628.28	0.039	0.023	9.008	20.33	0
1603.96	0.042	0.034	15.706	33.39	0
1453.64	0.083	0.081	17.047	77.03	0
1360.36	0.044	0.027	7.112	27.87	0
1256.87	0.086	0.086	44.817	91.25	0
1204.63	0.062	0.040	8.655	41.72	0
1177.78	0.056	0.032	8.456	33.84	0
1115.51	0.044	0.020	9.673	20.17	0
1077.61	0.084	0.066	14.849	66.30	0
1018.66	0.061	0.039	15.001	40.27	0
744.35	0.079	0.073	15.899	77.39	0

Spectrum

