Certificate of Analysis

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Analytical services

Purexa
Purexa Peptide
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Liquilabs s.r.o.
Inovační 122
252 41 Zlatníky-Hodkovice
Czechia
www.liquilabs.cz

Verify Results Online

Sample Identification

Sample Name	Semax 10 mg
Batch Number	709145
Date Published	2026-09-04 13:17

Results for LYO-0661

Peptides	Result	Unit	Uncertainty	Acceptable Range
Semax Assay Peptide Screening 0.1% TFA	11.81	*mg*	[± 0.06]	
Semax Purity Peptide Screening 0.1% TFA	99.3	*%*	[± 0.5]	
Semax Identification by Spectrum (FTIR) Peptide Screening 0.1% TFA	978		[± 5]	
Semax Identification by RT Peptide Screening 0.1% TFA	0.989		[± 0.005]	

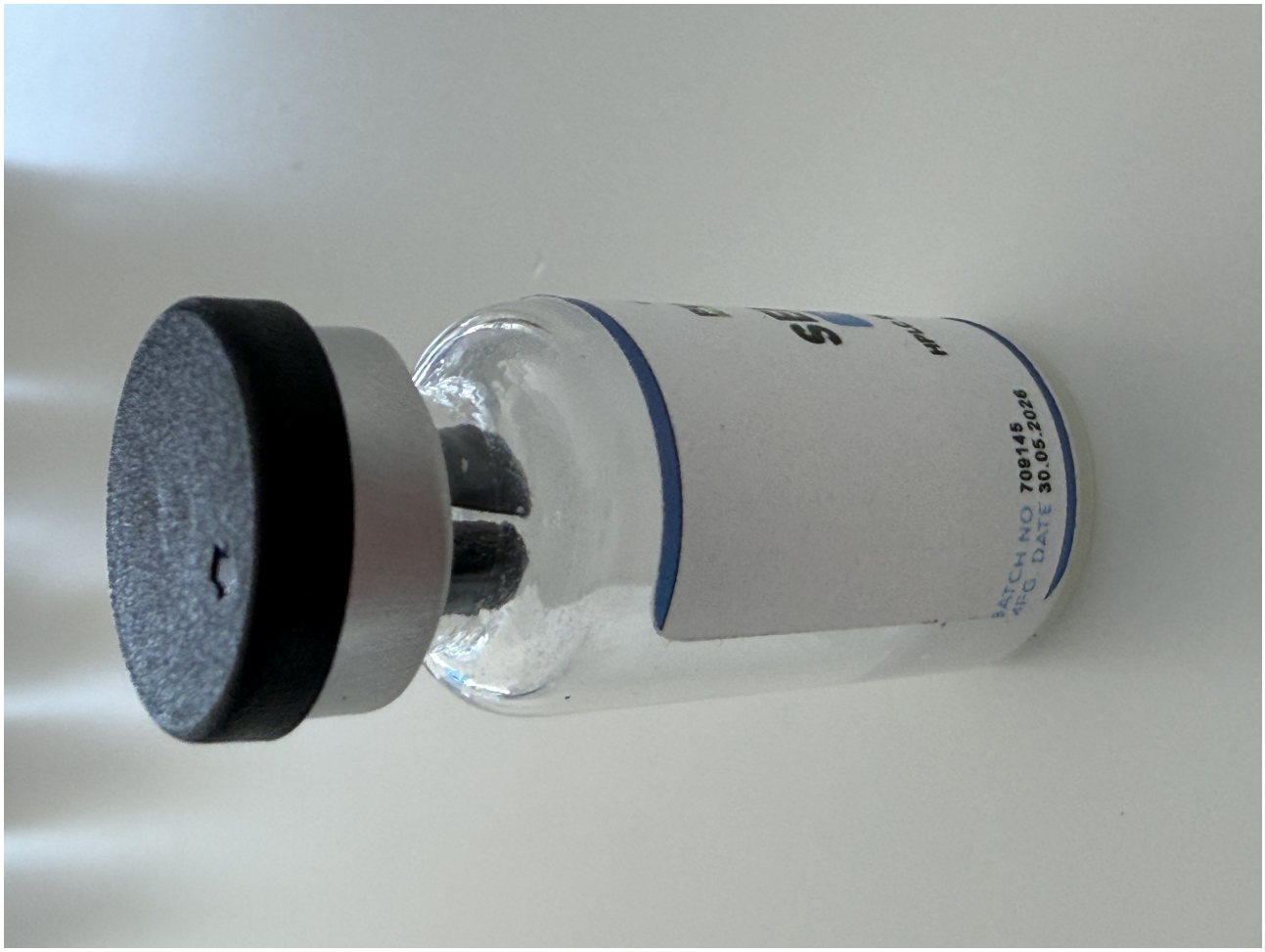
Microbiology	Result	Unit	Uncertainty	Acceptable Range
Bacterial Endotoxin Chromgenic USP<85>/ Eur. Ph. 2.6.14. Bacterial Endotoxin Chromgenic Test	0.011	*EU/mg*	[± 0]	

Elemental Impurities	Result	Unit	Uncertainty	Acceptable Range
Arsenic Elemental Impurities screening USP ⟨232⟩ / Ph. Eur. 5.20 / 2.4.20	< 0.001	*ppm*		
Cadmium Elemental Impurities screening USP ⟨232⟩ / Ph. Eur. 5.20 / 2.4.20	< 0.001	*ppm*		
Quicksilver Elemental Impurities screening USP ⟨232⟩ / Ph. Eur. 5.20 / 2.4.20	< 0.001	*ppm*		
Lead Elemental Impurities screening USP ⟨232⟩ / Ph. Eur. 5.20 / 2.4.20	< 0.001	*ppm*		
Nickel Elemental Impurities screening USP ⟨232⟩ / Ph. Eur. 5.20 / 2.4.20	< 0.001	*ppm*		
Vanadium Elemental Impurities screening USP ⟨232⟩ / Ph. Eur. 5.20 / 2.4.20	< 0.001	*ppm*		
Cobalt Elemental Impurities screening USP ⟨232⟩ / Ph. Eur. 5.20 / 2.4.20	< 0.001	*ppm*		

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LIQUILABS Analytical services	Method Specification	
Determination of identity, content and purity of Semax		
Document number SMX_008_2026	*Superseded document* -	*Number of pages* 4

1. Content Assesment

1.1. Instrumentation

Module	Name	Serial Number
System Controller	Shimadzu CBM-40 Lite	L221226351398
Degassing Unit	Shimadzu DGU-403	NA
Pump	Shimadzu LC-40B XR	L22146350580
Autosampler	Shimadzu SIL-40C XR	L22216351622
Colum Thermostat	Shimadzu CTO-40S	L22236351602
PDA Detector	Shimadzu SPD-M40	L22276352808
SQ MS Detector	Shimadzu LCMS-2050	O12476200760

1.2. Chromatographic conditions

Chromatographic conditions	
Eluent A	0.1% DFA in Water (HPLC, Gradient Grade)
Eluent B	0.1% DFAin Acetonitrile (HPLC, Gradient Grade)
Flow rate	0.8 mL/min
Program	Gradient elution
Injection volume	2 µL
Colum Temperature	60°C
Column	Waters XSelect CSH C18, 100x2.1mm 2.5µm
Detection wavelength	225 nm

Gradient Program		
Time [min]	A [%]	B [%]
1	98	2
13.99	35	65
14	5	95
15	5	95
15.01	98	2
19	end	

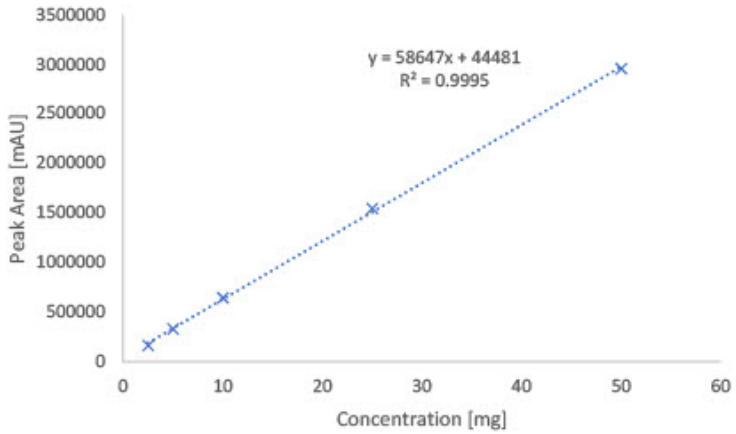
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1.3. Sample preparation

Whole amount of container was dissolved in 2mL of water (LCMS Grade). 100 µL of sample was transferred to HPLC vial and diluted by 900 µL water (LCMS Grade) and submitted for analysis.

1.4. Calibration curve

Calibration curve detail	
Quantitative method	External Standard
Calibration Type	Linear
Number of calibration points	5
Force through Zero	Enabled
Weighting Method	None



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2. Purity assessment

2.1 Instrumentation

Module	Name	Serial Number
System Controller	Shimadzu CBM-40 Lite	L221226351398
Degassing Unit	Shimadzu DGU-403	NA
Pump	Shimadzu LC-40B XR	L22146350580
Autosampler	Shimadzu SIL-40C XR	L22216351622
Colum Thermostat	Shimadzu CTO-40S	L22236351602
PDA Detector	Shimadzu SPD-M40	L22276352808
SQ MS Detector	Shimadzu LCMS-2050	O12476200760

2.2 Chromatographic conditions

Chromatographic conditions	
Eluent A	0.1% DFA in Water (HPLC, Gradient Grade)
Eluent B	0.1% DFAin Acetonitrile (HPLC, Gradient Grade)
Flow rate	0.8 mL/min
Program	Gradient elution
Injection volume	2 µL
Colum Temperature	60°C
Column	Waters XSelect CSH C18, 100x2.1mm 2.5µm
Detection wavelength	225nm

Gradient Program		
Time [min]	A [%]	B [%]
1	98	2
13.99	35	65
14	5	95
15	5	95
15.01	98	2
19	end	

2.3 Purity assesment

Purity of compound assesed by area normalization method, comparing area of each peak to sum of area of all peaks detected at wavelenght of 225 nm.

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Analysis Report

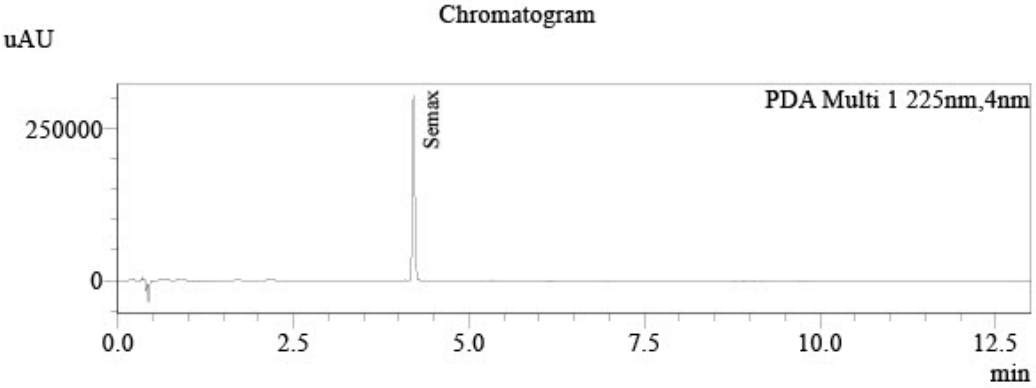
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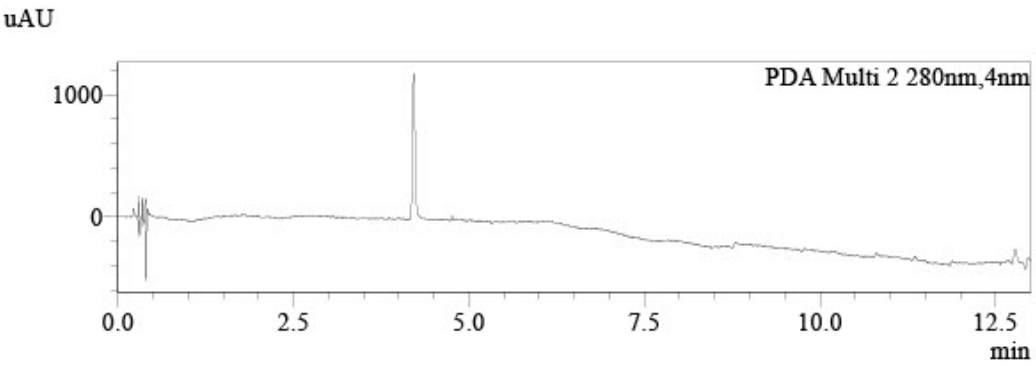
Analysis of quantity and purity of active ingredient by UHPLC with UV detection

Sample Information

Injection Volume	: 2
Data File	: LYO-0661__005.lcd
Method File	: Peptide Screening_DFA_Group E.lcm
Date Acquired	: 8/25/2026 1:50:42 PM

Chromatogram





Peak Table

PDA Ch1 225nm

Name	Ret. Time	Area	Conc.	Unit	Area%
	3.876	1001	0.000		0.135
	4.096	1190	0.000		0.160
Semax	4.207	737376	11.815	mg	99.287
	4.344	179	0.000		0.024
	4.468	436	0.000		0.059
	5.317	1368	0.000		0.184
	5.528	161	0.000		0.022
	5.675	962	0.000		0.130
		742673			100.000

Peak Table

PDA Ch2 280nm

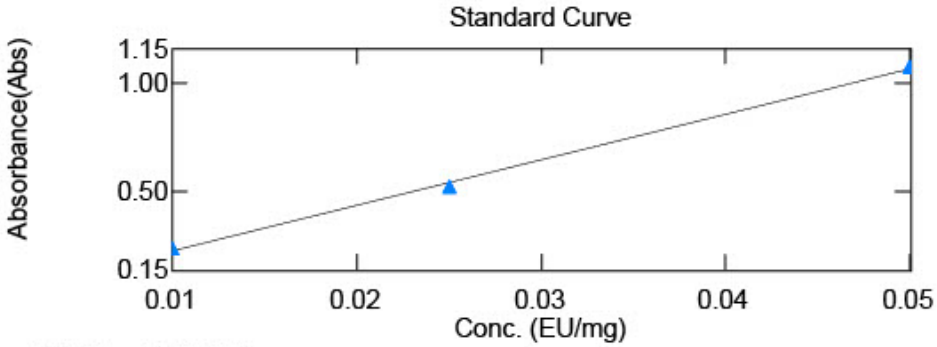
Name	Ret. Time	Area	Conc.	Unit
	4.210	3173	0.000	
		3173		

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Endotoxin Determination Report

File Information
Filename: C:\UVVis-Data\Data\File_260825_112353.vqud
Date/Time: 08/25/2026 12:17:16 PM

Instrument Information
Instrument Type: UV-1900 Series
Model (S/N): UV-1900i (A12536253123)



y = 20.7814 x + 0.0235192
r2 = 0.99830

	Sample Name	Conc	Raw_WL545.0	Dilution Rate
1	LYO-0660	0.367	0.4049	20.00
2	LYO-0661	0.125	0.1530	20.00
3	LYO-0662	0.084	0.1111	20.00
4	LYO-0663	2.058	1.0927	40.00
5	LYO-0664	0.196	0.2275	20.00
6	LYO-0666	0.101	0.1284	20.00
7	LYO-0667	0.068	0.0942	20.00
8	LYO-0668	0.080	0.1066	20.00
9	LYO-0669	1.030	0.5587	40.00
10	LYO-0672	0.113	0.1411	20.00
11	LYO-0671	0.311	0.1529	50.00
12	LYO-0672	2.514	0.5459	100.00
13	LYO-0673	0.066	0.0925	20.00
14	LYO-0674	2.276	0.6147	80.00
15	LYO-0675	0.074	0.1001	20.00
16	LYO-0676	0.059	0.0845	20.00
17	LYO-0677	0.136	0.1649	20.00
18	LYO-0678	3.182	0.8502	80.00

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Responsibles



Mr. Ján Galbavý
CEO

Analysis results relate only to the samples tested.
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