

# Certificate of Analysis

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V zářezu 902/4  
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## Sample Identification

**Sample Name** SEMAX 10 mg  
**Batch Number**  
**Date Published** 2026-06-11 16:51

## Results for LYO-0208

| Peptides                                                                              | Result | Unit  | Uncertainty | Acceptable Range |
|---------------------------------------------------------------------------------------|--------|-------|-------------|------------------|
| Semax Assay<br>Peptide Screening 0.1% TFA                                             | 10.52  | mg    | [± 0.05]    |                  |
| Semax Purity<br>Peptide Screening 0.1% TFA                                            | 99.7   | %     | [± 0.5]     |                  |
| Semax Identification by<br>Spectrum (FTIR)<br>Peptide Screening 0.1% TFA              | 996    |       | [± 5]       |                  |
| Semax Identification by RT<br>Peptide Screening 0.1% TFA                              | 0.987  |       | [± 0.005]   |                  |
| Mass Spectrometry                                                                     | Result | Unit  | Uncertainty | Acceptable Range |
| Molecular Ion Mass Identification<br>(MS Deconvolution)<br>Mass Spectrometry Identity | 813    | g/mol | [± 1]       |                  |

|                                                                                                                    |                                 |                             |
|--------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------|
|  LIQUILABS<br>Analytical services | <b>Method Specification</b>     |                             |
| <b>Determination of identity, content and purity of Semax</b>                                                      |                                 |                             |
| <i>Document number</i><br>SEMAX_003_2026                                                                           | <i>Superseded document</i><br>- | <i>Number of pages</i><br>3 |

## 1. Content Assessment

### 1.1. Instrumentation

| Module            | Name                | Serial Number |
|-------------------|---------------------|---------------|
| System Controller | Shimadzu CBM-20A    | L20235355693  |
| Degassing Unit    | Shimadzu DGU-14A    | NA            |
| Pump A            | Shimadzu LC-20AD    | L20104350216  |
| Pump B            | Shimadzu LC-20AD    | L20104451348  |
| Autosampler       | Shimadzu SIL-10ADvp | C21054109114  |
| Colum Thermostat  | Shimadzu CTO-10ACvp | C21033770144  |
| Detector          | Shimadzu SPD-10ADvp | C20994233588  |

### 1.2. Chromatographic conditions

| Chromatographic conditions |                                                    |
|----------------------------|----------------------------------------------------|
| Eluent A                   | 0.1% TFA in Water (HPLC, Gradient Grade)           |
| Eluent B                   | 0.1% TFA in Acetonitrile (HPLC, Gradient Grade)    |
| Flow rate                  | 0.4 mL/min                                         |
| Program                    | Gradient elution                                   |
| Injection volume           | 0.5 µL                                             |
| Colum Temperature          | 60°C                                               |
| Column                     | Phenomenex Biozen Peptide Polar C18, 150x2.1mm 3µm |
| Detection wavelength       | 214nm                                              |

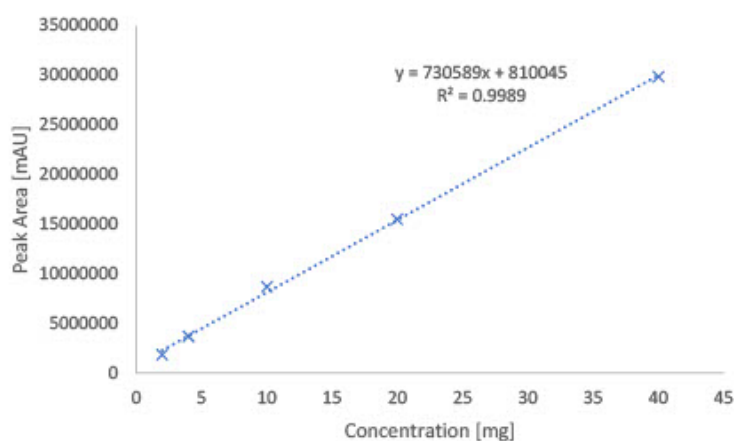
| Gradient Program |       |       |
|------------------|-------|-------|
| Time [min]       | A [%] | B [%] |
| 1                | 95    | 5     |
| 20.50            | 5     | 95    |
| 21.00            | 5     | 95    |
| 21.05            | 95    | 5     |
| 26               | end   |       |

### 1.3. Sample preparation

Whole amount of container was dissolved in 2mL of water (HPLC, Gradient Grade). Aliquote part of 1 mL was dispensed into HPLC vial for analysis.

### 1.4. Calibration curve

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



## 2. Purity assessment

### 2.1 Instrumentation

| Module            | Name                | Serial Number |
|-------------------|---------------------|---------------|
| System Controller | Shimadzu CBM-20A    | L20235355693  |
| Degassing Unit    | Shimadzu DGU-14A    | NA            |
| Pump A            | Shimadzu LC-20AD    | L20104350216  |
| Pump B            | Shimadzu LC-20AD    | L20104451348  |
| Autosampler       | Shimadzu SIL-10ADvp | C21054109114  |
| Colum Thermostat  | Shimadzu CTO-10ACvp | C21033770144  |
| Detector          | Shimadzu SPD-10ADvp | C20994233588  |

### 2.2 Chromatographic conditions

| Chromatographic conditions |                                                    |
|----------------------------|----------------------------------------------------|
| Eluent A                   | 0.1% TFA in Water (HPLC, Gradient Grade)           |
| Eluent B                   | 0.1% TFA in Acetonitrile (HPLC, Gradient Grade)    |
| Flow rate                  | 0.4 mL/min                                         |
| Program                    | Gradient elution                                   |
| Injection volume           | 0.5 µL                                             |
| Colum Temperature          | 60°C                                               |
| Column                     | Phenomenex Biozen Peptide Polar C18, 150x2.1mm 3µm |
| Detection wavelength       | 214nm                                              |

| Gradient Program |       |       |
|------------------|-------|-------|
| Time [min]       | A [%] | B [%] |
| 1                | 95    | 5     |
| 20.50            | 5     | 95    |
| 21.00            | 5     | 95    |
| 21.05            | 95    | 5     |
| 26               | end   |       |

### 1.5. Sample preparation

Whole amount of container was dissolved in 2mL of water (HPLC, Gradient Grade). Aliquote part of 1 mL was dispensed into HPLC vial for analysis.

### 1.6. 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 214 nm.

# Analysis Report

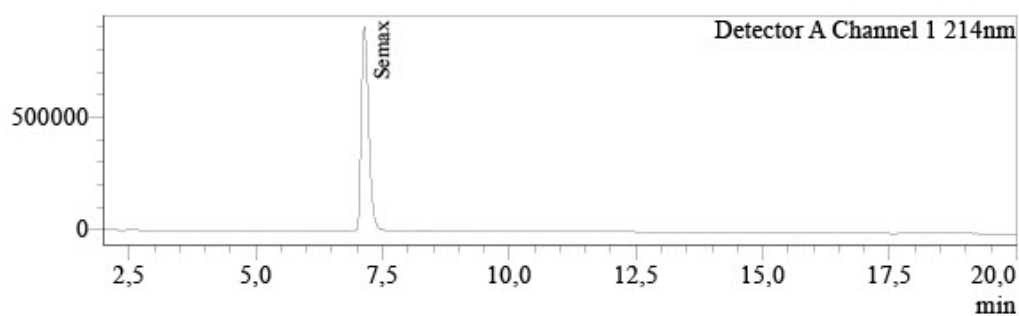


## Sample Information

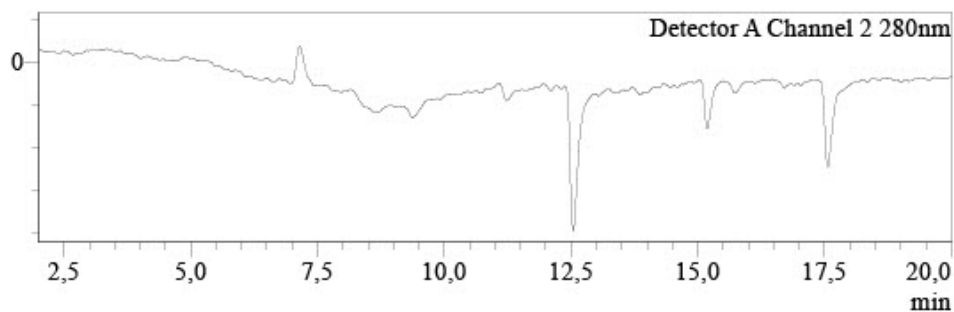
Injection Volume : 5  
Data File : LYO-0208\_005.lcd  
Method File : Peptide screening\_202602\_Goup E.lcm  
Date Acquired : 04.06.2026 17:54:58

## Chromatogram

uAU



uAU



## Peak Table

Detector A Channel 1 214nm

| Peak# | Name  | Ret. Time | Conc.  | Unit | Area%   |
|-------|-------|-----------|--------|------|---------|
| 1     | Semax | 7.142     | 10.521 | mg   | 99.727  |
| 2     |       | 8.216     | 0.000  |      | 0.200   |
| 3     |       | 8.956     | 0.000  |      | 0.072   |
| Total |       |           |        |      | 100.000 |

## Peak Table

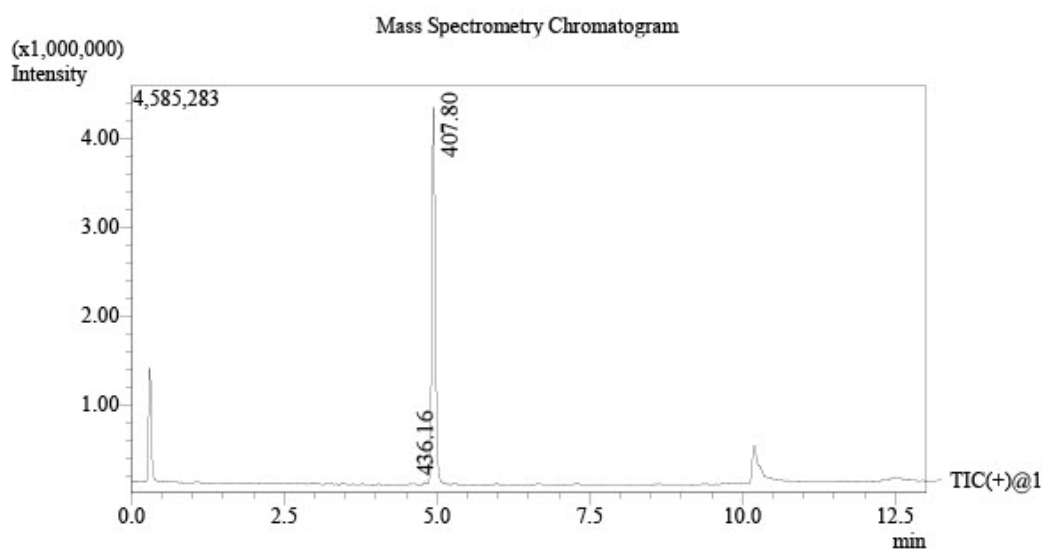
Detector A Channel 2 280nm

| Peak# | Name | Ret. Time | Conc. | Unit |
|-------|------|-----------|-------|------|
| Total |      |           |       |      |

## Qualitative Analysis Report



| Sample Information |                            |
|--------------------|----------------------------|
| Injection Volume   | : 2                        |
| Data File          | : LYO-0208_005.lcd         |
| Method File        | : Peptide screening_V7.lcm |
| Date Acquired      | : 6/11/2026 11:00:48 AM    |



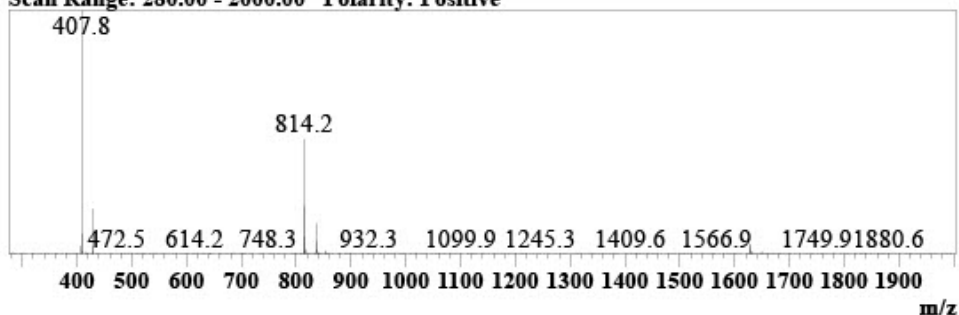
### Substance Identification

#### Detected substance

Ret.Time: 4.859

Base Peak: 407.8 Da

Scan Range: 280.00 - 2000.00 Polarity: Positive



#### Identified Substance

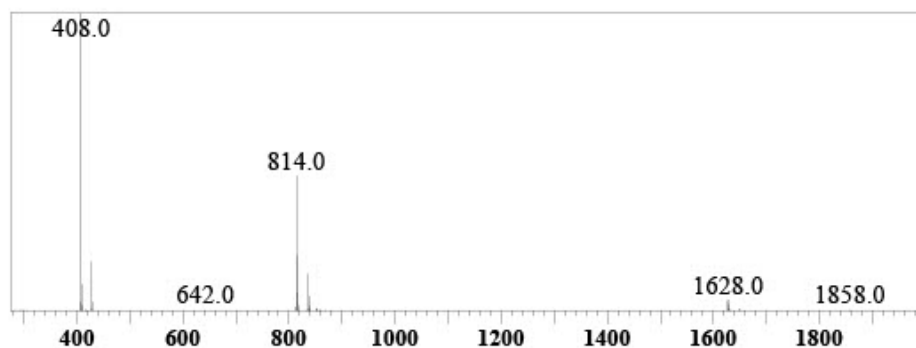
Compound Name: Semax

Similarity: 98%

Formula: C<sub>37</sub>H<sub>61</sub>N<sub>9</sub>O<sub>10</sub>S

CAS: 80714-61-0

Mol.Weight: 813 Da



## Responsibles



**Mr. Ján Galbavý**  
*CEO*

Analysis results relate only to the samples tested.

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