# Certificate of Analysis

LIQUILABS
Analytical services

**Enhanced Research s.r.o.**
Enhanced Research s.r.o.
Czechia

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

Verify Results Online

## Sample Identification

| | |
|---|---|
| **Sample Name** | ARA-290 |
| **Batch Number** | LIN-RAW-AR-2611-1 |
| **Date Published** | 2026-11-12 13:26 |

## Results for RAW-0026

| Peptides | Result | Unit | Uncertainty | Acceptable Range |
|---|---|---|---|---|
| ARA-290 Assay<br>Peptide Screening 0.1% TFA | 24.4 | *mg* | [± 0.1] | |
| ARA-290 Purity<br>Peptide Screening 0.1% TFA | 99.7 | *%* | [± 0.5] | (RT) |
| ARA-290 Identification by Spectrum (FTIR)<br>Peptide Screening 0.1% TFA | 989 | | [± 5] | |
| ARA-290 Identification by RT<br>Peptide Screening 0.1% TFA | 0.999 | | [± 0.005] | |
| Percentual content | 79.50 | *% (m/m)* | [± 1.59] | |



**Liquilabs s.r.o.** • Inovační 122 • 252 41 Zlatníky-Hodkovice • Czechia
Phone : +420 608 444 727 • Fax : • jan.galbavy@liquilabs.cz • www.liquilabs.cz






**Liquilabs s.r.o.** • Inovační 122 • 252 41 Zlatníky-Hodkovice • Czechia
Phone : +420 608 444 727 • Fax : • jan.galbavy@liquilabs.cz • www.liquilabs.cz






**Liquilabs s.r.o.** • Inovační 122 • 252 41 Zlatníky-Hodkovice • Czechia
Phone : +420 608 444 727 • Fax : • jan.galbavy@liquilabs.cz • www.liquilabs.cz

| LIQUILABS Analytical services | Method Specification | |
|---|---|---|
| Determination of identity, content and purity of ARA-290 | | |
| *Document number* ARA_010_2026 | *Superseded document* - | *Number of pages* 4 |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% DFA in Acetonitrile (HPLC, Gradient Grade) |
| Flow rate | 0.4 mL/min |
| Program | Gradient elution |
| Injection volume | 1 µL |
| Colum Temperature | 60ºC |
| Column | Waters ACQUITY CSH C18, 100x2.1mm 1.7µm |
| Detection wavelength | 225nm |

| Gradient Program | | |
|---|---|---|
| Time [min] | A [%] | B [%] |
| 2 | 98 | 2 |
| 10 | 35 | 65 |
| 10.01 | 5 | 95 |
| 11 | 5 | 95 |
| 11.01 | 98 | 2 |
| 15 | end | |

1



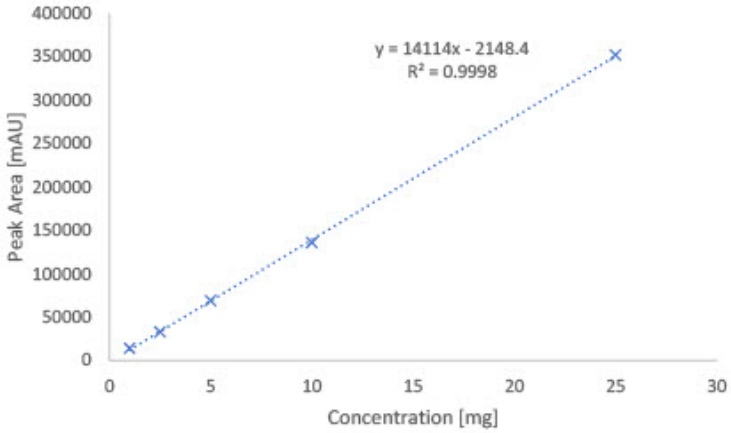
**Liquilabs s.r.o.** • Inovační 122 • 252 41 Zlatníky-Hodkovice • Czechia
Phone : +420 608 444 727 • Fax : • jan.galbavy@liquilabs.cz • www.liquilabs.cz

### 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 |




2



**Liquilabs s.r.o.** • Inovační 122 • 252 41 Zlatníky-Hodkovice • Czechia
Phone : +420 608 444 727 • Fax : • jan.galbavy@liquilabs.cz • www.liquilabs.cz

# 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% DFA in Acetonitrile (HPLC, Gradient Grade) |
| Flow rate | 0.4 mL/min |
| Program | Gradient elution |
| Injection volume | 1 µL |
| Colum Temperature | 60ºC |
| Column | Waters ACQUITY CSH C18, 100x2.1mm 1.7µm |
| Detection wavelength | 225nm |

| Gradient Program | | |
|---|---|---|
| Time [min] | A [%] | B [%] |
| 2 | 98 | 2 |
| 10 | 35 | 65 |
| 10.01 | 5 | 95 |
| 11 | 5 | 95 |
| 11.01 | 98 | 2 |
| 15 | 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 214 nm.

3



**Liquilabs s.r.o.** • Inovační 122 • 252 41 Zlatníky-Hodkovice • Czechia
Phone : +420 608 444 727 • Fax : • jan.galbavy@liquilabs.cz • www.liquilabs.cz

# Analysis Report

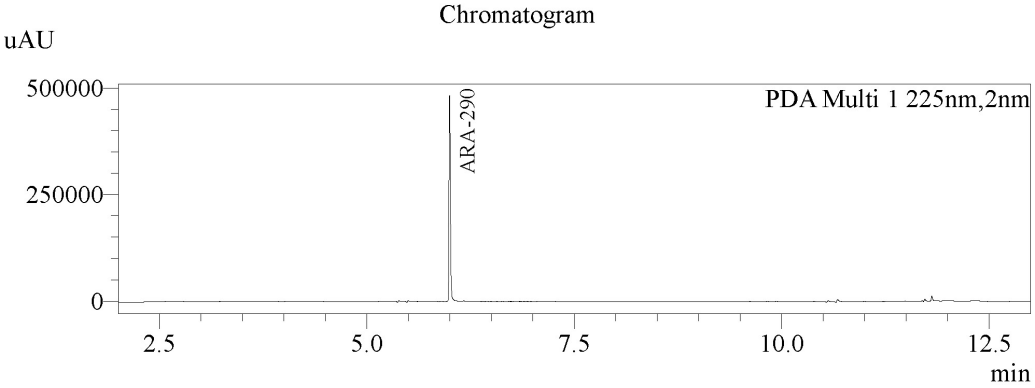
LIQUILABS Analytical services

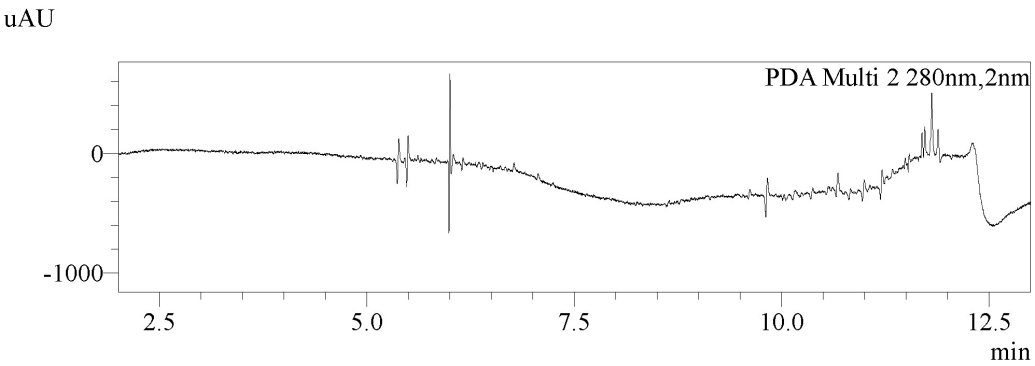
## Analysis of quantity and purity of active ingredient by UHPLC with UV detection

Sample Information

| | |
|---|---|
| Injection Volume | : 1 |
| Data File | : RAW-0026__002.lcd |
| Method File | : Peptide Screening_DFA_V2_F.lcm |
| Date Acquired | : 11/9/2026 12:53:22 PM |

Chromatogram




Peak Table

PDA Ch1 225nm

| Name | Ret. Time | Area | Conc. | Unit | Area% |
|---|---|---|---|---|---|
| ARA-290 | 5.997 | 563897 | 24.357 | mg | 99.661 |
| | 6.165 | 353 | 0.000 | | 0.062 |
| | 6.772 | 654 | 0.000 | | 0.116 |
| | 7.065 | 760 | 0.000 | | 0.134 |
| | 7.245 | 149 | 0.000 | | 0.026 |
| | | 565814 | | | 100.000 |

Peak Table

PDA Ch2 280nm

| Name | Ret. Time | Area | Conc. | Unit |
|---|---|---|---|---|
| | | | | |



**Liquilabs s.r.o.** • Inovační 122 • 252 41 Zlatníky-Hodkovice • Czechia
Phone : +420 608 444 727 • Fax : • jan.galbavy@liquilabs.cz • www.liquilabs.cz

**Responsibles**



**Mr. Ján Galbavý**
*CEO*

Analysis results relate only to the samples tested.
This document shall not be reproduced except in full, without the written approval of Liquilabs s.r.o.



**Liquilabs s.r.o.** • Inovační 122 • 252 41 Zlatníky-Hodkovice • Czechia
Phone : +420 608 444 727 • Fax : • jan.galbavy@liquilabs.cz • www.liquilabs.cz