**AV ANALYTICS**
*Analytical Precision - Operational Excellence*
INDEPENDENT ANALYTICAL LABORATORY

# CERTIFICATE OF ANALYSIS

Analytical results | Controlled laboratory report

| CERTIFICATE NO. | LAB SAMPLE ID | ISSUE DATE | REPORT STATUS |
|---|---|---|---|
| *COA-2026-00261* | *20260800331-32* | *06-SEP-2026* | *FINAL* |

## 01 CLIENT & PRODUCT INFORMATION

| | | | |
|---|---|---|---|
| **Client organization** | *Bulk Peptide Supply* | **Client contact** | *support@bulkpeptidesupply.com* |
| **Product name** | *L-Glutathione* | **Client lot / batch** | *GLU367420* |
| **Label claim** | *1500 mg* | **Lab sample ID** | *20260800331-32* |
| **Sample matrix** | *Lyophilized Powder* | **Quantity received** | *3* |
| **Container / closure** | *Amber Vial W/Black Cap* | **Condition on receipt** | *Intact* |
| **Date received** | *31 Aug 2026* | **Testing period** | *31 Aug 2026-05 Sep 2026* |
| **Storage condition** | *Ambient* | **Route / intended use** | *RUO* |

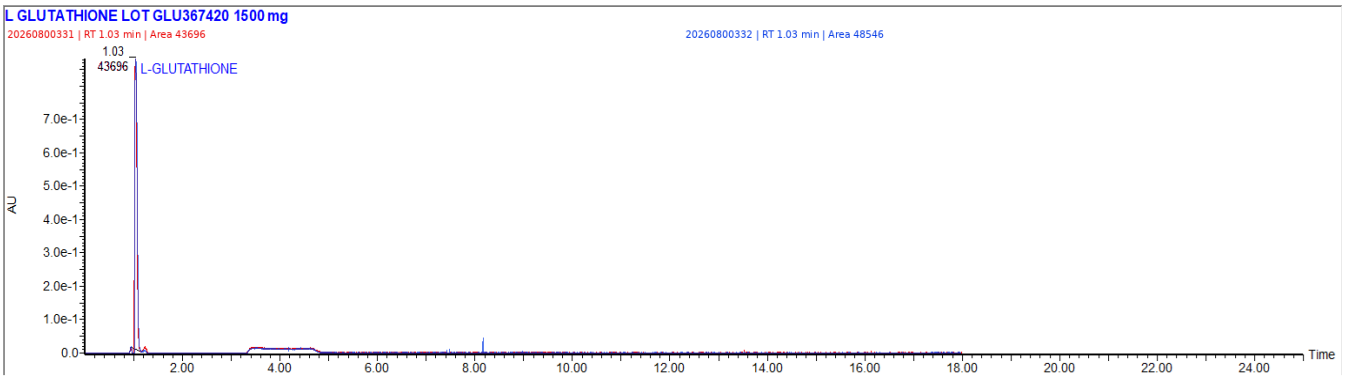
## 02 ANALYTICAL TEST RESULTS | Purity, identification and net content

| Analysis | Method / SOP | Instrumentation | Result | Units | Acceptance criterion | Status |
|---|---|---|---|---|---|---|
| Purity | *UPLC-UV* | *Acquity UPLC/PDA* | *99.77 AVG* | *% area* | *>99%* | *PASS* |
| Identification | *UPLC-MS* | *Waters Quattro Series* | *Conforms* | — | *Ionization profile match w/standard* | *PASS* |
| Net content | *Quantitative UPLC* | *Acquity UPLC/PDA* | *20260800331 – 1513.42*<br>*20260800332 – 1539.66* | *mg/vial* | *±10%* | *PASS* |

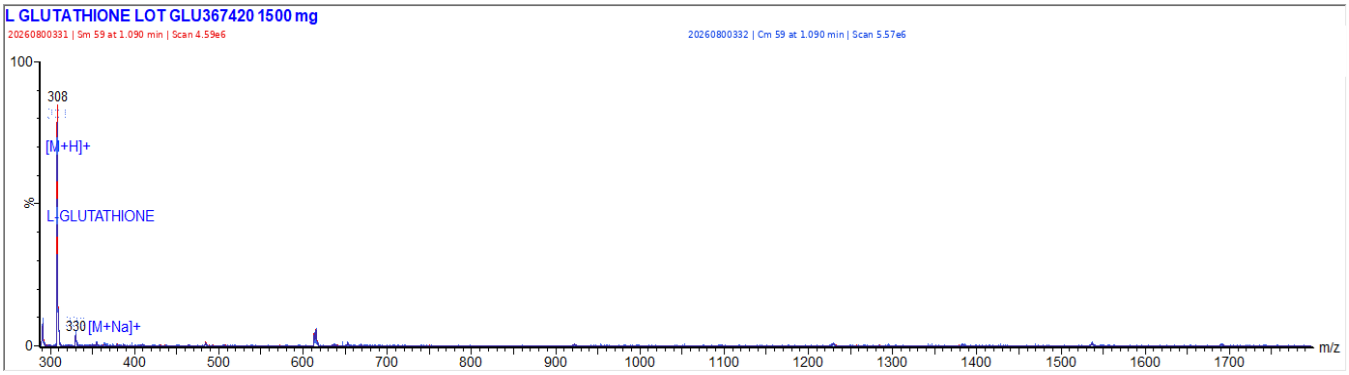
## 03 SUPPORTING ANALYTICAL EVIDENCE | UV/MASS Chromatograms/Spectra




**PRODUCT AS RECEIVED**




**UV CHROMATOGRAM**




**MASS SPECTRUM / SPECTRA**

## 04 HEAVY METALS SCREENING | ICP-MS | Elemental impurity results

| | | | |
|---|---|---|---|
| **Method** | *9 Metal Panel* | **Instrument / asset ID** | *Perkin Elmer SCIEX ELAN DRC II* |
| **Sample preparation** | *Digestion* | **Calibration model** | *Regression* |
| **Run / sequence ID** | *AVQC20260800331-32* | **Analysis date** | *01 Sep 2026* |

### ELEMENTAL IMPURITY RESULTS

| Analyte | Result (µg/L) | LOQ (µg/L) |
|---|---|---|
| Cadmium (Cd) | *Non-detect* | 0.10 |
| Lead (Pb) | *Non-detect* | 0.20 |
| Arsenic (As) | *Non-detect* | 0.50 |
| Mercury (Hg) | *Non-detect* | 0.20 |
| Cobalt (Co) | *Non-detect* | 0.20 |
| Vanadium (V) | *Non-detect* | 0.20 |
| Nickel (Ni) | *Non-detect* | 0.50 |
| Lithium (Li) | *Non-detect* | 1.0 |
| Antimony (Sb) | *Non-detect* | 0.20 |

## 05 ENDOTOXIN ANALYSIS | Recombinant Factor C (rFC) fluorescence assay

| | | | |
|---|---|---|---|
| **Method** | *Recombinant Factor-c* | **Instrument / asset ID** | *Molecular Devices Gemini XPS* |
| **Assay / reagent** | *bioMerieux EndoZyme II* | **Standard** | *Kit-integrated* |
| **Sample preparation** | *Reconstitution in Endotoxin Free Water* | **Run / plate ID** | *083013-AVQC20260800331-32* |
| **Product limit** | *0.5 EU/mL (AV Analytics applies 2x USP limit for H2O, no USP endotoxin limit applies to RUO products)* | **Maximum valid dilution** | *1:100* |

| Parameter | Result | Acceptance criterion | Units | Status |
|---|---|---|---|---|
| Endotoxin | *0.04* | *<0.5* | *EU/mL* | *PASS* |
| Positive product control recovery | *79* | *50-200* | *%* | *PASS* |
| Negative control | *Non-Detect* | *<0.005* | *EU/mL* | *PASS* |
| Standard curve / assay validity | *.98* | *Correlation factor >0.94* | *$R^2$* | *PASS* |

## 06 STERILITY | Rapid growth-based $CO_2$

| | | | |
|---|---|---|---|
| **Method** | *Aerobic/Anaerobic* | **Instrument / asset ID** | *BacT/ALERT 3D* |
| **Test type** | *Rapid growth-based* | **Sample volume / dilution** | *1.5mL/bottle* |
| **Media / bottles** | *iAST/iNST* | **Incubation conditions** | *22.5/32.5 °C* |
| **Run / batch ID** | *0901M1-AVQC2026080030331-32* | **Test period** | *96hr* |

| Parameter | Result | Acceptance criterion | Time for observation | Status |
|---|---|---|---|---|
| Aerobic condition / bottle | *No growth detected* | *No growth detected* | *96hr* | *PASS* |
| Anaerobic condition / bottle | *No growth detected* | *No growth detected* | *96hr* | *PASS* |
| Negative control | *No growth detected* | *No growth detected* | *96hr* | *PASS* |
| Overall sterility conclusion | *Conforms* | *No observed growth in sample/control* | — | *PASS* |

## 07 AUTHORIZATION | Review, decision rule and release

| | | | |
|---|---|---|---|
| **Analyst** | *Jason Snitker* | **Technical reviewer** | *Vanessa Montoya, PhD* |
| **Authorized signatory** | Vanessa Montoya, PhD | **Decision rule** | *Document complete, fields correct, analysis reviewed* |
| **Deviations / qualifiers** | *None* | **Amendment history** | *N/A* |

**Report conditions:** Results are analytical findings for the item tested and do not constitute an endorsement of product safety, efficacy or regulatory status. Unless otherwise stated, this certificate may be reproduced only in full with written approval from AV Analytics.