PRECISION MASS SPEC
CHEMICAL • PHARMACEUTICAL

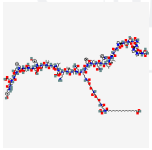
# CERTIFICATE OF ANALYSIS

| | |
|---|---|
| COA Number | **PMS-4243939963** |
| Client | **RENOVITA RESEARCH LLC** |
| Product | **Tirzepatide** |
| Received | **11/06/2026 3:42 PM CT** |
| Report Date | **11/16/2026** |
| Lot Number | **VNS2611TZ40-RR-TZ2B-1106** |

## PRODUCT IDENTIFICATION

HPLC-UV coupled with LC-MS, standard laboratory conditions

| | | | |
|---|---|---|---|
| **Compound Name** | TZ-2 | **CAS No.** | 2023788-19-2 |
| **Molecular Formula** | C225H348N48O68 | **Molecular Weight** | 4813 g/mol |
| **Appearance** | White Lyophilized Powder | **Compound Concentration** | 40mg |



MOLECULAR STRUCTURE

## SAMPLE IDENTIFICATION

Client-supplied, verified at intake

| | | | |
|---|---|---|---|
| **Container Size** | 3ml Glass Vial | **Cap Color** | Blue |
| **Crimp / Seal Color** | Silver | | |
| **Product Company** | RENOVITA RESEARCH LLC | | |




CLIENT SAMPLE PHOTO

## ANALYTICAL RESULTS

| Test | Specification | Result | Status |
|---|---|---|---|
| Purity (HPLC) | >= 90.0% | **99.91%** | **PASS** |
| Mass Identification (LC-MS) | Conforms to declared compound | **TZ-2** | **PASS** |
| Net Compound Content | 90.0–110.0% of 40 mg | **42.79 mg** | **PASS** |
| Water Content (Karl Fischer) | <= 10.0% | **4.82%** | **PASS** |
| Acetate Content (HPLC) | < 12.0% | **4.01%** | **PASS** |
| Heavy Metals (ICP-MS) | < 10 ppm | **Not Detected** | **PASS** |
| Bacterial Endotoxins (LAL) | < 5 EU/mg | **Not Detected** | **PASS** |
| Mass Balance | 95.0 – 105.0% | **Conforms** | **PASS** |
| Sterility (RMM) | USP <71> | **Not Requested** | - |
| pH (1 mg/mL in purified water, 25°C) | Report result | **Not Requested** | - |

## ANALYST NOTES

Sample received labeled as Tirzepatide, 40 mg, white lyophilized powder.

Identity: LC-MS analysis of the principal peak (RT 15.09 min) produced a multiply charged ion series at m/z 803.3 (6+), 963.7 (5+), 1204.4 (4+) and 1605.5 (3+), deconvoluting to an intact mass of 4813.5 Da, consistent with tirzepatide (CAS 2023788-19-2, theoretical 4813.5 Da). Identity result: Conforms.

Purity: 99.91% by HPLC-UV, principal peak relative to total integrated peak area. No related-substance peaks above the reporting threshold.

Net content: Tirzepatide quantified at 42.79 mg per vial against the compound calibration curve, 107.0% of label claim. Net content result: Conforms (within 90.0 to 110.0% of label).

Conclusion: Sample conforms to label for identity, purity and net content.

## INSTRUMENT DATA

Traces behind the results above

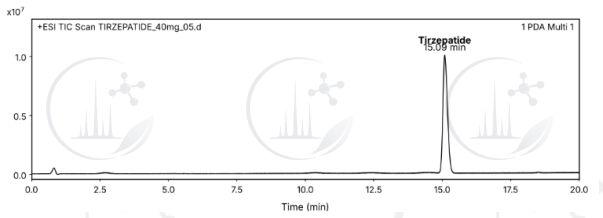



FIGURE 1 — TOTAL ION CHROMATOGRAM (LC-MS)

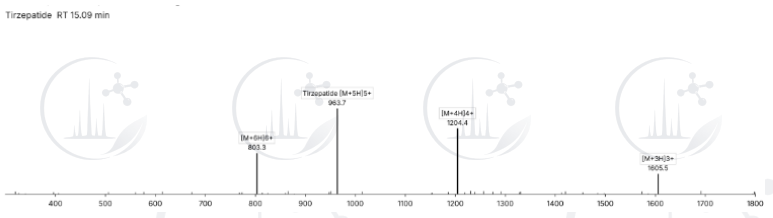



FIGURE 2 — MASS SPECTRUM, PRINCIPAL PEAK (LC-MS)

**Lee Adams**
Lab Director
**COA: PMS-4243939963**

The analysis reported herein was conducted using HPLC-UV and LC-MS under standard laboratory conditions. This analysis is intended for informational purposes only and is specific to the sample(s) provided. The compounds tested are intended for research use only and are not approved for human or veterinary use, diagnostic, therapeutic, or clinical applications. Results should be interpreted by qualified professionals within the scope of the intended research. The accuracy and reliability of the test may be influenced by sample integrity, handling, and other experimental variables. The sample image included in this Certificate of Analysis was provided by the client during intake. For research use only.

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