PRECISION MASS SPEC
CHEMICAL • PHARMACEUTICAL

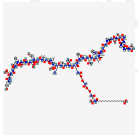
CERTIFICATE OF ANALYSIS

COA Number	**PMS-4067060318**
Client	**ZEN AMINOS**
Product	**TIRZEPATIDE**
Received	**11/06/2026 12:53 PM CT**
Report Date	**11/09/2026**
Lot Number	**ZA-2T6-01-ZA-TZ2G-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**	60mg



MOLECULAR STRUCTURE

SAMPLE IDENTIFICATION

Client-supplied, verified at intake

Product Company	ZEN AMINOS	**Container Size**	3ml Glass Vial
Cap Color	Green	**Crimp / Seal Color**	Silver



CLIENT SAMPLE PHOTO

ANALYTICAL RESULTS

Test	Specification	Result	Status
Purity (HPLC)	>= 90.0%	**99.94%**	**PASS**
Mass Identification (LC-MS)	Conforms to declared compound	**TZ-2**	**PASS**
Net Compound Content	90.0–110.0% of 60 mg	**63.15 mg**	**PASS**
Water Content (Karl Fischer)	<= 10.0%	**4.94%**	**PASS**
Acetate Content (HPLC)	< 12.0%	**3.99%**	**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>	**Growth Not Detected**	**PASS**
pH (1 mg/mL in purified water, 25°C)	Report result	**Not Requested**	-

ANALYST NOTES

Sample received labeled as Tirzepatide, 60 mg, white lyophilized powder.

Identity: LC-MS analysis of the principal peak (RT 15.10 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: 99.94% by HPLC-UV, principal peak relative to total integrated peak area. No related-substance peaks above the reporting threshold.

Net content: Tirzepatide quantified at 63.15 mg per vial against the compound calibration curve, 105.3% of label claim. Net content result: Conforms (within 90.0 to 110.0% of label).

Sterility: No growth detected by rapid microbiological method (RMM).

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

INSTRUMENT DATA

Traces behind the results above

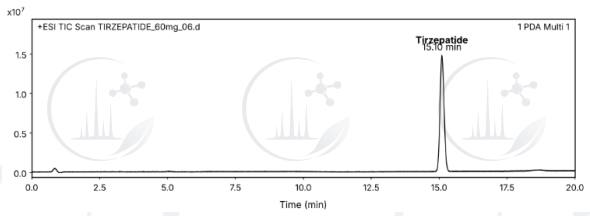


FIGURE 1 — TOTAL ION CHROMATOGRAM (LC-MS)

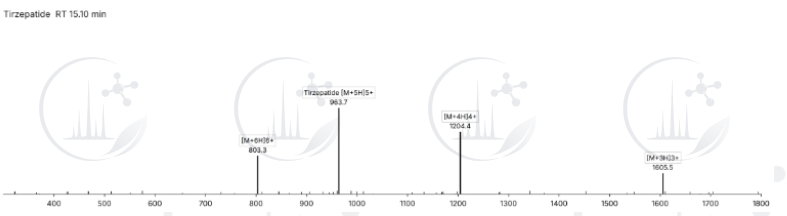


FIGURE 2 — MASS SPECTRUM, PRINCIPAL PEAK (LC-MS)

Lee Adams
Lab Director
COA: PMS-4067060318

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.

SCAN FOR THE COA LIBRARY
testwithprecision.com/coa-library