ASCENDTIALS LLC

Research compounds · Quality Control Department

CERTIFICATE OF ANALYSIS

Document COA-TRZ-2409B

Tirzepatide

CAS NUMBER
2023788-19-2

MOLECULAR FORMULA
$C_{225}H_{348}N_{48}O_{68}$

MOLECULAR WEIGHT
4813.5 g/mol

LOT NUMBER
TRZ-2409B

DATE OF ANALYSIS
August 20, 2026

RETEST DATE
August 19, 2028

ANALYTICAL LABORATORY
Third-party HPLC/MS

ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
Appearance	Visual	White to off-white lyophilized powder	**Conforms**
Identity (molecular mass)	ESI-MS	4813.5 g/mol +/- 1.0 Da	**4813.8 Da**
Purity	RP-HPLC, UV 214 nm	NLT 98.0%	**99.20%**
Single largest impurity	RP-HPLC, UV 214 nm	NMT 1.0%	**0.23%**
Water content	Karl Fischer titration	NMT 8.0%	**2.8%**
Acetate content	Ion chromatography	NMT 15.0%	**6.8%**
Peptide content	Nitrogen determination	NLT 80.0%	**84.9%**
Residual solvents	GC headspace, ICH Q3C	Meets ICH limits	**Conforms**
Bacterial endotoxins	LAL, USP <85>	< 1.0 EU/mg	**Conforms**

CONFORMS — lot TRZ-2409B meets all specifications listed above.

CHROMATOGRAPHIC CONDITIONS

Column: C18 reversed phase, 4.6 × 250 mm, 5 µm, 100 Å
Mobile phase A: 0.1% TFA in water · B: 0.1% TFA in acetonitrile
Gradient: 5-65% B over 30 min · Flow: 1.0 mL/min · 25 °C
Detection: UV 214 nm · Injection volume: 20 µL
Mass spectrometry: ESI, positive ion mode

STORAGE & HANDLING

Lyophilized: 2-8°C, protected from light.

RELEASED BY
Quality Control, Ascendtials LLC

DATE OF ISSUE
August 20, 2026

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This certificate applies only to the lot identified above. Not for use in food, drugs, medical devices, or cosmetics.