

Certificate of Analysis

Product	Tirzepatide	CAS No.:	2023788-19-2
Molecular Formula	C ₂₂₅ H ₃₄₈ N ₄₈ O ₆₈	Molecular Weight	4813.5
Sequence	Tyr-Aib-Glu-Gly-Thr-Phe-Thr-Ser-Asp-Tyr-Ser-Ile-Aib-Leu-Asp-Lys-Ile-Ala-Gln-Lys (PEG2-PEG2-γ-Glu-Eicosanedioic acid) -Ala-Phe-Val-Gln-Trp-Leu-Ile-Ala-Gly-Gly-Pro-Ser-Ser-Gly-Ala-Pro-Pro-Pro-Ser-NH ₂		
Batch No.	TRD-26031301	Quantity	2.3kg
Mfg. Date	Mar.13 th , 2026	Retest Date	Mar.12 th , 2028

【ITEMS】	【SPECIFICATIONS】	【RESULTS】
Appearance	White or almost white loose powder	White loose powder
Solubility	Freely soluble in water	Conforms
Solution clarity and color	Clear and colorless	Conforms
Specific optical rotation [α] _D ²⁰	-20.0° to -40.0° (anhydrous and sodium ion-free substance)	-29.7°
Identification by HPLC	The retention time of the principal peak of the test solution corresponds to that of the reference solution, as obtained in the Assay.	Conforms
Mass spectrum	4813.5±1.0	4812.5
pH	6.5-8.5	7.6
Water content(KF)	NMT 8.0%	4.8%
Acid group ions	Trifluoroacetate ion NMT 0.5% Acetate ion NMT 0.5%	N.D N.D
Related substances(HPLC)	Any individual impurity: NMT 0.5% Total impurities: NMT 2.0%	0.16% 0.77%
Purity(HPLC)	NLT 98.0%	99.2%
Sodium ion	1.0~2.0%	1.2%
High molecular protein	NMT 0.5%	N.D



Amino acid content	Tyr:1.8~2.2	2.0
	Glu:3.6~4.4	4.0
	Gly:3.6~4.4	4.0
	Thr:1.8~2.2	2.0
	Phe:1.8~2.2	2.0
	Ser:4.5~5.5	5.0
	Asp:1.8~2.2	2.0
	Ile:2.7~3.3	3.0
	Leu:1.8~2.2	2.0
	Lys:1.8~2.2	2.0
	Ala:3.6~4.4	4.0
	Val:0.9~1.1	1.0
	Pro:3.6~4.4	4.1
	Aib:1.8~2.2	2.0
AEEA: Should be detected		Conforms
Residual solvent	Methylene chloride NMT 600ppm	N.D
	Acetonitrile NMT 410ppm	49ppm
	Methyl tert-butyl ether NMT 5000 ppm	N.D
	DMF NMT 880ppm	N.D
Peptide content	NLT 90.0%	92.6%
Bacterial endotoxins	NMT 10EU/mg	<3EU/mg
Microbial limits	TAMC NMT 100 cfu/g	<20 cfu/g
	TYMC NMT 100 cfu/g	<20 cfu/g
	E. Coli: Absent	Absent
Assay(C ₂₂₅ H ₃₄₈ N ₄₈ O ₆₈)	95.0%-105.0%(Calculated with reference to the anhydrous and sodium ion-free substance.)	98.5%
Storage	Keep in tight container, protect from light, store at a temperature of -20±5°C.	
Report	<i>Lipeng</i>	Date 2026.3.13
Reviewer	<i>Feng Hailai</i>	Date 2026.3.13
Conclusion: This batch of product complies with Enterprise Standard.		

It is only supplied as chemical product.

It is only for R&D use.