

## Certificate of Analysis

Product Name	Tirzepatide	Batch No.	NBT-2412009V30
Molecular Weight	4813.45	Molecular Formula	C <sub>225</sub> H <sub>348</sub> N <sub>48</sub> O <sub>68</sub>
CAS. No.	2023788-19-2	Mfg. Date	2024.12.27
Report Date	2024.12.31	Retest Date	2026.12.26
Dosage	30mg/bottle	Quantity	4000bottles

Sequence: Tyr- {Aib} -Glu-Gly-Thr-Phe-Thr-Ser-Asp-Tyr-Ser-Ile- {Aib} -Leu-Asp-Lys-Ile-Ala-Gln- {diacid-C20-gamma-Glu- (AEEA) 2-Lys} -Ala-Phe-Val-GIn-Trp-Leu-Ile-Ala-Gly-Gly-Pro-Ser-Ser-Gly-Ala-Pro-Pro-Pro-Ser-NH<sub>2</sub>

Test	Specification	Result
1	Appearance/Colors	White or almost white powder
2	Solubility	Freely soluble in water
3	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
4	Molecular Ion Mass by MS	4813.45 ± 1.0
5	Amino Acid Content	Asp: 1.6~2.4 Tyr: 1.6~2.4 Lys: 1.6~2.4 Ile: 2.0~3.2 Leu: 1.6~2.4 Val: 0.8~1.2 Thr: 1.6~2.4 Phe: 1.6~2.4 Ser: 4.0~6.0 Ala: 3.2~4.8 Gly: 3.2~4.8 Glu: 3.2~4.8 Pro: 3.2-4.8 Aib: N/A AEEA: N/A
6	Water Content (K.F)	≤ 8.0%

7	Solution Clarity and Color	Clear and colorless	Conforms
8	Purity (HPLC)	>99.0%	99.7%
9	Related Substance (HPLC)	Total impurities $\leq 1.0\%$	0.3%
		Maximum single impurity $\leq 0.5\%$	0.2%
10	High Molecular Protein	$\leq 0.50\%$	ND
11	Residual Solvent	Acetonitrile $\leq 410$ ppm	5ppm
		Methanol $\leq 3000$ ppm	ND
12	Bacterial Endotoxins	<10 EU/mg	Conforms
13	Microbial Limits	TAMC $\leq 10^2$ cfu/g	Conforms
		TYMC $\leq 10^2$ cfu/g	
14	Trifluoroacetate Ion	$\leq 0.10\%$	ND
15	Sodium Ion	<5.0%	1.6%
16	Acetate Ion	$\leq 0.10\%$	ND
17	Phosphate Ion	<0.10%	ND
18	Peptide Content	$\geq 30.0$ mg	32.3mg
19	Assay (HPLC)	95.0–105.0% (on anhydrous and salt-free substance basis)	99.7%
Storage	Preserve in an air tight container, protected from light at a temperature of $-15^{\circ}\text{C} \sim -25^{\circ}\text{C}$		
Conclusion	The product tested Conform with In-house standard		
Remark	It is only supplied as chemical product		