

Certificate of Analysis

Product	Semaglutide	CAS No.:	910463-68-2
Molecular Formula	C ₁₈₇ H ₂₉₁ N ₄₅ O ₅₉	Molecular Weight	4113.6
Sequence	His-Aib-Glu-Gly-Thr-Phe-Thr-Ser-Asp-Val-Ser-Ser-Tyr-Leu-Glu-Gly-Gln-Ala-Ala-N6-[N-(17-carboxy-1-oxoheptadecyl-L-γ-glutamyl[2-(2-aminoethoxy)ethoxy]acetyl [2-2-aminoethoxy]ethoxy]acetyl]-Lys-Glu-Phe-Ile-Ala-Trp-Leu-Val-Arg-Gly-Arg-Gly-OH		
Batch No.	26031601	Quantity	4106.0g
Mfg. Date	Mar. 16 th , 2026	Retest Date	Mar. 15 th , 2028

【ITEMS】	【SPECIFICATIONS】	【RESULTS】
Appearance	White or almost white loose powder	White loose powder
Solubility	Freely soluble in water Firstly, to add freshly boiled and cooled water to make a clear solution containing 0.15mg of semaglutide in 1ml. Then, to adjust the pH of the solution to 5.5 with 0.05M hydrochloric acid and keep for 30 seconds. Finally, to adjust the pH of the solution to 3.0 and keep 30 seconds. The solution should be turbidin the rang of pH3.0 to 5.5.	Conforms
Solution clarity and color	Clear and colorless	Conforms
Specific optical rotation [α] _D ²⁰	-20.0° to -5.0° (anhydrous and sodium ion-free substance)	-7.4°
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	4113.6±1.0	4113.0
pH	6.0~9.0	6.9
Water content(KF)	NMT 8.0%	6.5%
Acid group ions	Trifluoroacetate ion NMT 0.5% Acetate ion NMT 0.5%	N.D N.D

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Related substances(HPLC)	Impurity 1:NMT 0.5% Impurity 2:NMT 0.5% Impurity 3:NMT 0.5% Any individual impurity: NMT 0.3% Total impurities:NMT 2.0%	0.12% 0.08% 0.19% 0.09% 1.0%
Purity(HPLC)	NLT 98.0%	99.4%
Sodium ion	1.0~3.0%	1.8%
High molecular protein	NMT 0.5%	0.05%
Amino acid content	Asp: 0.9-1.1 Ser:2.7-3.3 Glu:4.5-5.5 Gly:3.6-4.4 His: 0.9-1.1 Arg: 1.8-2.2 Thr: 1.8-2.2 Ala: 2.7-3.3 Aib: 0.9-1.1 Tyr: 0.9-1.1 Val: 1.8-2.2 Lys: 0.9-1.1 Ile: 0.9-1.1 Leu: 1.8-2.2 Phe: 1.8-2.2 AEEA: Should be detected	1.0 2.8 5.2 4.0 1.0 2.0 2.0 3.1 1.0 1.0 2.0 1.0 1.0 1.9 2.0 Conforms
Residual solvent	Methyl tert-butyl ether, NMT 5000 ppm Acetonitrile, NMT 410 ppm DCM, NMT 600ppm N,N-Dimethylformamide, NMT 880 ppm	N.D 6ppm N.D N.D
Particle size	D10≥2μm 2μm<D50≤25μm D90≤50μm	2μm 5μm 12μm
Peptide content	Reported value	90.6%
Bacterial endotoxins	NMT 10EU/mg	Conforms

Microbial limits	TAMC NMT 100cfu/g TYMC NMT 100cfu/g	Conforms
Assay($C_{187}H_{291}N_{45}O_{59}$)	95.0%-105.0%(Calculated with reference to the anhydrous and sodium ion-free substance.)	98.8%
Storage	Keep in tight container, protect from light, store at a temperature of $-20\pm 5^{\circ}C$.	
Report	Li peng Date	2016.3.16
Reviewer	Feng Helei Date	2016.3.16
Conclusion: This batch of product complies with Enterprise Standard.		

It is only supplied as chemical product.

It is only for R&D use.