

## CERTIFICATE OF ANALYSIS

<b>Product Name:</b>	<b>Semaglutide</b>		
<b>Sequence</b>	<b>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</b>		
<b>Batch No.</b>	F4847-A250814	<b>CAS No.</b>	910463-68-2
<b>Molecular Formula</b>	$C_{187}H_{291}N_{45}O_{59}$	<b>Molecular Weight</b>	4113.58
<b>Quantity</b>	1565.3g	<b>Source</b>	Synthetic
<b>Manufacturing Date</b>	August 14, 2025	<b>Expiry Date</b>	August 13, 2027
<b>Analytical results</b>			
<b>Items</b>	<b>Specifications</b>		<b>Results</b>
<b>Appearance</b>	White or off-white powder		White powder
<b>Solubility</b>	Freely soluble in water		Conforms
<b>Specific optical rotation <math>[\alpha]^{20}_D</math></b>	15.0° to -10.0° (anhydrous and sodium ion-free substance, C=10mg/ml, H <sub>2</sub> O)		-10.3°
<b>Identification by HPLC</b>	The retention time of the principal peak of the test solution corresponds to that of the reference solution, as obtained in the Assay.		Conforms
<b>Molecular Weight</b>	4113.58±1.0		Conforms
<b>Amino Acid Content</b>	Asp: 0.9 ~ 1.1		Asp: 1.0
	Ser: 2.7 ~ 3.3		Ser: 2.8
	Glu: 4.5 ~ 5.5		Glu: 5.0
	Gly: 3.6 ~ 4.4		Gly: 4.2
	His: 0.9 ~ 1.1		His: 0.9
	Aib: 0.9 ~ 1.1		Aib: 1.0
	Arg: 1.8 ~ 2.2		Arg: 1.9
	Thr: 1.8 ~ 2.2		Thr: 2.1
	Ala: 2.7 ~ 3.3		Ala: 2.7
	Tyr: 0.9 ~ 1.1		Tyr: 0.9
	Val: 1.8 ~ 2.2		Val: 2.1
Lys: 0.9 ~ 1.1		Lys: 1.0	

	Ile: 0.9 ~ 1.1	Ile: 1.0
	Leu: 1.8 ~ 2.2	Leu: 2.2
	Phe: 1.8 ~ 2.2	Phe: 1.9
	AEEA: Should be detected	AEEA: detected
<b>pH</b>	7.0-9.0	7.8
<b>Water Content</b>	NMT 8.0%	2.4%
<b>Purity (HPLC)</b>	NLT 98.0%	99.44%
<b>Related substances (HPLC)</b>	The largest individual impurity test NMT 0.5%	0.25%
	Total impurities NMT 2.0%	0.56%
<b>Residual solvent</b>	DCM: NMT 600ppm	N.D
	ACN: NMT 410ppm	105 ppm
	MeOH: NMT 3000ppm	N.D
	DMF: NMT 880ppm	N.D
	Isopropyl ether: NMT 5000ppm	N.D
	Isopropanol: NMT 5000ppm	N.D
<b>Acid group ions</b>	TFA: NMT 0.1%	N.D
	PO <sub>4</sub> <sup>3+</sup> : NMT 0.1%	N.D
	Cl <sup>-</sup> : NMT 0.1%	N.D
	HAC: NMT 0.1%	N.D
<b>Microbiological tests</b>	Total microbacterial count: ≤1000 CFU/g	Conforms
	Yeast and Mould: ≤100 CFU/g	Conforms
	Escherichia Coil presence: Negative	Conforms
	Salmonella: Negative	Conforms
	P.Aeruginosa: Negative	Conforms
	S.Aureus: Negative	Conforms
<b>Bacterial Endotoxins</b>	NMT 10EU/mg	Conforms
<b>Sodium ion</b>	NMT 5.0%	1.2%
<b>Peptide Content</b>	NLT 80.0% (Mass Balance)	95.8%
<b>Storage Conditions</b>	Keep in tight container, protect from light, store at a temperature of -20±5°C.	
<b>Conclusion</b>	Conformed with the product standards.	