

Certificate of Analysis

Product Information

Product Name: PEG-MGF (PEGylated Mechano Growth Factor)
CAS Number: 1015036-03-4
Molecular Formula: C160H269N45O49 (MGF 24-aa peptide, approximate)
Molecular Weight: ~3824.5 g/mol
Appearance: White to off-white lyophilized powder

Batch Information

Batch / Lot Number: PEG-MGF-2025-003
Quantity: 100mg
Date of Manufacture: 08-Aug-2025
Retest Date: 08-Aug-2027
Storage Conditions: -20 °C, dry and protected from light

Analytical Results

Test	Specification	Result	Method
Identity (Mass Spectrometry)	Consistent with theoretical mass (~3824.5 Da)	3825.0 Da (M+H)+	ESI-MS
Purity (HPLC)	≥ 98.0 % (by area)	99.0 %	RP-HPLC
Sequence Confirmation	As per PEG-MGF peptide sequence	Confirmed	MS/MS, Edman degradation
Appearance	White to off-white lyophilized powder	White powder	Visual
Solubility	Soluble in sterile water (≥1 mg/mL)	Pass	Visual
Residual Solvent	≤ 0.5 %	<0.2 %	GC
Water Content (Karl Fischer)	≤ 5.0 %	2.6 %	KF titration
Acetate Content	Report only	5.0 %	Ion chromatography
Peptide Content	≥70 %	74 %	Nitrogen analysis
Endotoxin	< 0.25 EU/mg	0.08 EU/mg	LAL test
Microbial Limit Test	<100 CFU/g, no pathogens	Pass	USP <61>/<62>

Compliance Statement

The above batch of **PEG-MGF** complies with the stated specifications.
This batch of **PEG-MGF** meets all specified analytical and microbiological criteria and is suitable for **research use only**. Manufactured and tested under controlled conditions to ensure consistency, purity, and integrity.