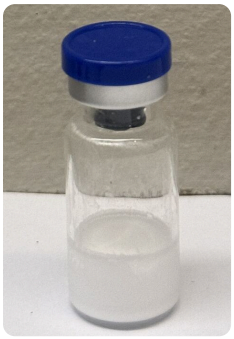
HK Analytical

Certificate of Analysis
HK-261025-JQ6CVP
Example report, not a test result



Unlabelled GLP-1 vial

TEST	BATCH	CLIENT
Blind GLP-1 test	EX-GLP-2609	Anonymous
RECEIVED	**TESTED**	**ISSUED**
15 Oct 2026	17 Oct 2026	25 Oct 2026

Identified: Tirzepatide

Tested against Semaglutide, Tirzepatide, Retatrutide

TEST	RESULT	LIMIT	STATUS
Identity LC-MS	Tirzepatide Semaglutide and retatrutide not detected	One of the candidates	✓ Confirmed
Content HPLC, calibrated	9.71 mg / vial	–	Reported
Purity HPLC-UV	99.3 %	–	Reported

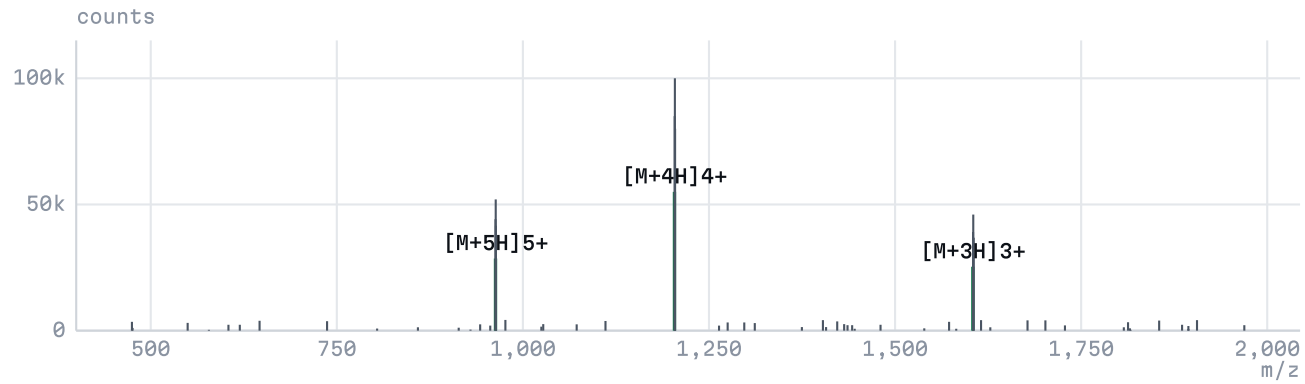
APPROVED
Example approver
Quality manager · 18 Oct 2026

CHECK THIS REPORT
hkanalytical.com/verify
Key 6XSXN-KEJ0J-F8STE-04ZWK-G9VYGY

Identity LC-MS

Unlabelled GLP-1 vial · Batch EX-GLP-2609 · Tirzepatide ✓ Confirmed

Mass spectrum · MS1, 13.35–13.50 min — 62 centroids



IONS · MASS ERROR = (OBSERVED − EXPECTED) / EXPECTED × 10⁶

COMPONENT	ION	EXPECTED M/Z	OBSERVED M/Z	ERROR (PPM)
Tirzepatide	[M+3H]3+	1604.5156	1604.5181	+1.6
Tirzepatide	[M+4H]4+	1203.6385	1203.6405	+1.7
Tirzepatide	[M+5H]5+	963.1122	963.1141	+2.0

SETTINGS

Ionisation	ESI positive	Analyser	Q-TOF, resolution 30 000 (FWHM)
Scan range	m/z 400–2400	Mass calibration	Lock mass, checked before the run
Acceptance	Two or more ions within ± 5 ppm	Searched for	Semaglutide, tirzepatide, retatrutide: [M+3H]3+ to [M+5H]5+, ± 10 ppm
Not found	Semaglutide and retatrutide: no ion above 0.1 % of the base peak		

RAW FILES · SHA-256

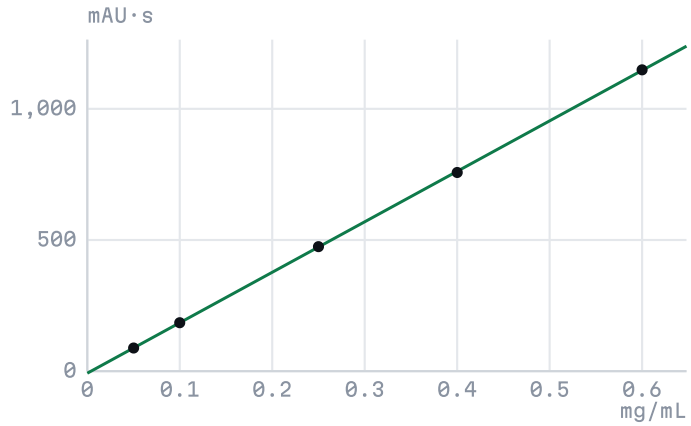
EX-GLP-2609_lcms_01.d	b583fad7f19ee58b26b9cb7002790261c795dd4d74dfc668fd2bf5c4c70e2b4f

Content HPLC, calibrated

Unlabelled GLP-1 vial · Batch EX-GLP-2609 · 9.71 mg / vial **Reported**

Calibration · Tirzepatide

y = 1923.9 x − 7.8 · R^2 0.99996



LEVELS

#	MG/ML	MAU·S
1	0.050	88.7
2	0.100	184.8
3	0.250	474.9
4	0.400	757.0
5	0.600	1148.8

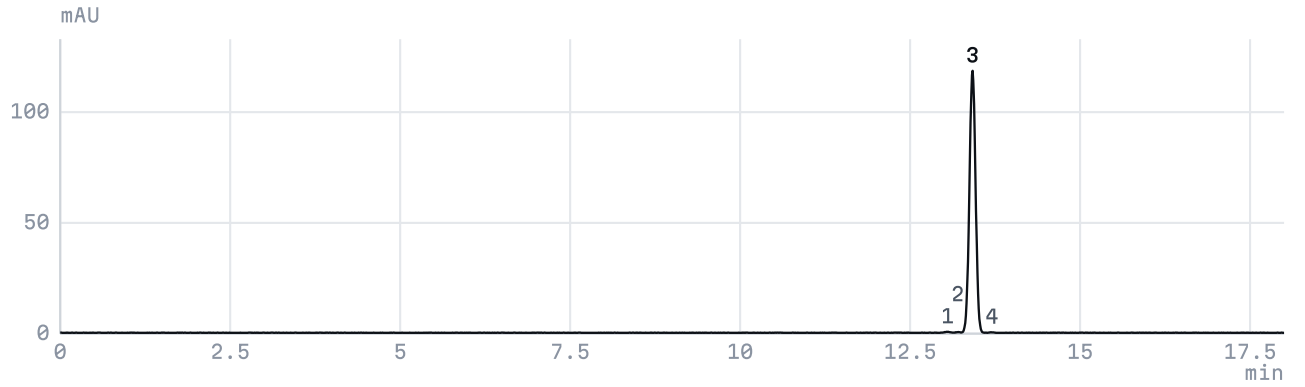
RAW FILES · SHA-256

EX-GLP-2609_content_calibration.d	cbdc859d993ef1b7955f4a9e70d4901107af26df3590077ca9eb4d19ab35581f

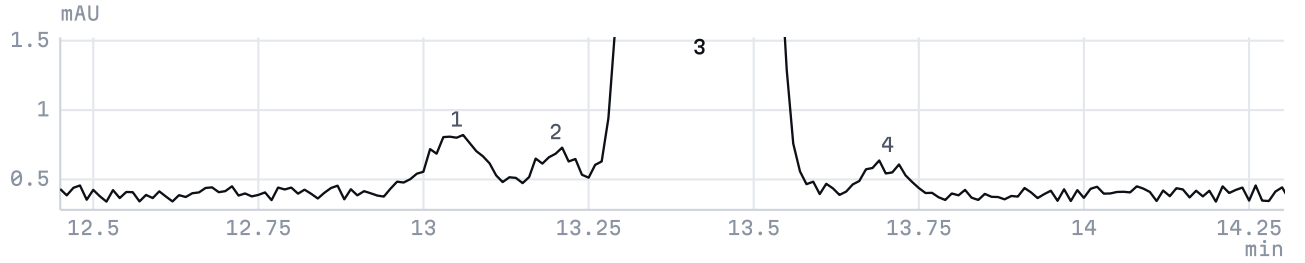
Purity HPLC-UV

Unlabelled GLP-1 vial · Batch EX-GLP-2609 · 99.3 % Reported

Chromatogram · UV 214 nm — 1,801 points as exported



Baseline detail · around the peaks, y scaled × 100 — Numbers as in the peak table



PEAK TABLE

#	RT (MIN)	AREA	AREA %	PEAK
1	13.050	2.6	0.34	
2	13.200	1.6	0.21	
3	**13.418**	**748.5**	**99.30**	**Main peak · Tirzepatide**
4	13.703	1.1	0.15	

SETTINGS

Column	C18 wide pore, 150 × 2.1 mm, 1.7 µm, 300 Å	Mobile phase A	0.1 % TFA in water
Mobile phase B	0.1 % TFA in acetonitrile	Gradient	20 → 60 % B in 15 min
Flow, column temperature	0.30 mL/min, 60 °C	Injection	2.0 µL
Detection	UV 214 nm, bandwidth 4 nm	Integration	Valley to valley, window 2.00–17.00 min, threshold 0.05 %
Excluded	Peaks also in the blank injection	Software	Example data system 0.0

RAW FILES · SHA-256

EX-GLP-2609_hplc_sample_1.d	b082dcf4b06611e2272de6792274b6e35e8a7e62081d20c272a1554309747be4