

ANALYTICAL CERTIFICATE

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Sample name	GHRP-6
Batch No.	2023149
Sample No.	01
Specification	NA
Manufacturing date	NA

1. Peptide content by HPLC/CLND:

1.1 HPLC Instrument:

Pump: Agilent 1200 Series, Quat Pump G1311A
Sampler: Agilent 1260 Series, Hip ALS G1367E
Degasser: Agilent 1200 Series, Degasser G1379B
Detectors: Agilent 1200 Series, VWD G1314B
Nitrogen detector Antek 8060

1.2 HPLC conditions:

Eluents: A – MilliQ water
B – isopropanol
D – 1% TFA in MilliQ water
Flow rate: 1 mL/min
Gradient:

Time	A (%)	B (%)	D (%)
0	90	0	10
1	90	0	10
9	10	80	10
10	10	80	10
11	90	0	10
15	90	0	10

Column: ARION 5 μ C4-BIO 300 A, 4.6 x 100 mm
Serial No 221258

1.3 Sample preparation:

The whole amount of GHRP-6 (5 mg) was dissolved in 1 mL of DMSO.
Injection: 2 μ L

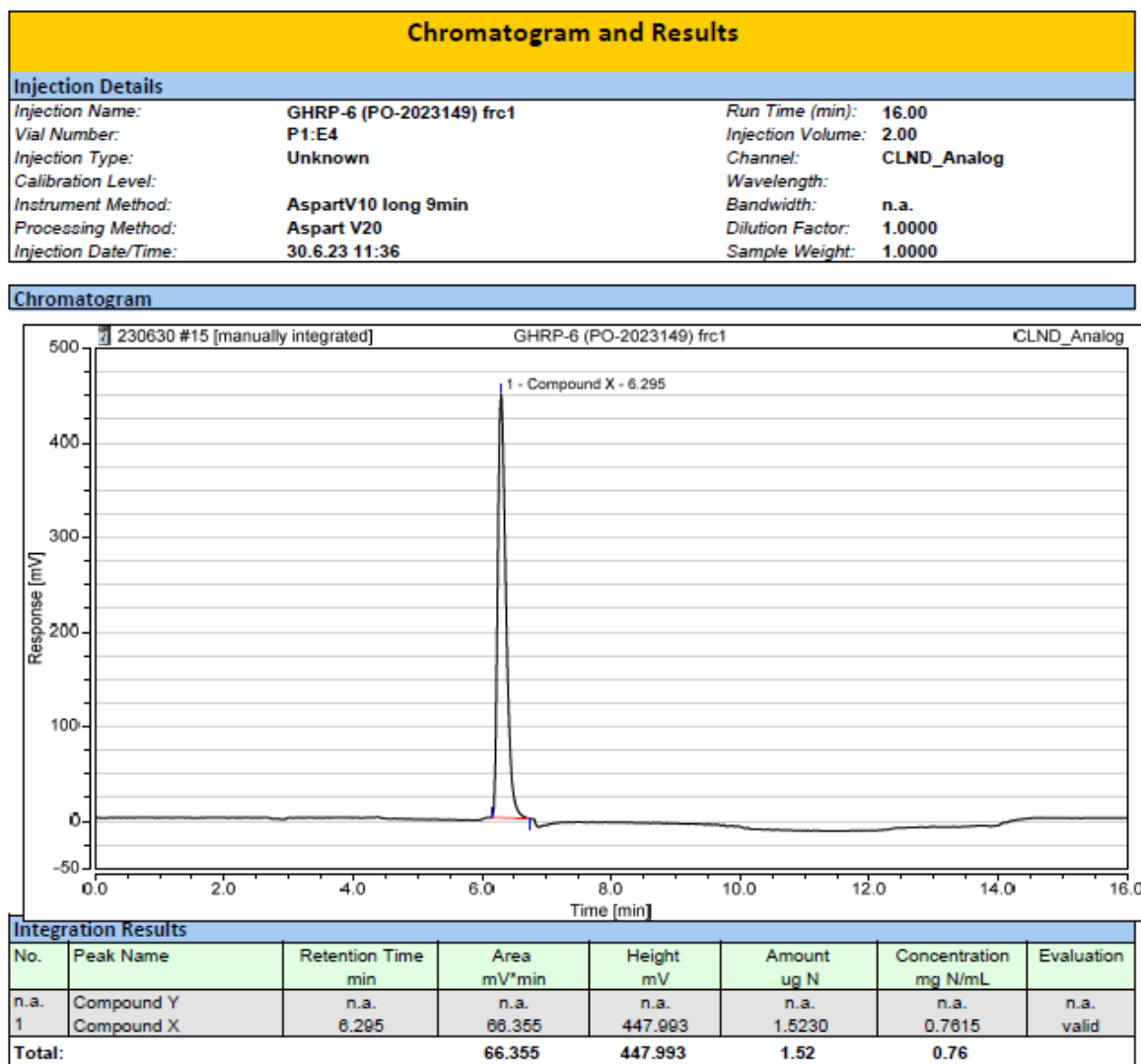
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1.4 Chromatograms and calibration curve:

Instrument: CLND-2 Sequence: 230630

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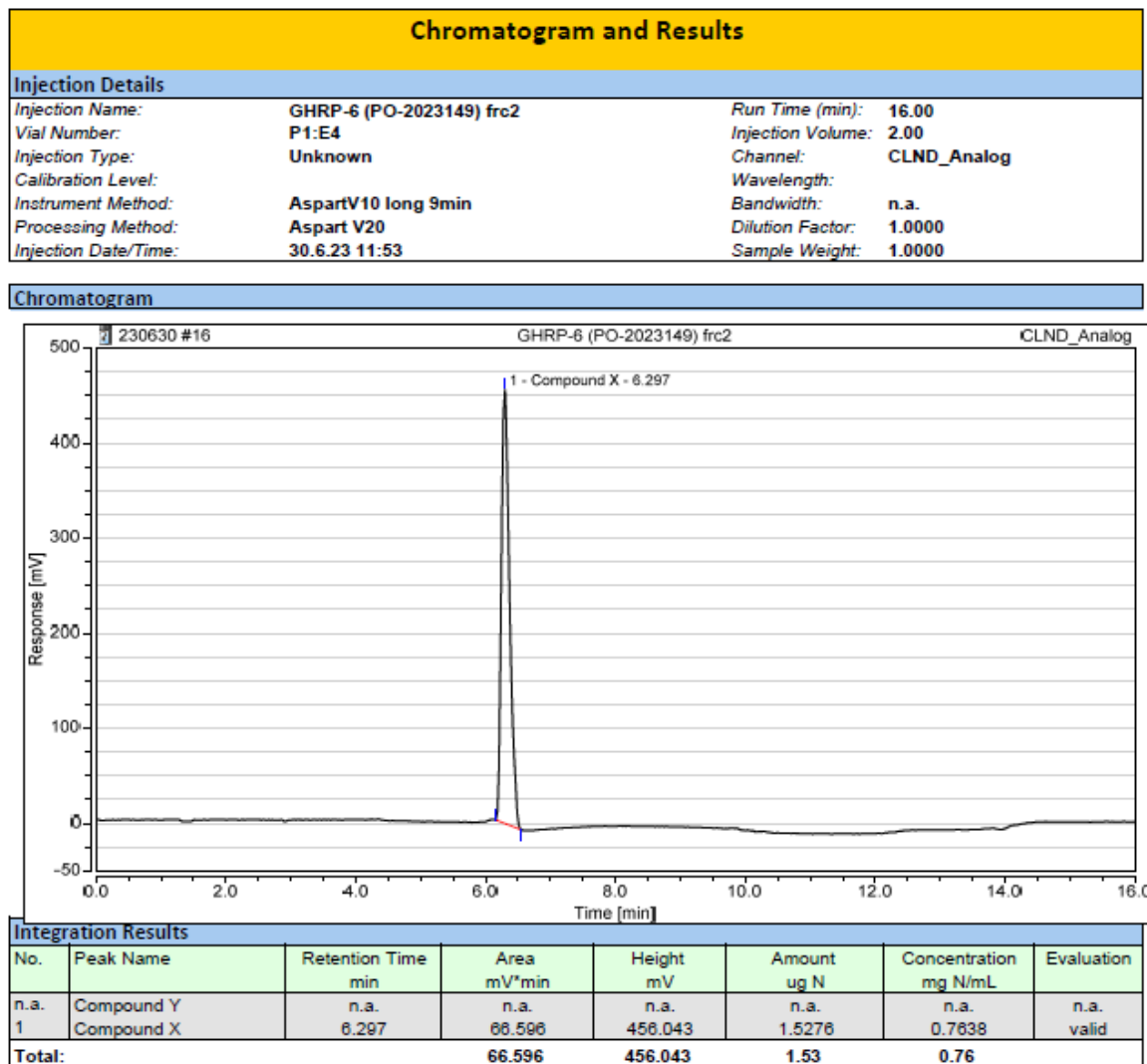


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Instrument:CLND-2 Sequence:230630

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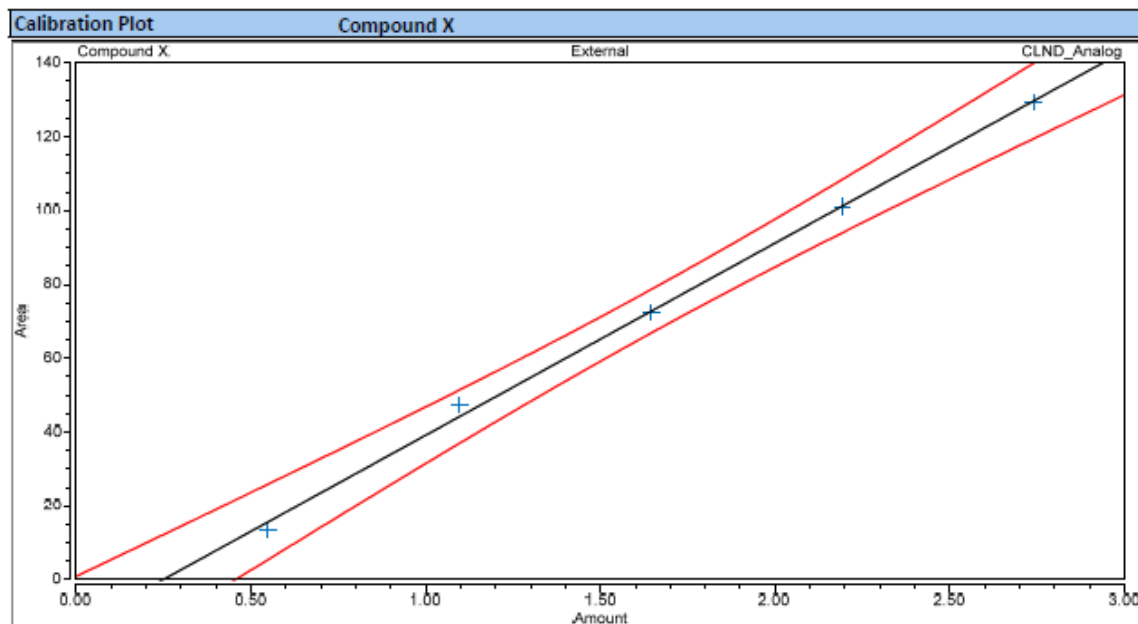
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Instrument:CLND-2 Sequence:230630

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Calibration			
Calibration Details		Compound X	
Calibration Type	Lin, WithOffset	Offset (C0)	-12.9286
Evaluation Type	Area	Slope (C1)	52.0582
Number of Calibration Points	5	Curve (C2)	0.0000
Number of disabled Calibration Points	0	R-Square	0.9981



Calibration Results		Compound X					
No.	Injection Name	Calibration Level	X Value	Y Value	Y Value	Area mV*min	Height mV
			CLND_Analog Compound X	CLND_Analog Compound X	CLND_Analog Compound X	CLND_Analog Compound X	CLND_Analog Compound X
2	Aspart5	1	2.7408	129.2661	129.2661	129.266	779.058
3	Aspart4	1	2.1926	101.0407	101.0407	101.041	608.682
4	Aspart3	1	1.6445	72.3095	72.3095	72.310	443.413
5	Aspart2	1	1.0963	47.3381	47.3381	47.338	289.828
6	Aspart1	1	0.5482	13.4386	13.4386	13.439	82.511

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1.4 Results:

NNC: GHRP-6 (Po-2023149)		Salt:	0
MW (calculated) g/mol	N content (calculated) %	N conc. (measured) mg × N/ml	
873,03	19,25	0,7627	
Theoretical Volume ml		Lyophilizate amount mg	
1,00		5,00	
Peptide concentration mg/ml	nmol/ml	Quantified amount mg	nmol
3,96	4538	4,0	4 538
Peptide content assay %			
79,2			

Summary table:

Peptide	Aliquoting (mg)	Total weight of sample (mg)	Content of the peptide by CLND (mg)	Content of the peptide in the sample (%)	Content of the peptide against the amount on label.
GHRP-6	5	NA	4.0		79.2%

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2. Purity assessment by UPLC:

2.1 HPLC Instrument:

LC-System Waters Acquity UPLC
Detectors: UV or DAD at 214 nm

2.2 HPLC conditions:

Eluents: A – MilliQ water + 0.05% TFA
 B – acetonitrile + 0.05% TFA
Flow rate: 0.40 mL/min
Gradient: from 5% B to 60% B in 4 min, according to chromatogram results
Column: Waters Acquity BEH, C-18, 1.7µm, 2.1mm x 50mm
 Part No 186002353

2.3 Sample preparation:

The aliquote of GHRP-6 was dissolved in 1 mL of H₂O.
Injection: 1,5 µL

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2.4 Chromatogram of GHRP-6 (PO2023149)

Sample information

UPLC 1

Sample: GHRP-6 (PO-2023149)

Channel Description PDA Ch1 214nm@4.8nm

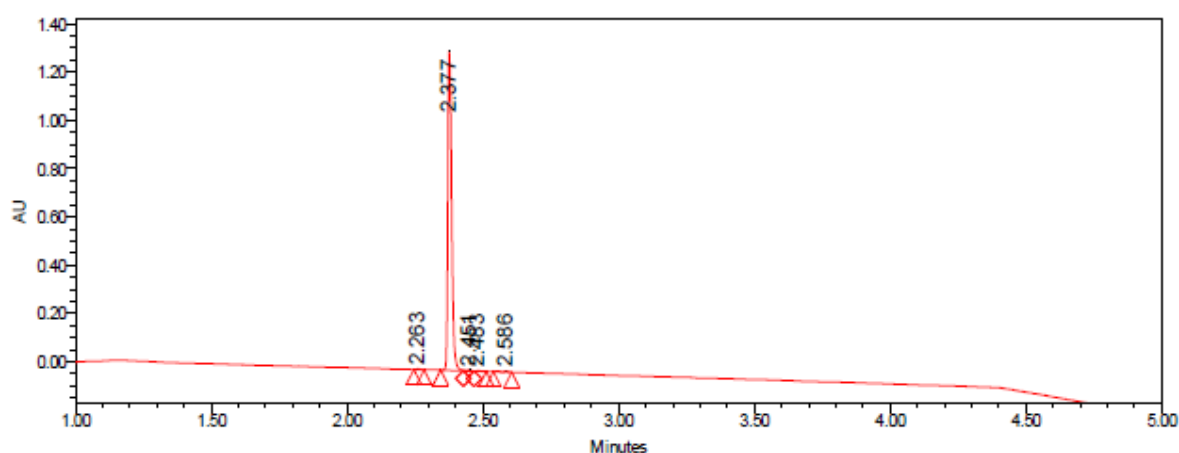
Date Acquired 7/26/2023 12:08:15 PM CEST

Vial : 1:A,5 Vol. : 1.50 ul

Date Processed 7/26/2023 3:49:31 PM CEST

Acq Method Set :

Gr5_60_4mi_40C_0_45ml_K2_met_s



	RT	Area	Height (μV)	% Area
1	2.263	2801	2836	0.21
2	2.377	1296800	1326332	98.60
3	2.451	6644	6245	0.51
4	2.483	2929	2733	0.22
5	2.586	5977	4665	0.45

A: 0.05% TFA in water

B: 0.05% TFA in acetonitrile

Gradient :

0.0 - 0.5min 0 - 0 % B

0.5 - 4 min 0 - 20 % B

4.0 - 4.5 min 20 - 100 % B

4.5 - 5.0min 100 % B

5.0 - 5.5min 100 - 5 % B

6min 5 % B

0.45ml/min

Acquity UPLC BEH C18, 1.7μm, 2.1 x 50 mm column

column oven temp. = 40 °C

2.5 Result of purity assessment

The overall purity is 98.60 % at 214 nm.

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CONCLUSION:

The sample GHRP-6 (Batch No. 2023149) was analyzed for peptide content and UV purity.

Peptide content is 79.2 % (4.0 mg in 5 mg)

Purity is 98.60 % (UPLC at 214 nm).

ANALYSIS COMPLETED:	Date: 26.07.2023
Issued by QC:	Date: 26.07.2023 Signature: 