

## GLP-1 (7-36) amide Acetate

<b>Product Name</b>	GLP-1 (7-36) amide Acetate	<b>Batch No.</b>	NJP13304-160810
<b>CAT#</b>	10-101-85	<b>Batch size</b>	8.4 g
<b>M.F/Formula</b>	C <sub>149</sub> H <sub>226</sub> N <sub>40</sub> O <sub>45</sub>	<b>Molecular Weight</b>	3297.68
<b>MFG. Date</b>	08.10,2016	<b>Retest Date</b>	08.09,2018
<b>Sequence</b>	H-His-Ala-Glu-Gly-Thr-Phe-Thr-Ser-Asp-Val-Ser-Ser-Tyr-Leu-Glu-Gly-Gln-Ala-Ala-Lys-Glu-Phe-Ile-Ala-Trp-Leu-Val-Lys-Gly-Arg-NH <sub>2</sub> acetate salt		
<b>TESTING ITEM</b>	<b>SPECIFICATION</b>	<b>RESULT</b>	
<b>Appearance</b>	White to off white powder	White powder	
<b>Amino acid analysis (N.C.H)</b>	N%	14.94%	
	C%	49.30%	
	H%	7.067%	
<b>Amino acid analysis (AAA) nmol/20µl</b>	Amino Acid	nmol/20 µl	Amino Acid Composition
	Asp	1.255	0.99
	Thr	2.254	1.77
	Ser	3.224	2.54
	Glu	5.157	4.06
	Gly	3.942	3.10
	Ala	5.127	4.03
	Val	2.536	2.00
	Ile	1.200	0.94
	Leu	2.679	2.11
	Tyr	1.303	1.03
	Phe	2.502	1.97
	Lys	2.590	2.04
	His	1.216	0.96
Arg	1.271	1.00	
<b>Peptide contend</b>	≥80%	87.9%	
<b>HPLC (TFA-220nm)</b>	97.0 % to 102.0 %	97.79%	
	Any other impurity: ≤1.5%	1.45%	
	Total impurities: ≤3.0%	2.21%	
<b>Water content,</b>	≤5%	0.994%	

<b>(KF)</b>		
<b>Acetic acid content, (HPLC)</b>	≤5.0%	2.473%
<b>Trifluoroacetic acid, (IC)</b>	≤0.5%	0.320%
<b>Bacterial endotoxins</b>	≤0.25EU/mg	Conforms
<b>Mass Spec by MALDI</b>	3297.68 ±1	Conforms
<b>Mass Spec by LC/MS</b>	3297.68 ±1	Conforms
<b>Store at</b>	Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstitute in PBS or water. Reconstituted protein/peptide can be stored at 4°C for a limited period of time. The lyophilized peptide remains stable for up to 1 year when stored at -20°C	

QA:

*Sharon Lee*

QC:

*Paulo Park*

Date:

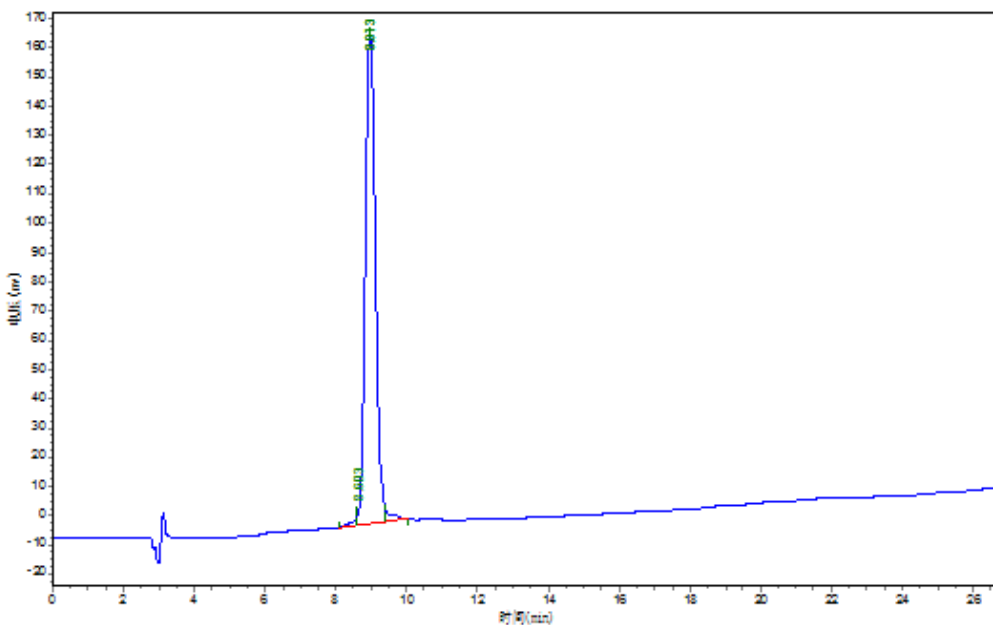
*Sept. 19, 2016*

### HPLC REPORT (220nm)

Product Name      GLP-1 (7-36) amide Acetate  
 Analyst            XHH  
 Lot No.            NJP13304-160810  
 Column            Xbridge BEH130 C18,4.6\*250mm,5um  
 Solvent A          0.1%Trifluoroacetic in 100% Acetonitrile  
 Solvent B          0.1%Trifluoroacetic in 100% Water  
 Gradient

	A	B
0.0min	36%	64%
25.0min	61%	39%
25.1min	100%	0%
30.0min	Stop	

Flow rate          1.0 ml/min  
 Wavelength      220 nm  
 Volume            20 ul



Peak No.	Ret Time	Height	Area	Conc.
1	8.603	2695.897	25701.301	0.7605
2	8.973	166453.234	3304844.750	97.7875
3	8.973	4482.071	49071.594	1.4520
Total				100

**Bacterial endotoxins Report**

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<b>Product Name</b>	GLP-1 (7-36) amide Acetate
<b>Sample wt.</b>	10 mg
<b>Lot No.</b>	NJP13304-160810
<b>Sample state</b>	White powder
<b>Chemist</b>	Mily
<b>To determine</b>	Bacterial endotoxins
<b>Test date</b>	08.30, 2016

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<b>Test Item</b>	<b>Requirement /Specification</b>	<b>Result</b>
<b>Bacterial endotoxins</b>	0.25EU/mg	Conforms

QC:

*Ada*

Date:

*Sept. 15, 2016*

**Amino acid analysis (AAA) Report**

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<b>Product Name</b>	GLP-1 (7-36) amide Acetate
<b>Sample wt.</b>	10 mg
<b>Lot No.</b>	NJP13304-160810
<b>Sample state</b>	White powder
<b>Chemist</b>	Mily
<b>To determine</b>	CH <sub>3</sub> COO-%, CF <sub>3</sub> COO-%, N%, C%, H%, Amino Acid Composition, MALDI-TOF
<b>Test date</b>	08.30, 2016

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**Report 1**

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<b>ID</b>	<b>Test Item</b>	<b>Result</b>
1	CH <sub>3</sub> COO-%	2.473%
2	CF <sub>3</sub> COO-%	0.320%
3	N%	14.94%
4	C%	49.30%
5	H%	7.067%

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*Remark: Please see Appendix the analytical report 1 by Hitachi L-8900 Amino Acid Analyzer*

*Remark: Please see Appendix the analytical report 2 by Metrohm 883 Basic IC plus*

*AHIMADZU AXIMA Assurance MALDI-TOF*

*Remark: Please see Appendix the analytical report 3 by AHIMADZU AXIMA Assurance*

**Report 2**

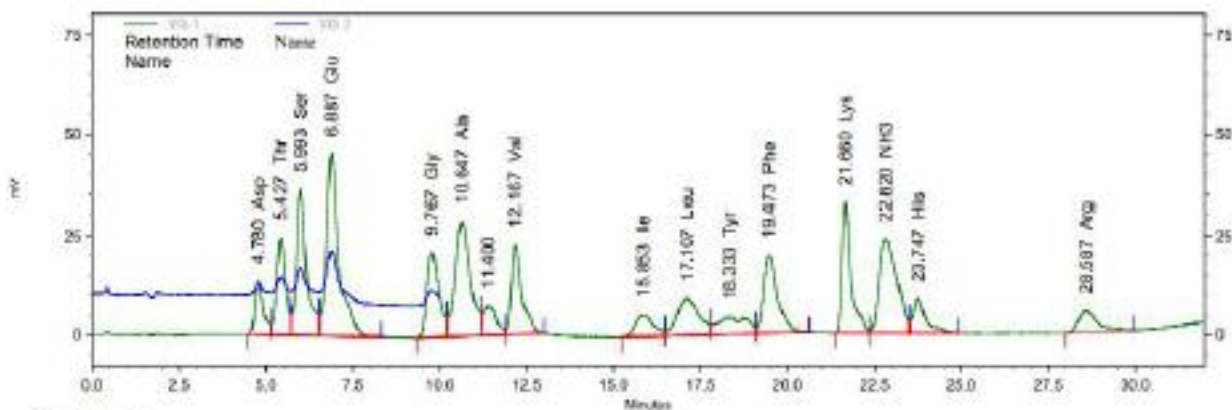
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<b>ID</b>	<b>nmol/20µl</b>	<b>Amino Acid Composition</b>
Asp	1.255	0.99
Thr	2.254	1.77
Ser	3.224	2.54
Glu	5.157	4.06
Gly	3.942	3.10
Ala	5.127	4.03
Cys	—	—
Val	2.536	2.00
Met	—	—
Ile	1.200	0.94
Leu	2.679	2.11
Tyr	1.303	1.03
Phe	2.502	1.97
Lys	2.590	2.04
His	1.216	0.96
Arg	1.271	1.00
Pro	—	—

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*Remark: Please see Appendix the analytical report by Hitachi L-8900 Amino Acid Analyzer.*

Appendix1



VIS 1 Results

Pk #	RT	Name	Height	Area	ESTD Conc/nmol	Calc%
1	4.780	Asp	54065	938063	1.255	167.089
2	5.427	Thr	97255	1747772	2.254	268.472
3	5.993	Ser	144510	3057654	3.224	338.835
4	6.887	Glu	181494	4578634	5.157	758.589
5	9.767	Gly	85369	2106203	3.942	296.040
6	10.647	Ala	114508	3602145	5.127	456.791
8	12.167	Val	90146	1912452	2.536	297.001
9	15.853	Ile	21875	791193	1.200	157.408
10	17.107	Leu	36836	1652178	2.679	351.437
11	18.333	Tyr	17197	1043355	1.303	236.171
12	19.473	Phe	78038	2191202	2.502	413.390
13	21.660	Lys	129374	2334626	2.590	378.599
14	22.820	NH3	94844	3399984	7.066	120.121
15	23.747	His	34226	925775	1.216	188.660
16	28.587	Arg	22122	858322	1.271	221.442
Totals			1201859	31139558	43.322	

VIS 2 Results

Pk #	RT	Name	Height	Area	ESTD Conc/nmol	Calc%
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Appendix2



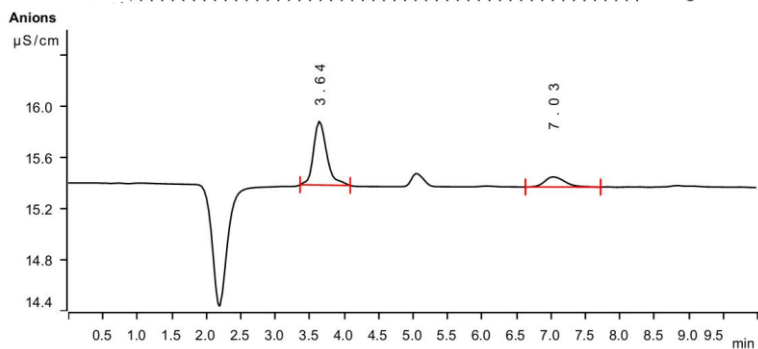
2016-09-18 10:42:00

Sample data

Ident . . . . . NJP13304-160810  
 Sample type . . . . .  
 Determination start . . . . . 2016-09-14 12:16:39 UTC+8  
 Method . . . . . 881+863-  
 Operator . . . . . LYJAdministrator  
 Sample Content . . . . . 2.125mg/10ml  
 AC Content . . . . . 2.473%  
 TFA Content . . . . . 0.320%

Anions

(883 Basic IC plus 1)  
 . . . . . 10.0 min  
 Metrosep A Supp 5 - 150/4.0  
 . . . . . 0.700 mL/min  
 . . . . . 6.54 MPa  
 . . . . . °C

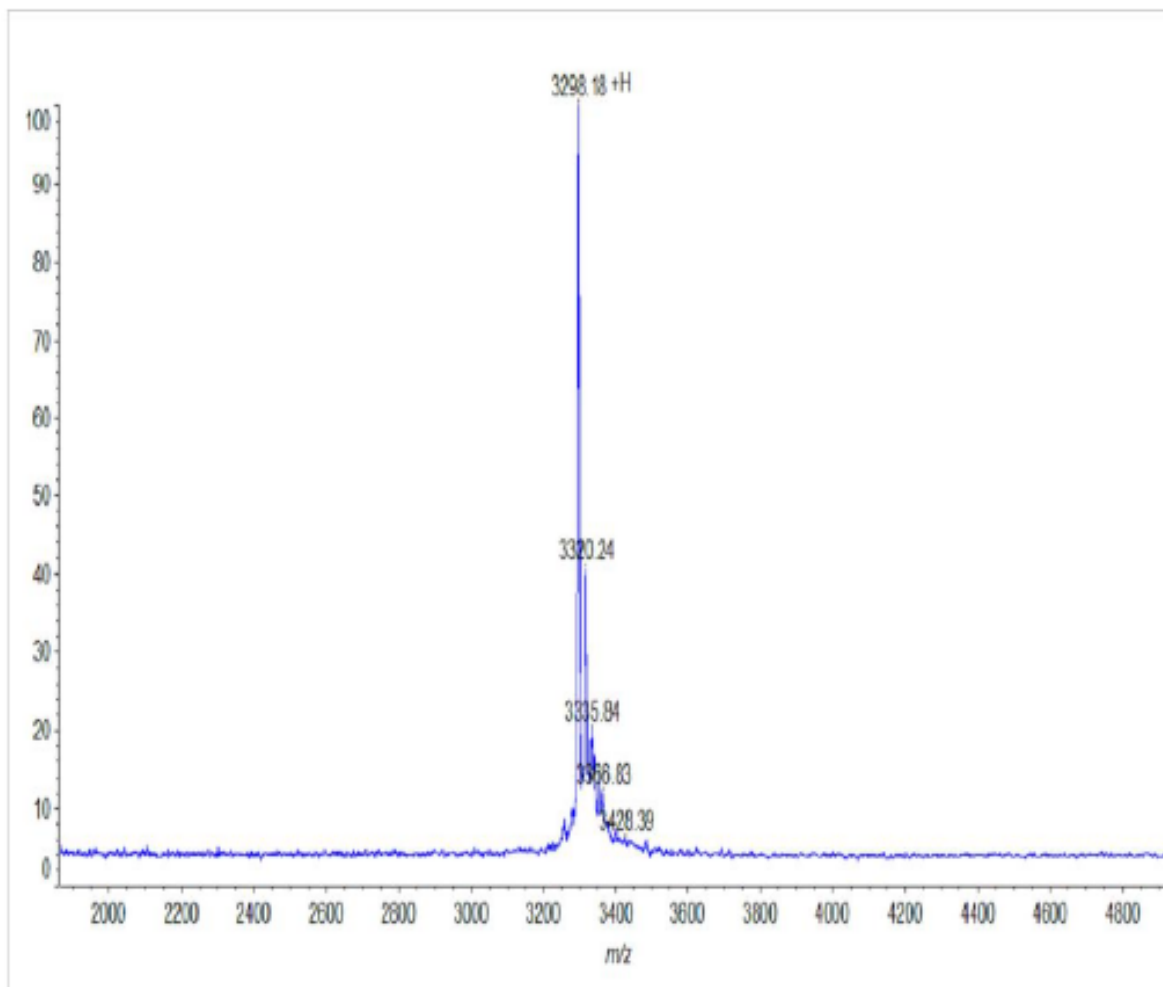


	min	(µS/cm)x min	µS/cm	ppm
1	3.638	0.1107	0.498	5.256
2	7.028	0.0274	0.079	0.679



Appendix3

MALDI-TOF REPORT



Acquired By LZZ

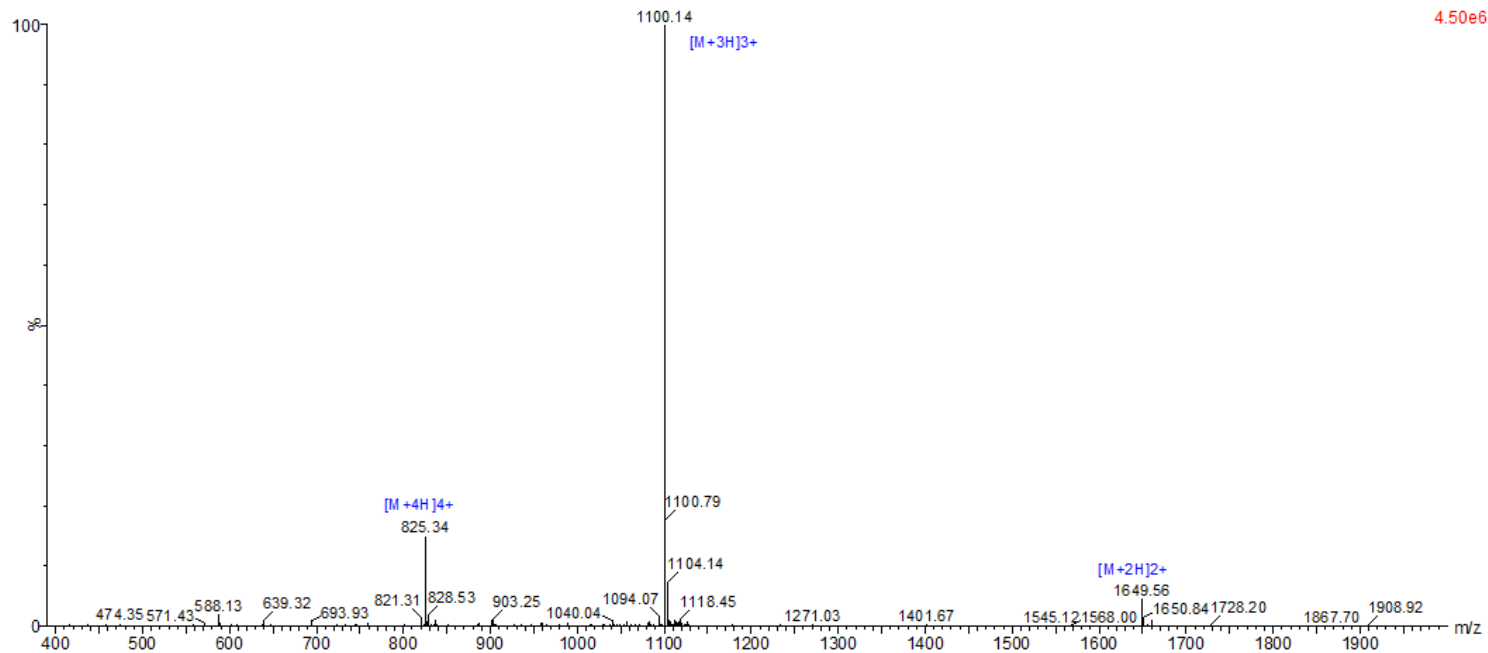
Data 08.30, 2016

Instrumentation SHIMADZU AXIMA ASSURANCE

Theoretical M.W. 3297.70

Lot No. NJP13304-160810

### MASS SPECTROMETRY REPORT



Sample Description		Instrument	Waters ZQ2000	
Analyzed date:	2016-9-14	Probe:	ESI	Probe Bias: +4.5kv
Analyst:	YU	Nebulizer Gas Flow:	1.5L/min	Detector: 1.5kv
Sample:	GLP-1 (7-36) amide Acetate	CDL:	-20.0v	T. Flow: 0.2ml/min
M.W.:	3297.70	CDL Temp.:	250 °C	B. Conc.: 50%H2O/50%ACN
Lot. No.:	NJP13304-160810	Block Temp.:	200 °C	