



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-1		
Molecular Formula	C61H107N21O22S	Cat#	8117
Molecular Weight	1518.78	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	MGARASVLSGGELDR		
Item No.	8117_140303_1		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1518.78±2.0	1518.3
3	Peptide Purity (By HPLC)	≥80%	83.3%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		S	1.8
		E	1.0
		G	2.9
		R	2.5
		A	2.0
		V	1.1
		M	0.7
	L	2.0	
5	Peptide content	81.7%	

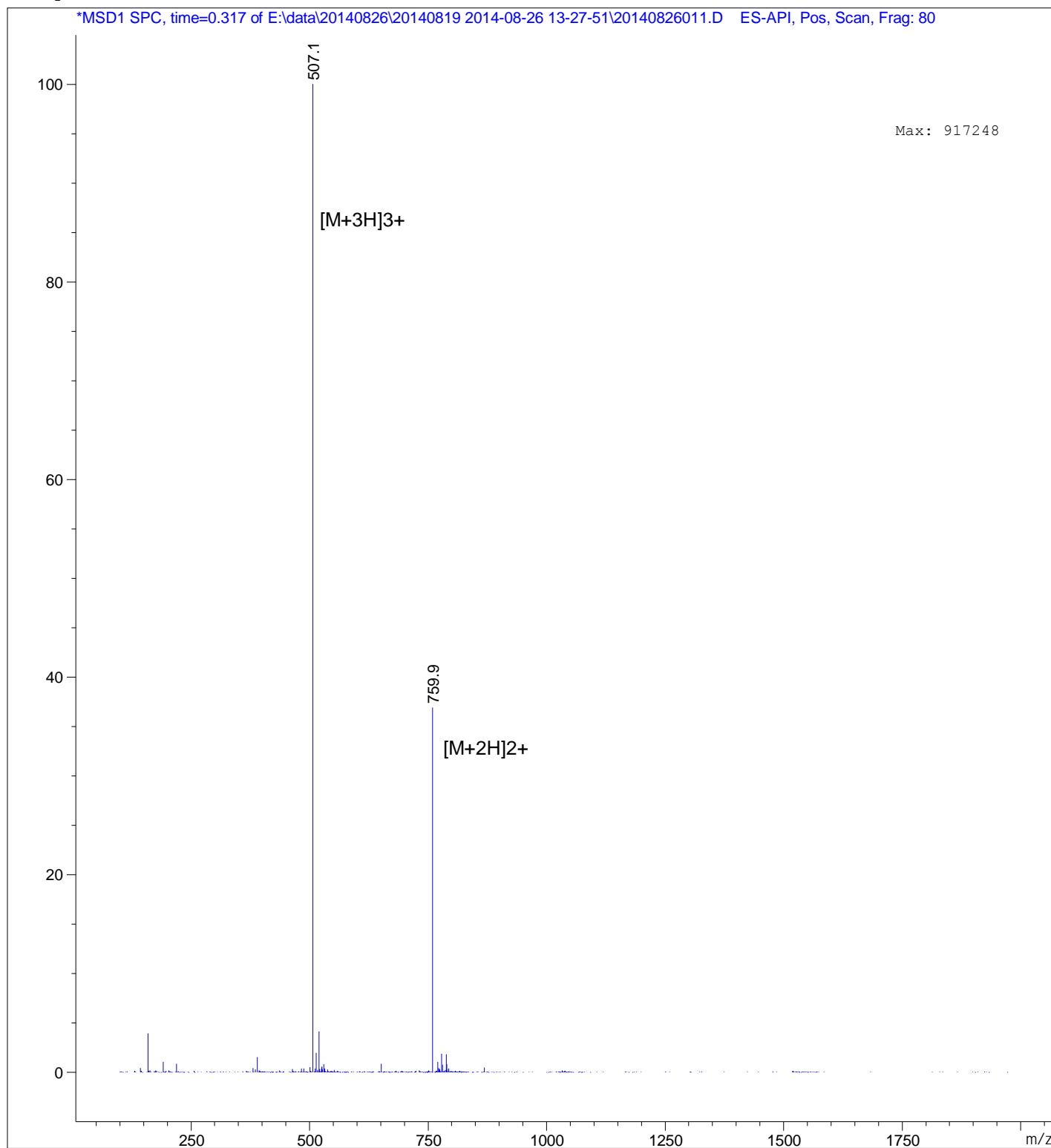
Quality Control By: wangjun

Date: 09/16/2014

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Acq. Operator	: SYSTEM	Seq. Line	: 12
Acq. Instrument	: Agilent6120	Location	: 51
Injection Date	: 8/26/2014 2:00:52 PM	Inj	: 1
		Inj Volume	: 5.000 µl
Acq. Method	: E:\data\20140826\20140819 2014-08-26 13-27-51\LCMS.M		
Last changed	: 8/26/2014 1:27:51 PM by SYSTEM		
Analysis Method	: E:\data\20140826\20140819 2014-08-26 13-27-51\LCMS.M (Sequence Method)		
Last changed	: 8/26/2014 2:30:48 PM by SYSTEM		

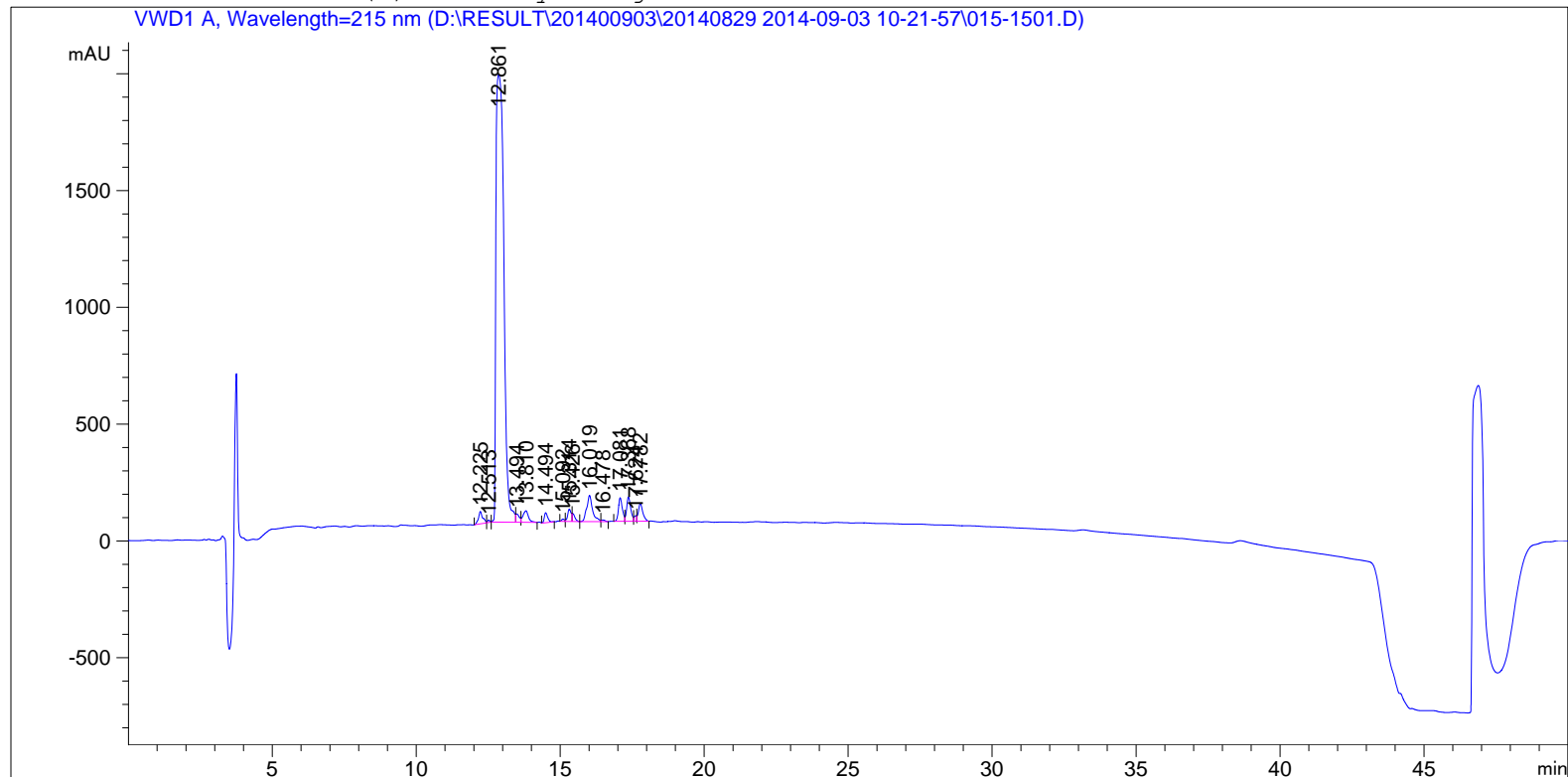
MS Spectrum



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=====
Acq. Operator   : SYSTEM                               Seq. Line :   15
Acq. Instrument : HPLC 1260                           Location  : Vial 15
Injection Date  : 9/3/2014 10:16:23 PM                 Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M (Sequence Method)
Last changed    : 9/3/2014 7:20:03 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5um,4.6*250mm   Cloumn Temp:35°C   Flow
Rate:1.0ml/min
Mobile Phase A:0.1%TFA+H2O
Mobile Phase B:0.1%TFA+ACN
time(min)       0         40         40.3       43         43.3       50
B%              10        70         95         95         10         10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.225	BV	0.1430	539.27020	52.86627	1.2439
2	12.513	VB	0.0865	54.68557	9.88499	0.1261
3	12.861	BV	0.3079	3.61246e4	1916.52026	83.3231
4	13.494	VV	0.1226	310.14813	35.60196	0.7154
5	13.810	VB	0.1829	650.37146	49.63067	1.5001
6	14.494	MM R	0.1366	353.43527	43.12837	0.8152
7	15.092	BV	0.1045	67.51665	9.78873	0.1557

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
8	15.314	VV	0.1224	450.60059	53.44487	1.0393
9	15.426	VB	0.1009	228.68056	34.26733	0.5275
10	16.019	BV	0.1980	1600.15625	112.49236	3.6908
11	16.478	VB	0.1374	62.82758	7.02348	0.1449
12	17.081	BV	0.1425	953.63275	100.73035	2.1996
13	17.368	VV	0.1461	1008.56744	104.02982	2.3263
14	17.624	VV	0.0866	139.53716	23.72073	0.3218
15	17.782	VB	0.1545	810.83392	76.61768	1.8702

Totals : 4.33548e4 2629.74787

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*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-2		
Molecular Formula	C73H118N20O24	Cat#	8117
Molecular Weight	1659.94	Lot#	140303
Manufacturing Date	09/10/2014	Test Date	09/10/2014
Sequence	ASVLSGGELDRWEKI		
Item No.	8117_140303_2		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1659.94±2.0	1659.3
3	Peptide Purity (By HPLC)	≥80%	97.8%
4	Identification(Amino Acid Composition by HPLC)	D	1.2
		S	1.6
		E	1.9
		G	2.2
		R	1.1
		A	1.0
		V	1.1
		K	1.0
		I	0.9
L	1.9		
5	Peptide content	73.0%	

Quality Control By:

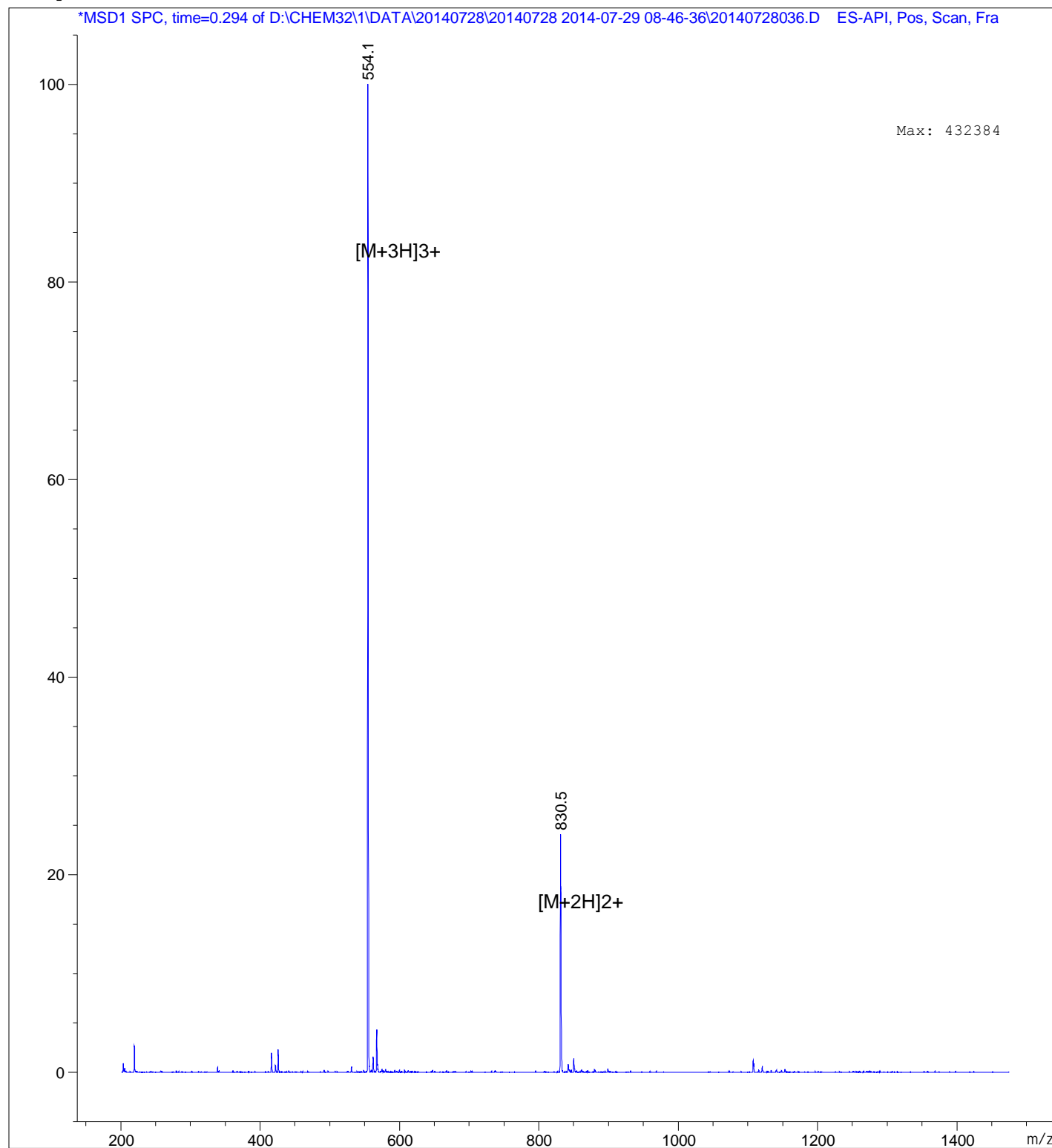
wangjun

Date:

09/10/2014

=====
Acq. Operator : lishichao Seq. Line : 36
Acq. Instrument : 5J-QC-082 Location : Vial 23
Injection Date : 7/29/2014 10:35:37 AM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140728\20140728 2014-07-29 08-46-36\TEST MS(200-1500).2.
Last changed : 7/28/2014 4:15:43 PM by lishichao
Analysis Method : D:\METHOD\LT MS(200-800).M
Last changed : 7/3/2014 2:51:30 PM by lishichao

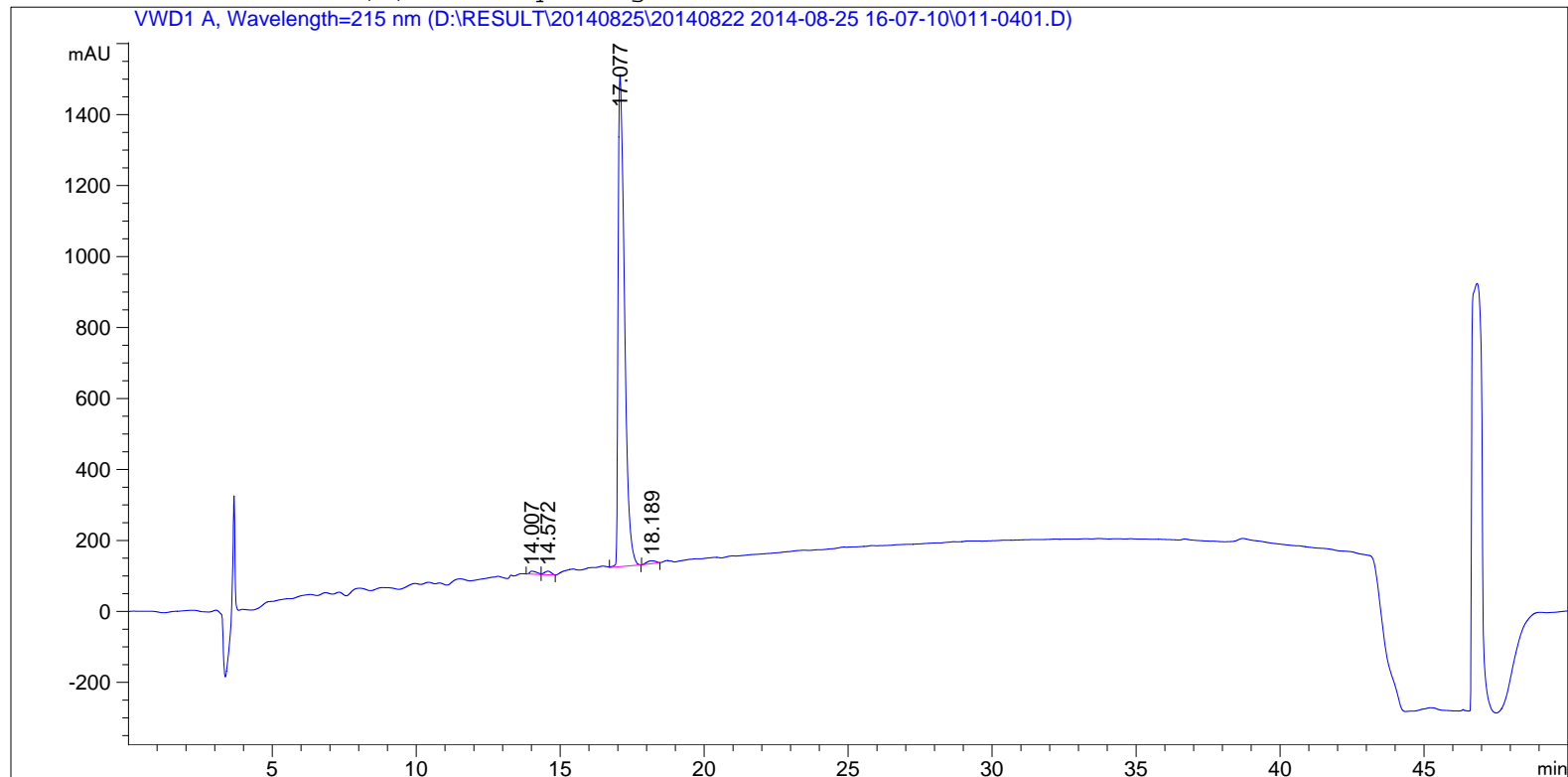
MS Spectrum



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=====
Acq. Operator   : SYSTEM                               Seq. Line :    4
Acq. Instrument : HPLC 1260                           Location  : Vial 11
Injection Date  : 8/25/2014 6:41:00 PM                Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\20140825\20140822 2014-08-25 16-07-10\KJ100401.M (Sequence Method)
Last changed    : 8/25/2014 4:07:10 PM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm   Column Temp:35°C   Flow
Rate:1.0ml/min
Mobile Phase A:0.1%TFA+H2O
Mobile Phase B:0.1%TFA+ACN
time(min)       0          40          40.3          43          43.3          50
B%              10         70          95           95          10           10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	14.007	BV	0.2291	145.10222	8.37575	0.6654
2	14.572	VB	0.2633	162.96335	9.98958	0.7473
3	17.077	VB	0.2463	2.13246e4	1387.21765	97.7884
4	18.189	BB	0.3818	174.21034	7.79323	0.7989

Totals : 2.18068e4 1413.37620

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*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-3		
Molecular Formula	C79H130N26O23	Cat#	8117
Molecular Weight	1812.14	Lot#	140303
Manufacturing Date	09/12/2014	Test Date	09/12/2014
Sequence	SGGELDRWEKIRLRP		
Item No.	8117_140303_3		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1812.14±2.0	1811.6
3	Peptide Purity (By HPLC)	≥80%	95.8%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	0.9
		E	2.1
		G	1.9
		R	3.2
		P	1.0
		K	1.0
		I	0.9
L	2.0		
5	Peptide content	83.7%	

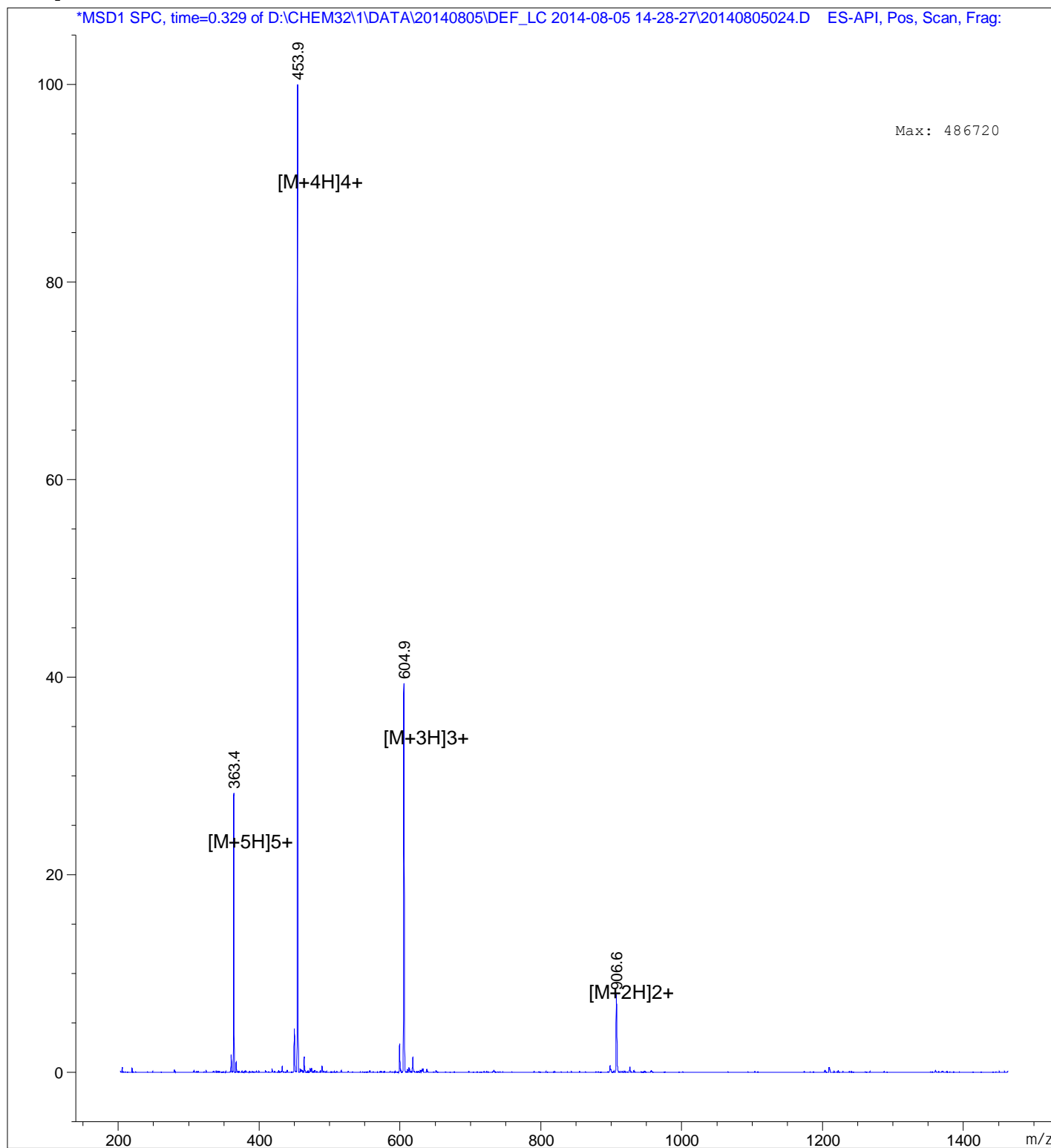
Quality Control By: wangjun

Date: 09/12/2014

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=====
Acq. Operator   : liusuying                 Seq. Line :   24
Acq. Instrument : 5J-QC-082                Location  : Vial 28
Injection Date  : 8/5/2014 3:40:15 PM      Inj       :    1
                                                Inj Volume: 3.0 µl
Acq. Method    : D:\CHEM32\1\DATA\20140805\DEF_LC 2014-08-05 14-28-27\TEST MS (200-1500)2.
Last changed   : 8/4/2014 6:24:11 PM by liusuying
Analysis Method : D:\METHOD\TEST MS (200-1500)2.M
Last changed   : 8/4/2014 6:24:11 PM by liusuying
    
```

MS Spectrum



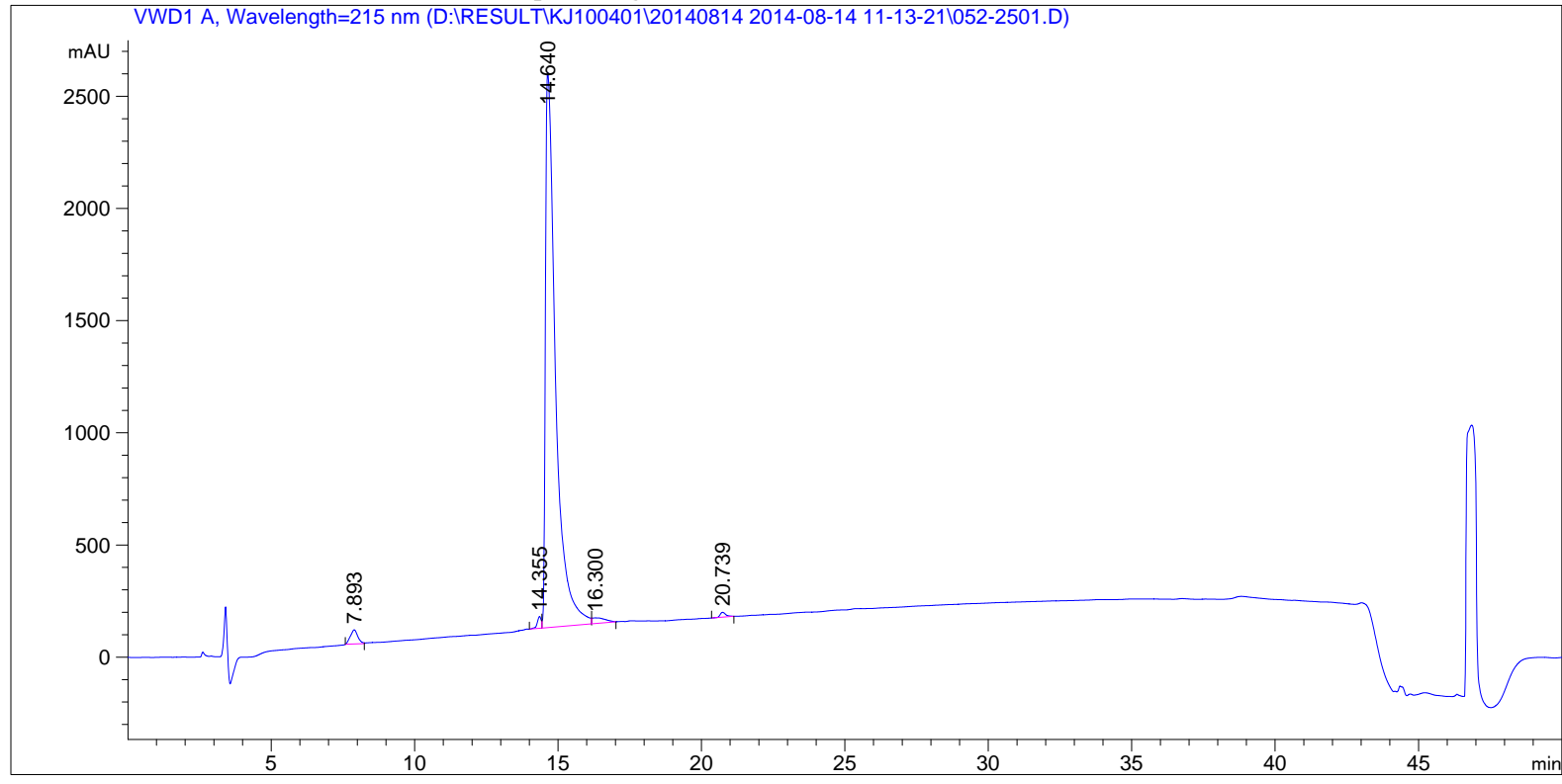
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=====
Acq. Operator   : SYSTEM                      Seq. Line :   25
Acq. Instrument : HPLC 1260                  Location  : Vial 52
Injection Date  : 8/15/2014 7:36:56 AM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\KJ100401\20140814 2014-08-14 11-13-21\KJ100401.M
Last changed    : 8/14/2014 11:13:21 AM by SYSTEM
Analysis Method : D:\RESULT\KJ100401\20140814 2014-08-14 11-13-21\KJ100401.M (Sequence Method)
Last changed    : 8/15/2014 1:04:30 PM by SYSTEM
                 (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                 Rate:1.0ml/min
                 Mobile Phase A:0.1%TFA+H2O
                 Mobile Phase B:0.1%TFA+ACN
                 time(min)      0      40      40.3      43      43.3      50
                 B%             10     70     95       95      10       10
  
```

Additional Info : Peak(s) manually integrated



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 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.893	MM R	0.2970	1125.65466	63.16241	1.7738
2	14.355	BV	0.1430	487.76376	52.71110	0.7686
3	14.640	VV	0.3716	6.07932e4	2474.86182	95.7965
4	16.300	VB	0.3906	763.65149	24.98389	1.2033

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	20.739	BB	0.2088	290.51083	21.34043	0.4578

Totals : 6.34608e4 2637.05965

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*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-4		
Molecular Formula	C83H142N28O20	Cat#	8117
Molecular Weight	1852.3	Lot#	140303
Manufacturing Date	09/10/2014	Test Date	09/10/2014
Sequence	LDRWEKIRLRPGGKK		
Item No.	8117_140303_4		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1852.3±2.0	1852.0
3	Peptide Purity (By HPLC)	≥80%	95.7%
4	Identification(Amino Acid Composition by HPLC)	D	0.9
		E	0.9
		G	2.3
		R	3.2
		P	1.0
		K	3.0
		I	0.8
	L	1.9	
5	Peptide content	77.6%	

Quality Control By:

wangjun

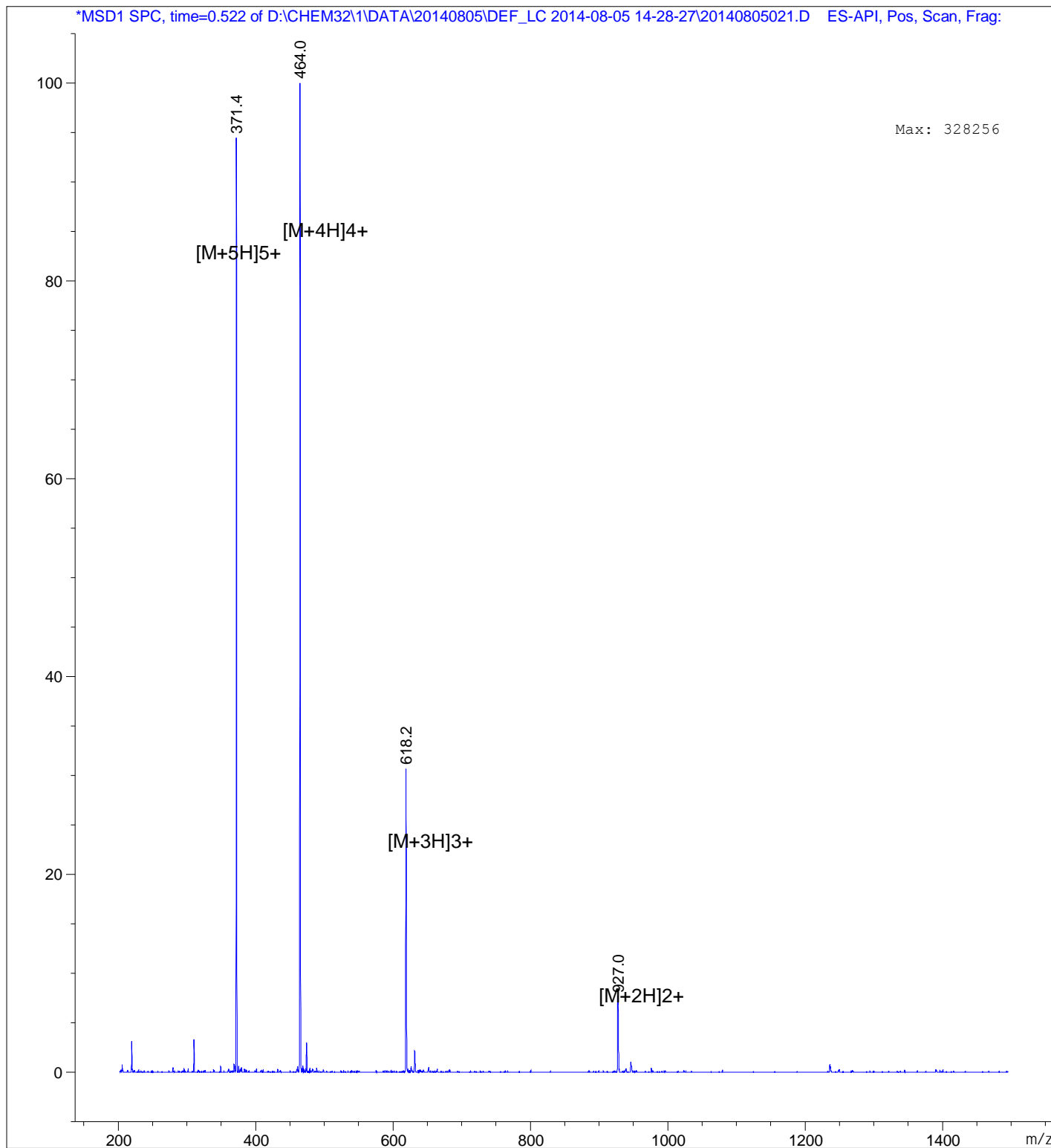
Date:

09/10/2014

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Acq. Operator	: liusuying	Seq. Line	: 21
Acq. Instrument	: 5J-QC-082	Location	: Vial 25
Injection Date	: 8/5/2014 3:30:59 PM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\20140805\DEF_LC 2014-08-05 14-28-27\TEST MS (200-1500)2.		
Last changed	: 8/4/2014 6:24:11 PM by liusuying		
Analysis Method	: D:\METHOD\TEST MS (200-1500)2.M		
Last changed	: 8/4/2014 6:24:11 PM by liusuying		

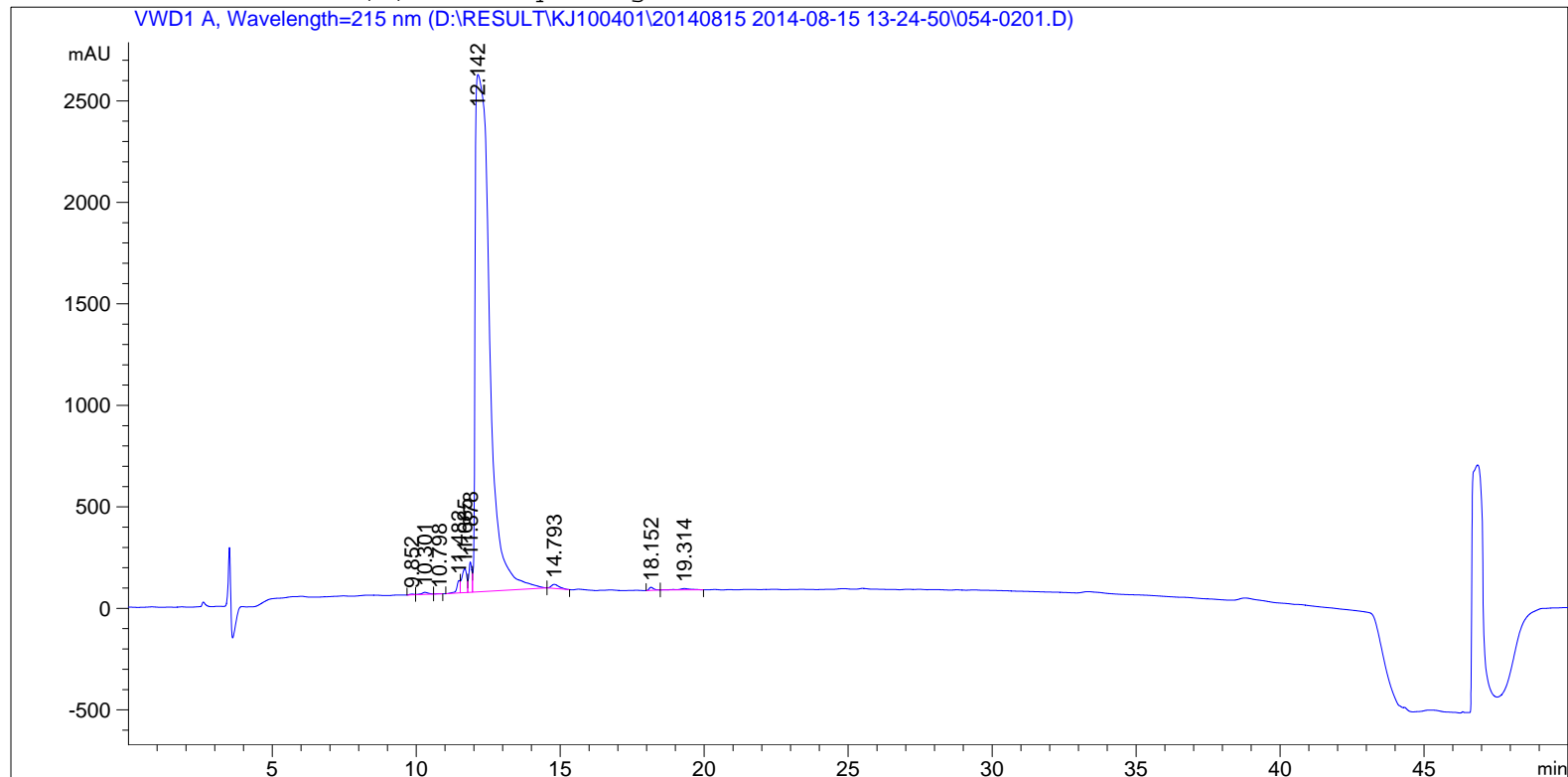
MS Spectrum



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=====
Acq. Operator   : SYSTEM                      Seq. Line :    2
Acq. Instrument : HPLC 1260                  Location  : Vial 54
Injection Date  : 8/15/2014 2:16:43 PM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401\20140815 2014-08-15 13-24-50\KJ100401.M (Sequence Method)
Last changed    : 8/15/2014 1:24:50 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
=====
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	9.852	BV	0.1797	42.29618	3.71964	0.0459
2	10.301	VV	0.2418	172.27963	10.21372	0.1869
3	10.798	VB	0.2133	17.02290	1.14589	0.0185
4	11.482	BV	0.1132	468.64215	61.31014	0.5084
5	11.685	VV	0.1847	1404.69836	117.34468	1.5240
6	11.878	VV	0.1099	1099.44934	149.31638	1.1928
7	12.142	VB	0.4669	8.82469e4	2548.77637	95.7394

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
8	14.793	BB	0.2869	372.21783	19.74838	0.4038
9	18.152	BB	0.1625	161.74788	15.16187	0.1755
10	19.314	BB	0.3955	188.82391	6.48793	0.2049

Totals : 9.21741e4 2933.22499

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*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-5		
Molecular Formula	C83H148N26O19	Cat#	8117
Molecular Weight	1814.34	Lot#	140303
Manufacturing Date	09/10/2014	Test Date	09/10/2014
Sequence	EKIRLRPGGKKKYKL		
Item No.	8117_140303_5		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1814.34±2.0	1814.0
3	Peptide Purity (By HPLC)	≥80%	93.1%
4	Identification(Amino Acid Composition by HPLC)	E	1.0
		G	2.0
		R	2.0
		P	1.0
		Y	1.0
		K	5.1
		I	0.9
L	2.0		
5	Peptide content	80.9%	

Quality Control By:

wangjun

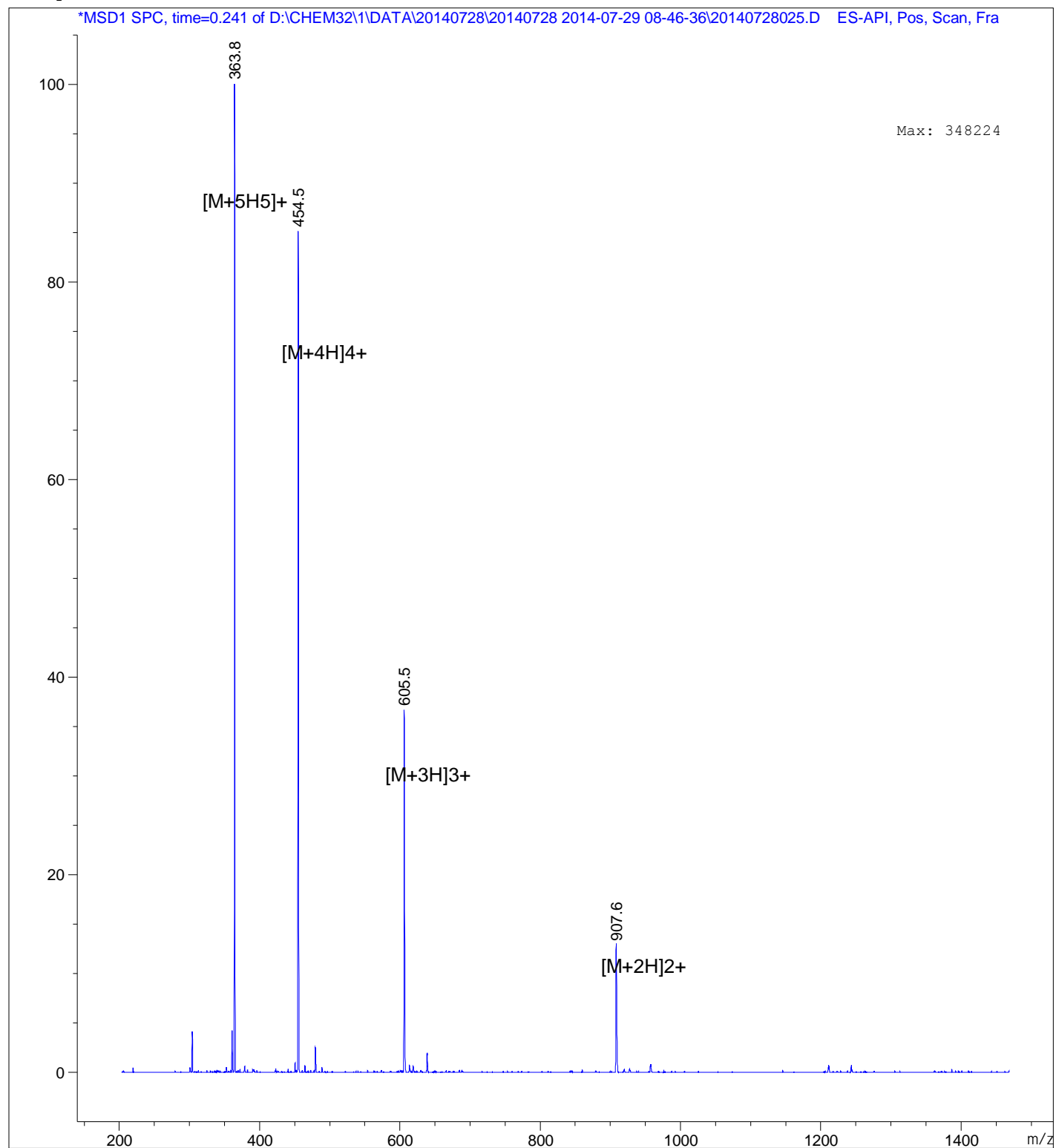
Date:

09/10/2014

Sample Name : HIV-1 Con B Gag Peptide-5

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=====
Acq. Operator   : lishichao                Seq. Line :   25
Acq. Instrument : 5J-QC-082              Location  : Vial 12
Injection Date  : 7/29/2014 10:01:41 AM    Inj       :    1
                                           Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140728\20140728 2014-07-29 08-46-36\TEST MS(200-1500)2.
Last changed    : 7/28/2014 4:15:43 PM by lishichao
Analysis Method : D:\METHOD\LT MS(200-800).M
Last changed    : 7/3/2014 2:51:30 PM by lishichao
=====
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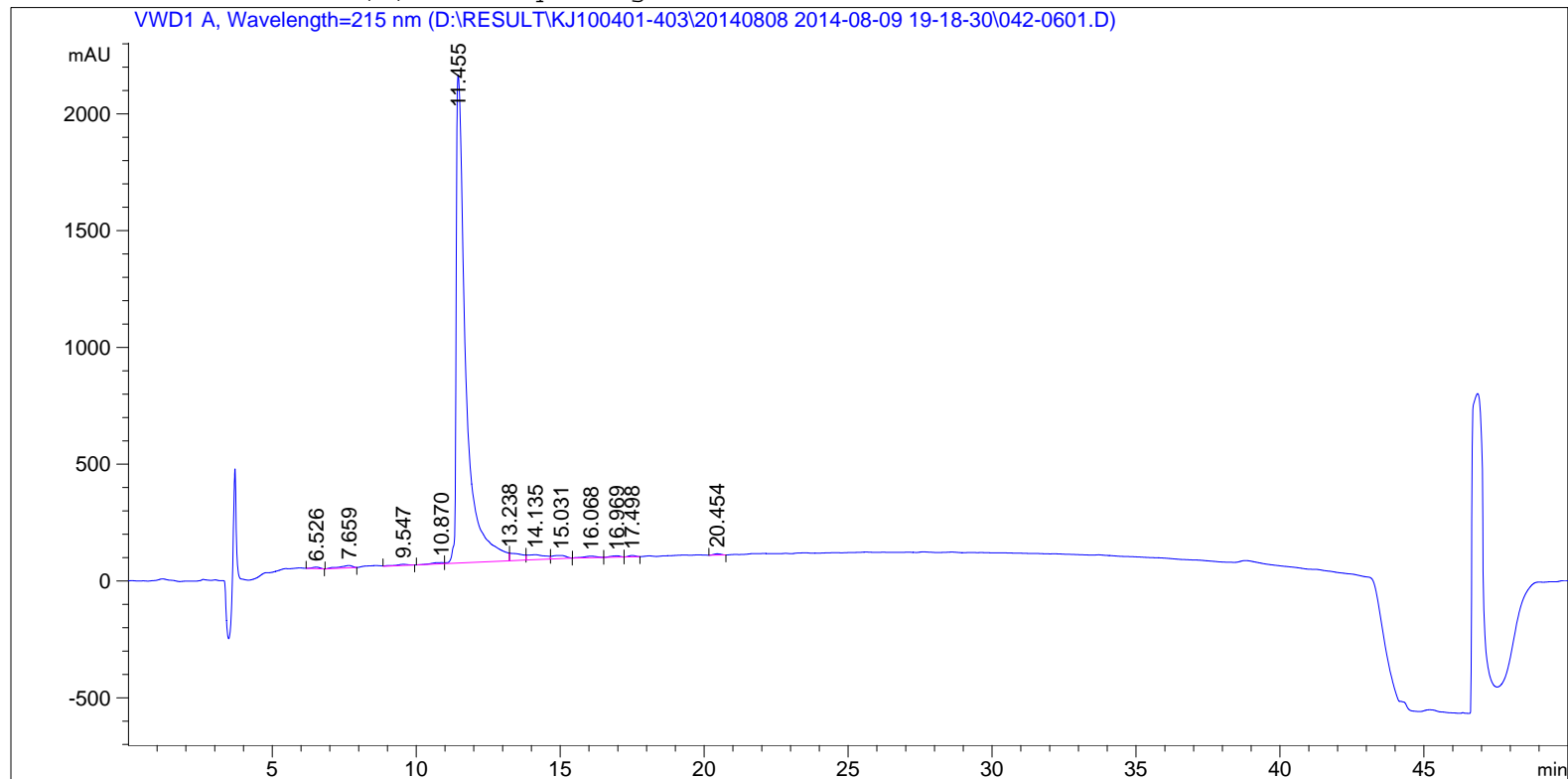
MS Spectrum



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=====
Acq. Operator   : SYSTEM                               Seq. Line :    6
Acq. Instrument : HPLC 1260                           Location  : Vial 42
Injection Date  : 8/9/2014 11:34:19 PM                Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
                Method)
Last changed    : 8/9/2014 7:18:30 PM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                Rate:1.0ml/min
                Mobile Phase A:0.1%TFA+H2O
                Mobile Phase B:0.1%TFA+ACN
                time(min)      0      40      40.3      43      43.3      50
                B%            10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	6.526	BB	0.2882	118.24156	6.53292	0.2263
2	7.659	BB	0.4639	340.57773	10.11241	0.6517
3	9.547	VB	0.4788	164.03633	4.85911	0.3139
4	10.870	BV	0.4100	172.02844	5.28108	0.3292
5	11.455	MF R	0.3879	4.86499e4	2090.54468	93.0958
6	13.238	FM R	0.4797	942.33124	32.74183	1.8032

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
7	14.135	VV	0.5758	903.63470	21.09209	1.7292
8	15.031	VB	0.4628	432.12112	12.93212	0.8269
9	16.068	BV	0.4663	207.27765	6.54811	0.3966
10	16.969	VV	0.3134	133.07010	5.82829	0.2546
11	17.498	VV	0.2715	100.67462	5.91791	0.1926
12	20.454	BB	0.2792	93.97076	5.50480	0.1798

Totals : 5.22579e4 2207.89534

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*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-6		
Molecular Formula	C83H145N25O17	Cat#	8117
Molecular Weight	1765.32	Lot#	140303
Manufacturing Date	09/12/2014	Test Date	09/12/2014
Sequence	LRPGGKKKYKCLKHIV		
Item No.	8117_140303_6		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1765.32±2.0	1765.3
3	Peptide Purity (By HPLC)	≥80%	98.8%
4	Identification(Amino Acid Composition by HPLC)	G	2.2
		H	1.1
		R	1.1
		P	1.0
		Y	1.0
		V	0.8
		K	5.2
		I	0.7
L	2.0		
5	Peptide content	82.5%	

Quality Control By: wangjun

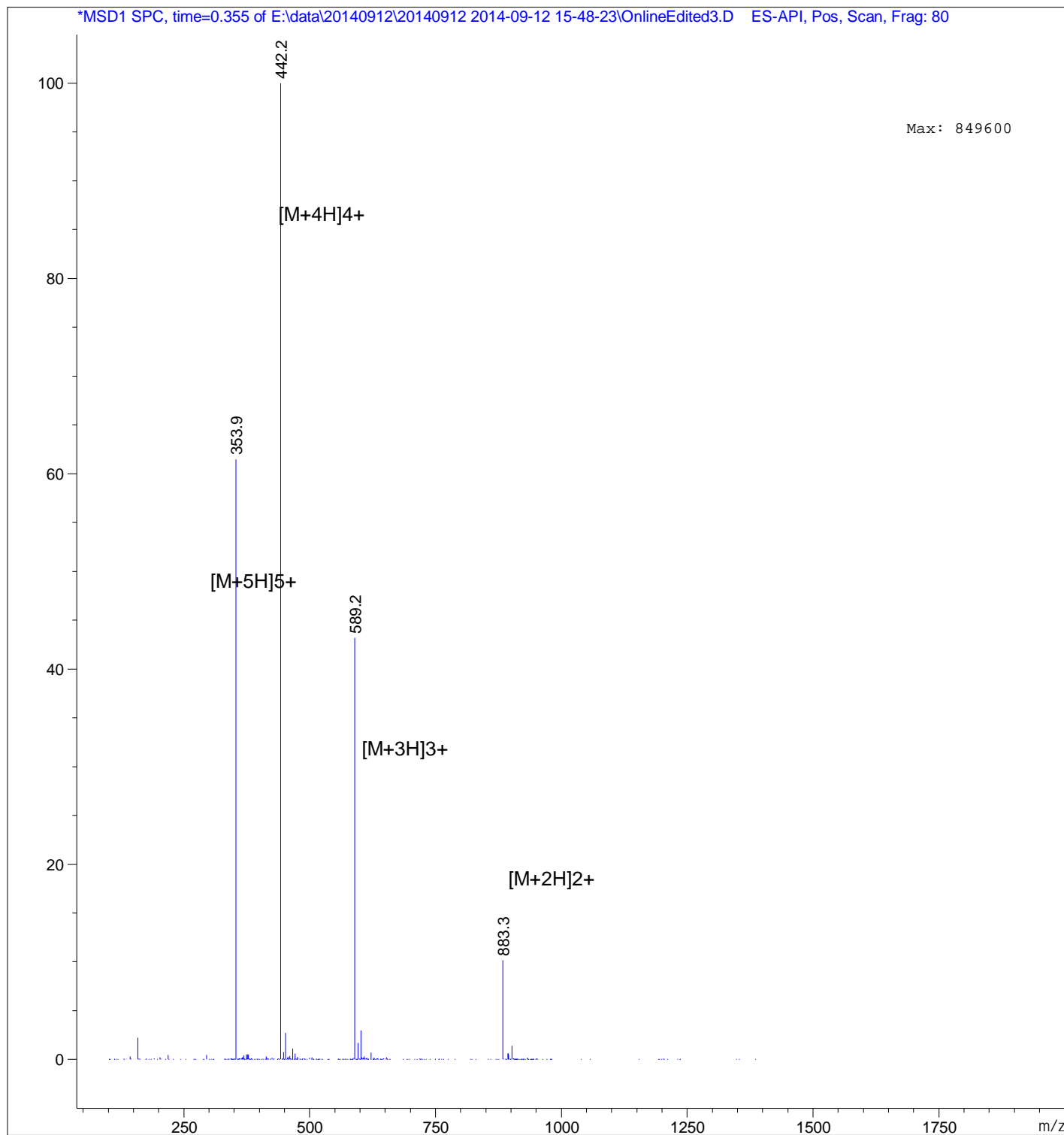
Date: 09/12/2014

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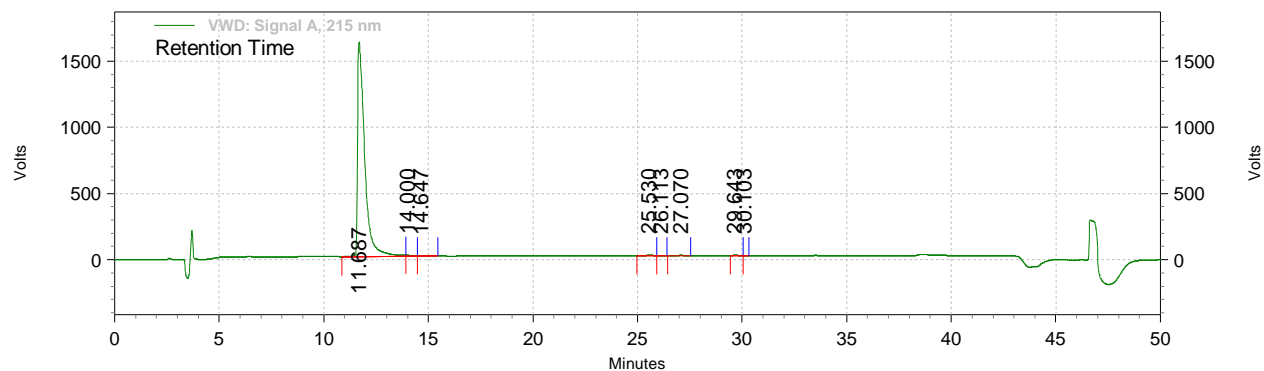
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Acq. Instrument : Agilent6120	Location : 35
Injection Date : 9/12/2014 4:01:14 PM	Inj : 1
	Inj Volume : 5.000 µl

Acq. Method : E:\data\20140912\20140912 2014-09-12 15-48-23\LCMS.M
Last changed : 9/12/2014 3:48:23 PM by SYSTEM
Analysis Method : E:\data\20140912\20140912 2014-09-12 15-48-23\LCMS.M (Sequence Method)
Last changed : 9/12/2014 3:52:33 PM by SYSTEM
(modified after loading)

MS Spectrum



Data File: D:\KJ100401\20140828\20140828.rslt\HIV-1 Con B Gag Peptide-6.dat
 Method: D:\Method\KJ100401.met
 Acquired: 8/28/2014 12:29:30 PM (GMT +08:00)
 Printed: 8/31/2014 8:23:34 AM (GMT +08:00)
 Column:Agilent HC-C18,5um,4.6*250mm Column Temp:35°C Flow Rate:1.0ml/min
 Mobile Phase A:0.1%TFA water
 Mobile Phase B:0.1%TFA+ACN
 time(min) 0 40 40.3 43 43.3 50
 B% 10 70 95 95 10 10



VWD: Signal A, 215 nm Results

Retention Time	Area	Area %
11.687	641028756	98.84
14.000	2482522	0.38
14.647	1640667	0.25
25.530	1312264	0.20
26.113	162923	0.03
27.070	888743	0.14
29.643	992897	0.15
30.103	33148	0.01
Totals	648541920	100.00



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-7		
Molecular Formula	C87H144N26O18	Cat#	8117
Molecular Weight	1842.35	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	GKKKYKCLKHIVWASR		
Item No.	8117_140303_7		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1842.35±2.0	1842.0
3	Peptide Purity (By HPLC)	≥80%	93.6%
4	Identification(Amino Acid Composition by HPLC)	S	1.1
		G	1.1
		H	1.0
		R	1.1
		A	1.2
		Y	1.0
		V	0.7
		K	4.7
		I	0.9
L	1.1		
5	Peptide content	65.6%	

Quality Control By:

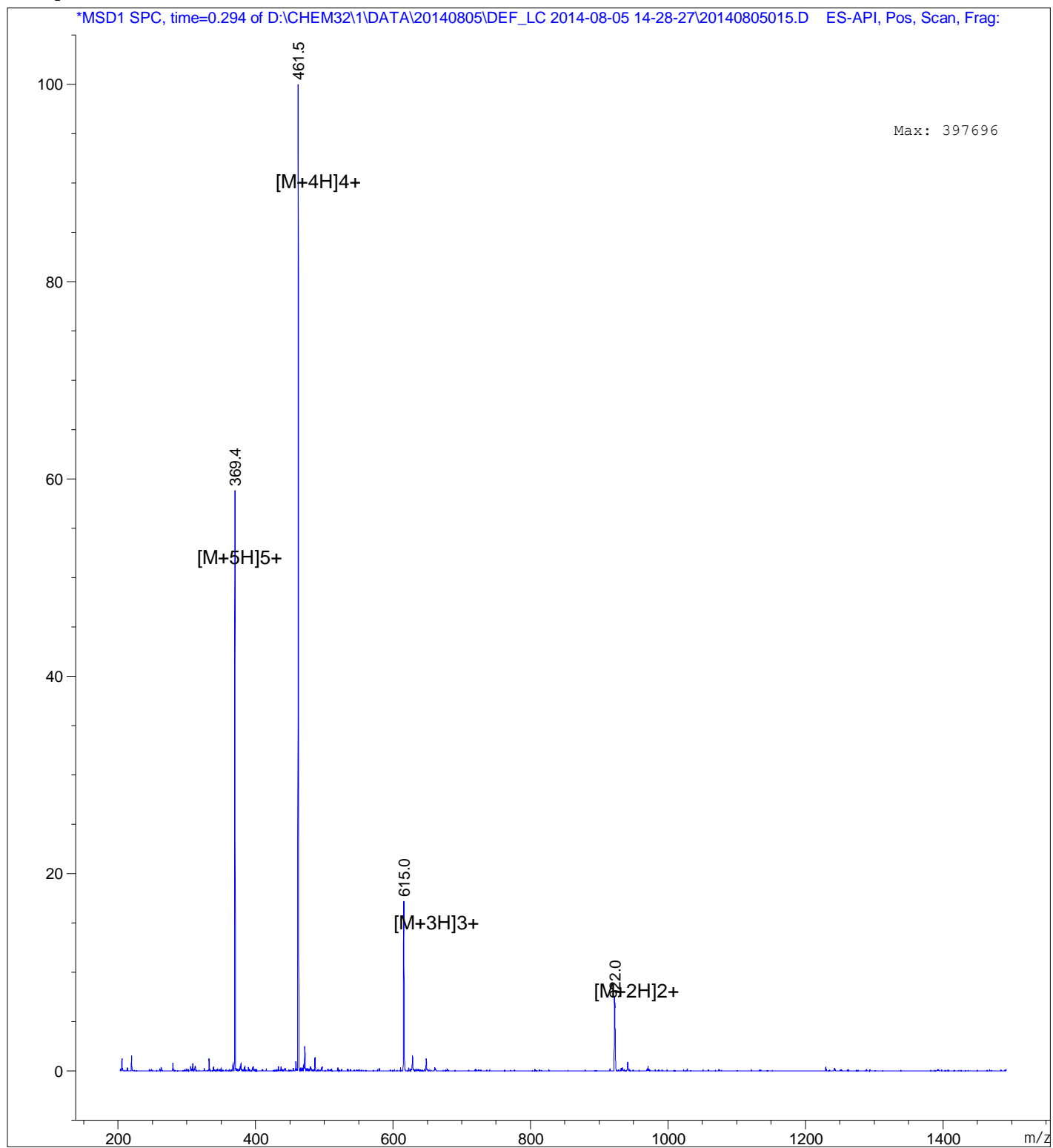
wangjun

Date:

09/11/2014


```
=====
Acq. Operator   : liusuying                      Seq. Line :   15
Acq. Instrument : 5J-QC-082                     Location  : Vial 17
Injection Date  : 8/5/2014 3:12:27 PM           Inj       :    1
                                                    Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140805\DEF_LC 2014-08-05 14-28-27\TEST MS(200-1500)2.
Last changed    : 8/4/2014 6:24:11 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M
Last changed    : 8/4/2014 6:24:11 PM by liusuying
```

MS Spectrum



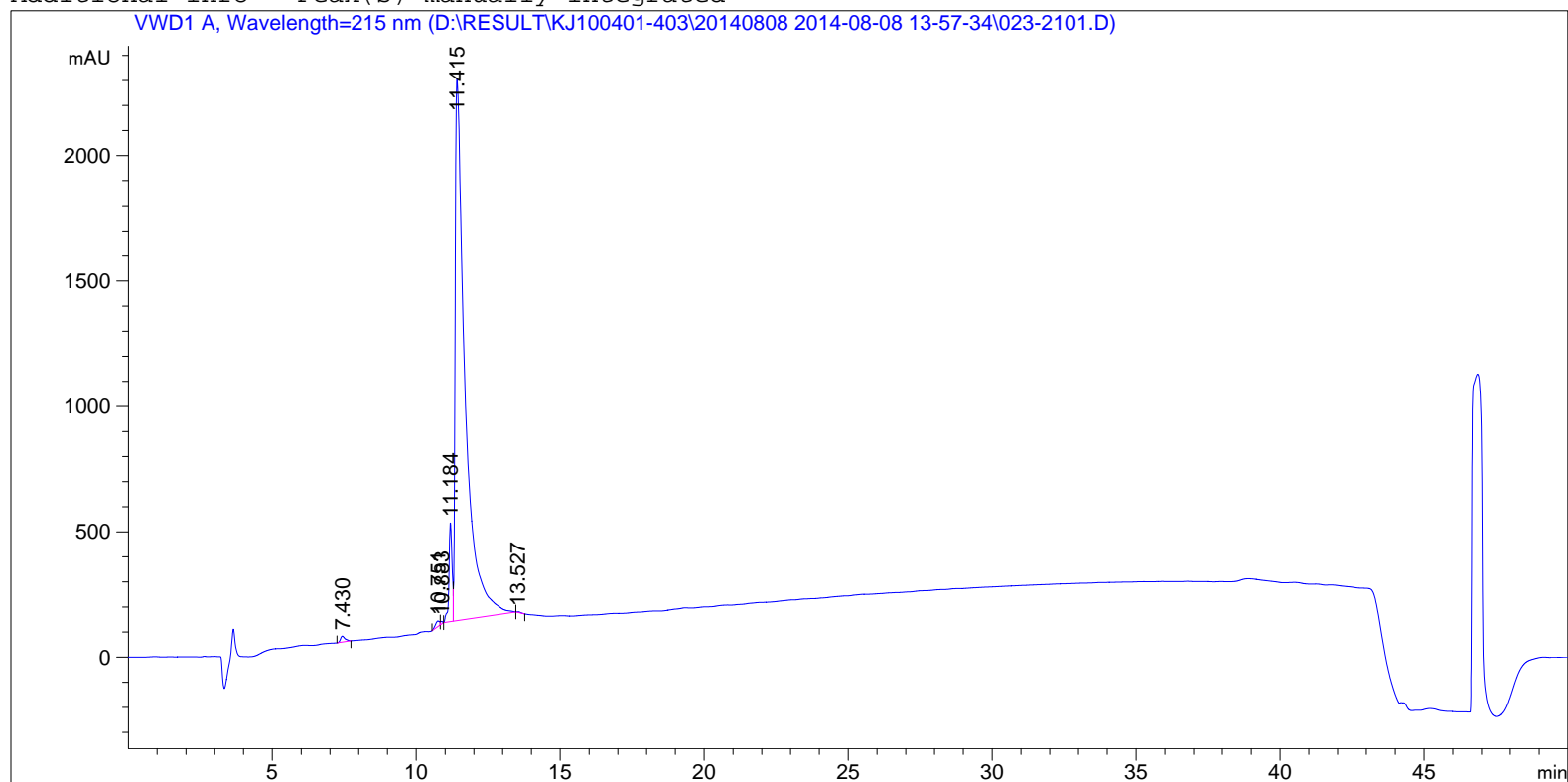
```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   21
Acq. Instrument : HPLC 1260                           Location  : Vial 23
Injection Date  : 8/9/2014 6:57:51 AM                 Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M
Last changed    : 8/8/2014 1:57:34 PM by SYSTEM
Analysis Method  : D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M (Sequence
Method)
Last changed    : 8/10/2014 4:18:06 PM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5um,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.430	BB	0.1670	261.93997	23.51236	0.4733
2	10.751	BV	0.1535	224.38655	21.91407	0.4055
3	10.883	VB	0.0798	51.93484	9.64278	0.0938

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
4	11.184	BV	0.1161	3007.77197	393.67816	5.4352
5	11.415	VB	0.3331	5.17693e4	2163.90454	93.5502
6	13.527	BB	0.1476	23.18610	2.42373	0.0419

Totals : 5.53385e4 2615.07564

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-8		
Molecular Formula	C89H142N26O22	Cat#	8117
Molecular Weight	1928.35	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	YKCLKHIVWASRELER		
Item No.	8117_140303_8		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1928.35±2.0	1928.0
3	Peptide Purity (By HPLC)	≥80%	87.9%
4	Identification(Amino Acid Composition by HPLC)	S	1.1
		E	2.2
		H	0.9
		R	2.2
		A	1.0
		Y	1.0
		V	0.7
		K	2.2
		I	0.6
L	2.0		
5	Peptide content	87.8%	

Quality Control By:

wangjun

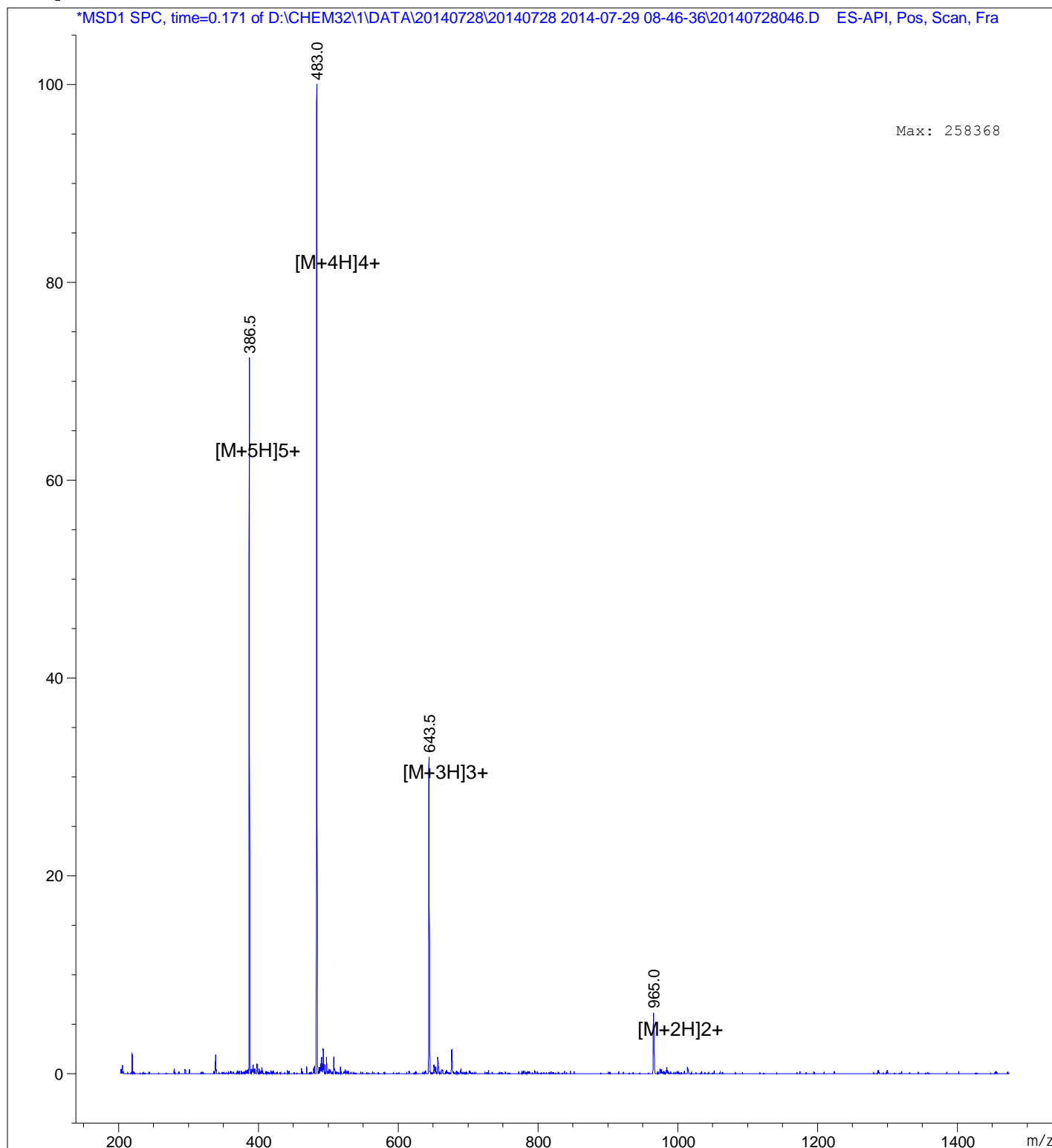
Date:

09/16/2014

```
=====
Acq. Operator   : lishichao                      Seq. Line :   46
Acq. Instrument : 5J-QC-082                     Location  : Vial 33
Injection Date  : 7/29/2014 11:06:32 AM        Inj       :    1
                                                    Inj Volume: 3.0 µl

Acq. Method     : D:\CHEM32\1\DATA\20140728\20140728 2014-07-29 08-46-36\TEST MS(200-1500)2.
Last changed    : 7/28/2014 4:15:43 PM by lishichao
Analysis Method : D:\METHOD\LT MS(200-800).M
Last changed    : 7/3/2014 2:51:30 PM by lishichao
```

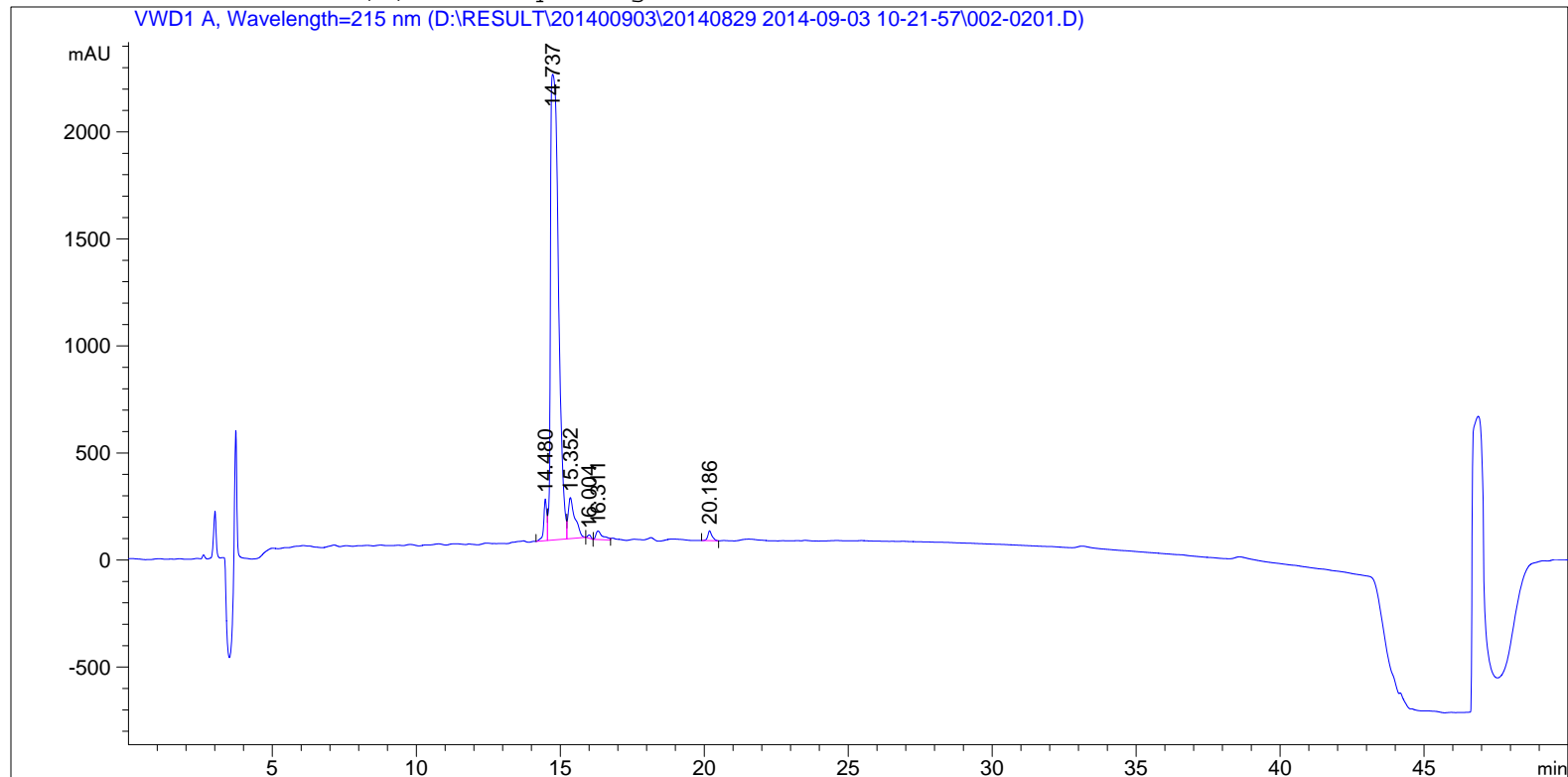
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    2
Acq. Instrument : HPLC 1260                  Location  : Vial 2
Injection Date  : 9/3/2014 11:13:48 AM      Inj       :    1
                                           Inj Volume: 20.000 µl
Acq. Method     : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M
Last changed    : 9/3/2014 10:21:57 AM by SYSTEM
Analysis Method : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M (Sequence Method)
Last changed    : 9/3/2014 7:20:03 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%            10     70     95      95     10      10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	14.480	BV	0.1080	1432.92834	194.38231	3.0032
2	14.737	VV	0.3018	4.19209e4	2175.63501	87.8613
3	15.352	VB	0.2245	3127.13940	191.50462	6.5541
4	16.004	BB	0.1208	115.14916	15.47919	0.2413
5	16.311	BV	0.2335	650.44788	40.26585	1.3633

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
6	20.186	BB	0.1459	466.04248	46.12155	0.9768

Totals : 4.77126e4 2663.38853

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-9		
Molecular Formula	C83H127N25O22	Cat#	8117
Molecular Weight	1827.15	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	HIVWASRELERFAVN		
Item No.	8117_140303_9		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1827.15±2.0	1826.4
3	Peptide Purity (By HPLC)	≥80%	89.7%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		S	1.0
		E	2.2
		H	1.1
		R	2.3
		A	2.1
		V	2.1
		I	0.6
		L	1.0
F	1.0		
5	Peptide content	96.6%	

Quality Control By:

wangjun

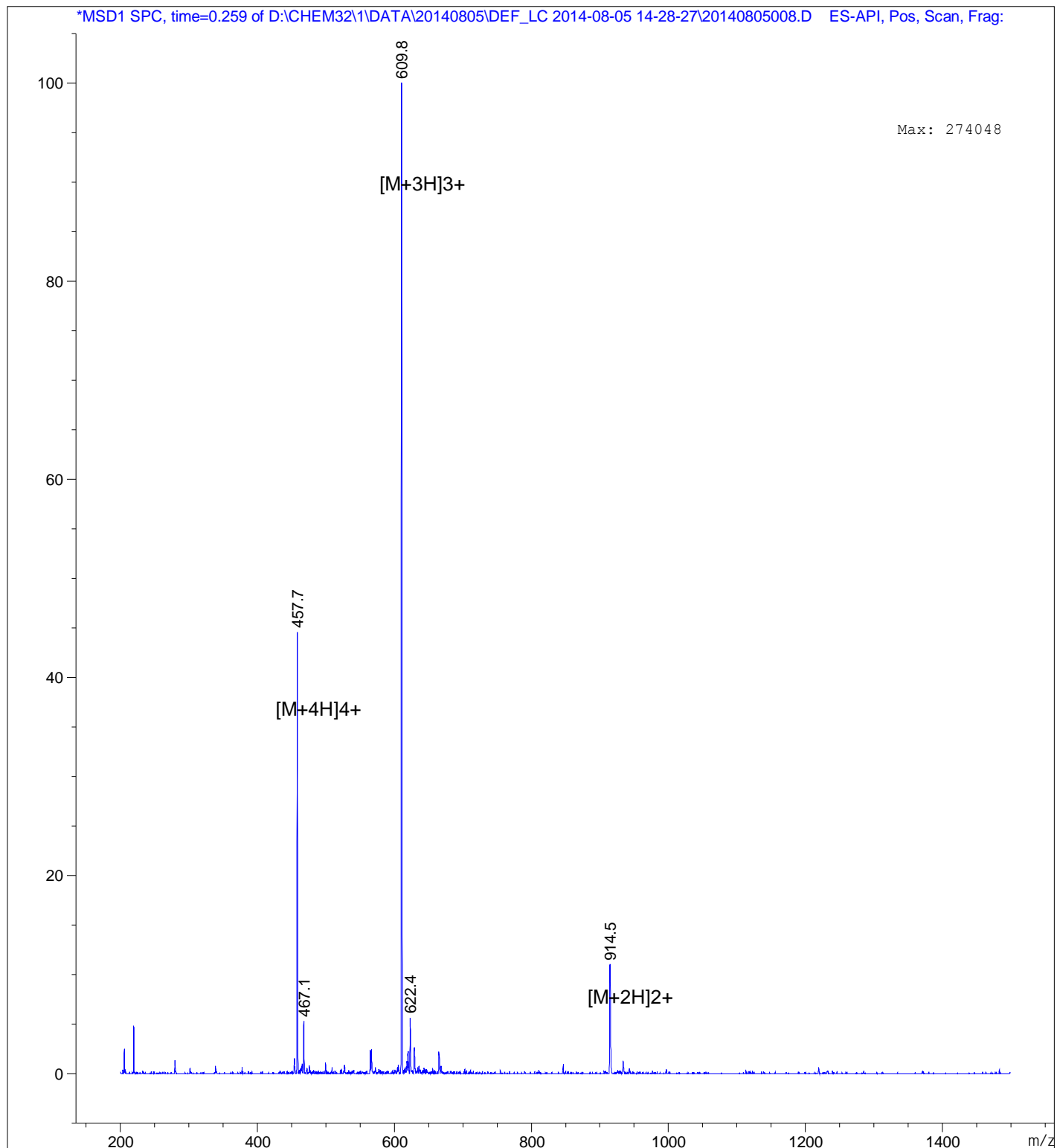
Date:

09/16/2014

=====

Acq. Operator : liusuying	Seq. Line : 8
Acq. Instrument : 5J-QC-082	Location : Vial 8
Injection Date : 8/5/2014 2:50:51 PM	Inj : 1
	Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140805\DEF_LC 2014-08-05 14-28-27\TEST MS(200-1500)2.	
Last changed : 8/4/2014 6:24:11 PM by liusuying	
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M	
Last changed : 8/4/2014 6:24:11 PM by liusuying	

MS Spectrum

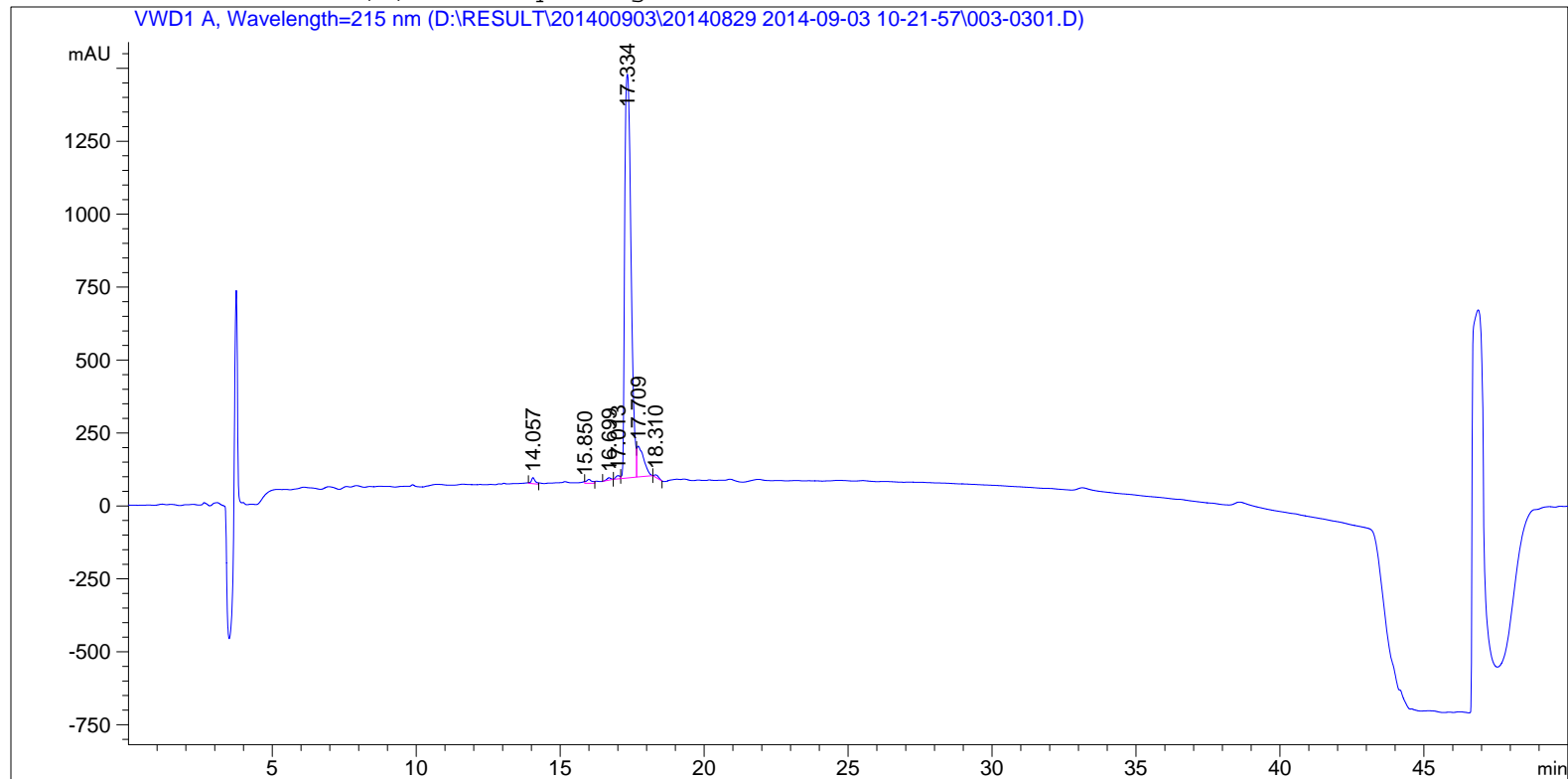


```

=====
Acq. Operator   : SYSTEM                               Seq. Line :    3
Acq. Instrument : HPLC 1260                           Location  : Vial 3
Injection Date  : 9/3/2014 12:04:44 PM                 Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M
Last changed    : 9/3/2014 10:21:57 AM by SYSTEM
Analysis Method : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M (Sequence Method)
Last changed    : 9/3/2014 7:20:03 PM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70      95      95      10      10
    
```

Additional Info : Peak(s) manually integrated



=====
Area Percent Report
=====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution        :      1.0000
Use Multiplier & Dilution Factor with ISTDs
    
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	14.057	MM R	0.1584	197.59767	20.78774	0.8454
2	15.850	MM R	0.2284	186.81288	5.98731	0.7992
3	16.699	BB	0.1460	79.34229	8.18899	0.3394
4	17.013	BV	0.1565	106.96495	10.80719	0.4576
5	17.334	VV	0.2418	2.09704e4	1383.79443	89.7158

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
6	17.709	VB	0.2147	1739.18921	105.85189	7.4406
7	18.310	BB	0.1869	93.93560	8.18172	0.4019

Totals : 2.33742e4 1543.59927

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-10		
Molecular Formula	C74H122N22O22	Cat#	8117
Molecular Weight	1671.99	Lot#	140303
Manufacturing Date	09/12/2014	Test Date	09/12/2014
Sequence	ASRELERFAVNPGLL		
Item No.	8117_140303_10		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1671.99±2.0	1671.6
3	Peptide Purity (By HPLC)	≥80%	96.0%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		S	1.0
		E	2.1
		G	0.8
		R	2.1
		A	2.0
		P	1.1
		V	1.1
		L	2.8
F	0.9		
5	Peptide content	78.4%	

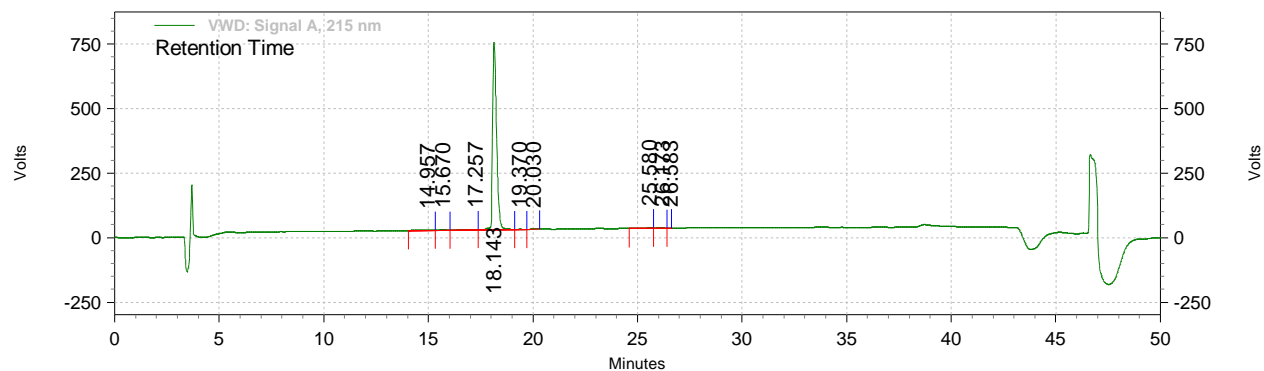
Quality Control By:

wangjun

Date:

09/12/2014

Data File: D:\KJ100401\20140830\20140830.rslt\HIV-1 Con B Gag Peptide-10.dat
 Method: D:\Method\KJ100401.met
 Acquired: 8/30/2014 12:39:48 PM (GMT +08:00)
 Printed: 8/27/2014 10:09:42 AM (GMT +08:00)
 Column:Agilent HC-C18,5um,4.6*250mm Column Temp:35°C Flow Rate:1.0ml/min
 Mobile Phase A:0.1%TFA water
 Mobile Phase B:0.1%TFA+ACN
 time(min) 0 40 40.3 43 43.3 50
 B% 10 70 95 95 10 10



VWD: Signal A, 215 nm Results

Retention Time	Area	Area %
14.957	978035	0.58
15.670	949276	0.56
17.257	1820280	1.07
18.143	162574999	95.98
19.370	483467	0.29
20.030	512481	0.30
25.580	1498453	0.88
26.173	548403	0.32
26.583	17337	0.01

Totals	169382731	100.00
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CERTIFICATE OF ANALYSIS

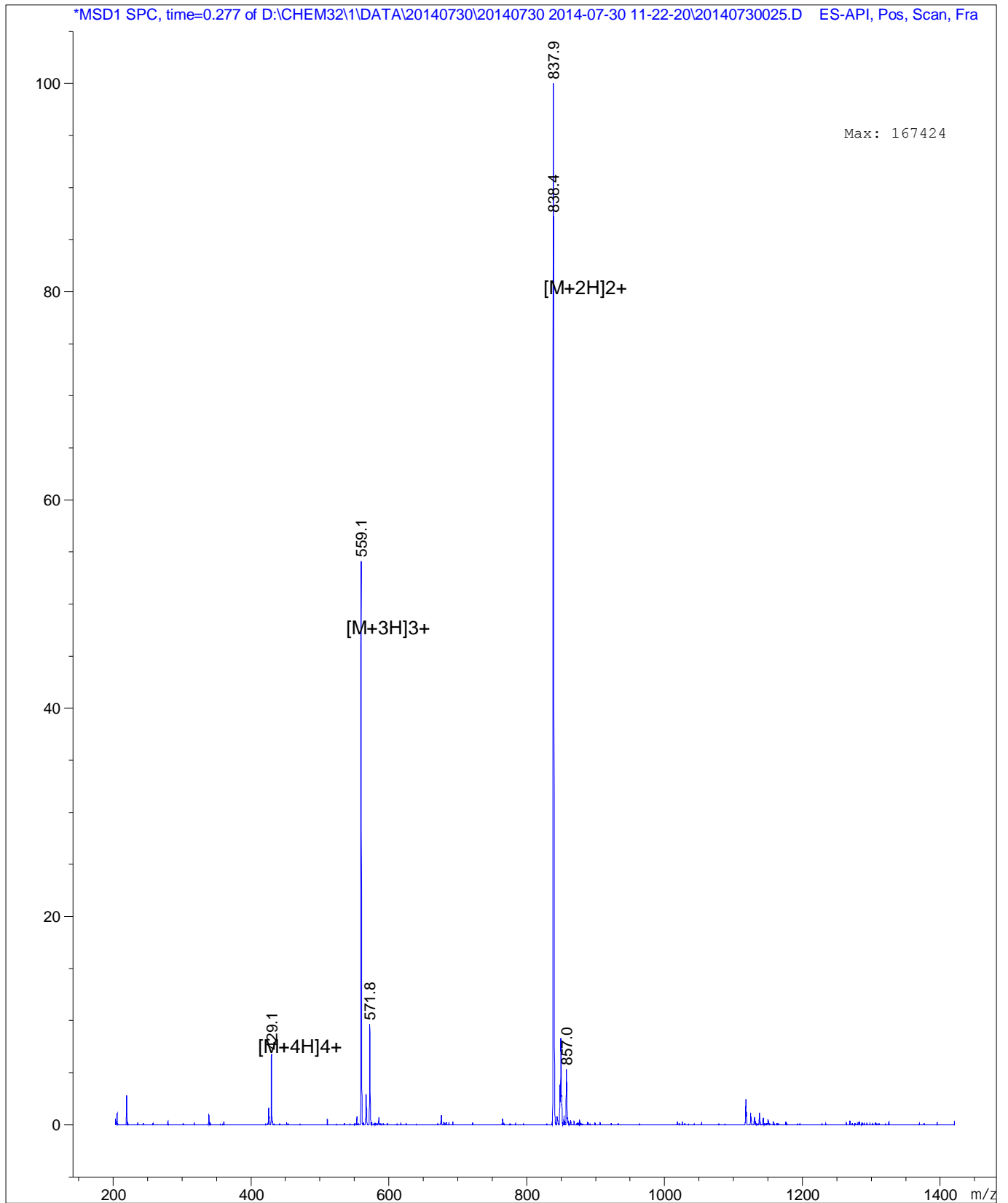
Product Name	HIV-1 Con B Gag Peptide-11		
Molecular Formula	C74H119N19O25	Cat#	8117
Molecular Weight	1674.95	Lot#	140303
Manufacturing Date	09/17/2014	Test Date	09/17/2014
Sequence	LERFAVNPGLLETSE		
Item No.	8117_140303_11		
TEST		SPECIFICATION	RESULT
1	Appearance	<i>White or slightly yellowish</i>	<i>Complies</i>
2	Molecular Weight	1674.95±2.0	1674.8
3	Peptide Purity (By HPLC)	≥80%	94.8%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	0.9
		E	3.2
		G	0.9
		R	1.0
		T	1.0
		A	0.9
		P	1.0
		V	1.0
L	2.9		
F	1.0		
5	Peptide content	78.7%	

Quality Control By: wangjun

Date: 09/17/2014

=====
Acq. Operator : lishichao Seq. Line : 25
Acq. Instrument : 5J-QC-082 Location : Vial 34
Injection Date : 7/30/2014 12:37:36 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140730\20140730 2014-07-30 11-22-20\TEST MS(200-1500)
2.
Last changed : 7/30/2014 10:43:17 AM by lishichao
Analysis Method : D:\METHOD\TEST MS(200-800).M
Last changed : 3/14/2014 11:35:24 PM by YZW

MS Spectrum

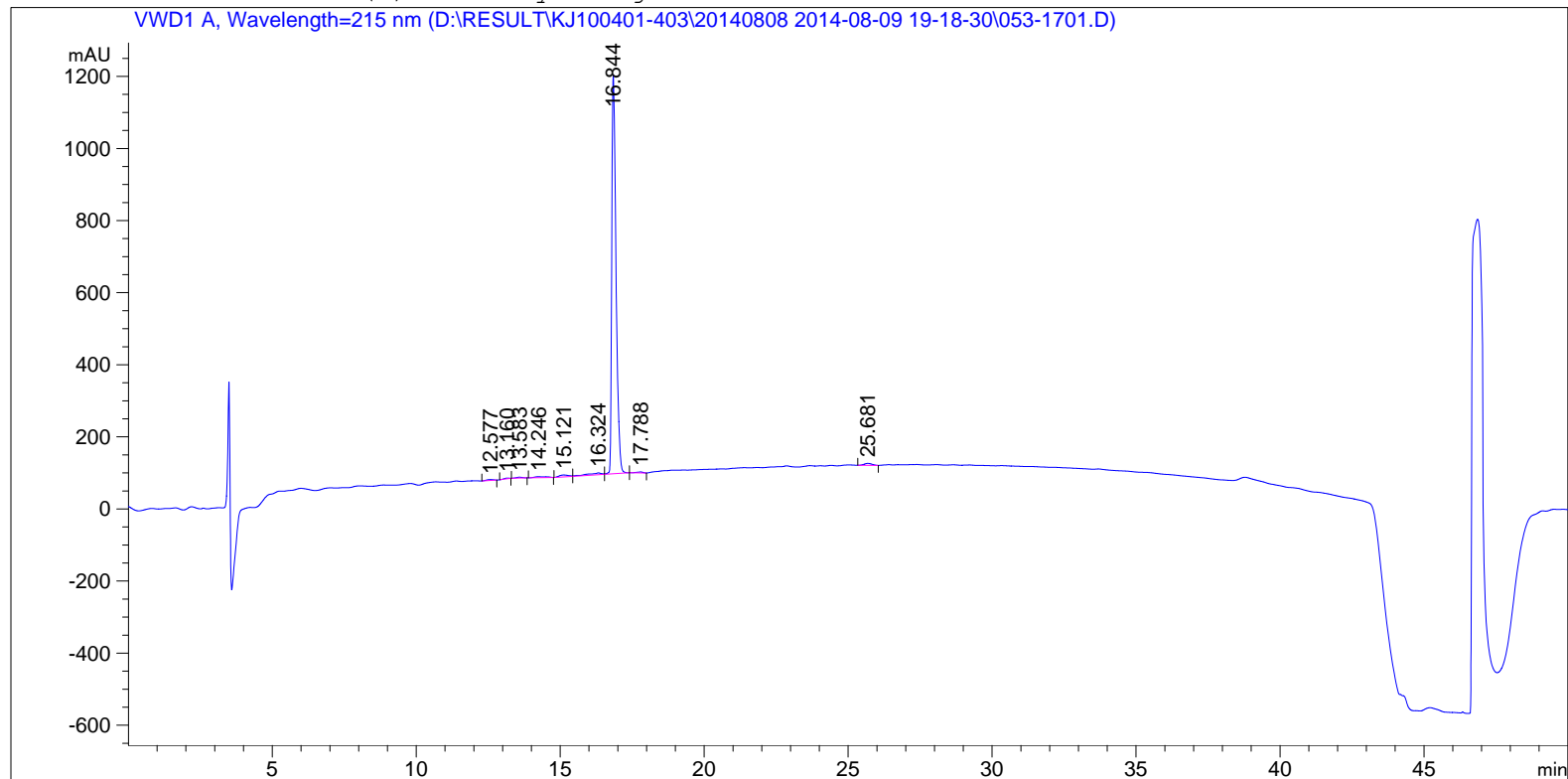



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   17
Acq. Instrument : HPLC 1260                           Location  : Vial 53
Injection Date  : 8/10/2014 8:54:58 AM                Inj       :    1
                                                    Inj Volume: 20.000 µl

Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
                Method)
Last changed    : 8/9/2014 7:18:30 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                Rate:1.0ml/min
                Mobile Phase A:0.1%TFA+H2O
                Mobile Phase B:0.1%TFA+ACN
                time(min)      0      40      40.3      43      43.3      50
                B%            10     70     95      95     10      10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.577	BB	0.2661	38.71476	2.35134	0.3240
2	13.160	BB	0.1988	23.97889	1.93260	0.2007
3	13.583	BB	0.2199	36.01094	2.44370	0.3014
4	14.246	BB	0.4178	86.14850	2.73290	0.7211
5	15.121	BV	0.3584	116.46494	5.27826	0.9748
6	16.324	VV	0.4482	177.94322	4.97578	1.4894

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
7	16.844	VB	0.1574	1.13281e4	1106.91858	94.8161
8	17.788	BB	0.2302	41.52057	2.62997	0.3475
9	25.681	BB	0.2962	98.56348	5.34361	0.8250

Totals : 1.19474e4 1134.60674

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-12		
Molecular Formula	C₆₄H₁₀₈N₂₀O₂₄S	Cat#	8117
Molecular Weight	1573.82	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	AVNPGLLETSEGCRQ		
Item No.	8117_140303_12		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1573.82±2.0	1572.8
3	Peptide Purity (By HPLC)	≥80%	89.4%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		S	0.9
		E	2.6
		G	2.2
		R	1.1
		T	1.0
		A	1.0
		P	1.0
		C	1.0
		V	1.1
L	2.1		
5	Peptide content	81.5%	

Quality Control By:

wangjun

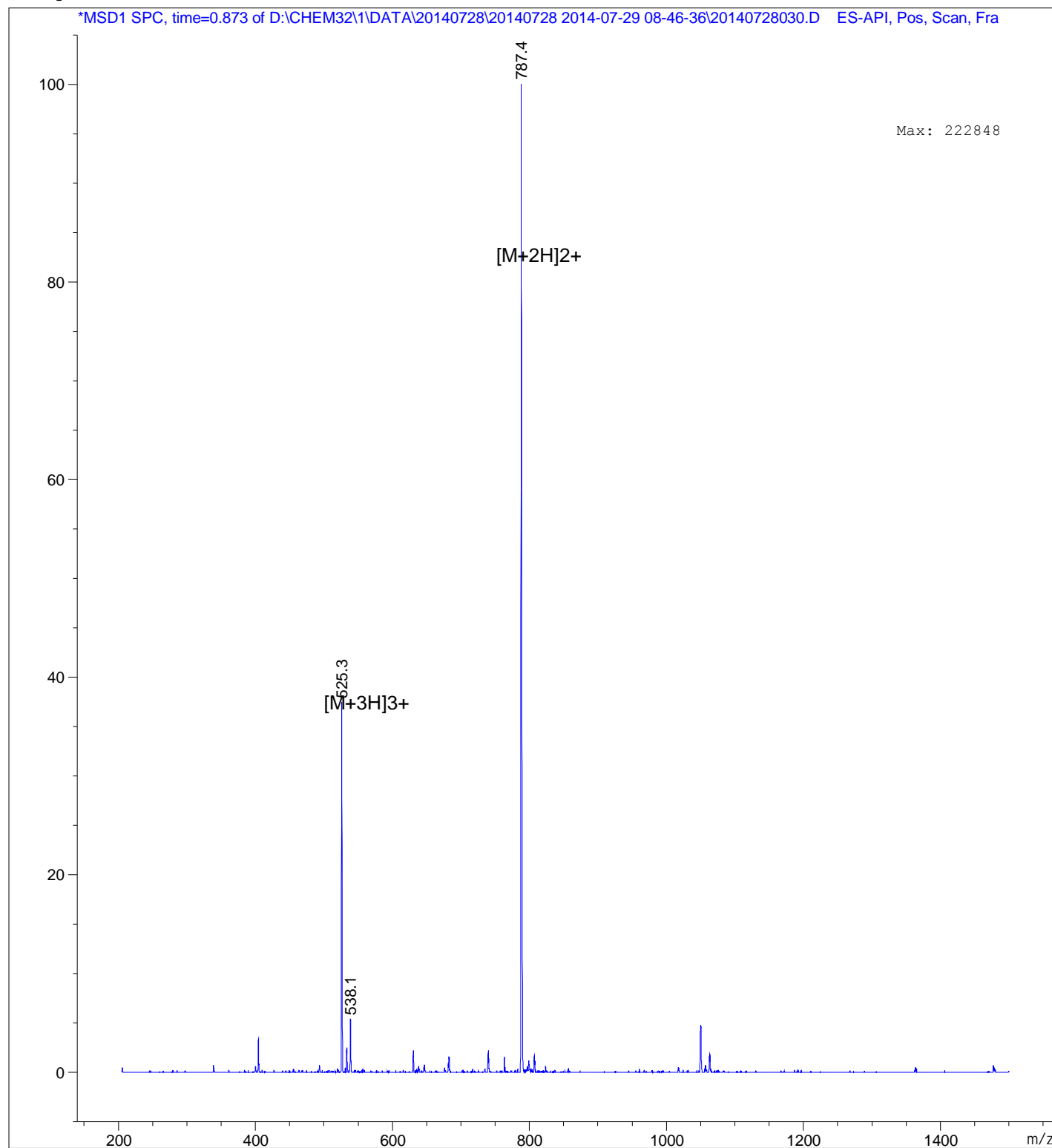
Date:

09/11/2014

=====

Acq. Operator : lishichao	Seq. Line : 30
Acq. Instrument : 5J-QC-082	Location : Vial 17
Injection Date : 7/29/2014 10:17:05 AM	Inj : 1
	Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140728\20140728 2014-07-29 08-46-36\TEST MS(200-1500)2.	
Last changed : 7/28/2014 4:15:43 PM by lishichao	
Analysis Method : D:\METHOD\LT MS(200-800).M	
Last changed : 7/3/2014 2:51:30 PM by lishichao	

MS Spectrum



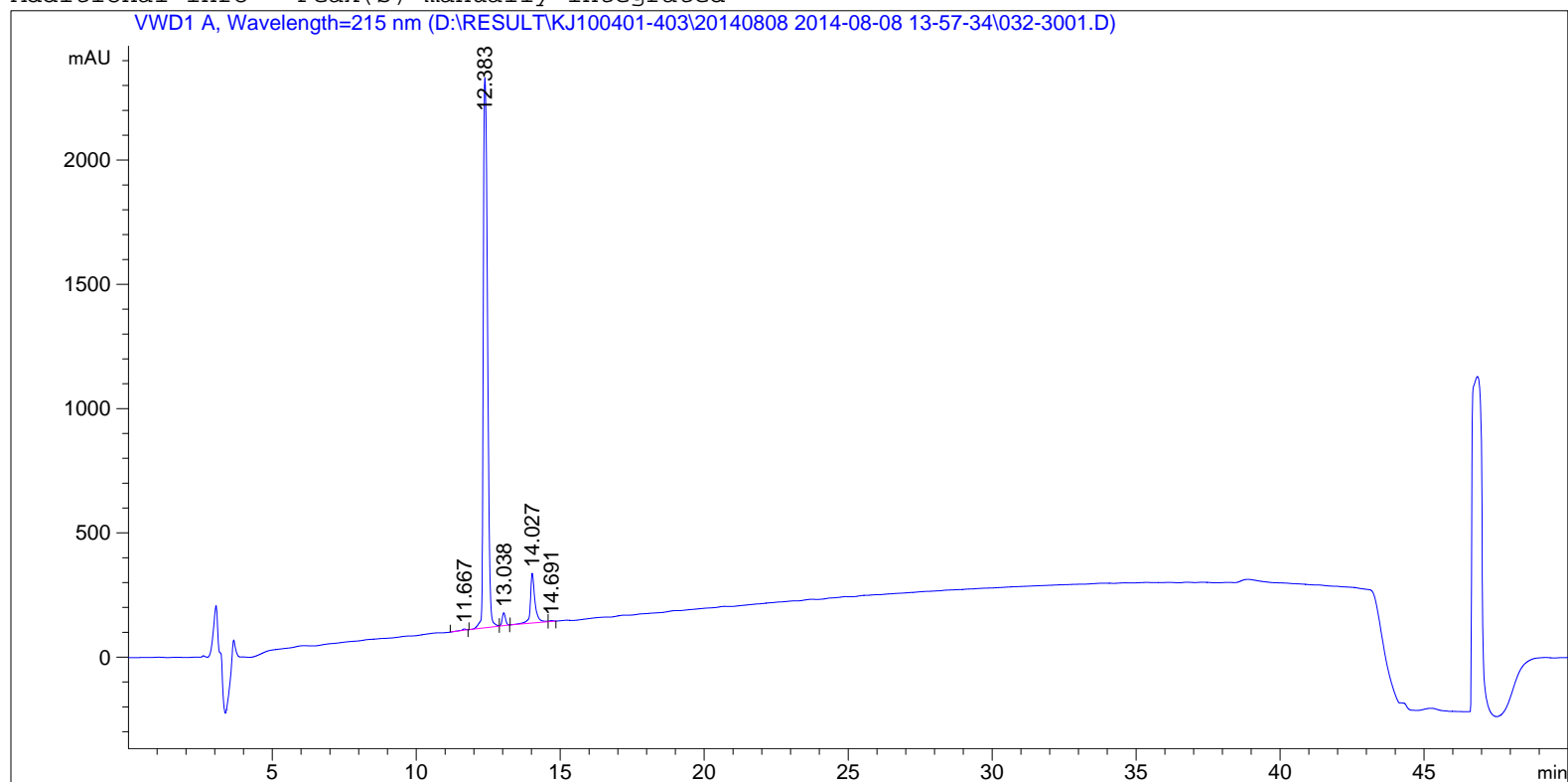
```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   30
Acq. Instrument : HPLC 1260                           Location  : Vial 32
Injection Date  : 8/9/2014 2:36:26 PM                 Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M
Last changed    : 8/8/2014 1:57:34 PM by SYSTEM
Analysis Method : D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M (Sequence
Method)
Last changed    : 8/10/2014 4:18:06 PM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	11.667	BB	0.1457	51.38942	5.13536	0.2031
2	12.383	BV	0.1653	2.26173e4	2212.07275	89.3808
3	13.038	VB	0.1203	405.35651	51.79959	1.6019

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
4	14.027	BV	0.1592	2201.54419	200.39511	8.7002
5	14.691	VB	0.1225	28.83994	3.45188	0.1140

Totals : 2.53044e4 2472.85469

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-13		
Molecular Formula	C66H114N20O24S	Cat#	8117
Molecular Weight	1603.91	Lot#	140303
Manufacturing Date	09/17/2014	Test Date	09/17/2014
Sequence	GLLETSEGCRQILGQ		
Item No.	8117_140303_13		
TEST		SPECIFICATION	RESULT
1	Appearance	<i>White or slightly yellowish</i>	<i>Complies</i>
2	Molecular Weight	1603.91±2.0	1603.8
3	Peptide Purity (By HPLC)	≥80%	89.5%
4	Identification(Amino Acid Composition by HPLC)	S	0.8
		E	4.0
		G	3.0
		R	1.0
		T	1.0
		C	1.0
		I	1.0
L	3.0		
5	Peptide content	92.8%	

Quality Control By: wangjun

Date: 09/17/2014

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
8	17.437	VV	0.1790	211.18056	16.87111	0.5278
9	17.734	VB	0.2326	156.07306	8.60577	0.3900

Totals : 4.00141e4 2580.71805

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-14		
Molecular Formula	C66H113N21O24S	Cat#	8117
Molecular Weight	1616.9	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	TSEGCRQILGQLQPS		
Item No.	8117_140303_14		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1616.9±2.0	1616.0
3	Peptide Purity (By HPLC)	≥80%	84.5%
4	Identification(Amino Acid Composition by HPLC)	S	2.1
		E	3.9
		G	1.9
		R	1.0
		T	1.0
		P	1.0
		C	0.9
		I	1.0
L	2.0		
5	Peptide content	87.9%	

Quality Control By: wangjun

Date: 09/16/2014

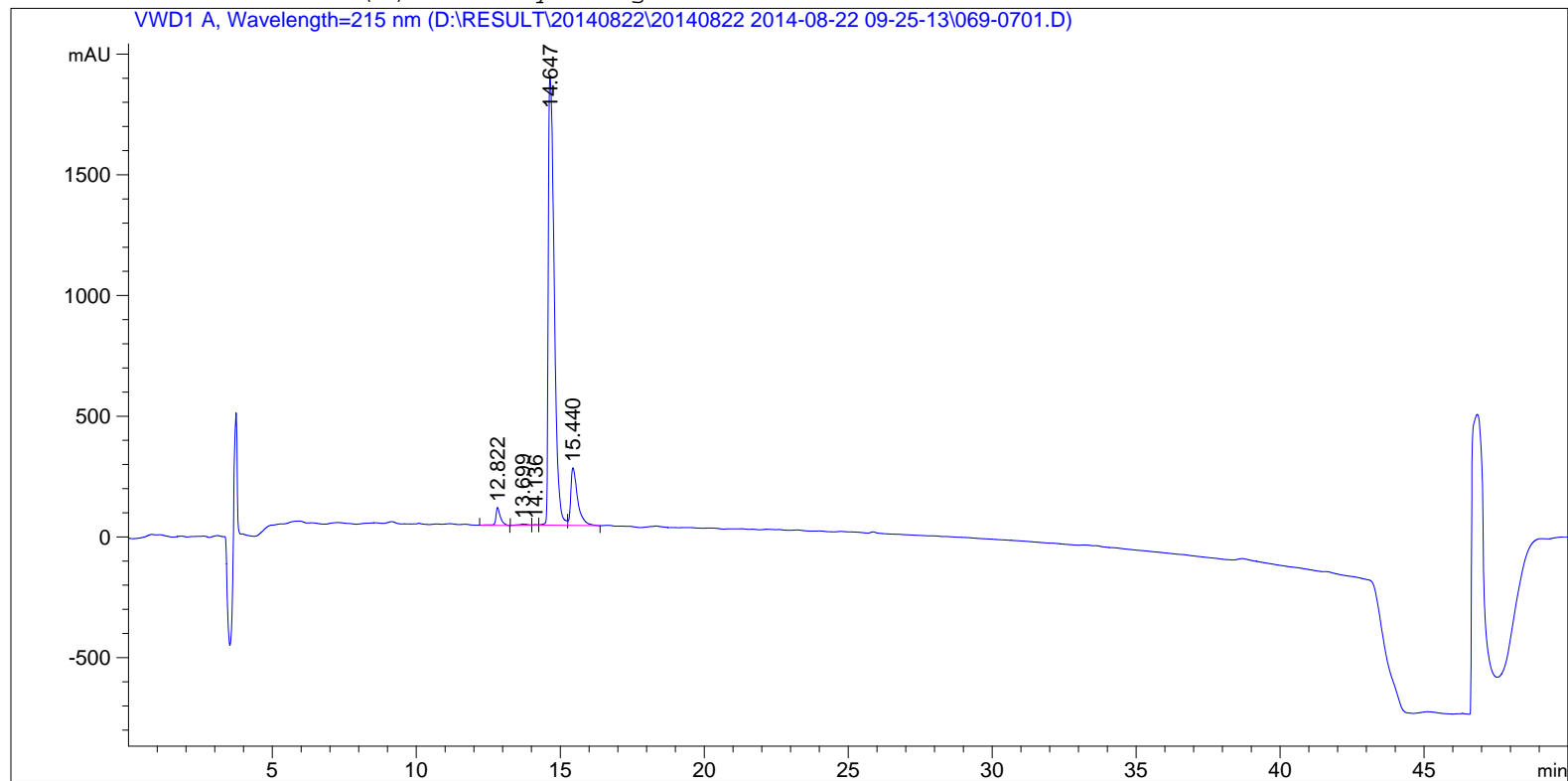

```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    7
Acq. Instrument : HPLC 1260                  Location  : Vial 69
Injection Date  : 8/22/2014 2:32:28 PM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140822\20140822 2014-08-22 09-25-13\KJ100401.M
Last changed    : 8/22/2014 9:25:13 AM by SYSTEM
Analysis Method  : D:\RESULT\20140822\20140822 2014-08-22 09-25-13\KJ100401.M (Sequence Method)
Last changed    : 8/25/2014 10:06:34 AM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By       : Signal
Multiplier      : 1.0000
Dilution        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.822	BB	0.1574	837.99689	74.95925	2.6537
2	13.699	BB	0.2501	96.17459	4.89679	0.3046
3	14.136	BV	0.1160	14.11718	1.81000	0.0447
4	14.647	VV	0.2322	2.66884e4	1861.91150	84.5153

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	15.440	VB	0.2507	3941.49146	238.58942	12.4817

Totals : 3.15782e4 2182.16696

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-15		
Molecular Formula	C69H120N22O22S	Cat#	8117
Molecular Weight	1642.01	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	CRQILGQLQPSLQTG		
Item No.	8117_140303_15		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1642.01±2.0	1641.0
3	Peptide Purity (By HPLC)	≥80%	88.9%
4	Identification(Amino Acid Composition by HPLC)	S	0.9
		E	4.2
		G	1.9
		R	1.0
		T	1.0
		P	1.0
		C	0.9
		I	1.0
L	3.1		
5	Peptide content	89.9%	

• • 01

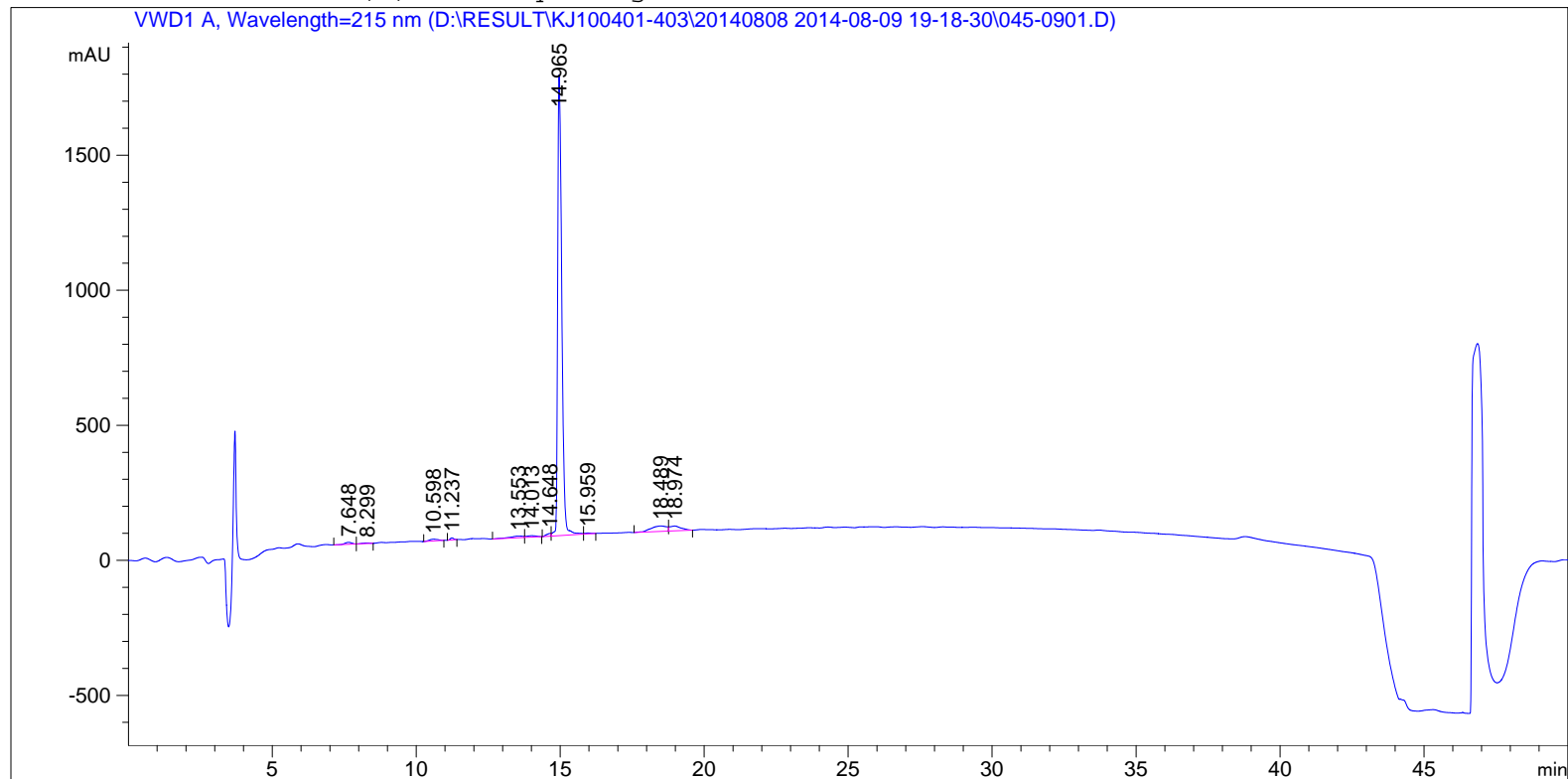
Quality Control By: wangjun

Date: 09/18/2014


```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    9
Acq. Instrument : HPLC 1260                  Location  : Vial 45
Injection Date  : 8/10/2014 2:07:13 AM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
Method)
Last changed   : 8/9/2014 7:18:30 PM by SYSTEM
Method Info    : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
Rate:1.0ml/min
Mobile Phase A:0.1%TFA+H2O
Mobile Phase B:0.1%TFA+ACN
time(min)      0      40      40.3      43      43.3      50
B%             10     70      95       95      10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By      :      Signal
Multiplier    :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.648	BV	0.2698	124.70055	7.42897	0.6569
2	8.299	VB	0.3534	44.82030	2.17494	0.2361
3	10.598	BB	0.3431	134.49698	6.53427	0.7085
4	11.237	BB	0.1270	57.34128	7.11492	0.3020
5	13.553	BV	0.4923	211.52631	6.19563	1.1142
6	14.013	VB	0.3755	126.20531	5.21140	0.6648

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
7	14.648	BV	0.1559	109.53875	10.07061	0.5770
8	14.965	VV	0.1534	1.68740e4	1706.14001	88.8843
9	15.959	VB	0.2078	49.54549	3.26979	0.2610
10	18.489	BV	0.5645	766.99054	19.90711	4.0401
11	18.974	VB	0.3900	485.06705	17.63149	2.5551

Totals : 1.89843e4 1791.67915

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

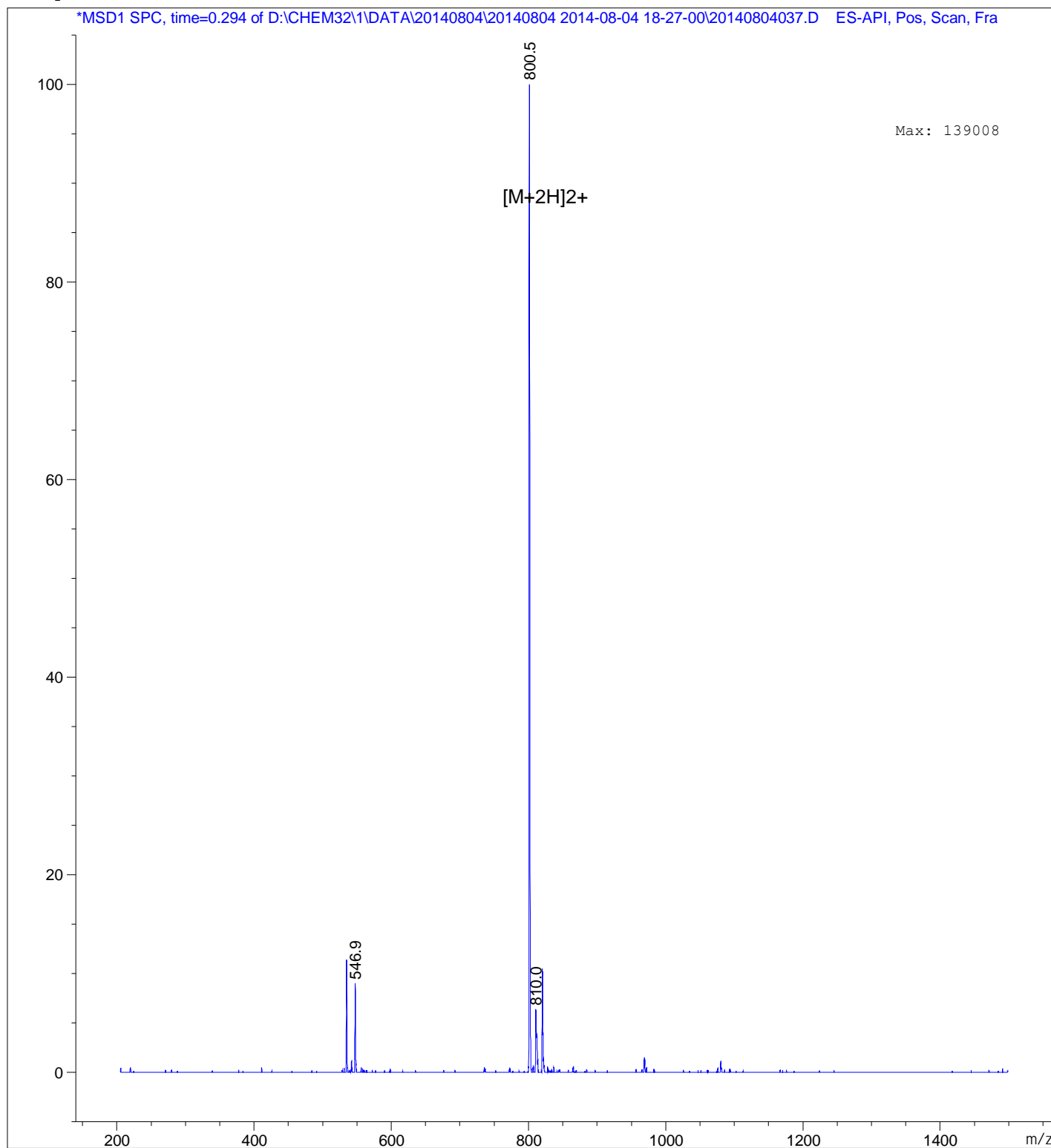
Product Name	HIV-1 Con B Gag Peptide-16		
Molecular Formula	C68H114N18O26	Cat#	8117
Molecular Weight	1599.86	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	LGQLQPSLQTGSEEL		
Item No.	8117_140303_16		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1599.86±2.0	1599.0
3	Peptide Purity (By HPLC)	≥80%	94.7%
4	Identification(Amino Acid Composition by HPLC)	S	1.8
		E	4.9
		G	2.0
		T	1.0
		P	1.0
	L	4.1	
5	Peptide content	81.5%	

Quality Control By: wangjun

Date: 09/11/2014

```
=====
Acq. Operator   : liusuying                Seq. Line : 37
Acq. Instrument : 5J-QC-082                Location  : Vial 61
Injection Date  : 8/4/2014 8:19:59 PM      Inj       : 1
                                           Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140804\20140804 2014-08-04 18-27-00\TEST MS(200-1500)2.
Last changed    : 8/4/2014 6:24:11 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M
Last changed    : 8/4/2014 6:24:11 PM by liusuying
```

MS Spectrum



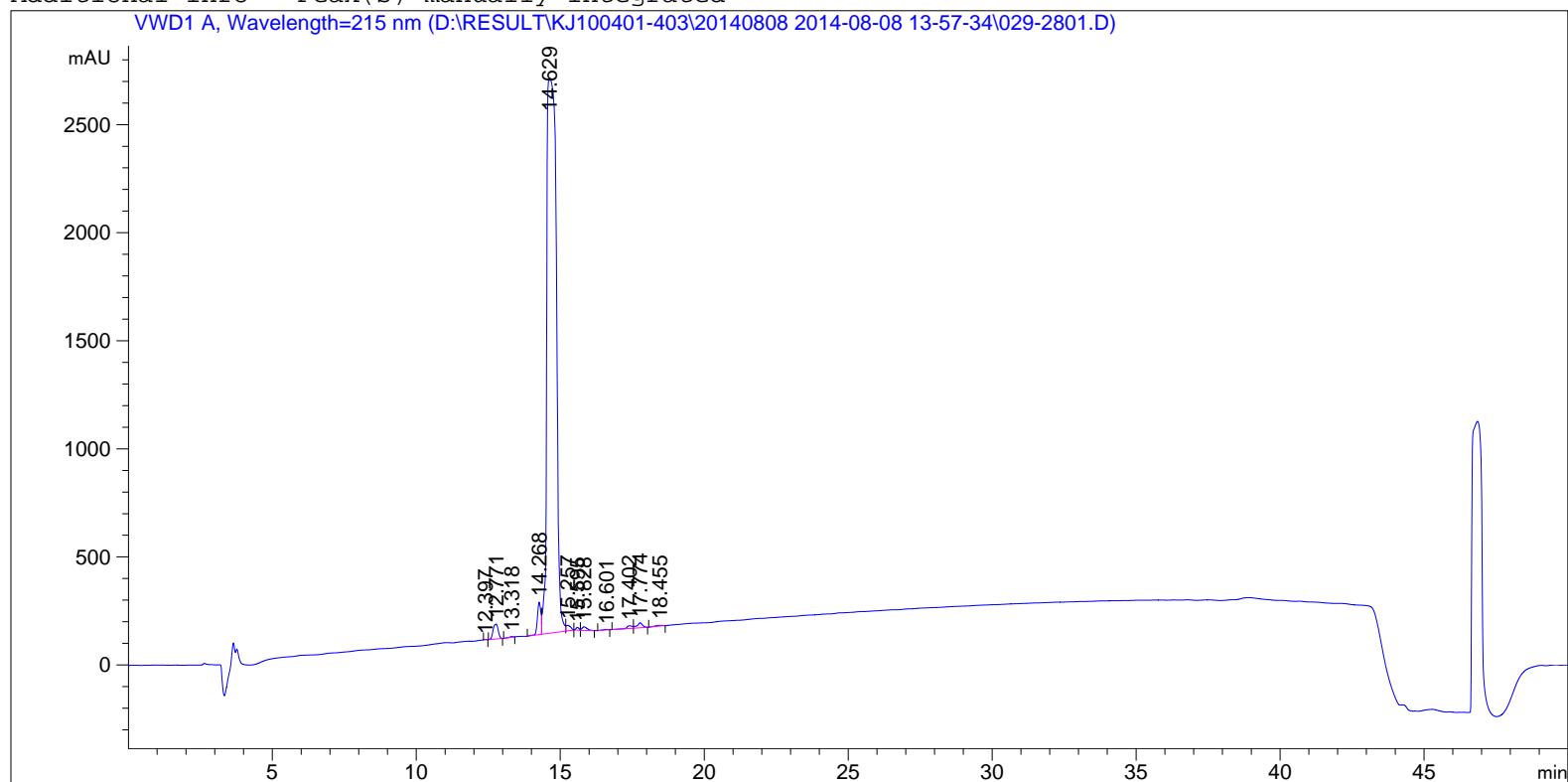
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=====
Acq. Operator   : SYSTEM                               Seq. Line :   28
Acq. Instrument : HPLC 1260                             Location  : Vial 29
Injection Date  : 8/9/2014 12:54:32 PM                 Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M
Last changed    : 8/8/2014 1:57:34 PM by SYSTEM
Analysis Method : D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M (Sequence
Method)
Last changed    : 8/10/2014 4:18:06 PM by SYSTEM
                  (modified after loading)

Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.397	BB	0.0752	7.36949	1.45110	0.0120
2	12.771	BB	0.1991	842.16974	68.67113	1.3767
3	13.318	BB	0.1239	24.51240	3.07984	0.0401

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
4	14.268	BV	0.1274	1254.79272	150.22583	2.0513
5	14.629	VV	0.3681	5.79294e4	2568.99268	94.7007
6	15.257	VB	0.1785	277.98212	25.63411	0.4544
7	15.595	BV	0.1112	91.74033	12.86307	0.1500
8	15.828	VB	0.1829	198.93855	16.24525	0.3252
9	16.601	BB	0.1796	26.17862	2.08299	0.0428
10	17.402	BV	0.1893	153.06819	12.29440	0.2502
11	17.774	VB	0.1884	295.76974	22.64150	0.4835
12	18.455	BB	0.3035	69.09340	3.65606	0.1130

Totals : 6.11710e4 2887.83795

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-17		
Molecular Formula	C73H118N20O27	Cat#	8117
Molecular Weight	1707.94	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	QPSLQTGSEELRSLY		
Item No.	8117_140303_17		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1707.94±2.0	1717.0
3	Peptide Purity (By HPLC)	≥80%	83.8%
4	Identification(Amino Acid Composition by HPLC)	S	2.8
		E	3.7
		G	1.0
		R	1.1
		T	1.0
		P	1.1
		Y	1.0
L	3.2		
5	Peptide content	90.6%	

Quality Control By:

wangjun

Date:

09/16/2014

Acq. Operator : lishichao

Seq. Line : 22

Acq. Instrument : 5J-QC-082

Location : Vial 31

Injection Date : 7/30/2014 12:28:13 PM

Inj : 1

Inj Volume : 3.0 µl

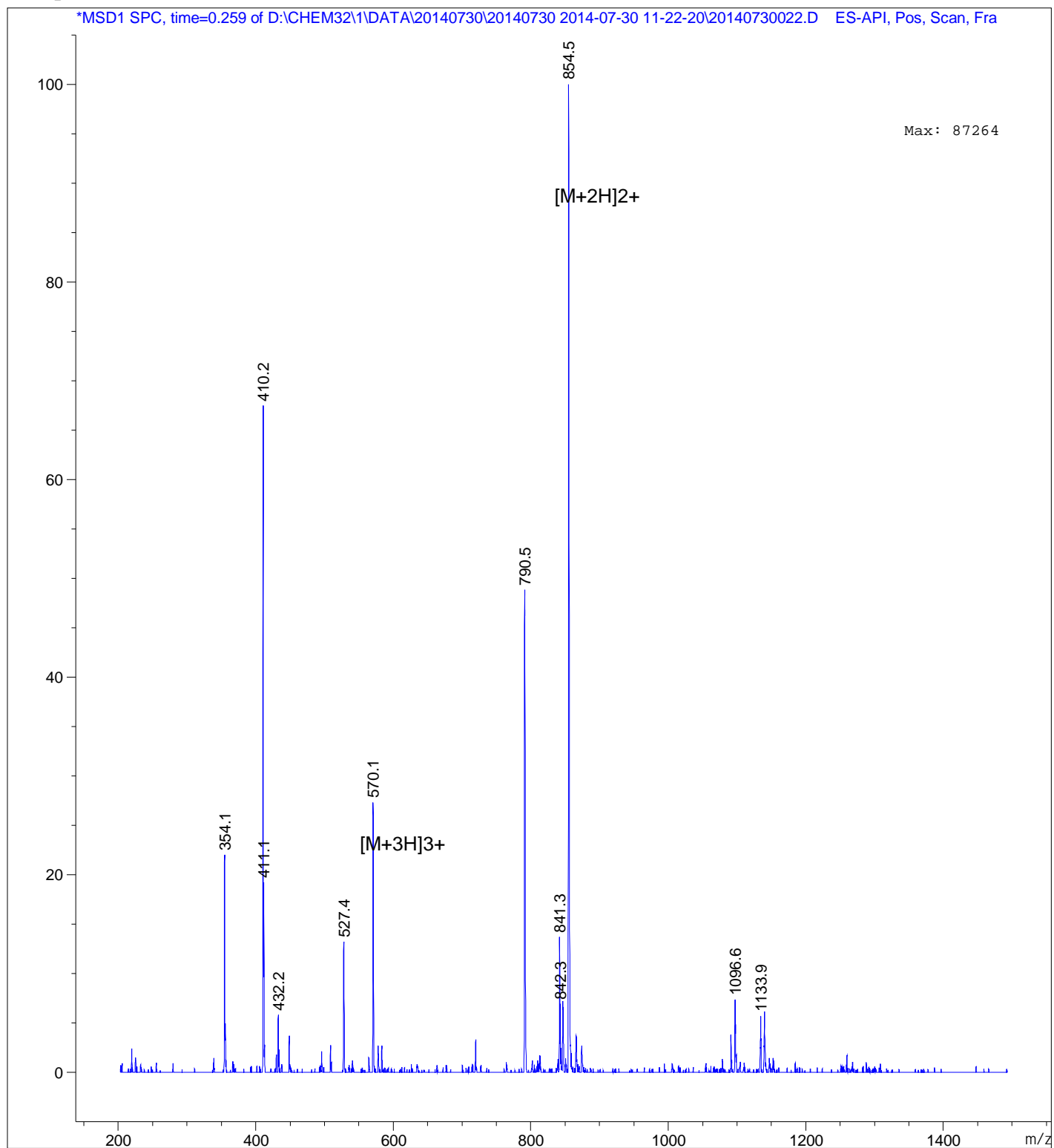
Acq. Method : D:\CHEM32\1\DATA\20140730\20140730 2014-07-30 11-22-20\TEST MS(200-1500).2.

Last changed : 7/30/2014 10:43:17 AM by lishichao

Analysis Method : D:\METHOD\LT MS(200-800).M

Last changed : 7/3/2014 2:51:30 PM by lishichao

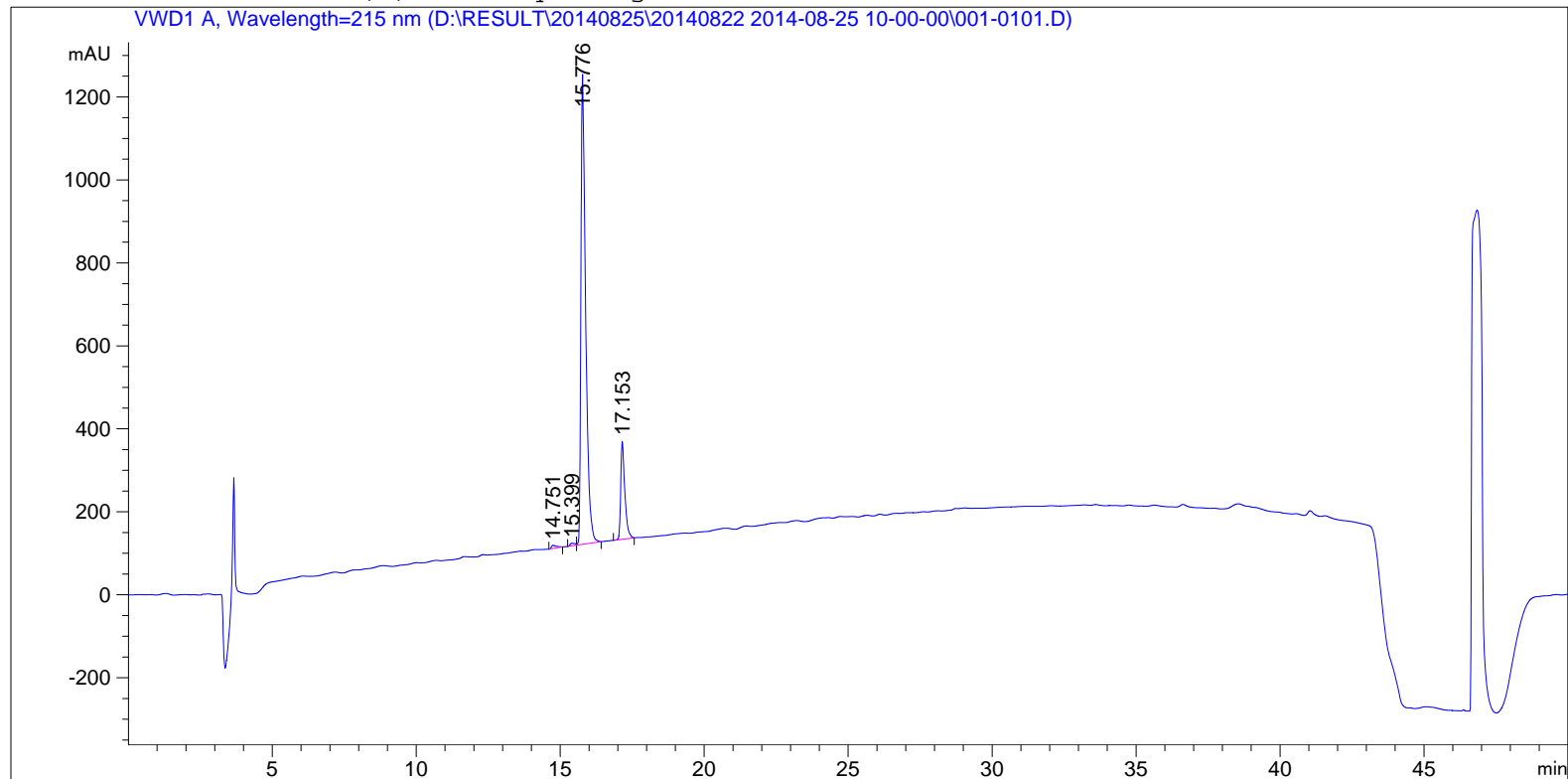
MS Spectrum




```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    1
Acq. Instrument : HPLC 1260                  Location  : Vial 1
Injection Date  : 8/25/2014 10:00:51 AM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\20140825\20140822 2014-08-25 10-00-00\KJ100401.M (Sequence Method)
Last changed    : 8/25/2014 10:00:00 AM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm           Cloumn Temp:35°C           Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0          40          40.3         43          43.3         50
                  B%             10         70          95          95          10          10
=====
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution        :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	14.751	BB	0.1655	92.91608	7.82930	0.6049
2	15.399	BV	0.1569	72.92181	6.49842	0.4747
3	15.776	VB	0.1657	1.28790e4	1132.51294	83.8389
4	17.153	BB	0.1415	2316.75903	235.97847	15.0815

Totals : 1.53616e4 1382.81913

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-18		
Molecular Formula	C70H114N20O27	Cat#	8117
Molecular Weight	1667.87	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	QTGSEELRSLYNTVA		
Item No.	8117_140303_18		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1667.87±2.0	1667.4
3	Peptide Purity (By HPLC)	≥80%	82.1%
4	Identification(Amino Acid Composition by HPLC)	D	1.2
		S	1.9
		E	2.9
		G	0.9
		R	1.0
		T	2.0
		A	1.0
		Y	0.9
		V	1.1
L	2.0		
5	Peptide content	78.4%	

Quality Control By:

wangjun

Date:

09/11/2014

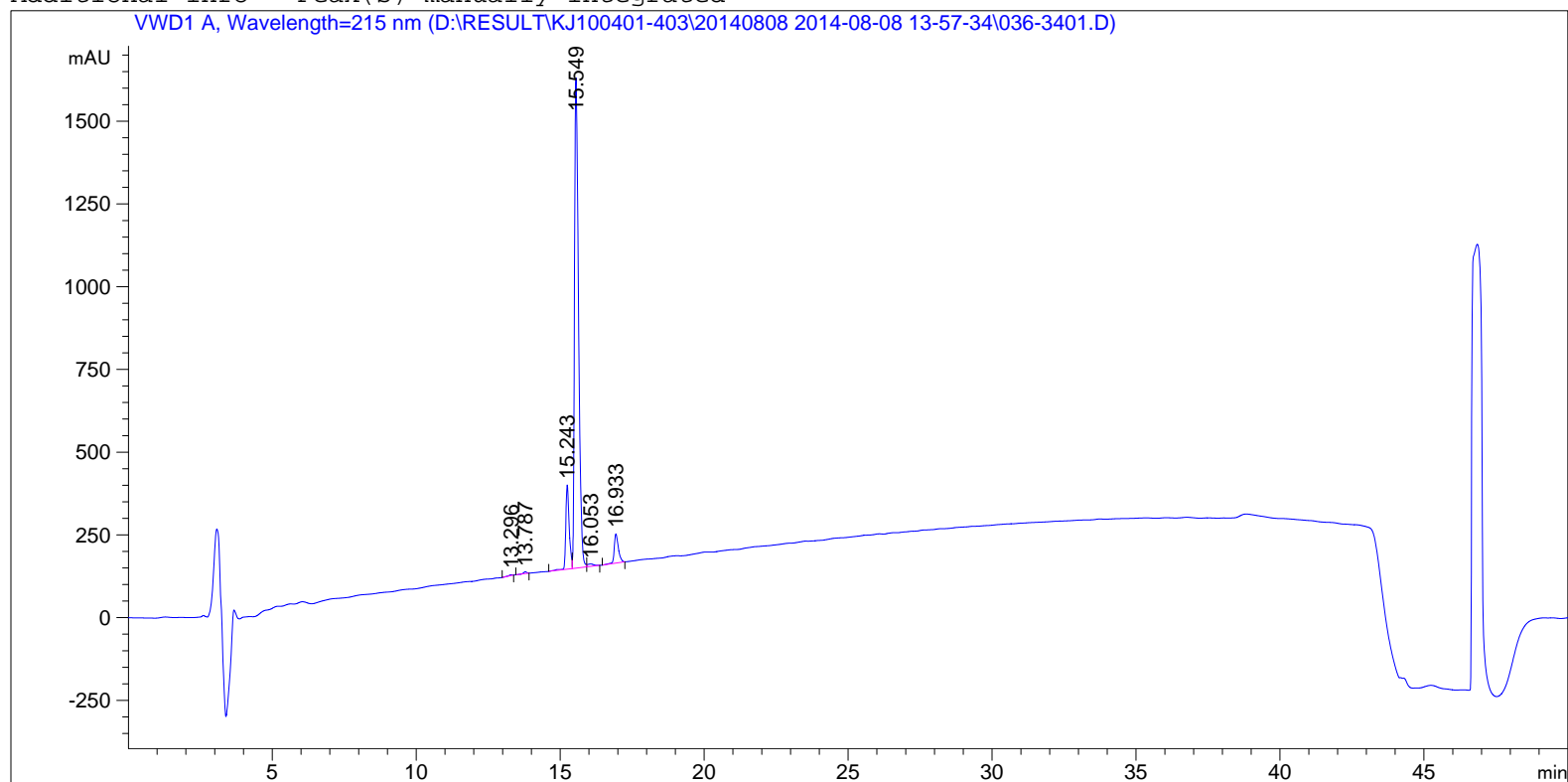

```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   34
Acq. Instrument : HPLC 1260                           Location  : Vial 36
Injection Date  : 8/9/2014 6:00:22 PM                 Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M
Last changed    : 8/8/2014 1:57:34 PM by SYSTEM
Analysis Method : D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M (Sequence
Method)
Last changed    : 8/10/2014 4:18:06 PM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	13.296	BB	0.1197	19.99812	2.43879	0.1134
2	13.787	BB	0.1165	41.47782	5.40821	0.2352
3	15.243	BV	0.1243	2103.30981	254.69295	11.9264

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
4	15.549	VV	0.1510	1.44735e4	1480.96753	82.0691
5	16.053	VB	0.2238	113.41776	7.48218	0.6431
6	16.933	BB	0.1527	884.03357	88.39646	5.0127

Totals : 1.76357e4 1839.38611

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-19		
Molecular Formula	C78H123N19O26S	Cat#	8117
Molecular Weight	1775.08	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	EELRSLYNTVATLYC		
Item No.	8117_140303_19		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1775.08±2.0	1773.8
3	Peptide Purity (By HPLC)	≥80%	81.1%
4	Identification(Amino Acid Composition by HPLC)	D	0.9
		S	0.9
		E	2.1
		R	1.1
		T	2.0
		A	0.9
		C	0.9
		Y	2.0
		V	1.1
L	3.1		
5	Peptide content	76.0%	

Quality Control By:

wangjun

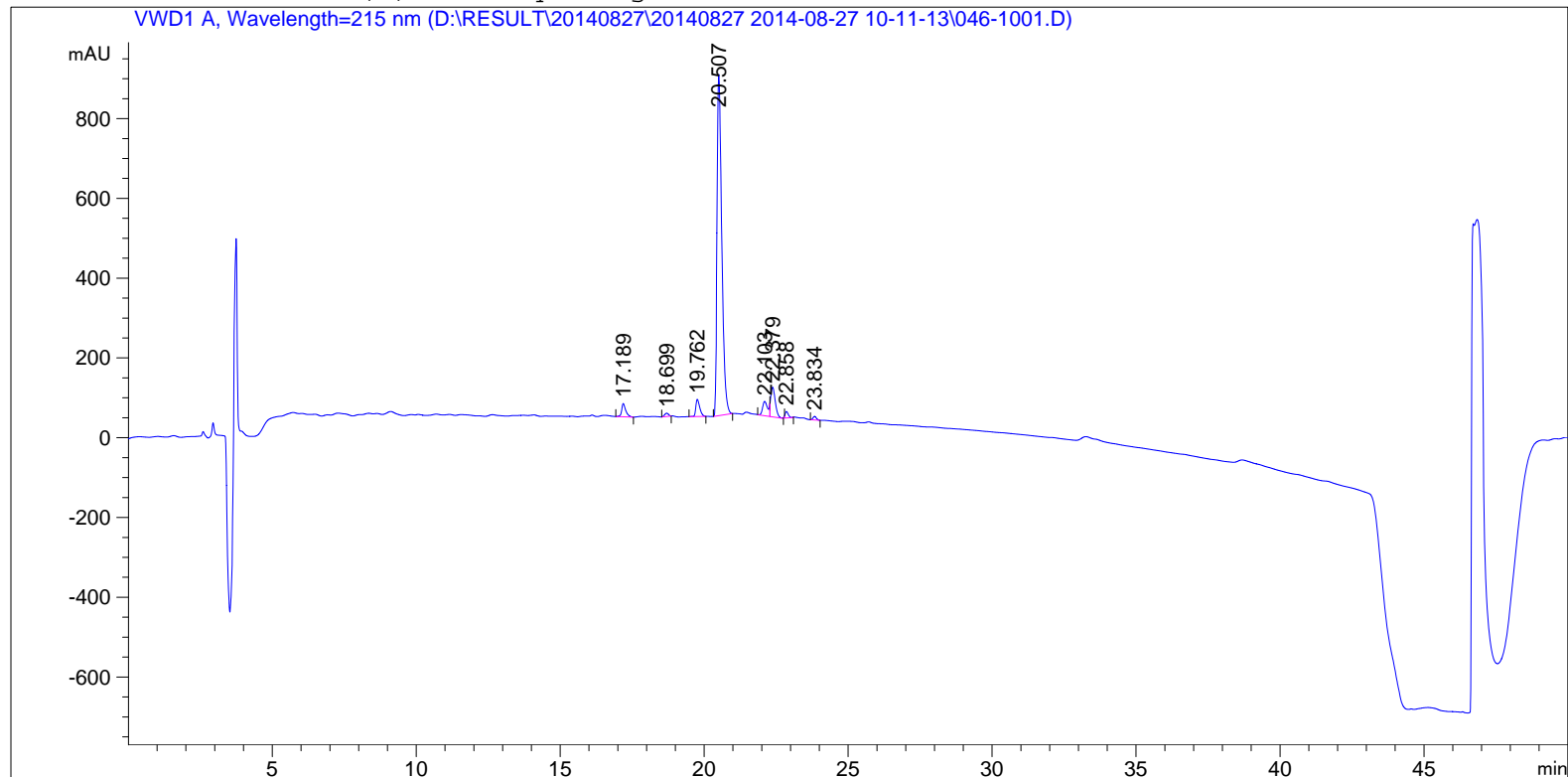
Date:

09/11/2014


```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   10
Acq. Instrument : HPLC 1260                           Location  : Vial 46
Injection Date  : 8/27/2014 5:50:52 PM                Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\20140827\20140827 2014-08-27 10-11-13\KJ100401.M (Sequence Method)
Last changed    : 8/27/2014 10:11:13 AM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm    Column Temp:35°C    Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	17.189	BB	0.1400	325.13824	33.27722	2.6964
2	18.699	BB	0.1574	76.34206	8.14279	0.6331
3	19.762	BB	0.1449	415.43860	43.29856	3.4453
4	20.507	BB	0.1754	9779.66699	855.38477	81.1034
5	22.103	MF R	0.2136	462.63892	36.10342	3.8367
6	22.379	FM R	0.1797	803.02789	74.46738	6.6596
7	22.858	MM R	0.1262	123.58816	16.32022	1.0249

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
8	23.834	BB	0.1294	72.43626	8.86128	0.6007

Totals : 1.20583e4 1075.85563

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-20		
Molecular Formula	C78H122N22O23S	Cat#	8117
Molecular Weight	1768.1	Lot#	140303
Manufacturing Date	09/12/2014	Test Date	09/12/2014
Sequence	SLYNTVATLYCVHQR		
Item No.	8117_140303_20		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1768.1±2.0	1767.3
3	Peptide Purity (By HPLC)	≥80%	84.3%
4	Identification(Amino Acid Composition by HPLC)	D	1.2
		S	0.9
		E	0.9
		H	1.0
		R	1.0
		T	2.0
		A	0.9
		C	0.9
		Y	2.1
		V	2.1
L	2.1		
5	Peptide content	75.5%	

Quality Control By:

wangjun

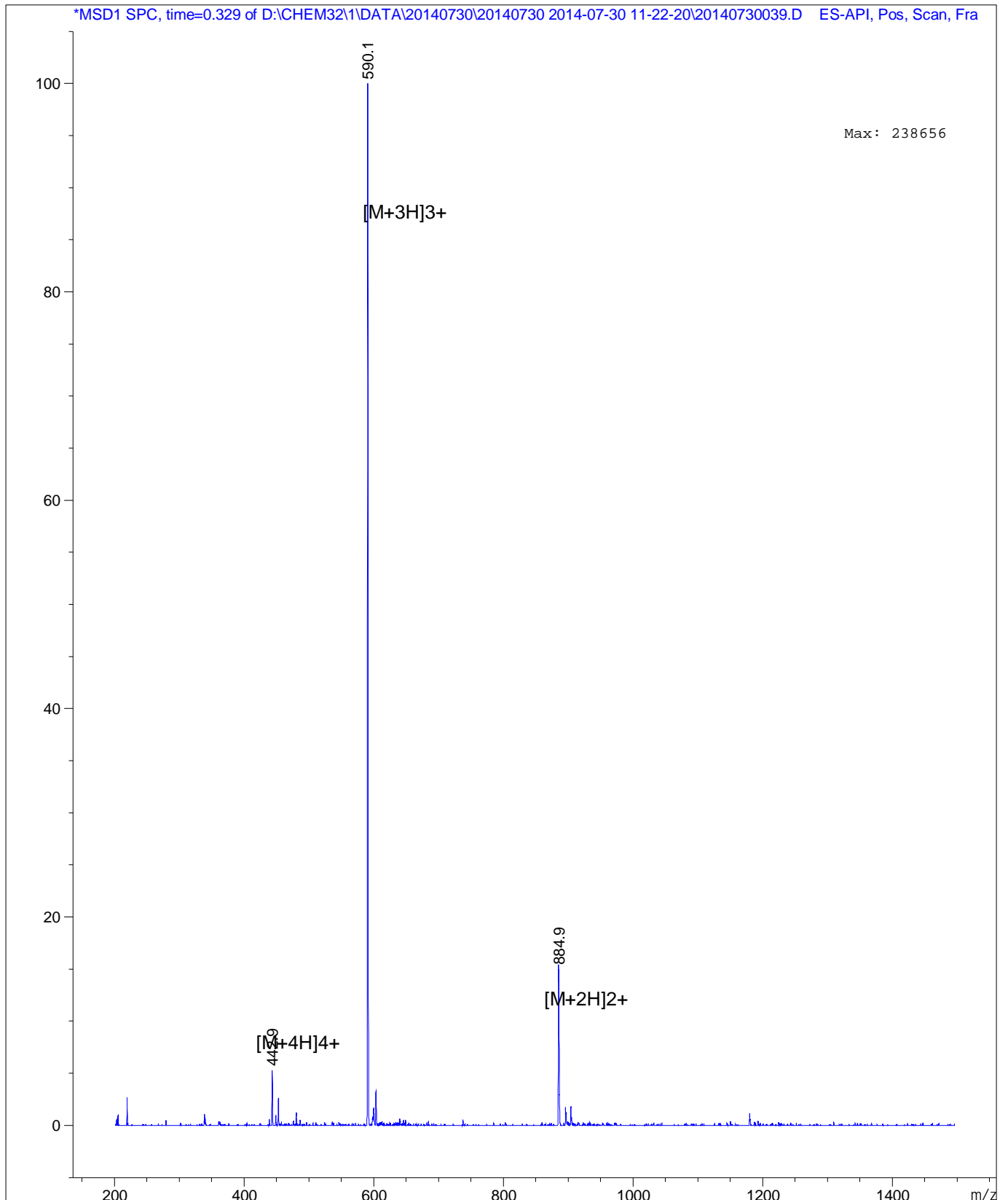
Date:

09/12/2014

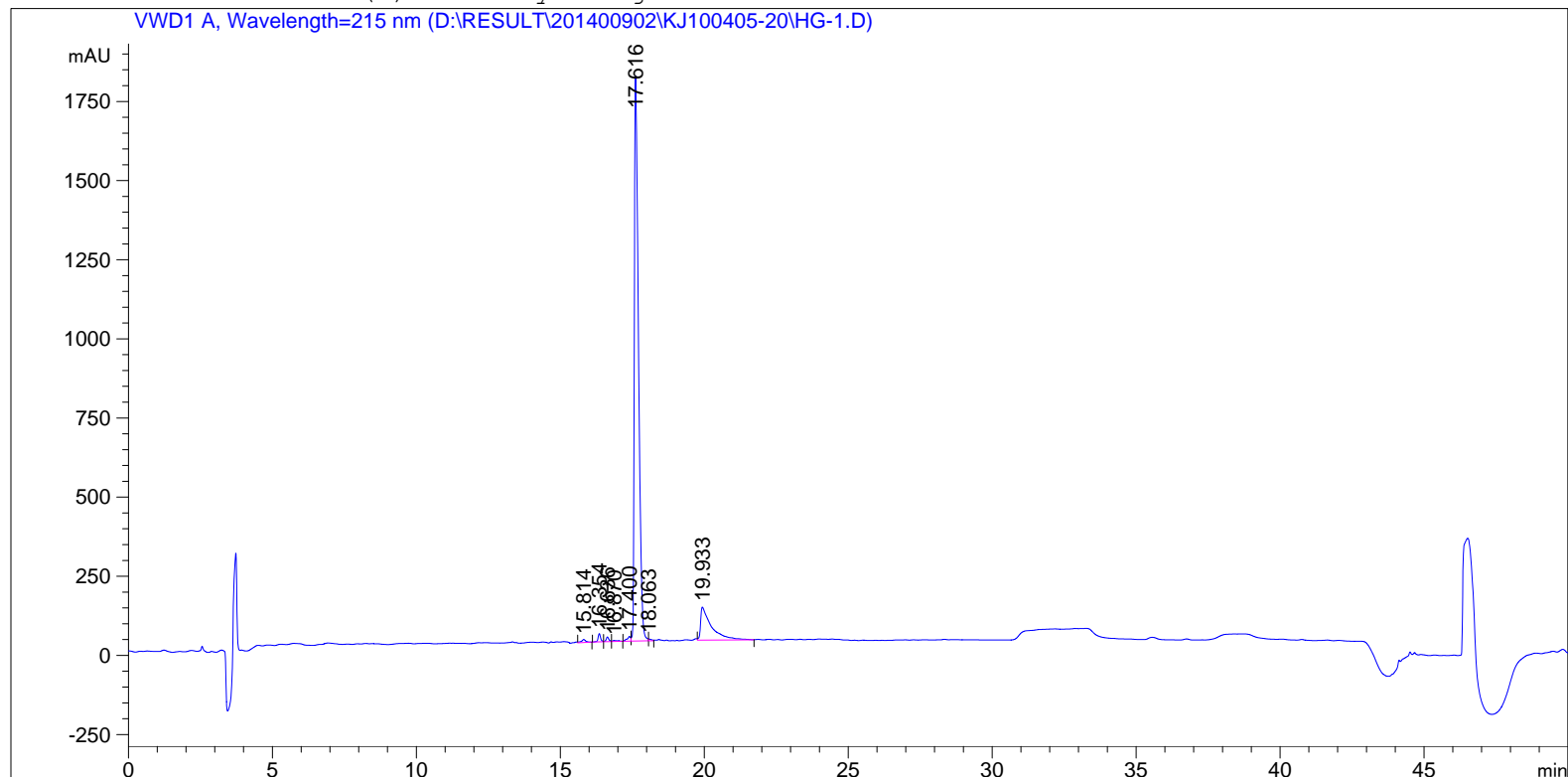
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Acq. Operator	: lishichao	Seq. Line	: 39
Acq. Instrument	: 5J-QC-082	Location	: Vial 72
Injection Date	: 7/30/2014 1:21:02 PM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\20140730\20140730 2014-07-30 11-22-20\TEST MS(200-1500) 2.		
Last changed	: 7/30/2014 10:43:17 AM by lishichao		
Analysis Method	: D:\METHOD\TEST MS(200-800).M		
Last changed	: 3/14/2014 11:35:24 PM by YZW		

MS Spectrum



=====
Acq. Operator :
Acq. Instrument : Instrument 1 Location : Vial 1
Injection Date : 9/4/2014 3:30:03 PM Inj Volume : Manually
Acq. Method : E:\METHODS\10-70IN50MIN.M\10-70IN50MIN.M
Last changed : 9/4/2014 1:51:03 PM
(modified after loading)
Analysis Method : C:\CHEM32\1\METHODS\WSAH.M
Last changed : 7/28/2014 4:59:11 PM by SYSTEM
Additional Info : Peak(s) manually integrated



=====
Area Percent Report
=====

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	15.814	VB	0.1470	103.80975	9.76636	0.4912
2	16.354	BV	0.0922	162.08286	26.54237	0.7670
3	16.636	VV	0.0977	98.58025	15.00214	0.4665
4	16.870	VB	0.1684	39.82406	3.17445	0.1885
5	17.400	BV	0.1172	121.69169	14.60846	0.5759
6	17.616	MF R	0.1663	1.78213e4	1785.99780	84.3315
7	18.063	FM R	0.1155	40.70750	5.87479	0.1926
8	19.933	VV	0.3408	2744.43799	104.69394	12.9869

Totals : 2.11324e4 1965.66031

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-21		
Molecular Formula	C78H130N22O22S	Cat#	8117
Molecular Weight	1760.17	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	TVATLYCVHQRIEVK		
Item No.	8117_140303_21		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1760.17±2.0	1759.5
3	Peptide Purity (By HPLC)	≥80%	85.1%
4	Identification(Amino Acid Composition by HPLC)	E	2.3
		H	0.9
		R	1.0
		T	1.9
		A	1.1
		C	0.8
		Y	1.1
		V	3.0
		K	1.0
		I	0.9
L	1.0		
5	Peptide content	76.4%	

Quality Control By:

wangjun

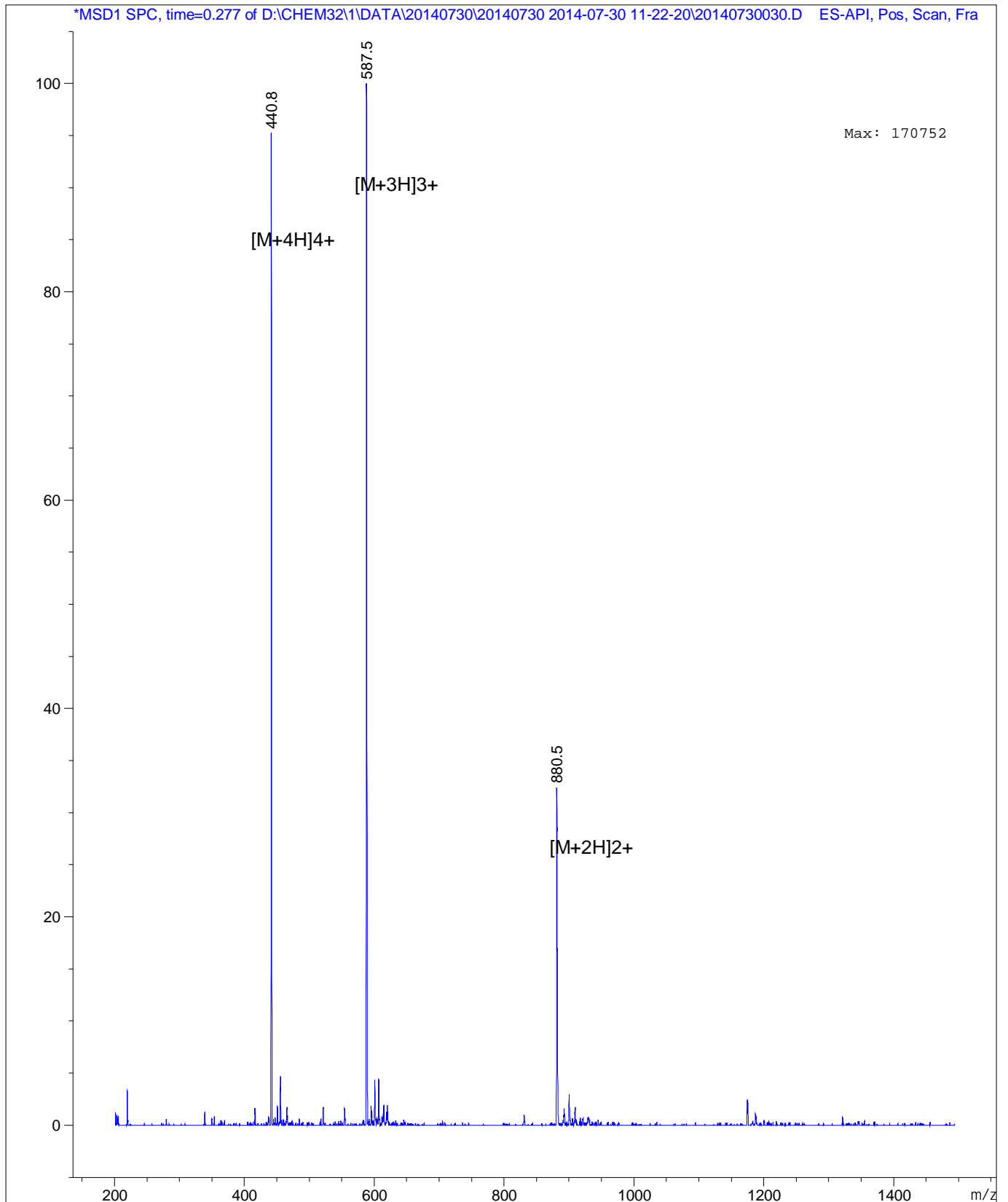
Date:

09/18/2014

```

=====
Acq. Operator   : lishichao                      Seq. Line : 30
Acq. Instrument : 5J-QC-082                     Location  : Vial 41
Injection Date  : 7/30/2014 12:53:10 PM        Inj       : 1
                                                    Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140730\20140730 2014-07-30 11-22-20\TEST MS(200-1500)
                                                    2.
Last changed    : 7/30/2014 10:43:17 AM by lishichao
Analysis Method : D:\METHOD\TEST MS(200-800).M
Last changed    : 3/14/2014 11:35:24 PM by YZW
    
```

MS Spectrum

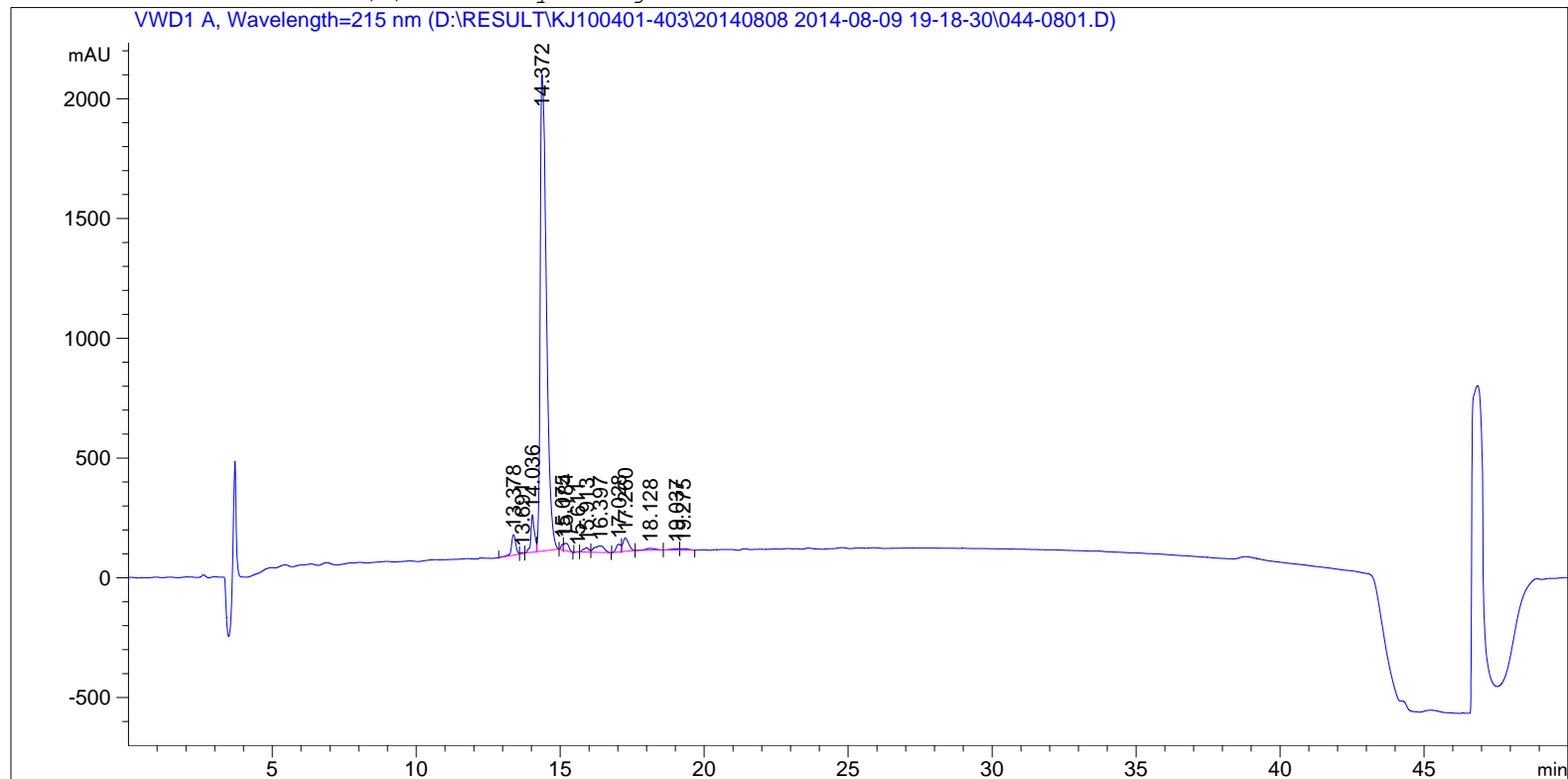



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :    8
Acq. Instrument : HPLC 1260                             Location  : Vial 44
Injection Date  : 8/10/2014 1:16:16 AM                 Inj       :    1
                                                    Inj Volume: 20.000 µl

Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
Method)
Last changed    : 8/9/2014 7:18:30 PM by SYSTEM
Method Info     : Column:Agilent HC-C18,5um,4.6*250mm      Column Temp:35°C      Flow
Rate:1.0ml/min
Mobile Phase A : 0.1%TFA+H2O
Mobile Phase B : 0.1%TFA+ACN
time(min)       0      40      40.3      43      43.3      50
B%              10     70      95       95      10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	13.378	BV	0.1612	880.68121	85.51356	2.5185
2	13.691	VB	0.1043	26.40395	3.88361	0.0755
3	14.036	BV	0.1240	1353.95764	156.35443	3.8719
4	14.372	VB	0.2335	2.97454e4	1988.19678	85.0638
5	15.075	BV	0.0797	117.40915	22.94714	0.3358
6	15.184	VB	0.1902	370.95920	30.44567	1.0608

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
7	15.611	BB	0.1325	9.28222	1.19689	0.0265
8	15.913	BV	0.1927	240.79646	17.92269	0.6886
9	16.397	VB	0.3265	658.02637	26.89004	1.8818
10	17.028	BV	0.1765	374.31467	32.95164	1.0704
11	17.260	VB	0.2116	789.50903	56.28554	2.2578
12	18.128	BB	0.3647	187.05798	7.53278	0.5349
13	19.037	BV	0.2506	99.78252	5.40023	0.2854
14	19.275	VB	0.2633	114.77693	5.74059	0.3282

Totals : 3.49684e4 2441.26158

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

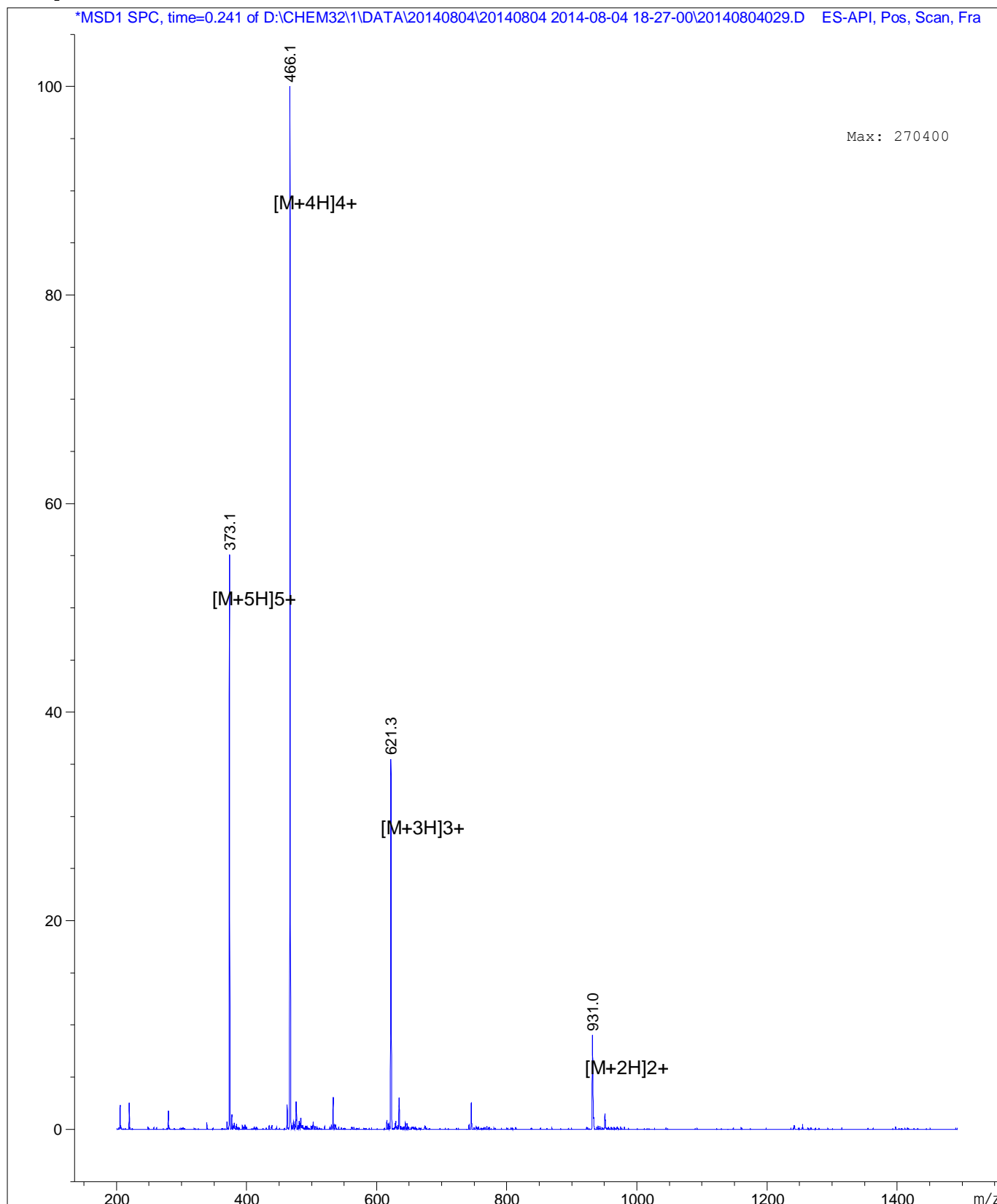
Product Name	HIV-1 Con B Gag Peptide-22		
Molecular Formula	C81H133N23O25S	Cat#	8117
Molecular Weight	1861.23	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	LYCVHQRIEVKDTKE		
Item No.	8117_140303_22		
TEST	SPECIFICATION	RESULT	
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1861.23±2.0	1860.4
3	Peptide Purity (By HPLC)	≥80%	94.3%
4	Identification(Amino Acid Composition by HPLC)	D	1.3
		E	3.0
		H	0.9
		R	1.1
		T	1.0
		C	0.6
		Y	1.0
		V	2.1
		K	2.0
		I	1.0
		L	1.0
5	Peptide content	83.2 %	

Quality Control By: wangjun
Date: 09/16/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 29
Acq. Instrument	: 5J-QC-082	Location	: Vial 52
Injection Date	: 8/4/2014 7:55:17 PM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\20140804\20140804 2014-08-04 18-27-00\TEST MS(200-1500) 2.		
Last changed	: 8/4/2014 6:24:11 PM by liusuying		
Analysis Method	: D:\METHOD\MS(100-1000).M		
Last changed	: 6/19/2014 4:53:37 PM by lishichao		

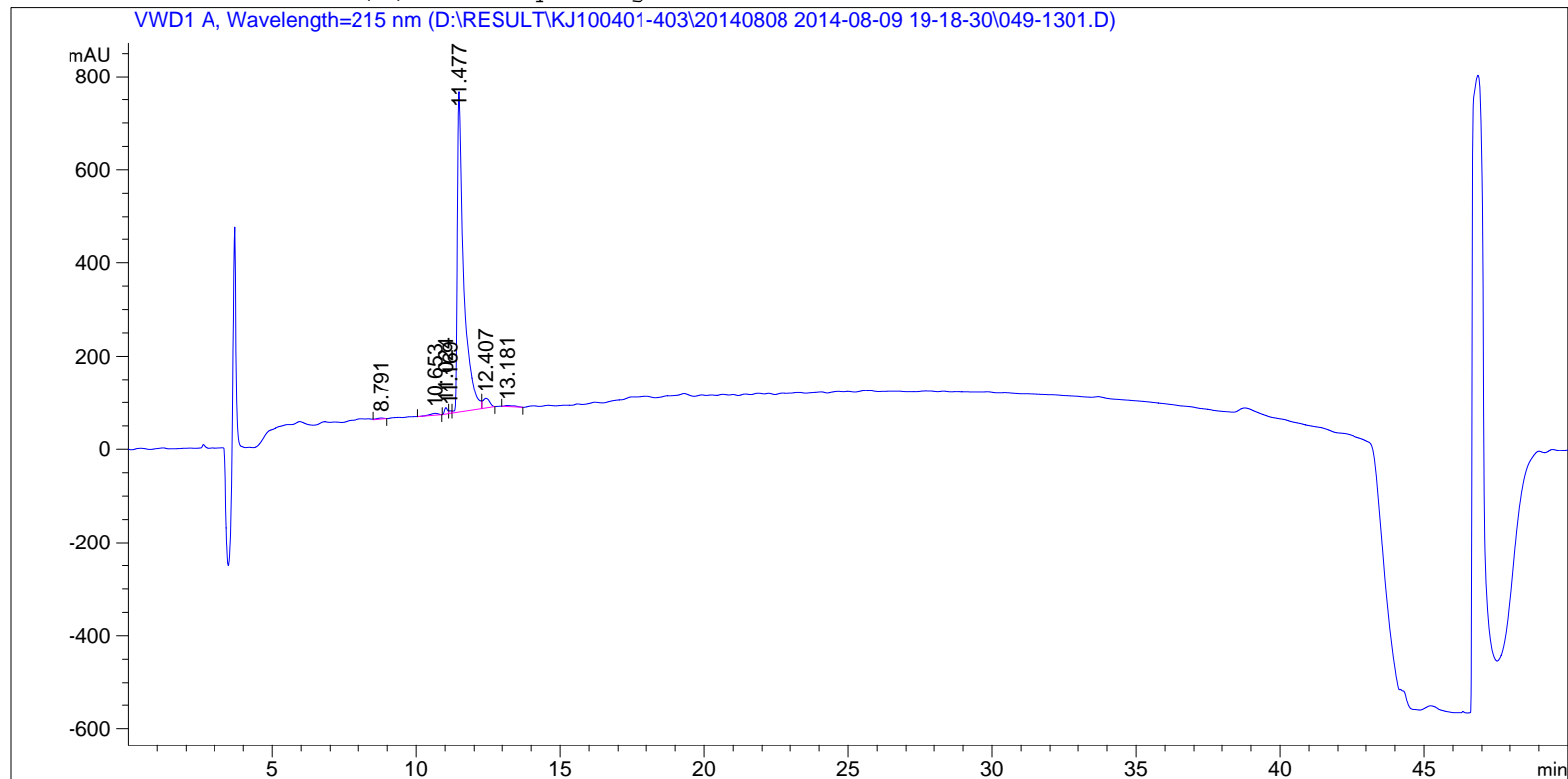
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :   13
Acq. Instrument : HPLC 1260                  Location  : Vial 49
Injection Date  : 8/10/2014 5:31:05 AM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
Method)
Last changed   : 8/9/2014 7:18:30 PM by SYSTEM
Method Info    : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
Rate:1.0ml/min
Mobile Phase A:0.1%TFA+H2O
Mobile Phase B:0.1%TFA+ACN
time(min)      0      40      40.3      43      43.3      50
B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	8.791	VB	0.2866	38.70821	2.08500	0.3460
2	10.653	BB	0.2925	77.01245	3.93258	0.6883
3	11.024	BV	0.1133	98.30040	13.60244	0.8786
4	11.169	VV	0.0919	35.63852	5.55365	0.3185
5	11.477	VV	0.2129	1.05449e4	687.54828	94.2513
6	12.407	VB	0.2540	335.63052	20.50156	2.9999

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
7	13.181	BB	0.3663	57.87668	2.13503	0.5173

Totals : 1.11881e4 735.35853

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-23		
Molecular Formula	C78H134N24O26	Cat#	8117
Molecular Weight	1824.15	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	HQRIEVKDTKEALEK		
Item No.	8117_140303_23		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1824.15±2.0	1823.5
3	Peptide Purity (By HPLC)	≥80%	93.9%
4	Identification(Amino Acid Composition by HPLC)	D	0.9
		E	4.1
		H	0.9
		R	1.0
		T	1.0
		A	1.0
		V	1.0
		K	3.0
		I	0.9
L	1.0		
5	Peptide content	82.8%	

Quality Control By:

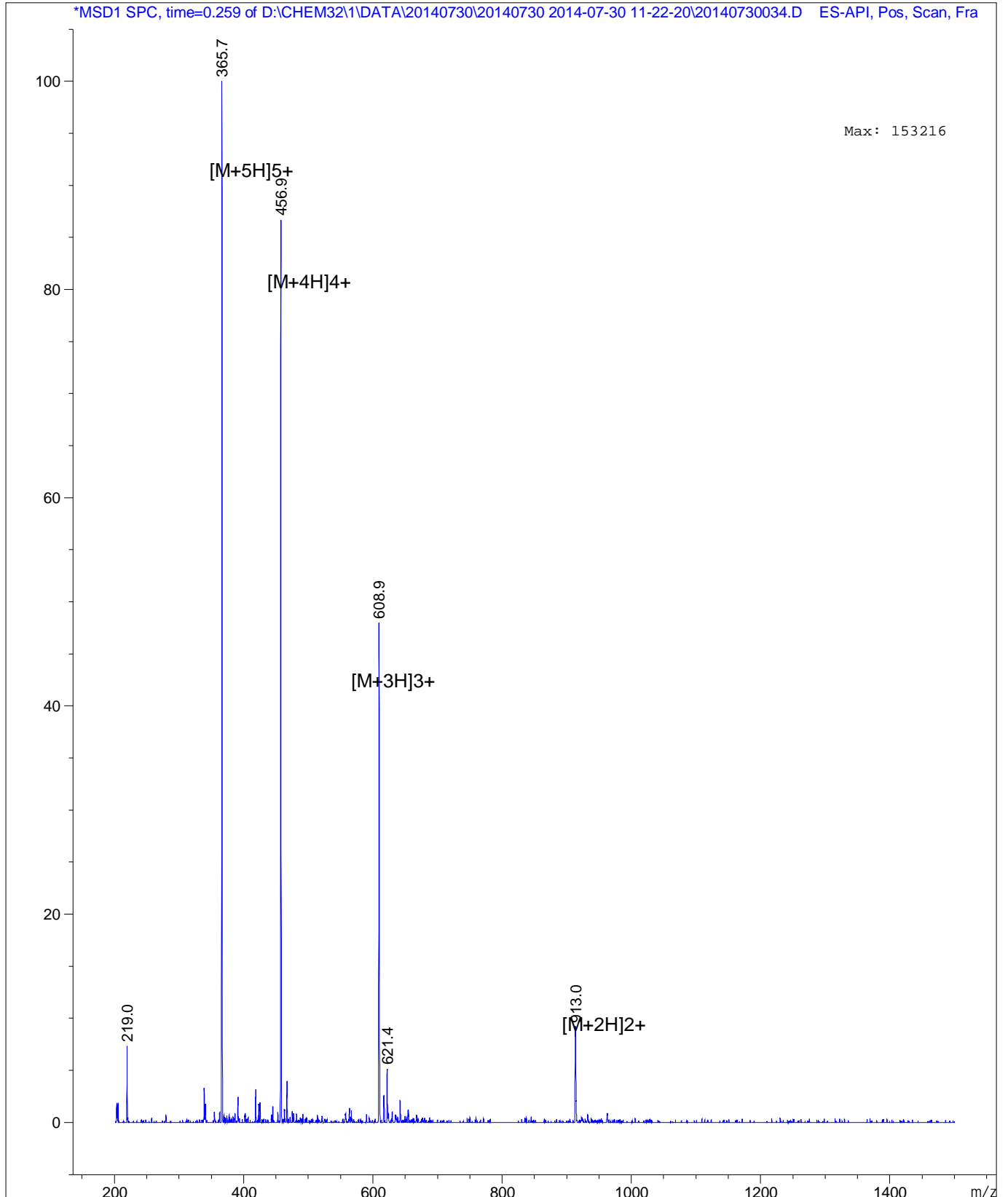
wangjun

Date:

09/16/2014

=====
Acq. Operator : lishichao Seq. Line : 34
Acq. Instrument : 5J-QC-082 Location : Vial 45
Injection Date : 7/30/2014 1:05:32 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140730\20140730 2014-07-30 11-22-20\TEST MS(200-1500)
2.
Last changed : 7/30/2014 10:43:17 AM by lishichao
Analysis Method : D:\METHOD\TEST MS(200-800).M
Last changed : 3/14/2014 11:35:24 PM by YZW

MS Spectrum



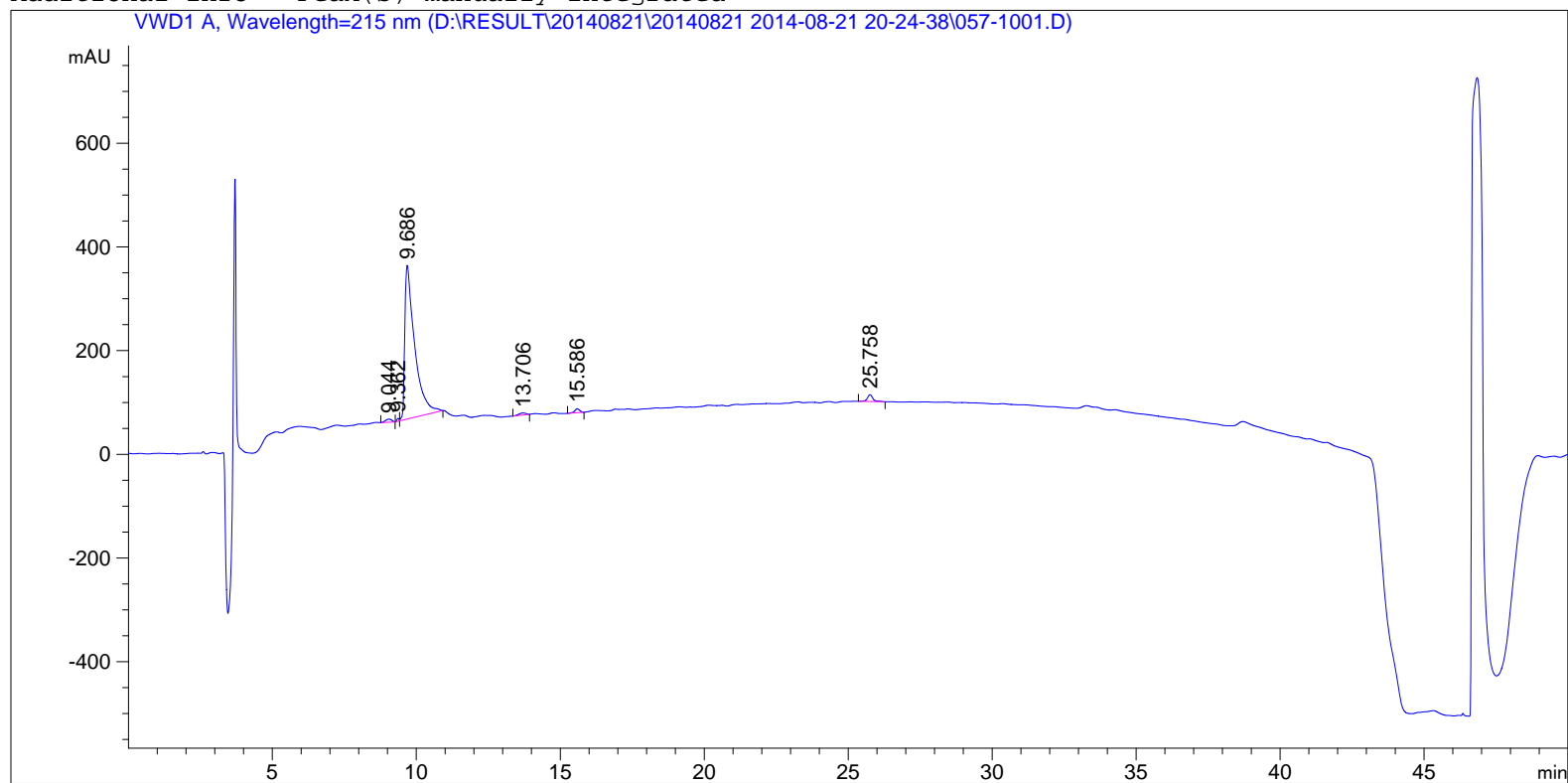

```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   10
Acq. Instrument : HPLC 1260                           Location  : Vial 57
Injection Date  : 8/22/2014 4:04:20 AM                Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140821\20140821 2014-08-21 20-24-38\KJ100401.M
Last changed    : 8/21/2014 8:24:39 PM by SYSTEM
Analysis Method : D:\RESULT\20140821\20140821 2014-08-21 20-24-38\KJ100401.M (Sequence Method)
Last changed    : 8/22/2014 1:26:04 PM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95      10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	9.044	BB	0.2482	91.57316	6.09673	1.2158
2	9.362	BV	0.0835	29.07722	5.43171	0.3860
3	9.686	VB	0.3273	7075.09668	296.62799	93.9332
4	13.706	BB	0.2681	66.61472	3.96360	0.8844

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	15.586	BB	0.1828	91.17178	7.60733	1.2105
6	25.758	BB	0.2041	178.51576	13.17693	2.3701

Totals : 7532.04932 332.90429

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-24		
Molecular Formula	C76H128N18O31	Cat#	8117
Molecular Weight	1790.03	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	EVKDTKEALEKIEEE		
Item No.	8117_140303_24		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1790.03±2.0	1789.5
3	Peptide Purity (By HPLC)	≥80%	97.4%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		E	6.4
		T	0.9
		A	1.0
		V	1.0
		K	3.0
		I	0.8
L	0.9		
5	Peptide content	82.6%	

Quality Control By:

wangjun

Date:

09/11/2014

=====

Acq. Operator : lishichao

Seq. Line : 59

Acq. Instrument : 5J-QC-082

Location : Vial 95

Injection Date : 7/30/2014 2:24:29 PM

Inj : 1

Inj Volume : 3.0 µl

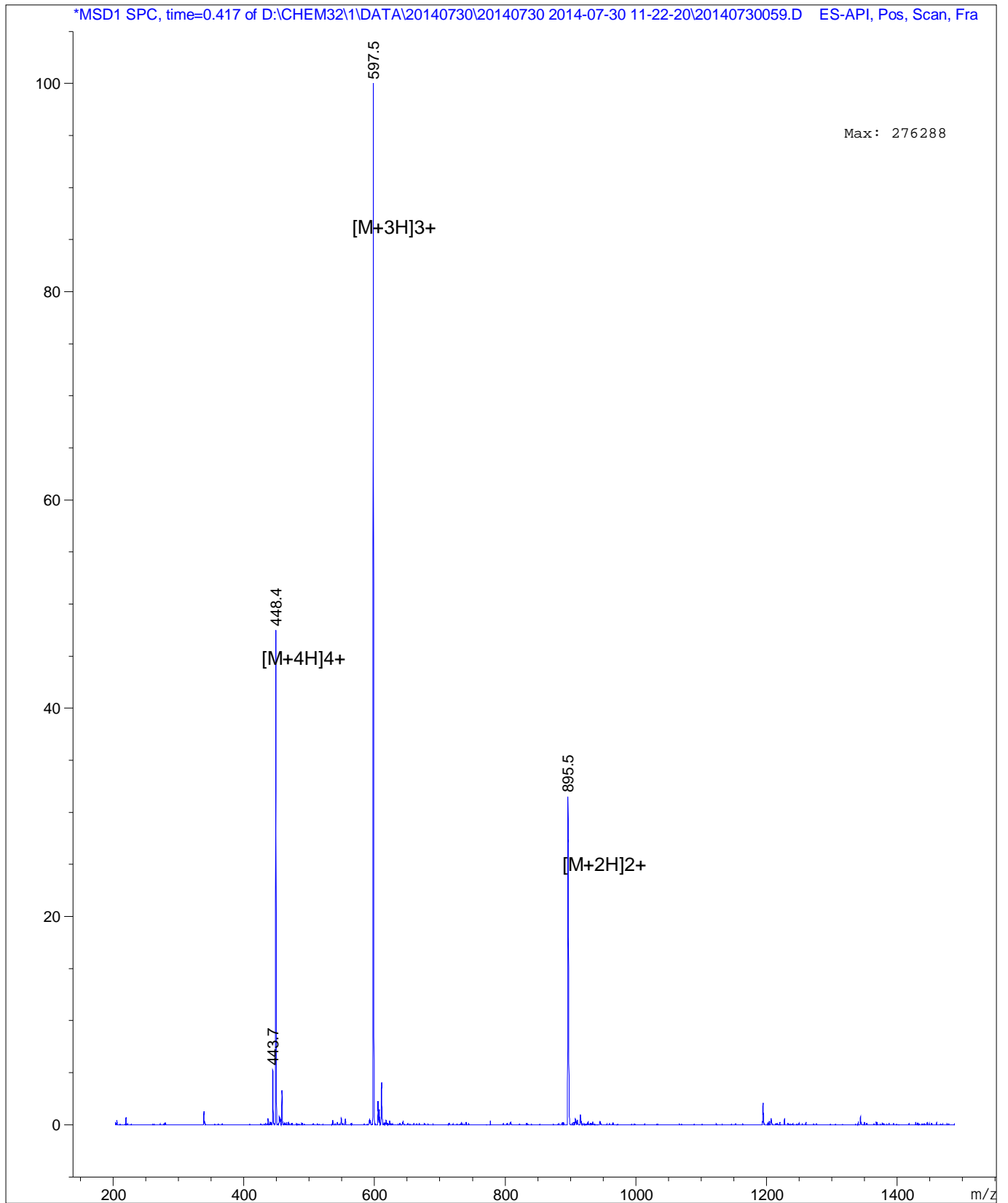
Acq. Method : D:\CHEM32\1\DATA\20140730\20140730 2014-07-30 11-22-20\TEST MS(200-1500)
2.

Last changed : 7/30/2014 10:43:17 AM by lishichao

Analysis Method : D:\METHOD\TEST MS(200-800).M

Last changed : 3/14/2014 11:35:24 PM by YZW

MS Spectrum



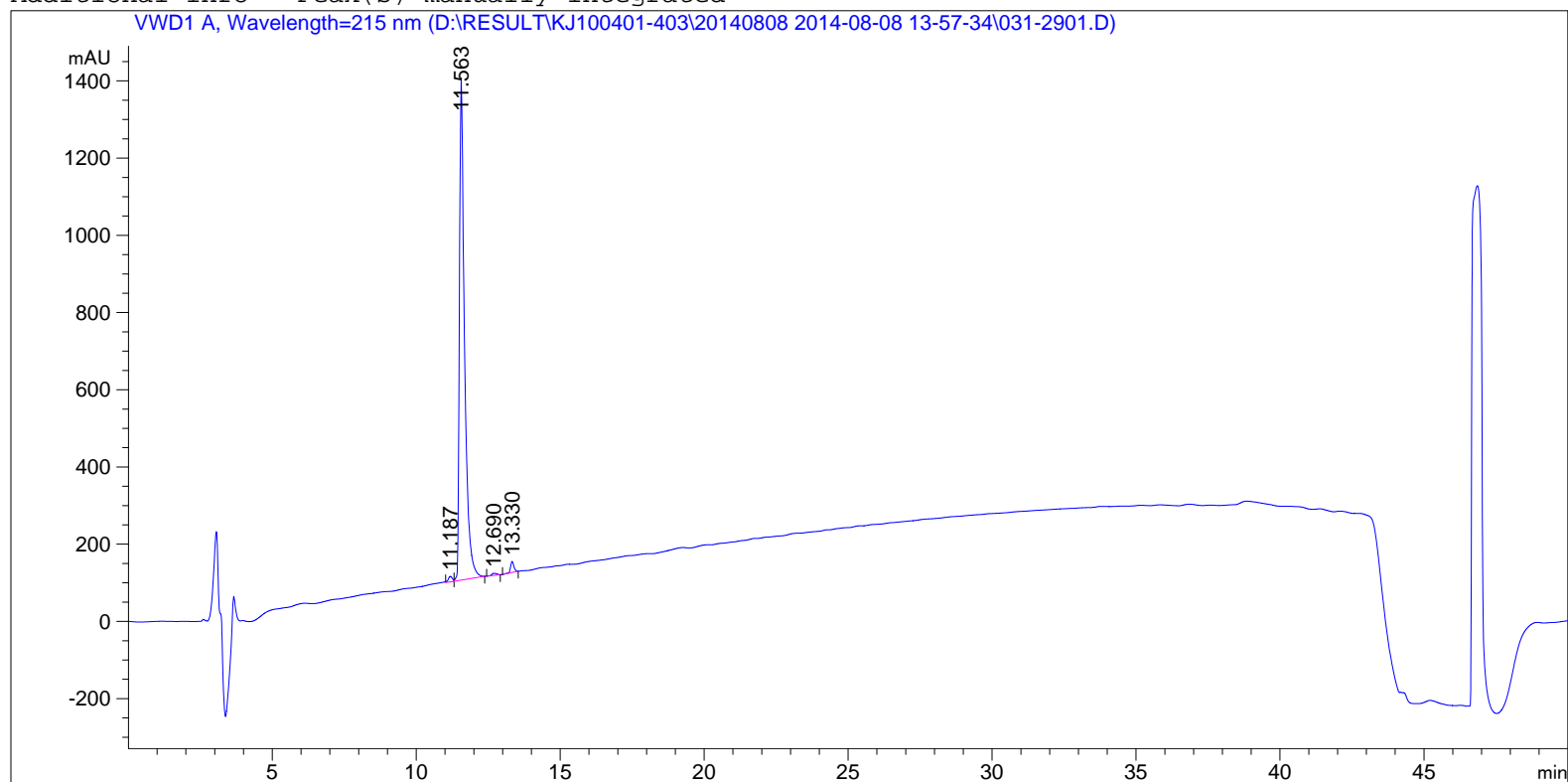
```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   29
Acq. Instrument : HPLC 1260                           Location  : Vial 31
Injection Date  : 8/9/2014 1:45:29 PM                  Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M
Last changed    : 8/8/2014 1:57:34 PM by SYSTEM
Analysis Method : D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M (Sequence
Method)
Last changed    : 8/10/2014 4:18:06 PM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95      95     10      10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	11.187	FM R	0.1660	141.98032	14.25408	0.8562
2	11.563	VB	0.1828	1.61461e4	1300.51111	97.3630
3	12.690	BB	0.1627	64.94050	5.42226	0.3916

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
4	13.330	BB	0.1226	230.38647	28.71144	1.3893

Totals : 1.65834e4 1348.89889

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-25		
Molecular Formula	C74H126N20O30	Cat#	8117
Molecular Weight	1776.01	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	TKEALEKIEEEQNKS		
Item No.	8117_140303_25		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1776.01±2.0	1775.4
3	Peptide Purity (By HPLC)	≥80%	97.2%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		S	1.1
		E	5.7
		T	1.1
		A	1.1
		K	2.9
		I	0.8
L	0.9		
5	Peptide content	88.8%	

Quality Control By:

wangjun

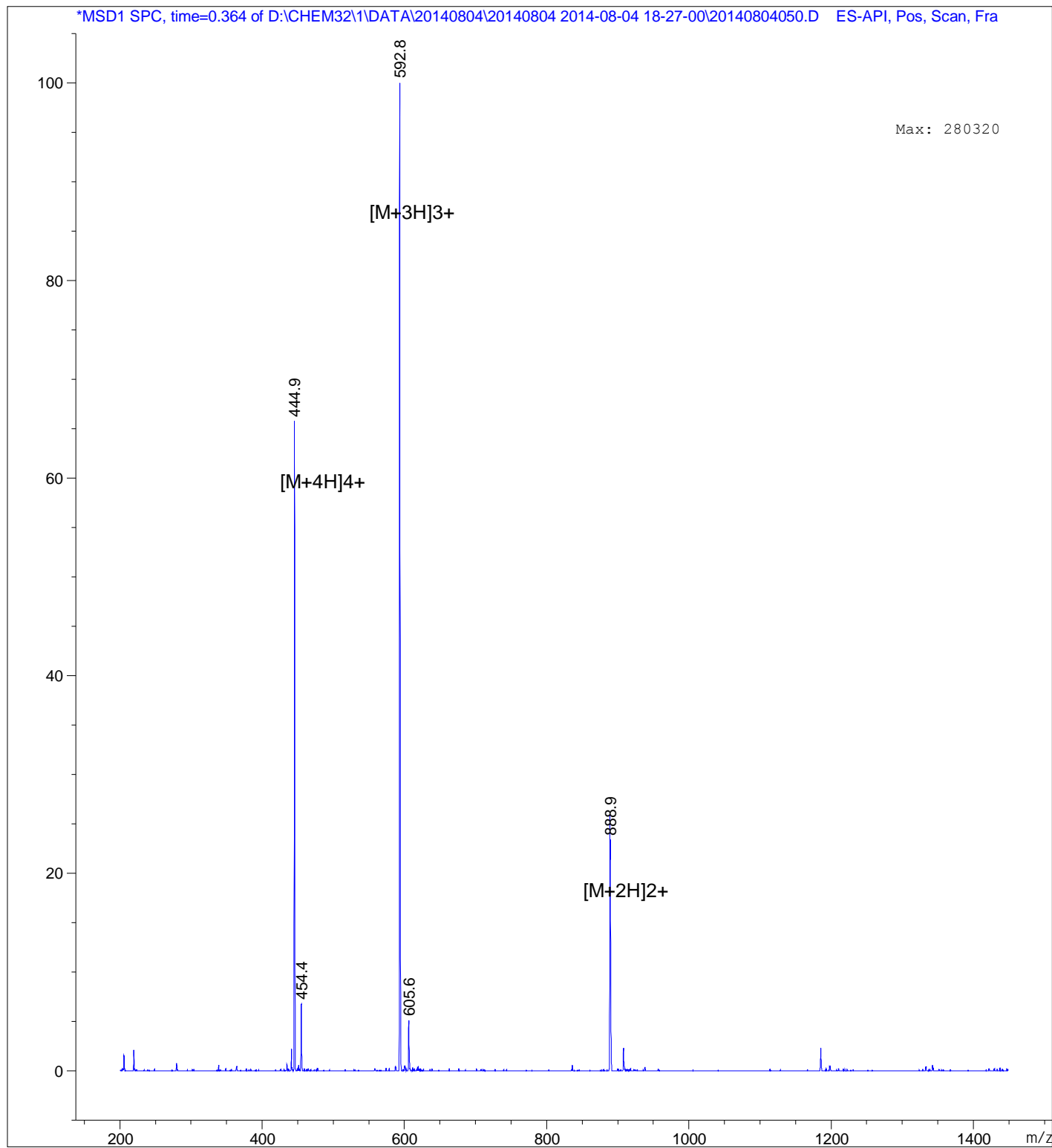
Date:

09/11/2014

```

=====
Acq. Operator   : liusuying                      Seq. Line :   50
Acq. Instrument : 5J-QC-082                     Location  : Vial 75
Injection Date  : 8/4/2014 9:00:17 PM           Inj       :    1
                                                    Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140804\20140804 2014-08-04 18-27-00\TEST MS(200-1500)2.
Last changed    : 8/4/2014 6:24:11 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M
Last changed    : 8/4/2014 6:24:11 PM by liusuying
    
```

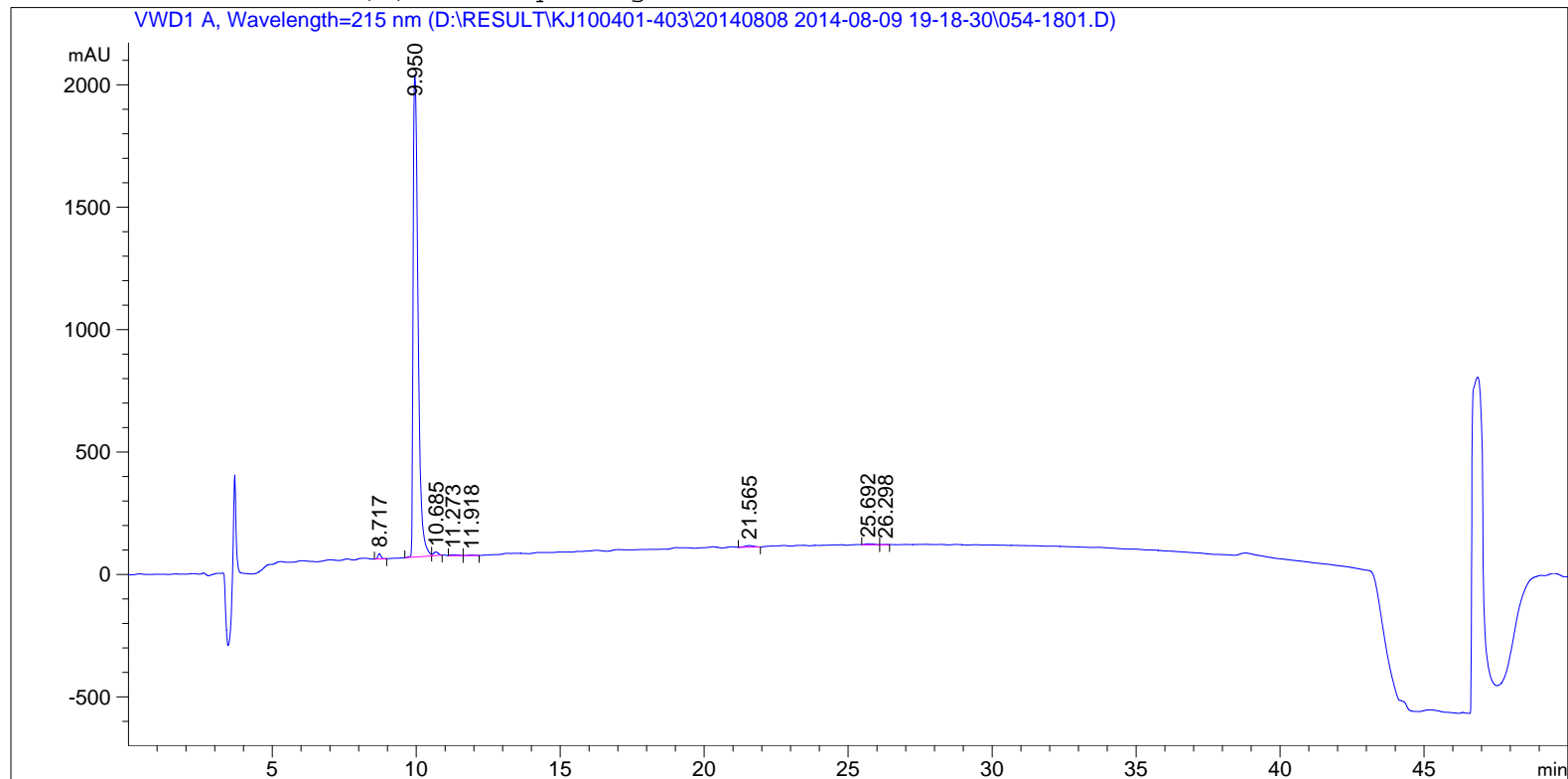
MS Spectrum




```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   18
Acq. Instrument : HPLC 1260                             Location  : Vial 54
Injection Date  : 8/10/2014 9:45:56 AM                 Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
Method)
Last changed   : 8/9/2014 7:18:30 PM by SYSTEM
Method Info    : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C    Flow
Rate:1.0ml/min
Mobile Phase A:0.1%TFA+H2O
Mobile Phase B:0.1%TFA+ACN
time(min)      0      40      40.3      43      43.3      50
B%             10     70      95       95      10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	8.717	BB	0.1139	153.48453	21.34949	0.6358
2	9.950	BV	0.1870	2.34692e4	1970.10864	97.2202
3	10.685	VB	0.1757	171.40242	14.51897	0.7100
4	11.273	BB	0.2449	57.77127	3.45848	0.2393
5	11.918	BB	0.2566	34.79177	2.22334	0.1441
6	21.565	VB	0.3463	145.36101	6.53942	0.6022

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
7	25.692	VB	0.2873	93.36615	4.42295	0.3868
8	26.298	BV	0.1795	14.87064	1.27076	0.0616

Totals : 2.41402e4 2023.89204

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-26		
Molecular Formula	C77H136N22O27	Cat#	8117
Molecular Weight	1802.14	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	LEKIEEEQNKSKKKA		
Item No.	8117_140303_26		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1802.14±2.0	1801.6
3	Peptide Purity (By HPLC)	≥80%	95.3 %
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	0.8
		E	5.0
		A	1.0
		K	5.2
		I	0.9
	L	1.0	
5	Peptide content	88.0 %	

Quality Control By:

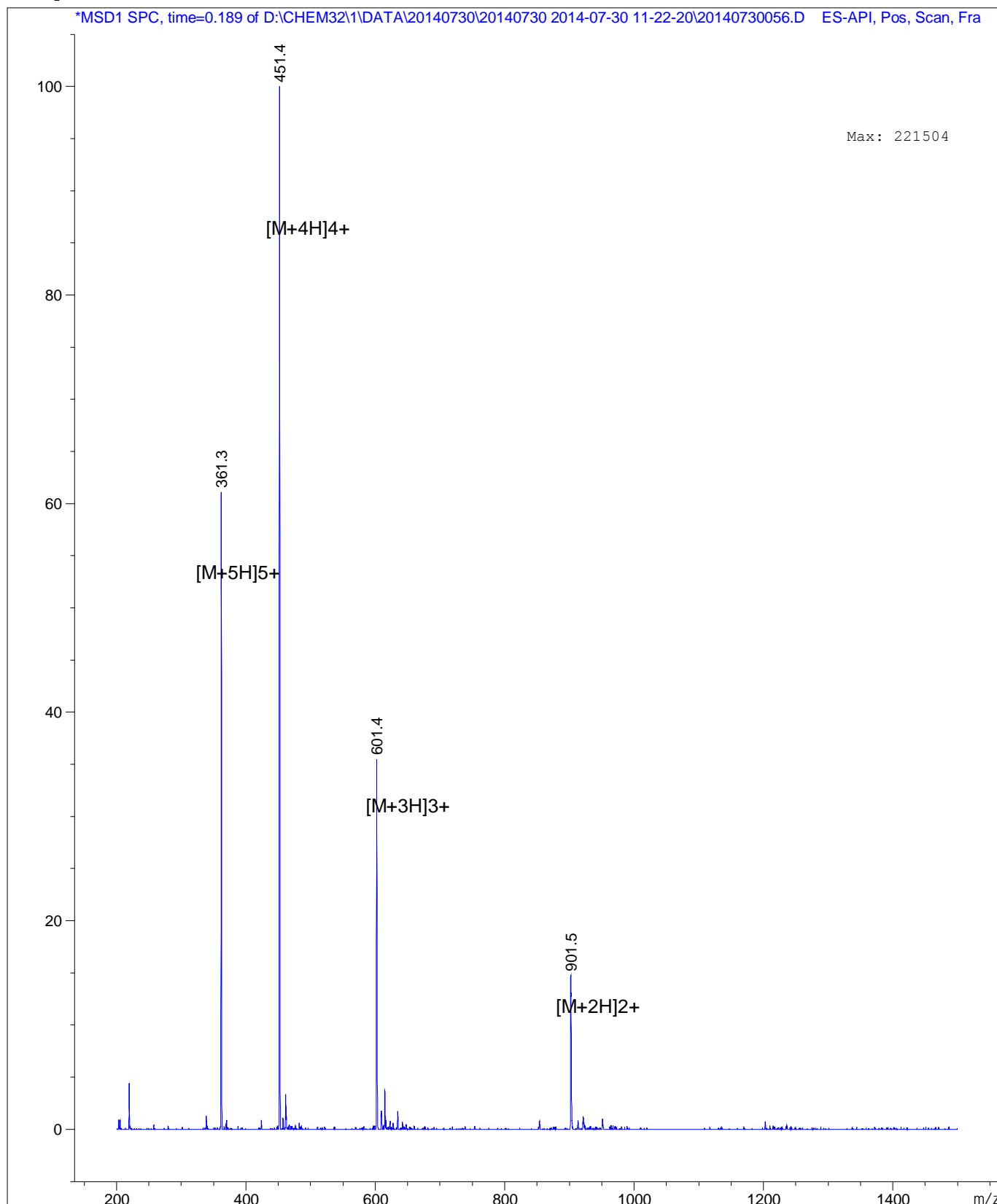
wangjun

Date:

09/11/2014

=====
Acq. Operator : lishichao Seq. Line : 56
Acq. Instrument : 5J-QC-082 Location : Vial 92
Injection Date : 7/30/2014 2:15:14 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140730\20140730 2014-07-30 11-22-20\TEST MS(200-1500)
2.
Last changed : 7/30/2014 10:43:17 AM by lishichao
Analysis Method : D:\METHOD\TEST MS(200-800).M
Last changed : 3/14/2014 11:35:24 PM by YZW

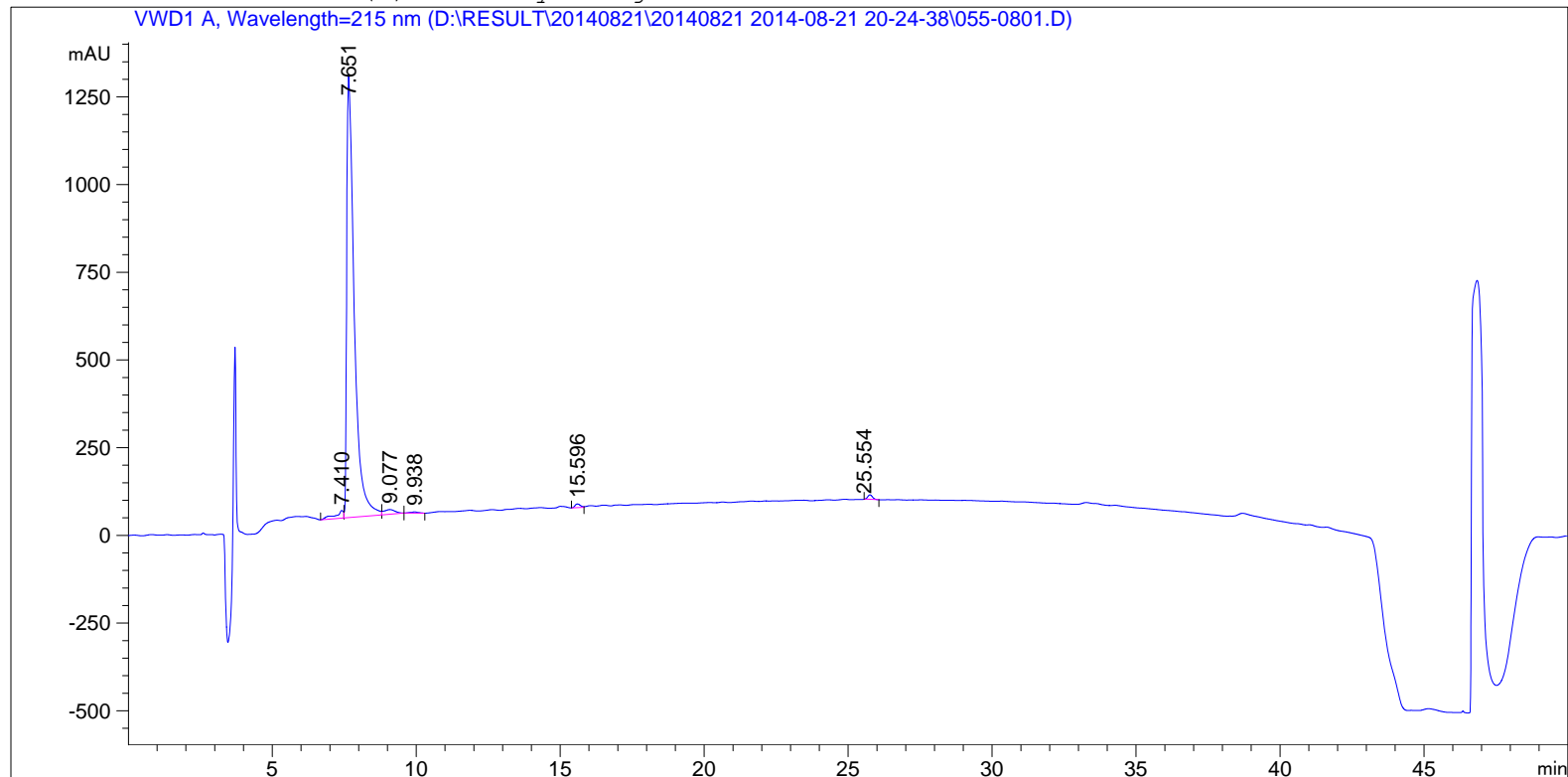
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :    8
Acq. Instrument : HPLC 1260                           Location  : Vial 55
Injection Date  : 8/22/2014 2:22:23 AM                Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\20140821\20140821 2014-08-21 20-24-38\KJ100401.M (Sequence Method)
Last changed    : 8/21/2014 8:24:39 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
Rate:1.0ml/min
Mobile Phase A:0.1%TFA+H2O
Mobile Phase B:0.1%TFA+ACN
time(min)       0      40      40.3      43      43.3      50
B%              10     70      95       95      10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      : Signal
Multiplier     : 1.0000
Dilution      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.410	BV	0.2629	442.62451	21.98260	1.8412
2	7.651	VV	0.2556	2.29144e4	1263.22571	95.3190
3	9.077	VB	0.3943	363.07541	13.26775	1.5103
4	9.938	BB	0.2377	66.33840	3.69008	0.2760
5	15.596	BV	0.1957	132.43913	10.52977	0.5509
6	25.554	MM R	0.1706	120.81220	1.05610	0.5026

Totals : 2.40397e4 1313.75200

=====
*** End of Report ***



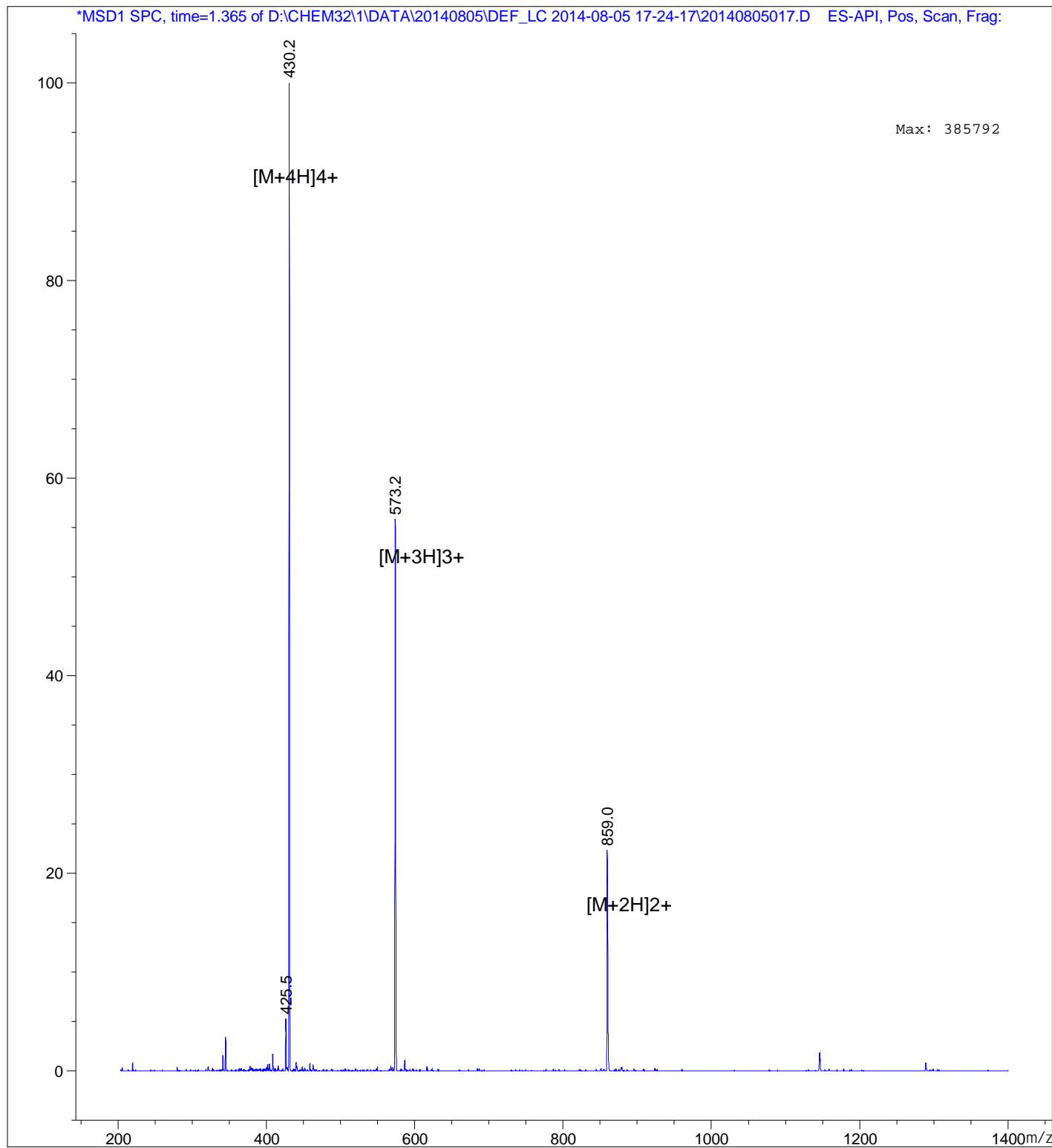
CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-27		
Molecular Formula	C70H121N23O27	Cat#	8117
Molecular Weight	1716.94	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	EEEQNKSKKKAQQAA		
Item No.	8117_140303_27		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1716.94±2.0	1716.8
3	Peptide Purity (By HPLC)	≥80%	90.9%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	0.9
		E	6.0
		A	3.0
		K	4.2
5	Peptide content	91.4%	

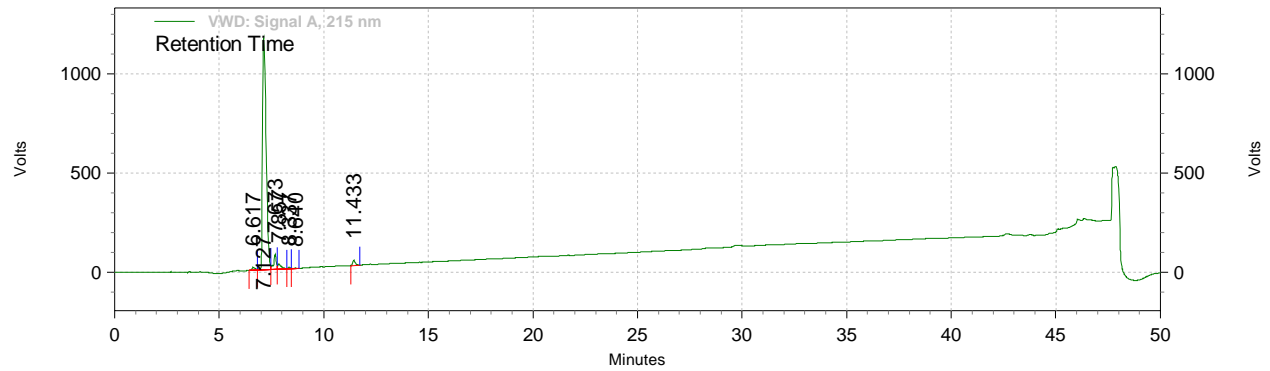
Quality Control By: wangjun Date: 09/16/2014

```
=====
Acq. Operator   : liusuying                      Seq. Line :   17
Acq. Instrument : 5J-QC-082                      Location  : Vial 61
Injection Date  : 8/5/2014 6:17:18 PM           Inj       :    1
                                                    Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140805\DEF_LC 2014-08-05 17-24-17\TEST MS(200-1500)2.
Last changed    : 8/4/2014 6:24:11 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M
Last changed    : 8/4/2014 6:24:11 PM by liusuying
=====
```

MS Spectrum



Data File: D:\405-27\20140822.rslt\HIV-1 Con B Gag Peptide-27.dat
 Method: D:\Method\405-027.met
 Acquired: 8/22/2014 10:17:30 AM (GMT +08:00)
 Printed: 8/22/2014 11:23:31 AM (GMT +08:00)
 Column: Agilent HC-C18, 5µm, 4.6*250mm Column Temp: 35°C Flow Rate: 1.0ml/min
 Mobile Phase A: 0.1% TFA water
 Mobile Phase B: 0.1% TFA+ACN
 time(min) 0 40 42 44 44.5 50
 B% 2 62 95 95 2 2



VWD: Signal A, 215 nm Results

Retention Time	Area	Area %
6.617	2676906	1.02
7.127	238598539	90.85
7.673	11007521	4.19
7.857	5209961	1.98
8.337	978775	0.37
8.640	484516	0.18
11.433	3677676	1.40
Totals	262633894	100.00



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-28		
Molecular Formula	C63H112N22O23	Cat#	8117
Molecular Weight	1545.78	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	NKSKKKAQQAAADTG		
Item No.	8117_140303_28		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1545.78±2.0	1545.6
3	Peptide Purity (By HPLC)	≥80%	85.5%
4	Identification(Amino Acid Composition by HPLC)	D	1.9
		S	0.9
		E	2.2
		G	1.0
		T	1.0
		A	3.7
	K	3.8	
5	Peptide content	70.0%	

Quality Control By:

wangjun

Date:

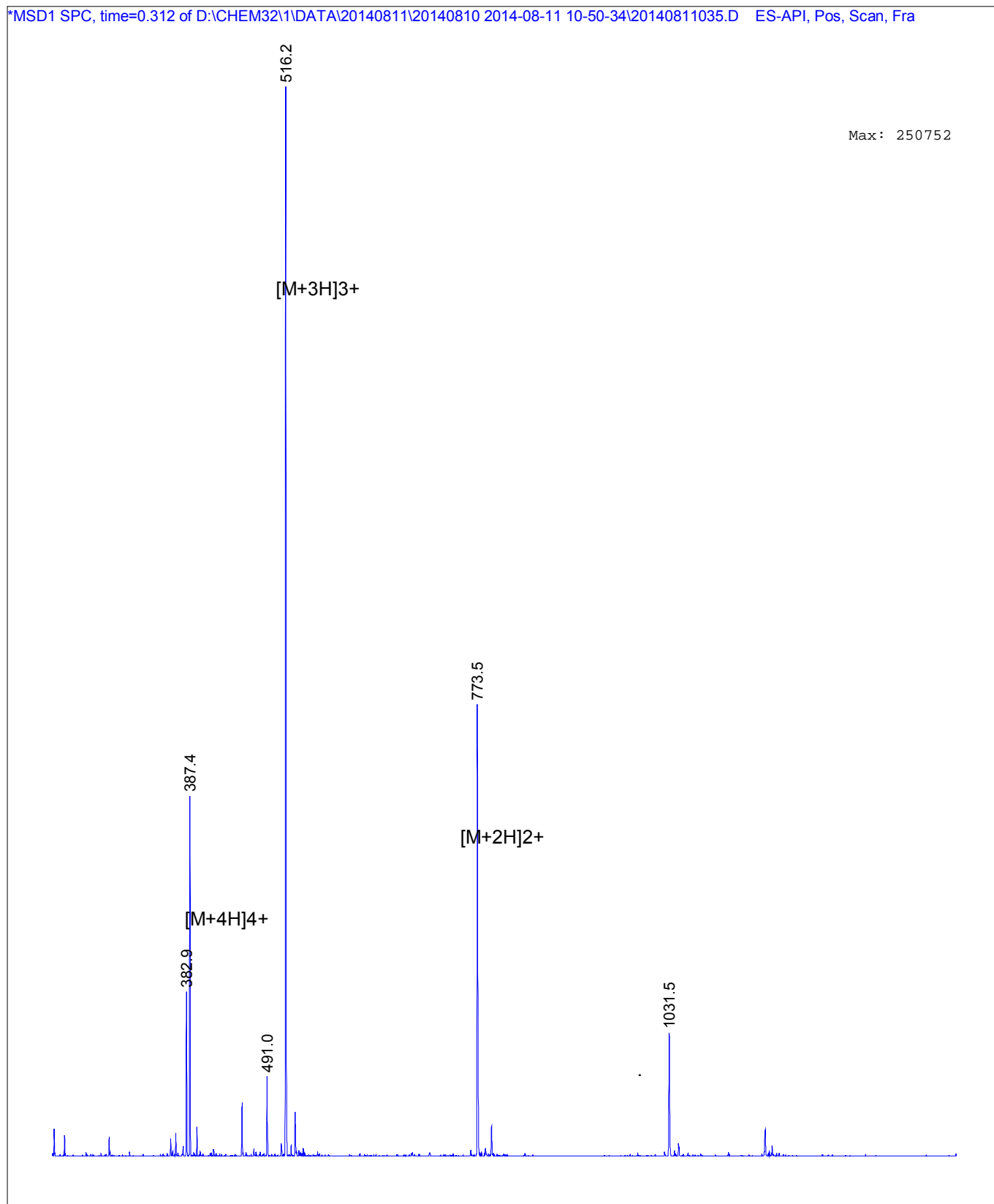
09/16/2014

```

=====
Acq. Operator   : liusuying                Seq. Line :   35
Acq. Instrument : 5J-QC-082                Location  : Vial 43
Injection Date  : 8/11/2014 12:36:38 PM    Inj       :    1
                                         Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140811\20140810 2014-08-11 10-50-34\TEST MS(200-1500)
                : 2.
Last changed    : 8/10/2014 3:32:14 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M
Last changed    : 8/11/2014 1:22:13 PM by liusuying

```

MS Spectrum



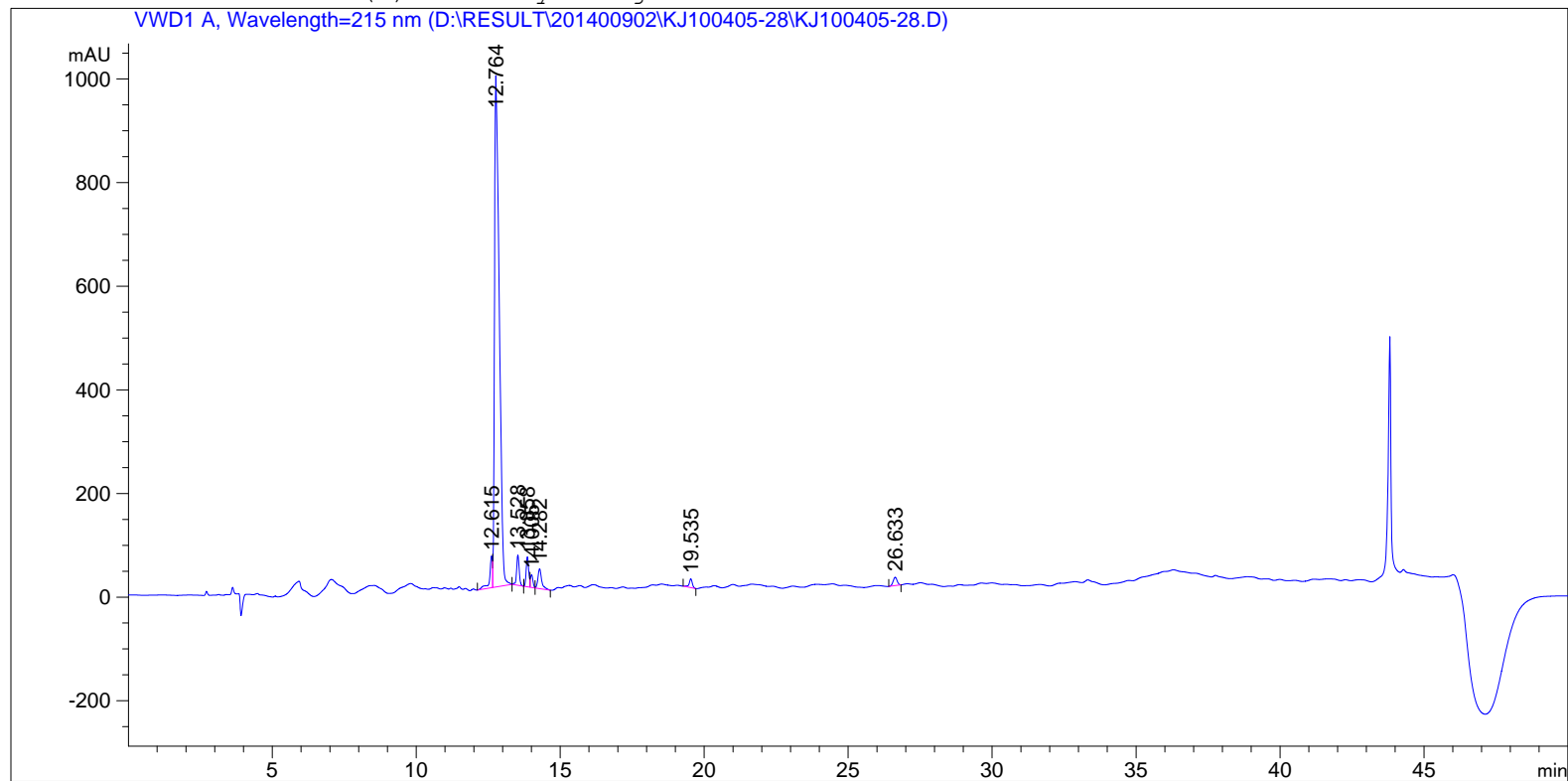
```

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 1
Injection Date  : 9/4/2014 8:28:55 AM
                                           Inj Volume : Manually

Acq. Method     : E:\CHEM32\1\METHODS\METHODS\10-70IN50MIN.M
Last changed    : 9/4/2014 9:39:32 AM
                  (modified after loading)

Analysis Method : C:\CHEM32\1\METHODS\KJ100401.M
Last changed    : 9/14/2014 11:49:02 AM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18, 5um, 4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      : Signal
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.615	BV	0.1002	427.56381	61.46515	3.2262
2	12.764	VB	0.1820	1.13355e4	987.13562	85.5311
3	13.528	BB	0.0957	362.56299	58.19947	2.7357
4	13.858	BV	0.0938	350.55444	57.80161	2.6451

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	14.005	VV	0.0917	147.41129	24.67757	1.1123
6	14.282	VB	0.1366	346.02213	38.21953	2.6109
7	19.535	BB	0.1139	128.47722	17.05000	0.9694
8	26.633	BB	0.1499	154.97557	16.15862	1.1694

Totals : 1.32530e4 1260.70757

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-29		
Molecular Formula	C59H101N21O25	Cat#	8117
Molecular Weight	1504.64	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	KKAQQAAADTGNSSQ		
Item No.	8117_140303_29		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1504.64±2.0	1503.9
3	Peptide Purity (By HPLC)	≥80%	95.0%
4	Identification(Amino Acid Composition by HPLC)	D	2.0
		S	1.8
		E	3.1
		G	1.1
		T	0.9
		A	4.0
	K	2.1	
5	Peptide content	75.4%	

Quality Control By:

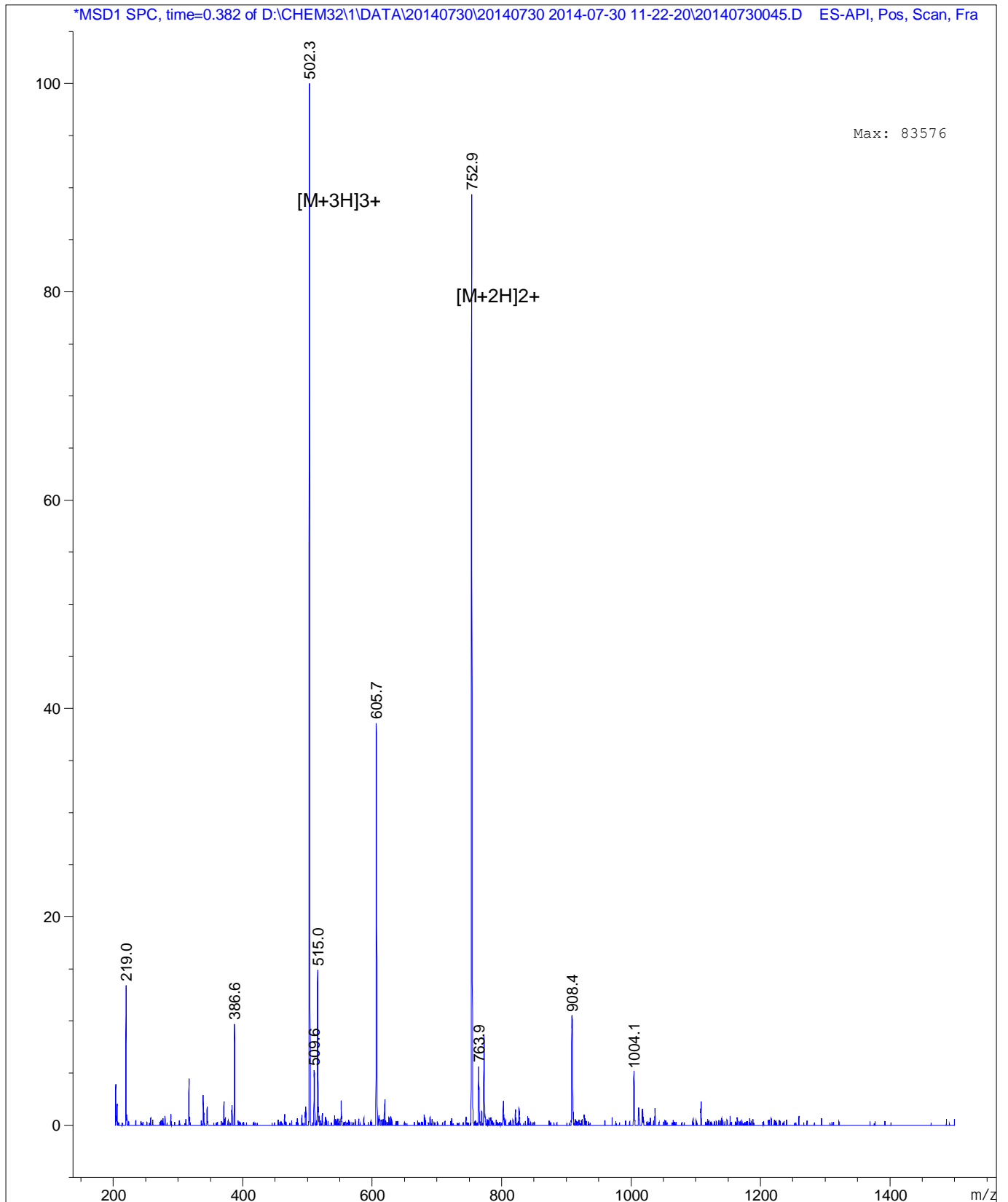
wangjun

Date:

09/18/2014

```
=====
Acq. Operator   : lishichao                        Seq. Line : 45
Acq. Instrument : 5J-QC-082                        Location  : Vial 78
Injection Date  : 7/30/2014 1:39:49 PM              Inj       : 1
                                                    Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140730\20140730 2014-07-30 11-22-20\TEST MS (200-1500)
                : 2.
Last changed    : 7/30/2014 10:43:17 AM by lishichao
Analysis Method : D:\METHOD\TEST MS (200-800).M
Last changed    : 3/14/2014 11:35:24 PM by YZW
```

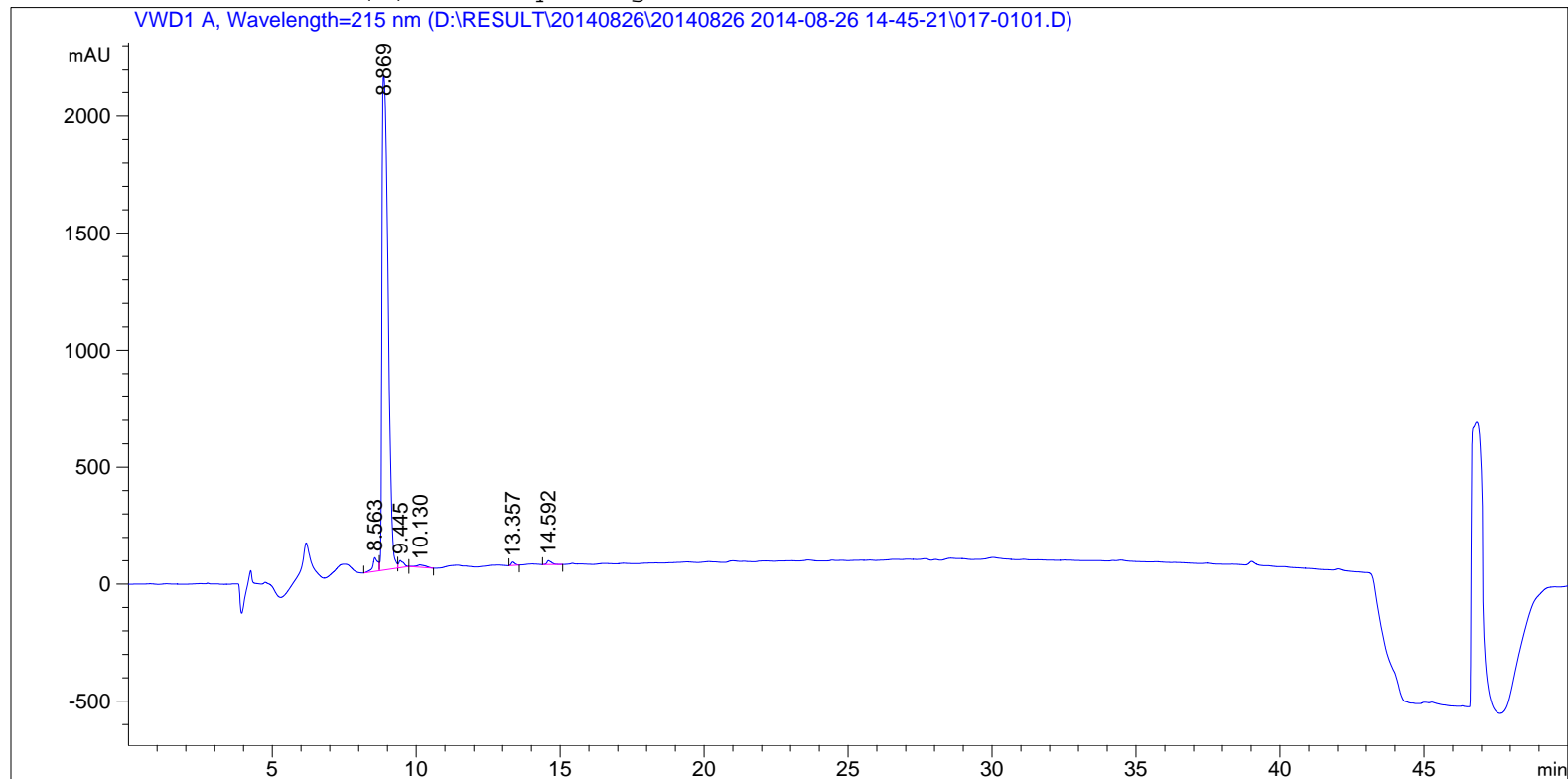
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    1
Acq. Instrument : HPLC 1260                  Location  : Vial 17
Injection Date  : 8/26/2014 2:46:15 PM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\20140826\20140826 2014-08-26 14-45-21\KJ100401(2-62).M (Sequence
Method)
Last changed    : 8/26/2014 2:45:21 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
Rate:1.0ml/min
Mobile Phase A : 0.1%TFA+H2O
Mobile Phase B : 0.1%TFA+ACN
time(min)      : 0      40      40.3      43      43.3      50
B%             : 2      62      95      95      2      2
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	8.563	BV	0.1662	724.66199	58.62439	2.2237
2	8.869	VV	0.2387	3.09708e4	2116.43164	95.0386
3	9.445	VB	0.1541	356.58289	31.01373	1.0942
4	10.130	BB	0.3043	226.75928	9.82393	0.6958
5	13.357	BB	0.1301	127.50169	14.85845	0.3913
6	14.592	BB	0.1520	181.30305	16.52489	0.5564

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
----- ----- ----- ----- ----- ----- -----						
Totals :				3.25876e4	2247.27704	

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-30		
Molecular Formula	C56H92N20O27	Cat#	8117
Molecular Weight	1477.53	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	QAAADTGNSSQVSN		
Item No.	8117_140303_30		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1477.53±2.0	1476.8
3	Peptide Purity (By HPLC)	≥80%	81.7%
4	Identification(Amino Acid Composition by HPLC)	D	3.0
		S	2.6
		E	3.1
		G	1.1
		T	0.9
		A	3.0
	V	1.1	
5	Peptide content	74.9%	

Quality Control By:

wangjun

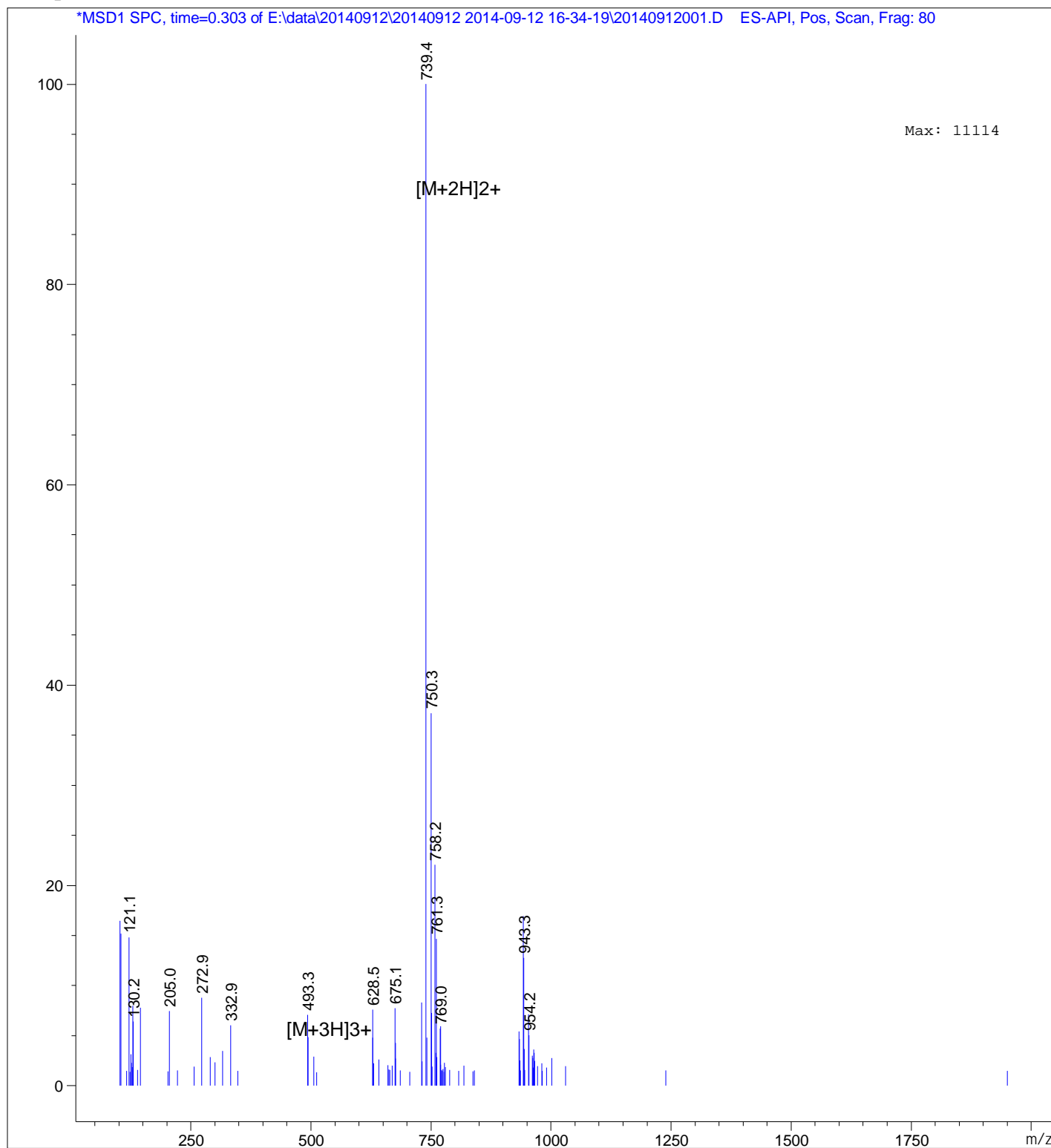
Date:

09/18/2014

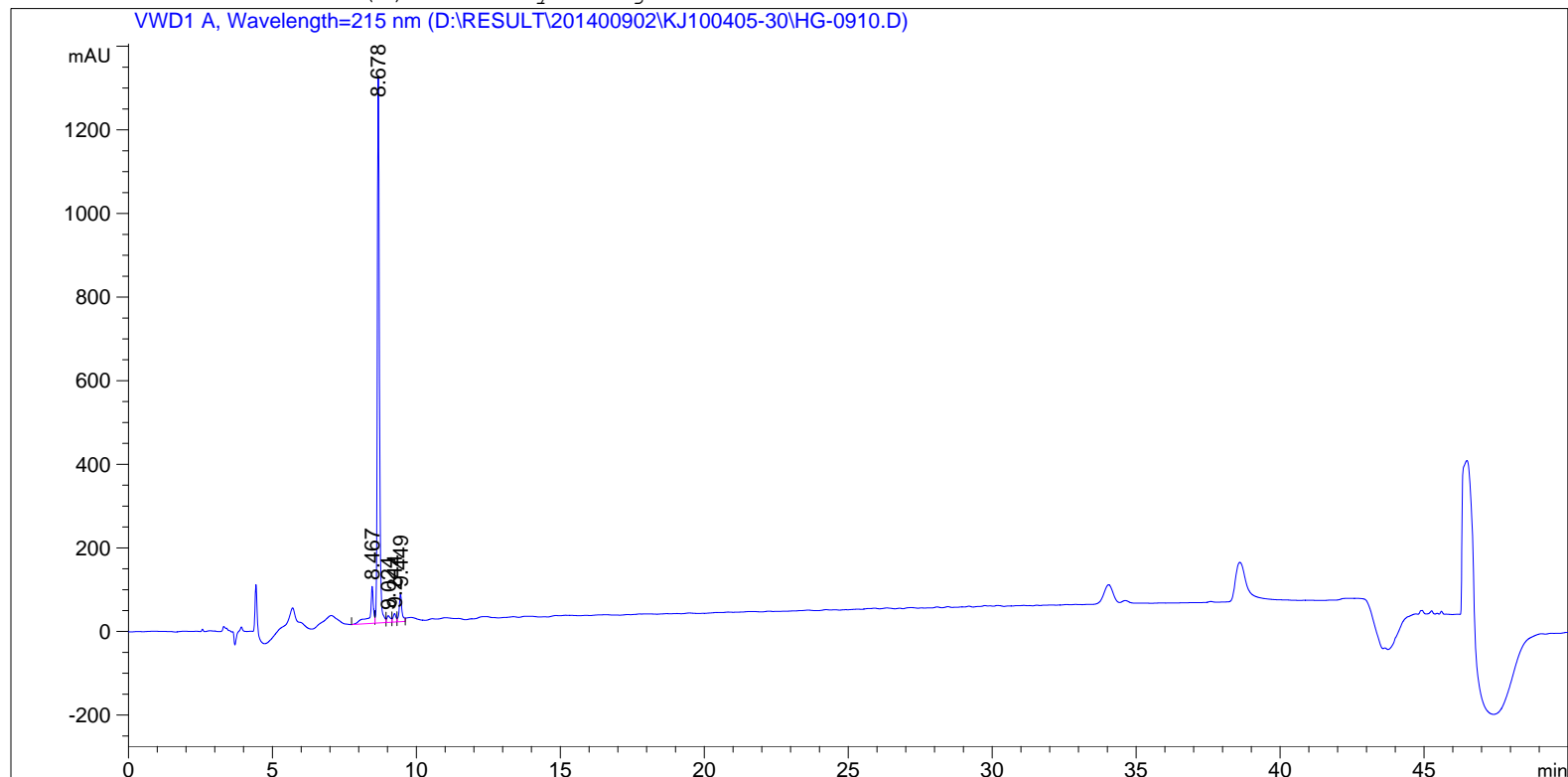
=====

Acq. Operator	: SYSTEM	Seq. Line	: 1
Acq. Instrument	: Agilent6120	Location	: 51
Injection Date	: 9/12/2014 4:35:41 PM	Inj	: 1
		Inj Volume	: 5.000 µl
Acq. Method	: E:\data\20140912\20140912 2014-09-12 16-34-19\LCMS.M		
Last changed	: 9/12/2014 4:34:19 PM by SYSTEM		
Analysis Method	: E:\data\20140912\20140912 2014-09-12 16-34-19\LCMS.M (Sequence Method)		
Last changed	: 9/12/2014 4:38:23 PM by SYSTEM		

MS Spectrum



=====
Acq. Operator :
Acq. Instrument : Instrument 1 Location : Vial 1
Injection Date : 9/10/2014 8:33:12 PM Inj Volume : Manually
Acq. Method : E:\METHODS\10-70IN50MIN.M\2-62IN50MIN.M
Last changed : 9/10/2014 8:11:25 PM
(modified after loading)
Analysis Method : C:\CHEM32\1\METHODS\WSAH.M
Last changed : 7/28/2014 4:59:11 PM by SYSTEM
Additional Info : Peak(s) manually integrated



=====
Area Percent Report
=====

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	8.467	BV	0.1184	768.51190	88.44756	9.4065
2	8.678	VV	0.0784	6672.98096	1309.60718	81.6767
3	9.024	VV	0.1237	143.34280	16.27867	1.7545
4	9.244	VV	0.1038	140.55846	20.29350	1.7204
5	9.449	VV	0.0945	444.60016	67.78197	5.4419

Totals : 8169.99428 1502.40888

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

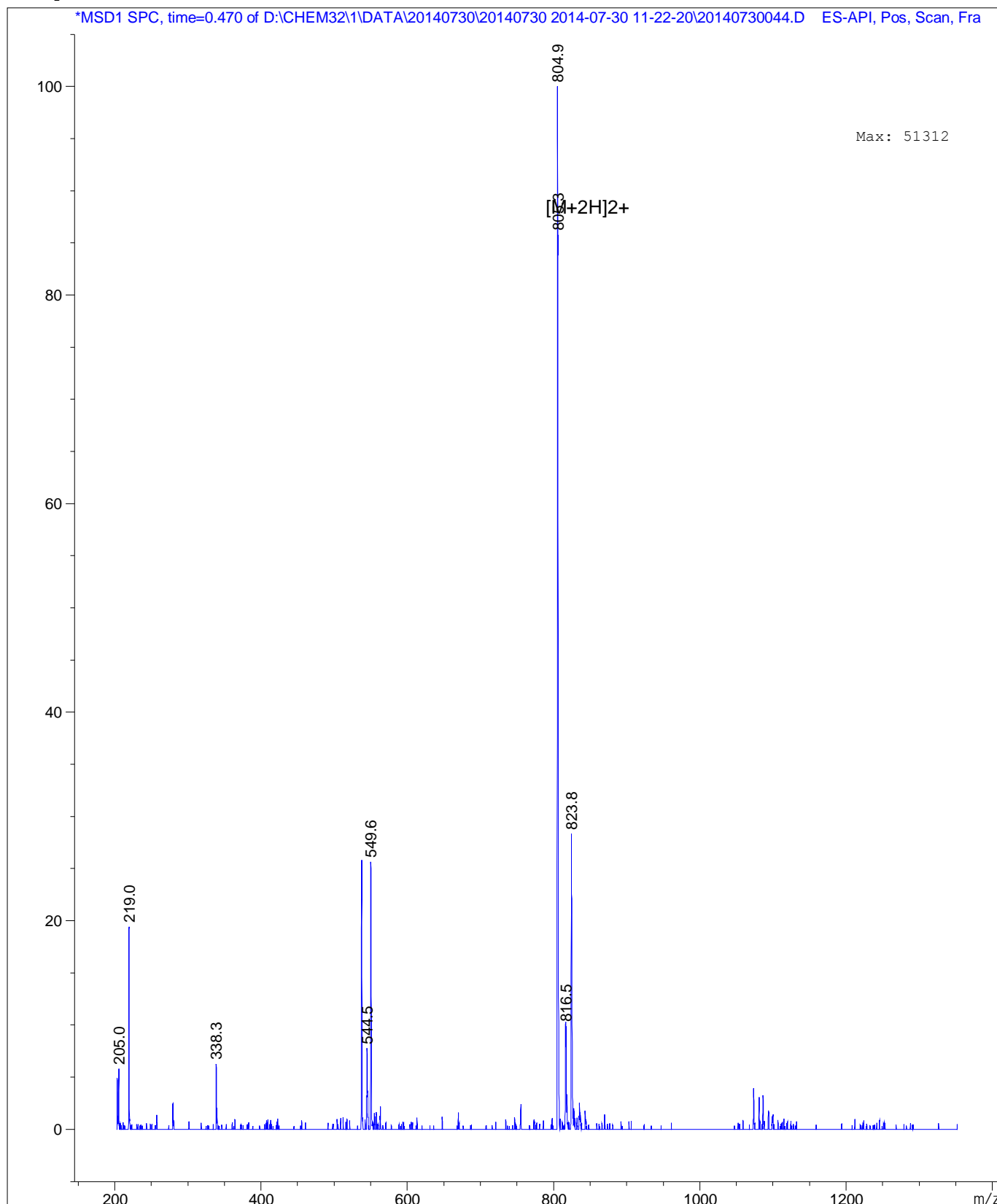
Product Name	HIV-1 Con B Gag Peptide-31		
Molecular Formula	C67H105N19O27	Cat#	8117
Molecular Weight	1608.76	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	DTGNSSQVSQNYPIV		
Item No.	8117_140303_31		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1608.76±2.0	1607.8
3	Peptide Purity (By HPLC)	≥80%	95.4%
4	Identification(Amino Acid Composition by HPLC)	D	3.1
		S	2.6
		E	2.2
		G	1.0
		T	0.9
		P	1.1
		Y	1.0
		V	2.2
I	0.9		
5	Peptide content	82.9%	

Quality Control By: wangjun

Date: 09/18/2014

=====
Acq. Operator : lishichao Seq. Line : 44
Acq. Instrument : 5J-QC-082 Location : Vial 77
Injection Date : 7/30/2014 1:36:43 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140730\20140730 2014-07-30 11-22-20\TEST MS(200-1500)
2.
Last changed : 7/30/2014 10:43:17 AM by lishichao
Analysis Method : D:\METHOD\TEST MS(200-800).M
Last changed : 3/14/2014 11:35:24 PM by YZW

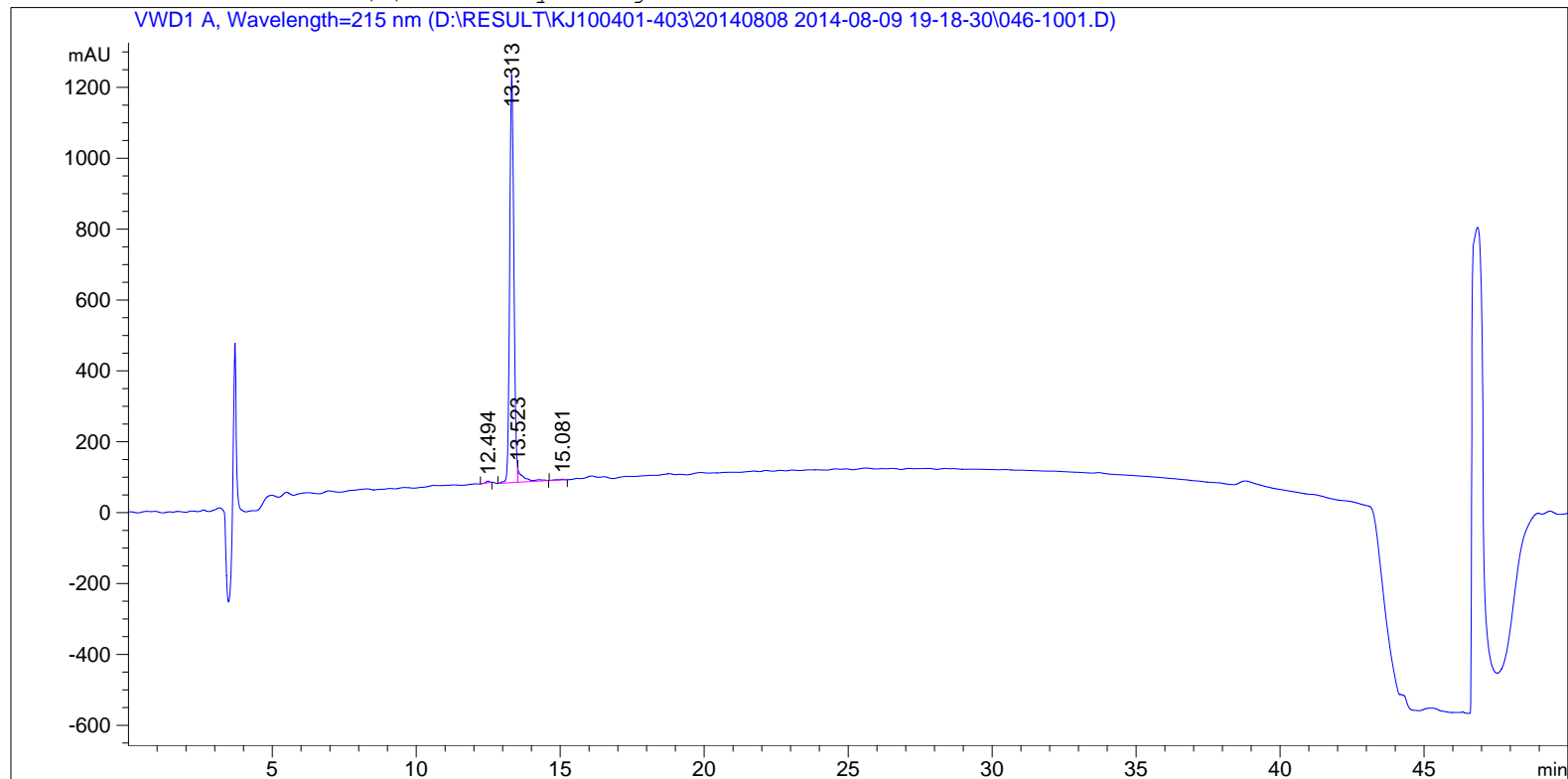
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   10
Acq. Instrument : HPLC 1260                           Location  : Vial 46
Injection Date  : 8/10/2014 2:58:11 AM                Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
                Method)
Last changed    : 8/9/2014 7:18:30 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                Rate:1.0ml/min
                Mobile Phase A:0.1%TFA+H2O
                Mobile Phase B:0.1%TFA+ACN
                time(min)      0      40      40.3      43      43.3      50
                B%            10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.494	BB	0.1344	41.93294	4.92022	0.3438
2	13.313	MF R	0.1685	1.16353e4	1151.15454	95.3909
3	13.523	FM R	0.1922	485.24185	42.08680	3.9782
4	15.081	BB	0.2320	35.02699	2.05328	0.2872

Totals : 1.21975e4 1200.21484

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-32		
Molecular Formula	C73H117N21O26	Cat#	8117
Molecular Weight	1704.95	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	SSQVSQNYPIVQN LQ		
Item No.	8117_140303_32		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1704.95±2.0	1704.0
3	Peptide Purity (By HPLC)	≥80%	90.4%
4	Identification(Amino Acid Composition by HPLC)	D	1.8
		S	2.7
		E	4.4
		P	1.1
		Y	1.0
		V	2.0
		I	0.8
	L	1.2	
5	Peptide content	90.3%	

Quality Control By:

wangjun

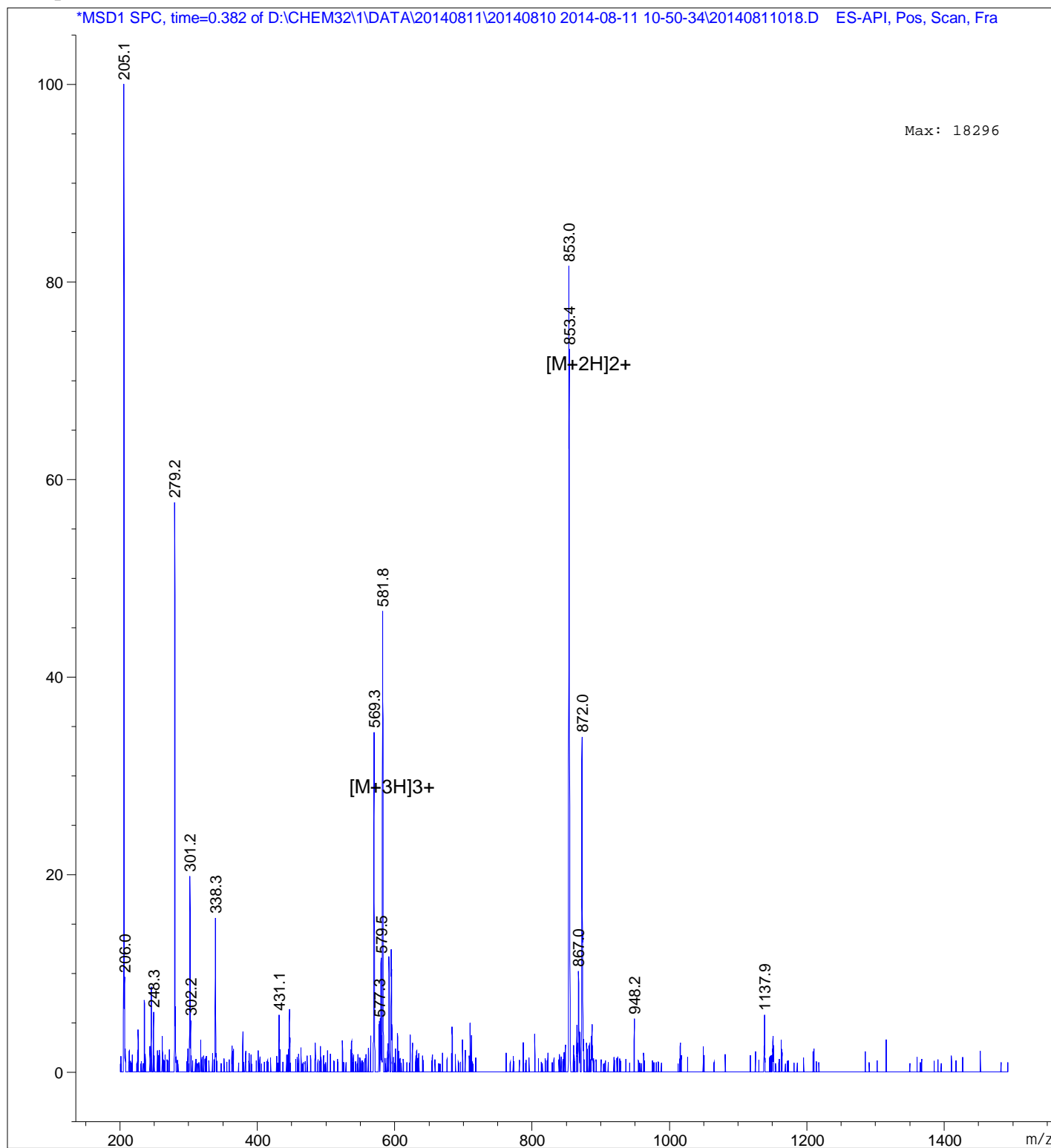
Date:

09/18/2014

=====

Acq. Operator : liusuying Seq. Line : 18
Acq. Instrument : 5J-QC-082 Location : Vial 22
Injection Date : 8/11/2014 11:44:03 AM Inj : 1
 Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140811\20140810 2014-08-11 10-50-34\TEST MS(200-1500)2.
Last changed : 8/10/2014 3:32:14 PM by liusuying
Analysis Method : D:\METHOD\MS(100-1000).M
Last changed : 8/10/2014 4:53:59 PM by liusuying

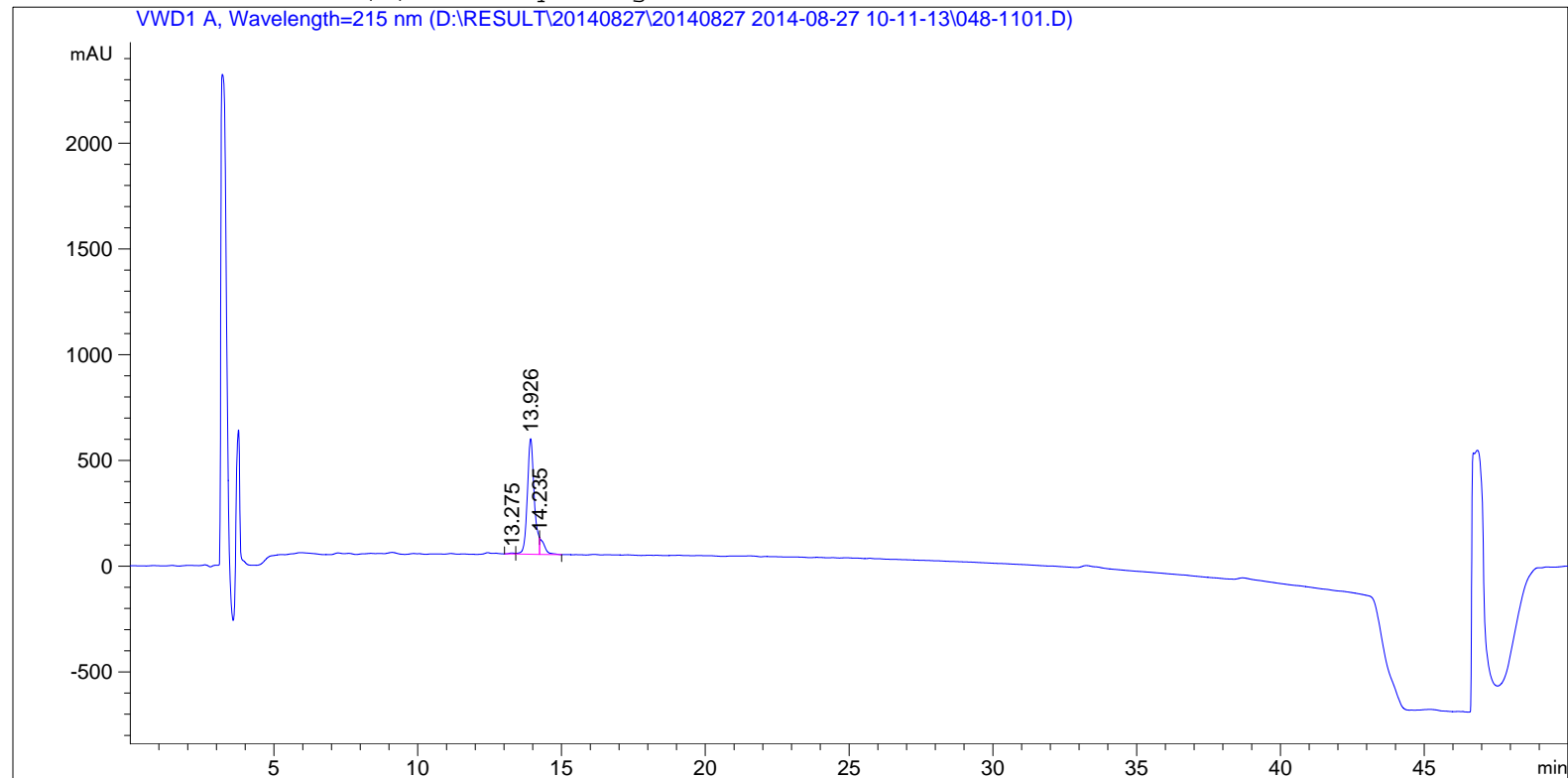
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line   :   11
Acq. Instrument : HPLC 1260                             Location    : Vial 48
Injection Date  : 8/27/2014 6:41:51 PM                Inj         :    1
                                                    Inj Volume  : 20.000 µl
Method          : D:\RESULT\20140827\20140827 2014-08-27 10-11-13\KJ100401.M (Sequence Method)
Last changed    : 8/27/2014 10:11:13 AM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3     43      43.3     50
                  B%            10     70     95      95     10      10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	13.275	BV	0.2067	65.55684	4.85027	0.6503
2	13.926	MF R	0.2779	9111.79785	546.50671	90.3862
3	14.235	FM R	0.1901	903.60126	79.21587	8.9634

Totals : 1.00810e4 630.57285

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-33		
Molecular Formula	C74H119N21O24S	Cat#	8117
Molecular Weight	1719.05	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	SQNYPIVQNLQGQMV		
Item No.	8117_140303_33		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1719.05±2.0	1718.0
3	Peptide Purity (By HPLC)	≥80%	93.2%
4	Identification(Amino Acid Composition by HPLC)	D	1.7
		S	1.0
		E	4.3
		G	1.0
		P	1.2
		Y	1.0
		V	2.0
		M	0.9
		I	0.8
L	1.0		
5	Peptide content	88.6%	

Quality Control By:

wangjun

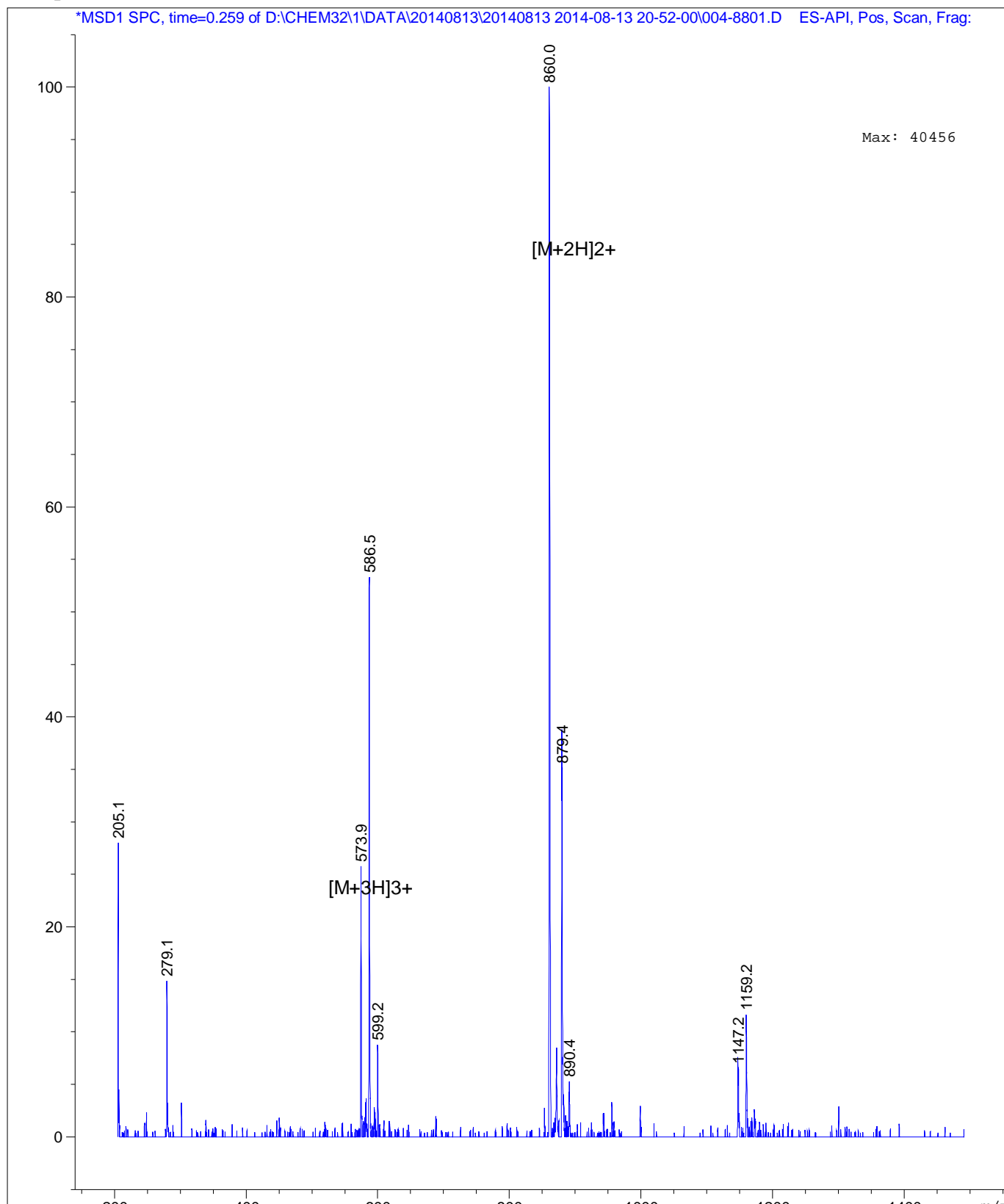
Date:

09/16/2014

=====

Acq. Operator : liusuying Seq. Line : 88
Acq. Instrument : 5J-QC-082 Location : Vial 4
Injection Date : 8/14/2014 1:21:59 AM Inj : 1
 Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500)
 2.
Last changed : 8/11/2014 1:22:13 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed : 4/18/2014 11:29:00 AM by YZW

MS Spectrum



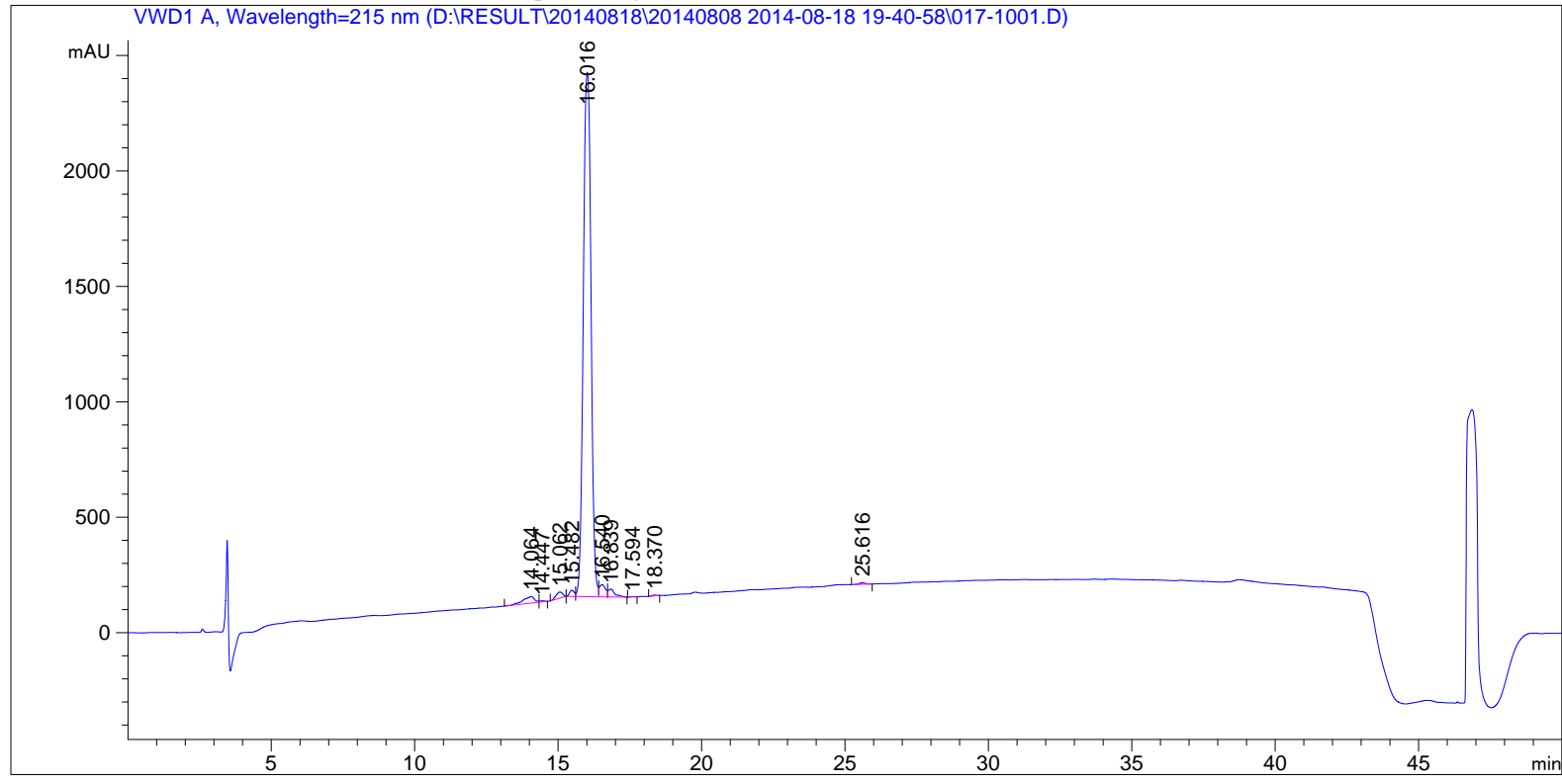
```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   10
Acq. Instrument : HPLC 1260                           Location  : Vial 17
Injection Date  : 8/19/2014 3:20:18 AM                 Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method    : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M
Last changed   : 8/18/2014 7:45:15 PM by SYSTEM
Analysis Method: D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M (Sequence Method)
Last changed   : 8/19/2014 10:12:31 AM by SYSTEM
                (modified after loading)

Method Info    : Cloumn:Agilent HC-C18,5um,4.6*250mm      Cloumn Temp:35°C      Flow
                Rate:1.0ml/min
                Mobile Phase A:0.1%TFA+H2O
                Mobile Phase B:0.1%TFA+ACN
                time(min)      0      40      40.3      43      43.3      50
                B%            10      70      95      95      10      10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	14.064	BV	0.3788	804.55731	28.37200	1.7716
2	14.447	VB	0.1629	51.90116	4.58922	0.1143
3	15.062	BB	0.2595	428.89011	26.68673	0.9444
4	15.482	BV	0.1823	309.87552	26.91497	0.6823

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	16.016	VV	0.2965	4.23328e4	2271.01563	93.2173
6	16.540	VV	0.2192	784.69647	52.86646	1.7279
7	16.839	VB	0.2366	550.05634	33.66793	1.2112
8	17.594	BB	0.1559	17.02259	1.72806	0.0375
9	18.370	BB	0.1680	37.36296	3.45844	0.0823
10	25.616	BB	0.2078	95.87521	6.66695	0.2111

Totals : 4.54131e4 2455.96639

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-34		
Molecular Formula	C73H122N22O21S	Cat#	8117
Molecular Weight	1676.08	Lot#	140303
Manufacturing Date	09/25/2014	Test Date	09/25/2014
Sequence	PIVQNLQGQMVHQAI		
Item No.	8117_140303_34		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1676.08±2.0	1675.2
3	Peptide Purity (By HPLC)	≥80%	95.4%
4	Identification(Amino Acid Composition by HPLC)	D	0.8
		E	4.8
		G	1.1
		H	1.0
		A	1.0
		P	1.0
		V	1.8
		M	0.6
		I	1.8
L	1.1		
5	Peptide content	89.8%	

Quality Control By:

wangjun

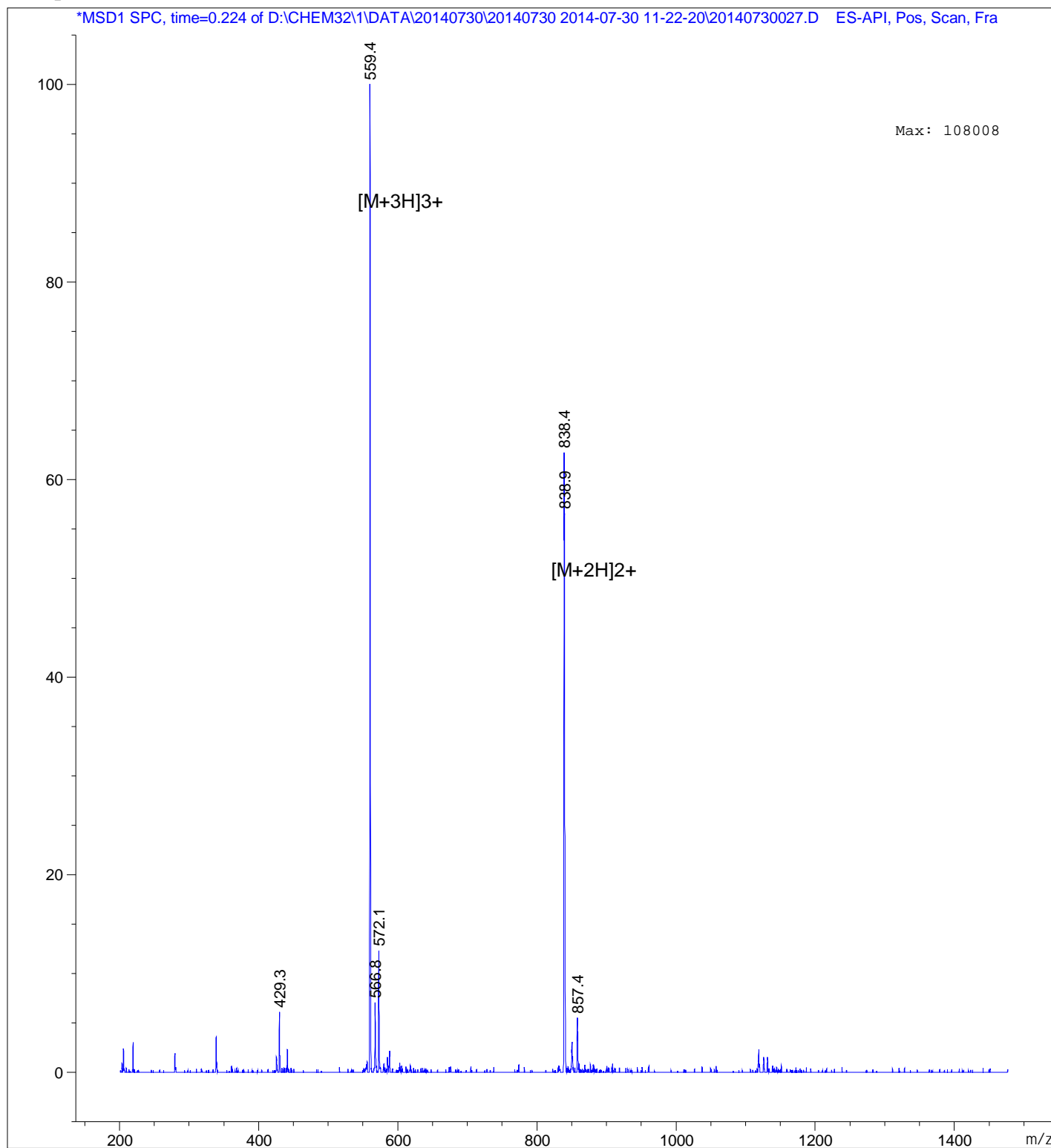
Date:

09/25/2014

=====

Acq. Operator : lishichao	Seq. Line : 27
Acq. Instrument : 5J-QC-082	Location : Vial 36
Injection Date : 7/30/2014 12:43:47 PM	Inj : 1
	Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140730\20140730 2014-07-30 11-22-20\TEST MS(200-1500)2.	
Last changed : 7/30/2014 10:43:17 AM by lishichao	
Analysis Method : D:\METHOD\LT MS(200-800).M	
Last changed : 7/3/2014 2:51:30 PM by lishichao	

MS Spectrum



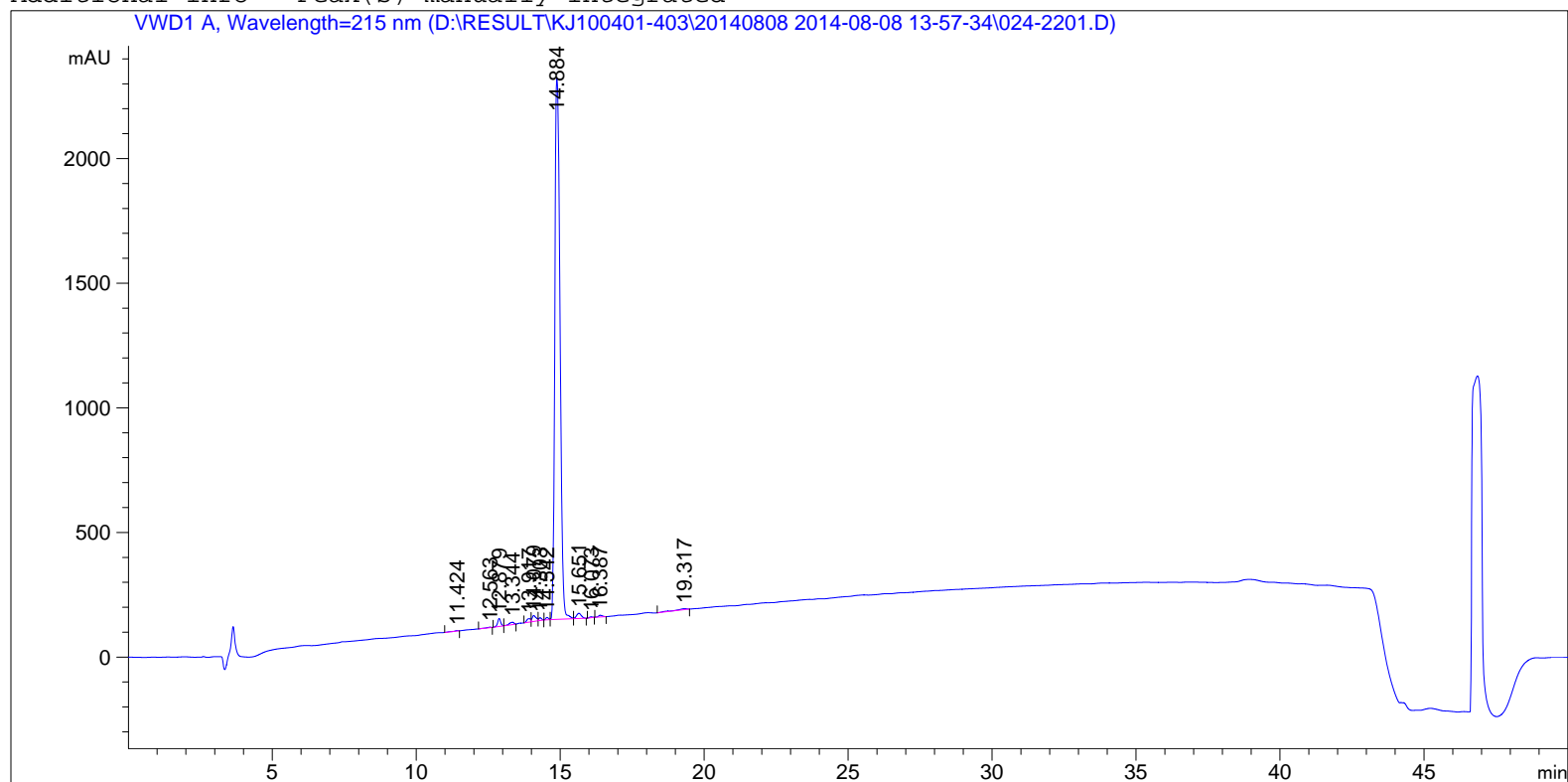
```

=====
Acq. Operator   : SYSTEM                      Seq. Line :   22
Acq. Instrument : HPLC 1260                  Location  : Vial 24
Injection Date  : 8/9/2014 7:48:49 AM       Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M
Last changed    : 8/8/2014 1:57:34 PM by SYSTEM
Analysis Method  : D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M (Sequence
Method)
Last changed    : 8/10/2014 4:18:06 PM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5um,4.6*250mm           Cloumn Temp:35°C           Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution        :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	11.424	BB	0.1742	20.30958	1.62110	0.0713
2	12.563	BB	0.1757	24.01584	1.88441	0.0843
3	12.879	BV	0.1102	233.80930	32.01134	0.8212

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
4	13.344	VB	0.1523	102.12457	9.21284	0.3587
5	13.917	BV	0.1452	127.61328	14.14669	0.4482
6	14.079	VV	0.1344	227.36984	24.03306	0.7986
7	14.303	VB	0.1003	71.74694	10.82820	0.2520
8	14.542	BV	0.1021	61.91718	9.36776	0.2175
9	14.884	VV	0.1988	2.71512e4	2171.94360	95.3591
10	15.651	VB	0.1776	247.01062	21.41637	0.8675
11	16.073	BB	0.1190	24.56434	3.33308	0.0863
12	16.387	BB	0.1316	61.86783	6.90247	0.2173
13	19.317	BB	0.4348	119.02742	3.74543	0.4180

Totals : 2.84726e4 2310.44634

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-35		
Molecular Formula	C70H118N24O22S	Cat#	8117
Molecular Weight	1680.01	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	NLQGQMVHQAI SPRT		
Item No.	8117_140303_35		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1680.01±2.0	1679.4
3	Peptide Purity (By HPLC)	≥80%	80.1%
4	Identification(Amino Acid Composition by HPLC)	D	0.9
		S	0.9
		E	3.3
		G	1.1
		H	0.8
		R	1.2
		T	1.0
		A	1.0
		P	1.0
		V	0.9
		M	0.7
	I	1.0	
	L	1.1	
5	Peptide content	85.8%	

Quality Control By:

wangjun

Date:

09/18/2014

Acq. Operator : liusuying

Seq. Line : 38

Acq. Instrument : 5J-QC-082

Location : Vial 62

Injection Date : 8/4/2014 8:23:04 PM

Inj : 1

Inj Volume : 3.0 μ l

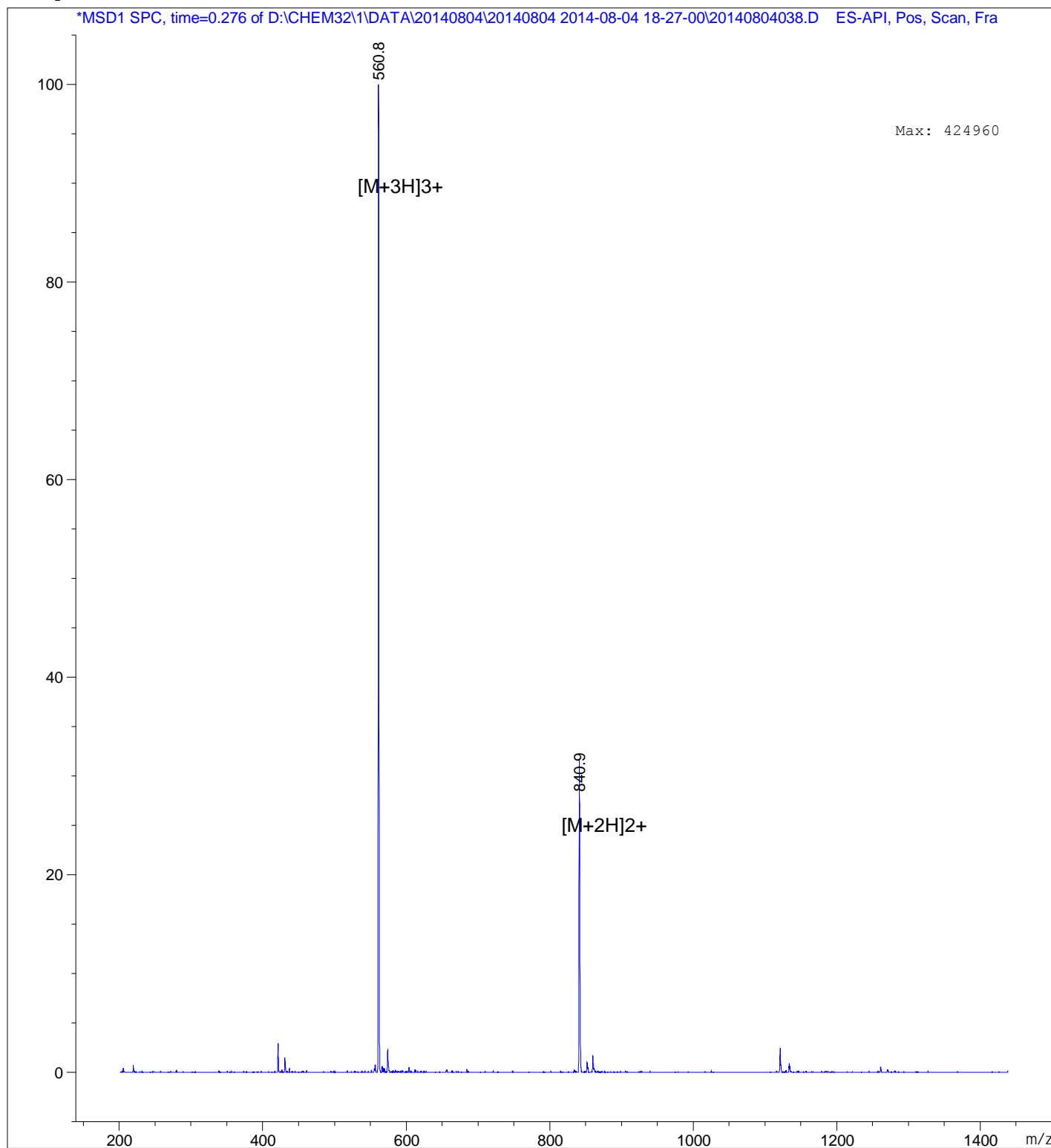
Acq. Method : D:\CHEM32\1\DATA\20140804\20140804 2014-08-04 18-27-00\TEST MS(200-1500)2.

Last changed : 8/4/2014 6:24:11 PM by liusuying

Analysis Method : D:\METHOD\TEST MS(200-1500)2.M

Last changed : 8/4/2014 6:24:11 PM by liusuying

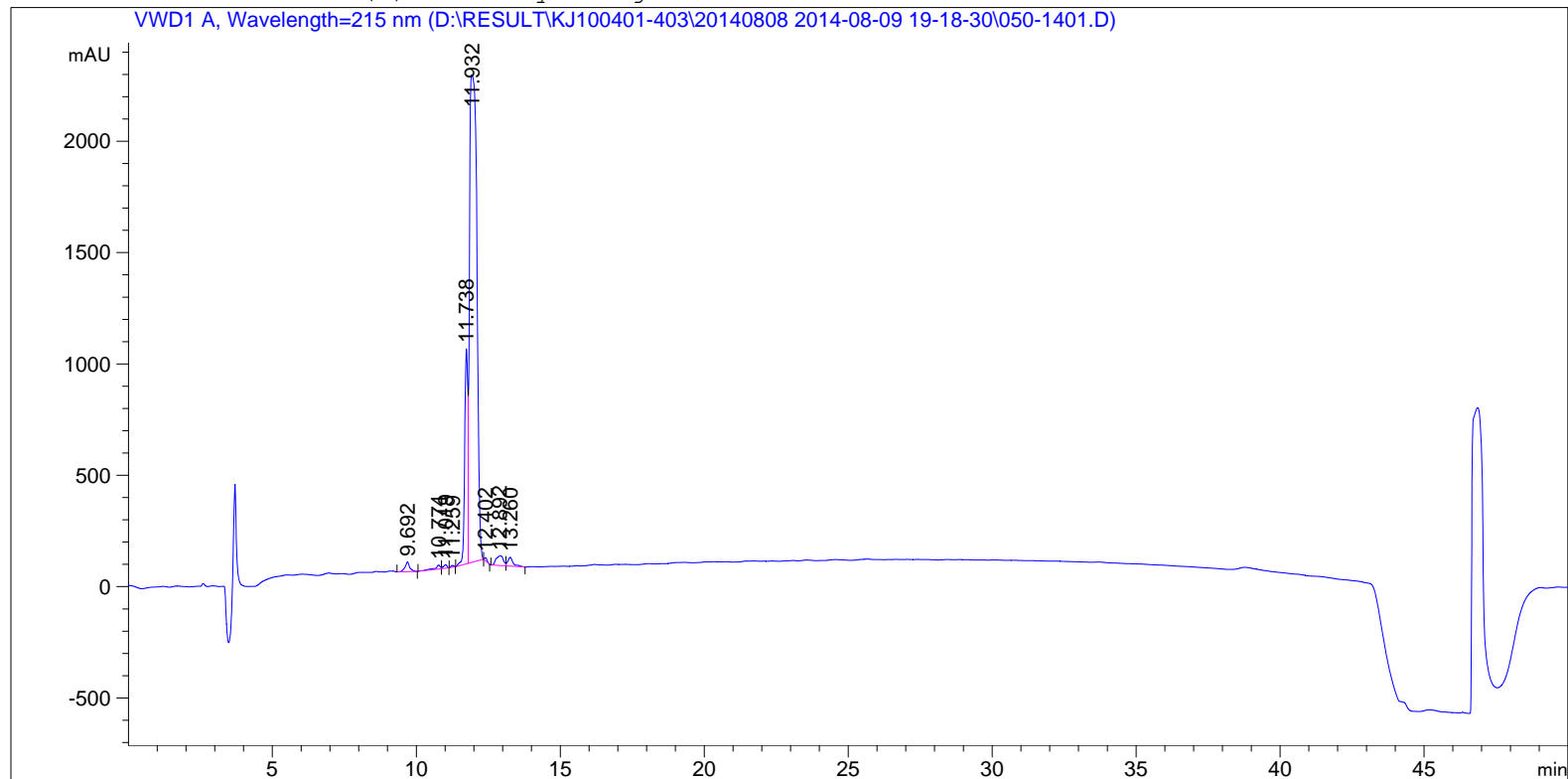
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :   14
Acq. Instrument : HPLC 1260                  Location  : Vial 50
Injection Date  : 8/10/2014 6:22:05 AM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
                : Method)
Last changed    : 8/9/2014 7:18:30 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                : Rate:1.0ml/min
                : Mobile Phase A:0.1%TFA+H2O
                : Mobile Phase B:0.1%TFA+ACN
                : time(min)      0      40      40.3      43      43.3      50
                : B%             10     70     95       95     10       10
=====
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	9.692	BB	0.1589	493.62238	43.65952	1.0277
2	10.774	BV	0.1775	229.86084	17.81790	0.4786
3	11.019	VB	0.1309	135.95166	15.41553	0.2831
4	11.259	BB	0.1179	55.44444	7.89461	0.1154
5	11.738	BV	0.1143	7308.56445	965.33002	15.2168
6	11.932	VB	0.2850	3.84636e4	2189.14746	80.0834

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
7	12.402	BB	0.0951	83.17348	14.04586	0.1732
8	12.892	BV	0.2256	756.30414	42.50748	1.5747
9	13.260	VB	0.1858	502.91110	39.41781	1.0471

Totals : 4.80295e4 3335.23619

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-36		
Molecular Formula	C77H122N24O21S	Cat#	8117
Molecular Weight	1752.11	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	QMVHQAI SPRTLNAW		
Item No.	8117_140303_36		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1752.11±2.0	1751.1
3	Peptide Purity (By HPLC)	≥80%	88.9%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		S	1.2
		E	2.0
		H	1.0
		R	1.1
		T	0.9
		A	2.0
		P	1.0
		V	1.0
		M	0.6
		I	1.0
L	1.0		
5	Peptide content	89.3%	

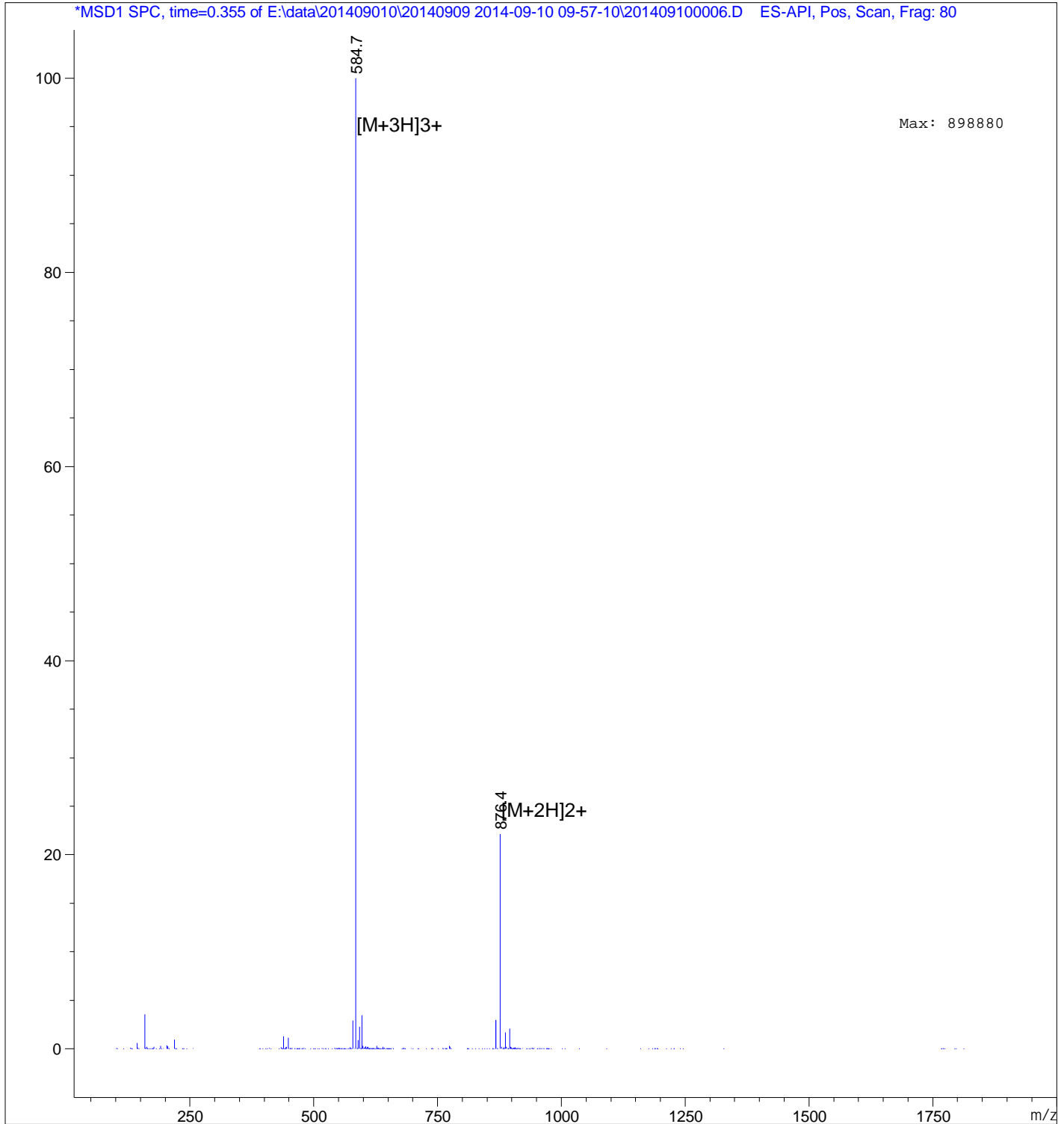
Quality Control By: wangjun

Date: 09/16/2014

=====

Acq. Operator	: SYSTEM	Seq. Line	: 6
Acq. Instrument	: Agilent6120	Location	: 6
Injection Date	: 9/10/2014 10:12:38 AM	Inj	: 1
		Inj Volume	: 5.000 µl
Acq. Method	: E:\data\201409010\20140909 2014-09-10 09-57-10\LCMS.M		
Last changed	: 9/10/2014 9:57:10 AM by SYSTEM		
Analysis Method	: E:\data\201409010\20140909 2014-09-10 09-57-10\LCMS.M (Sequence Method)		
Last changed	: 9/10/2014 12:58:33 PM by SYSTEM		
	(modified after loading)		

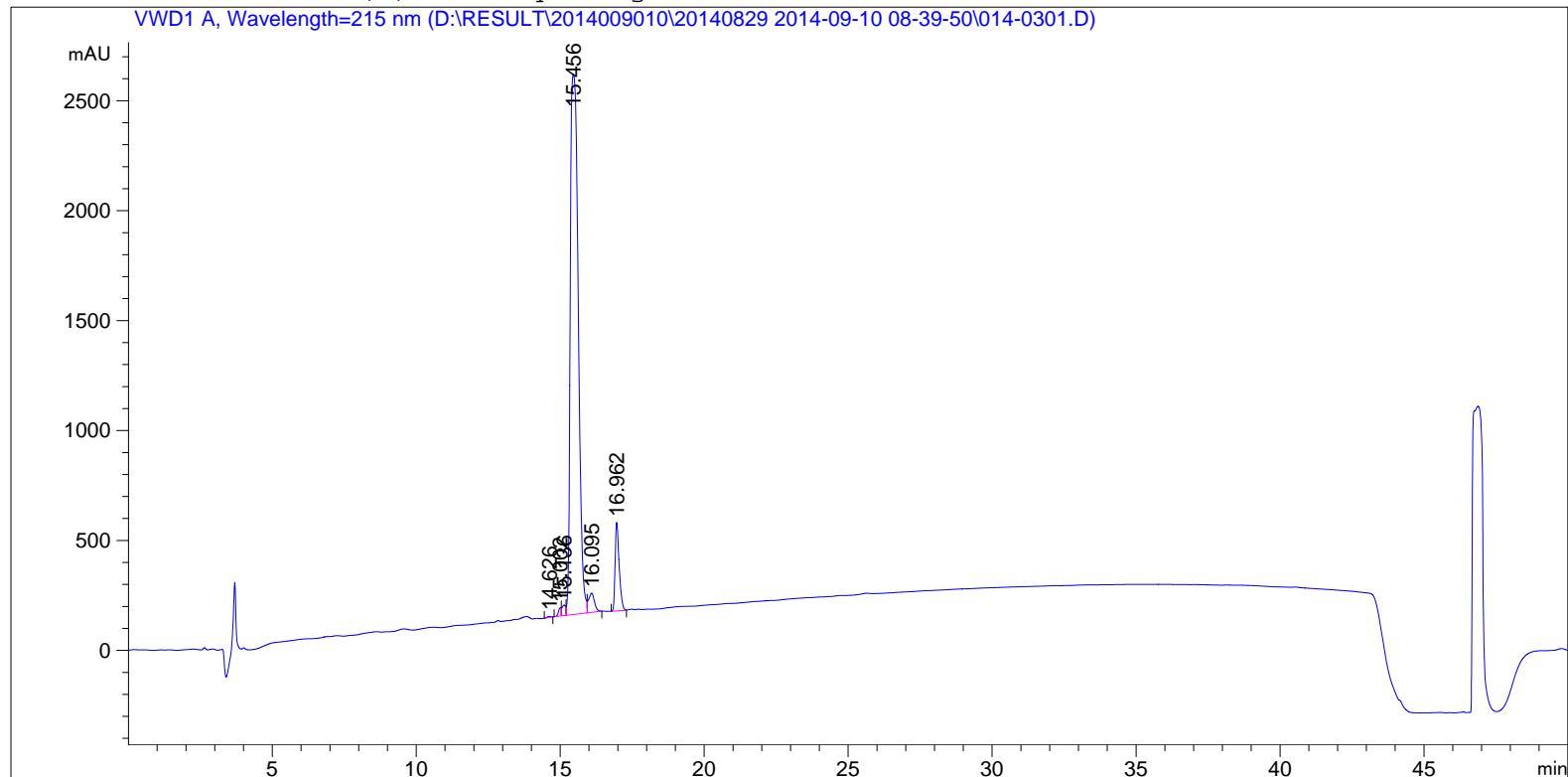
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :    3
Acq. Instrument : HPLC 1260                           Location  : Vial 14
Injection Date  : 9/10/2014 10:22:33 AM              Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\2014009010\20140829 2014-09-10 08-39-50\KJ100401.M (Sequence Method)
Last changed    : 9/10/2014 8:39:50 AM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	14.626	BB	0.1323	37.99214	4.55737	0.0718
2	15.002	BV	0.0945	230.80295	37.64249	0.4364
3	15.136	VV	0.1298	425.17352	47.80069	0.8040
4	15.456	VV	0.3054	4.70296e4	2456.14307	88.9279
5	16.095	VB	0.2099	1245.05127	87.55077	2.3543
6	16.962	BV	0.1455	3916.44238	402.44849	7.4056

Totals : 5.28850e4 3036.14288

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-37		
Molecular Formula	C77H128N22O20	Cat#	8117
Molecular Weight	1682.08	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	QAISPRTLNAWVKVV		
Item No.	8117_140303_37		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1682.08±2.0	1681.5
3	Peptide Purity (By HPLC)	≥80%	84.6%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	1.2
		E	1.0
		R	1.1
		T	1.0
		A	2.0
		P	1.0
		V	2.9
		K	1.0
		I	0.9
L	0.8		
5	Peptide content	83.9%	

Quality Control By:

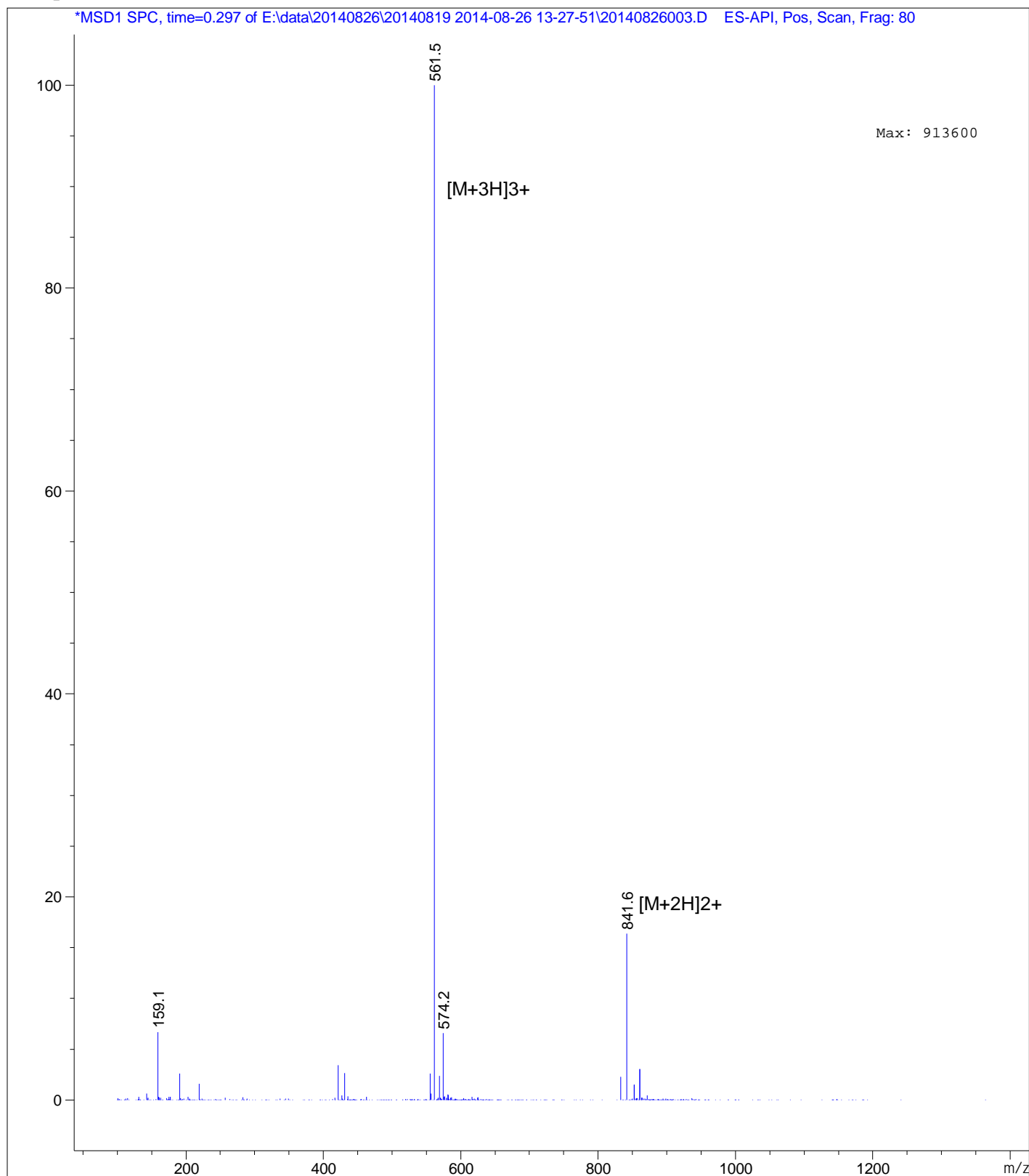
wangjun

Date:

09/18/2014

=====
Acq. Operator : SYSTEM Seq. Line : 3
Acq. Instrument : Agilent6120 Location : 43
Injection Date : 8/26/2014 1:34:57 PM Inj : 1
 Inj Volume : 5.000 µl
Method : E:\data\20140826\20140819 2014-08-26 13-27-51\LCMS.M (Sequence Method)
Last changed : 8/26/2014 1:27:51 PM by SYSTEM

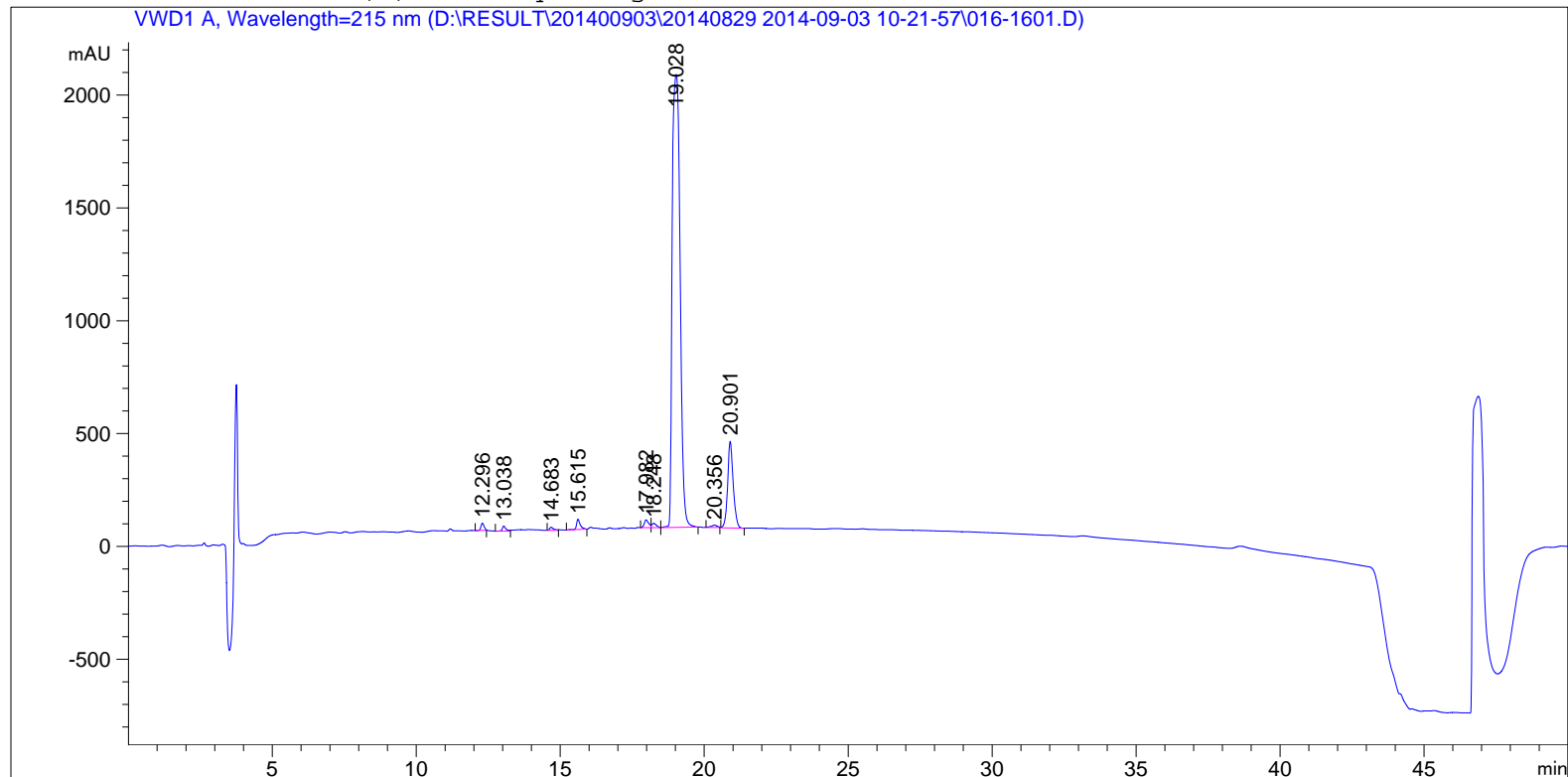
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   16
Acq. Instrument : HPLC 1260                           Location  : Vial 16
Injection Date  : 9/3/2014 11:07:19 PM                Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M (Sequence Method)
Last changed    : 9/3/2014 7:20:03 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
=====
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.296	MM R	0.1242	234.58318	31.48114	0.5251
2	13.038	MM R	0.1536	207.91737	22.56335	0.4654
3	14.683	MM R	0.1681	136.70490	13.55051	0.3060
4	15.615	BB	0.1299	413.06186	45.93757	0.9246
5	17.982	BV	0.1539	364.32120	34.59267	0.8155
6	18.248	VB	0.1580	207.39581	19.04993	0.4642
7	19.028	BB	0.3069	3.78174e4	2006.69568	84.6469

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
8	20.356	MM R	0.2343	149.67493	10.64719	0.3350
9	20.901	VB	0.1993	5145.57324	383.96249	11.5174

Totals : 4.46766e4 2568.48053

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

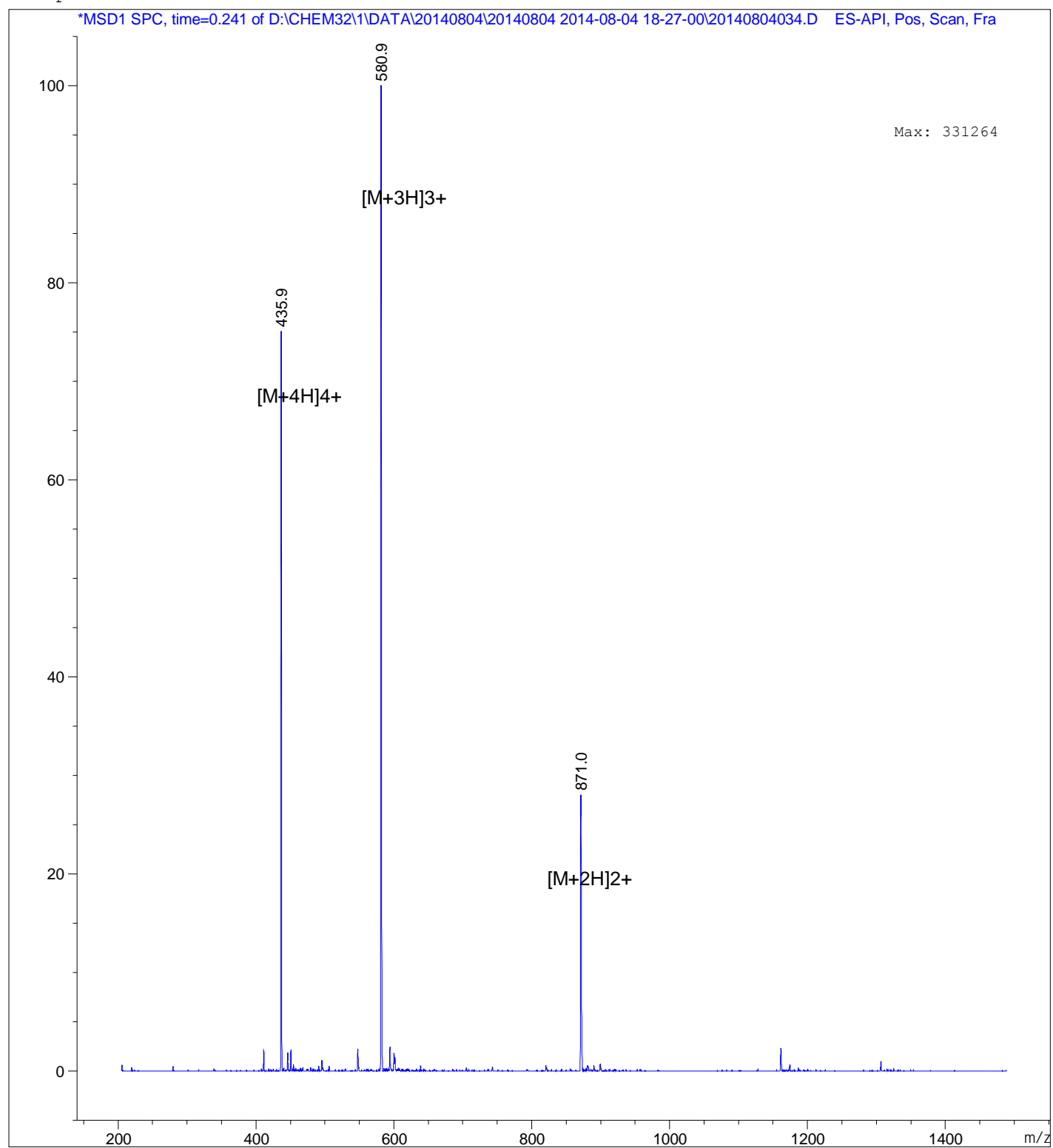
Product Name	HIV-1 Con B Gag Peptide-38		
Molecular Formula	C79H130N22O22	Cat#	8117
Molecular Weight	1740.11	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	PRTLNAWVKVVEEKA		
Item No.	8117_140303_38		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1740.11±2.0	1739.7
3	Peptide Purity (By HPLC)	≥80%	91.3%
4	Identification(Amino Acid Composition by HPLC)	D	1.2
		E	2.1
		R	1.0
		T	1.0
		A	2.0
		P	1.0
		V	2.6
		K	2.0
	L	0.9	
5	Peptide content	84.9%	

Quality Control By: wangjun

Date: 09/16/2014

=====
Acq. Operator : liusuying Seq. Line : 34
Acq. Instrument : 5J-QC-082 Location : Vial 57
Injection Date : 8/4/2014 8:10:42 PM Inj : 1
 Inj Volume: 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140804\20140804 2014-08-04 18-27-00\TEST MS(200-1500)2.
Last changed : 8/4/2014 6:24:11 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M
Last changed : 8/4/2014 6:24:11 PM by liusuying

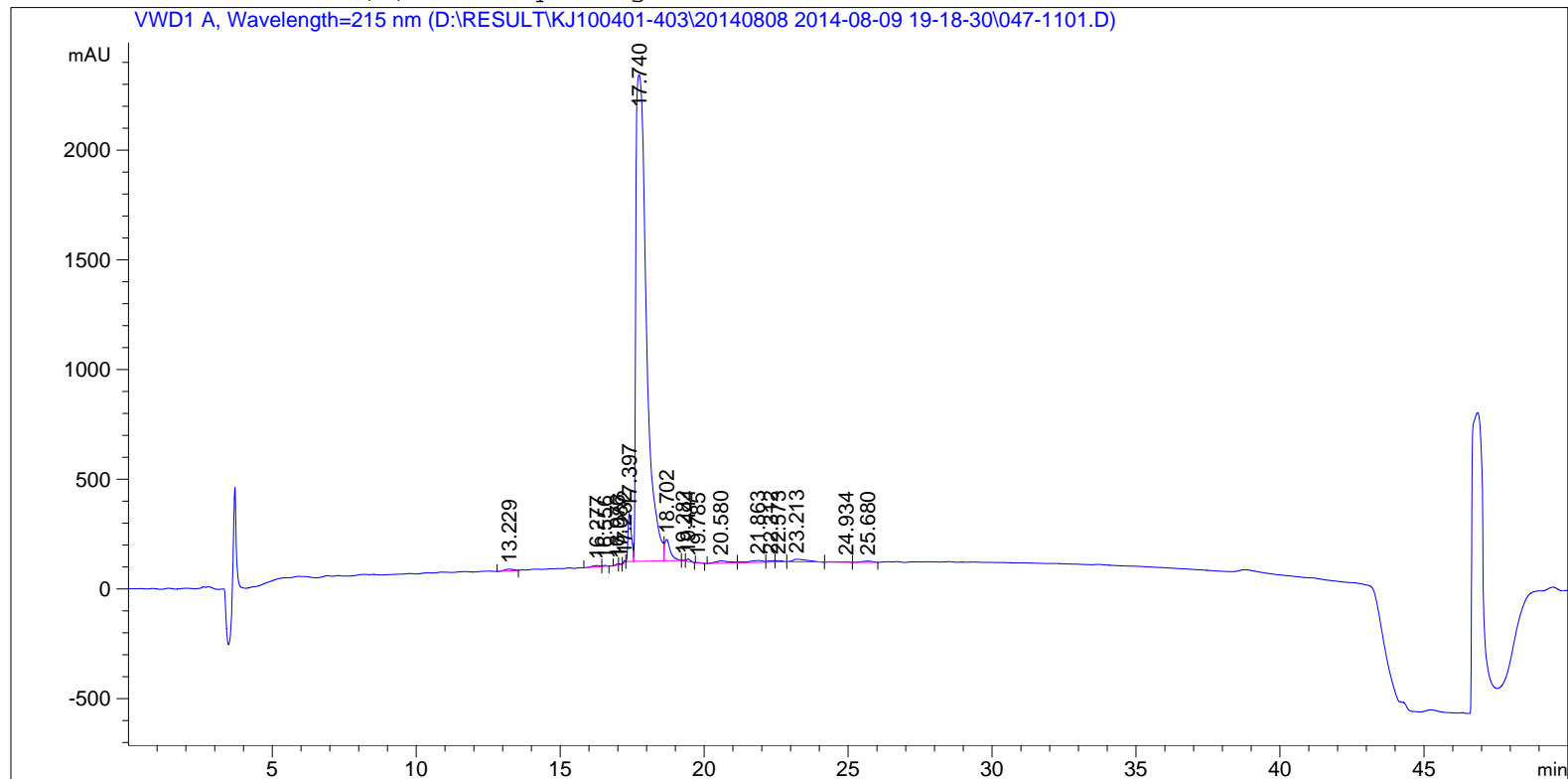
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   11
Acq. Instrument : HPLC 1260                           Location  : Vial 47
Injection Date  : 8/10/2014 3:49:07 AM                Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
Method)
Last changed   : 8/9/2014 7:18:30 PM by SYSTEM
Method Info    : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
Rate:1.0ml/min
Mobile Phase A:0.1%TFA+H2O
Mobile Phase B:0.1%TFA+ACN
time(min)      0      40      40.3      43      43.3      50
B%             10     70      95      95      10      10
    
```

Additional Info : Peak(s) manually integrated



=====
Area Percent Report
=====

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
    
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	13.229	BV	0.3760	196.94897	8.35468	0.3204
2	16.277	BV	0.3267	120.54408	6.01895	0.1961
3	16.556	VB	0.1342	37.89326	4.36742	0.0616
4	16.976	BV	0.0878	29.34318	5.12708	0.0477
5	17.087	VB	0.0782	20.35375	3.94269	0.0331
6	17.232	BB	0.0632	35.80002	9.23867	0.0582

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
7	17.397	BV	0.1278	1818.29260	219.14708	2.9578
8	17.740	VV	0.3914	5.61549e4	2217.53174	91.3478
9	18.702	VB	0.1973	1353.61829	97.28990	2.2019
10	19.282	BV	0.0880	20.01491	3.43315	0.0326
11	19.441	VB	0.1373	108.78183	11.60891	0.1770
12	19.785	BB	0.1957	17.17214	1.41367	0.0279
13	20.580	BV	0.4438	367.63541	10.64690	0.5980
14	21.863	VV	0.5124	331.81183	8.77109	0.5398
15	22.312	VV	0.2529	107.72012	6.61863	0.1752
16	22.573	VB	0.2197	96.71154	6.07667	0.1573
17	23.213	BB	0.4811	440.67606	11.78928	0.7169
18	24.934	BB	0.4174	76.78268	2.49947	0.1249
19	25.680	BB	0.4205	138.72432	5.26385	0.2257

Totals : 6.14737e4 2639.13981

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-39		
Molecular Formula	C80H121N19O24	Cat#	8117
Molecular Weight	1733.02	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	NAWVKVVEEKAFSPE		
Item No.	8117_140303_39		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1733.02±2.0	1732.2
3	Peptide Purity (By HPLC)	≥80%	93.2%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	1.0
		E	3.2
		A	2.1
		P	1.1
		V	3.0
		K	2.2
F	1.0		
5	Peptide content	88.7%	

Quality Control By:

wangjun

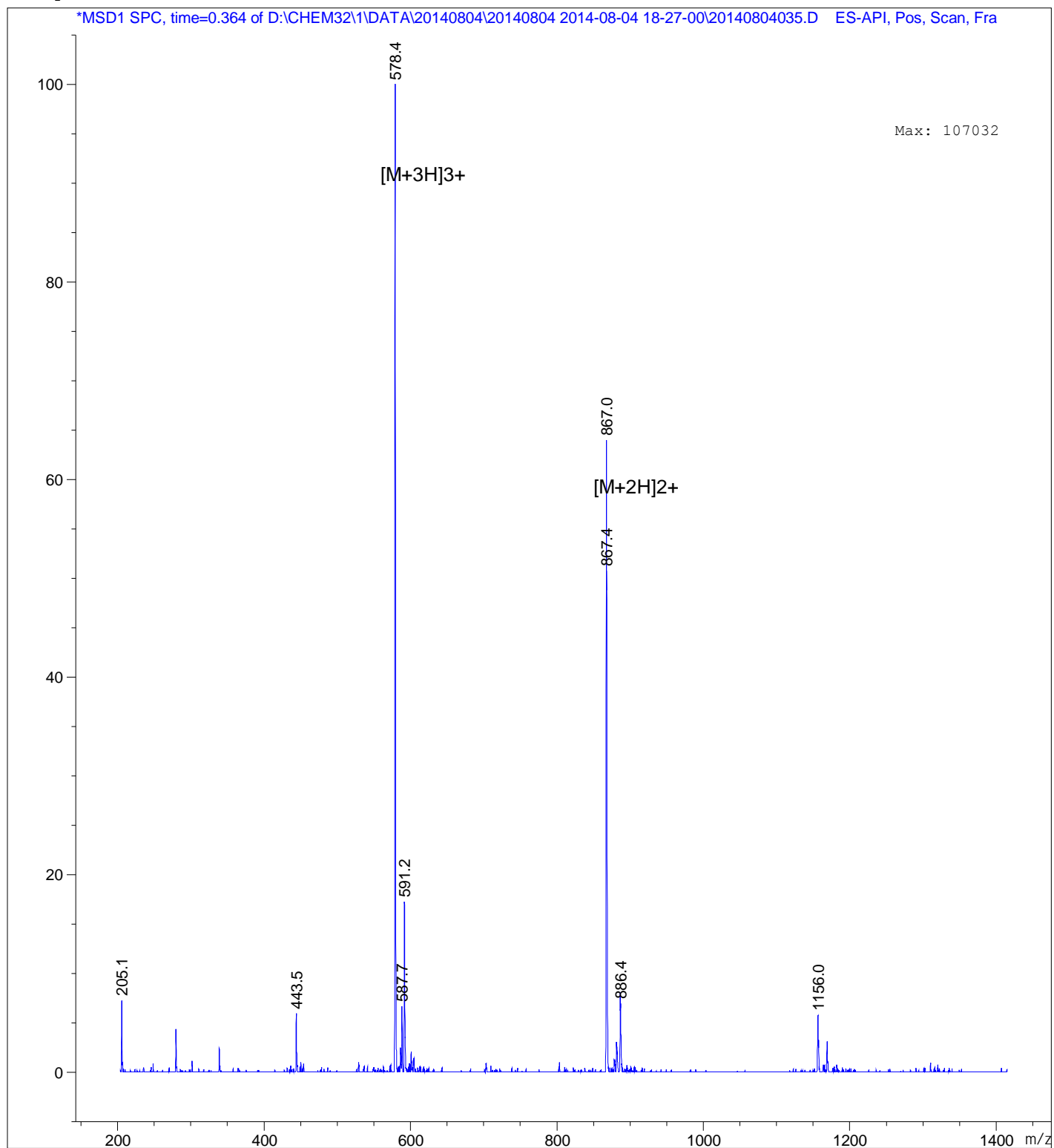
Date:

09/16/2014

=====

Acq. Operator : liusuying	Seq. Line : 35
Acq. Instrument : 5J-QC-082	Location : Vial 58
Injection Date : 8/4/2014 8:13:46 PM	Inj : 1
	Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140804\20140804 2014-08-04 18-27-00\TEST MS(200-1500)2.	
Last changed : 8/4/2014 6:24:11 PM by liusuying	
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M	
Last changed : 8/4/2014 6:24:11 PM by liusuying	

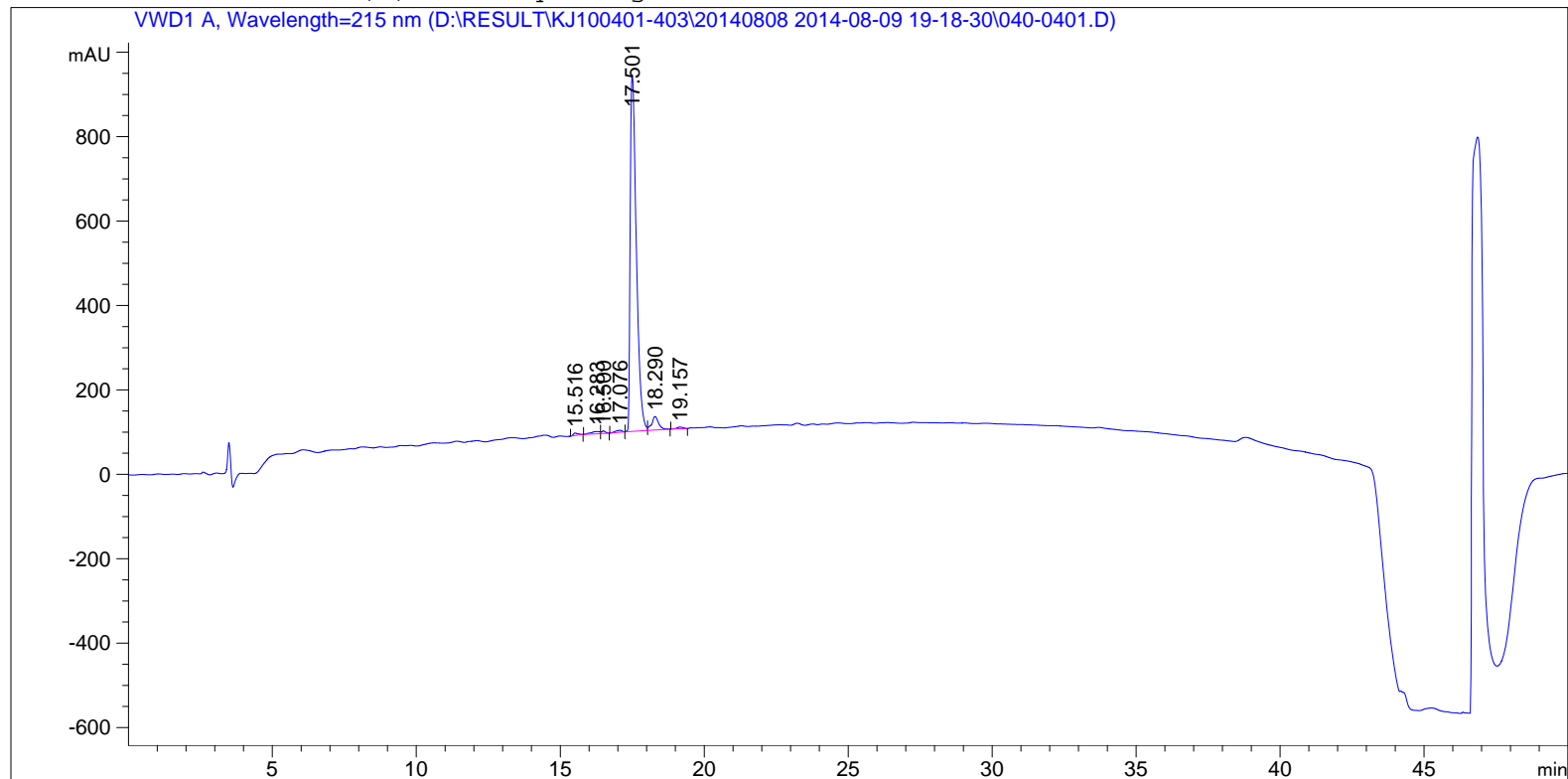
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :    4
Acq. Instrument : HPLC 1260                           Location  : Vial 40
Injection Date  : 8/9/2014 9:52:22 PM                 Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
                : Method)
Last changed    : 8/9/2014 7:18:30 PM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                : Rate:1.0ml/min
                : Mobile Phase A:0.1%TFA+H2O
                : Mobile Phase B:0.1%TFA+ACN
                : time(min)      0      40      40.3      43      43.3      50
                : B%             10      70      95      95      10      10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	15.516	BB	0.1643	67.97398	5.94765	0.5099
2	16.283	BV	0.3288	116.12553	5.23450	0.8712
3	16.500	VB	0.1405	56.61964	5.87257	0.4248
4	17.076	BB	0.2788	76.45268	4.60292	0.5735
5	17.501	BV	0.2226	1.24262e4	844.67792	93.2203
6	18.290	VB	0.2431	529.85822	31.84637	3.9750

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
7	19.157	BB	0.2100	56.70390	4.03405	0.4254

Totals : 1.33299e4 902.21599

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-40		
Molecular Formula	C78H127N17O23S	Cat#	8117
Molecular Weight	1703.1	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	KVVEEKAFSPEVIPM		
Item No.	8117_140303_40		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1703.1±2.0	1702.5
3	Peptide Purity (By HPLC)	≥80%	95.4%
4	Identification(Amino Acid Composition by HPLC)	S	0.9
		E	3.2
		A	1.0
		P	2.1
		V	2.7
		M	1.0
		K	2.1
		I	1.0
F	1.1		
5	Peptide content	92.5%	

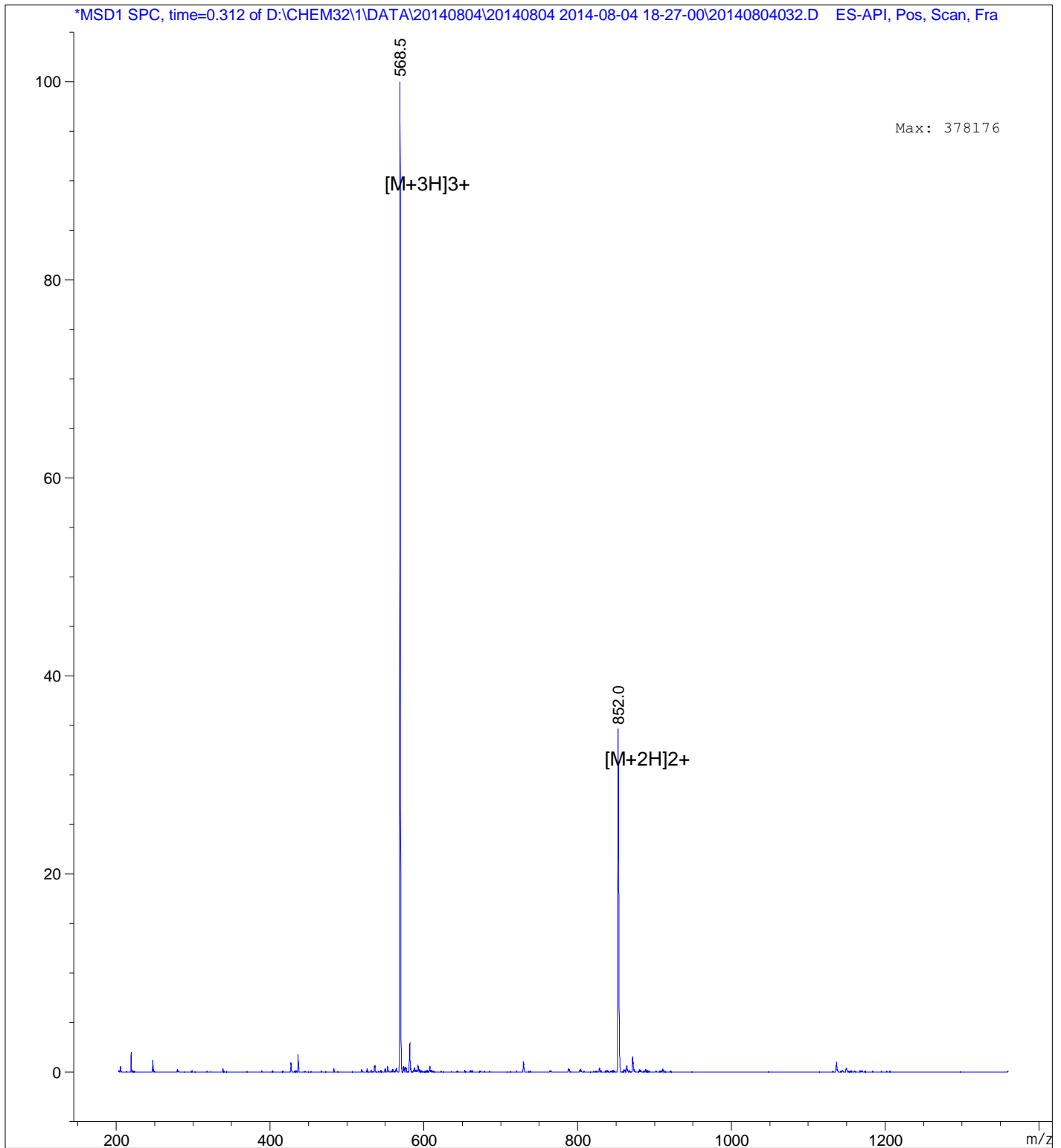
Quality Control By: wangjun

Date: 09/24/2014

=====

Acq. Operator : liusuying	Seq. Line : 32
Acq. Instrument : 5J-QC-082	Location : Vial 55
Injection Date : 8/4/2014 8:04:33 PM	Inj : 1
	Inj Volume : 3.0 μ l
Acq. Method : D:\CHEM32\1\DATA\20140804\20140804 2014-08-04 18-27-00\TEST MS(200-1500)2.	
Last changed : 8/4/2014 6:24:11 PM by liusuying	
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M	
Last changed : 8/4/2014 6:24:11 PM by liusuying	

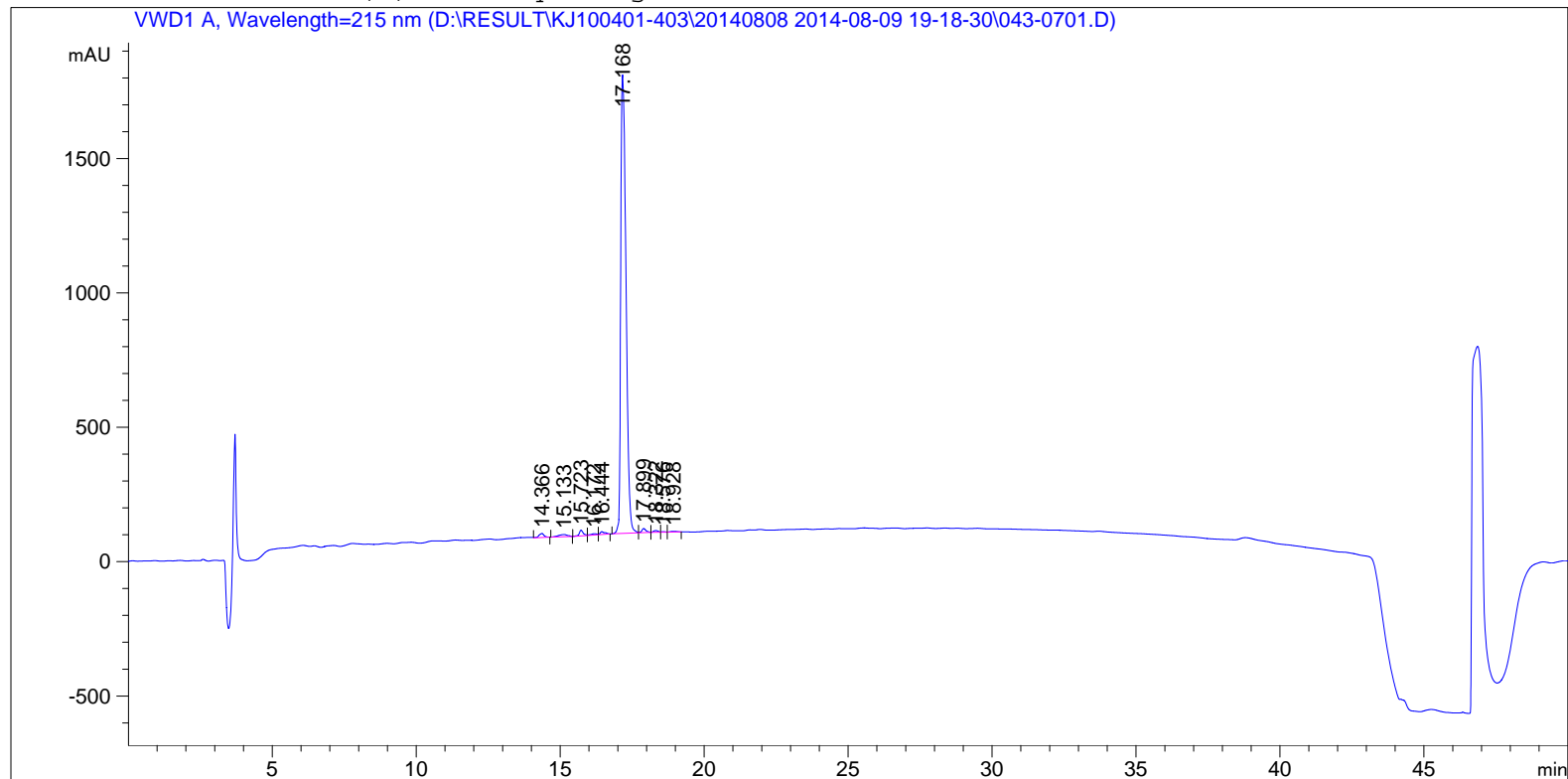
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    7
Acq. Instrument : HPLC 1260                  Location  : Vial 43
Injection Date  : 8/10/2014 12:25:17 AM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
Method)
Last changed    : 8/9/2014 7:18:30 PM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
Rate:1.0ml/min
Mobile Phase A : 0.1%TFA+H2O
Mobile Phase B : 0.1%TFA+ACN
time(min)       0      40      40.3      43      43.3      50
B%              10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	14.366	FM R	0.2011	183.26341	15.19100	0.8088
2	15.133	BB	0.3354	179.00813	8.27427	0.7900
3	15.723	BV	0.1400	206.00464	21.64921	0.9092
4	16.172	VV	0.2351	72.87855	4.74853	0.3216
5	16.444	VB	0.1574	117.31367	10.41300	0.5177
6	17.168	BV	0.2037	2.16093e4	1706.56873	95.3672

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
7	17.899	VB	0.1555	163.42455	15.56991	0.7212
8	18.322	BV	0.1823	73.88503	6.72014	0.3261
9	18.576	VV	0.1442	16.77226	1.87828	0.0740
10	18.928	VB	0.2645	37.20456	2.31538	0.1642

Totals : 2.26590e4 1793.32844

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-41		
Molecular Formula	C78H120N16O22S	Cat#	8117
Molecular Weight	1666.03	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	EKAFSPEVIPMFSAL		
Item No.	8117_140303_41		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1666.03±2.0	1664.8
3	Peptide Purity (By HPLC)	≥80%	95.9%
4	Identification(Amino Acid Composition by HPLC)	S	1.8
		E	2.2
		A	2.1
		P	2.2
		V	0.9
		M	0.6
		K	1.1
		I	0.9
		L	1.0
F	2.1		
5	Peptide content	77.1%	

Quality Control By:

wangjun

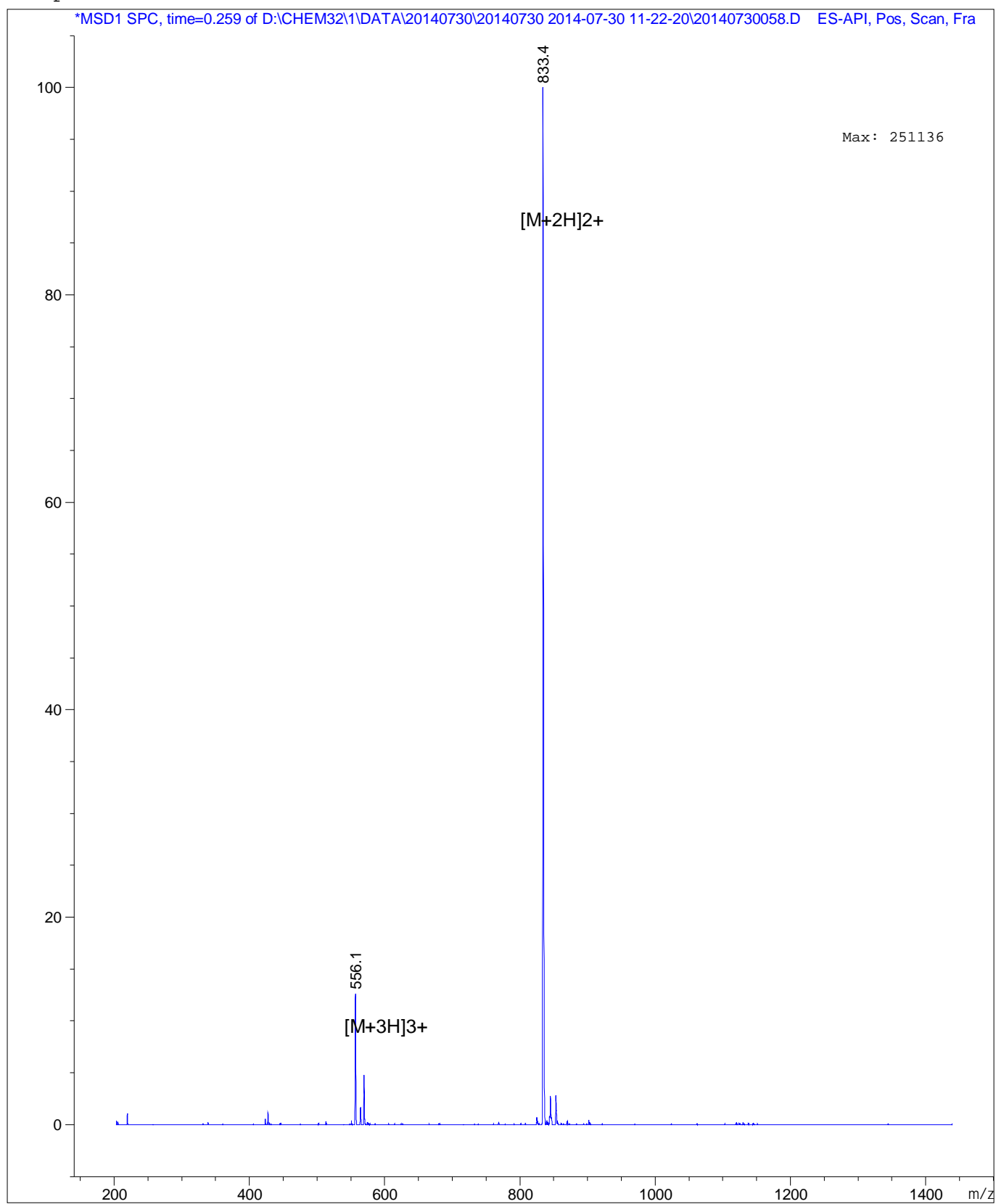
Date:

09/18/2014

=====

Acq. Operator : lishichao Seq. Line : 58
Acq. Instrument : 5J-QC-082 Location : Vial 94
Injection Date : 7/30/2014 2:21:25 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140730\20140730 2014-07-30 11-22-20\TEST MS(200-1500)
2.
Last changed : 7/30/2014 10:43:17 AM by lishichao
Analysis Method : D:\METHOD\TEST MS(200-800).M
Last changed : 3/14/2014 11:35:24 PM by YZW

MS Spectrum



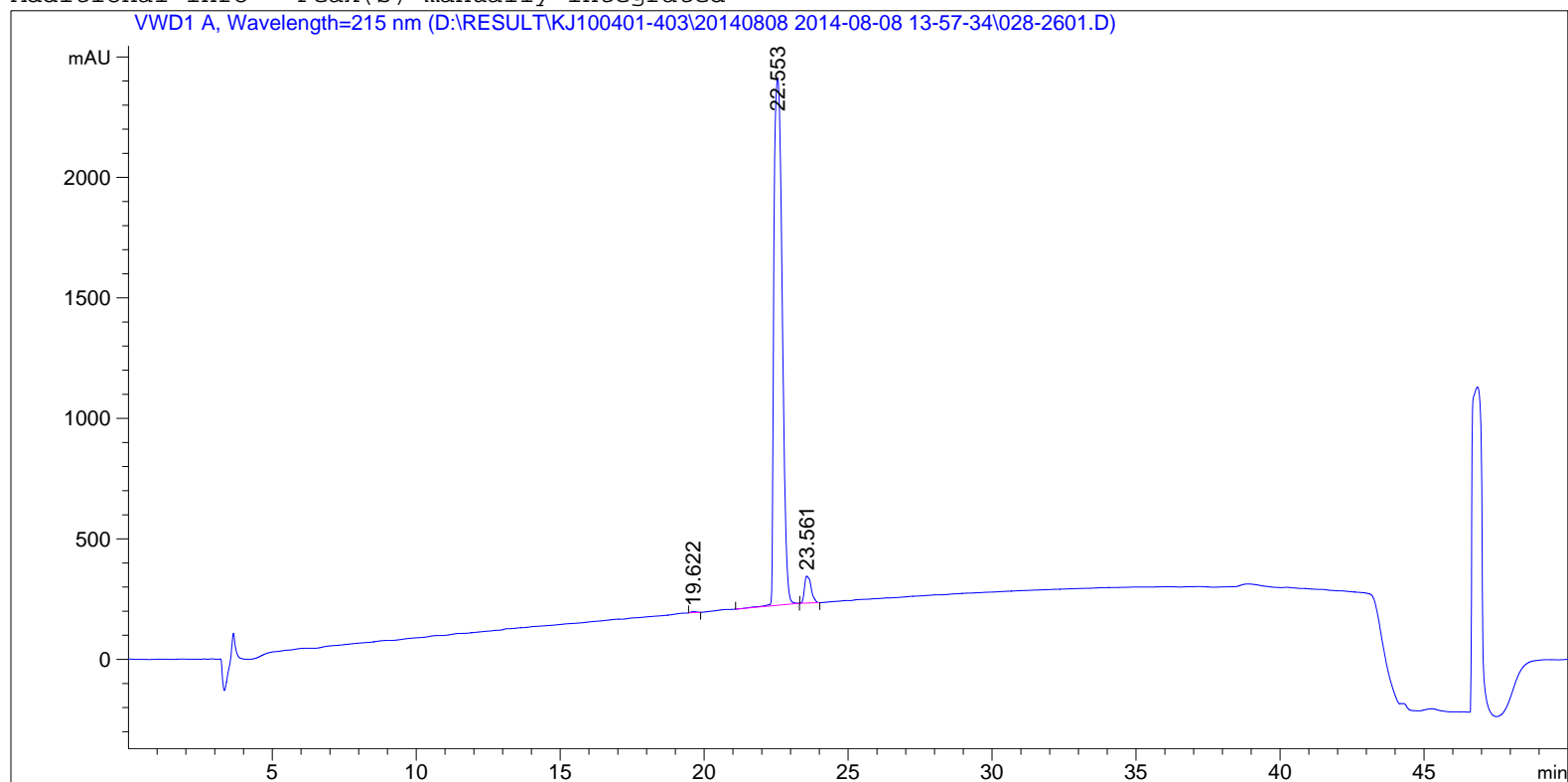
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=====
Acq. Operator   : SYSTEM                               Seq. Line :   26
Acq. Instrument : HPLC 1260                           Location  : Vial 28
Injection Date  : 8/9/2014 11:12:35 AM                 Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M
Last changed    : 8/8/2014 1:57:34 PM by SYSTEM
Analysis Method  : D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M (Sequence
Method)
Last changed    : 8/10/2014 4:18:06 PM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5um,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95      10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution        :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	19.622	BB	0.1785	55.95697	4.28092	0.1235
2	22.553	BB	0.3288	4.34784e4	2187.98242	95.9273
3	23.561	BB	0.2192	1789.95642	112.16653	3.9492

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
----- ----- ----- ----- ----- ----- -----						
Totals :				4.53243e4	2304.42987	

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-42		
Molecular Formula	C68H107N15O23S	Cat#	8117
Molecular Weight	1534.81	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	SPEVIPMFSALSEGA		
Item No.	8117_140303_42		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1534.81±2.0	1534.0
3	Peptide Purity (By HPLC)	≥80%	98.3%
4	Identification(Amino Acid Composition by HPLC)	S	2.9
		E	2.2
		G	1.0
		A	2.1
		P	2.2
		V	0.8
		M	0.9
		I	0.7
		L	1.1
F	1.1		
5	Peptide content	81.0%	

Quality Control By:

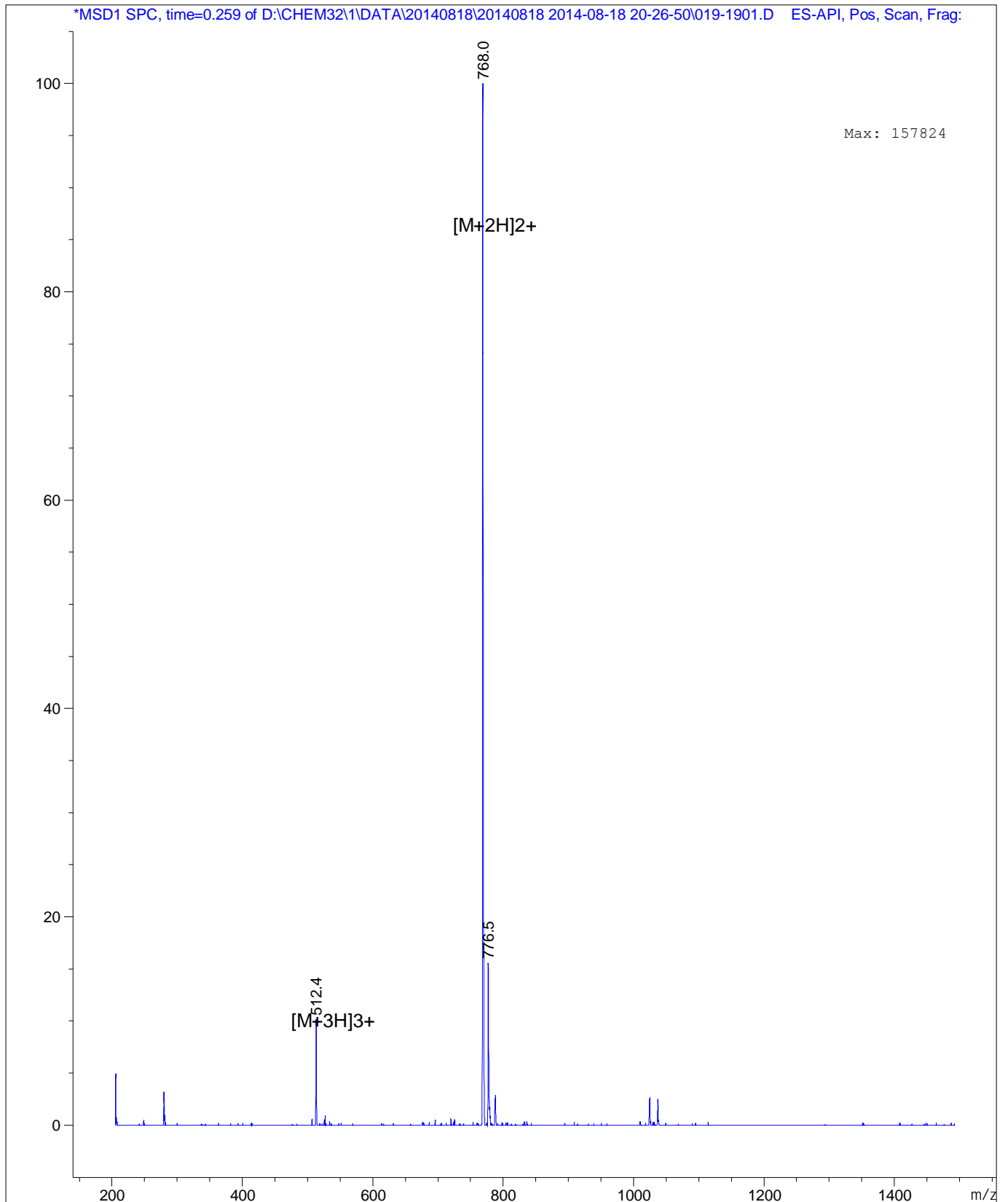
wangjun

Date:

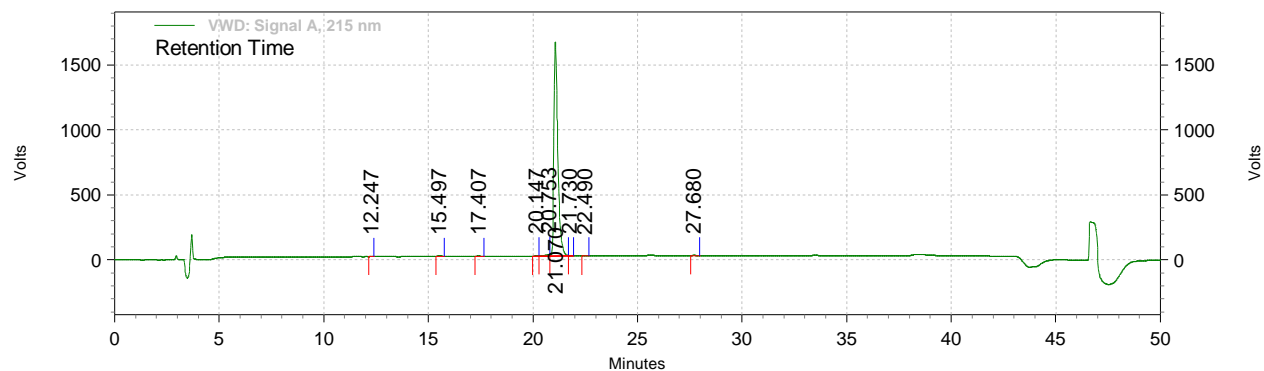
09/24/2014

=====
Acq. Operator : liusuying Seq. Line : 19
Acq. Instrument : 5J-QC-082 Location : Vial 19
Injection Date : 8/18/2014 9:23:19 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140818\20140818 2014-08-18 20-26-50\TEST MS(200-1500)
2.
Last changed : 8/14/2014 11:53:24 AM by liusuying
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M
Last changed : 8/14/2014 11:53:24 AM by liusuying

MS Spectrum



Data File: D:\KJ100401\20140828\20140828.rslt\HIV-1 Con B Gag Peptide-42.dat
 Method: D:\Method\KJ100401.met
 Acquired: 8/28/2014 9:54:16 AM (GMT +08:00)
 Printed: 8/31/2014 8:18:14 AM (GMT +08:00)
 Column:Agilent HC-C18,5um,4.6*250mm Column Temp:35°C Flow Rate:1.0ml/min
 Mobile Phase A:0.1%TFA water
 Mobile Phase B:0.1%TFA+ACN
 time(min) 0 40 40.3 43 43.3 50
 B% 10 70 95 95 10 10



VWD: Signal A, 215 nm Results

Retention Time	Area	Area %
12.247	74073	0.02
15.497	550614	0.15
17.407	250374	0.07
20.147	853228	0.23
20.753	3234498	0.88
21.070	360581529	98.30
21.730	413473	0.11
22.490	252592	0.07
27.680	592975	0.16

Totals	366803356	100.00
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CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-43		
Molecular Formula	C68H106N16O24S	Cat#	8117
Molecular Weight	1563.81	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	IPMFSALSEGATPQD		
Item No.	8117_140303_43		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1563.81±2.0	1562.8
3	Peptide Purity (By HPLC)	≥80%	98.3%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		S	1.7
		E	2.2
		G	0.9
		T	1.0
		A	2.0
		P	1.9
		M	0.9
		I	1.0
		L	1.0
F	1.0		
5	Peptide content	94.0%	

Quality Control By:

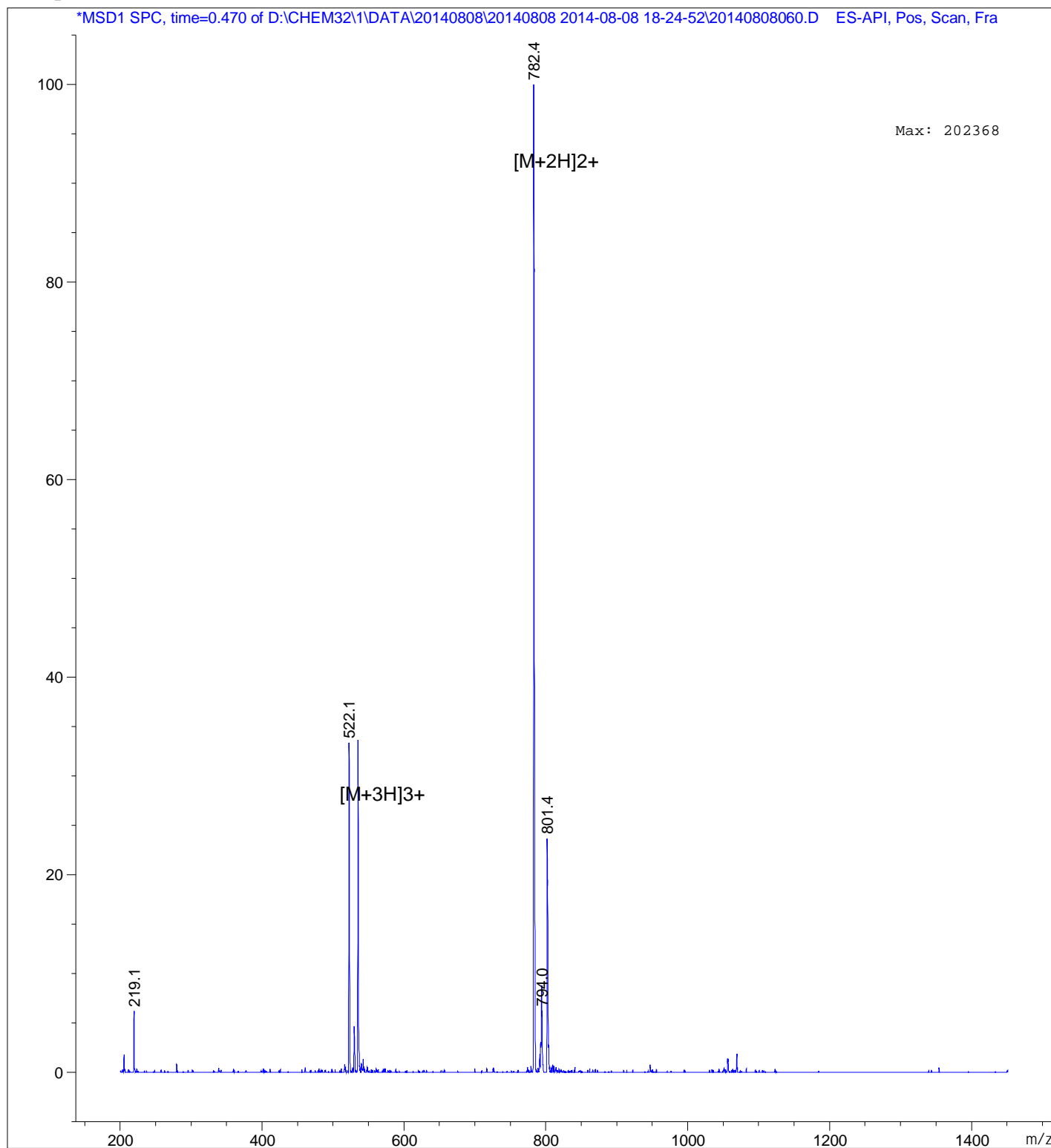
wangjun

Date:

09/16/2014

=====
Acq. Operator : liusuying Seq. Line : 60
Acq. Instrument : 5J-QC-082 Location : Vial 26
Injection Date : 8/8/2014 9:30:21 PM Inj : 1
 Inj Volume : 3.0 μ l
Acq. Method : D:\CHEM32\1\DATA\20140808\20140808 2014-08-08 18-24-52\TEST MS(200-1500)2.
Last changed : 8/8/2014 10:11:15 AM by liusuying
Analysis Method : D:\METHOD\MS(100-1000).M
Last changed : 8/10/2014 4:53:59 PM by liusuying

MS Spectrum



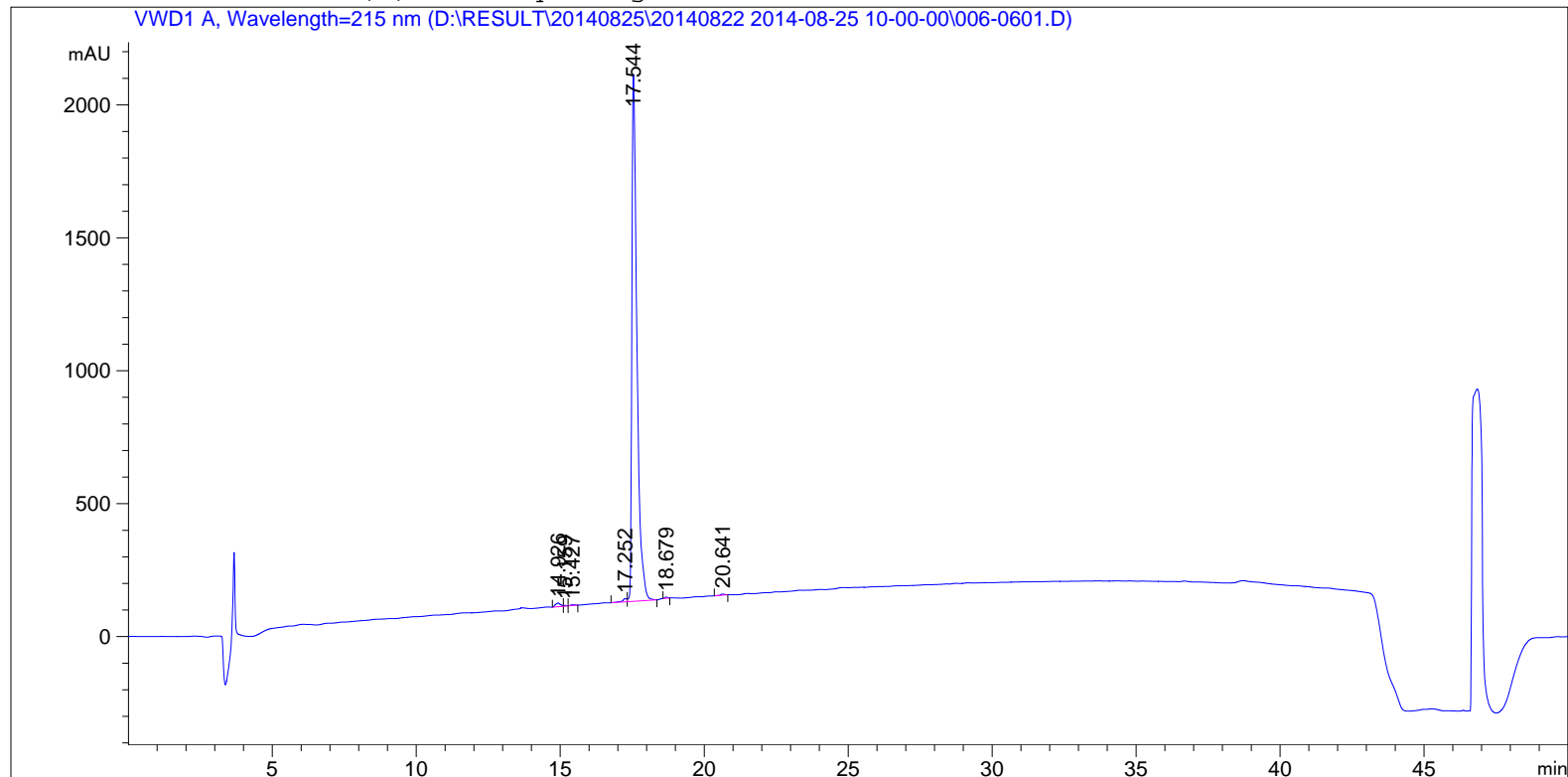
```

=====
Acq. Operator   : SYSTEM                               Seq. Line :    6
Acq. Instrument : HPLC 1260                           Location  : Vial 6
Injection Date  : 8/25/2014 2:15:35 PM                 Inj       :    1
                                                    Inj Volume: 20.000 µl

Method          : D:\RESULT\20140825\20140822 2014-08-25 10-00-00\KJ100401.M (Sequence Method)
Last changed    : 8/25/2014 10:00:00 AM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm    Column Temp:35°C    Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
=====

```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs

```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	14.926	BV	0.1631	167.21259	14.02633	0.6768
2	15.159	VV	0.1068	20.91290	2.84301	0.0846
3	15.427	VB	0.1458	31.56937	3.20884	0.1278
4	17.252	BV	0.1486	126.89008	12.17581	0.5136
5	17.544	VB	0.1790	2.42927e4	1981.96704	98.3220
6	18.679	MM R	0.1183	30.90143	4.35515	0.1251
7	20.641	BB	0.1318	37.09711	4.25331	0.1501

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
Totals :				2.47073e4	2022.82949	

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-44		
Molecular Formula	C62H103N17O26S	Cat#	8117
Molecular Weight	1534.73	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	SALSEGATPQDLNTM		
Item No.	8117_140303_44		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1534.73±2.0	1534.0
3	Peptide Purity (By HPLC)	≥80%	95.3%
4	Identification(Amino Acid Composition by HPLC)	D	1.8
		S	1.7
		E	2.2
		G	1.0
		T	2.2
		A	2.1
		P	1.1
		M	0.7
	L	2.2	
5	Peptide content	80.8%	

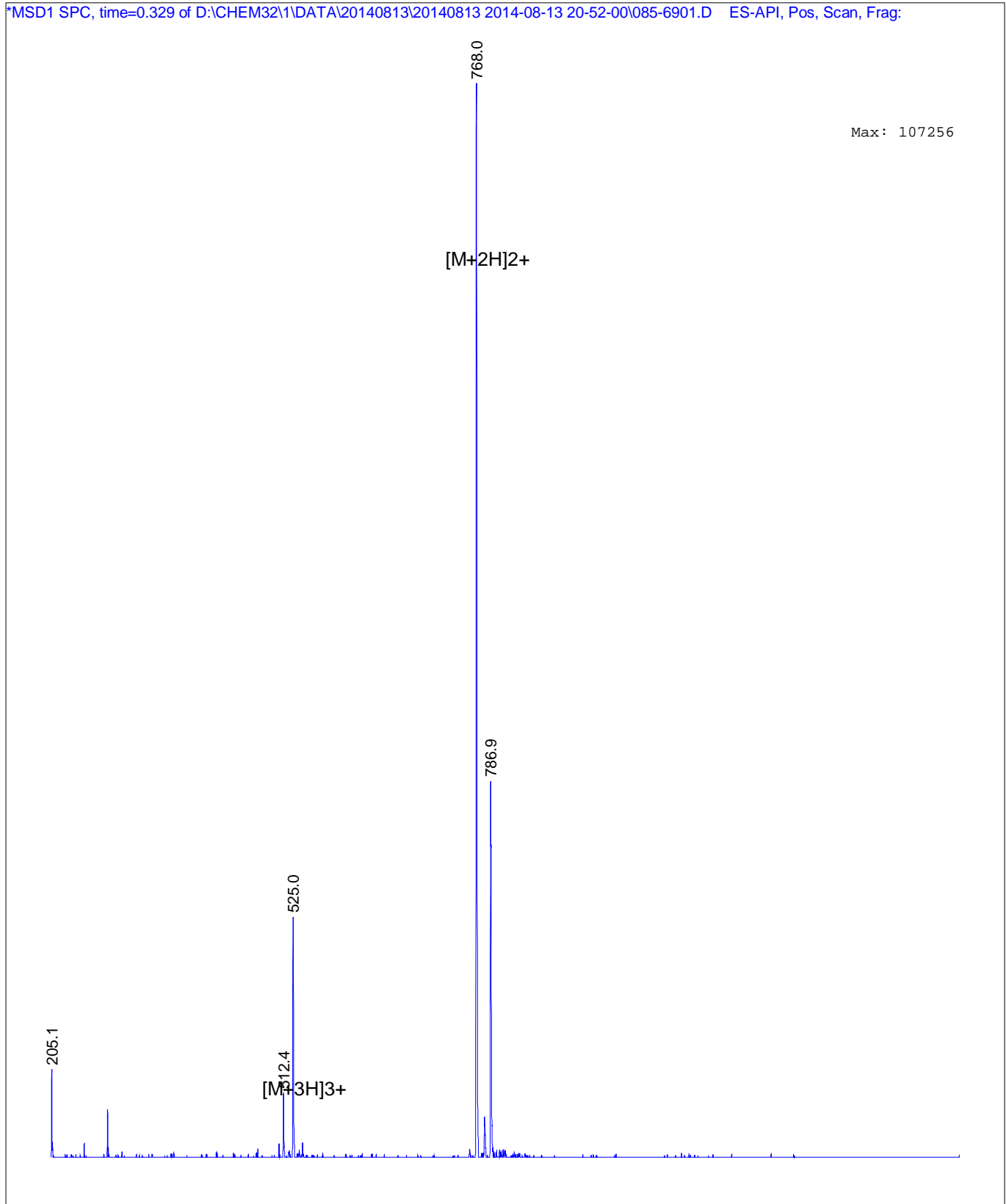
Quality Control By: wangjun

Date: 09/18/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 69
Acq. Instrument	: 5J-QC-082	Location	: Vial 85
Injection Date	: 8/14/2014 12:22:50 AM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500) 2.		
Last changed	: 8/11/2014 1:22:13 PM by liusuying		
Analysis Method	: D:\METHOD\TEST MS(500-15000).M		
Last changed	: 4/18/2014 11:29:00 AM by YZW		

MS Spectrum



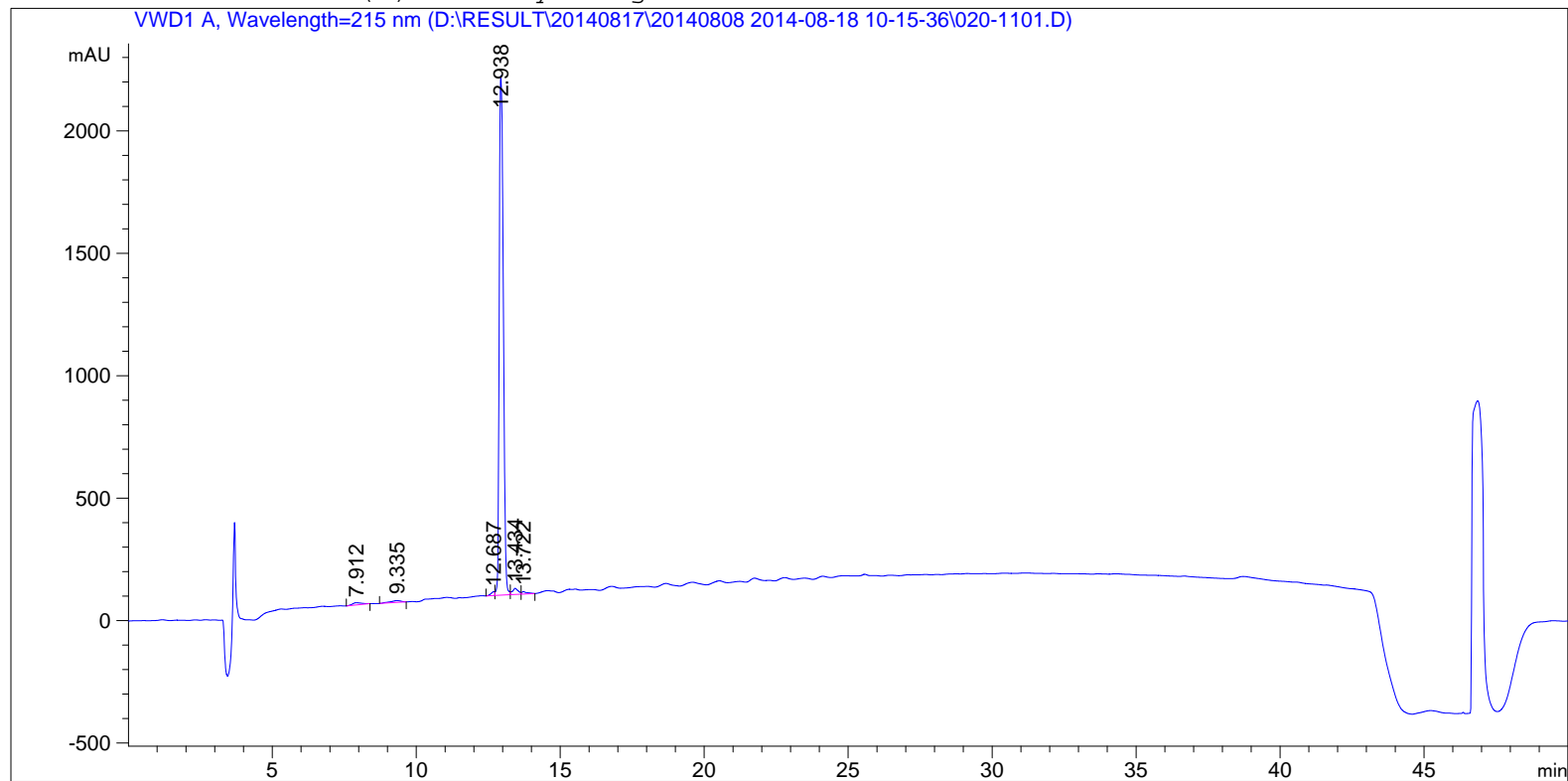
```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   11
Acq. Instrument : HPLC 1260                           Location  : Vial 20
Injection Date  : 8/18/2014 6:46:08 PM                Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140817\20140808 2014-08-18 10-15-36\KJ100401.M
Last changed    : 8/18/2014 10:15:36 AM by SYSTEM
Analysis Method  : D:\RESULT\20140817\20140808 2014-08-18 10-15-36\KJ100401.M (Sequence Method)
Last changed    : 8/19/2014 11:10:42 AM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5um,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.912	BB	0.3466	200.03117	8.82005	0.9061
2	9.335	BB	0.3883	201.68120	7.36984	0.9136
3	12.687	BV	0.1237	142.59592	16.19765	0.6459
4	12.938	VV	0.1597	2.10442e4	2121.91235	95.3261

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	13.434	VV	0.1933	353.36191	25.24441	1.6007
6	13.722	VB	0.1759	134.12964	10.23284	0.6076

Totals : 2.20760e4 2189.77714

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

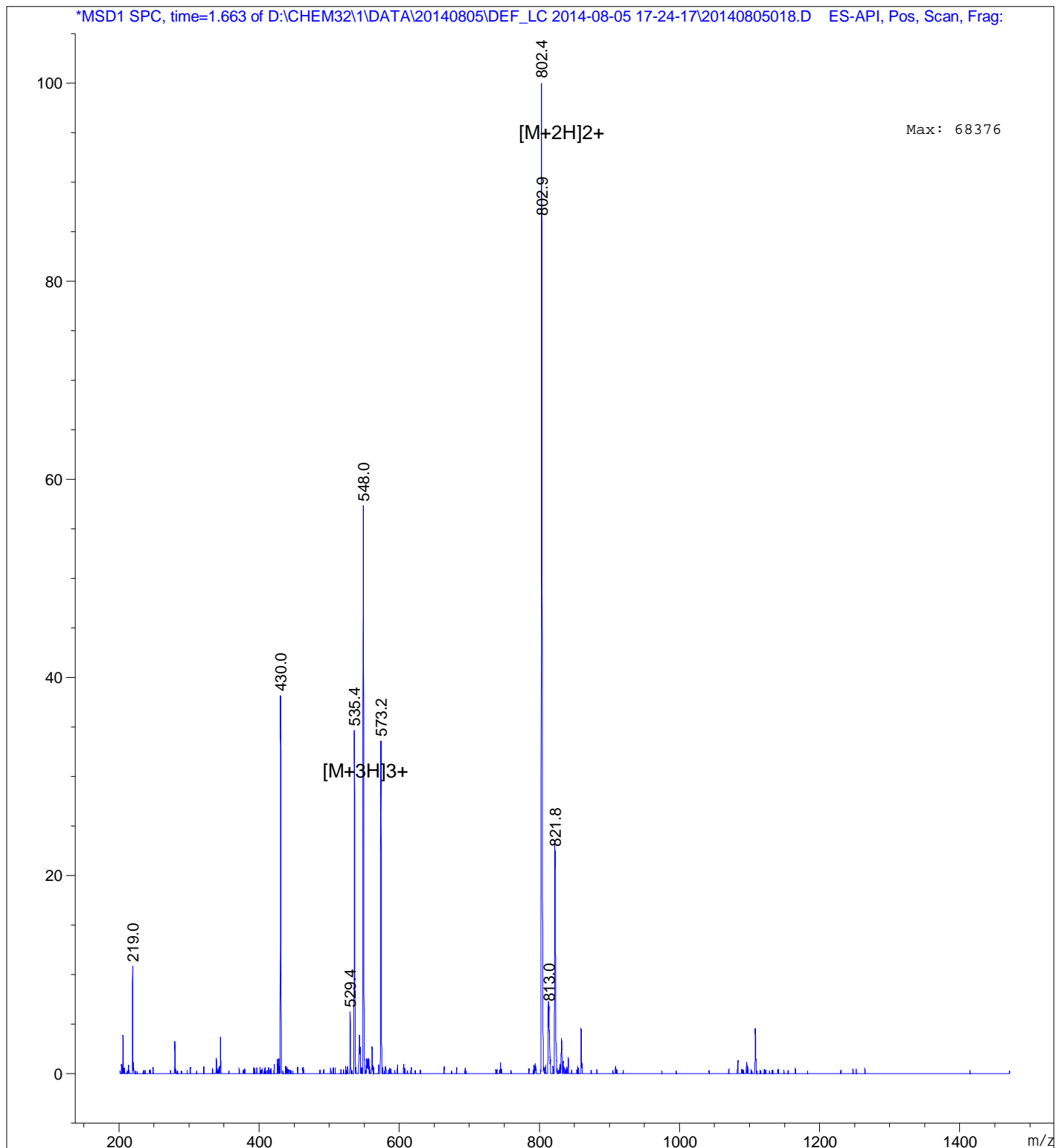
Product Name	HIV-1 Con B Gag Peptide-45		
Molecular Formula	C66H110N18O26S	Cat#	8117
Molecular Weight	1603.85	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	EGATPQDLNTMLNTV		
Item No.	8117_140303_45		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1603.85±2.0	1602.8
3	Peptide Purity (By HPLC)	≥80%	97.8%
4	Identification(Amino Acid Composition by HPLC)	D	3.3
		E	2.3
		G	1.0
		T	2.8
		A	1.0
		P	1.0
		V	1.1
		M	0.7
L	1.9		
5	Peptide content	92.3%	

Quality Control By: wangjun

Date: 09/18/2014

=====
 Acq. Operator : liusuying Seq. Line : 18
 Acq. Instrument : 5J-QC-082 Location : Vial 62
 Injection Date : 8/5/2014 6:20:25 PM Inj : 1
 Inj Volume : 3.0 µl
 Acq. Method : D:\CHEM32\1\DATA\20140805\DEF_LC 2014-08-05 17-24-17\TEST MS(200-1500)2.
 Last changed : 8/4/2014 6:24:11 PM by liusuying
 Analysis Method : D:\METHOD\TEST MS(200-1500)2.M
 Last changed : 8/4/2014 6:24:11 PM by liusuying

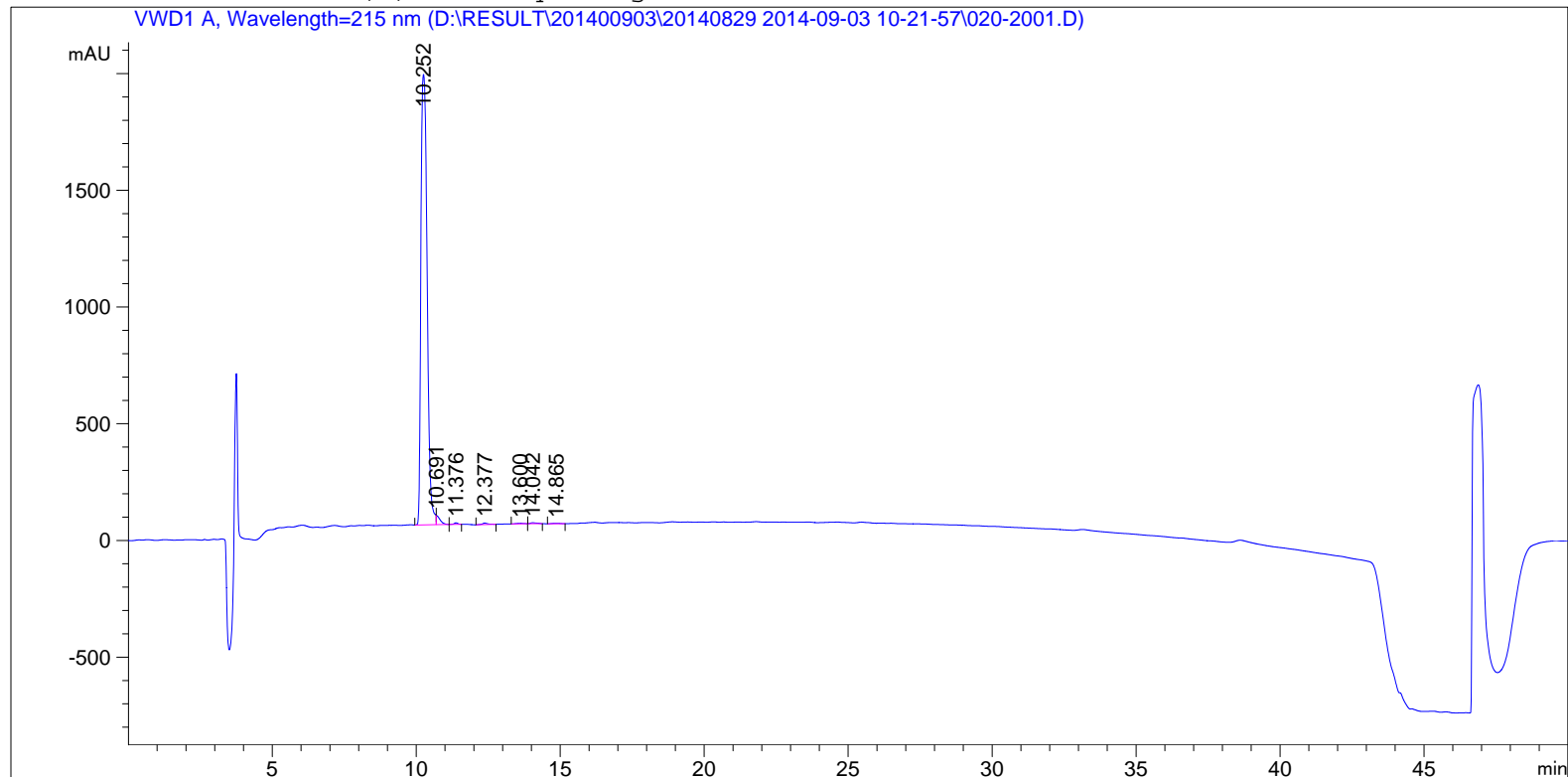
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   20
Acq. Instrument : HPLC 1260                           Location  : Vial 20
Injection Date  : 9/4/2014 2:31:07 AM                 Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M (Sequence Method)
Last changed    : 9/3/2014 7:20:03 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm   Cloumn Temp:35°C   Flow
Rate:1.0ml/min
Mobile Phase A:0.1%TFA+H2O
Mobile Phase B:0.1%TFA+ACN
time(min)       0      40      40.3      43      43.3      50
B%              10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	10.252	MF R	0.2501	2.89602e4	1929.77271	97.8074
2	10.691	FM R	0.1471	359.99246	40.79027	1.2158
3	11.376	BB	0.1289	55.37665	6.53488	0.1870
4	12.377	BB	0.1857	90.80010	6.76061	0.3067
5	13.600	BB	0.2440	39.31882	2.29334	0.1328
6	14.042	BB	0.2242	61.03276	3.90856	0.2061
7	14.865	BB	0.3515	42.69510	2.08839	0.1442

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
----- ----- ----- ----- ----- ----- -----						
Totals :				2.96094e4	1992.14876	

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-46		
Molecular Formula	C67H109N21O24S	Cat#	8117
Molecular Weight	1624.89	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	PQDLNTMLNTVGGHQ		
Item No.	8117_140303_46		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1624.89±2.0	1624.0
3	Peptide Purity (By HPLC)	≥80%	95.6%
4	Identification(Amino Acid Composition by HPLC)	D	3.1
		E	2.1
		G	2.0
		H	1.0
		T	2.1
		P	1.0
		V	1.1
		M	0.6
	L	2.1	
5	Peptide content	93.4%	

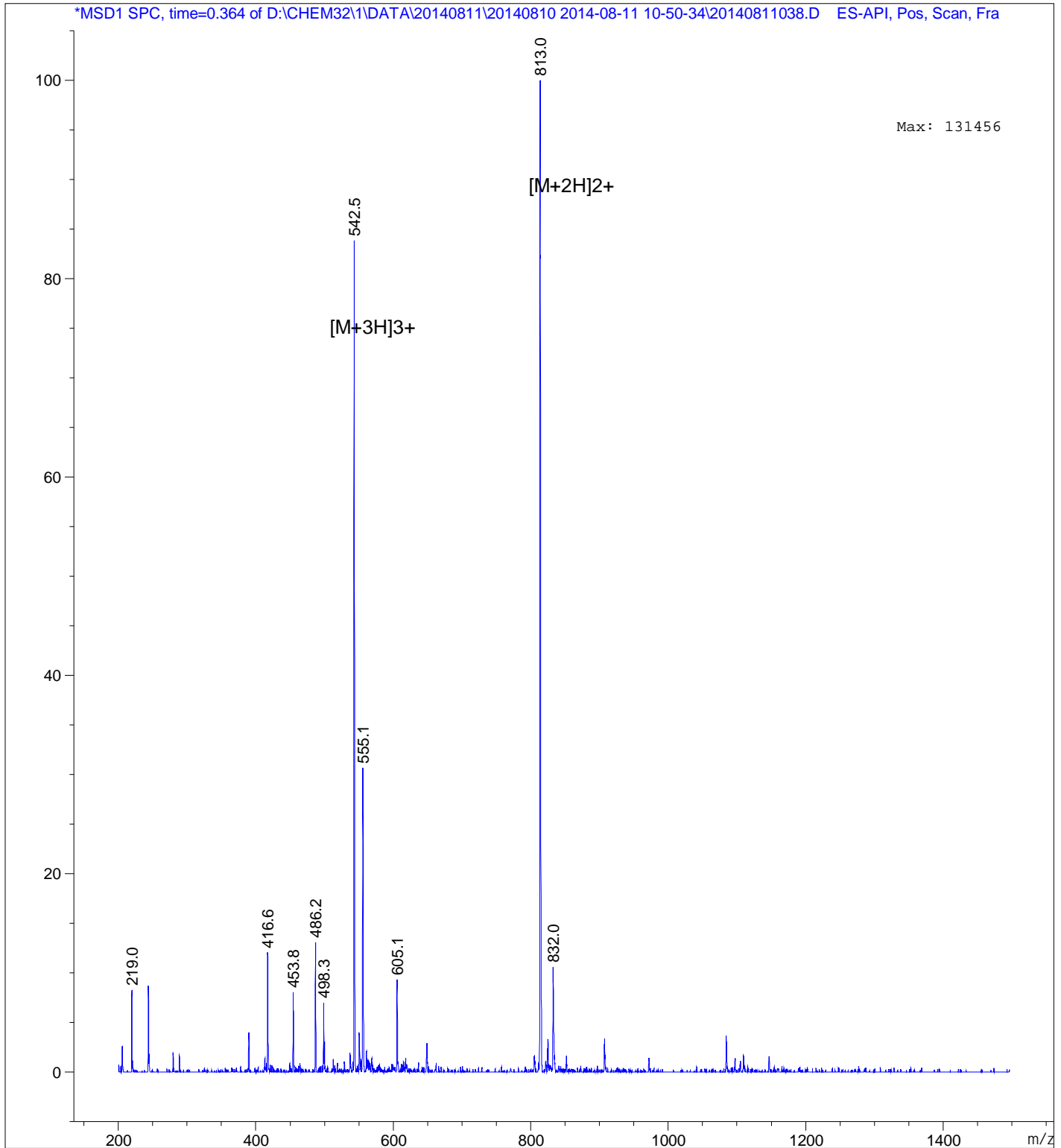
Quality Control By: wangjun

Date: 09/24/2014


```

=====
Acq. Operator   : liusuying                      Seq. Line :   38
Acq. Instrument : 5J-QC-082                      Location  : Vial 46
Injection Date  : 8/11/2014 12:45:55 PM          Inj       :    1
                                                    Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140811\20140810 2014-08-11 10-50-34\TEST MS(200-1500)2.
Last changed    : 8/10/2014 3:32:14 PM by liusuying
Analysis Method  : D:\METHOD\MS(100-1000).M
Last changed    : 8/10/2014 4:53:59 PM by liusuying
    
```

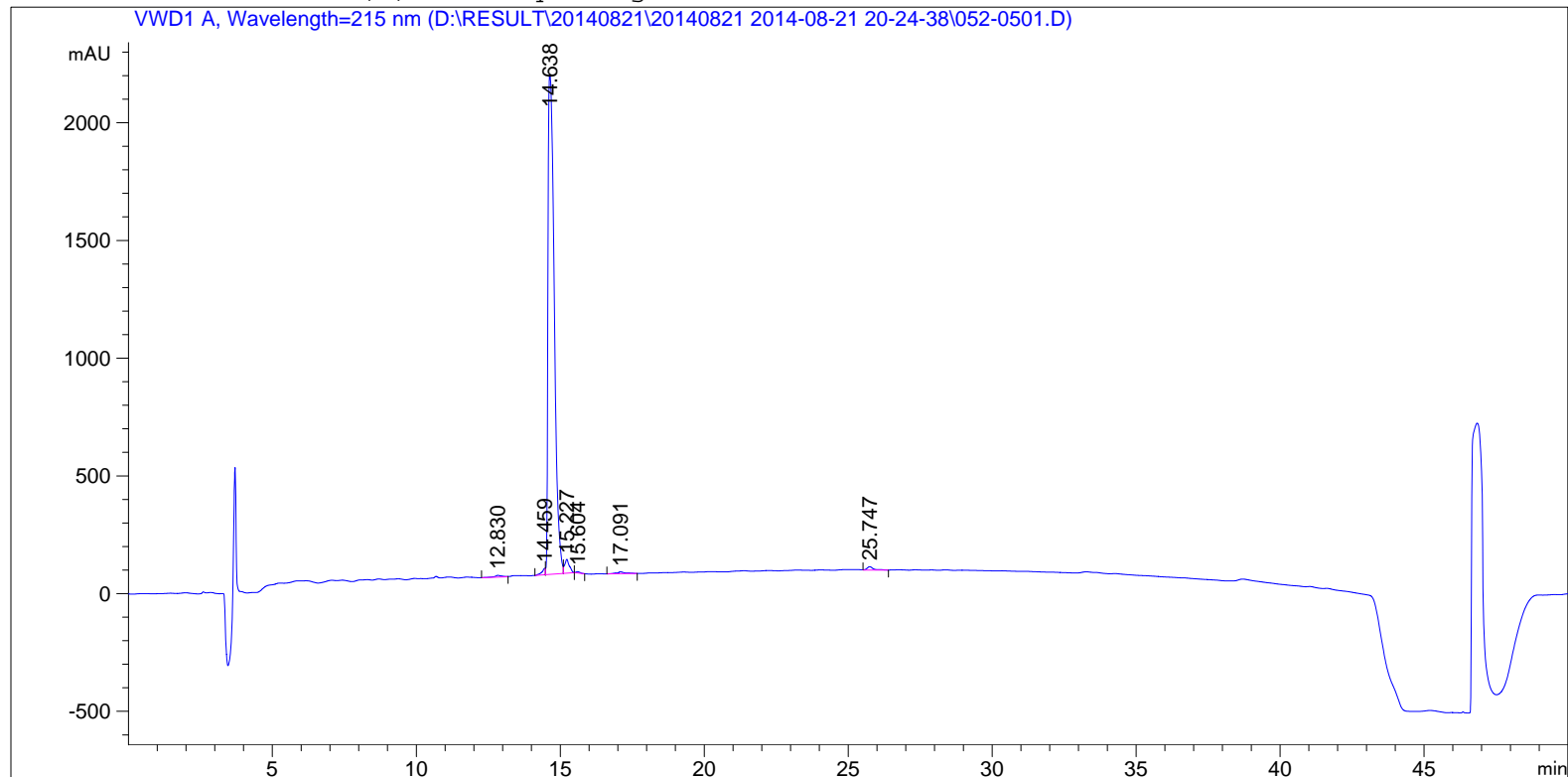
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    5
Acq. Instrument : HPLC 1260                  Location  : Vial 52
Injection Date  : 8/21/2014 11:49:26 PM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\20140821\20140821 2014-08-21 20-24-38\KJ100401.M (Sequence Method)
Last changed    : 8/21/2014 8:24:39 PM by SYSTEM
Method Info     : Column:Agilent HC-C18,5um,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0          40          40.3         43          43.3         50
                  B%             10         70          95          95          10          10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      : Signal
Multiplier     : 1.0000
Dilution      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.830	BV	0.2363	132.50874	7.42122	0.3958
2	14.459	BV	0.1151	225.49933	27.37213	0.6736
3	14.638	VV	0.2429	3.20175e4	2123.53101	95.6429
4	15.227	VB	0.1551	658.81268	58.61589	1.9680
5	15.604	BB	0.1405	47.97958	5.30791	0.1433
6	17.091	BB	0.2760	167.62463	7.88650	0.5007
7	25.747	VB	0.2286	226.17296	14.52990	0.6756

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
Totals :				3.34761e4	2244.66456	

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-47		
Molecular Formula	C63H105N21O22S2	Cat#	8117
Molecular Weight	1572.87	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	NTMLNTVGGHQAAMQ		
Item No.	8117_140303_47		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1572.87±2.0	1572.0
3	Peptide Purity (By HPLC)	≥80%	97.4%
4	Identification(Amino Acid Composition by HPLC)	D	1.8
		E	2.0
		G	2.3
		H	1.0
		T	1.8
		A	2.0
		V	0.9
		M	2.0
L	1.0		
5	Peptide content	58.0%	

Quality Control By: wangjun

Date: 09/16/2014

Sample Name : HIV-1 Con B Gag Peptide-47

=====
Acq. Operator : liusuying

Seq. Line : 57

Acq. Instrument : 5J-QC-082

Location : Vial 19

Injection Date : 8/8/2014 9:20:59 PM

Inj : 1

Inj Volume : 3.0 µl

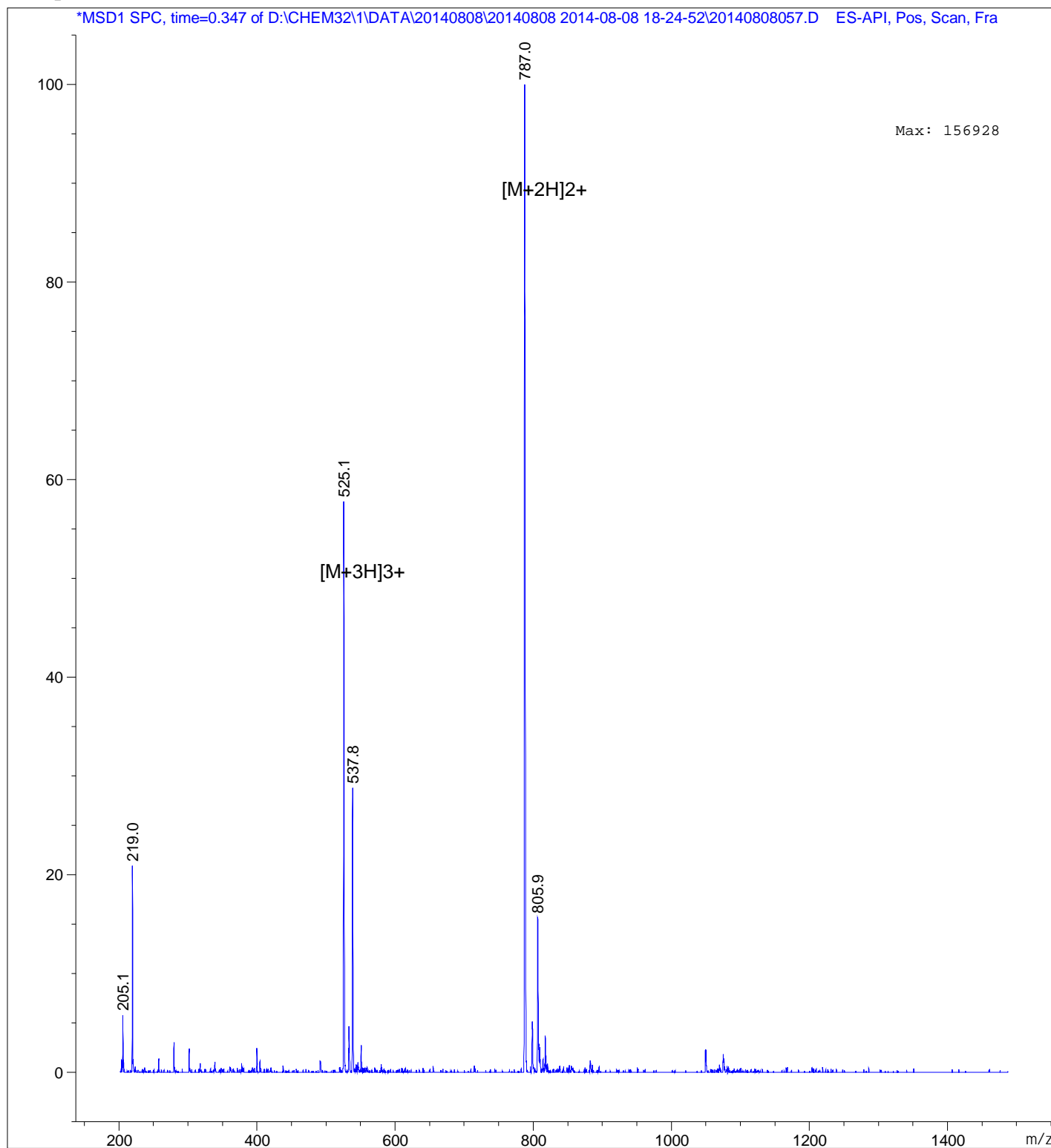
Acq. Method : D:\CHEM32\1\DATA\20140808\20140808 2014-08-08 18-24-52\TEST MS(200-1500).2.

Last changed : 8/8/2014 10:11:15 AM by liusuying

Analysis Method : D:\METHOD\MS(100-1000).M

Last changed : 8/10/2014 4:53:59 PM by liusuying

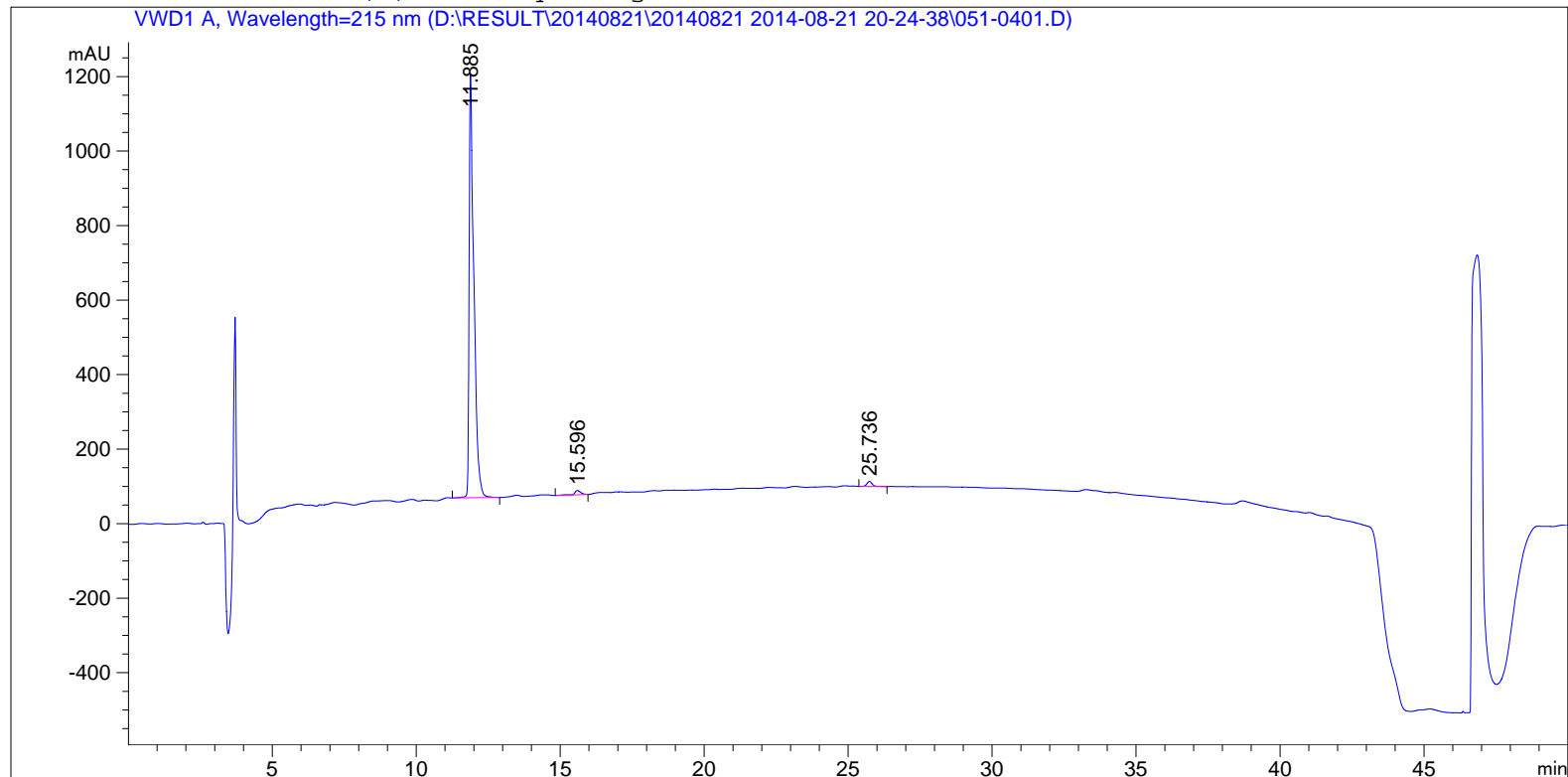
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    4
Acq. Instrument : HPLC 1260                   Location  : Vial 51
Injection Date  : 8/21/2014 10:58:31 PM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\20140821\20140821 2014-08-21 20-24-38\KJ100401.M (Sequence Method)
Last changed    : 8/21/2014 8:24:39 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	11.885	BB	0.1607	1.30186e4	1136.13013	97.3578
2	15.596	BB	0.2274	175.92325	11.43959	1.3156
3	25.736	BB	0.1978	177.39241	13.63297	1.3266

Totals : 1.33719e4 1161.20268

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-48		
Molecular Formula	C66H111N21O22S2	Cat#	8117
Molecular Weight	1614.95	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	NTVGGHQAAMQMLKE		
Item No.	8117_140303_48		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1614.95±2.0	1614.3
3	Peptide Purity (By HPLC)	≥80%	98.7%
4	Identification(Amino Acid Composition by HPLC)	D	0.9
		E	3.2
		G	2.0
		H	1.0
		T	1.0
		A	2.0
		V	1.1
		M	1.7
		K	1.0
L	1.0		
5	Peptide content	59.9%	

Quality Control By:

wangjun

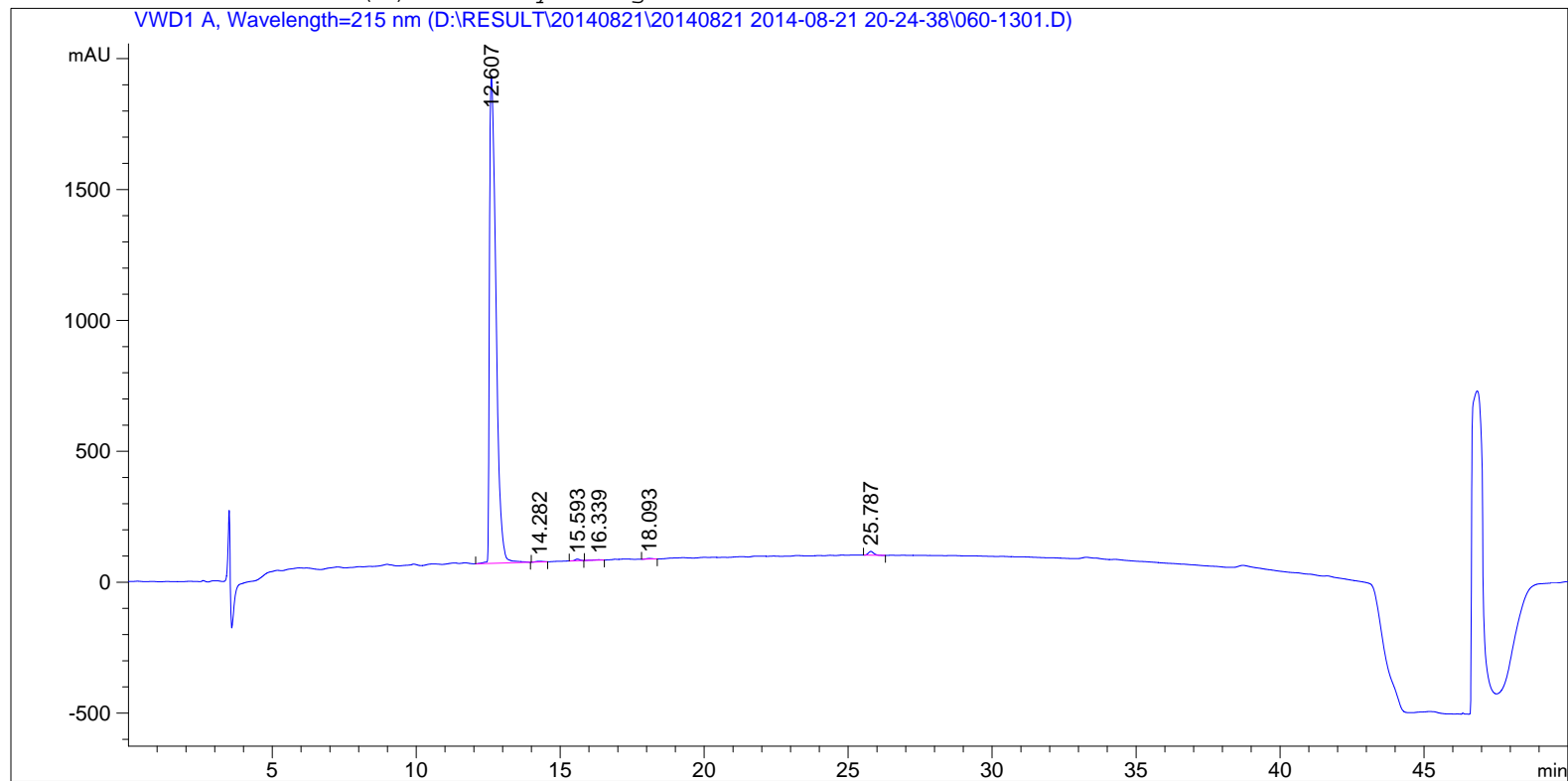
Date:

09/18/2014

=====

Acq. Operator	: SYSTEM	Seq. Line	: 13				
Acq. Instrument	: HPLC 1260	Location	: Vial 60				
Injection Date	: 8/22/2014 6:37:16 AM	Inj	: 1				
		Inj Volume	: 20.000 µl				
Acq. Method	: D:\RESULT\20140821\20140821 2014-08-21 20-24-38\KJ100401.M						
Last changed	: 8/21/2014 8:24:39 PM by SYSTEM						
Analysis Method	: D:\RESULT\20140821\20140821 2014-08-21 20-24-38\KJ100401.M (Sequence Method)						
Last changed	: 8/22/2014 1:26:04 PM by SYSTEM (modified after loading)						
Method Info	: Cloumn:Agilent HC-C18,5µm,4.6*250mm	Cloumn Temp	:35°C	Flow			
	Rate:1.0ml/min						
	Mobile Phase A:0.1%TFA+H2O						
	Mobile Phase B:0.1%TFA+ACN						
	time(min)	0	40	40.3	43	43.3	50
	B%	10	70	95	95	10	10

Additional Info : Peak(s) manually integrated



=====
Area Percent Report
=====

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.607	BB	0.2533	2.92780e4	1863.38806	98.7439
2	14.282	BB	0.2843	48.86168	2.86030	0.1648
3	15.593	BB	0.1695	64.79454	6.02208	0.2185
4	16.339	BB	0.3047	29.18224	1.36891	0.0984

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	18.093	BB	0.2355	36.50762	2.46899	0.1231
6	25.787	BB	0.2014	193.08122	14.68028	0.6512

Totals : 2.96505e4 1890.78862

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-49		
Molecular Formula	C70H117N21O24S2	Cat#	8117
Molecular Weight	1701.04	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	GHQAAMQMLKETINE		
Item No.	8117_140303_49		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1701.04 ±2.0	1700.1
3	Peptide Purity (By HPLC)	≥80%	83.5%
4	Identification(Amino Acid Composition by HPLC)	D	0.8
		E	3.8
		G	1.1
		H	1.1
		T	1.1
		A	1.9
		M	2.0
		K	1.0
		I	1.0
F	1.0		
5	Peptide content	83.5 %	

Quality Control By:

wangjun

Date:

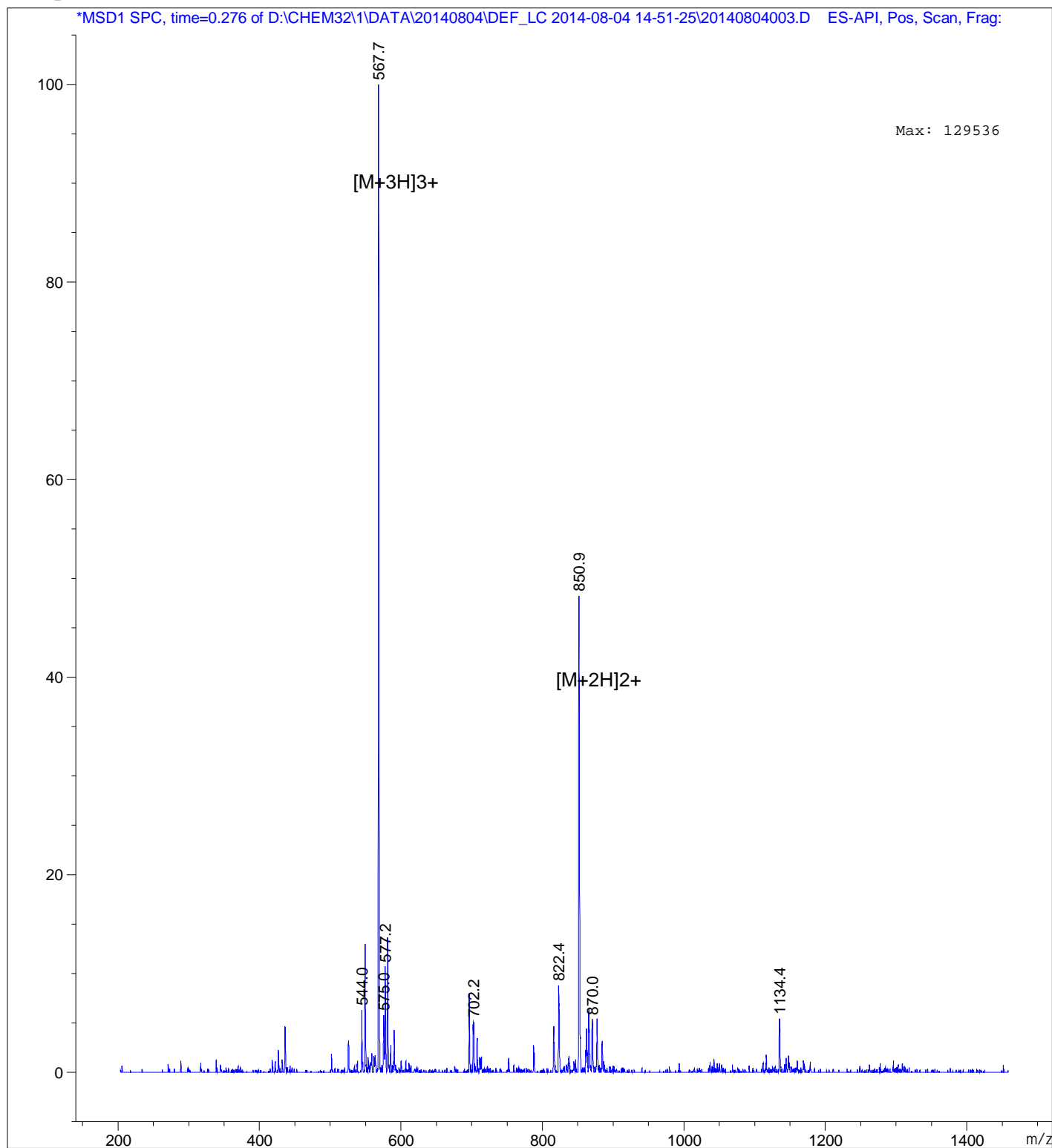
09/11/2014

```

=====
Acq. Operator   : liusuying                    Seq. Line :    3
Acq. Instrument : 5J-QC-082                    Location  : Vial 83
Injection Date  : 8/4/2014 2:58:29 PM          Inj       :    1
                                                Inj Volume: 3.0 µl

Acq. Method     : D:\CHEM32\1\DATA\20140804\DEF_LC 2014-08-04 14-51-25\TEST MS(200-1500)2.
Last changed    : 8/2/2014 10:06:36 AM by lishichao
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M
Last changed    : 8/4/2014 6:24:11 PM by liusuying
  
```

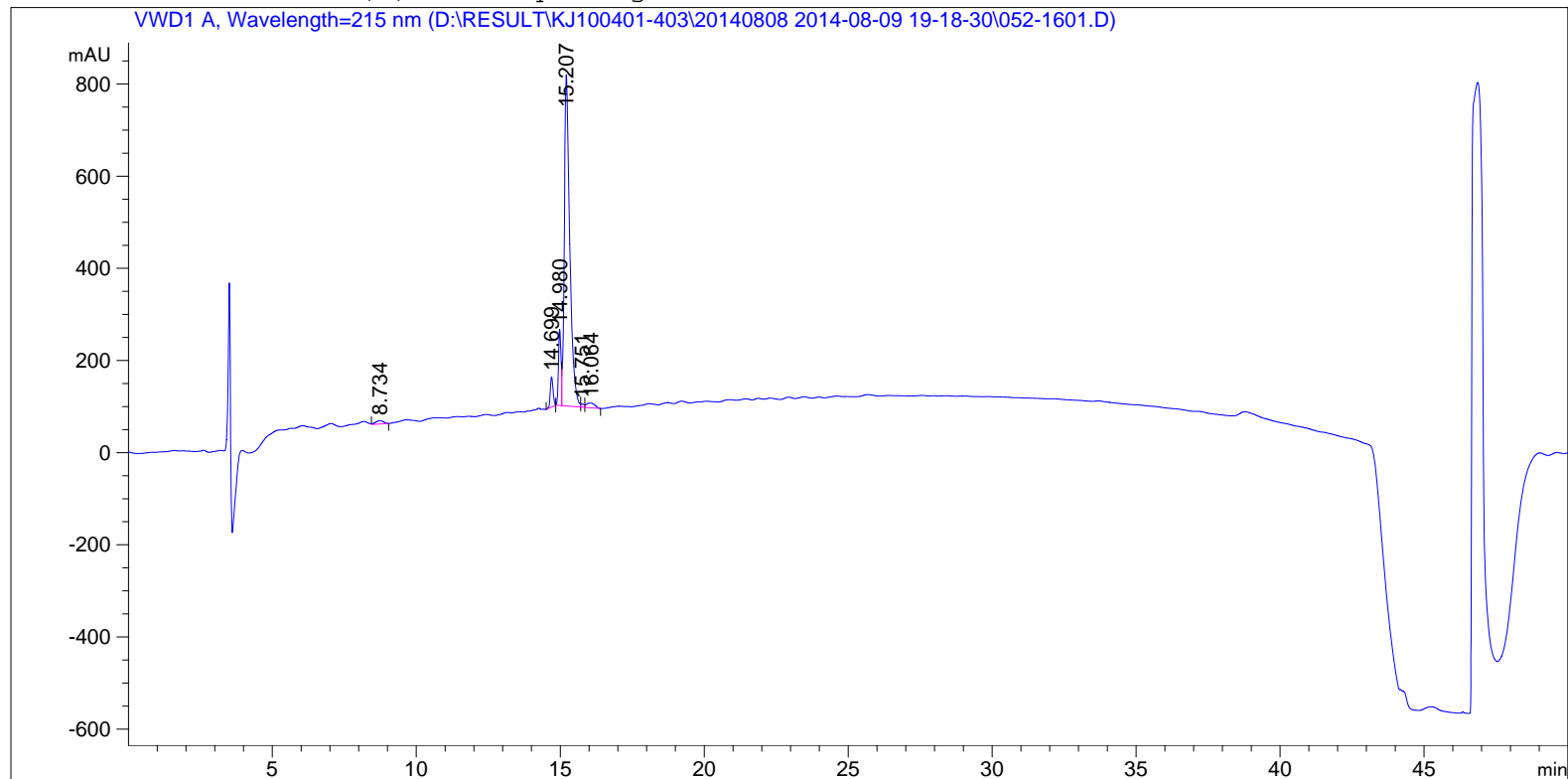
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   16
Acq. Instrument : HPLC 1260                           Location  : Vial 52
Injection Date  : 8/10/2014 8:04:00 AM                Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
Method)
Last changed    : 8/9/2014 7:18:30 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
=====
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	8.734	VB	0.3128	142.50851	7.30001	1.2665
2	14.699	BB	0.1037	434.59406	65.26812	3.8624
3	14.980	BV	0.0938	1015.22540	164.98630	9.0227
4	15.207	VV	0.1906	9400.69629	718.53369	83.5479
5	15.751	VV	0.1131	53.55405	6.85699	0.4760
6	16.064	VB	0.2900	205.28813	10.14982	1.8245

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
Totals :				1.12519e4	973.09493	

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-50		
Molecular Formula	C70H118N18O27S2	Cat#	8117
Molecular Weight	1708.01	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	AMQMLKETINEEAAE		
Item No.	8117_140303_50		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1708.01±2.0	1706.8
3	Peptide Purity (By HPLC)	≥80%	94.7%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		E	5.2
		T	1.0
		A	3.0
		M	1.6
		K	1.0
		I	1.1
L	1.0		
5	Peptide content	94.6%	

Quality Control By:

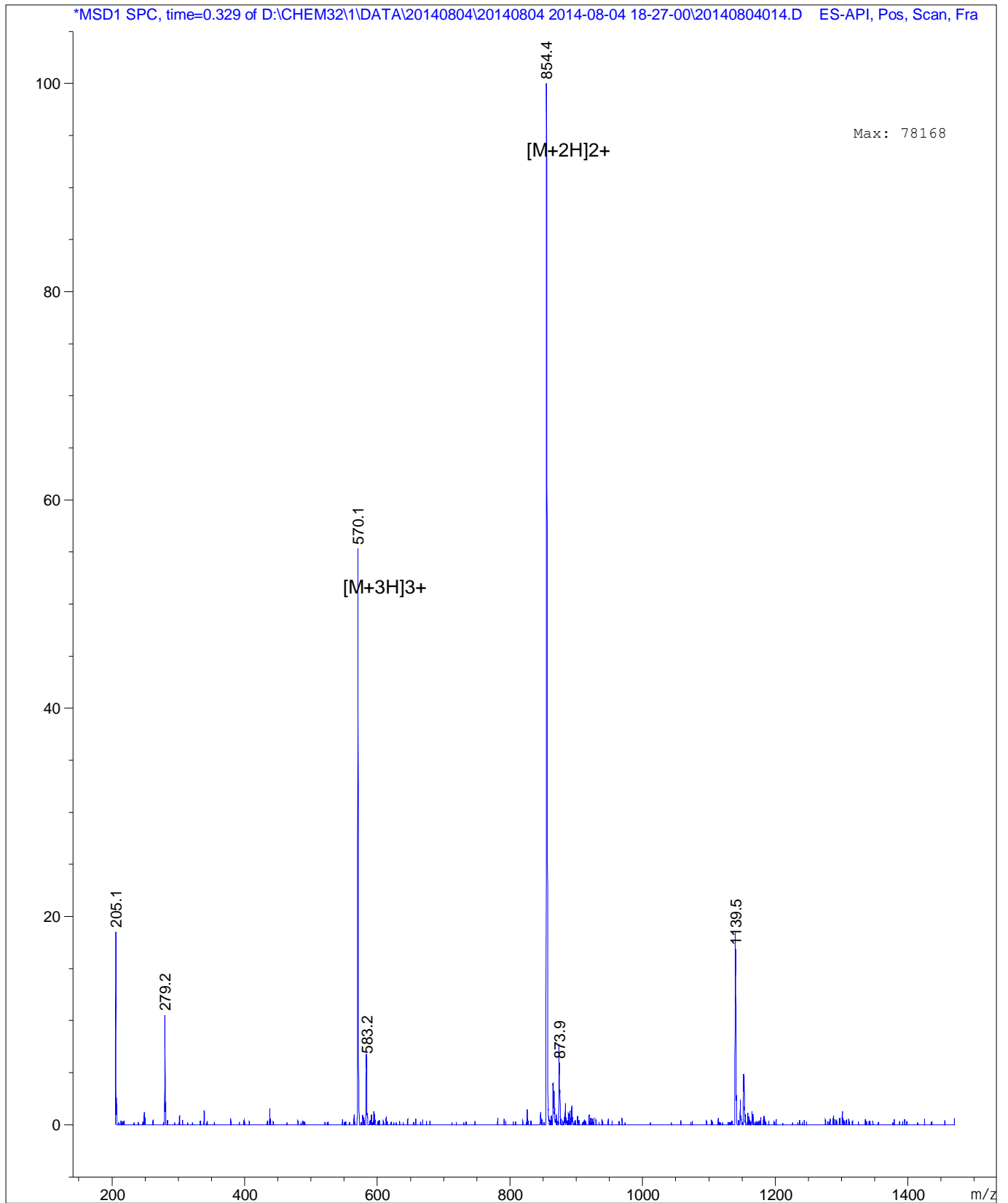
wangjun

Date:

09/18/2014

=====
Acq. Operator : liusuying Seq. Line : 14
Acq. Instrument : 5J-QC-082 Location : Vial 31
Injection Date : 8/4/2014 7:08:55 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140804\20140804 2014-08-04 18-27-00\TEST MS(200-1500)
2.
Last changed : 8/4/2014 6:24:11 PM by liusuying
Analysis Method : D:\METHOD\MS(100-1000).M
Last changed : 6/19/2014 4:53:37 PM by lishichao

MS Spectrum



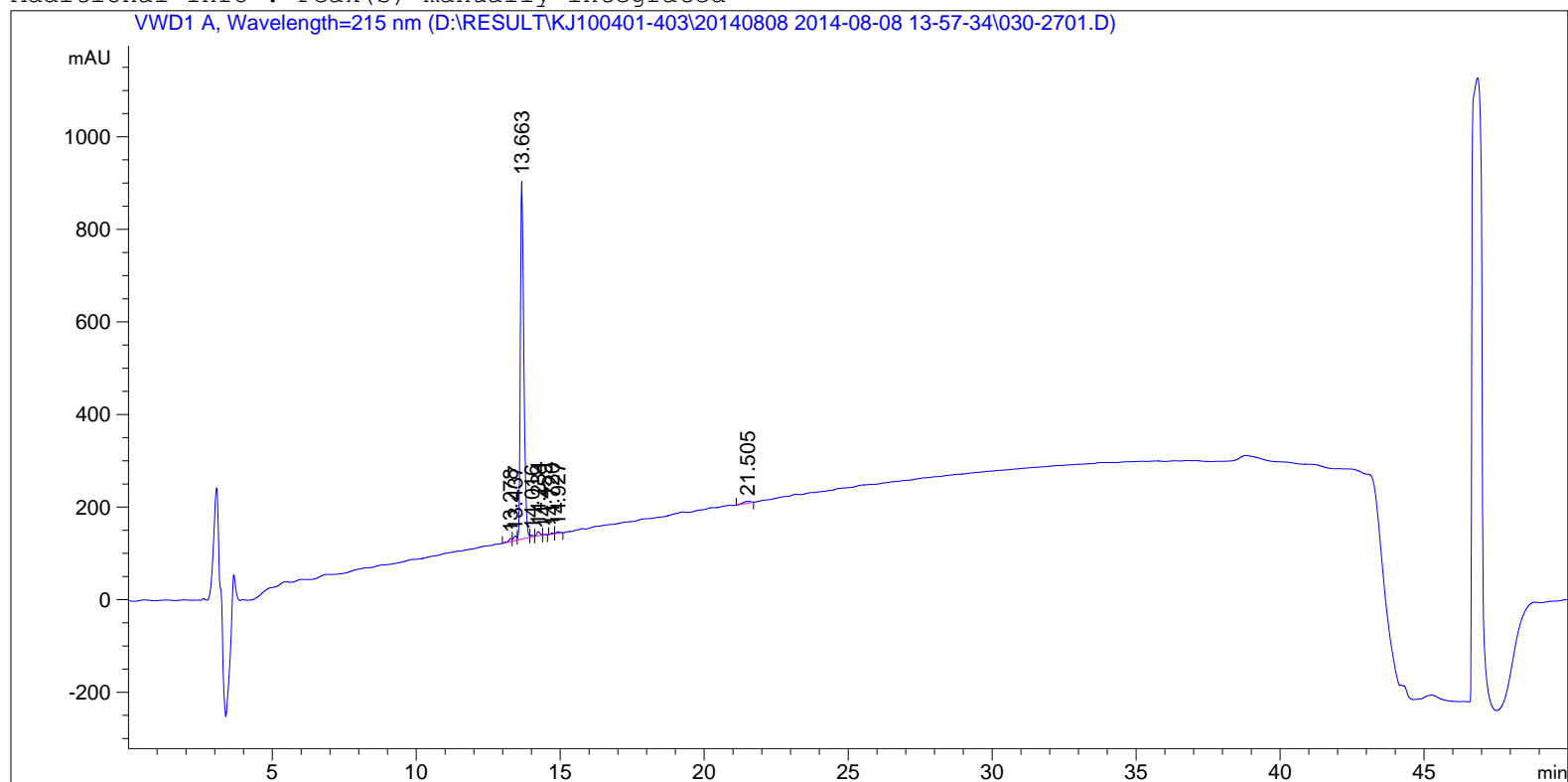
```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   27
Acq. Instrument : HPLC 1260                           Location  : Vial 30
Injection Date  : 8/9/2014 12:03:35 PM                 Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method    : D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M
Last changed   : 8/8/2014 1:57:34 PM by SYSTEM
Analysis Method: D:\RESULT\KJ100401-403\20140808 2014-08-08 13-57-34\KJ100401.M (Sequence
Method)
Last changed   : 8/10/2014 4:18:06 PM by SYSTEM
                (modified after loading)

Method Info    : Cloumn:Agilent HC-C18, 5µm, 4.6*250mm      Cloumn Temp:35°C      Flow
                Rate:1.0ml/min
                Mobile Phase A:0.1%TFA+H2O
                Mobile Phase B:0.1%TFA+ACN
                time(min)      0      40      40.3      43      43.3      50
                B%            10     70     95       95      10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	13.278	BV	0.1239	57.13020	6.60808	0.8468
2	13.437	VV	0.1142	75.85839	9.70054	1.1244
3	13.663	VV	0.1265	6390.66064	773.00153	94.7242

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
4	14.016	VB	0.1034	22.74428	3.38270	0.3371
5	14.234	BV	0.1193	70.44691	9.09678	1.0442
6	14.459	VB	0.0889	10.09030	1.75987	0.1496
7	14.720	BV	0.1073	16.82092	2.41433	0.2493
8	14.927	VB	0.1308	29.70408	3.40379	0.4403
9	21.505	BB	0.2926	73.13979	3.97582	1.0841

Totals : 6746.59551 813.34344

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-51		
Molecular Formula	C79H125N21O28	Cat#	8117
Molecular Weight	1817.06	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	LKETINEEAAEWDR L		
Item No.	8117_140303_51		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1817.06±2.0	1816.5
3	Peptide Purity (By HPLC)	≥80%	92.0%
4	Identification(Amino Acid Composition by HPLC)	D	2.0
		E	4.3
		R	1.1
		T	1.0
		A	2.0
		K	1.0
		I	0.9
L	1.8		
5	Peptide content	81.8%	

Quality Control By:

wangjun

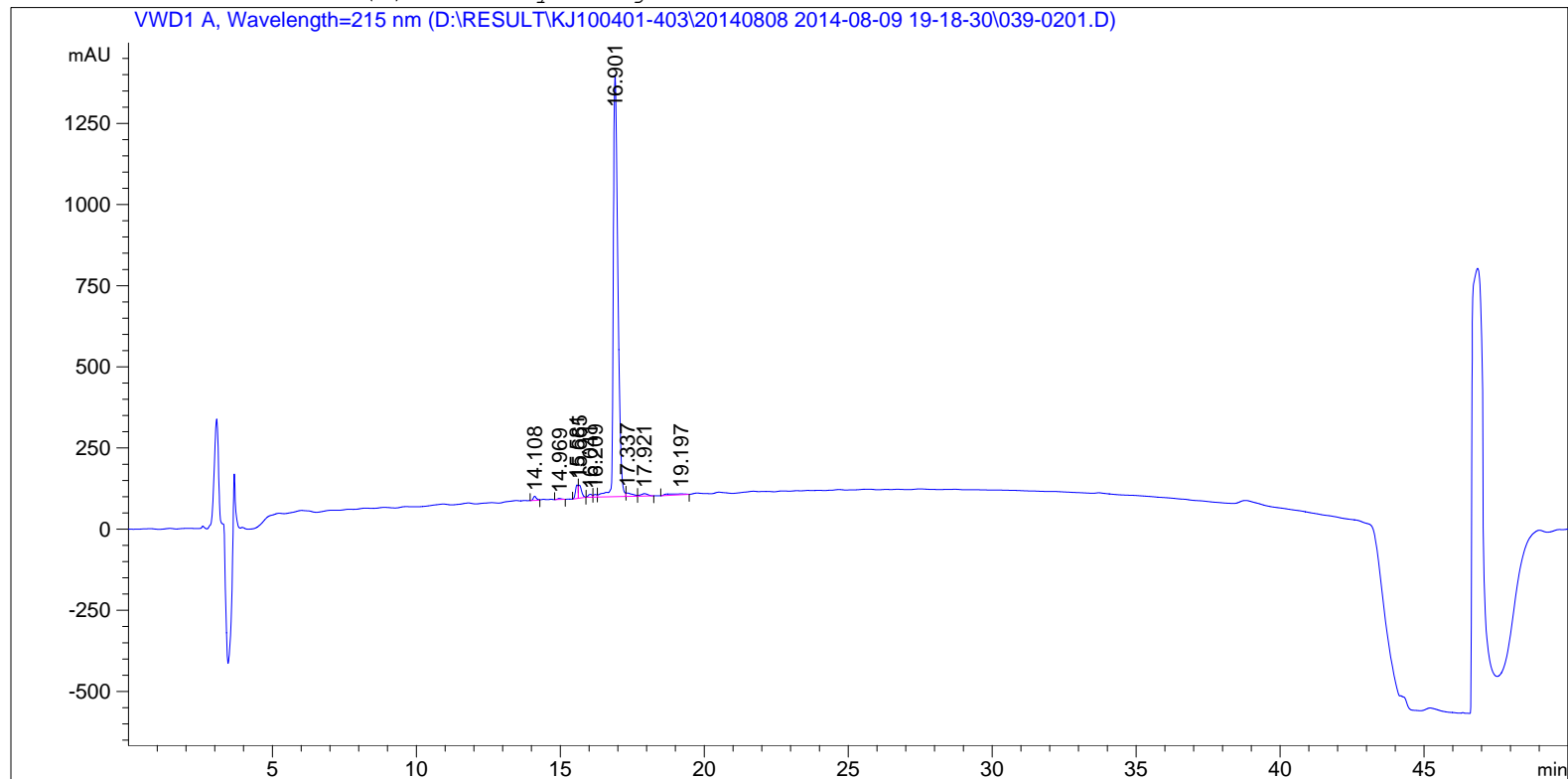
Date:

09/24/2014


```

=====
Acq. Operator   : SYSTEM                               Seq. Line :    2
Acq. Instrument : HPLC 1260                           Location  : Vial 39
Injection Date  : 8/9/2014 8:10:25 PM                 Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
Method)
Last changed   : 8/9/2014 7:18:30 PM by SYSTEM
Method Info    : Cloumn:Agilent HC-C18,5um,4.6*250mm      Cloumn Temp:35°C      Flow
Rate:1.0ml/min
Mobile Phase A:0.1%TFA+H2O
Mobile Phase B:0.1%TFA+ACN
time(min)      0      40      40.3      43      43.3      50
B%             10     70      95       95      10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	14.108	BV	0.1135	98.86115	12.88571	0.6335
2	14.969	BB	0.1351	28.91331	3.20998	0.1853
3	15.581	BV	0.0925	255.06073	41.63853	1.6343
4	15.665	VB	0.1121	301.08670	39.88661	1.9293
5	16.041	BV	0.1411	79.24329	8.88214	0.5078
6	16.209	VV	0.1152	64.25932	8.04117	0.4118

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
7	16.901	VV	0.1698	1.43502e4	1299.64185	91.9517
8	17.337	VV	0.2033	158.98705	10.52068	1.0187
9	17.921	VB	0.2461	124.68658	7.45737	0.7990
10	19.197	BB	0.7970	144.94533	2.40553	0.9288

Totals : 1.56063e4 1434.56957

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-52		
Molecular Formula	C80H118N24O25	Cat#	8117
Molecular Weight	1816.04	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	INEEAAEWDR LHPVH		
Item No.	8117_140303_52		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1816.04 ±2.0	1815.6
3	Peptide Purity (By HPLC)	≥80%	96.7 %
4	Identification(Amino Acid Composition by HPLC)	D	2.0
		E	3.1
		H	1.8
		R	1.0
		A	2.0
		P	0.8
		V	1.0
		I	1.3
L	1.0		
5	Peptide content	90.5 %	

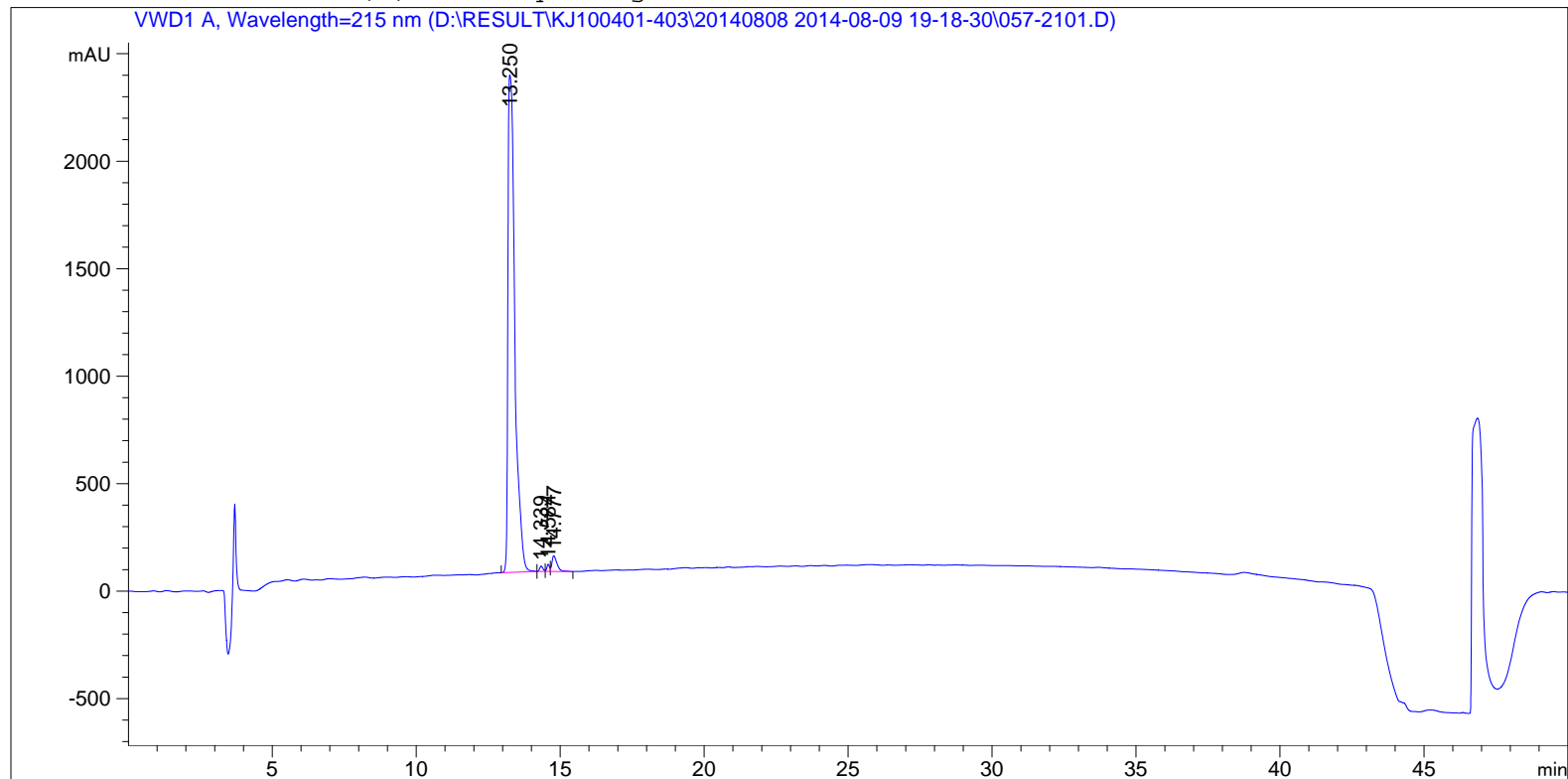
Quality Control By: wangjun

Date: 09/11/2014


```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   21
Acq. Instrument : HPLC 1260                           Location  : Vial 57
Injection Date  : 8/10/2014 12:18:53 PM              Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
Method)
Last changed    : 8/9/2014 7:18:30 PM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
=====
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	13.250	BB	0.2590	3.84984e4	2314.92505	96.6708
2	14.339	BV	0.1266	202.89922	25.02609	0.5095
3	14.584	VV	0.1000	218.50795	33.53498	0.5487
4	14.777	VB	0.1825	904.42242	73.54377	2.2710

Totals : 3.98242e4 2447.02989

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-53		
Molecular Formula	C76H113N23O20	Cat#	8117
Molecular Weight	1668.95	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	AAEWDRRLHPVHAGPI		
Item No.	8117_140303_53		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1668.95 ±2.0	1668.6
3	Peptide Purity (By HPLC)	≥80%	92.5 %
4	Identification(Amino Acid Composition by HPLC)	D	1.2
		E	1.0
		G	1.2
		H	1.8
		R	1.1
		A	3.1
		P	2.1
		V	0.8
		I	0.8
L	0.9		
5	Peptide content	86.5%	

Quality Control By:

wangjun

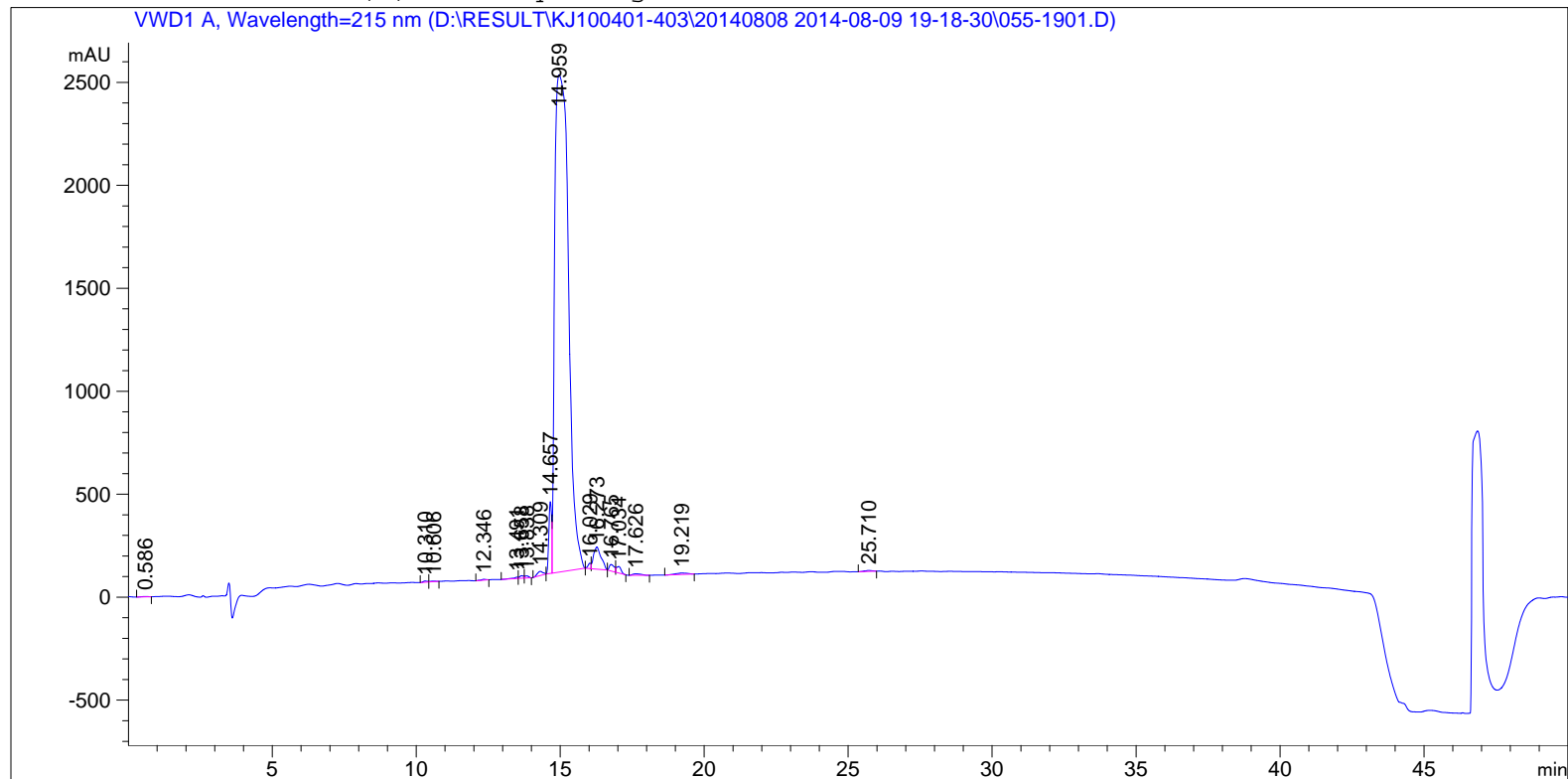
Date:

09/11/2014


```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   19
Acq. Instrument : HPLC 1260                           Location  : Vial 55
Injection Date  : 8/10/2014 10:36:58 AM              Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
Method)
Last changed   : 8/9/2014 7:18:30 PM by SYSTEM
Method Info    : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
Rate:1.0ml/min
Mobile Phase A:0.1%TFA+H2O
Mobile Phase B:0.1%TFA+ACN
time(min)      0      40      40.3      43      43.3      50
B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

Sorted By : Signal
 Multiplier : 1.0000
 Dilution : 1.0000
 Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	0.586	BB	0.2636	23.25415	1.47787	0.0271
2	10.310	BV	0.1459	56.64824	5.80072	0.0660
3	10.606	VB	0.2585	40.67209	2.43927	0.0474
4	12.346	BB	0.1703	51.51295	4.22268	0.0600
5	13.491	BV	0.1651	84.39277	6.83242	0.0983
6	13.658	VV	0.1479	123.57480	12.44023	0.1439

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
7	13.838	VB	0.1425	101.33001	10.59935	0.1180
8	14.309	BB	0.2194	283.61880	20.37031	0.3303
9	14.657	BV	0.1046	2350.15625	348.68314	2.7370
10	14.959	VB	0.5339	7.94632e4	2414.63110	92.5416
11	16.029	BV	0.1035	182.04875	26.37677	0.2120
12	16.273	VB	0.2712	1938.42224	107.57396	2.2575
13	16.765	BV	0.1858	385.39490	31.70643	0.4488
14	17.034	VB	0.1623	355.75681	31.85237	0.4143
15	17.626	BB	0.3020	149.80937	7.22368	0.1745
16	19.219	BB	0.3612	204.56436	7.18448	0.2382
17	25.710	BB	0.2354	73.22365	4.35021	0.0853

Totals : 8.58676e4 3043.76501

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-54		
Molecular Formula	C69H109N23O19	Cat#	8117
Molecular Weight	1564.85	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	DRLHPVHAGPIAPGQ		
Item No.	8117_140303_54		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1564.85±2.0	1564.5
3	Peptide Purity (By HPLC)	≥80%	88.5%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		E	1.0
		G	1.8
		H	1.8
		R	1.0
		A	2.0
		P	3.0
		V	1.0
		I	1.0
L	1.0		
5	Peptide content	75.3%	

Quality Control By:

wangjun

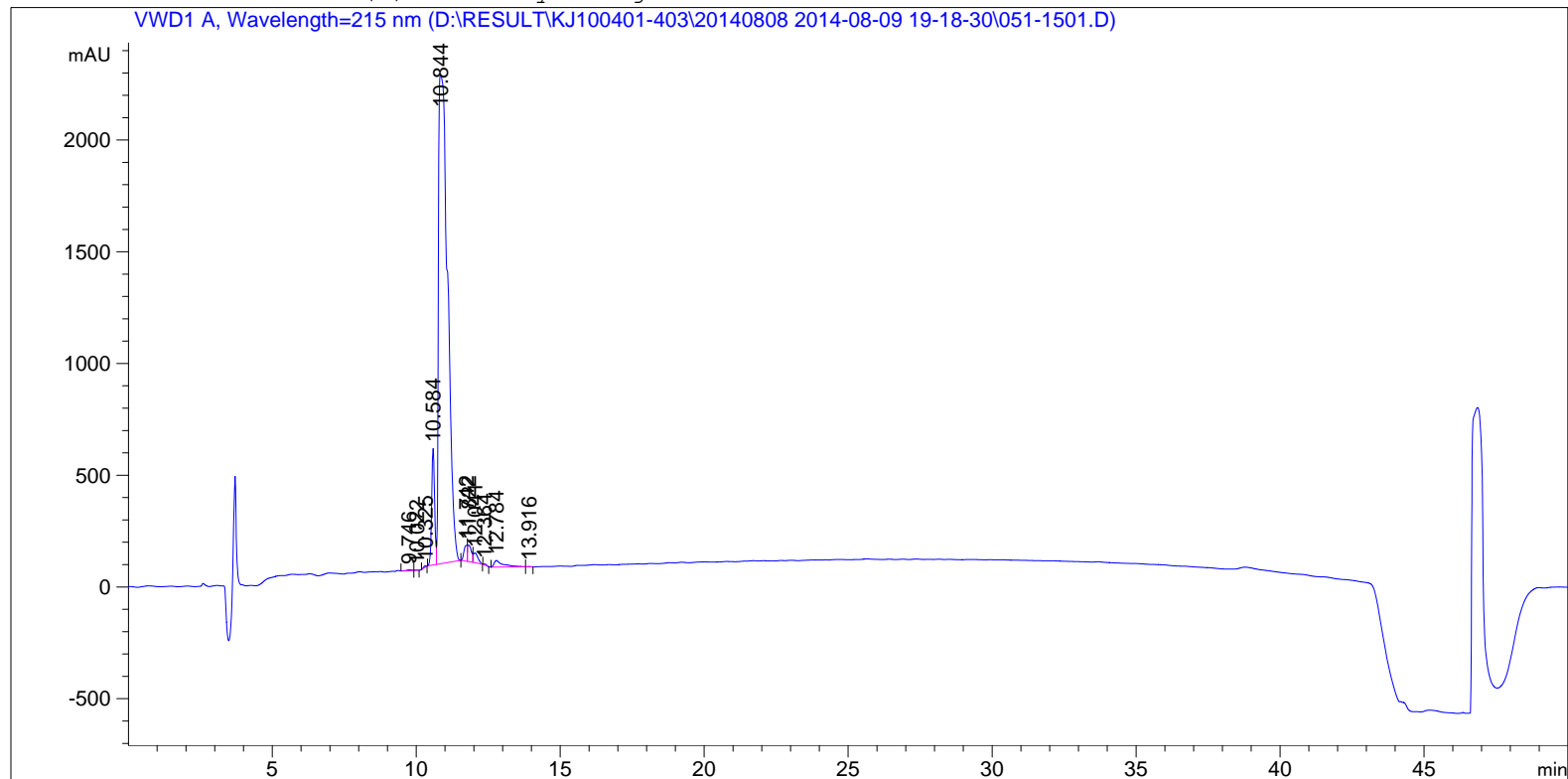
Date:

09/16/2014


```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   15
Acq. Instrument : HPLC 1260                           Location  : Vial 51
Injection Date  : 8/10/2014 7:13:02 AM                 Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
                Method)
Last changed    : 8/9/2014 7:18:30 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm   Cloumn Temp:35°C   Flow
                Rate:1.0ml/min
                Mobile Phase A:0.1%TFA+H2O
                Mobile Phase B:0.1%TFA+ACN
                time(min)      0      40      40.3      43      43.3      50
                B%            10     70     95        95        10        10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

Sorted By : Signal
 Multiplier : 1.0000
 Dilution : 1.0000
 Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	9.746	VV	0.2071	52.84978	3.58261	0.0975
2	10.022	VB	0.1125	10.72774	1.39853	0.0198
3	10.325	BB	0.1238	39.36301	5.00215	0.0726
4	10.584	BV	0.1114	3725.89575	521.40710	6.8735
5	10.844	VB	0.3288	4.79656e4	2187.55591	88.4862
6	11.742	BV	0.1252	555.83344	71.08712	1.0254

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
7	11.822	VV	0.1399	698.63312	73.52366	1.2888
8	12.041	VB	0.1619	477.00906	43.84577	0.8800
9	12.364	BB	0.1250	29.06221	3.68495	0.0536
10	12.784	BV	0.3029	642.06909	29.27036	1.1845
11	13.916	VB	0.1095	9.82872	1.35763	0.0181

Totals : 5.42069e4 2941.71579

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-55		
Molecular Formula	C68H109N21O19S	Cat#	8117
Molecular Weight	1556.88	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	PVHAGPIAPGQMREP		
Item No.	8117_140303_55		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1556.88±2.0	1556.4
3	Peptide Purity (By HPLC)	≥80%	97.1%
4	Identification(Amino Acid Composition by HPLC)	E	2.0
		G	1.8
		H	0.8
		R	1.4
		A	2.0
		P	4.4
		V	0.9
		M	0.6
	I	1.1	
5	Peptide content	71.4%	

Quality Control By: wangjun

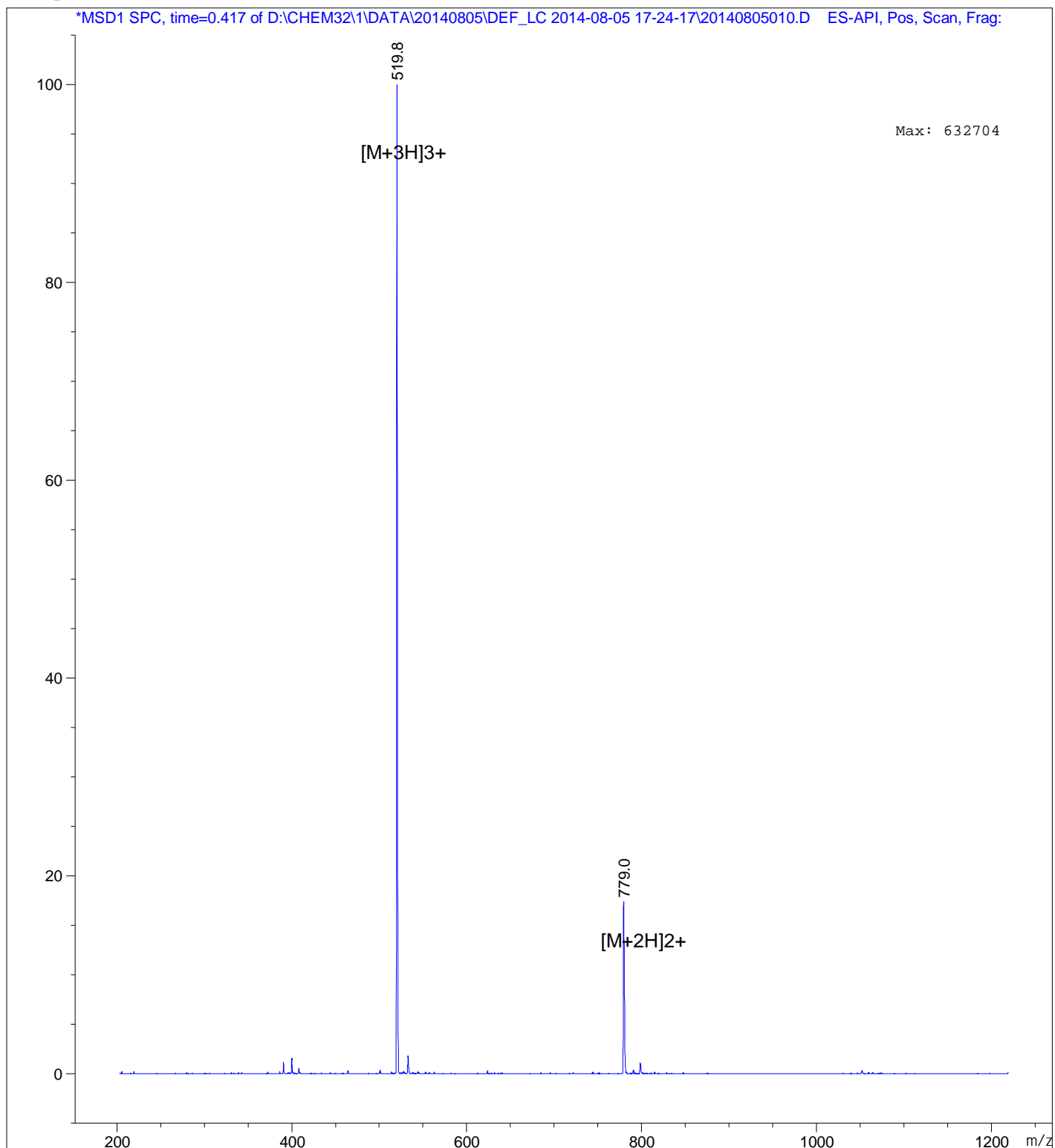
Date: 09/18/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 10
Acq. Instrument	: 5J-QC-082	Location	: Vial 52
Injection Date	: 8/5/2014 5:55:33 PM	Inj	: 1
		Inj Volume	: 3.0 µl

Acq. Method	: D:\CHEM32\1\DATA\20140805\DEF_LC 2014-08-05 17-24-17\TEST MS(200-1500)2.
Last changed	: 8/4/2014 6:24:11 PM by liusuying
Analysis Method	: D:\METHOD\TEST MS(200-1500)2.M
Last changed	: 8/4/2014 6:24:11 PM by liusuying

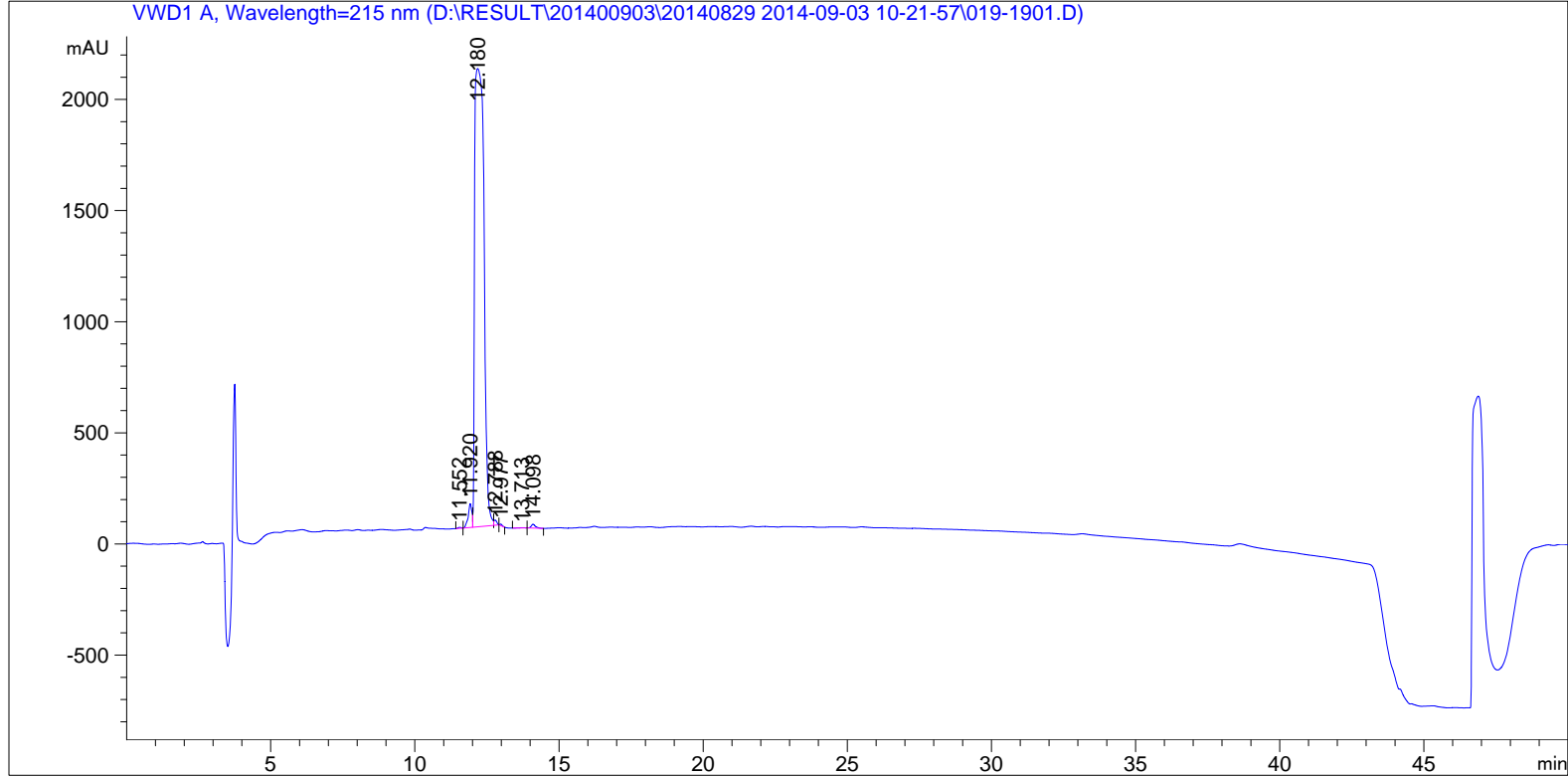
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :   19
Acq. Instrument : HPLC 1260                  Location  : Vial 19
Injection Date  : 9/4/2014 1:40:08 AM        Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M (Sequence Method)
Last changed    : 9/3/2014 7:20:03 PM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
=====
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By       : Signal
Multiplier      : 1.0000
Dilution        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	11.552	BB	0.1195	32.55051	4.49168	0.0692
2	11.920	BV	0.1287	940.18140	106.77331	1.9980
3	12.180	VV	0.3637	4.57044e4	2061.40942	97.1288
4	12.788	VB	0.1052	154.44832	22.73983	0.3282
5	12.977	BB	0.0931	37.79882	6.47310	0.0803
6	13.713	BB	0.1539	13.13184	1.17979	0.0279
7	14.098	BB	0.1482	172.95546	17.21619	0.3676

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
Totals :				4.70555e4	2220.28332	

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-56		
Molecular Formula	C₆₄H₁₀₆N₂₂O₂₂S	Cat#	8117
Molecular Weight	1567.81	Lot#	140303
Manufacturing Date	09/16/2014	Test Date	09/16/2014
Sequence	GPIAPGQMREPRGSD		
Item No.	8117_140303_56		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1567.81±2.0	1567.2
3	Peptide Purity (By HPLC)	≥80%	92.8%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	0.8
		E	1.8
		G	3.3
		R	2.2
		A	0.9
		P	2.9
		M	0.8
	I	1.0	
5	Peptide content	80.6%	

Quality Control By: wangjun

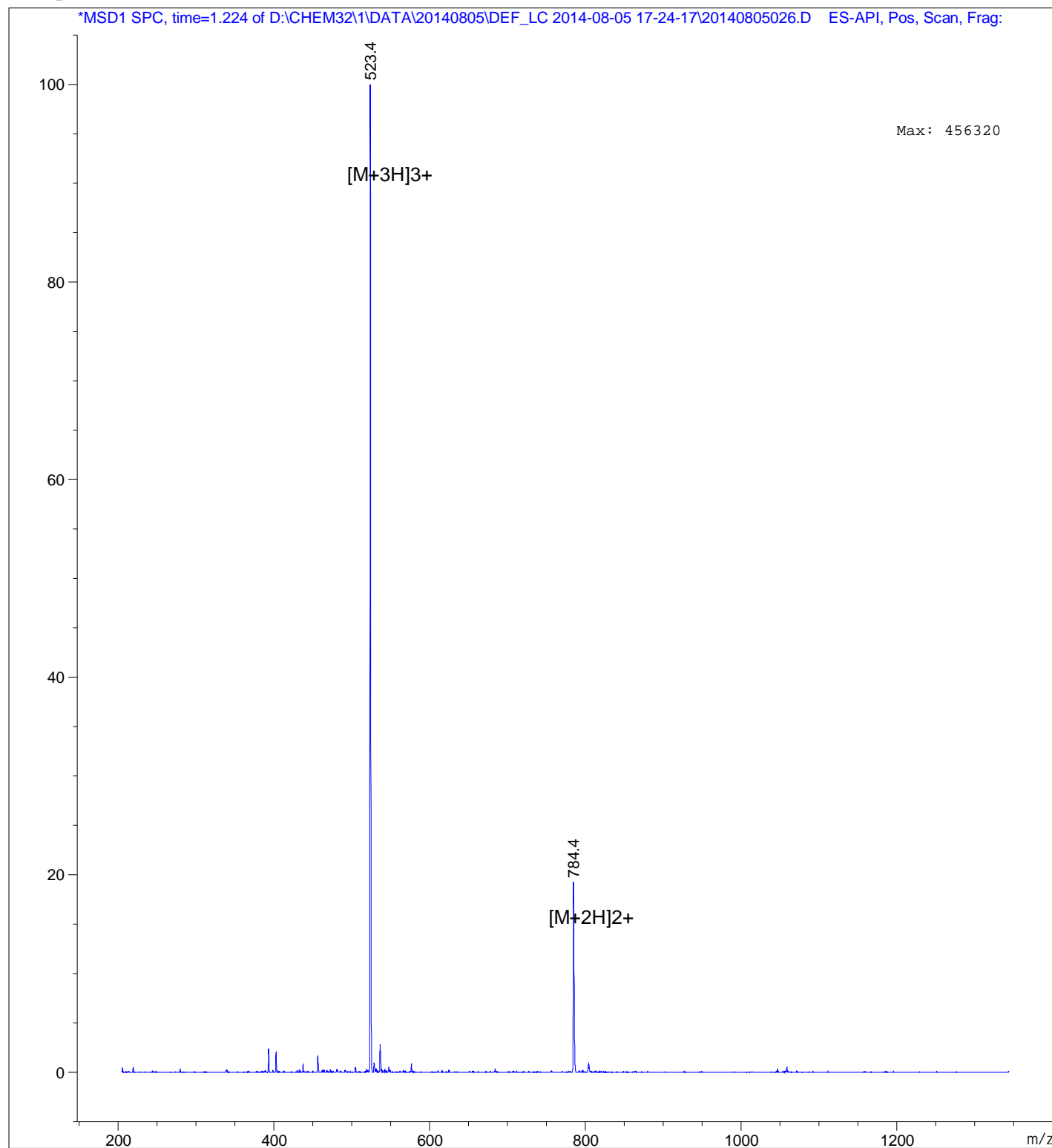
Date: 09/16/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 26
Acq. Instrument	: 5J-QC-082	Location	: Vial 68
Injection Date	: 8/5/2014 6:45:38 PM	Inj	: 1
		Inj Volume	: 3.0 µl

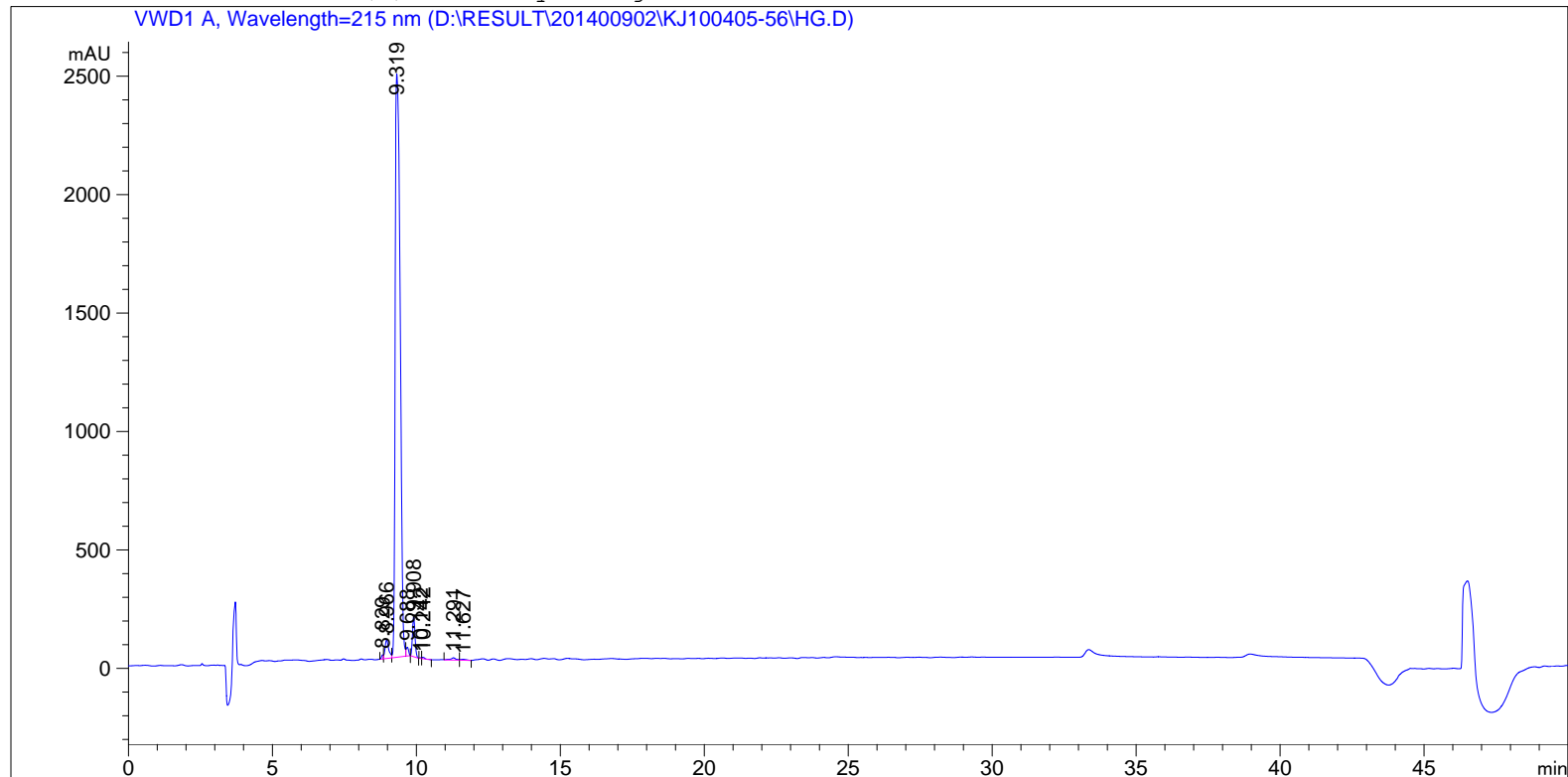
Acq. Method	: D:\CHEM32\1\DATA\20140805\DEF_LC 2014-08-05 17-24-17\TEST MS(200-1500)2.
Last changed	: 8/4/2014 6:24:11 PM by liusuying
Analysis Method	: D:\METHOD\TEST MS(200-1500)2.M
Last changed	: 8/4/2014 6:24:11 PM by liusuying

MS Spectrum



```

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 1
Injection Date  : 9/4/2014 5:13:39 PM
                                           Inj Volume : Manually
Acq. Method     : E:\METHODS\10-70IN50MIN.M\10-70IN50MIN.M
Last changed    : 9/4/2014 5:13:05 PM
                  (modified after loading)
Analysis Method : C:\CHEM32\1\METHODS\WSAH.M
Last changed    : 7/28/2014 4:59:11 PM by SYSTEM
Additional Info  : Peak(s) manually integrated
  
```



=====
 Area Percent Report
 =====

```

Sorted By       : Signal
Multiplier      : 1.0000
Dilution        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	8.829	BV	0.0656	74.79973	17.59223	0.2366
2	8.966	VV	0.1351	699.56763	77.68279	2.2128
3	9.319	VV	0.1960	2.93519e4	2462.90332	92.8431
4	9.688	VB	0.0920	223.80133	37.31260	0.7079
5	9.908	BB	0.0961	1031.78320	166.99355	3.2636
6	10.142	BV	0.0596	11.03511	2.82087	0.0349
7	10.242	VB	0.0828	33.59635	6.13957	0.1063
8	11.291	VV	0.1891	134.53671	9.68257	0.4256
9	11.627	VB	0.2293	53.49360	3.68720	0.1692

Totals : 3.16145e4 2784.81469

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-57		
Molecular Formula	C63H106N22O23S	Cat#	8117
Molecular Weight	1571.8	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	PGQMREPRGSDIAGT		
Item No.	8117_140303_57		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1571.8±2.0	1571.4
3	Peptide Purity (By HPLC)	≥80%	92.1%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	0.6
		E	2.1
		G	2.9
		R	2.3
		T	1.1
		A	1.0
		P	2.0
		M	0.9
	I	1.2	
5	Peptide content	95.0%	

Quality Control By:

wangjun

Date:

09/18/2014

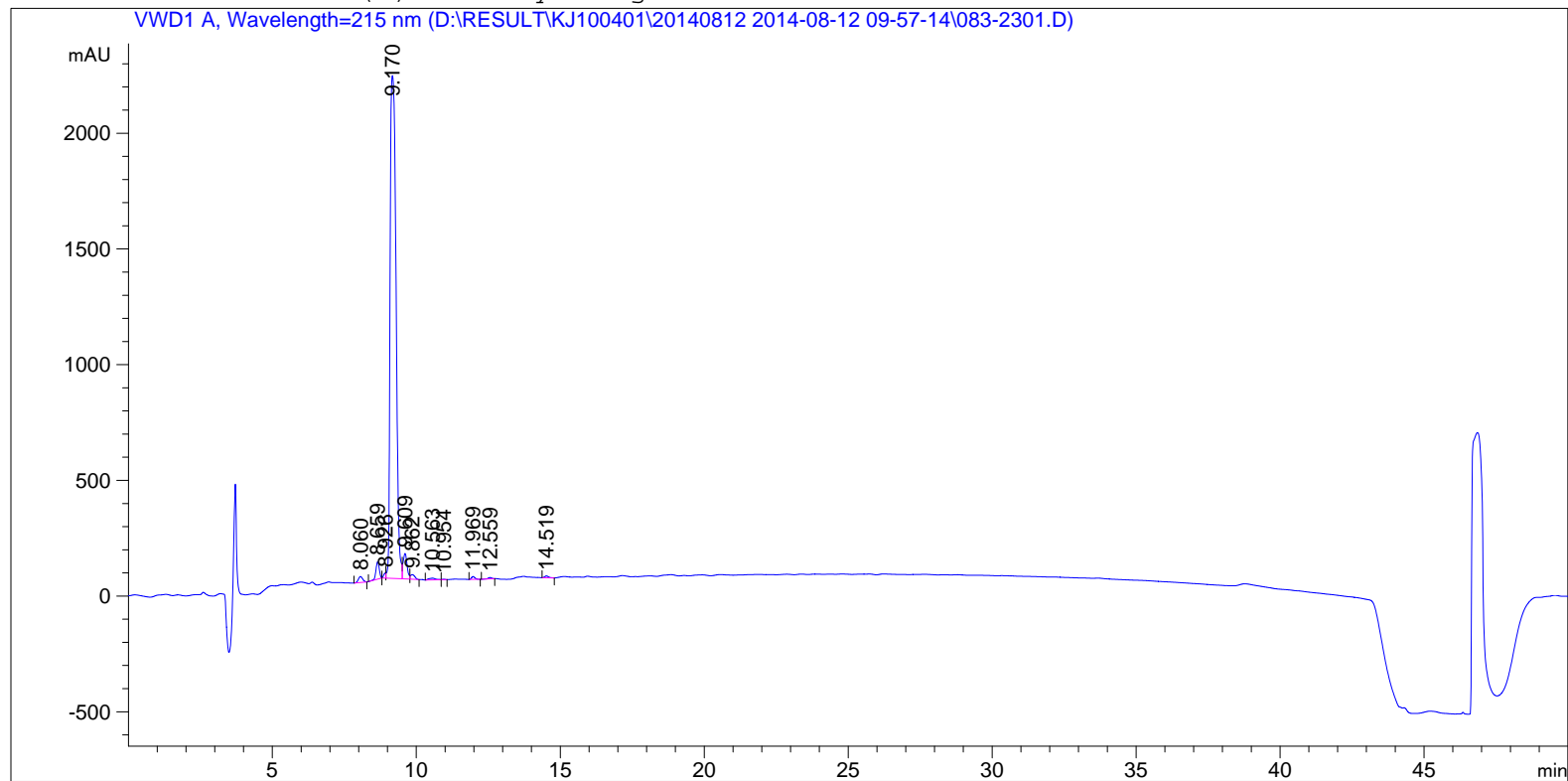

```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   23
Acq. Instrument : HPLC 1260                           Location  : Vial 83
Injection Date  : 8/13/2014 4:39:37 AM                 Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\KJ100401\20140812 2014-08-12 09-57-14\KJ100401.M
Last changed    : 8/12/2014 9:57:14 AM by SYSTEM
Analysis Method : D:\RESULT\KJ100401\20140812 2014-08-12 09-57-14\KJ100401.M (Sequence Method)
Last changed    : 8/13/2014 1:46:04 PM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95      10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	8.060	BB	0.1624	267.25754	25.69257	0.8020
2	8.659	BB	0.1277	603.69403	75.19830	1.8117
3	8.926	BV	0.0820	110.96488	21.95847	0.3330
4	9.170	VV	0.2299	3.07029e4	2172.71289	92.1382

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	9.609	VV	0.1442	1068.06433	110.12357	3.2052
6	9.862	VB	0.1633	205.95992	19.81482	0.6181
7	10.563	BV	0.2307	126.50196	7.50279	0.3796
8	10.954	VB	0.1041	13.57089	2.05337	0.0407
9	11.969	BB	0.1286	102.91702	12.42630	0.3088
10	12.559	BB	0.1412	50.54948	5.66096	0.1517
11	14.519	BB	0.1426	70.28134	7.62161	0.2109

Totals : 3.33227e4 2460.76564

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-58		
Molecular Formula	C63H109N21O25	Cat#	8117
Molecular Weight	1560.75	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	REPRGSDIAGTTSTL		
Item No.	8117_140303_58		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1560.75 ±2.0	1560.0
3	Peptide Purity (By HPLC)	≥80%	97.1%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	1.7
		E	1.1
		G	1.9
		R	2.1
		T	3.1
		A	1.0
		P	1.0
		I	1.0
L	1.0		
5	Peptide content	92.2%	

Quality Control By:

wangjun

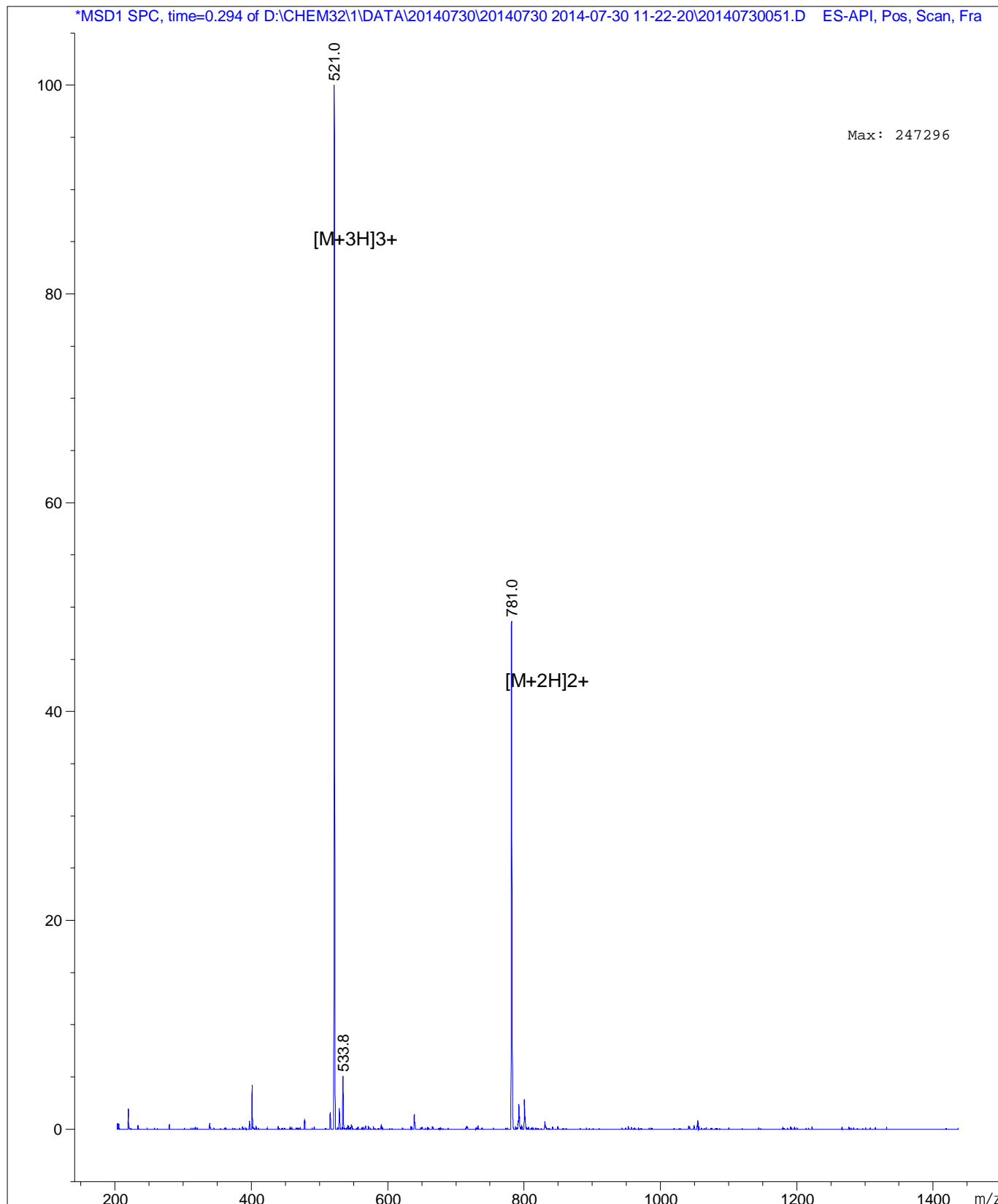
Date:

09/11/2014

=====

Acq. Operator : lishichao Seq. Line : 51
Acq. Instrument : 5J-QC-082 Location : Vial 86
Injection Date : 7/30/2014 1:58:23 PM Inj : 1
Inj Volume : 3.0 μ l
Acq. Method : D:\CHEM32\1\DATA\20140730\20140730 2014-07-30 11-22-20\TEST MS(200-1500)
2.
Last changed : 7/30/2014 10:43:17 AM by lishichao
Analysis Method : D:\METHOD\TEST MS(200-800).M
Last changed : 3/14/2014 11:35:24 PM by YZW

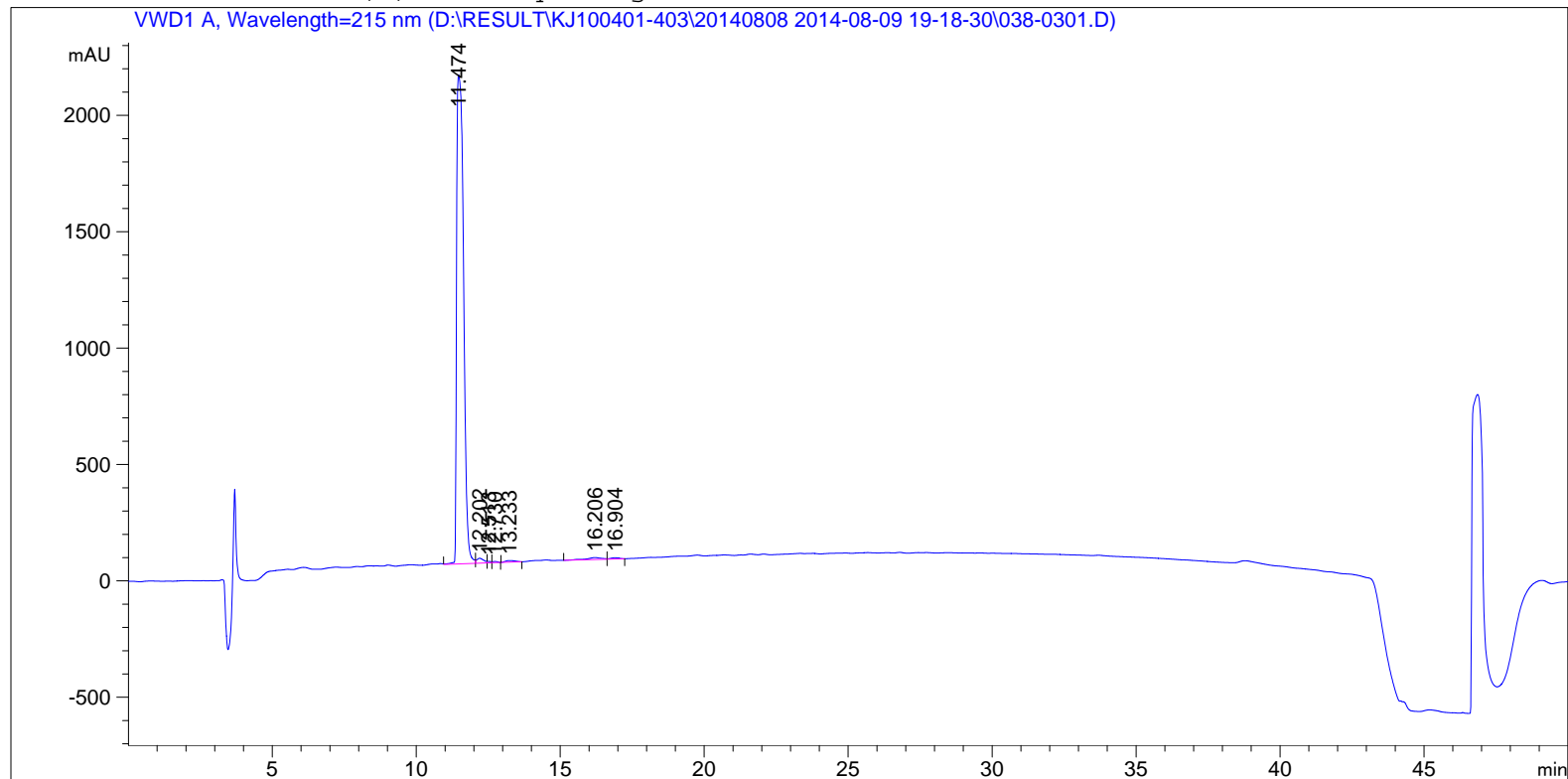
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :    3
Acq. Instrument : HPLC 1260                           Location  : Vial 38
Injection Date  : 8/9/2014 9:01:25 PM                 Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
                : Method)
Last changed    : 8/9/2014 7:18:30 PM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                : Rate:1.0ml/min
                : Mobile Phase A:0.1%TFA+H2O
                : Mobile Phase B:0.1%TFA+ACN
                : time(min)      0      40      40.3      43      43.3      50
                : B%            10     70     95      95     10      10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      : Signal
Multiplier     : 1.0000
Dilution      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	11.474	VV	0.2711	3.49529e4	2101.31030	97.0787
2	12.202	VV	0.2353	352.83875	21.18916	0.9800
3	12.513	VV	0.1284	54.92100	6.19791	0.1525
4	12.730	VB	0.1861	58.58486	4.91316	0.1627
5	13.233	BB	0.3254	161.60493	6.74904	0.4488
6	16.206	BV	0.5017	314.96860	8.55167	0.8748

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
7	16.904	VB	0.3132	108.89184	5.33286	0.3024

Totals : 3.60047e4 2154.24410

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-59		
Molecular Formula	C62H105N17O27	Cat#	8117
Molecular Weight	1520.7	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	GSDIAGTTSTLQEQI		
Item No.	8117_140303_59		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1520.7±2.0	1519.8
3	Peptide Purity (By HPLC)	≥80%	94.9%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	1.7
		E	3.2
		G	2.0
		T	3.0
		A	1.0
		I	2.0
	L	1.1	
5	Peptide content	88.8%	

Quality Control By:

wangjun

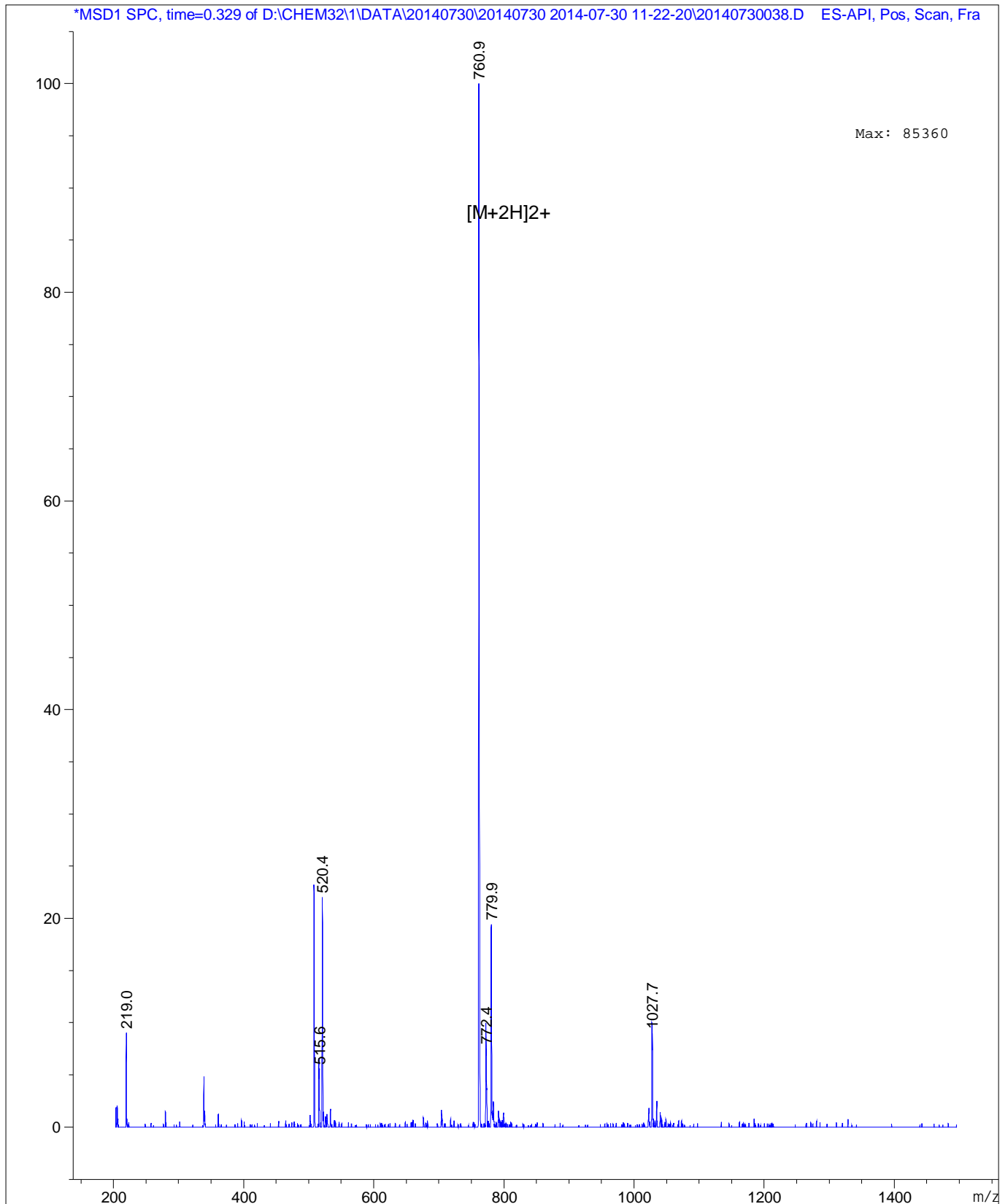
Date:

09/24/2014

=====

Acq. Operator	: lishichao	Seq. Line	: 38
Acq. Instrument	: 5J-QC-082	Location	: Vial 71
Injection Date	: 7/30/2014 1:17:55 PM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\20140730\20140730 2014-07-30 11-22-20\TEST MS(200-1500) 2.		
Last changed	: 7/30/2014 10:43:17 AM by lishichao		
Analysis Method	: D:\METHOD\TEST MS(200-800).M		
Last changed	: 3/14/2014 11:35:24 PM by YZW		

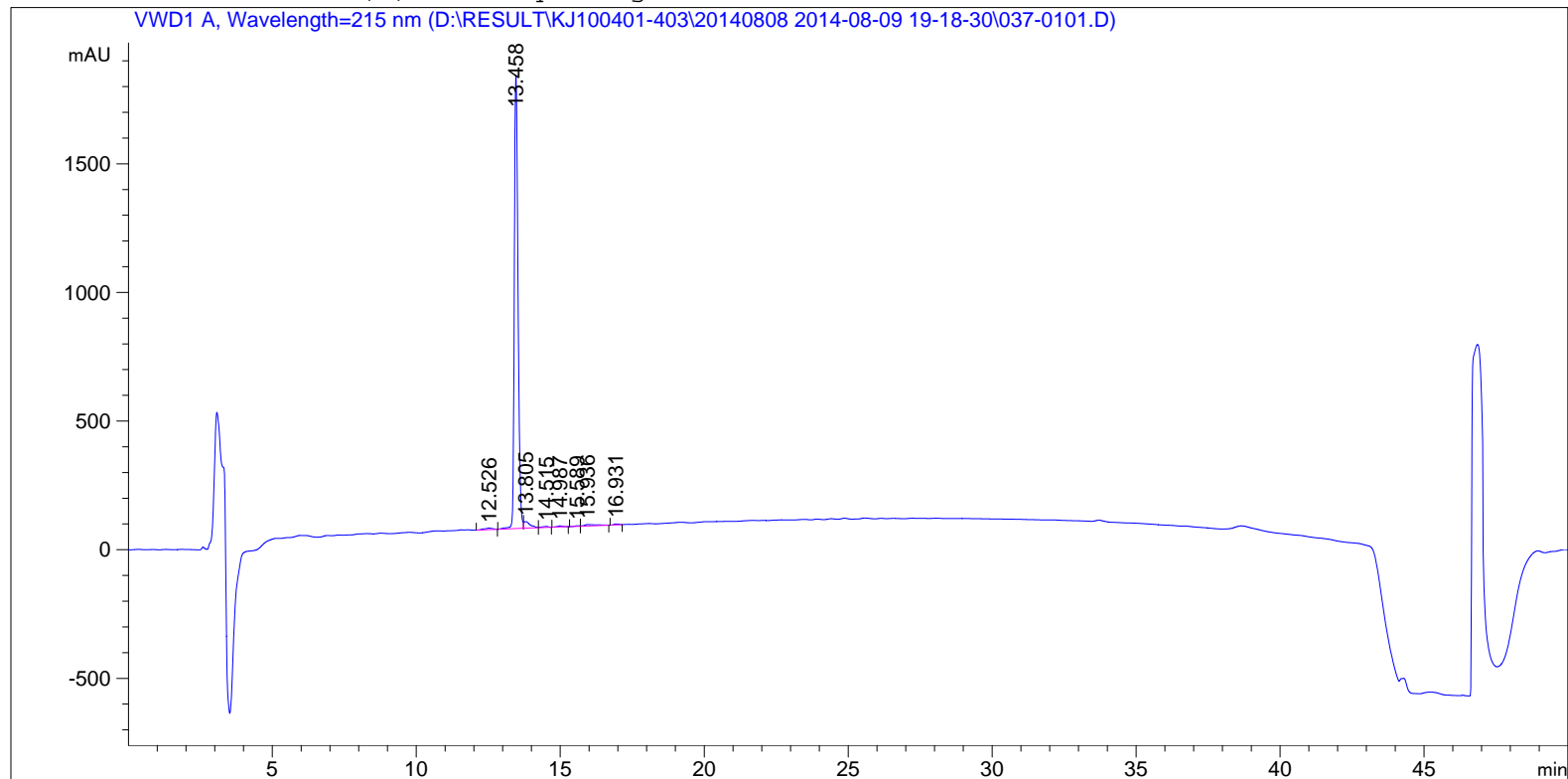
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    1
Acq. Instrument : HPLC 1260                  Location  : Vial 37
Injection Date  : 8/9/2014 7:19:24 PM       Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401-403\20140808 2014-08-09 19-18-30\KJ100401.M (Sequence
Method)
Last changed   : 8/9/2014 7:18:30 PM by SYSTEM
Method Info    : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
Rate:1.0ml/min
Mobile Phase A:0.1%TFA+H2O
Mobile Phase B:0.1%TFA+ACN
time(min)      0      40      40.3      43      43.3      50
B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.526	BB	0.2605	123.56091	6.25477	0.7376
2	13.458	BV	0.1402	1.59043e4	1763.48767	94.9456
3	13.805	VV	0.2212	390.36542	25.27481	2.3304
4	14.515	VB	0.2146	54.26550	3.44745	0.3240
5	14.987	BB	0.1751	51.08855	4.08024	0.3050
6	15.589	BV	0.1729	25.35829	2.22529	0.1514

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
7	15.936	VB	0.3768	167.28377	5.56327	0.9987
8	16.931	BB	0.1523	34.73766	3.42530	0.2074

Totals : 1.67509e4 1813.75880

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-60		
Molecular Formula	C69H110N18O25S	Cat#	8117
Molecular Weight	1623.89	Lot#	140303
Manufacturing Date	09/25/2014	Test Date	09/25/2014
Sequence	AGTTSTLQEQIGWMT		
Item No.	8117_140303_60		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1623.89±2.0	1623.0
3	Peptide Purity (By HPLC)	≥80%	85.4%
4	Identification(Amino Acid Composition by HPLC)	S	0.9
		E	3.1
		G	2.0
		T	4.4
		A	1.0
		M	0.5
		I	1.0
L	0.9		
5	Peptide content	90.4%	

Quality Control By:

wangjun

Date:

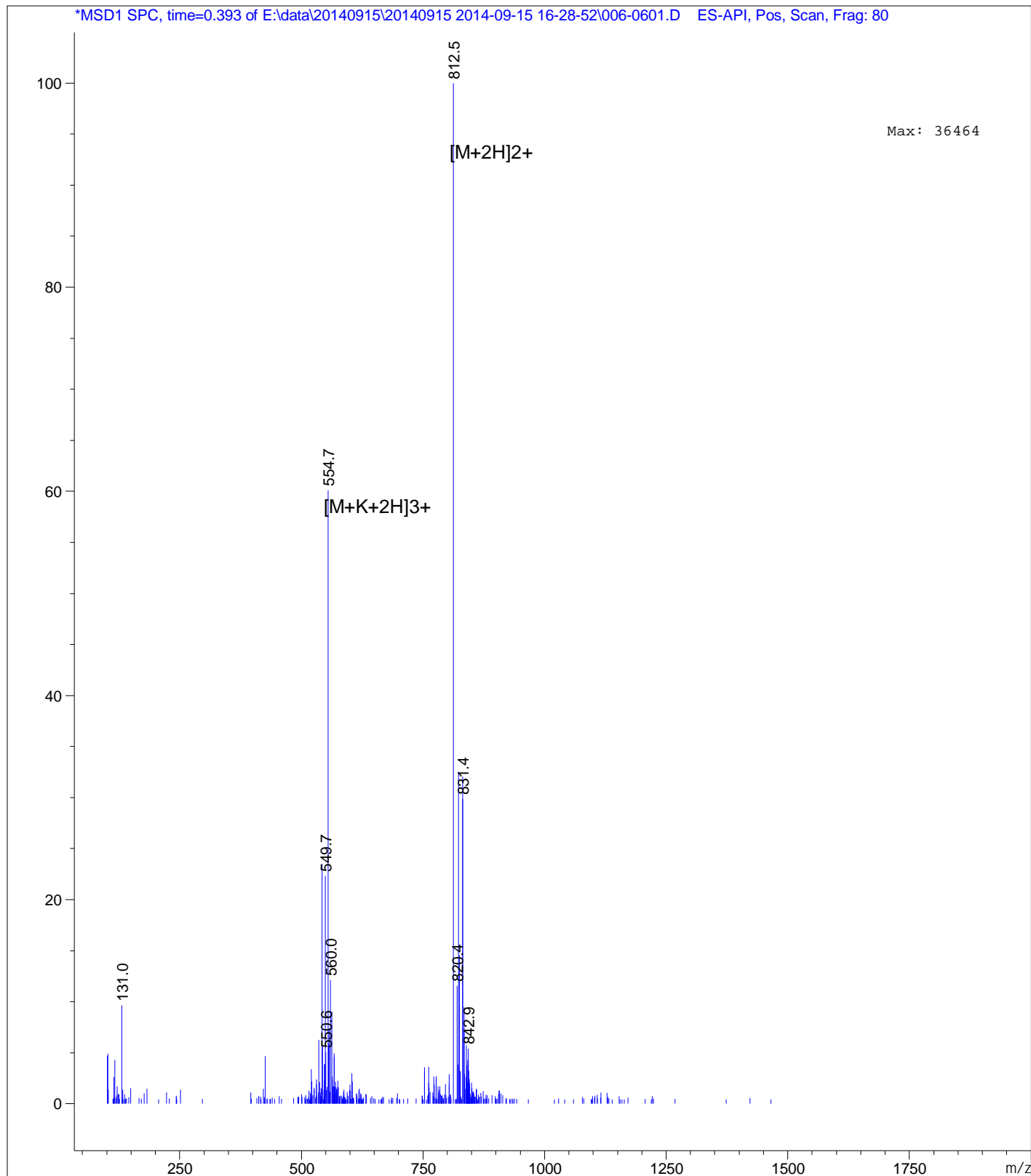
09/25/2014

=====

Acq. Operator	: SYSTEM	Seq. Line	: 6
Acq. Instrument	: Agilent6120	Location	: 6
Injection Date	: 9/15/2014 4:44:39 PM	Inj	: 1
		Inj Volume	: 5.000 µl

Method : E:\data\20140915\20140915 2014-09-15 16-28-52\LCMS.M (Sequence Method)
Last changed : 9/15/2014 4:40:47 PM by SYSTEM

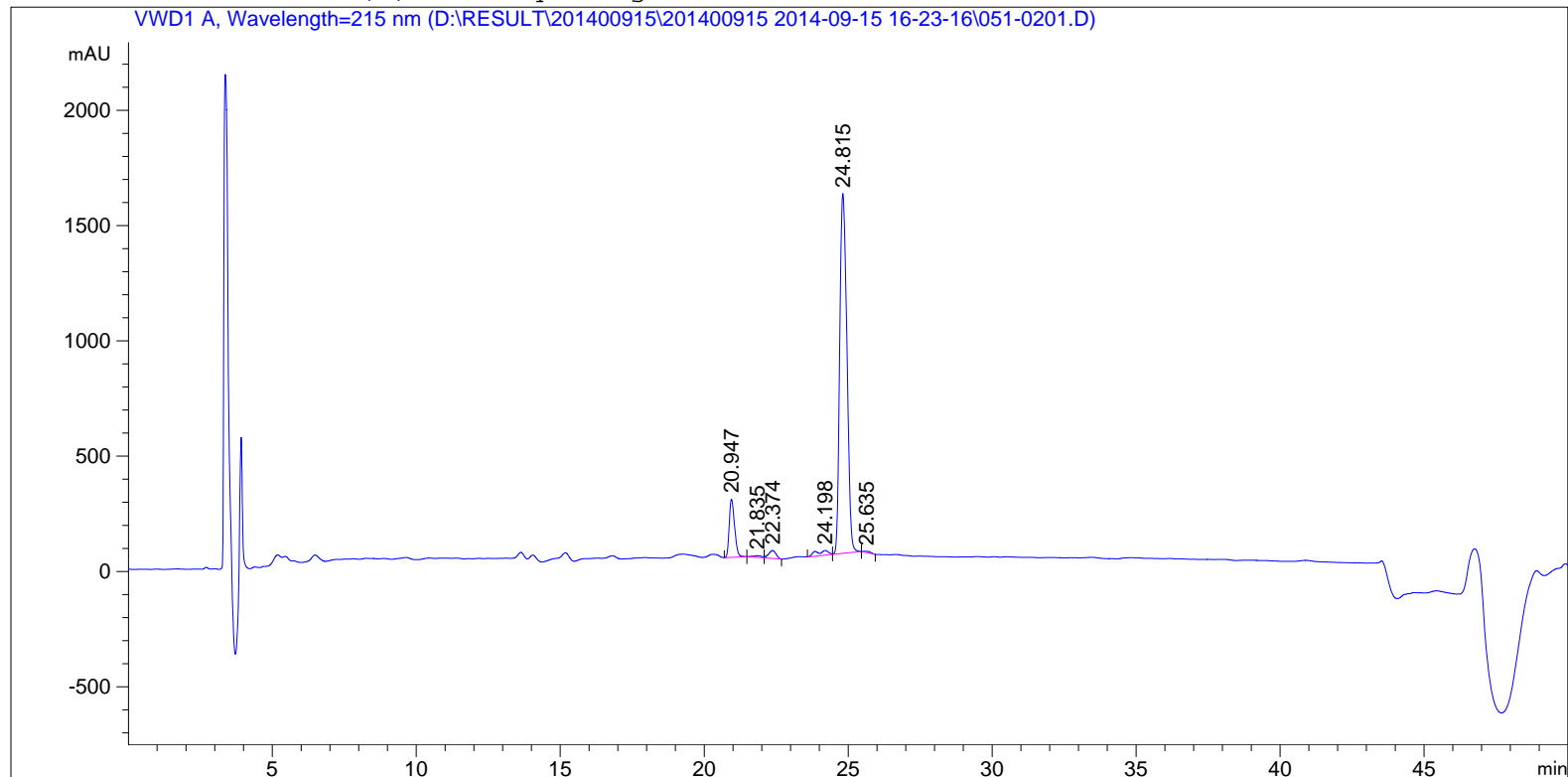
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :    2
Acq. Instrument : HPLC 1260                             Location  : Vial 51
Injection Date  : 9/15/2014 5:15:08 PM                Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\201400915\201400915 2014-09-15 16-23-16\KJ100401.M (Sequence Method)
Last changed    : 9/15/2014 4:23:16 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	20.947	BB	0.1980	3244.15674	252.33324	10.2883
2	21.835	BV	0.3362	169.79445	7.41446	0.5385
3	22.374	VB	0.2785	615.40710	34.60909	1.9517
4	24.198	MV R	0.3872	480.82629	19.78366	1.5249
5	24.815	VB	0.2873	2.69269e4	1560.43921	85.3940
6	25.635	BB	0.2622	95.46392	5.56350	0.3027

Totals : 3.15325e4 1880.14316

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-61		
Molecular Formula	C74H114N20O25S	Cat#	8117
Molecular Weight	1715.99	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	STLQEQIGWMTNPP		
Item No.	8117_140303_61		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1715.99±2.0	1715.2
3	Peptide Purity (By HPLC)	≥80%	87.8%
4	Identification(Amino Acid Composition by HPLC)	D	2.1
		S	1.0
		E	3.2
		G	1.1
		T	2.1
		P	1.7
		M	0.3
		I	1.4
L	1.1		
5	Peptide content	93.4%	

Quality Control By:

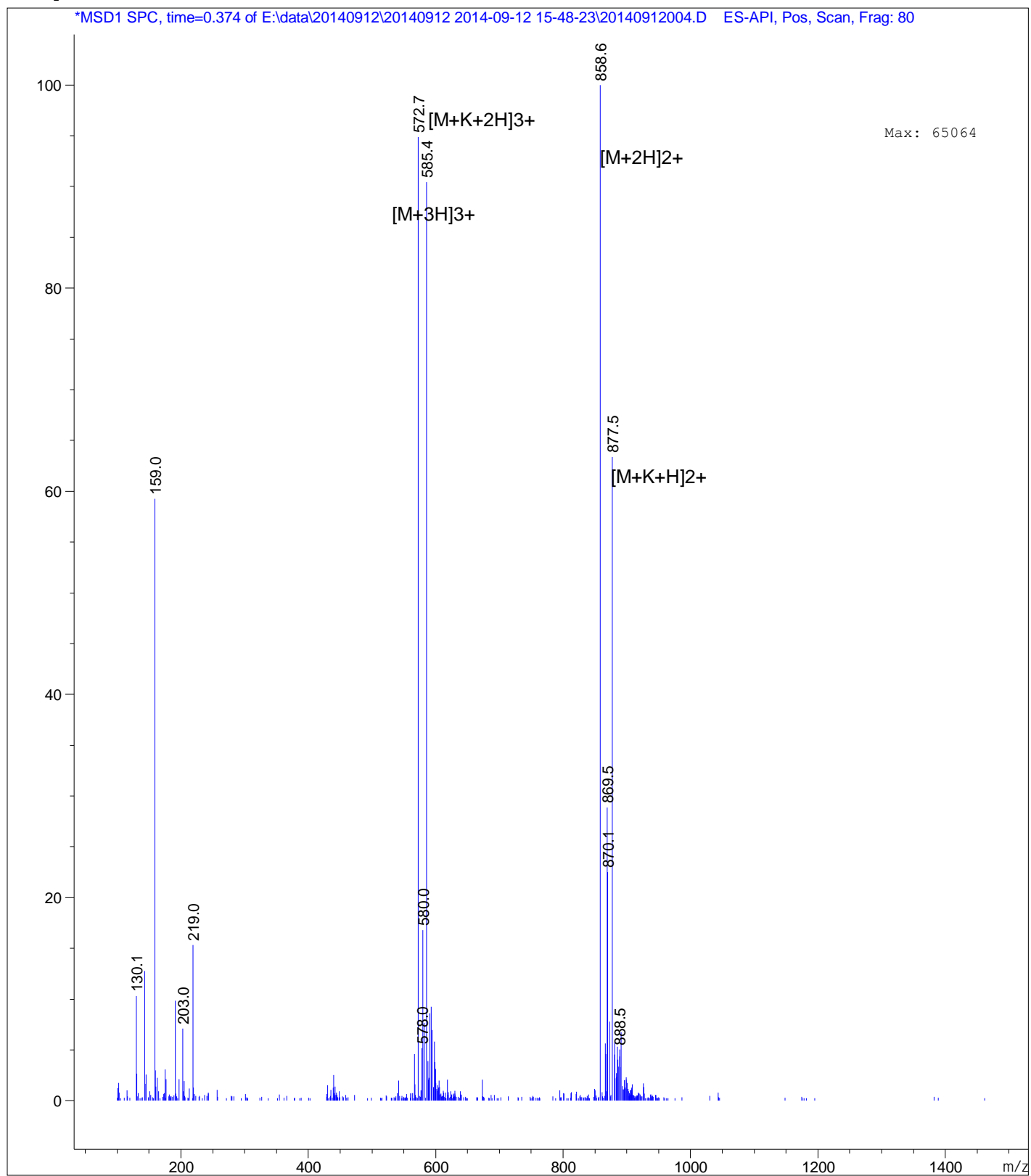
wangjun

Date:

09/18/2014

=====
Acq. Operator : SYSTEM Seq. Line : 4
Acq. Instrument : Agilent6120 Location : 34
Injection Date : 9/12/2014 3:58:25 PM Inj : 1
Inj Volume : 5.000 µl
Method : E:\data\20140912\20140912 2014-09-12 15-48-23\LCMS.M (Sequence Method)
Last changed : 9/12/2014 3:48:23 PM by SYSTEM

MS Spectrum



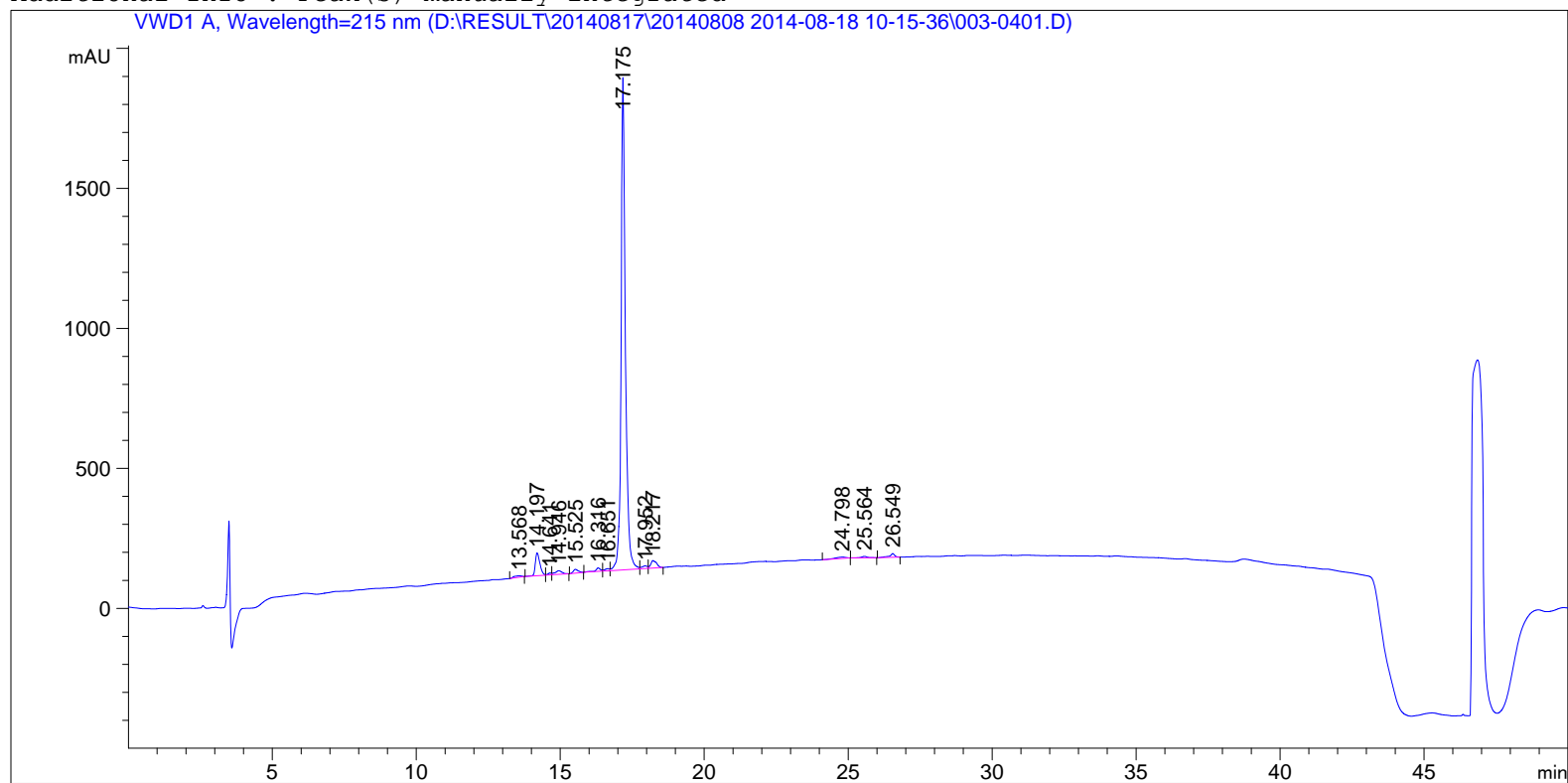
```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    4
Acq. Instrument : HPLC 1260                  Location  : Vial 3
Injection Date  : 8/18/2014 12:49:27 PM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140817\20140808 2014-08-18 10-15-36\KJ100401.M
Last changed    : 8/18/2014 10:15:36 AM by SYSTEM
Analysis Method  : D:\RESULT\20140817\20140808 2014-08-18 10-15-36\KJ100401.M (Sequence Method)
Last changed    : 8/19/2014 11:10:42 AM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18, 5µm, 4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	13.568	BB	0.2706	99.61401	5.03884	0.4752
2	14.197	BV	0.1666	896.61157	81.37203	4.2774
3	14.641	VV	0.1222	57.08580	6.78120	0.2723
4	14.946	VB	0.2567	222.29973	12.92543	1.0605

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	15.525	BB	0.1721	161.60573	13.55662	0.7710
6	16.316	BV	0.1714	150.37671	12.49946	0.7174
7	16.651	VV	0.1765	91.58896	7.65845	0.4369
8	17.175	VV	0.1531	1.83991e4	1758.26270	87.7754
9	17.952	VV	0.1796	129.80324	9.85849	0.6192
10	18.217	VB	0.1938	385.69437	26.81714	1.8400
11	24.798	BB	0.4167	123.38818	4.77102	0.5886
12	25.564	BB	0.2114	77.22660	5.25721	0.3684
13	26.549	BB	0.1766	167.16704	13.12030	0.7975

Totals : 2.09616e4 1957.91890

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-62		
Molecular Formula	C74H113N19O22S	Cat#	8117
Molecular Weight	1652.98	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	EQIGWMTNNPPIPVG		
Item No.	8117_140303_62		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1652.98±2.0	1652.0
3	Peptide Purity (By HPLC)	≥80%	81.4%
4	Identification(Amino Acid Composition by HPLC)	D	1.9
		E	2.2
		G	2.0
		T	1.1
		P	3.1
		V	1.2
		M	0.5
	I	2.1	
5	Peptide content	82.2%	

Quality Control By:

wangjun

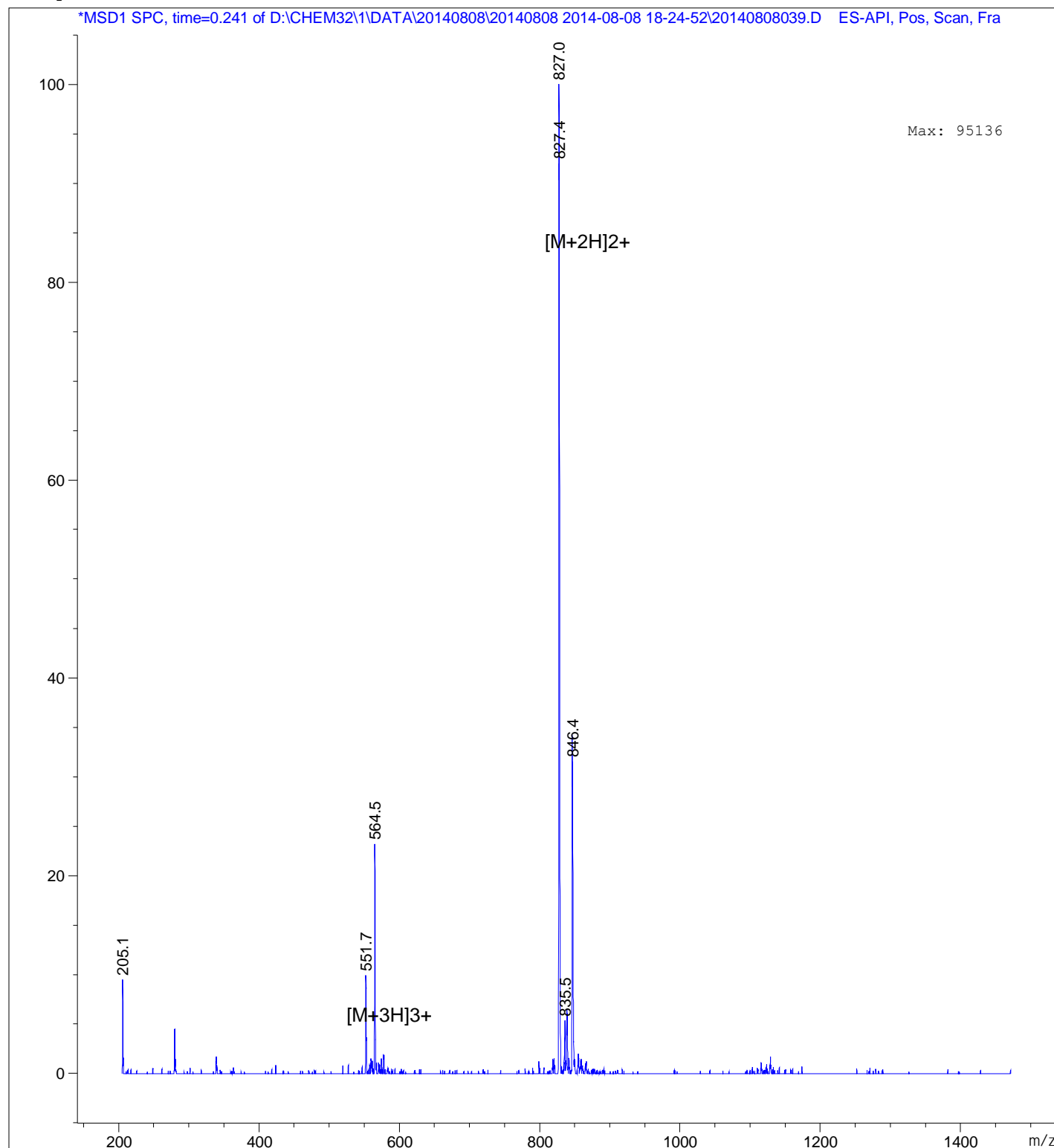
Date:

09/18/2014


```

=====
Acq. Operator   : liusuying                      Seq. Line :   39
Acq. Instrument : 5J-QC-082                      Location  : Vial 86
Injection Date  : 8/8/2014 8:24:43 PM           Inj       :    1
                                                    Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140808\20140808 2014-08-08 18-24-52\TEST MS(200-1500).2.
Last changed    : 8/8/2014 10:11:15 AM by liusuying
Analysis Method : D:\METHOD\MS(100-1000).M
Last changed    : 8/10/2014 4:53:59 PM by liusuying
    
```

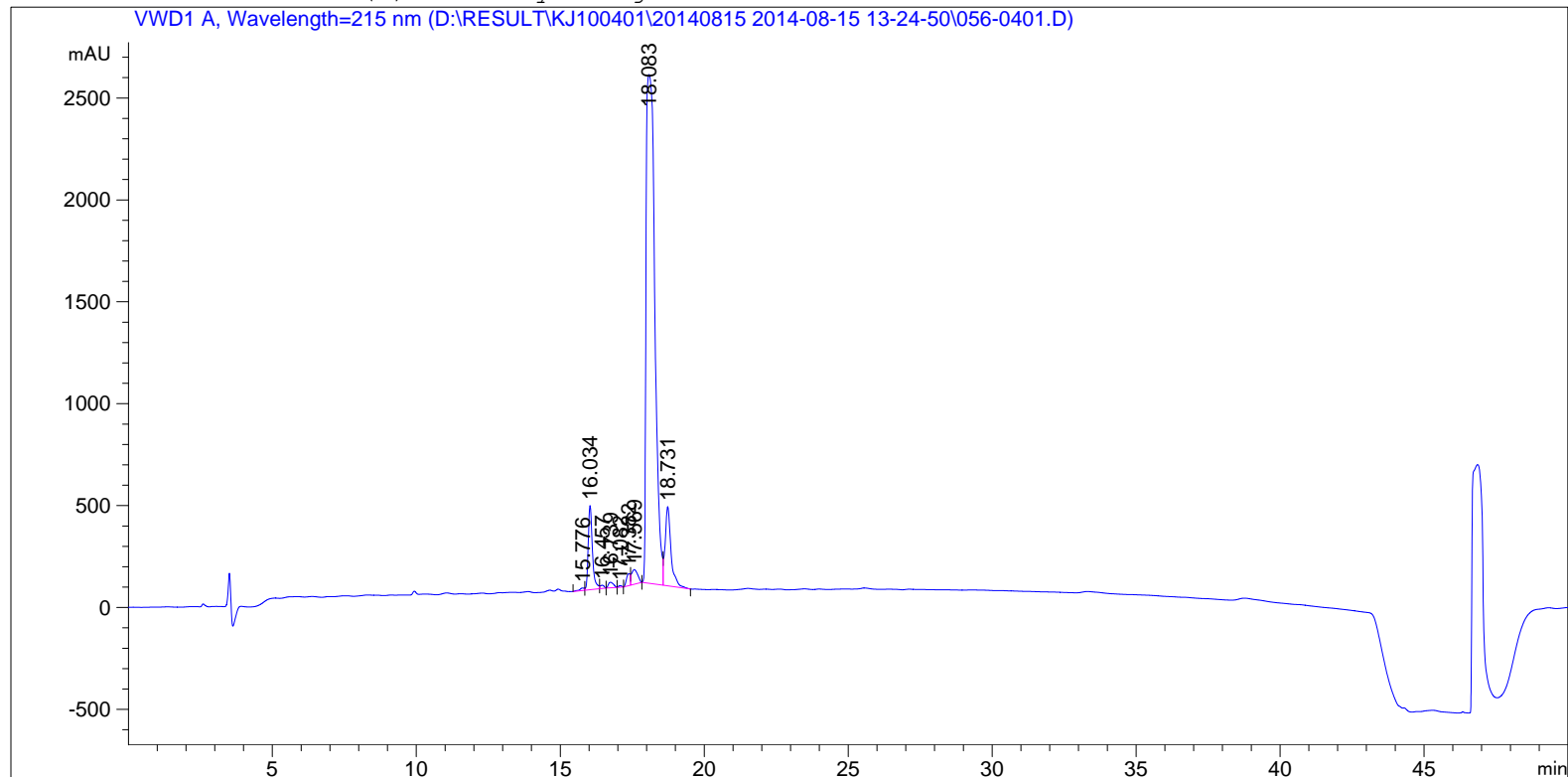
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :    4
Acq. Instrument : HPLC 1260                           Location  : Vial 56
Injection Date  : 8/15/2014 3:58:40 PM                 Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401\20140815 2014-08-15 13-24-50\KJ100401.M (Sequence Method)
Last changed    : 8/15/2014 1:24:50 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5um,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95      95     10      10
=====
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	15.776	BV	0.1712	142.50113	12.48468	0.2221
2	16.034	VV	0.1531	4146.57129	413.13623	6.4621
3	16.457	VB	0.1413	147.63031	16.05905	0.2301
4	16.739	BV	0.2058	329.35190	27.09170	0.5133
5	17.082	VB	0.1191	53.54047	7.51607	0.0834
6	17.382	BV	0.1413	528.05872	58.47958	0.8229
7	17.569	VB	0.2381	1060.89099	71.91267	1.6533

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
8	18.083	BV	0.3301	5.22361e4	2496.88940	81.4054
9	18.731	VB	0.2080	5523.24805	388.19318	8.6075

Totals : 6.41679e4 3491.76255

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-63		
Molecular Formula	C82H123N19O22S	Cat#	8117
Molecular Weight	1759.14	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	WMTNPPPIPVGEIYK		
Item No.	8117_140303_63		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1759.14±2.0	1758.2
3	Peptide Purity (By HPLC)	≥80%	91.7%
4	Identification(Amino Acid Composition by HPLC)	D	2.1
		E	1.0
		G	1.0
		T	1.0
		P	2.9
		Y	0.9
		V	1.1
		M	0.8
		K	1.1
I	2.1		
5	Peptide content	92.3%	

Quality Control By:

wangjun

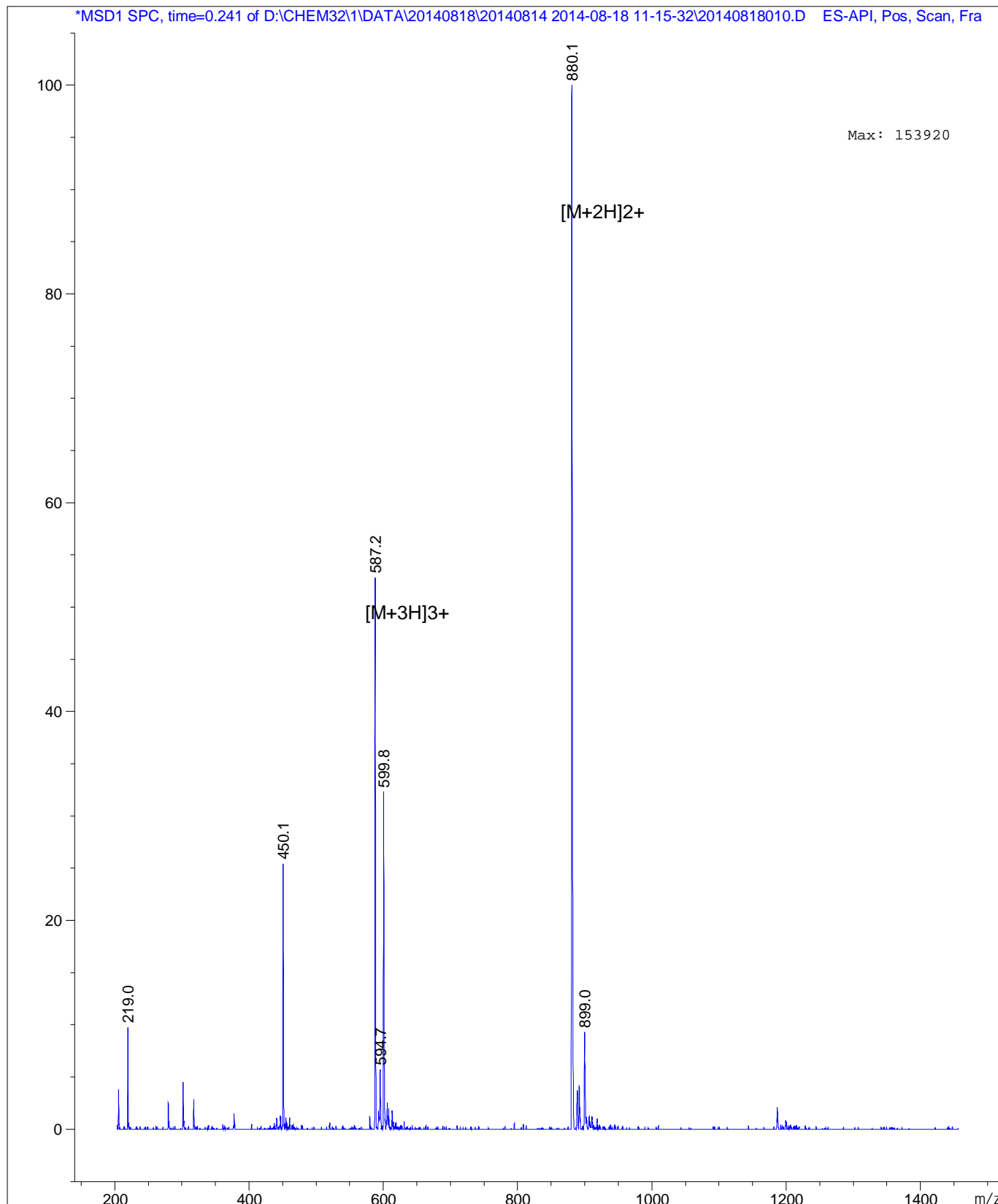
Date:

09/24/2014

=====

Acq. Operator : liusuying Seq. Line : 10
Acq. Instrument : 5J-QC-082 Location : Vial 14
Injection Date : 8/18/2014 11:44:38 AM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140818\20140814 2014-08-18 11-15-32\TEST MS(200-1500)
2.
Last changed : 8/14/2014 11:53:24 AM by liusuying
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M
Last changed : 8/14/2014 11:53:24 AM by liusuying

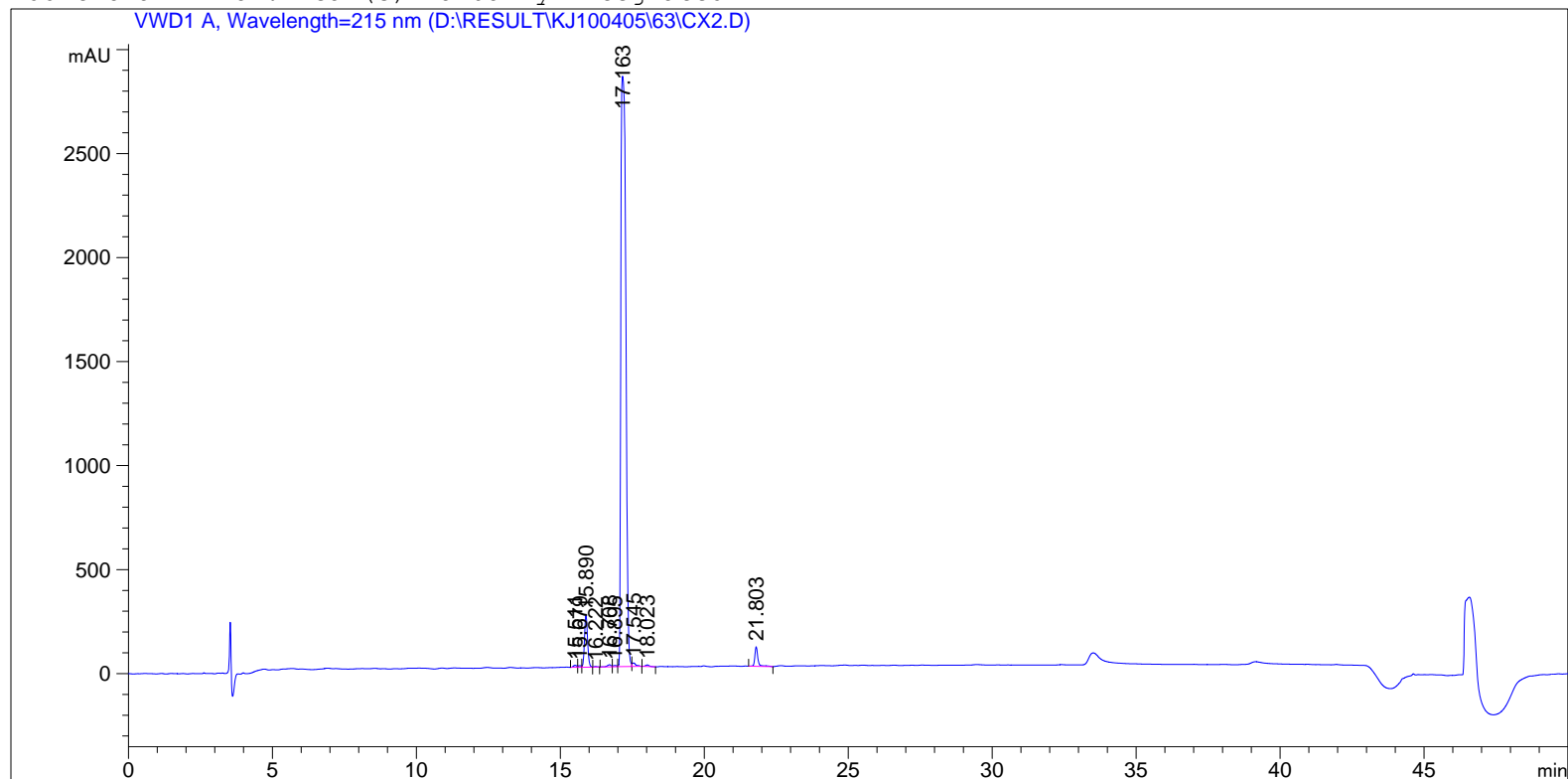
MS Spectrum



```

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 1
Injection Date  : 8/29/2014 10:44:43 AM
                                           Inj Volume : No inj
Acq. Method     : E:\METHODS\10-70IN50MIN.M\10-70IN50MIN.M
Last changed    : 8/29/2014 10:39:39 AM
Analysis Method : C:\CHEM32\1\METHODS\WASH.M
Last changed    : 8/28/2014 5:25:56 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18, 5um, 4.6*250nm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA H2O
                  Mobile Phase B:0.1%TFA ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95      95     10      10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By       : Signal
Multiplier      : 1.0000
Dilution        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	15.511	BV	0.1305	78.70908	9.22468	0.2125
2	15.679	VV	0.1101	58.94014	7.89723	0.1592
3	15.890	VB	0.1157	1851.93298	249.28569	5.0006
4	16.222	BB	0.1090	18.16703	2.68215	0.0491
5	16.708	BV	0.1245	87.97350	10.11625	0.2375

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
6	16.895	VV	0.1341	50.87817	5.64695	0.1374
7	17.163	VV	0.1957	3.39726e4	2838.01392	91.7329
8	17.545	VB	0.1311	152.51614	16.77708	0.4118
9	18.023	BB	0.1362	71.25043	7.82905	0.1924
10	21.803	BB	0.1109	691.30060	93.92325	1.8667

Totals : 3.70343e4 3241.39624

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-64		
Molecular Formula	C87H135N21O20	Cat#	8117
Molecular Weight	1795.25	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	NPPIPVGGEIYKRWII		
Item No.	8117_140303_64		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1795.25±2.0	1794.6
3	Peptide Purity (By HPLC)	≥80%	90.7%
4	Identification(Amino Acid Composition by HPLC)	D	0.8
		E	1.1
		G	1.0
		R	1.1
		P	2.9
		Y	1.0
		V	1.1
		K	1.1
	I	4.0	
5	Peptide content	62.4%	

Quality Control By:

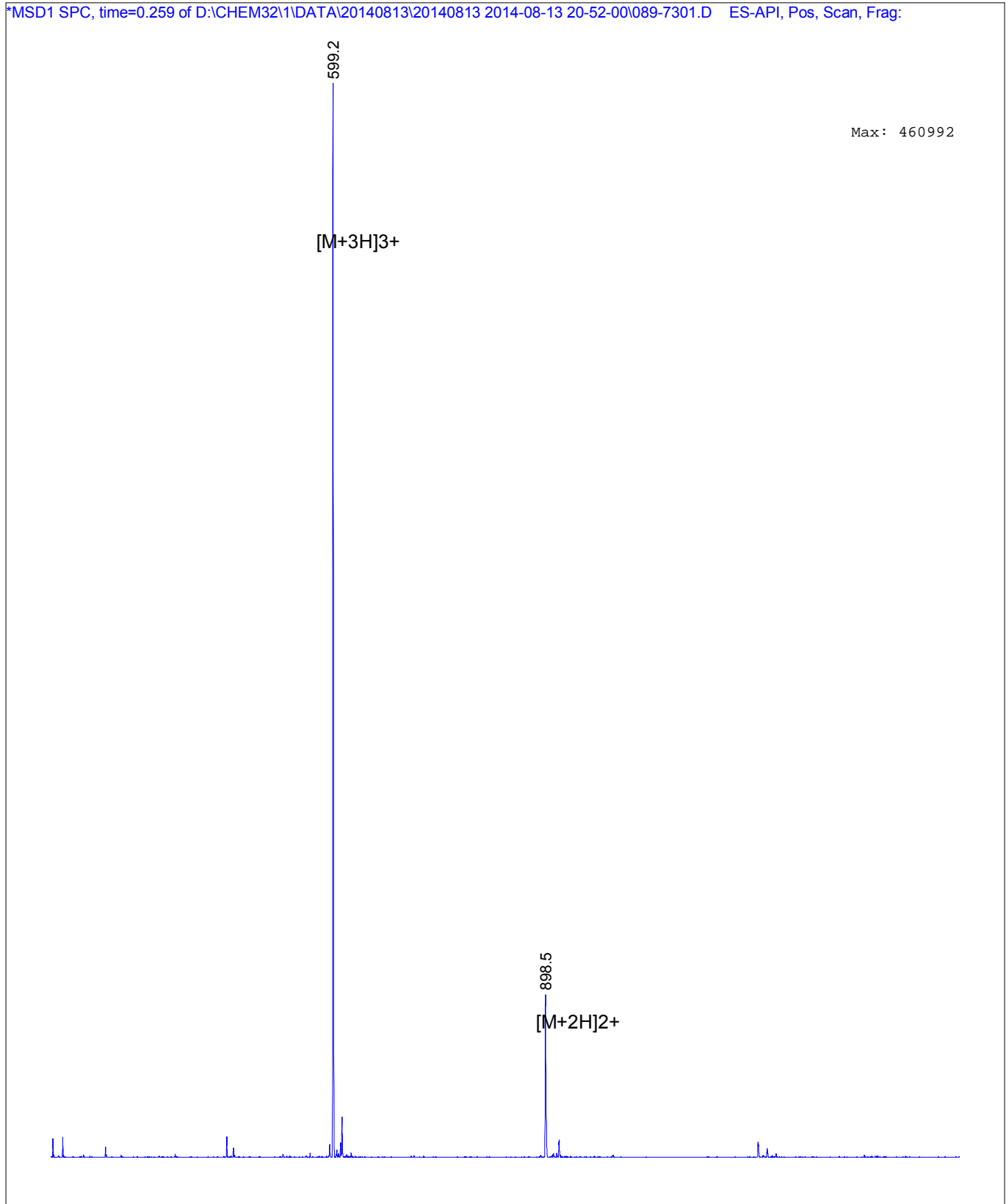
wangjun

Date:

09/18/2014


```
=====
Acq. Operator   : liusuying                Seq. Line :   73
Acq. Instrument : 5J-QC-082                Location  : Vial 89
Injection Date  : 8/14/2014 12:35:16 AM    Inj       :    1
                                           Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500)
                                           2.
Last changed    : 8/11/2014 1:22:13 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed    : 4/18/2014 11:29:00 AM by YZW
```

MS Spectrum



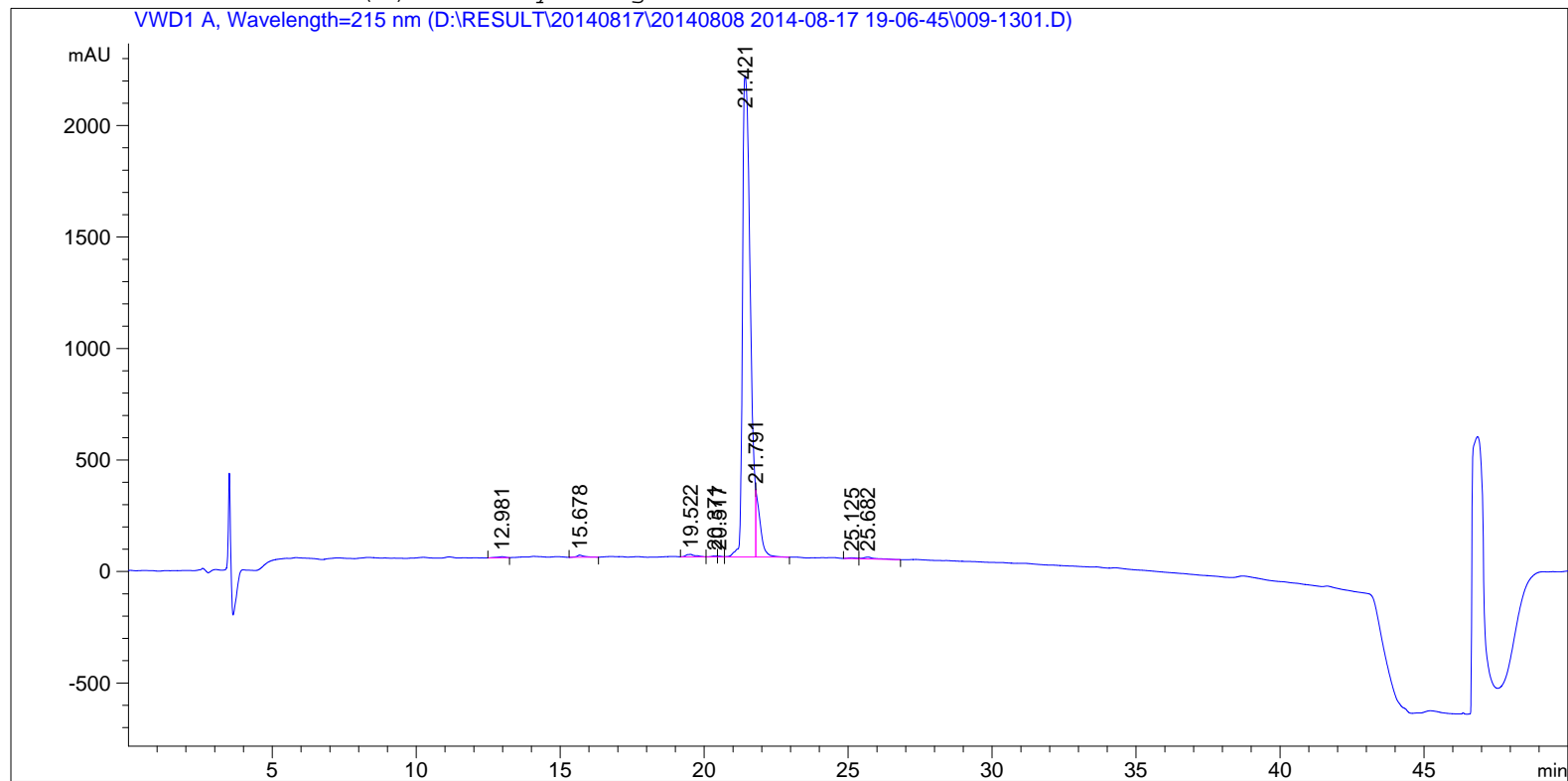
```

=====
Acq. Operator   : SYSTEM                      Seq. Line :   13
Acq. Instrument : HPLC 1260                   Location  : Vial 9
Injection Date  : 8/18/2014 5:19:07 AM       Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140817\20140808 2014-08-17 19-06-45\KJ100401.M
Last changed    : 8/17/2014 7:06:45 PM by SYSTEM
Analysis Method : D:\RESULT\20140817\20140808 2014-08-17 19-06-45\KJ100401.M (Sequence Method)
Last changed    : 8/18/2014 10:23:47 AM by SYSTEM
                 (modified after loading)

Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                 Rate:1.0ml/min
                 Mobile Phase A:0.1%TFA+H2O
                 Mobile Phase B:0.1%TFA+ACN
                 time(min)      0      40      40.3      43      43.3      50
                 B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.981	BV	0.3186	98.51672	4.47959	0.2216
2	15.678	BB	0.2467	169.49133	9.56538	0.3812
3	19.522	VB	0.2987	273.03799	11.63861	0.6141
4	20.371	BV	0.1822	47.32519	3.93872	0.1064

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	20.517	VV	0.1461	36.86714	3.61028	0.0829
6	21.421	MF R	0.3112	4.03111e4	2158.81885	90.6628
7	21.791	FM R	0.1778	3220.53760	301.96970	7.2432
8	25.125	BV	0.3307	72.60058	3.46080	0.1633
9	25.682	VB	0.3859	233.21216	8.29890	0.5245

Totals : 4.44627e4 2505.78081

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-65		
Molecular Formula	C85H135N21O20	Cat#	8117
Molecular Weight	1771.24	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	PVGEIYKRWILGLN		
Item No.	8117_140303_65		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1771.24±2.0	1770.6
3	Peptide Purity (By HPLC)	≥80%	88.3%
4	Identification(Amino Acid Composition by HPLC)	D	0.8
		E	0.9
		G	1.9
		R	1.1
		P	1.0
		Y	1.0
		V	1.2
		K	1.0
		I	3.1
L	2.0		
5	Peptide content	61.1%	

Quality Control By:

wangjun

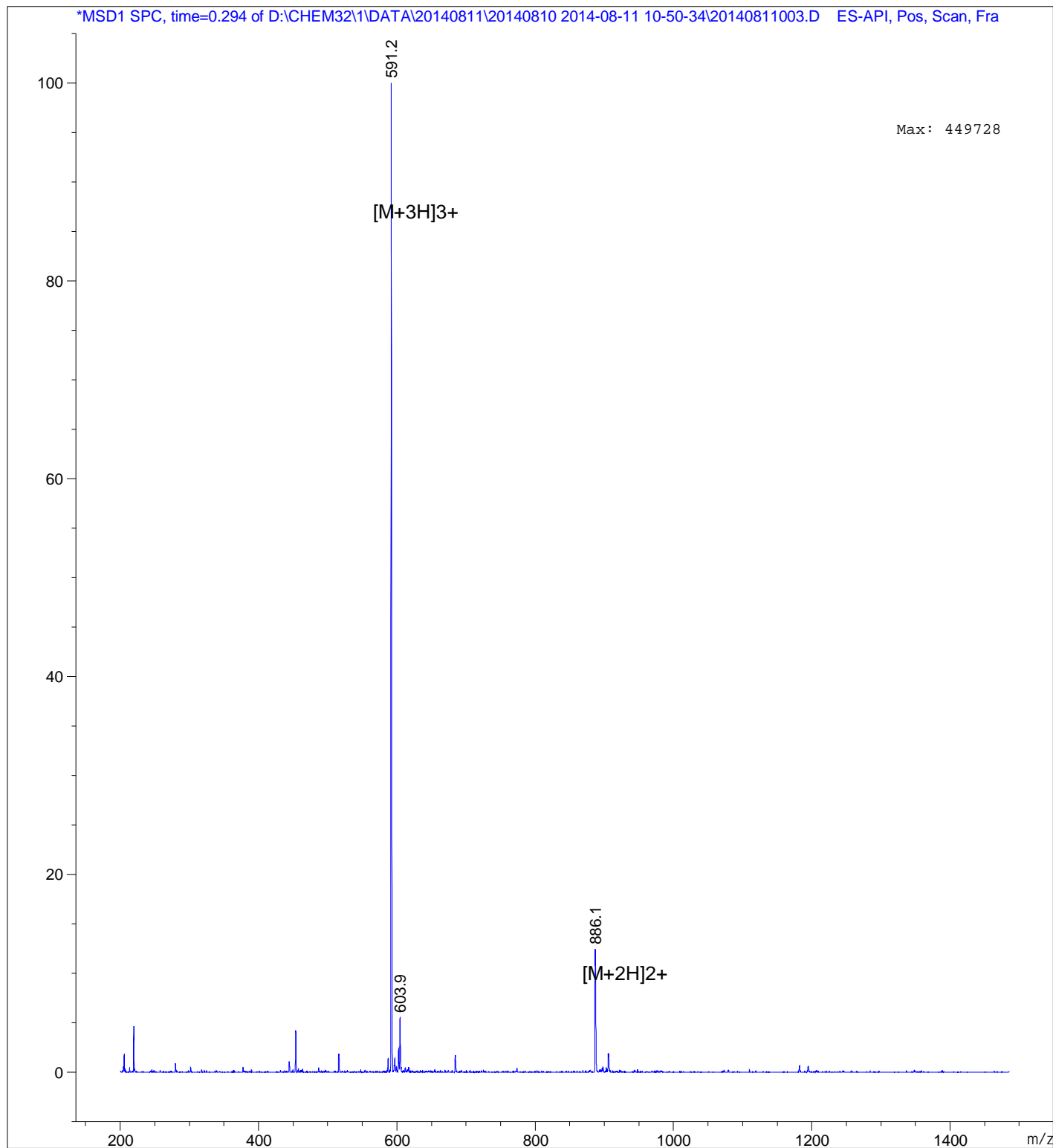
Date:

09/18/2014

=====

Acq. Operator : liusuying	Seq. Line : 3
Acq. Instrument : 5J-QC-082	Location : Vial 3
Injection Date : 8/11/2014 10:57:47 AM	Inj : 1
	Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140811\20140810 2014-08-11 10-50-34\TEST MS(200-1500)2.	
Last changed : 8/10/2014 3:32:14 PM by liusuying	
Analysis Method : D:\METHOD\MS(100-1000).M	
Last changed : 8/10/2014 4:53:59 PM by liusuying	

MS Spectrum

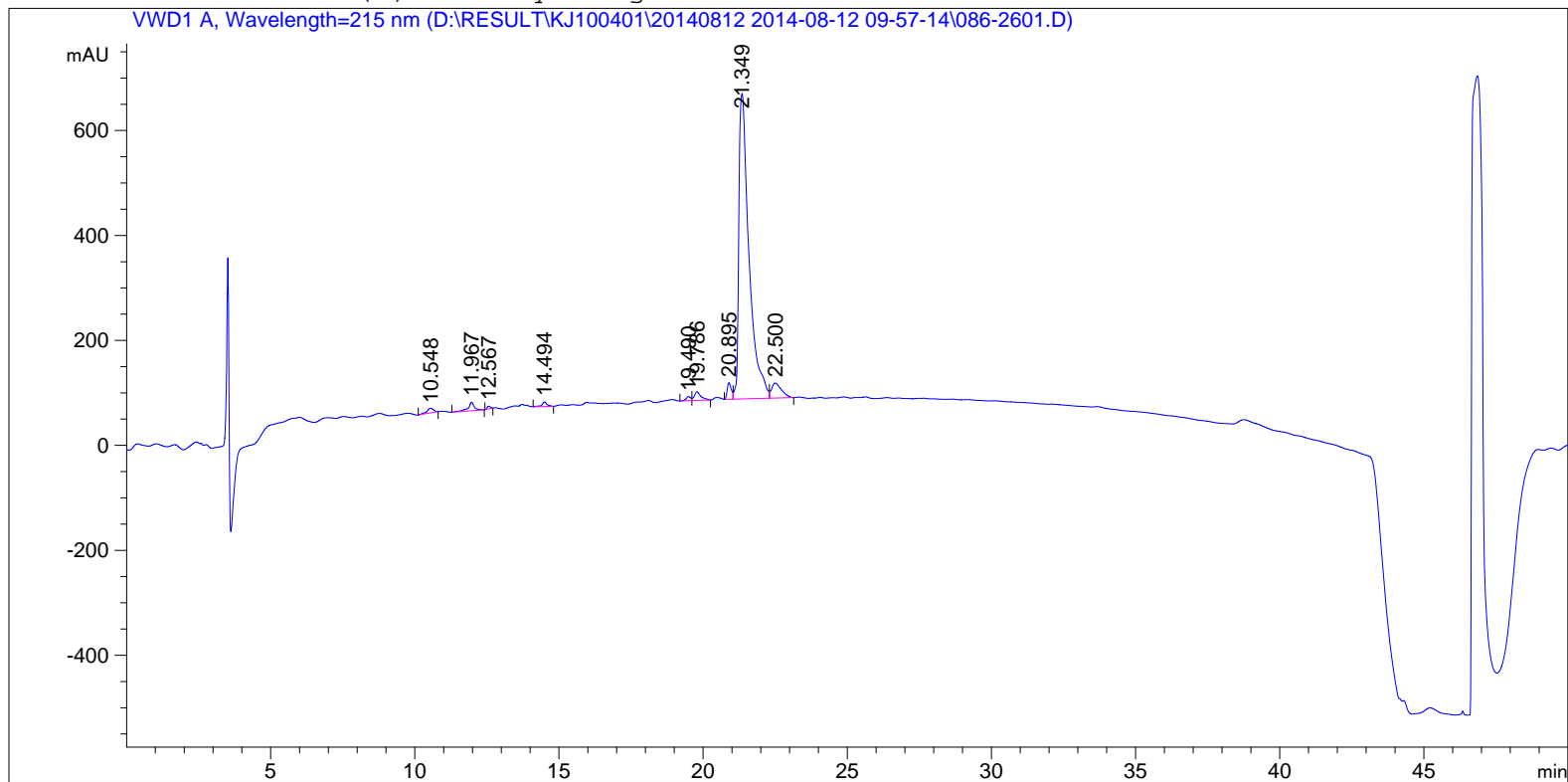


Sample Name: HIV-1 Con B Gag Peptide-65

```

=====
Acq. Operator   : SYSTEM                               Seq. Line : 26
Acq. Instrument : HPLC 1260                           Location  : Vial 86
Injection Date  : 8/13/2014 7:12:25 AM                Inj       : 1
                                                    Inj Volume: 20.000 µl
Acq. Method    : D:\RESULT\KJ100401\20140812 2014-08-12 09-57-14\KJ100401.M
Last changed   : 8/12/2014 9:57:14 AM by SYSTEM
Analysis Method: D:\RESULT\KJ100401\20140812 2014-08-12 09-57-14\KJ100401.M (Sequence Method)
Last changed   : 8/13/2014 1:46:04 PM by SYSTEM
                (modified after loading)
Method Info    : Column:Agilent HC-C18,5µm,4.6*250mm   Column Temp:35°C   Flow
                Rate:1.0ml/min
                Mobile Phase A:0.1%TFA+H2O
                Mobile Phase B:0.1%TFA+ACN
                time(min)      0        40        40.3       43        43.3       50
                B%            10       70        95        95        10        10
    
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By          : Signal
Multiplier         : 1.0000
Dilution          : 1.0000
Use Multiplier & Dilution Factor with ISTDs
    
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	10.548	BB	0.2463	138.41522	8.57536	0.8589
2	11.967	BB	0.2094	247.19746	16.44170	1.5339
3	12.567	BB	0.1307	41.30328	5.14516	0.2563
4	14.494	BB	0.1782	106.45700	8.61141	0.6606

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	19.490	BV	0.1625	87.02494	7.84151	0.5400
6	19.786	VB	0.2231	260.35077	16.50224	1.6155
7	20.895	BV	0.1459	316.02832	31.81831	1.9610
8	21.349	VV	0.3521	1.42256e4	582.21057	88.2708
9	22.500	VB	0.3485	693.48334	28.83879	4.3031

Totals : 1.61159e4 705.98503

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-66		
Molecular Formula	C91H153N25O18	Cat#	8117
Molecular Weight	1885.48	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	IYKRWILGLNKIVR		
Item No.	8117_140303_66		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1885.48±2.0	1885.2
3	Peptide Purity (By HPLC)	≥80%	88.9%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		G	1.1
		R	2.2
		Y	1.0
		V	0.9
		K	2.1
		I	3.5
	L	2.1	
5	Peptide content	79.4%	

Quality Control By:

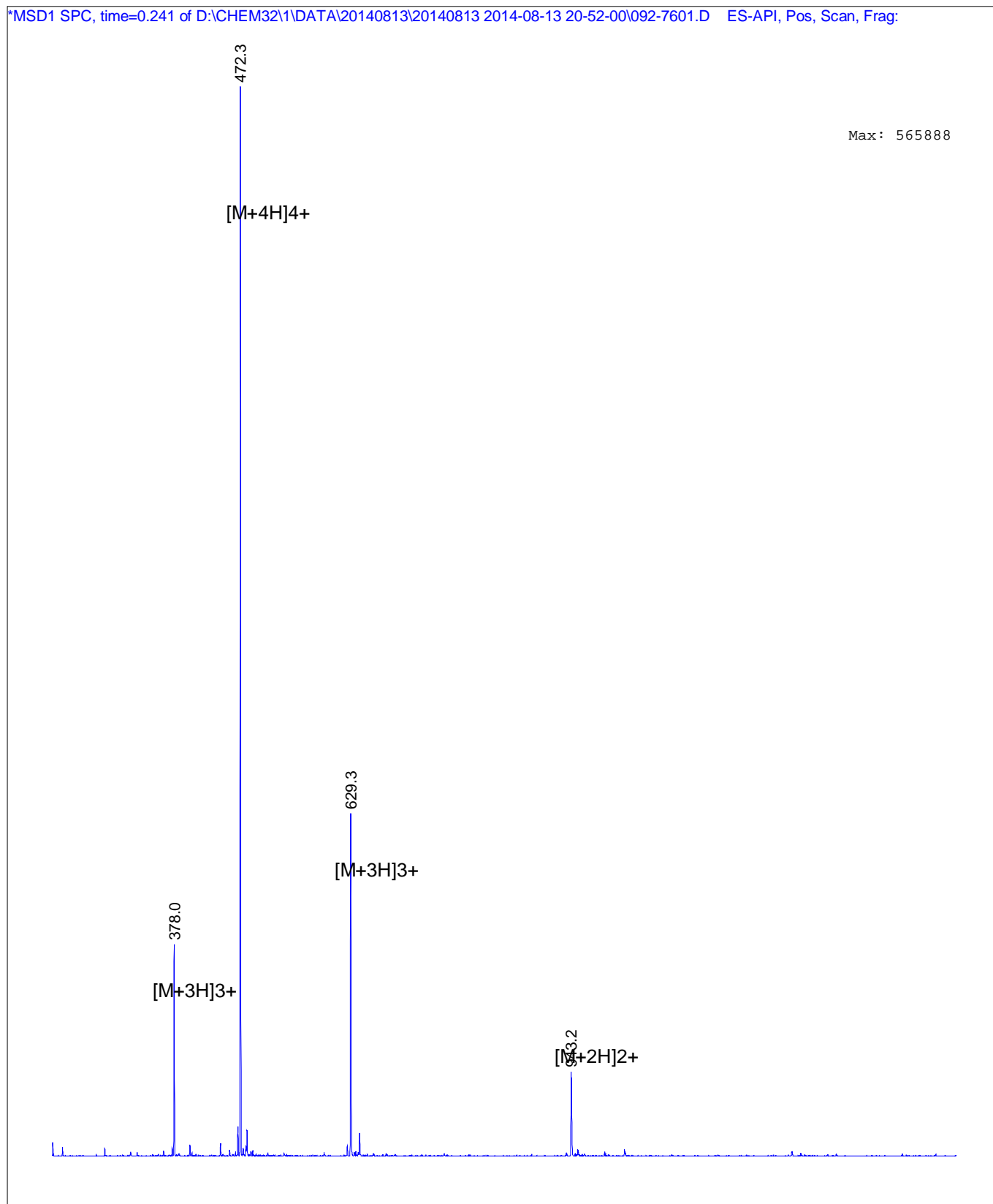
wangjun

Date:

09/24/2014

=====
Acq. Operator : liusuying Seq. Line : 76
Acq. Instrument : 5J-QC-082 Location : Vial 92
Injection Date : 8/14/2014 12:44:34 AM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500)
2.
Last changed : 8/11/2014 1:22:13 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed : 4/18/2014 11:29:00 AM by YZW

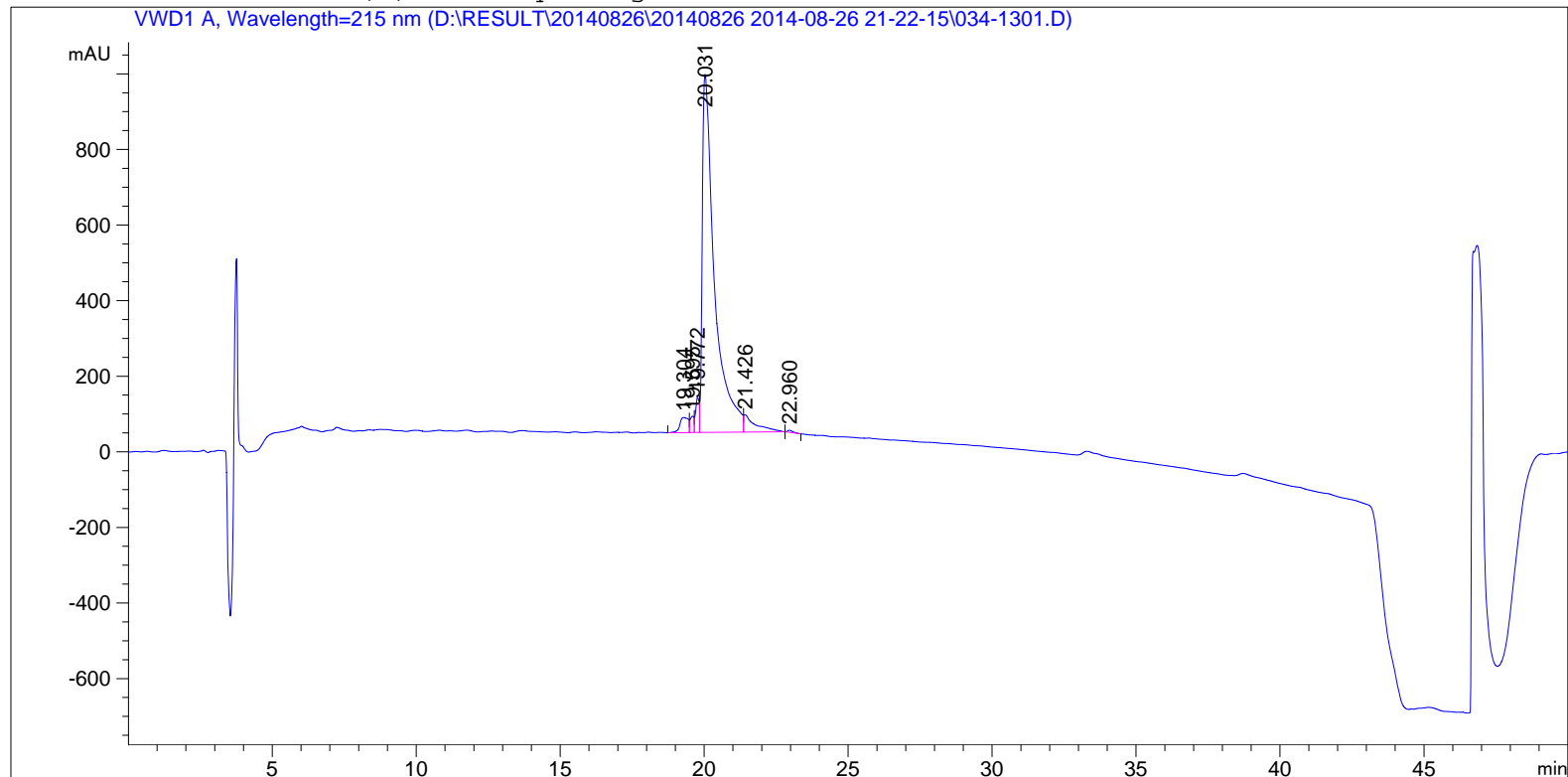
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   13
Acq. Instrument : HPLC 1260                           Location  : Vial 34
Injection Date  : 8/27/2014 7:34:34 AM                 Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\20140826\20140826 2014-08-26 21-22-15\KJ100401.M (Sequence Method)
Last changed    : 8/26/2014 9:22:15 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
=====
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	19.304	BV	0.2577	813.55878	39.92393	2.6132
2	19.595	VV	0.1357	397.53748	43.04823	1.2769
3	19.772	VV	0.1287	805.59167	92.41383	2.5876
4	20.031	VV	0.4251	2.76886e4	947.13000	88.9389
5	21.426	VB	0.3786	1353.89038	45.83510	4.3488
6	22.960	BB	0.2004	72.98553	5.55113	0.2344

Totals : 3.11322e4 1173.90223

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-67		
Molecular Formula	C86H139N21O19S	Cat#	8117
Molecular Weight	1803.34	Lot#	140303
Manufacturing Date	09/25/2014	Test Date	09/25/2014
Sequence	WIILGLNKIVRMYS P		
Item No.	8117_140303_67		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1803.34 ±2.0	1802.4
3	Peptide Purity (By HPLC)	≥80%	98.0%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		S	0.9
		G	1.1
		R	1.3
		P	1.1
		Y	1.0
		V	0.9
		M	0.7
		K	1.1
		I	2.8
L	2.1		
5	Peptide content	73.4%	

Quality Control By:

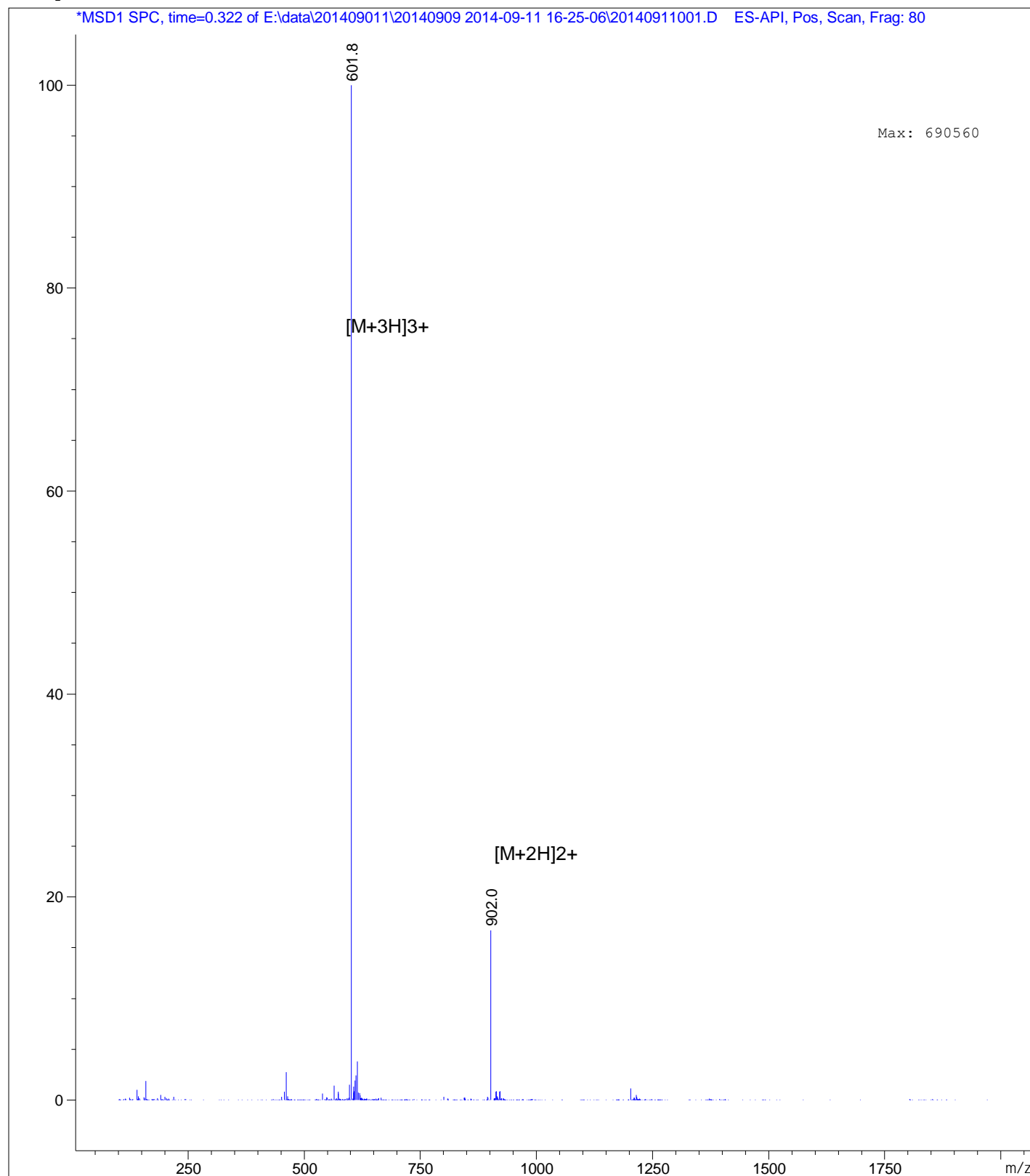
wangjun

Date:

09/25/2014

```
=====
Acq. Operator   : SYSTEM                               Seq. Line :    1
Acq. Instrument : Agilent6120                         Location  :   12
Injection Date  : 9/11/2014 4:27:44 PM                Inj       :    1
                                                    Inj Volume: 5.000 µl
Method         : E:\data\201409011\20140909 2014-09-11 16-25-06\LCMS.M (Sequence Method)
Last changed   : 9/11/2014 4:25:06 PM by SYSTEM
```

MS Spectrum



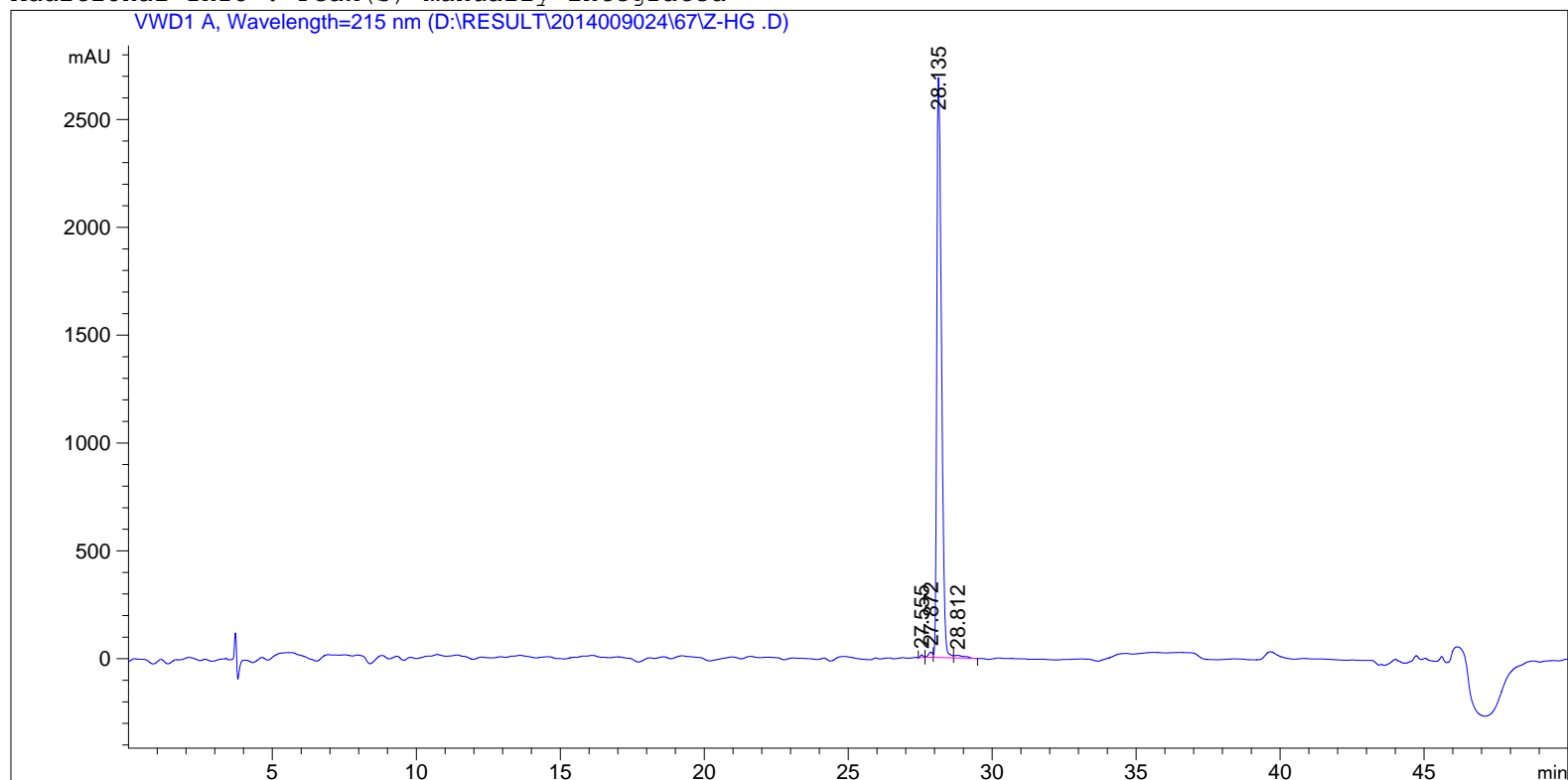
```

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 1
Injection Date  : 8/26/2014 8:03:33 PM
                                           Inj Volume : Manually

Acq. Method     : E:\CHEM32\1\METHODS\METHODS\10-70IN50MIN.M
Last changed    : 8/26/2014 7:50:39 PM
                  (modified after loading)

Analysis Method : C:\CHEM32\1\METHODS\KJ100401.M
Last changed    : 9/24/2014 9:23:38 AM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18, 5um, 4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95      10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	27.555	BB	0.1006	74.93255	11.88500	0.2416
2	27.872	BV	0.1450	225.30196	24.33431	0.7265
3	28.135	VV	0.1769	3.03959e4	2688.91919	98.0154
4	28.812	VB	0.3533	315.21014	12.24393	1.0164

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
----- ----- ----- ----- ----- ----- -----						
Totals :				3.10113e4	2737.38242	

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-68		
Molecular Formula	C76H130N20O21S	Cat#	8117
Molecular Weight	1692.14	Lot#	140303
Manufacturing Date	09/25/2014	Test Date	09/25/2014
Sequence	GLNKIVRMYSPTSIL		
Item No.	8117_140303_68		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1692.14±2.0	1691.1
3	Peptide Purity (By HPLC)	≥80%	90.3%
4	Identification(Amino Acid Composition by HPLC)	D	0.9
		S	1.9
		G	1.1
		R	1.3
		T	1.1
		P	1.0
		Y	1.0
		V	0.9
		M	0.7
		K	1.0
	I	1.9	
	L	2.1	
5	Peptide content	75.5%	

Quality Control By:

wangjun

Date:

09/25/2014

=====

Acq. Operator : SYSTEM Seq. Line : 9
Acq. Instrument : Agilent6120 Location : 6
Injection Date : 9/24/2014 11:02:27 AM Inj : 1
Inj Volume : 5.000 μ l

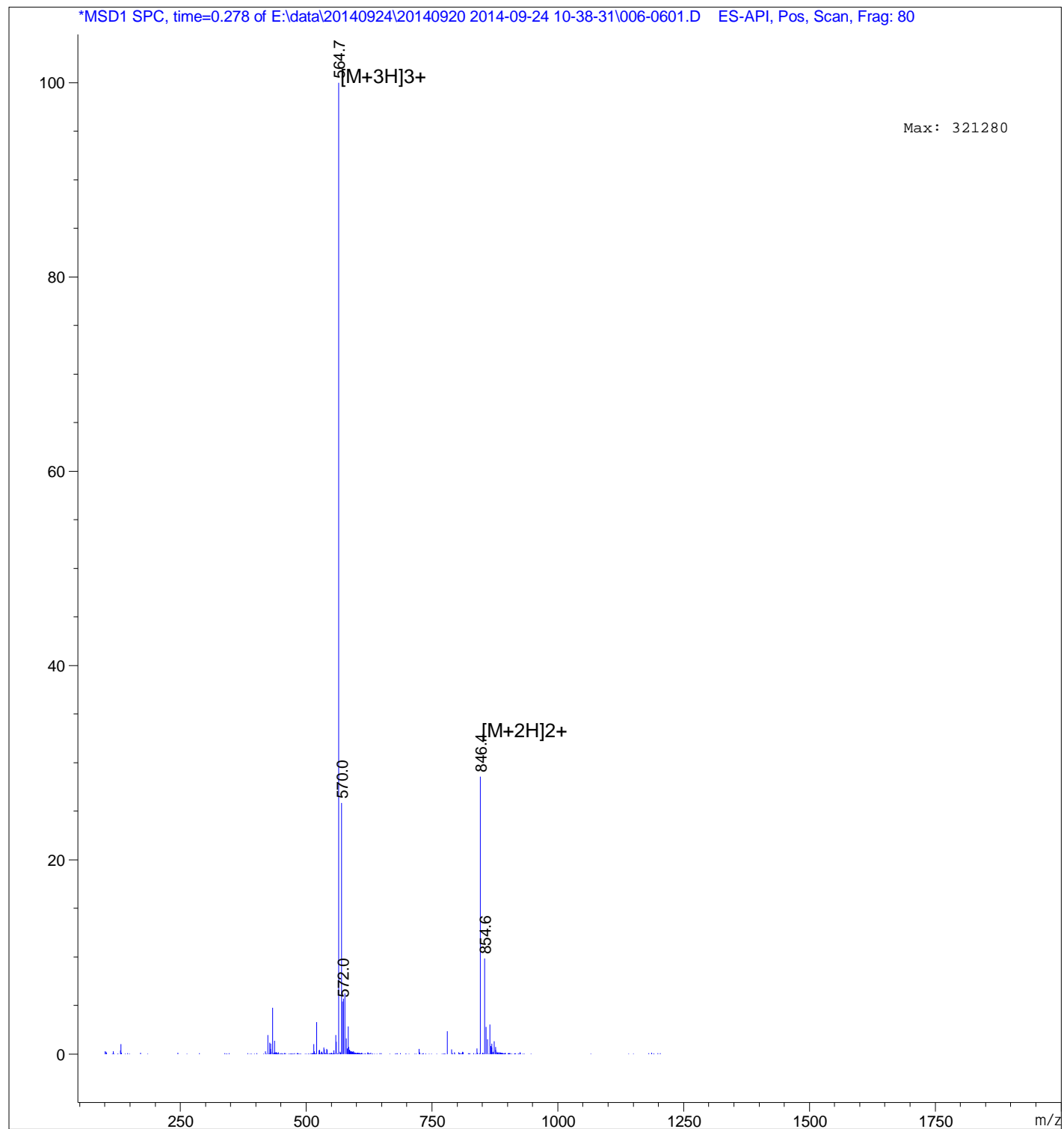
Acq. Method : E:\data\20140924\20140920 2014-09-24 10-38-31\LCMS.M

Last changed : 9/24/2014 10:59:24 AM by SYSTEM

Analysis Method : E:\data\20140924\20140920 2014-09-24 10-38-31\LCMS.M (Sequence Method)

Last changed : 9/24/2014 11:59:41 AM by SYSTEM
(modified after loading)

MS Spectrum

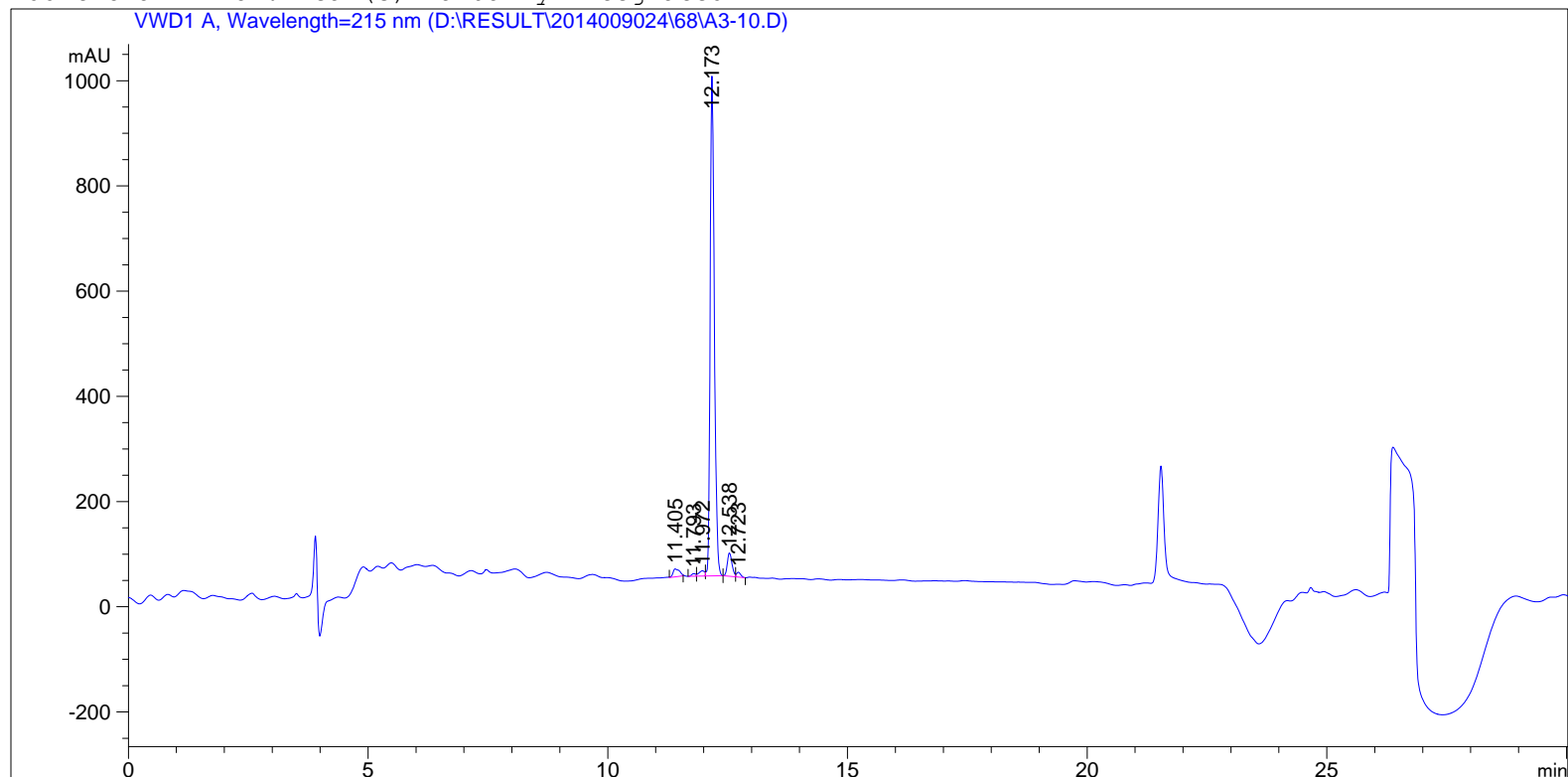


```

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 1
Injection Date  : 9/20/2014 11:31:13 AM
                                           Inj Volume : Manually

Acq. Method     : D:\CHEM32\1\METHODS\10-70IN30MIN.M
Last changed    : 8/16/2014 1:13:59 PM
Analysis Method  : C:\CHEM32\1\METHODS\KJ100401(5-65).M
Last changed    : 9/2/2014 4:19:13 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5um,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      20      20.5      23      23.5      30
                  B%             5      65      95      95      5
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      : Signal
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	11.405	MM R	0.1577	143.78217	15.19642	2.2457
2	11.793	BV	0.0919	29.94176	4.99136	0.4676
3	11.972	VV	0.1255	84.37263	10.21548	1.3178
4	12.173	VB	0.0943	5784.68066	950.44885	90.3484
5	12.538	BV	0.1058	303.14120	44.45841	4.7346

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
6	12.723	VB	0.0911	56.72199	9.35464	0.8859

Totals : 6402.64041 1034.66517

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-69		
Molecular Formula	C79H134N22O23S	Cat#	8117
Molecular Weight	1792.21	Lot#	140303
Manufacturing Date	09/25/2014	Test Date	09/25/2014
Sequence	IVRMYSPTSILDIRQ		
Item No.	8117_140303_69		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1792.21±2.0	1791.6
3	Peptide Purity (By HPLC)	≥80%	85.9%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		S	1.9
		E	1.1
		R	2.2
		T	1.0
		P	1.1
		Y	1.0
		V	0.7
		M	0.8
		I	2.8
L	1.2		
5	Peptide content	57.8%	

Quality Control By:

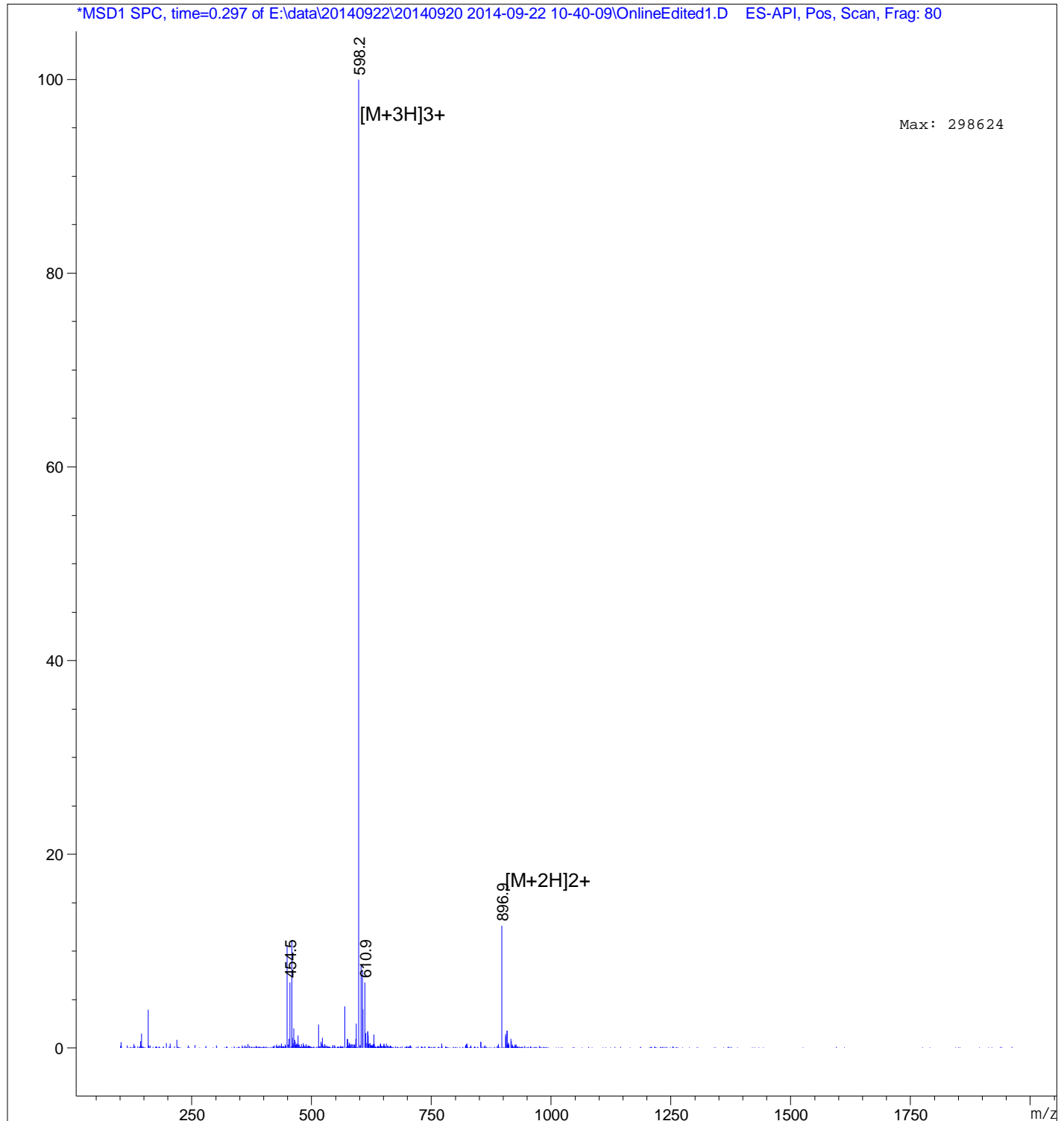
wangjun

Date:

09/25/2014

```
=====
Acq. Operator   : SYSTEM                      Seq. Line :    4
Acq. Instrument : Agilent6120                 Location  :   11
Injection Date  : 9/22/2014 10:50:06 AM      Inj       :    1
                                           Inj Volume: 5.000 µl
Acq. Method     : E:\data\20140922\20140920 2014-09-22 10-40-09\LCMS.M
Last changed    : 9/22/2014 10:40:09 AM by SYSTEM
Analysis Method : E:\data\20140922\20140920 2014-09-22 10-40-09\LCMS.M (Sequence Method)
Last changed    : 9/22/2014 10:57:53 AM by SYSTEM
                  (modified after loading)
```

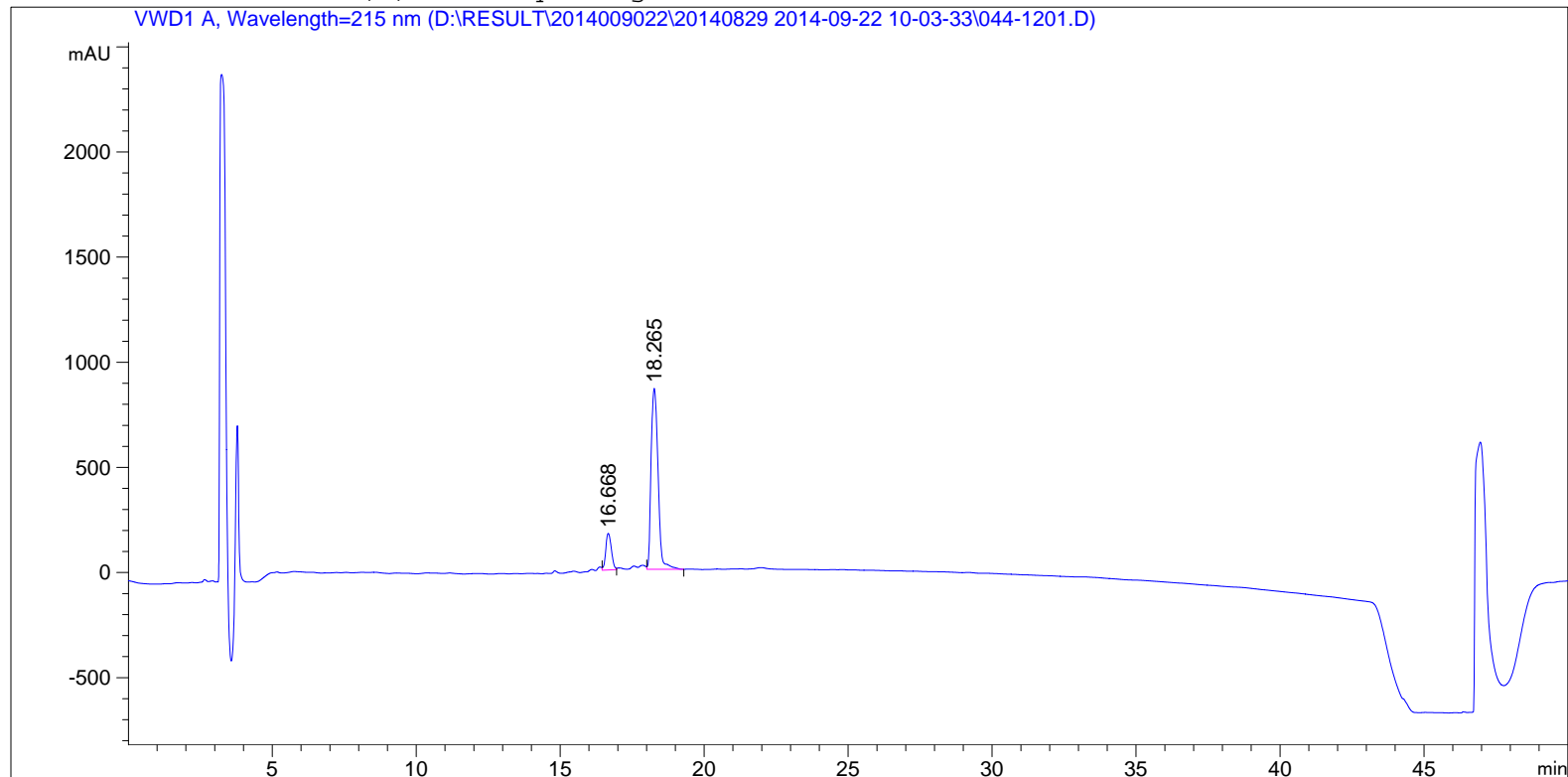
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   12
Acq. Instrument : HPLC 1260                           Location  : Vial 44
Injection Date  : 9/22/2014 7:25:32 PM                Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\2014009022\20140829 2014-09-22 10-03-33\KJ100401.M (Sequence Method)
Last changed    : 9/22/2014 10:03:33 AM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5um,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0          40          40.3        43          43.3        50
                  B%             10         70          95          95          10          10
=====
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	16.668	VV	0.2171	2377.25122	174.30194	14.1269
2	18.265	VB	0.2759	1.44506e4	860.39490	85.8731

Totals : 1.68278e4 1034.69684



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-70		
Molecular Formula	C75H122N20O25	Cat#	8117
Molecular Weight	1703.99	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	YSPTSILDIRQGPKE		
Item No.	8117_140303_70		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1703.99±2.0	1703.4
3	Peptide Purity (By HPLC)	≥80%	90.8%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		S	1.8
		E	2.1
		G	1.0
		R	1.0
		T	1.0
		P	1.7
		Y	1.0
		K	1.1
		I	2.0
L	1.1		
5	Peptide content	69.7%	

Quality Control By:

wangjun

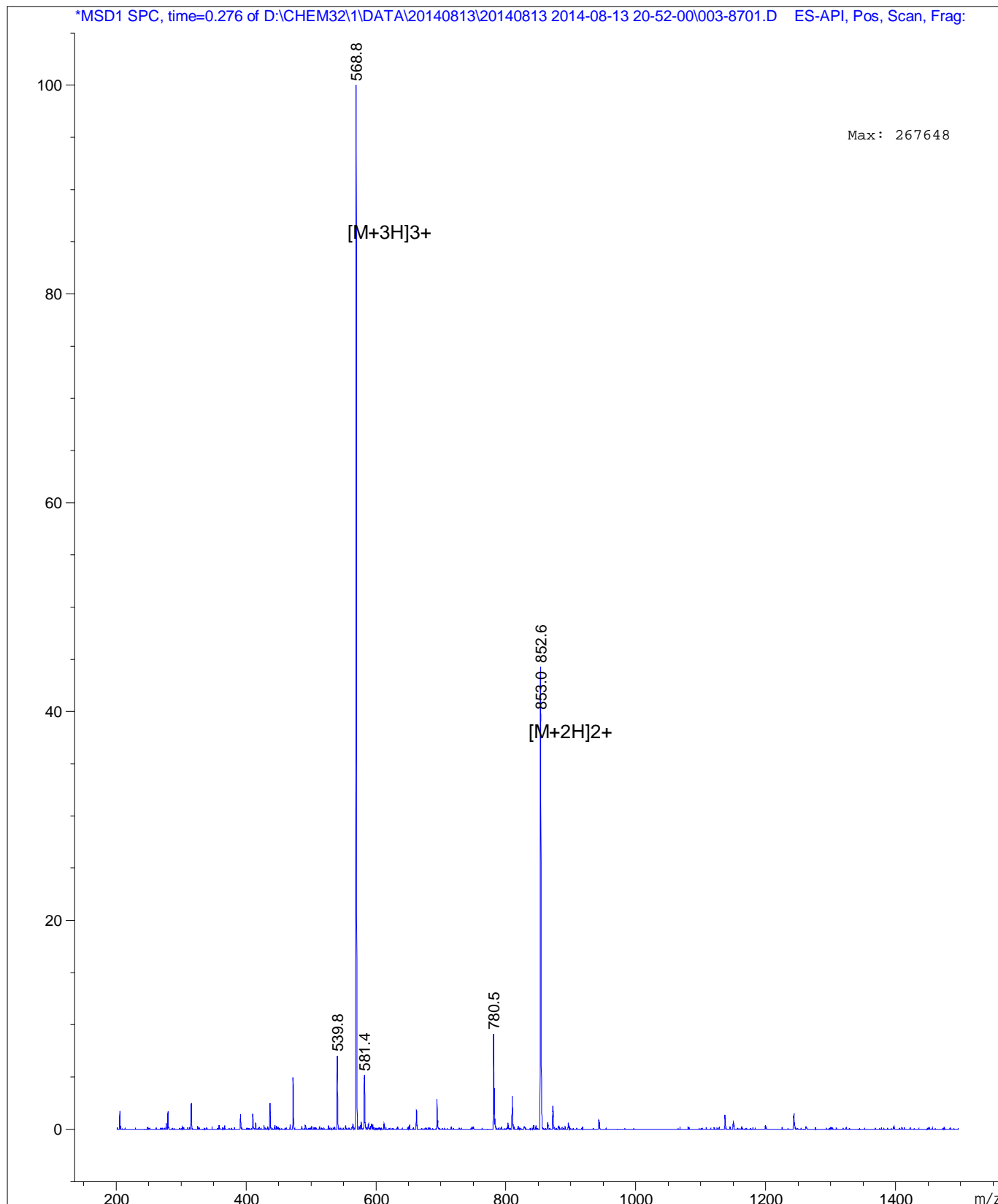
Date:

09/11/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 87
Acq. Instrument	: 5J-QC-082	Location	: Vial 3
Injection Date	: 8/14/2014 1:18:54 AM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500) 2.		
Last changed	: 8/11/2014 1:22:13 PM by liusuying		
Analysis Method	: D:\METHOD\TEST MS(500-15000).M		
Last changed	: 4/18/2014 11:29:00 AM by YZW		

MS Spectrum



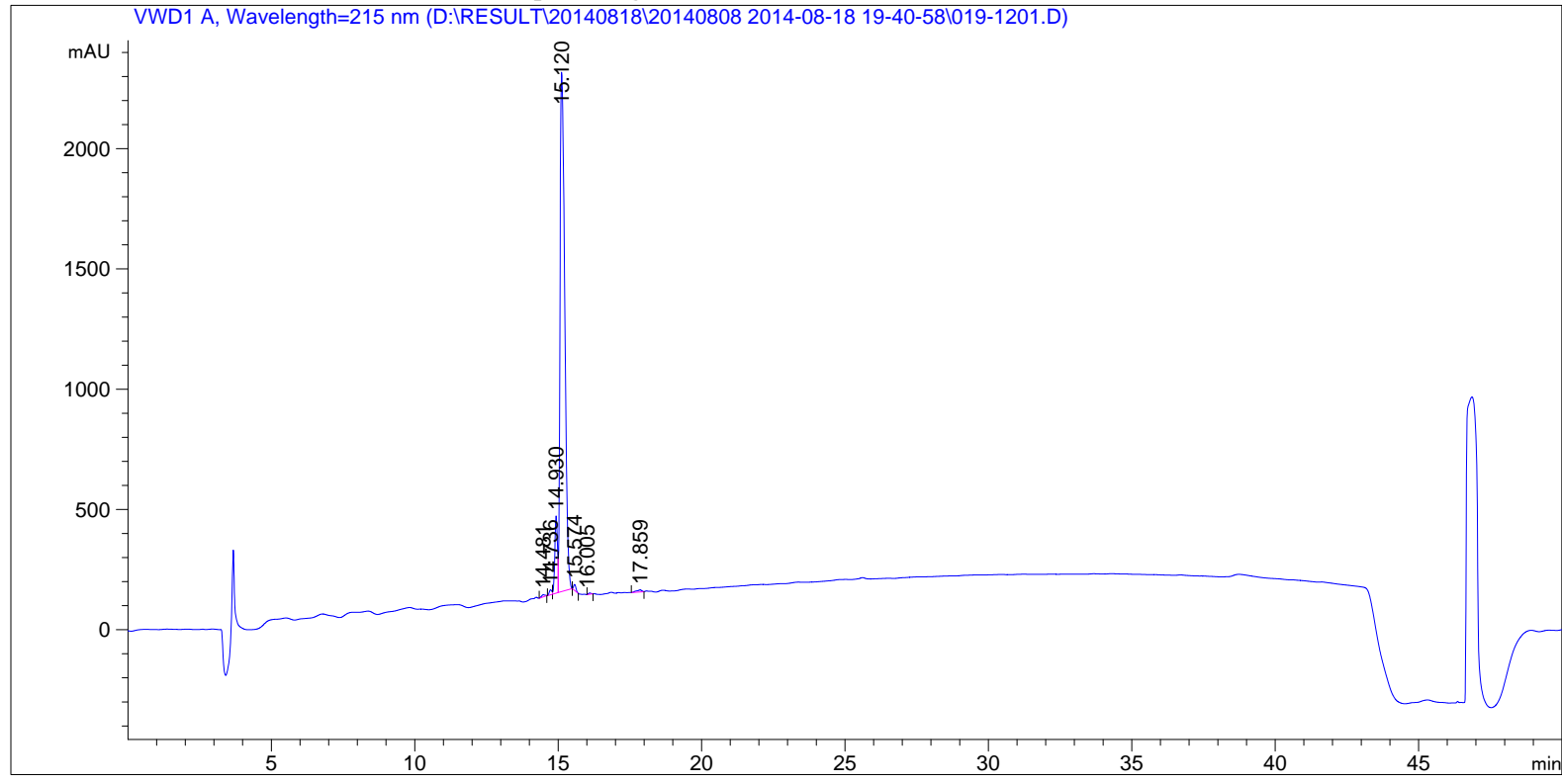

```

=====
Acq. Operator   : SYSTEM                      Seq. Line :   12
Acq. Instrument : HPLC 1260                  Location  : Vial 19
Injection Date  : 8/19/2014 5:02:17 AM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M
Last changed    : 8/18/2014 7:45:15 PM by SYSTEM
Analysis Method : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M (Sequence Method)
Last changed    : 9/11/2014 4:11:47 PM by SYSTEM
                 (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5um,4.6*250mm      Cloumn Temp:35°C      Flow
                 Rate:1.0ml/min
                 Mobile Phase A:0.1%TFA+H2O
                 Mobile Phase B:0.1%TFA+ACN
                 time(min)      0      40      40.3      43      43.3      50
                 B%             10     70     95      95     10      10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	14.481	MM R	0.1317	72.76183	9.20788	0.2684
2	14.736	BV	0.0983	128.03467	20.65355	0.4724
3	14.930	VV	0.0973	2015.86072	320.90253	7.4372
4	15.120	VB	0.1810	2.46035e4	2158.07397	90.7712

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	15.574	BB	0.0913	145.03937	25.12998	0.5351
6	16.005	MM R	0.0836	29.59003	2.42164e-1	0.1092
7	17.859	BV	0.1794	110.16812	8.48998	0.4065

Totals : 2.71049e4 2542.70006

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-71		
Molecular Formula	C78H127N23O24	Cat#	8117
Molecular Weight	1771.08	Lot#	140303
Manufacturing Date	09/09/2014	Test Date	09/09/2014
Sequence	SILDIRQGPKEPFRD		
Item No.	8117_140303_71		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1771.08±2.0	1770.6
3	Peptide Purity (By HPLC)	≥80%	94.6%
4	Identification(Amino Acid Composition by HPLC)	D	2.0
		S	1.1
		E	2.1
		G	1.0
		R	2.0
		P	1.8
		K	1.0
		I	1.9
		L	1.0
F	1.0		
5	Peptide content	91.9%	

Quality Control By:

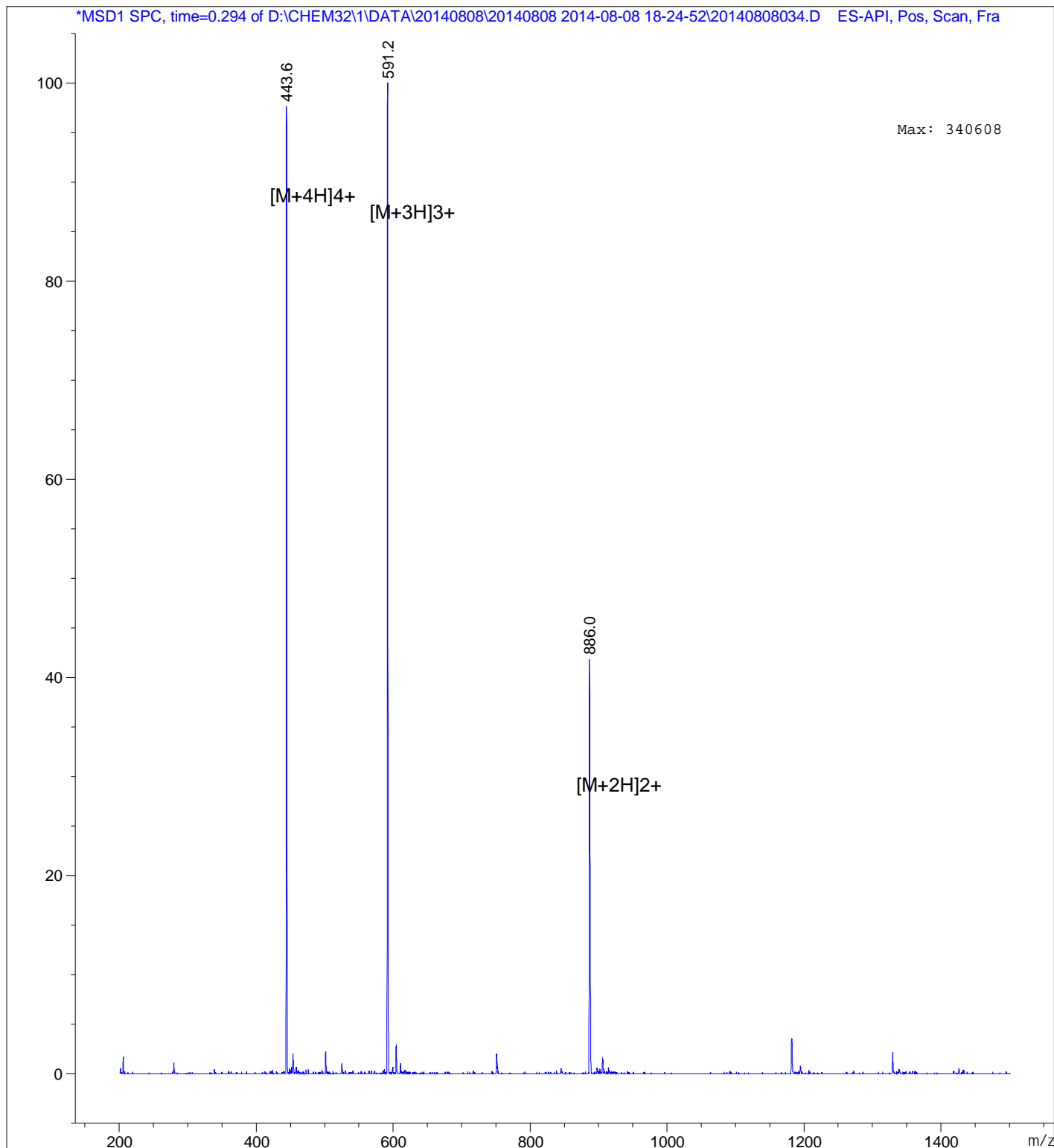
wangjun

Date:

09/09/2014

```
=====
Acq. Operator   : liusuying                      Seq. Line :   34
Acq. Instrument : 5J-QC-082                      Location  : Vial 81
Injection Date  : 8/8/2014 8:09:13 PM            Inj       :    1
                                                Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140808\20140808 2014-08-08 18-24-52\TEST MS(200-1500)2.
Last changed    : 8/8/2014 10:11:15 AM by liusuying
Analysis Method : D:\METHOD\MS(100-1000).M
Last changed    : 8/10/2014 4:53:59 PM by liusuying
=====
```

MS Spectrum



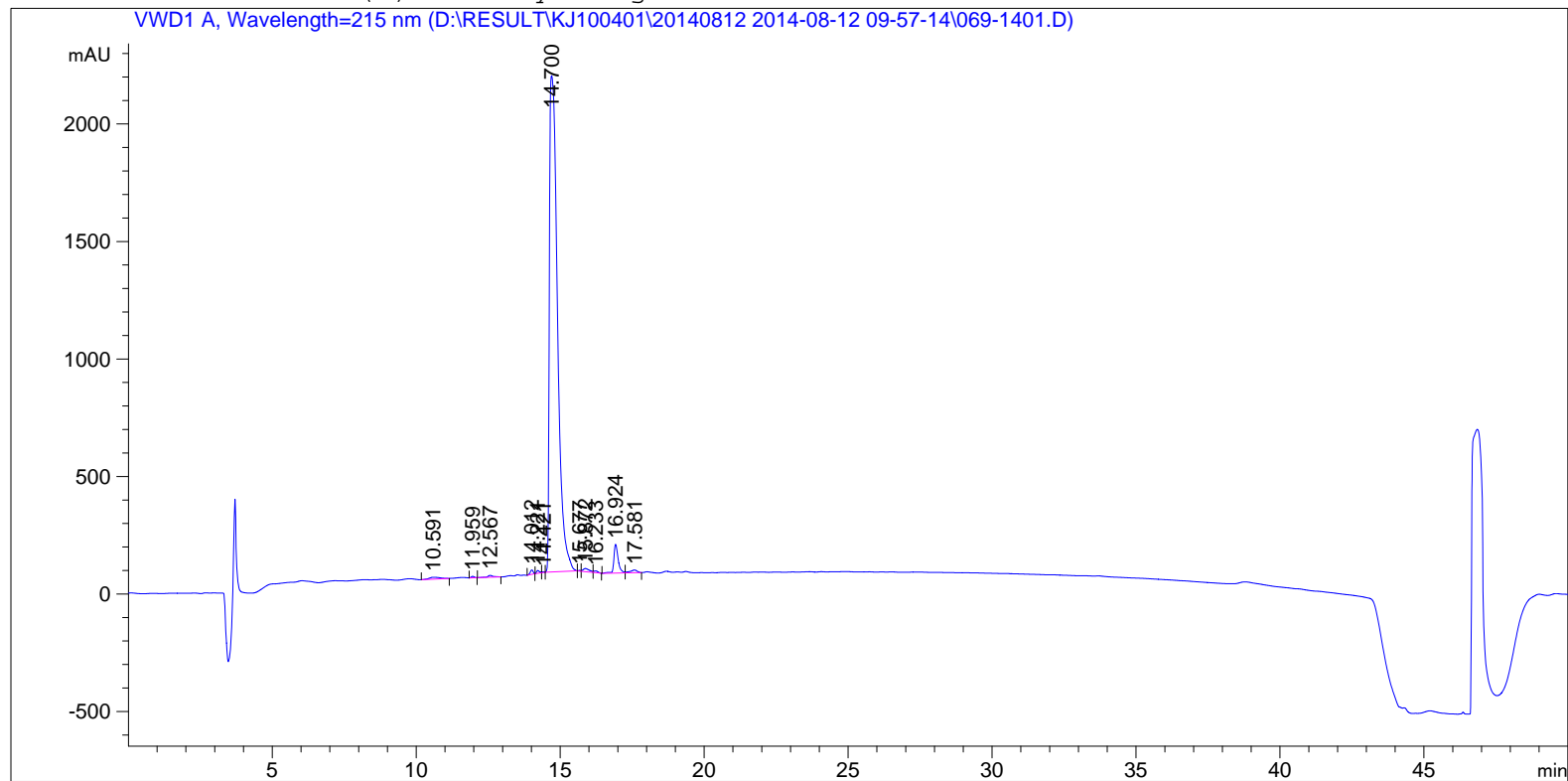
```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   14
Acq. Instrument : HPLC 1260                           Location  : Vial 69
Injection Date  : 8/12/2014 9:00:45 PM                Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\KJ100401\20140812 2014-08-12 09-57-14\KJ100401.M
Last changed    : 8/12/2014 9:57:14 AM by SYSTEM
Analysis Method : D:\RESULT\KJ100401\20140812 2014-08-12 09-57-14\KJ100401.M (Sequence Method)
Last changed    : 8/13/2014 11:48:32 AM by SYSTEM
                  (modified after loading)

Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	10.591	BB	0.3441	202.46043	7.97830	0.4681
2	11.959	BB	0.1131	44.23571	6.20674	0.1023
3	12.567	BB	0.1985	110.29858	8.01699	0.2550
4	14.012	BB	0.1074	126.81879	18.63773	0.2932

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	14.221	BV	0.1092	85.90614	11.75868	0.1986
6	14.421	VB	0.0826	18.01026	3.25483	0.0416
7	14.700	BB	0.3019	4.09033e4	2112.15356	94.5719
8	15.677	BV	0.0869	16.71596	2.95807	0.0386
9	15.872	VV	0.2274	207.04269	13.54255	0.4787
10	16.233	VB	0.1540	74.71826	7.45003	0.1728
11	16.924	BV	0.1553	1263.33337	122.47498	2.9209
12	17.581	VB	0.2547	198.15207	11.40387	0.4581

Totals : 4.32510e4 2325.83633

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-72		
Molecular Formula	C83H130N26O24	Cat#	8117
Molecular Weight	1876.17	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	IRQGPKEPFRDYVDR		
Item No.	8117_140303_72		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1876.17±2.0	1875.6
3	Peptide Purity (By HPLC)	≥80%	90.6%
4	Identification(Amino Acid Composition by HPLC)	D	1.8
		E	2.0
		G	1.0
		R	3.1
		P	2.0
		Y	1.0
		V	1.1
		K	1.0
		I	0.9
F	1.0		
5	Peptide content	84.0%	

Quality Control By:

wangjun

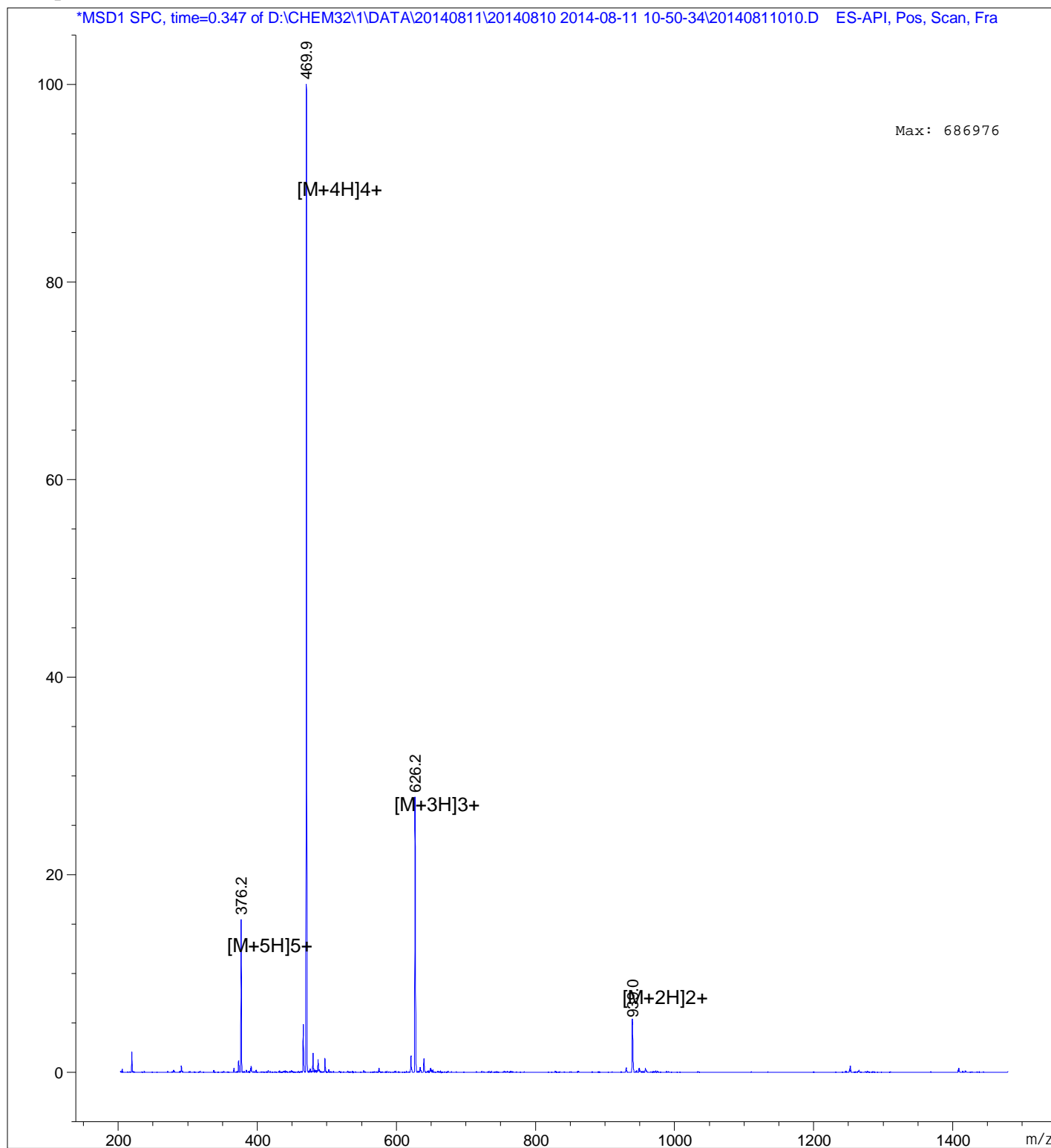
Date:

09/18/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 10
Acq. Instrument	: 5J-QC-082	Location	: Vial 12
Injection Date	: 8/11/2014 11:19:21 AM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\20140811\20140810 2014-08-11 10-50-34\TEST MS(200-1500)2.		
Last changed	: 8/10/2014 3:32:14 PM by liusuying		
Analysis Method	: D:\METHOD\MS(100-1000).M		
Last changed	: 8/10/2014 4:53:59 PM by liusuying		

MS Spectrum



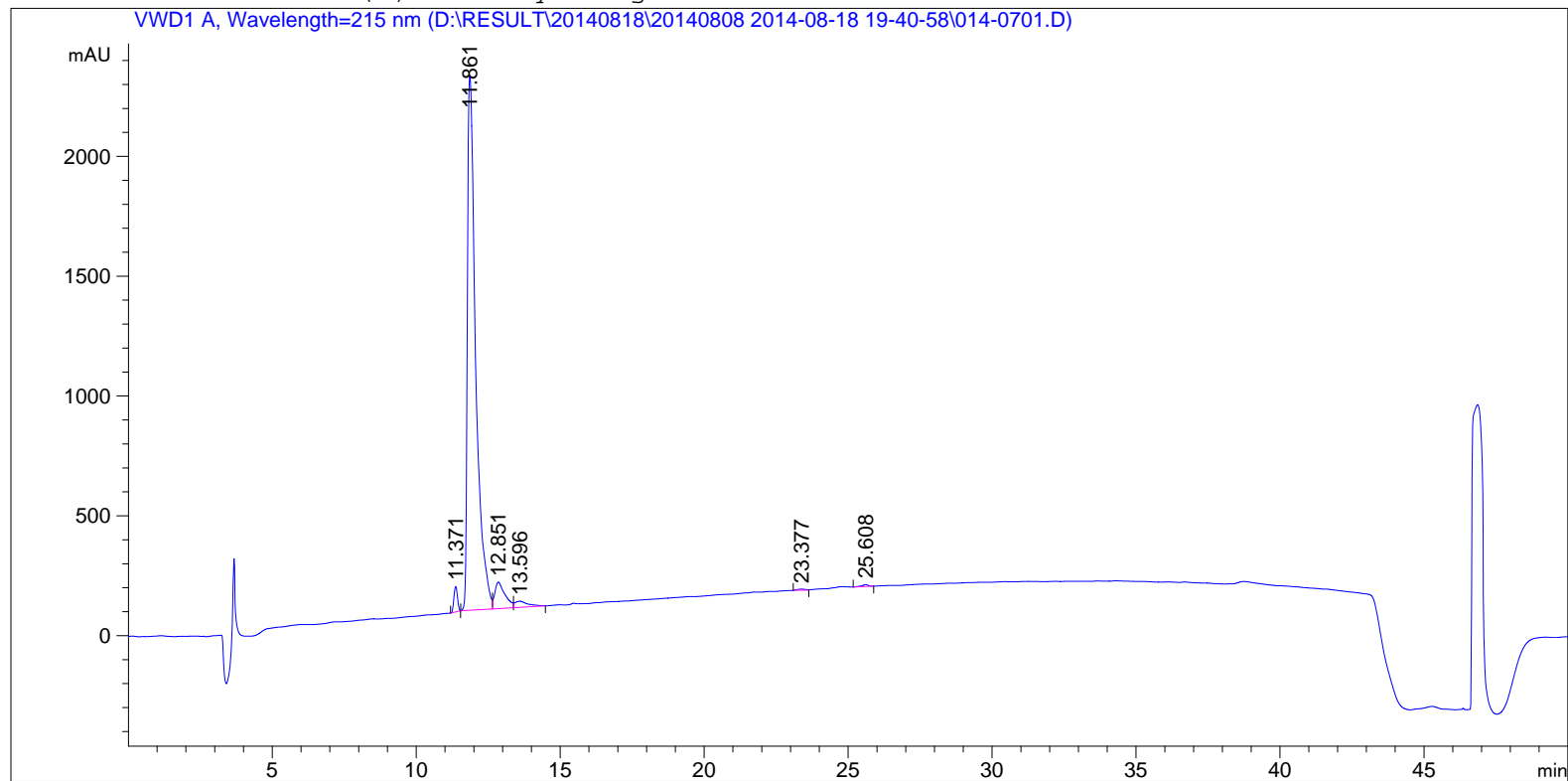

```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    7
Acq. Instrument : HPLC 1260                  Location  : Vial 14
Injection Date  : 8/19/2014 12:47:30 AM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M
Last changed    : 8/18/2014 7:45:15 PM by SYSTEM
Analysis Method : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M (Sequence Method)
Last changed    : 8/19/2014 10:12:31 AM by SYSTEM
                 (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                 Rate:1.0ml/min
                 Mobile Phase A:0.1%TFA+H2O
                 Mobile Phase B:0.1%TFA+ACN
                 time(min)      0      40      40.3      43      43.3      50
                 B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	11.371	BB	0.1374	902.58716	105.95374	1.8290
2	11.861	BV	0.2978	4.47073e4	2230.94019	90.5956
3	12.851	VV	0.3459	2711.57715	110.66445	5.4948
4	13.596	VB	0.4438	814.24908	25.96864	1.6500

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	23.377	MM R	0.3292	90.51762	4.58253	0.1834
6	25.608	BB	0.2227	121.95605	7.83218	0.2471

Totals : 4.93482e4 2485.94172

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

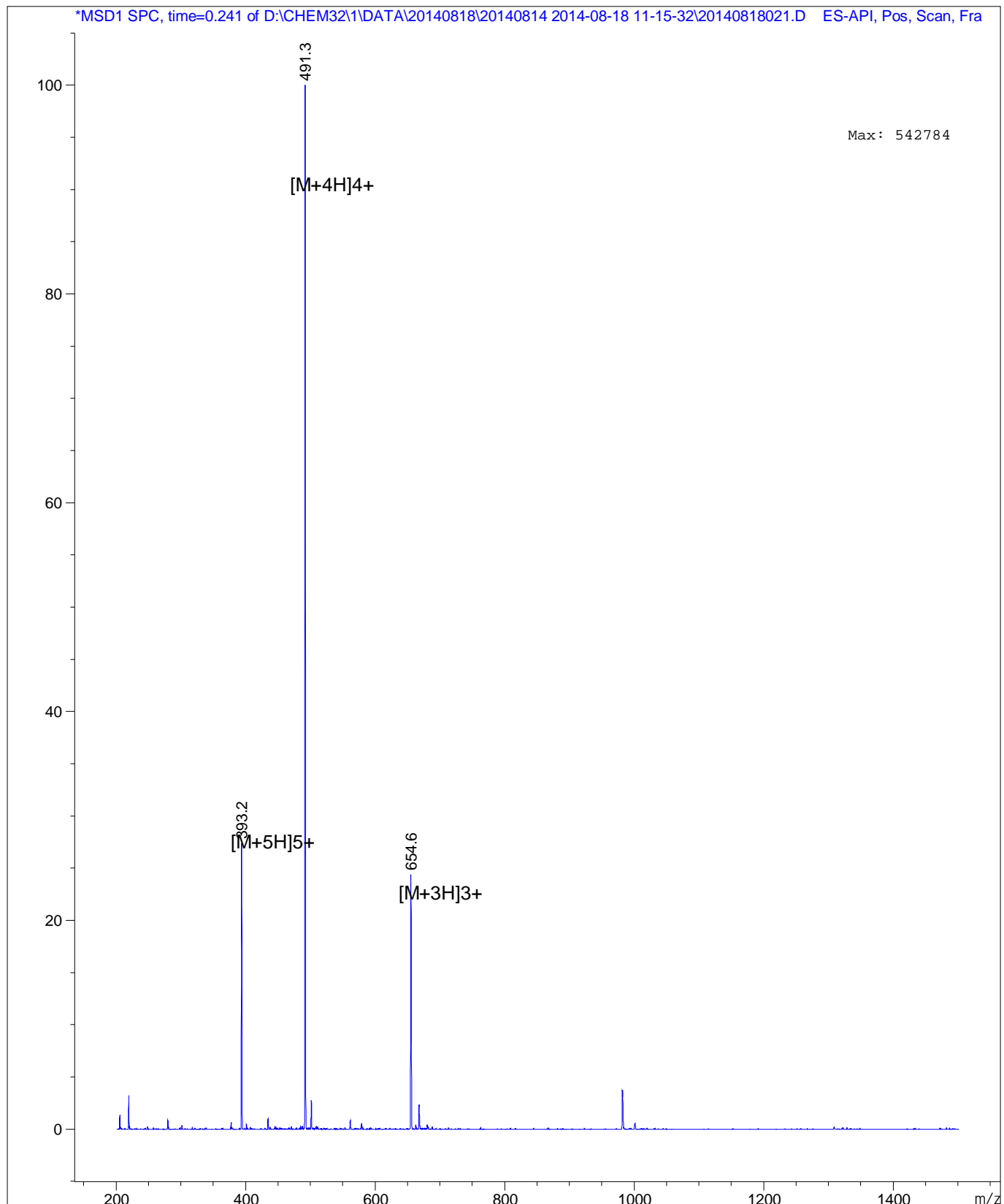
Product Name	HIV-1 Con B Gag Peptide-73		
Molecular Formula	C92H133N23O25	Cat#	8117
Molecular Weight	1961.26	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	PKEPFRDYVDRFYKT		
Item No.	8117_140303_73		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1961.26±2.0	1961.2
3	Peptide Purity (By HPLC)	≥80%	95.4%
4	Identification(Amino Acid Composition by HPLC)	D	2.0
		E	1.0
		R	2.1
		T	1.0
		P	2.0
		Y	2.0
		V	1.1
		K	2.0
	F	1.8	
5	Peptide content	84.7%	

Quality Control By: wangjun

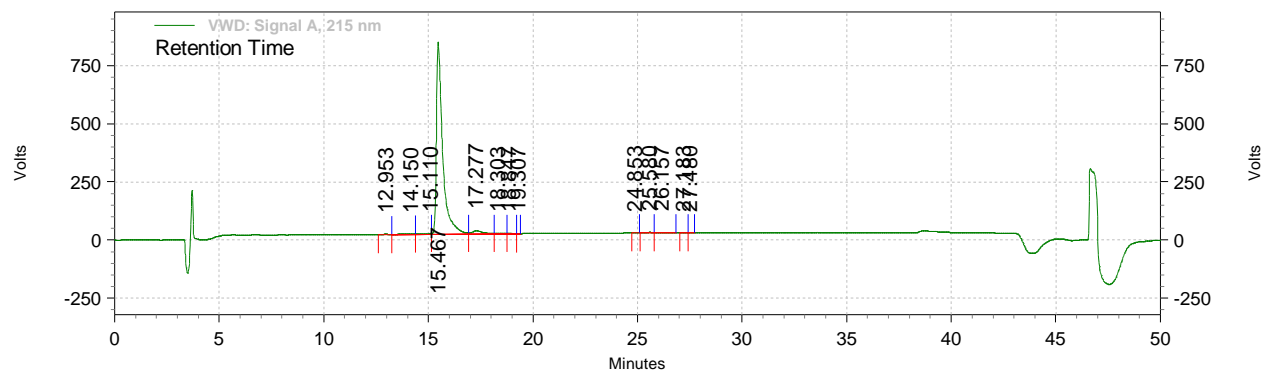
Date: 09/11/2014

```
=====
Acq. Operator   : liusuying                      Seq. Line :   21
Acq. Instrument : 5J-QC-082                       Location  : Vial 27
Injection Date  : 8/18/2014 12:18:37 PM           Inj       :    1
                                                Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140818\20140814 2014-08-18 11-15-32\TEST MS(200-1500)
                : 2.
Last changed    : 8/14/2014 11:53:24 AM by liusuying
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M
Last changed    : 8/14/2014 11:53:24 AM by liusuying
```

MS Spectrum



Data File: D:\KJ100401\20140829-1\20140829.rslt\HIV-1 Con B Gag Peptide-73.dat
 Method: D:\Method\KJ100401.met
 Acquired: 8/29/2014 3:47:28 PM (GMT +08:00)
 Printed: 8/27/2014 9:57:34 AM (GMT +08:00)
 Column:Agilent HC-C18,5um,4.6*250mm Column Temp:35°C Flow Rate:1.0ml/min
 Mobile Phase A:0.1%TFA water
 Mobile Phase B:0.1%TFA+ACN
 time(min) 0 40 40.3 43 43.3 50
 B% 10 70 95 95 10 10



VWD: Signal A, 215 nm Results

Retention Time	Area	Area %
12.953	305600	0.10
14.150	1041007	0.34
15.110	1244799	0.41
15.467	288094478	95.42
17.277	8359781	2.77
18.303	836627	0.28
18.847	208951	0.07
19.307	13863	0.00
24.853	47817	0.02
25.580	663740	0.22
26.157	923593	0.31
27.183	128298	0.04
27.480	58810	0.02

Totals	301927364	100.00
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CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-74		
Molecular Formula	C91H135N25O25	Cat#	8117
Molecular Weight	1979.28	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	FRDYVDRFYKTLRAE		
Item No.	8117_140303_74		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1979.28±2.0	1979.2
3	Peptide Purity (By HPLC)	≥80%	86.3%
4	Identification(Amino Acid Composition by HPLC)	D	2.1
		E	1.2
		R	3.0
		T	1.0
		A	1.1
		Y	1.7
		V	1.0
		K	1.1
		L	1.0
F	1.8		
5	Peptide content	91.9%	

Quality Control By: wangjun

Date: 09/18/2014

=====
 Acq. Operator : liusuying

Seq. Line : 6

Acq. Instrument : 5J-QC-082

Location : Vial 6

Injection Date : 8/11/2014 11:07:02 AM

Inj : 1

Inj Volume : 3.0 µl

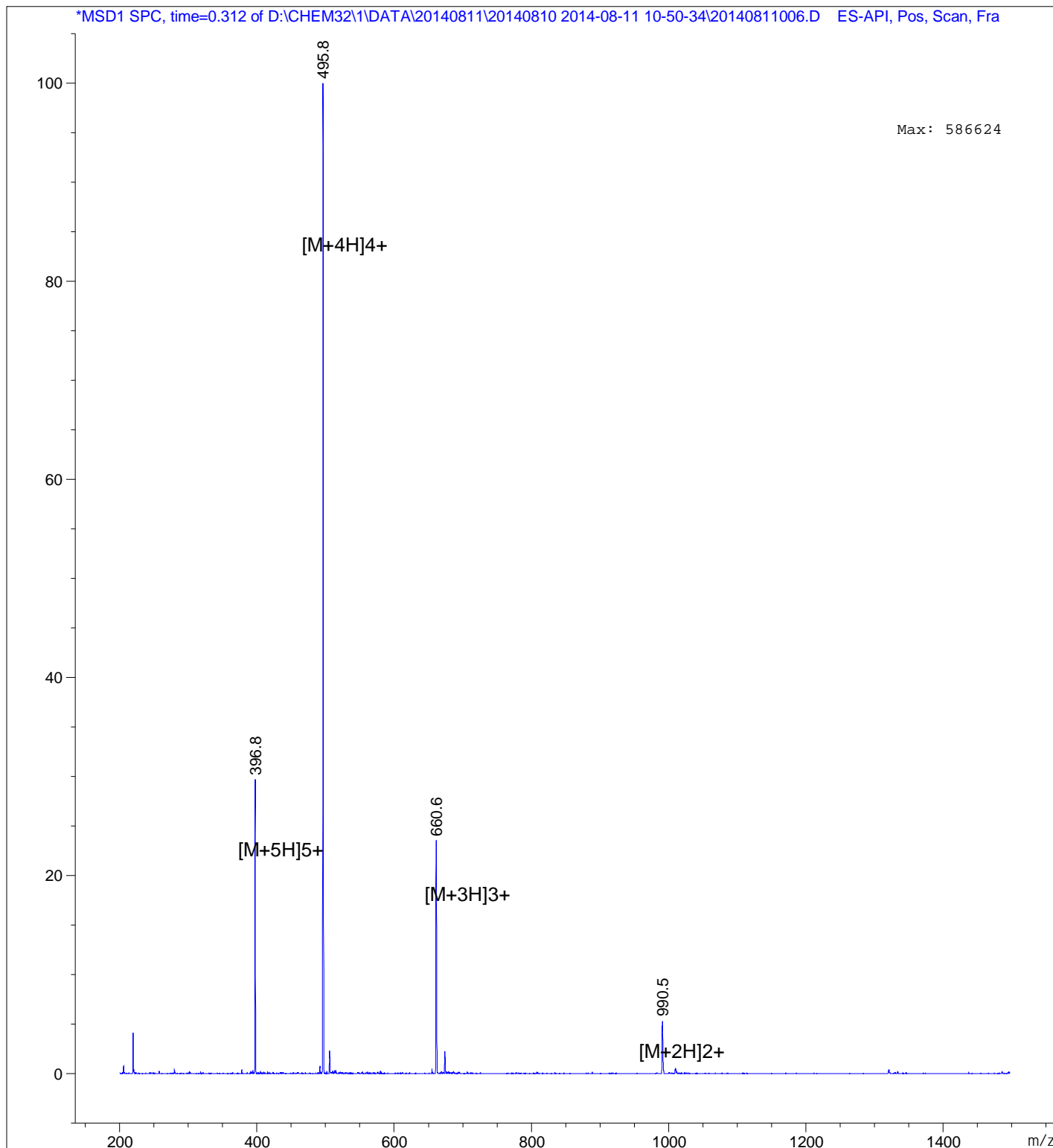
Acq. Method : D:\CHEM32\1\DATA\20140811\20140810 2014-08-11 10-50-34\TEST MS(200-1500)2.

Last changed : 8/10/2014 3:32:14 PM by liusuying

Analysis Method : D:\METHOD\MS(100-1000).M

Last changed : 8/10/2014 4:53:59 PM by liusuying

MS Spectrum

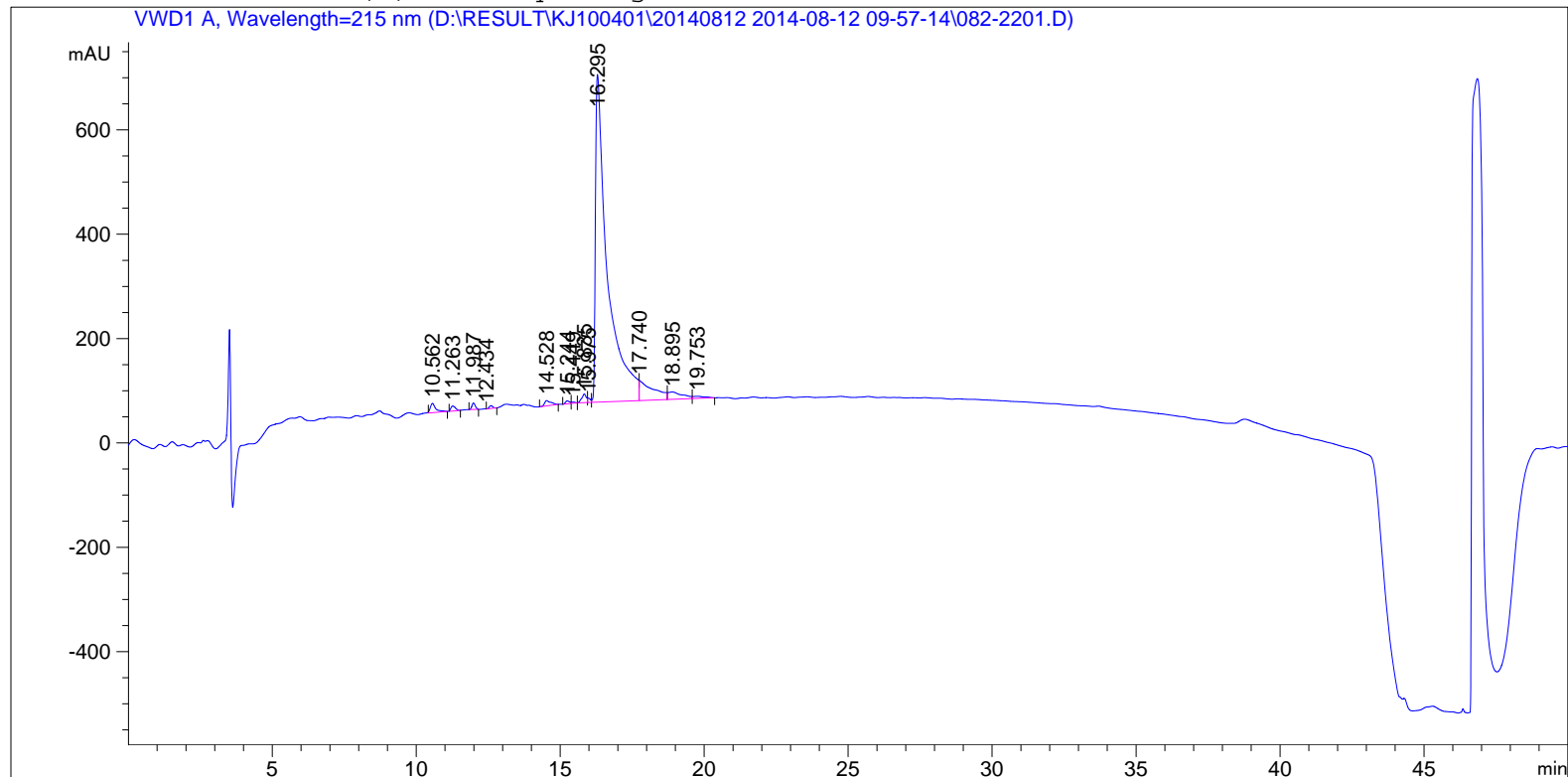


Max: 586624

```

=====
Acq. Operator   : SYSTEM                      Seq. Line :   22
Acq. Instrument : HPLC 1260                  Location  : Vial 82
Injection Date  : 8/13/2014 3:48:40 AM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\KJ100401\20140812 2014-08-12 09-57-14\KJ100401.M (Sequence Method)
Last changed    : 8/12/2014 9:57:14 AM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0          40          40.3         43          43.3         50
                  B%             10         70          95          95          10          10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By       : Signal
Multiplier      : 1.0000
Dilution        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	10.562	MM R	0.2228	237.00070	17.73180	1.1317
2	11.263	MM R	0.1787	104.49554	9.74590	0.4990
3	11.987	MM R	0.1360	100.97550	12.37506	0.4822
4	12.434	MM R	0.1392	45.80885	1.68632e-1	0.2187
5	14.528	BB	0.2126	157.25079	10.27490	0.7509
6	15.244	BV	0.1442	54.30407	5.64794	0.2593
7	15.449	VB	0.1286	18.76223	2.22013	0.0896

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
8	15.835	BV	0.1507	177.25700	16.58128	0.8464
9	15.975	VV	0.1012	54.73795	8.26921	0.2614
10	16.295	MF R	0.4794	1.80788e4	628.02979	86.3276
11	17.740	FM R	0.5593	1305.58521	38.68406	6.2343
12	18.895	VV	0.4711	487.33594	14.03483	2.3271
13	19.753	VB	0.4027	119.77428	4.19999	0.5719

Totals : 2.09421e4 767.96351

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-75		
Molecular Formula	C79H126N24O25	Cat#	8117
Molecular Weight	1812.08	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	VDRFYKTLRAEQASQ		
Item No.	8117_140303_75		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1812.08±2.0	1811.6
3	Peptide Purity (By HPLC)	≥80%	87.2%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	1.2
		E	2.9
		R	2.0
		T	1.0
		A	1.9
		Y	0.9
		V	1.1
		K	1.0
		L	1.0
F	1.0		
5	Peptide content	91.9%	

Quality Control By:

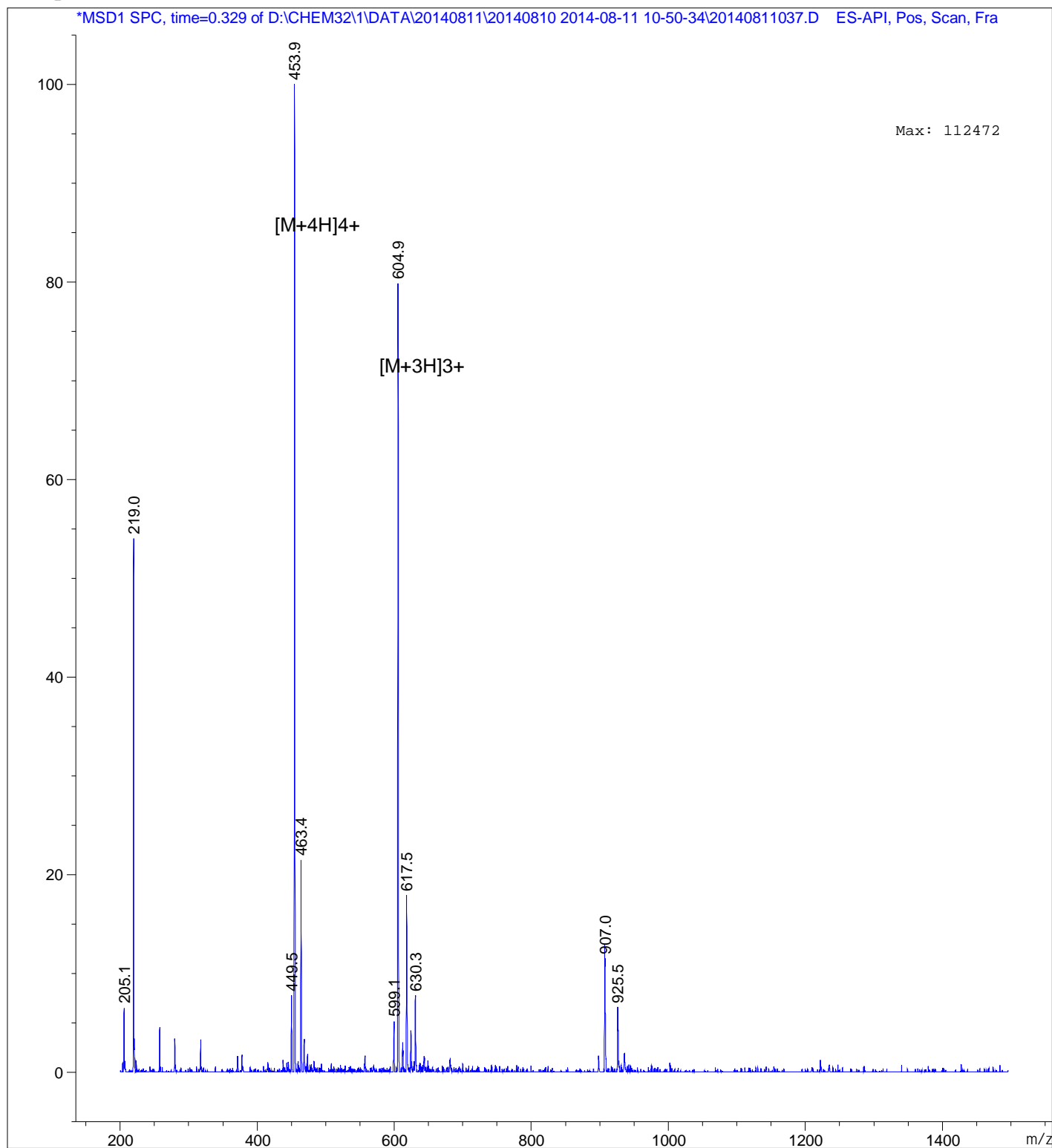
wangjun

Date:

09/18/2014

```
=====
Acq. Operator   : liusuying                Seq. Line :   37
Acq. Instrument : 5J-QC-082                Location  : Vial 45
Injection Date  : 8/11/2014 12:42:50 PM    Inj       :    1
                                          Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140811\20140810 2014-08-11 10-50-34\TEST MS(200-1500)2.
Last changed    : 8/10/2014 3:32:14 PM by liusuying
Analysis Method : D:\METHOD\MS(100-1000).M
Last changed    : 8/10/2014 4:53:59 PM by liusuying
```

MS Spectrum



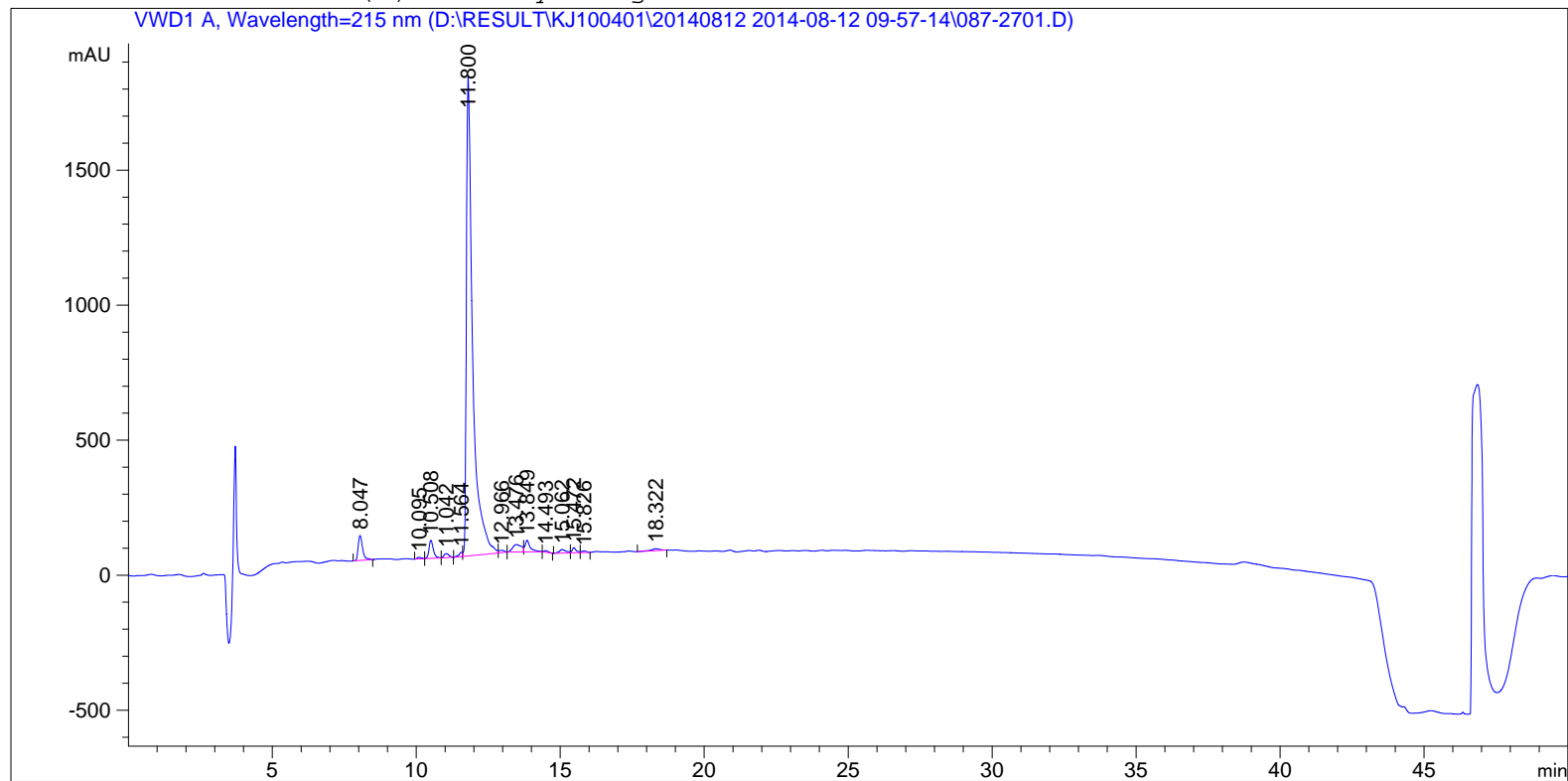
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=====
Acq. Operator   : SYSTEM                      Seq. Line :   27
Acq. Instrument : HPLC 1260                  Location  : Vial 87
Injection Date  : 8/13/2014 8:03:26 AM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\KJ100401\20140812 2014-08-12 09-57-14\KJ100401.M
Last changed    : 8/12/2014 9:57:14 AM by SYSTEM
Analysis Method : D:\RESULT\KJ100401\20140812 2014-08-12 09-57-14\KJ100401.M (Sequence Method)
Last changed    : 8/13/2014 1:46:04 PM by SYSTEM
                 (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                 Rate:1.0ml/min
                 Mobile Phase A:0.1%TFA+H2O
                 Mobile Phase B:0.1%TFA+ACN
                 time(min)      0      40      40.3      43      43.3      50
                 B%             10     70     95      95     10      10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	8.047	BB	0.1659	989.73236	92.43075	3.1732
2	10.095	BV	0.1399	57.04993	6.28332	0.1829
3	10.508	VV	0.1572	694.95465	66.90471	2.2281
4	11.042	VB	0.1874	179.18829	15.21581	0.5745

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	11.564	BV	0.1212	133.86430	15.74071	0.4292
6	11.800	VV	0.2223	2.71876e4	1778.73059	87.1672
7	12.966	VB	0.1961	110.58746	8.77128	0.3546
8	13.476	BV	0.3113	586.10382	27.31804	1.8791
9	13.849	VB	0.1732	536.34180	43.40005	1.7196
10	14.493	BB	0.1547	59.41092	5.99180	0.1905
11	15.062	BV	0.2242	225.20862	13.45913	0.7221
12	15.472	VV	0.1405	188.55214	19.38677	0.6045
13	15.826	VB	0.1963	73.08211	5.82902	0.2343
14	18.322	BB	0.3138	168.49034	7.31334	0.5402

Totals : 3.11901e4 2106.77533

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-76		
Molecular Formula	C75H125N23O26	Cat#	8117
Molecular Weight	1765.03	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	YKTLRAEQASQEVKN		
Item No.	8117_140303_76		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1765.03±2.0	1764.6
3	Peptide Purity (By HPLC)	≥80%	86.5%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	0.8
		E	4.3
		R	1.0
		T	0.9
		A	1.9
		Y	0.9
		V	1.1
	K	2.0	
	L	1.0	
5	Peptide content	87.6%	

Quality Control By:

wangjun

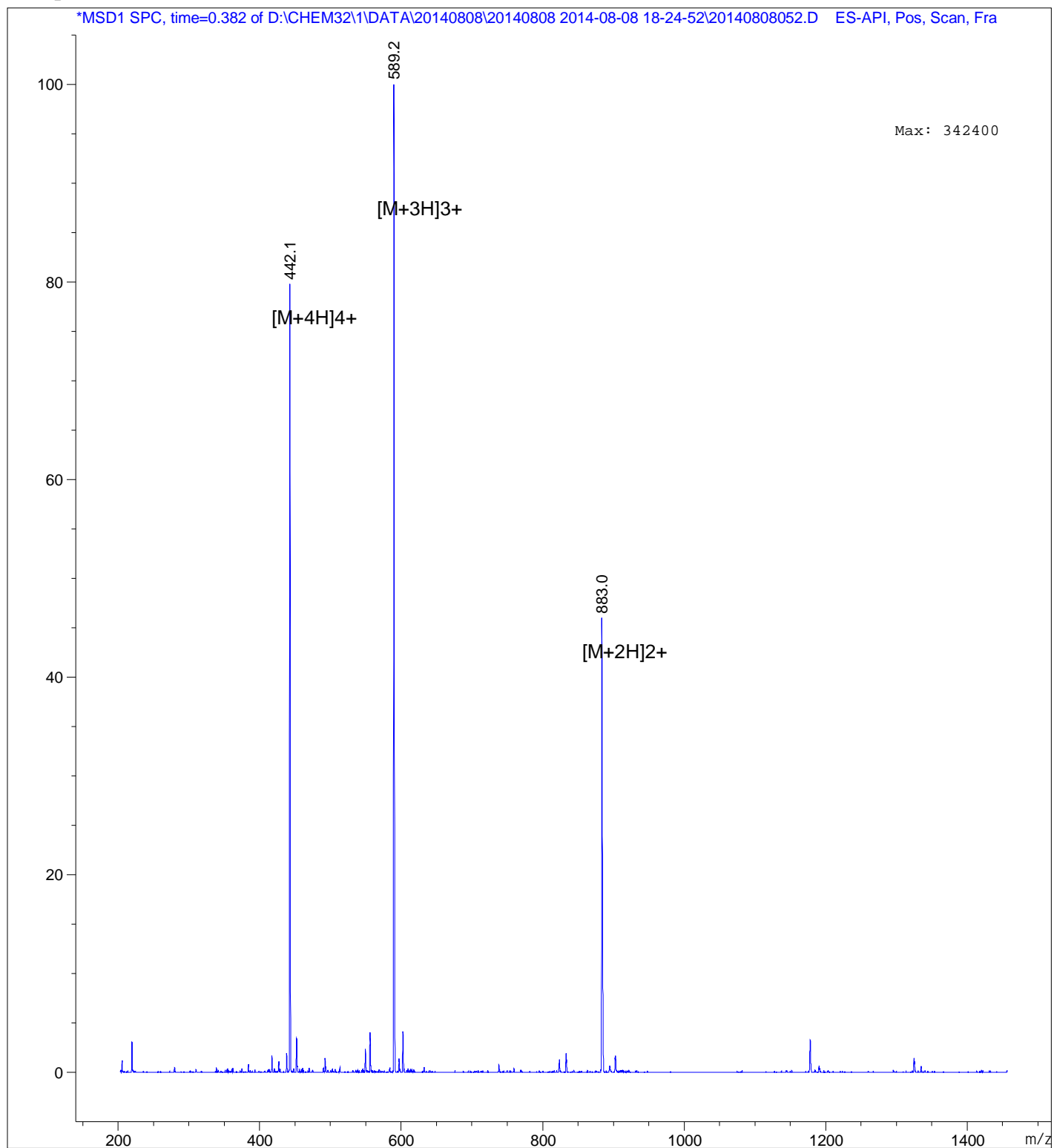
Date:

09/18/2014

```

=====
Acq. Operator   : liusuying                      Seq. Line :   52
Acq. Instrument : 5J-QC-082                      Location  : Vial 14
Injection Date  : 8/8/2014 9:05:26 PM             Inj       :    1
                                                    Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140808\20140808 2014-08-08 18-24-52\TEST MS(200-1500)2.
Last changed    : 8/8/2014 10:11:15 AM by liusuying
Analysis Method : D:\METHOD\MS(100-1000).M
Last changed    : 8/10/2014 4:53:59 PM by liusuying
    
```

MS Spectrum



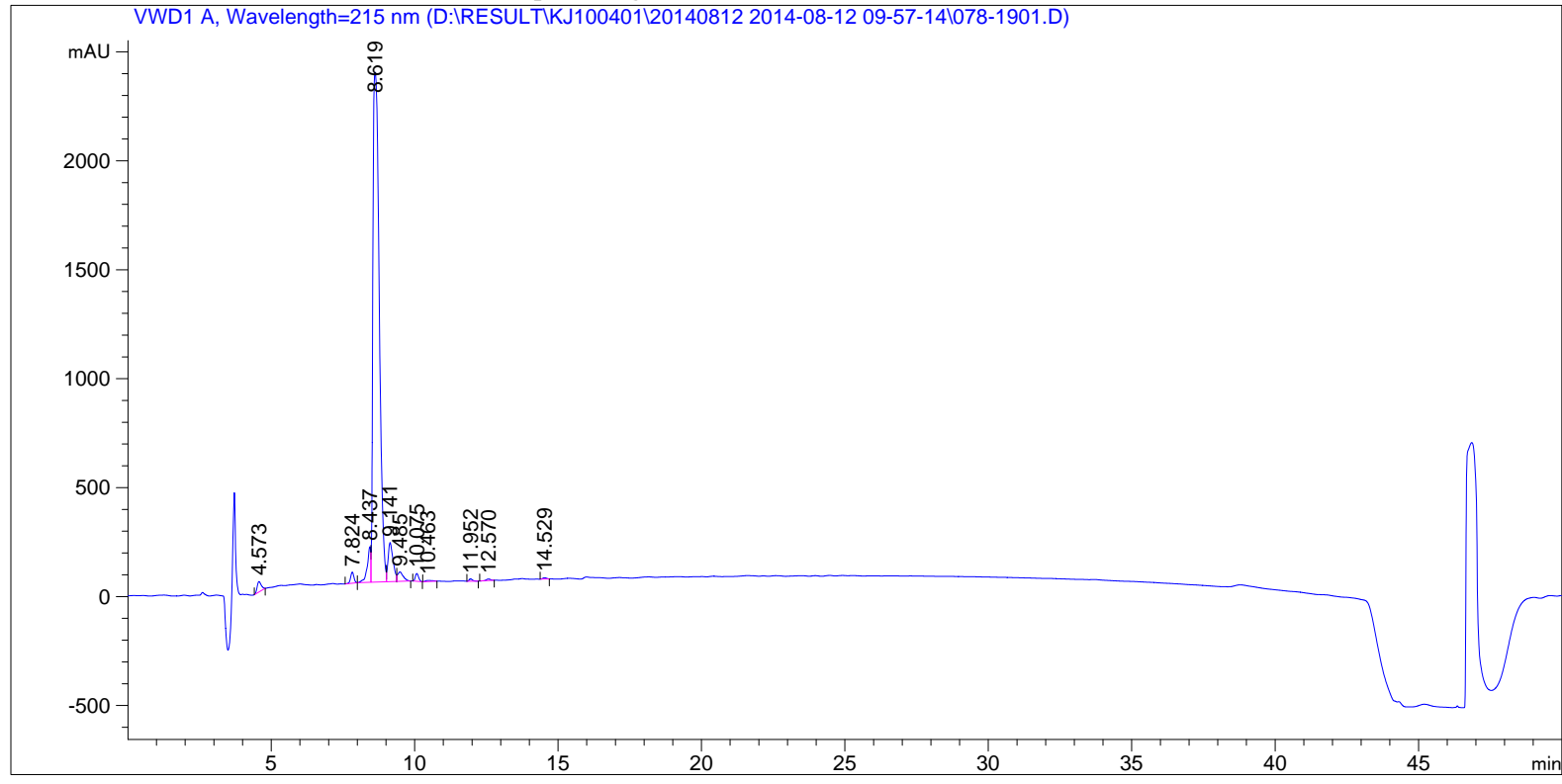
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=====
Acq. Operator   : SYSTEM                               Seq. Line :   19
Acq. Instrument : HPLC 1260                           Location  : Vial 78
Injection Date  : 8/13/2014 1:15:43 AM                 Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\KJ100401\20140812 2014-08-12 09-57-14\KJ100401.M
Last changed    : 8/12/2014 9:57:14 AM by SYSTEM
Analysis Method : D:\RESULT\KJ100401\20140812 2014-08-12 09-57-14\KJ100401.M (Sequence Method)
Last changed    : 8/13/2014 1:46:04 PM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5um,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95      10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	4.573	BB	0.1513	472.35498	47.81131	1.1416
2	7.824	BB	0.1259	402.45145	50.53029	0.9727
3	8.437	BV	0.1206	1379.41626	163.20782	3.3338
4	8.619	VV	0.2424	3.57849e4	2339.89258	86.4856

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	9.141	VV	0.1781	2188.97974	179.67157	5.2904
6	9.485	VB	0.1941	584.96655	43.17010	1.4138
7	10.075	BB	0.1251	280.20801	35.50201	0.6772
8	10.463	BB	0.2295	79.06427	4.89433	0.1911
9	11.952	BB	0.1254	81.46076	10.17098	0.1969
10	12.570	BB	0.1608	73.17011	7.06731	0.1768
11	14.529	BB	0.1330	49.76183	5.92582	0.1203

Totals : 4.13768e4 2887.84412

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-77		
Molecular Formula	C75H119N23O27S	Cat#	8117
Molecular Weight	1807.04	Lot#	140303
Manufacturing Date	09/05/2014	Test Date	09/05/2014
Sequence	RAEQASQEVKNWMTE		
Item No.	8117_140303_77		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1807.04±2.0	1806.6
3	Peptide Purity (By HPLC)	≥80%	95.6%
4	Identification(Amino Acid Composition by HPLC)	D	0.7
		S	1.0
		E	5.3
		R	1.2
		T	1.0
		A	2.0
		V	1.0
		M	0.6
K	1.0		
5	Peptide content	73.1%	

Quality Control By:

wangjun

Date:

09/09/2014

=====
Acq. Operator : liusuying

Seq. Line : 32

Acq. Instrument : 5J-QC-082

Location : Vial 38

Injection Date : 8/11/2014 12:27:23 PM

Inj : 1

Inj Volume : 3.0 µl

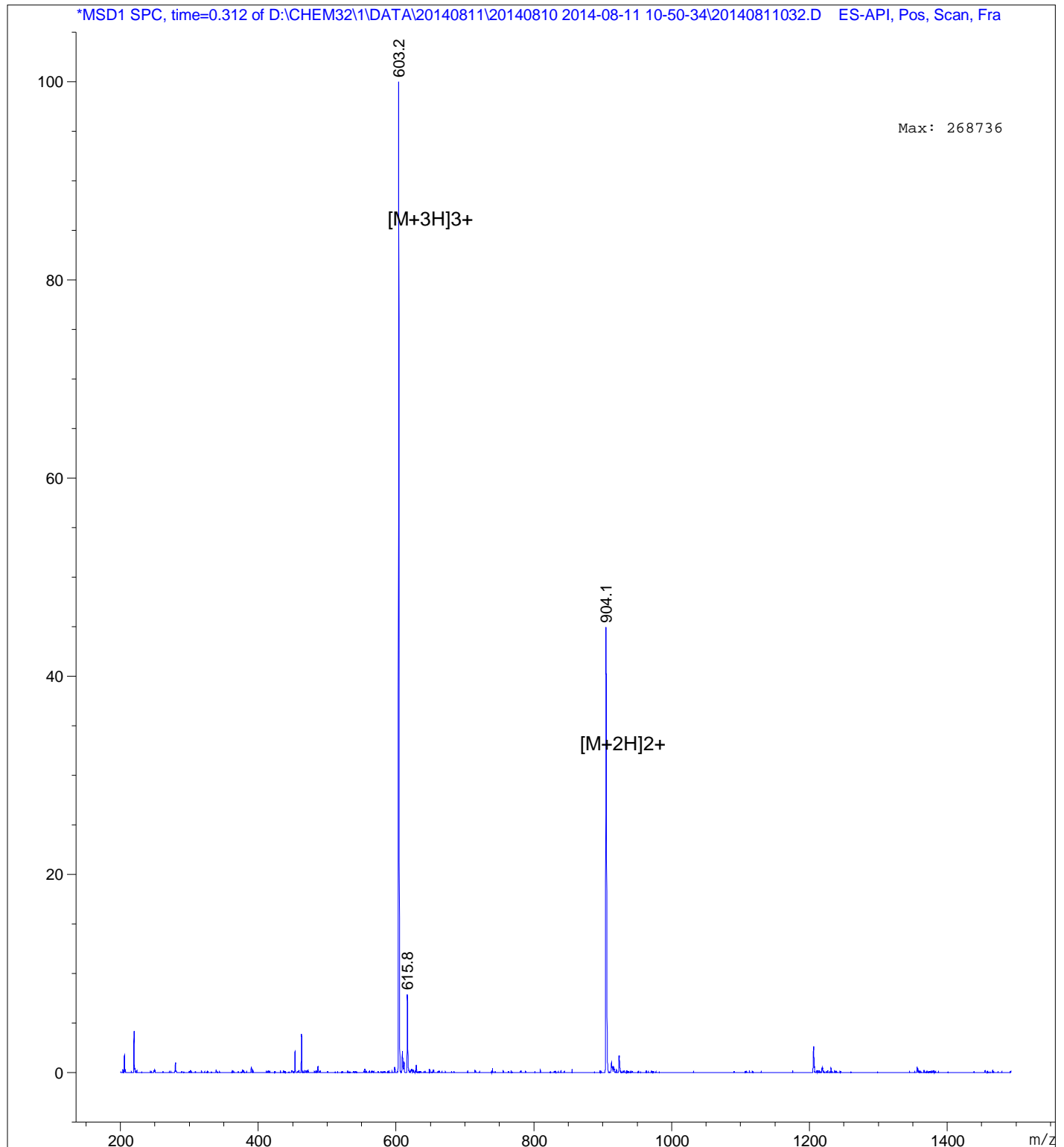
Acq. Method : D:\CHEM32\1\DATA\20140811\20140810 2014-08-11 10-50-34\TEST MS(200-1500)2.

Last changed : 8/10/2014 3:32:14 PM by liusuying

Analysis Method : D:\METHOD\MS(100-1000).M

Last changed : 8/10/2014 4:53:59 PM by liusuying

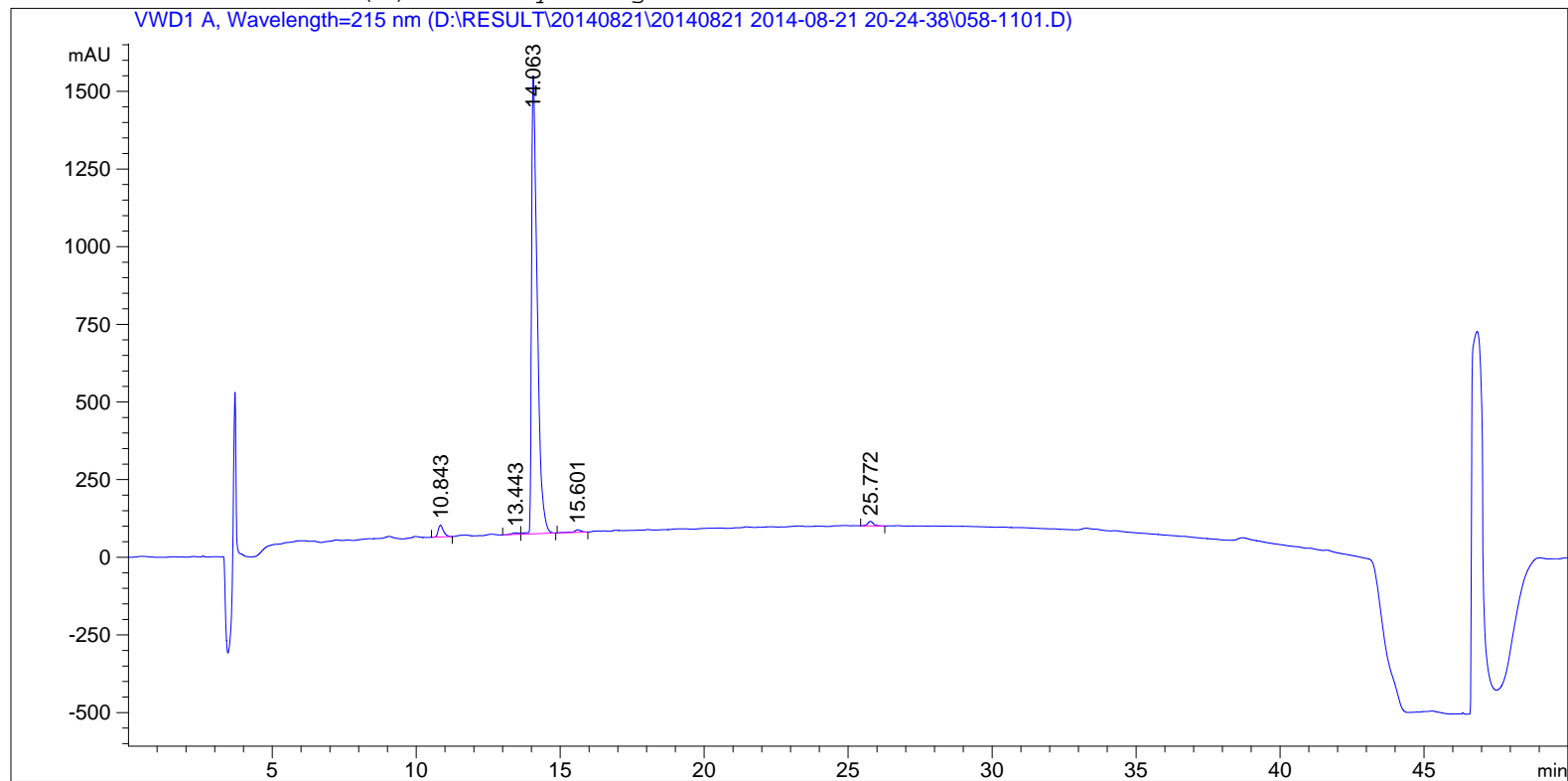
MS Spectrum



=====

Acq. Operator	: SYSTEM	Seq. Line	: 11				
Acq. Instrument	: HPLC 1260	Location	: Vial 58				
Injection Date	: 8/22/2014 4:55:19 AM	Inj	: 1				
		Inj Volume	: 20.000 µl				
Acq. Method	: D:\RESULT\20140821\20140821 2014-08-21 20-24-38\KJ100401.M						
Last changed	: 8/21/2014 8:24:39 PM by SYSTEM						
Analysis Method	: D:\RESULT\20140821\20140821 2014-08-21 20-24-38\KJ100401.M (Sequence Method)						
Last changed	: 8/22/2014 1:26:04 PM by SYSTEM (modified after loading)						
Method Info	: Cloumn:Agilent HC-C18,5µm,4.6*250mm	Cloumn Temp	:35°C	Flow			
	Rate:1.0ml/min						
	Mobile Phase A:0.1%TFA+H2O						
	Mobile Phase B:0.1%TFA+ACN						
	time(min)	0	40	40.3	43	43.3	50
	B%	10	70	95	95	10	10

Additional Info : Peak(s) manually integrated



=====
Area Percent Report
=====

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	10.843	BB	0.1930	485.31998	38.51760	2.3115
2	13.443	BV	0.2807	96.98208	5.12721	0.4619
3	14.063	VB	0.1968	2.00735e4	1475.13354	95.6068
4	15.601	BB	0.2536	146.87640	8.37516	0.6995

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	25.772	BB	0.2040	193.22105	14.35474	0.9203

Totals : 2.09959e4 1541.50827

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

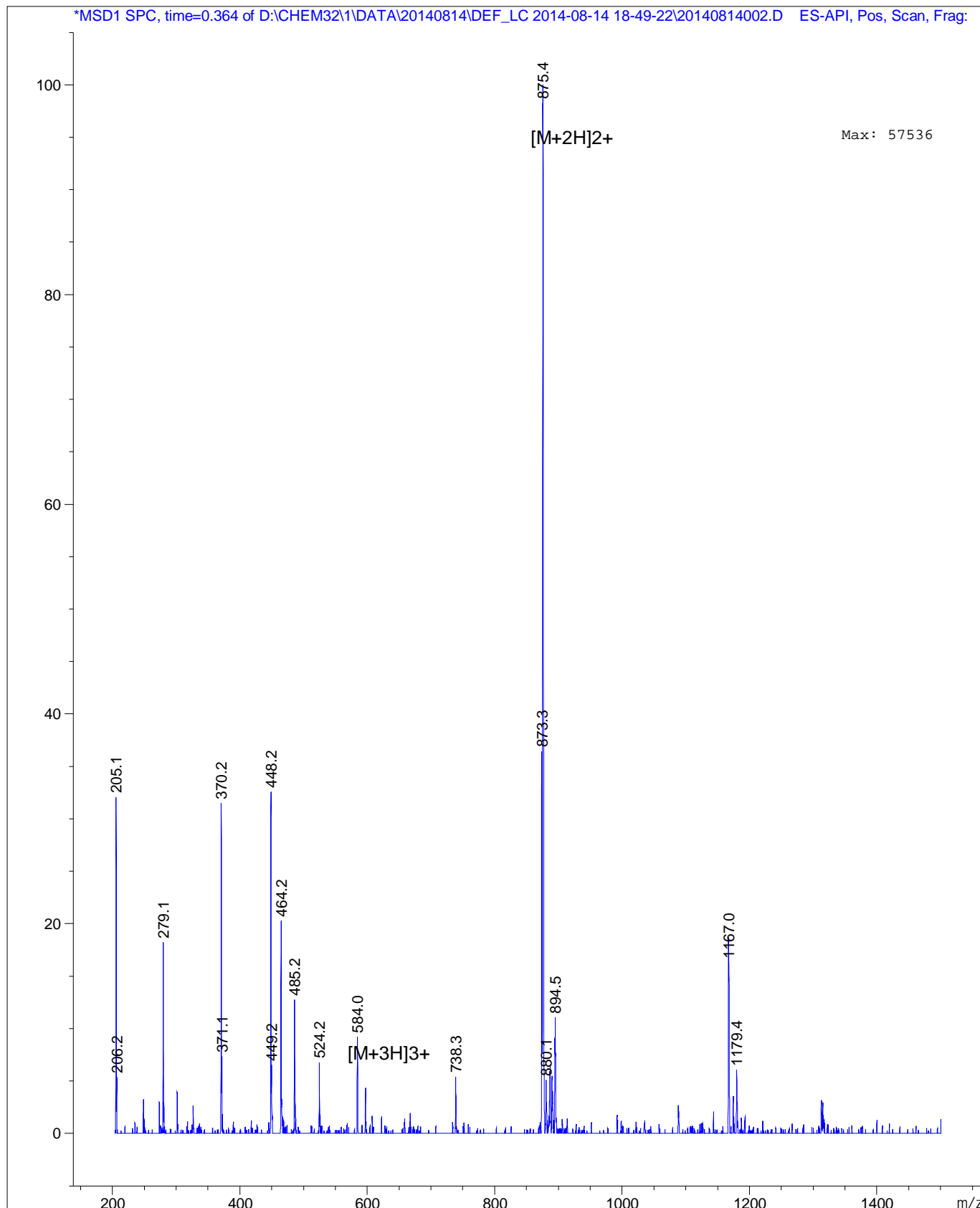
Product Name	HIV-1 Con B Gag Peptide-78		
Molecular Formula	C77H125N19O25S	Cat#	8117
Molecular Weight	1749.1	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	ASQEVKNWMTETLLV		
Item No.	8117_140303_78		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1749.1±2.0	1748.8
3	Peptide Purity (By HPLC)	≥80%	84.9%
4	Identification(Amino Acid Composition by HPLC)	D	0.6
		S	0.8
		E	3.3
		T	2.2
		A	1.1
		V	2.3
		M	0.6
		K	1.1
	L	2.0	
5	Peptide content	87.0%	

Quality Control By: wangjun

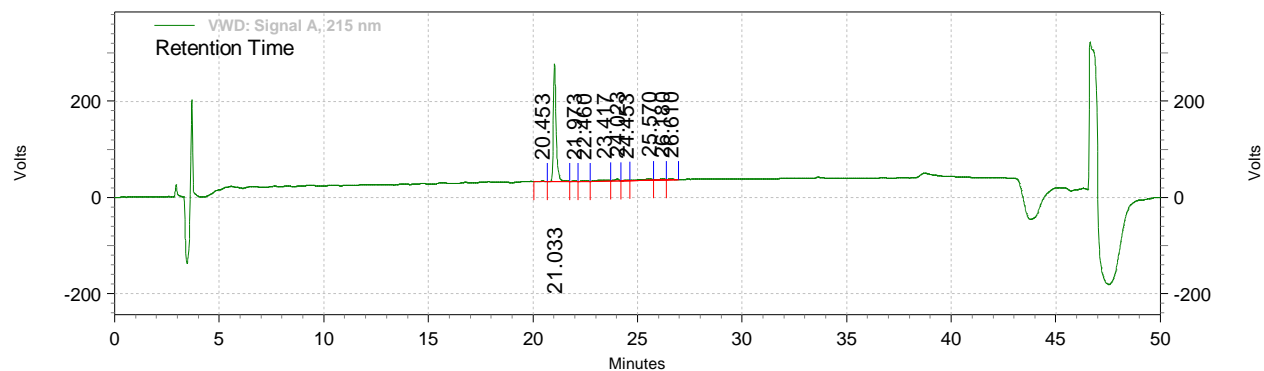
Date: 09/18/2014

=====
Acq. Operator : liusuying Seq. Line : 2
Acq. Instrument : 5J-QC-082 Location : Vial 42
Injection Date : 8/14/2014 6:53:23 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140814\DEF_LC 2014-08-14 18-49-22\TEST MS(200-1500)2.
Last changed : 8/14/2014 11:53:24 AM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed : 4/18/2014 11:29:00 AM by YZW

MS Spectrum



Data File: D:\KJ100401\20140830\20140830.rslt\HIV-1 Con B Gag Peptide-78.dat
 Method: D:\Method\KJ100401.met
 Acquired: 8/30/2014 1:31:38 PM (GMT +08:00)
 Printed: 8/27/2014 10:11:48 AM (GMT +08:00)
 Column:Agilent HC-C18,5um,4.6*250mm Column Temp:35°C Flow Rate:1.0ml/min
 Mobile Phase A:0.1%TFA water
 Mobile Phase B:0.1%TFA+ACN
 time(min) 0 40 40.3 43 43.3 50
 B% 10 70 95 95 10 10



VWD: Signal A, 215 nm Results

Retention Time	Area	Area %
20.453	346659	0.79
21.033	37137652	84.88
21.973	201841	0.46
22.460	242200	0.55
23.417	1241459	2.84
24.023	1060876	2.42
24.453	335737	0.77
25.570	2009449	4.59
26.180	819646	1.87
26.610	356871	0.82
Totals	43752390	100.00



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-79		
Molecular Formula	C77H125N21O24S	Cat#	8117
Molecular Weight	1761.12	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	VKNWMTETLLVQNAN		
Item No.	8117_140303_79		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1761.12±2.0	1760.0
3	Peptide Purity (By HPLC)	≥80%	88.5%
4	Identification(Amino Acid Composition by HPLC)	D	2.6
		E	2.3
		T	2.1
		A	1.1
		V	2.3
		M	0.4
		K	1.1
	L	2.1	
5	Peptide content	75.7%	

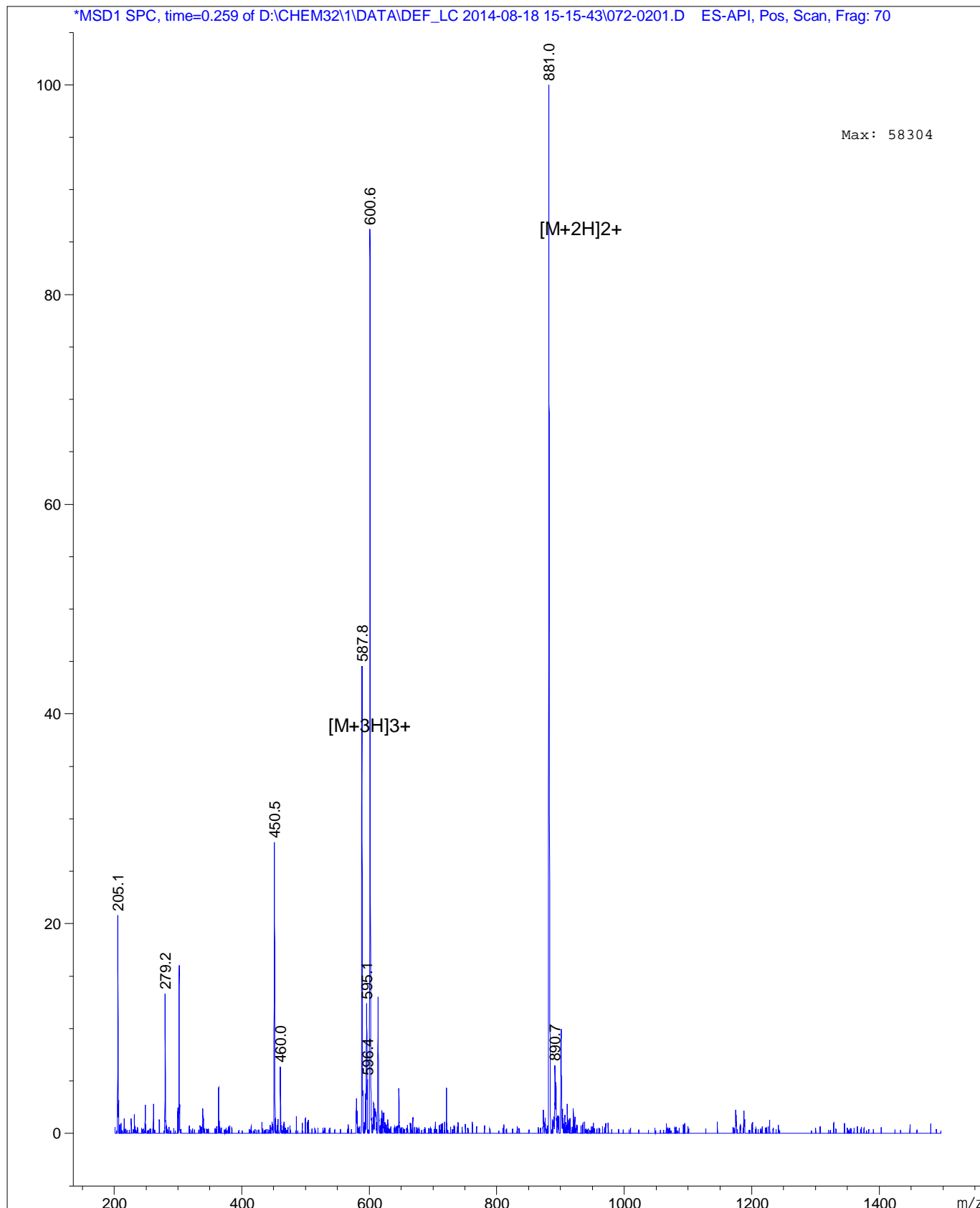
Quality Control By: wangjun

Date: 09/24/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 2
Acq. Instrument	: 5J-QC-082	Location	: Vial 72
Injection Date	: 8/18/2014 3:19:44 PM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\DEF_LC 2014-08-18 15-15-43\TEST MS(200-1500)2.		
Last changed	: 8/14/2014 11:53:24 AM by liusuying		
Analysis Method	: D:\METHOD\TEST MS(200-1500)2.M		
Last changed	: 8/14/2014 11:53:24 AM by liusuying		

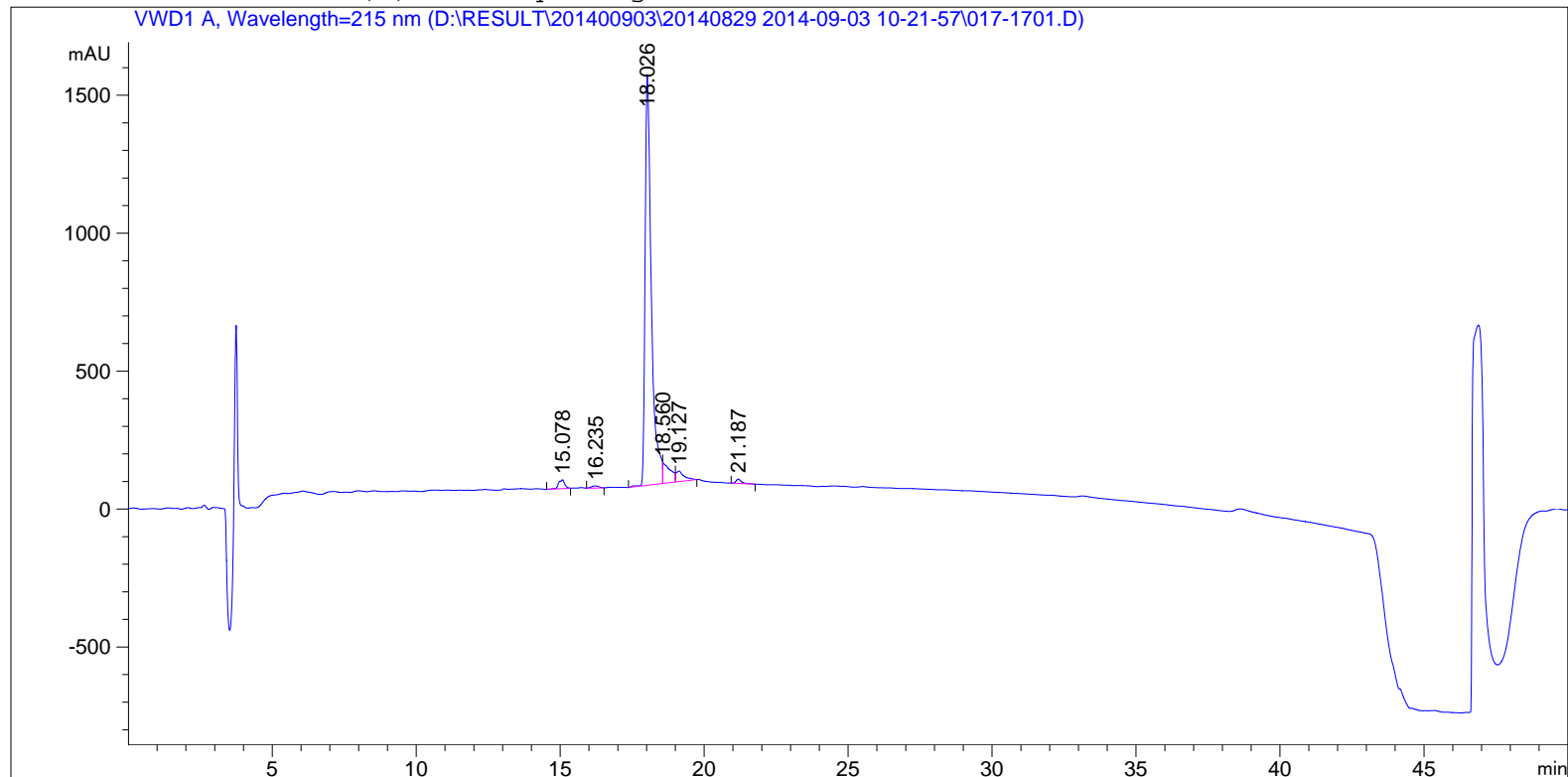
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   17
Acq. Instrument : HPLC 1260                           Location  : Vial 17
Injection Date  : 9/3/2014 11:58:15 PM                Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M (Sequence Method)
Last changed    : 9/3/2014 7:20:03 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5um,4.6*250mm   Cloumn Temp:35°C   Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      : Signal
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	15.078	BB	0.1947	462.12778	31.96587	1.8186
2	16.235	BB	0.2836	132.57802	7.48629	0.5217
3	18.026	MF R	0.2518	2.25006e4	1489.19666	88.5480
4	18.560	FM R	0.2901	1364.16833	78.36881	5.3685
5	19.127	VB	0.2621	742.94446	38.34211	2.9238
6	21.187	BB	0.1902	208.19830	16.06730	0.8193

Totals : 2.54106e4 1661.42704

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-80		
Molecular Formula	C69H117N19O25S2	Cat#	8117
Molecular Weight	1677.0	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	MTETLLVQNANPDCK		
Item No.	8117_140303_80		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1677.0±2.0	1676.0
3	Peptide Purity (By HPLC)	≥80%	89.4%
4	Identification(Amino Acid Composition by HPLC)	D	3.2
		E	2.2
		T	1.9
		A	1.0
		P	1.0
		C	0.9
		V	1.0
		M	0.8
		K	1.1
L	2.0		
5	Peptide content	82.2%	

Quality Control By:

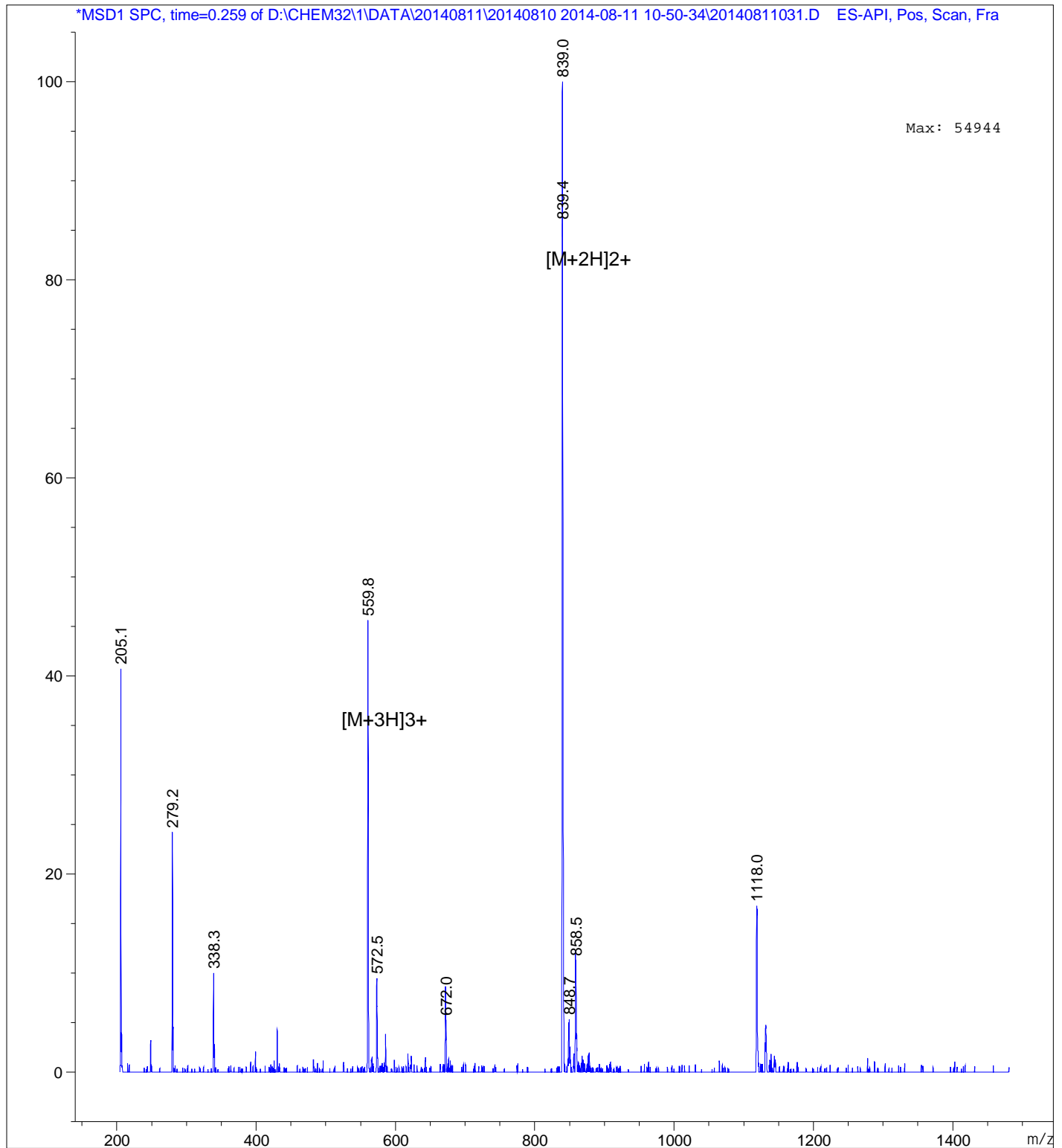
wangjun

Date:

09/18/2014

=====
Acq. Operator : liusuying Seq. Line : 31
Acq. Instrument : 5J-QC-082 Location : Vial 37
Injection Date : 8/11/2014 12:24:17 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140811\20140810 2014-08-11 10-50-34\TEST MS(200-1500)2.
Last changed : 8/10/2014 3:32:14 PM by liusuying
Analysis Method : D:\METHOD\MS(100-1000).M
Last changed : 8/10/2014 4:53:59 PM by liusuying

MS Spectrum



```

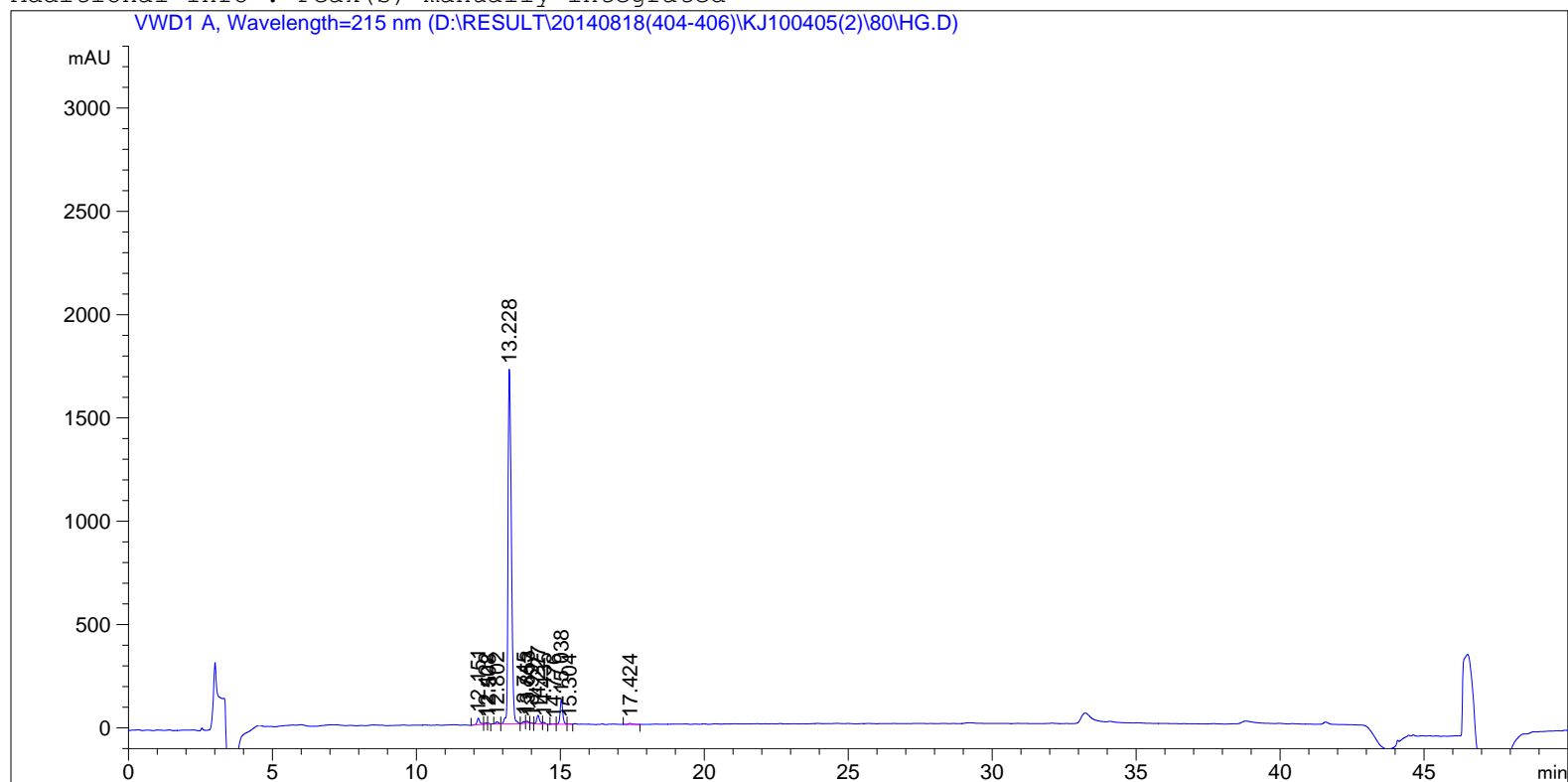
=====
Acq. Operator   :
Acq. Instrument : Instrument 1                Location : Vial 1
Injection Date  : 8/21/2014 12:02:19 PM
                                           Inj Volume : Manually

Acq. Method     : E:\METHODS\10-70IN50MIN.M\10-70IN50MIN.M
Last changed    : 8/21/2014 11:59:13 AM
                  (modified after loading)

Analysis Method : C:\CHEM32\1\METHODS\KJ100401.M
Last changed    : 8/21/2014 8:35:12 PM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18, 5um, 4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%              10      70      95      95      10      10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.151	BV	0.1013	218.29041	31.70956	1.4221
2	12.422	VV	0.0943	37.97234	5.80714	0.2474
3	12.508	VB	0.0660	16.47160	3.84363	0.1073

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
4	12.802	BB	0.1087	68.35587	10.26810	0.4453
5	13.228	BB	0.1272	1.37229e4	1717.05688	89.3987
6	13.745	BV	0.0927	59.10986	9.48830	0.3851
7	13.853	VB	0.0829	56.89486	10.55352	0.3706
8	13.997	BB	0.0689	11.21459	2.67792	0.0731
9	14.227	BV	0.1052	286.22409	41.10701	1.8646
10	14.435	VB	0.0926	45.96382	7.48702	0.2994
11	14.776	BV	0.1220	12.76454	1.61875	0.0832
12	15.038	VV	0.0944	751.00134	121.03487	4.8924
13	15.304	VV	0.1140	19.88256	2.46886	0.1295
14	17.424	BB	0.1217	43.17399	5.00030	0.2813

Totals : 1.53502e4 1970.12187

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-81		
Molecular Formula	C73H128N20O22S	Cat#	8117
Molecular Weight	1670.09	Lot#	140303
Manufacturing Date	09/25/2014	Test Date	09/25/2014
Sequence	LLVQNaNPDCKTILK		
Item No.	8117_140303_81		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1670.09±2.0	1669.5
3	Peptide Purity (By HPLC)	≥80%	87.6%
4	Identification(Amino Acid Composition by HPLC)	D	2.9
		E	1.0
		T	1.0
		A	1.0
		P	1.0
		C	1.0
		V	1.1
		K	2.1
		I	0.9
L	3.0		
5	Peptide content	87.3%	

Quality Control By:

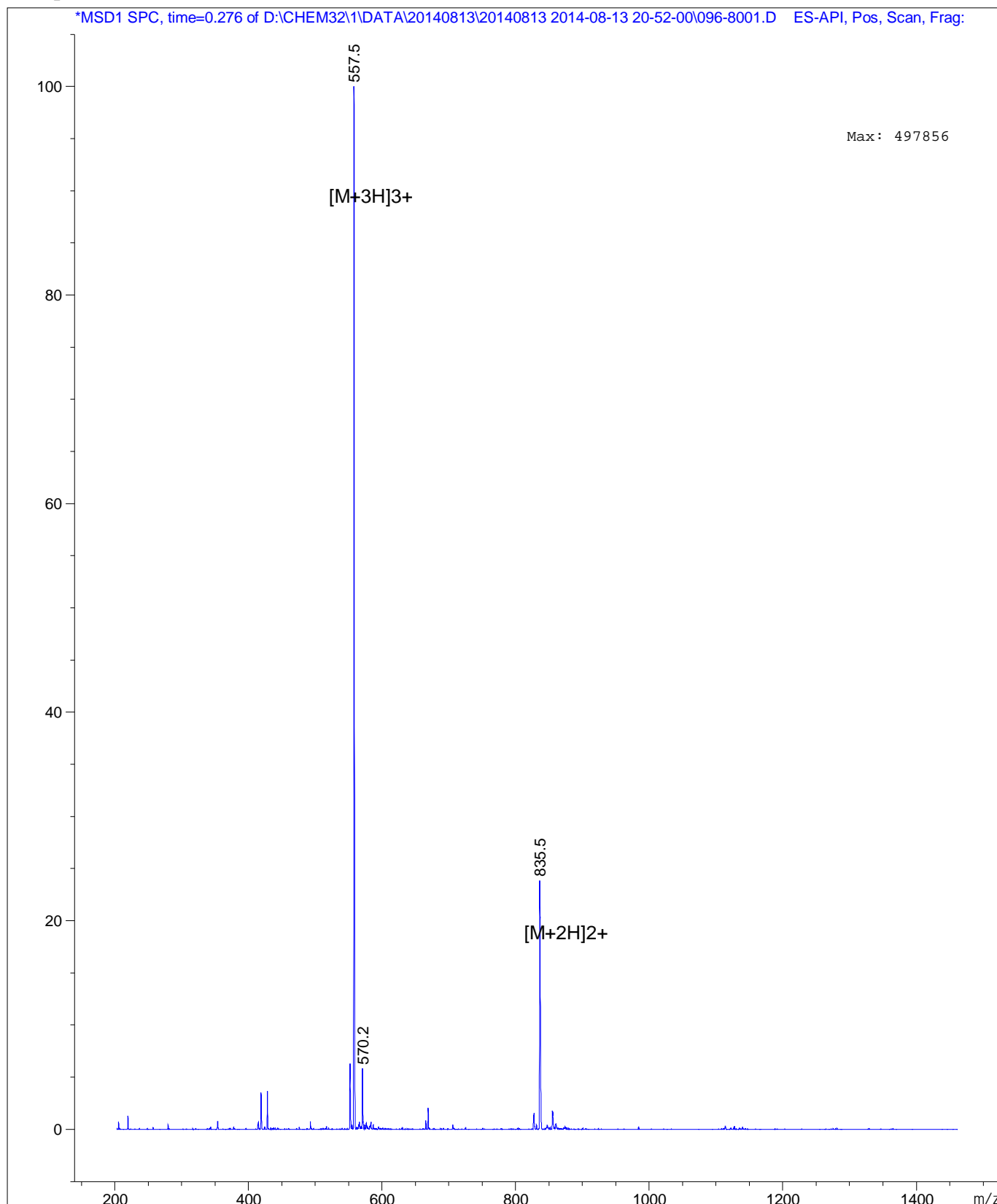
wangjun

Date:

09/25/2014

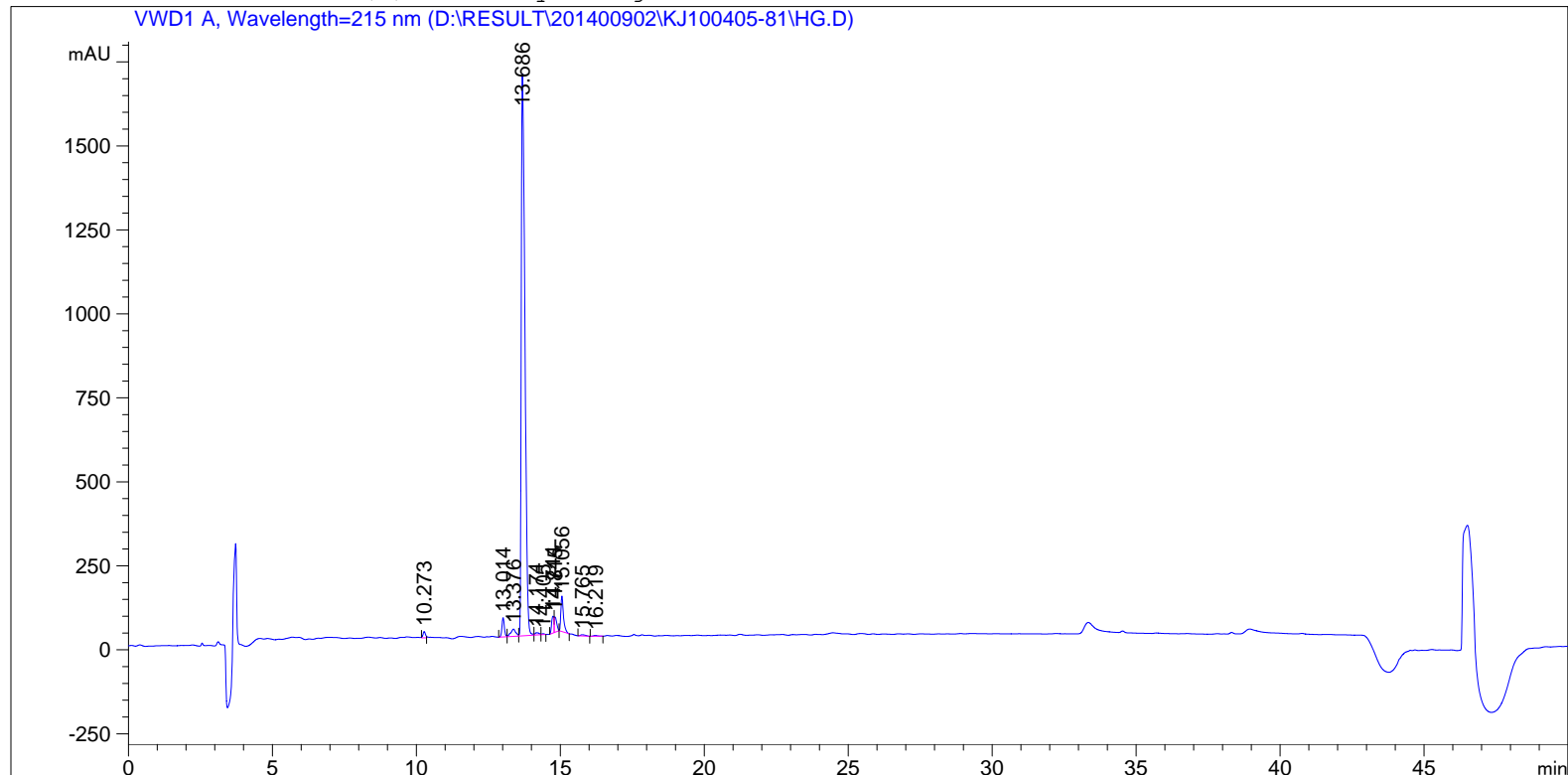
=====
Acq. Operator : liusuying Seq. Line : 80
Acq. Instrument : 5J-QC-082 Location : Vial 96
Injection Date : 8/14/2014 12:57:00 AM Inj : 1
Inj Volume : 3.0 μ l
Acq. Method : D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500)
2.
Last changed : 8/11/2014 1:22:13 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed : 4/18/2014 11:29:00 AM by YZW

MS Spectrum



```

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 1
Injection Date  : 9/4/2014 4:23:00 PM
                                           Inj Volume : Manually
Acq. Method     : E:\METHODS\10-70IN50MIN.M\10-70IN50MIN.M
Last changed    : 9/4/2014 4:20:10 PM
                  (modified after loading)
Analysis Method : C:\CHEM32\1\METHODS\WSAH.M
Last changed    : 7/28/2014 4:59:11 PM by SYSTEM
Additional Info  : Peak(s) manually integrated
  
```



Area Percent Report

```

Sorted By      : Signal
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	10.273	MM R	0.0964	108.66802	18.78657	0.6482
2	13.014	BV	0.0882	331.52884	57.52723	1.9777
3	13.376	VV	0.1741	261.61880	21.47735	1.5606
4	13.686	VV	0.1384	1.46909e4	1673.18848	87.6361
5	14.174	VV	0.1332	67.52516	6.77814	0.4028
6	14.405	VB	0.1006	17.75000	2.73963	0.1059
7	14.744	BV	0.0871	285.20953	50.30952	1.7014
8	14.815	VB	0.0883	267.23456	45.68060	1.5941
9	15.056	BB	0.0945	666.80286	105.80695	3.9777
10	15.765	BB	0.2046	43.64065	3.56999	0.2603
11	16.219	BB	0.1434	22.64978	2.37161	0.1351

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
----- ----- ----- ----- ----- ----- -----						
Totals :				1.67635e4	1988.23605	

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-82		
Molecular Formula	C67H115N19O21S	Cat#	8117
Molecular Weight	1554.9	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	NANPDCKTILKALGP		
Item No.	8117_140303_82		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1554.9±2.0	1554.3
3	Peptide Purity (By HPLC)	≥80%	83.1%
4	Identification(Amino Acid Composition by HPLC)	D	3.1
		G	1.0
		T	0.9
		A	1.9
		P	2.0
		C	0.9
		K	2.2
		I	1.0
L	2.0		
5	Peptide content	96.1%	

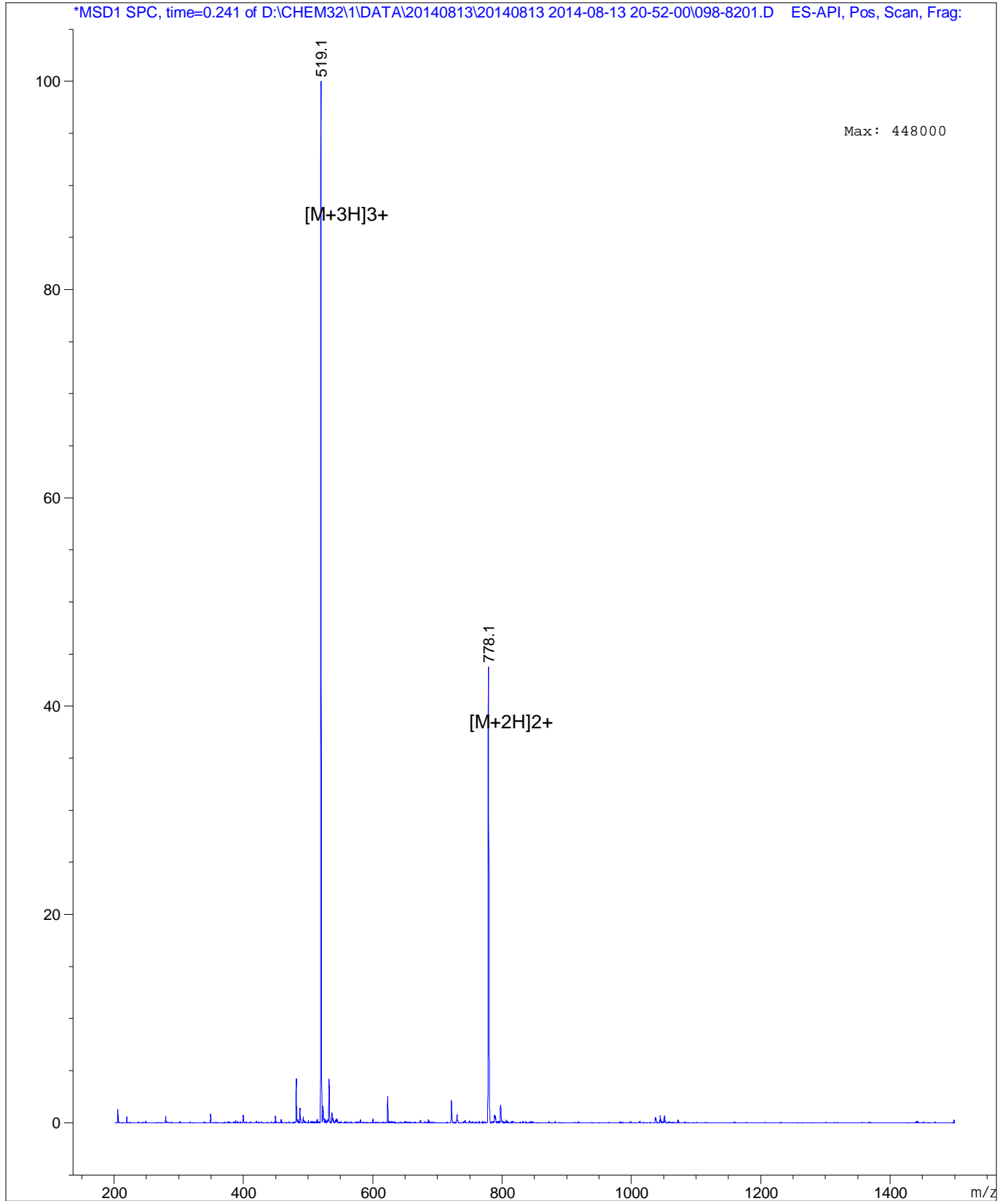
Quality Control By: wangjun

Date: 09/18/2014

```

=====
Acq. Operator   : liusuying                      Seq. Line :   82
Acq. Instrument : 5J-QC-082                      Location  : Vial 98
Injection Date  : 8/14/2014 1:03:16 AM           Inj       :    1
                                              Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500)
                                              2.
Last changed    : 8/11/2014 1:22:13 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed    : 4/18/2014 11:29:00 AM by YZW
    
```

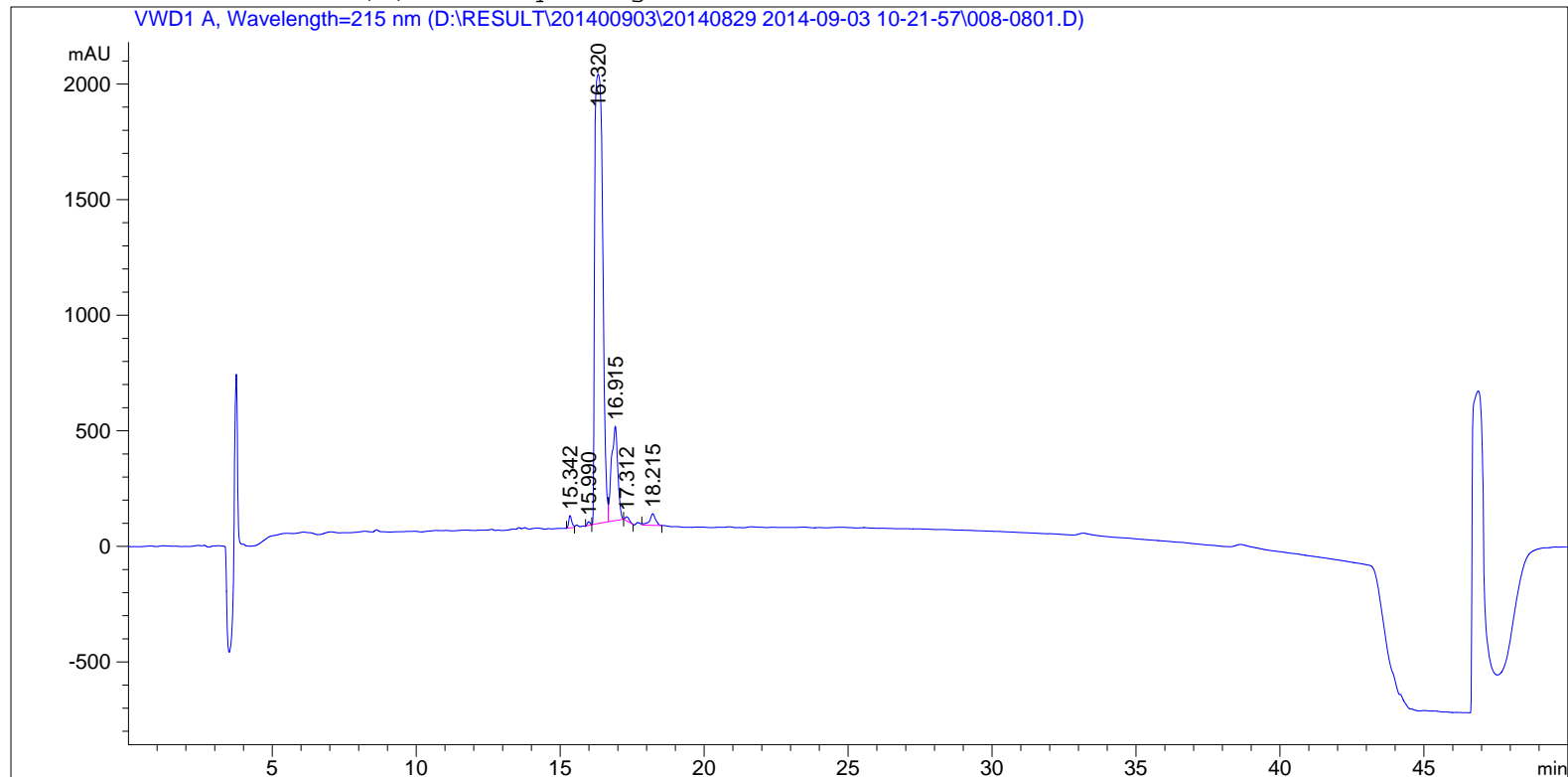
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :    8
Acq. Instrument : HPLC 1260                           Location  : Vial 8
Injection Date  : 9/3/2014 4:19:29 PM                 Inj       :    1
                                                    Inj Volume: 20.000 µl
Acq. Method     : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M
Last changed    : 9/3/2014 10:21:57 AM by SYSTEM
Analysis Method : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M (Sequence Method)
Last changed    : 9/3/2014 7:20:03 PM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	15.342	BV	0.1102	386.30197	52.89190	0.8642
2	15.990	BB	0.1065	102.84676	15.88800	0.2301
3	16.320	BV	0.3139	3.71268e4	1943.32471	83.0541
4	16.915	VB	0.2076	6184.66553	408.53354	13.8353
5	17.312	BB	0.1516	175.55266	18.18499	0.3927

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
6	18.215	VB	0.2042	725.77106	50.34728	1.6236

Totals : 4.47020e4 2489.17043

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-83		
Molecular Formula	C67H119N17O20S	Cat#	8117
Molecular Weight	1514.92	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	DCKTILKALGPAATL		
Item No.	8117_140303_83		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1514.92±2.0	1514.4
3	Peptide Purity (By HPLC)	≥80%	81.7%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		G	1.0
		T	1.9
		A	2.9
		P	1.0
		C	0.9
		K	2.2
		I	1.0
L	3.0		
5	Peptide content	87.6%	

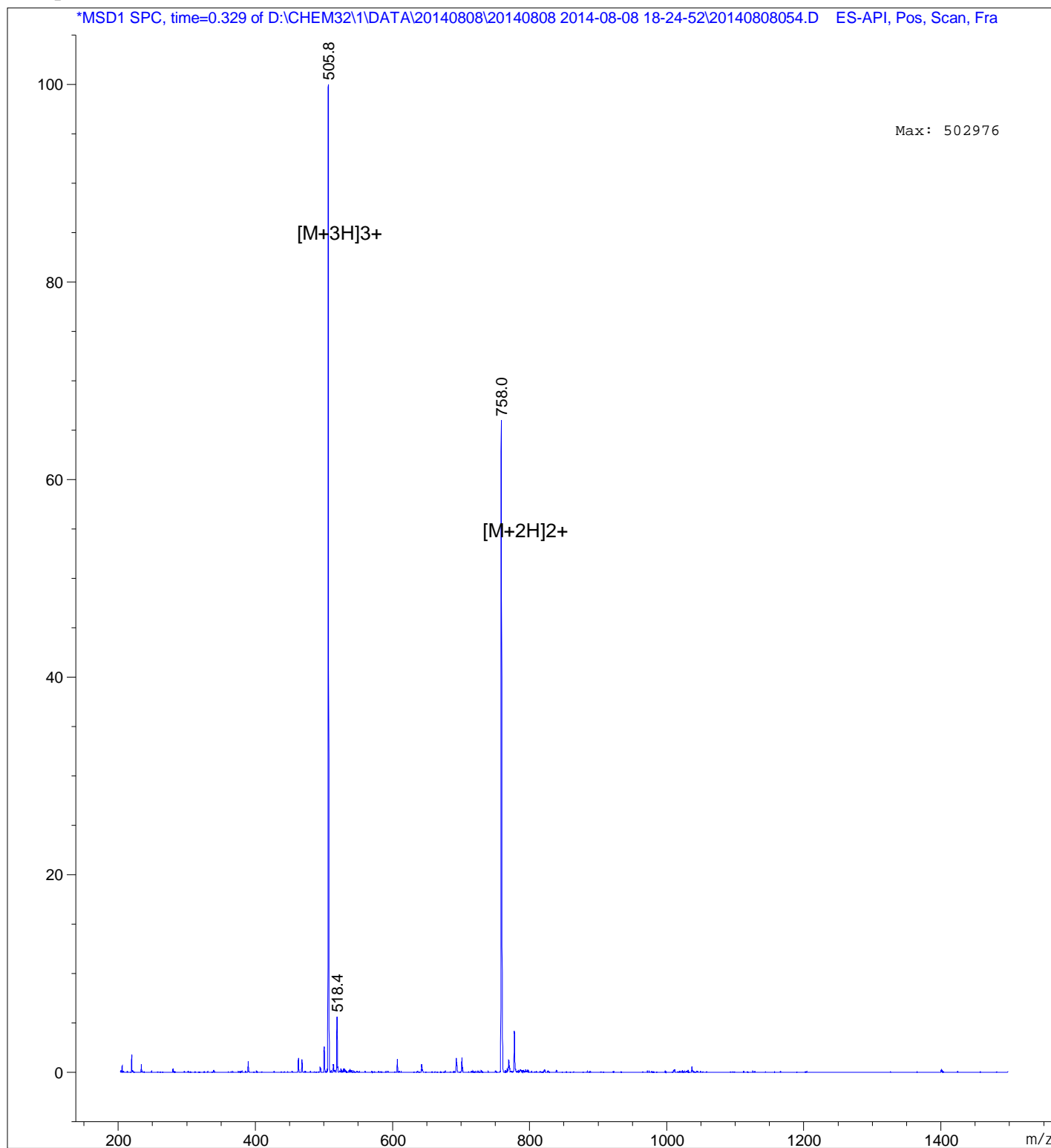
Quality Control By: wangjun

Date: 09/18/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 54
Acq. Instrument	: 5J-QC-082	Location	: Vial 16
Injection Date	: 8/8/2014 9:11:40 PM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\20140808\20140808 2014-08-08 18-24-52\TEST MS(200-1500)2.		
Last changed	: 8/8/2014 10:11:15 AM by liusuying		
Analysis Method	: D:\METHOD\MS(100-1000).M		
Last changed	: 8/10/2014 4:53:59 PM by liusuying		

MS Spectrum



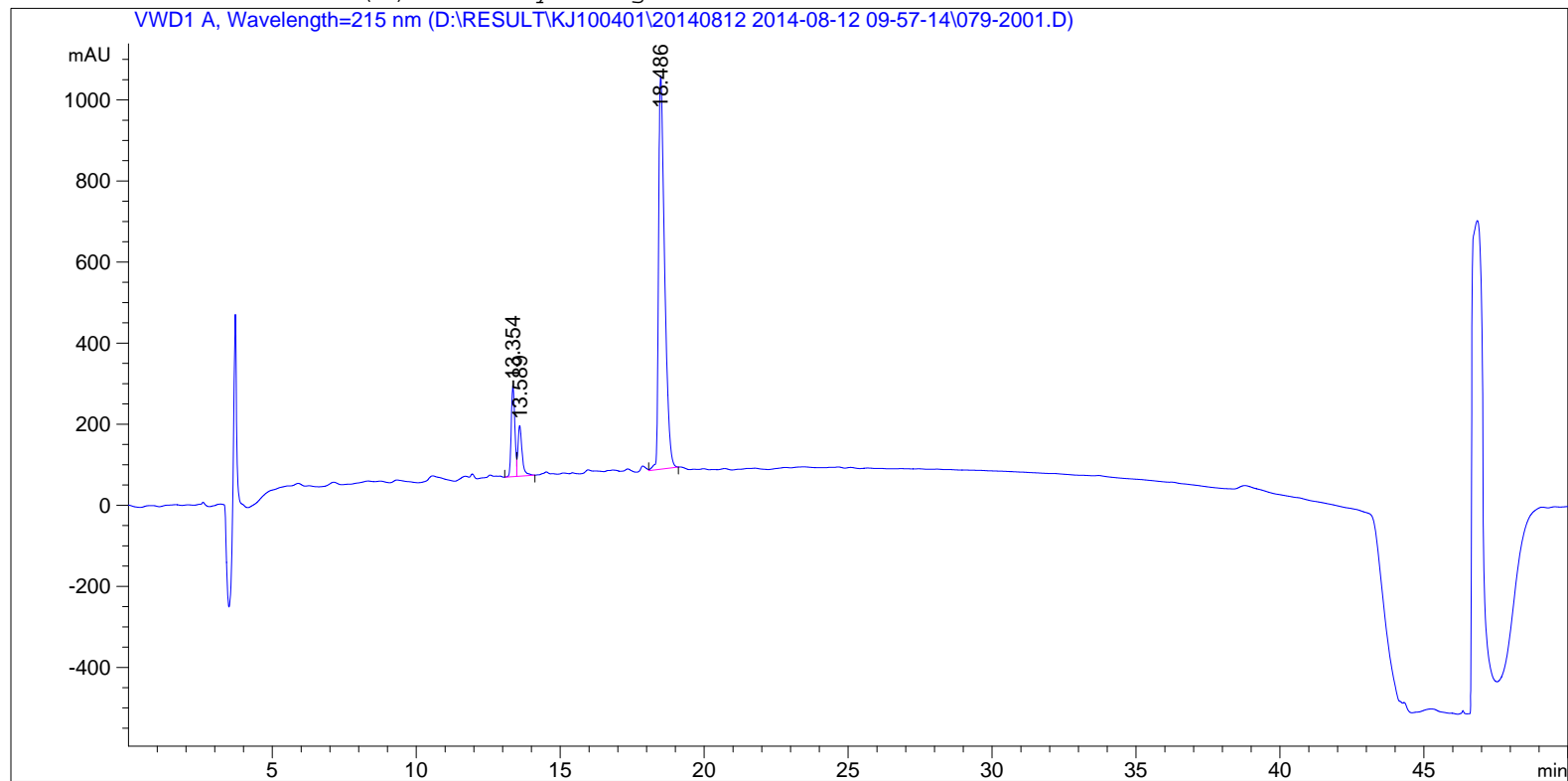
```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   20
Acq. Instrument : HPLC 1260                           Location  : Vial 79
Injection Date  : 8/13/2014 2:06:42 AM                Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\KJ100401\20140812 2014-08-12 09-57-14\KJ100401.M
Last changed    : 8/12/2014 9:57:14 AM by SYSTEM
Analysis Method : D:\RESULT\KJ100401\20140812 2014-08-12 09-57-14\KJ100401.M (Sequence Method)
Last changed    : 8/13/2014 1:46:04 PM by SYSTEM
                  (modified after loading)

Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	13.354	BV	0.1357	1956.87109	224.46072	11.2215
2	13.589	VB	0.1492	1240.83057	124.60966	7.1154
3	18.486	VB	0.2211	1.42409e4	970.85229	81.6631

Totals : 1.74386e4 1319.92268

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-84		
Molecular Formula	C70H122N16O21S2	Cat#	8117
Molecular Weight	1588.04	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	ILKALGPAATLEEMM		
Item No.	8117_140303_84		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1588.04±2.0	1587.0
3	Peptide Purity (By HPLC)	≥80%	98.1%
4	Identification(Amino Acid Composition by HPLC)	E	2.1
		G	0.9
		T	1.0
		A	3.1
		P	1.1
		M	1.5
		K	1.1
		I	1.1
L	3.2		
5	Peptide content	88.2%	

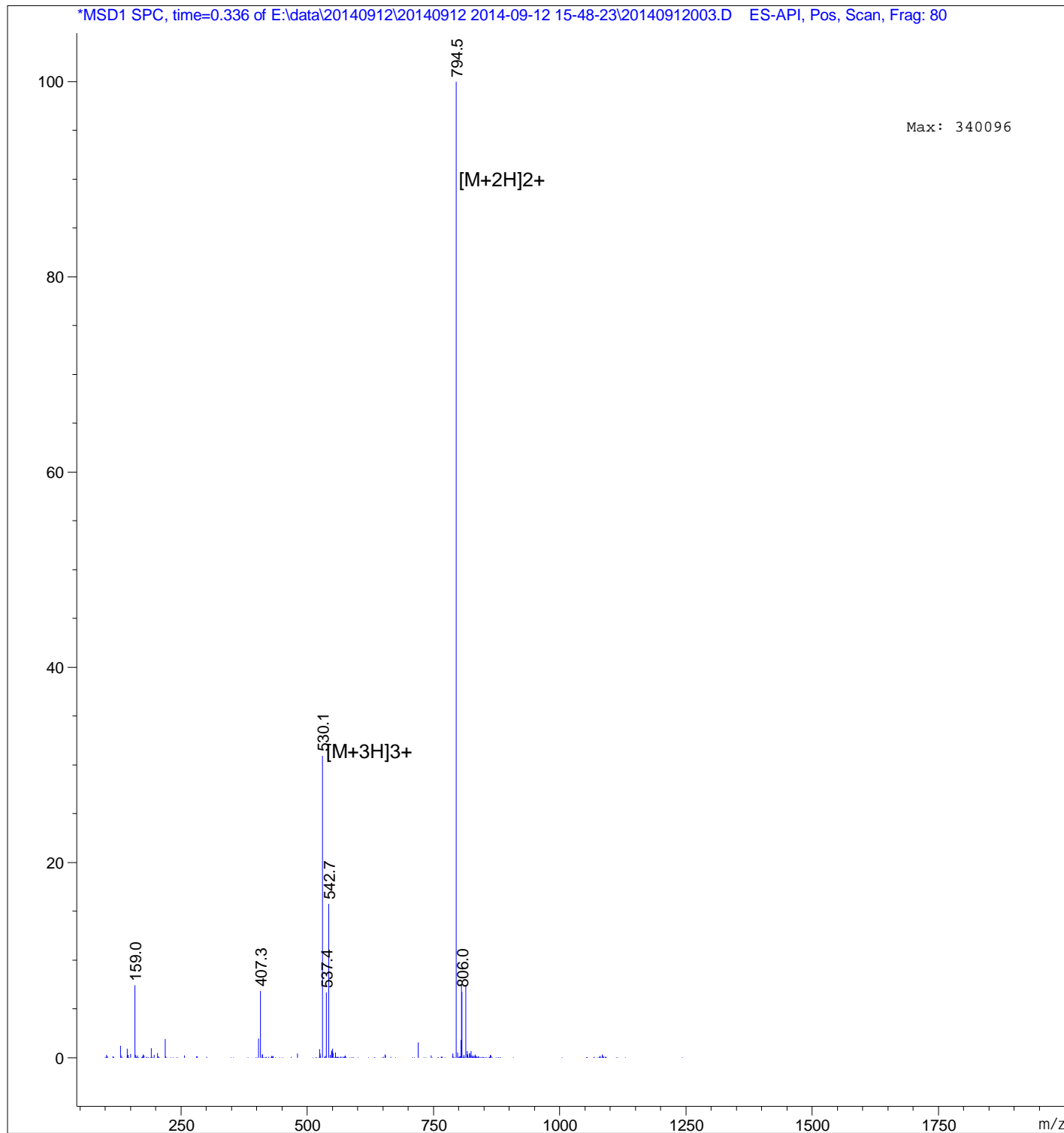
Quality Control By: wangjun

Date: 09/18/2014

=====

Acq. Operator	: SYSTEM	Seq. Line	: 3
Acq. Instrument	: Agilent6120	Location	: 33
Injection Date	: 9/12/2014 3:55:33 PM	Inj	: 1
		Inj Volume	: 5.000 µl
Acq. Method	: E:\data\20140912\20140912 2014-09-12 15-48-23\LCMS.M		
Last changed	: 9/12/2014 3:48:23 PM by SYSTEM		
Analysis Method	: E:\data\20140912\20140912 2014-09-12 15-48-23\LCMS.M (Sequence Method)		
Last changed	: 9/12/2014 3:52:33 PM by SYSTEM (modified after loading)		

MS Spectrum



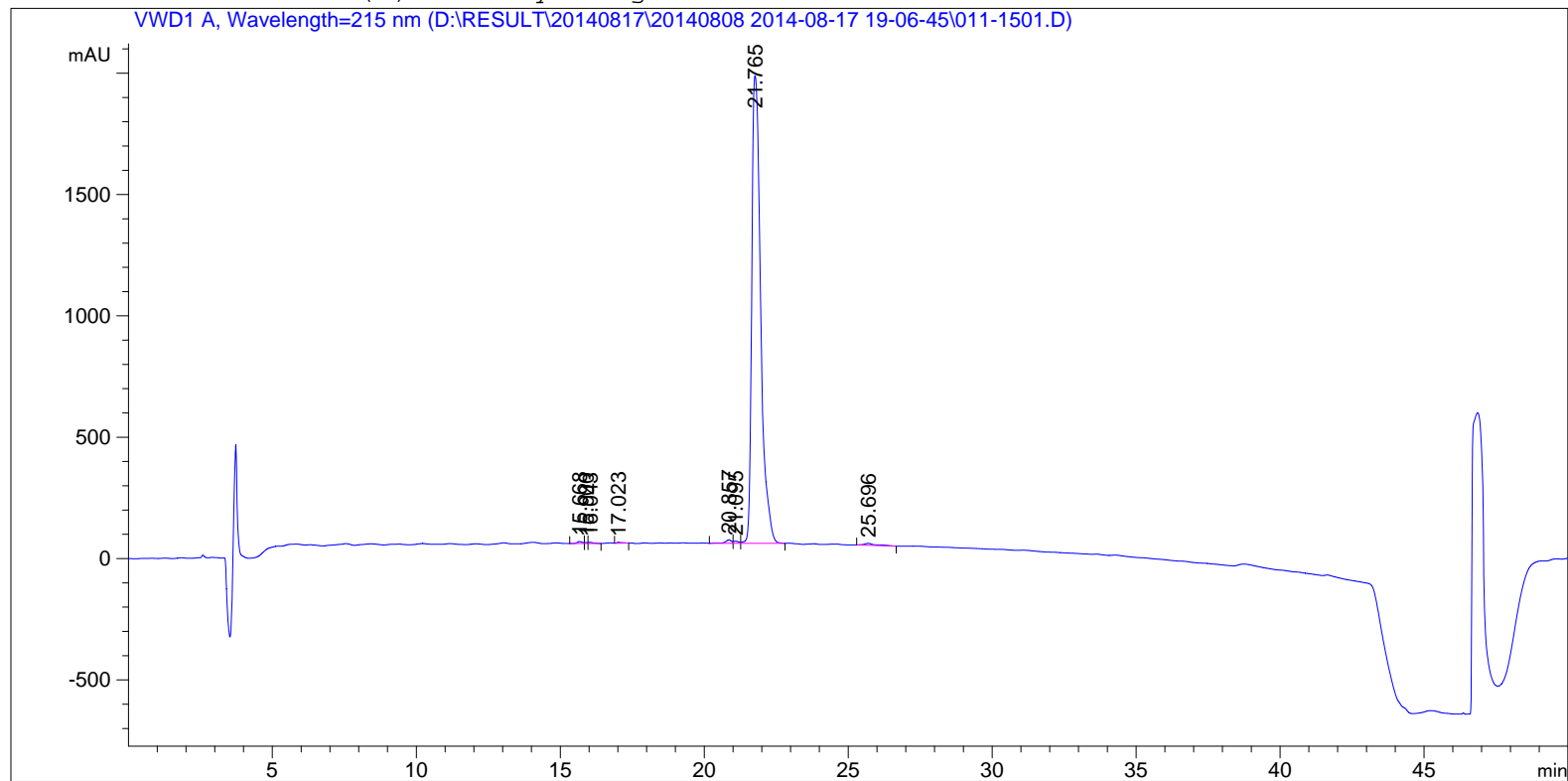
```

=====
Acq. Operator   : SYSTEM                      Seq. Line :   15
Acq. Instrument : HPLC 1260                  Location  : Vial 11
Injection Date  : 8/18/2014 7:01:05 AM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140817\20140808 2014-08-17 19-06-45\KJ100401.M
Last changed    : 8/17/2014 7:06:45 PM by SYSTEM
Analysis Method : D:\RESULT\20140817\20140808 2014-08-17 19-06-45\KJ100401.M (Sequence Method)
Last changed    : 8/18/2014 10:23:47 AM by SYSTEM
                 (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                 Rate:1.0ml/min
                 Mobile Phase A:0.1%TFA+H2O
                 Mobile Phase B:0.1%TFA+ACN
                 time(min)      0      40      40.3      43      43.3      50
                 B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	15.668	BV	0.1857	100.39397	8.15357	0.2391
2	15.900	VV	0.1033	26.76141	3.74924	0.0637
3	16.043	VB	0.1683	52.78013	4.35745	0.1257
4	17.023	VB	0.1787	52.70406	4.07928	0.1255

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	20.857	BV	0.2052	211.90652	14.44456	0.5046
6	21.095	VV	0.1725	109.67860	8.85309	0.2612
7	21.765	VB	0.3335	4.12089e4	1926.95825	98.1353
8	25.696	BB	0.3949	228.81833	7.87599	0.5449

Totals : 4.19919e4 1978.47144

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-85		
Molecular Formula	C64H108N16O23S3	Cat#	8117
Molecular Weight	1565.91	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	LGPAATLEEMMTACQ		
Item No.	8117_140303_85		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1565.91±2.0	1565.0
3	Peptide Purity (By HPLC)	≥80%	87.4%
4	Identification(Amino Acid Composition by HPLC)	E	3.1
		G	1.1
		T	2.1
		A	2.9
		P	0.9
		C	0.9
		M	1.9
	L	2.0	
5	Peptide content	87.2%	

Quality Control By:

wangjun

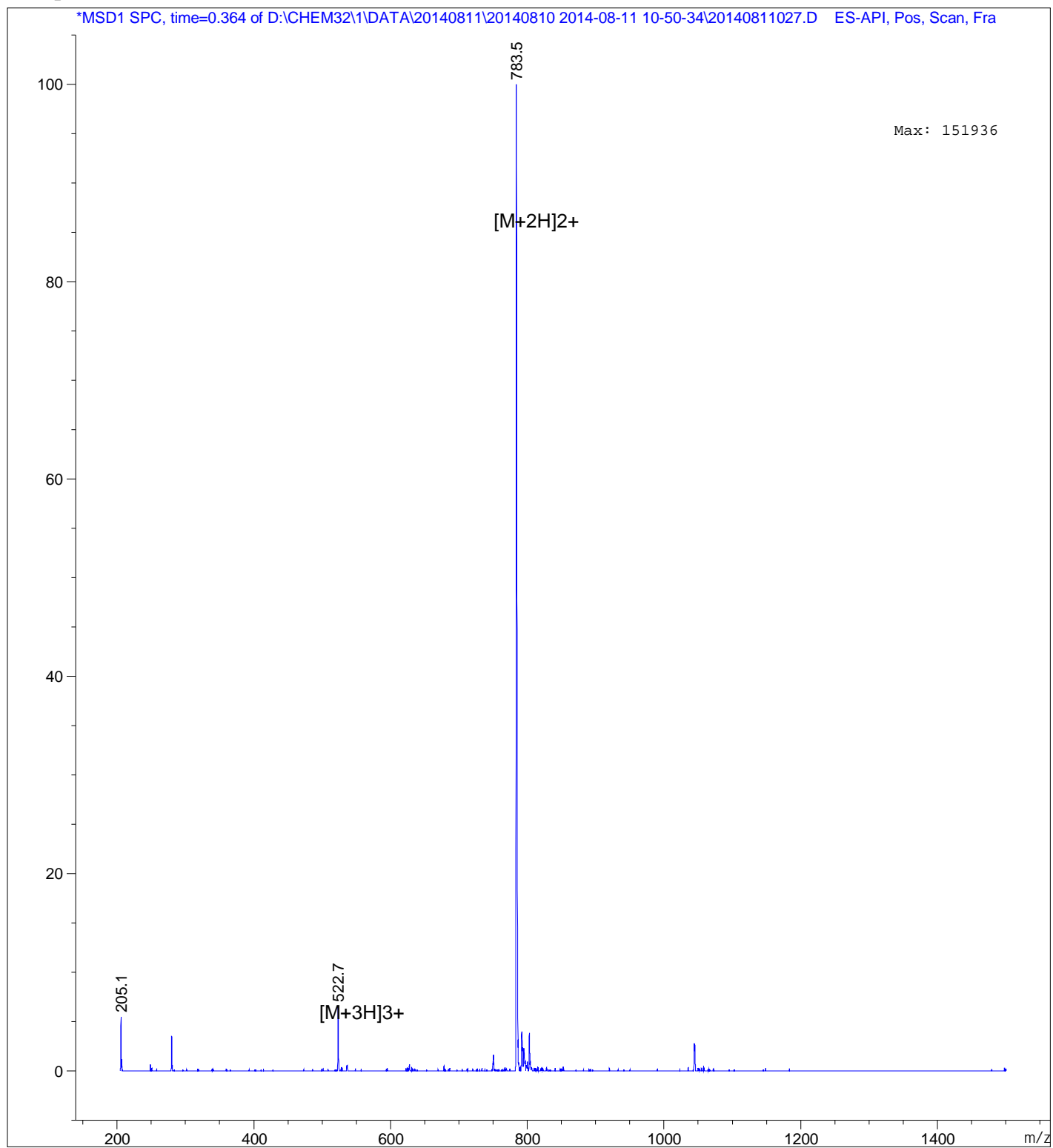
Date:

09/18/2014

```

=====
Acq. Operator   : liusuying                      Seq. Line :   27
Acq. Instrument : 5J-QC-082                      Location  : Vial 33
Injection Date  : 8/11/2014 12:11:55 PM          Inj       :    1
                                                    Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140811\20140810 2014-08-11 10-50-34\TEST MS(200-1500)2.
Last changed    : 8/10/2014 3:32:14 PM by liusuying
Analysis Method : D:\METHOD\MS(100-1000).M
Last changed    : 8/10/2014 4:53:59 PM by liusuying
    
```

MS Spectrum



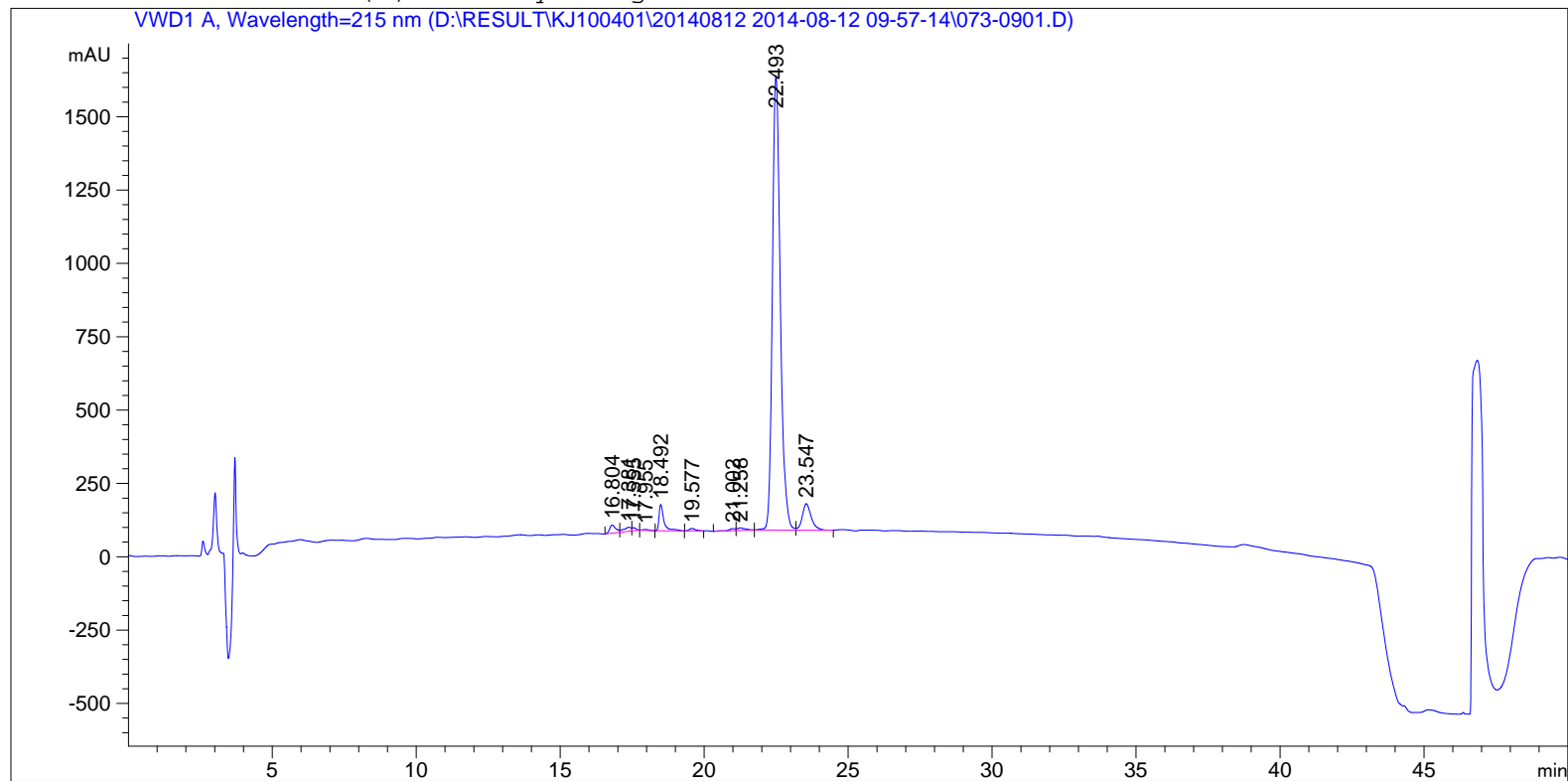
```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    9
Acq. Instrument : HPLC 1260                   Location  : Vial 73
Injection Date  : 8/12/2014 4:45:53 PM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\KJ100401\20140812 2014-08-12 09-57-14\KJ100401.M
Last changed    : 8/12/2014 9:57:14 AM by SYSTEM
Analysis Method : D:\RESULT\KJ100401\20140812 2014-08-12 09-57-14\KJ100401.M (Sequence Method)
Last changed    : 8/13/2014 11:48:32 AM by SYSTEM
                 (modified after loading)

Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                 Rate:1.0ml/min
                 Mobile Phase A:0.1%TFA+H2O
                 Mobile Phase B:0.1%TFA+ACN
                 time(min)      0      40      40.3      43      43.3      50
                 B%             10     70     95       95     10       10
    
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
    
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	16.804	BV	0.2188	410.84100	27.73106	1.2167
2	17.381	VV	0.2569	259.99863	13.85534	0.7700
3	17.555	VB	0.1472	99.53300	10.25869	0.2948
4	17.955	BB	0.2235	47.88610	3.29612	0.1418

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	18.492	BB	0.1744	1066.49683	89.89763	3.1584
6	19.577	BB	0.2301	128.05296	8.29573	0.3792
7	21.002	BV	0.2505	126.33643	7.20603	0.3741
8	21.258	VB	0.2641	177.13100	9.05943	0.5246
9	22.493	BV	0.2944	2.95227e4	1548.79688	87.4317
10	23.547	VB	0.3193	1927.62720	90.20947	5.7087

Totals : 3.37666e4 1808.60637

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-86		
Molecular Formula	C59H100N16O23S3	Cat#	8117
Molecular Weight	1497.8	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	ATLEEMMTACQGVGG		
Item No.	8117_140303_86		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1497.8±2.0	1496.8
3	Peptide Purity (By HPLC)	≥80%	83.7%
4	Identification(Amino Acid Composition by HPLC)	E	3.2
		G	3.1
		T	1.8
		A	2.0
		C	0.8
		V	1.1
		M	1.9
	L	1.0	
5	Peptide content	93.3%	

Quality Control By:

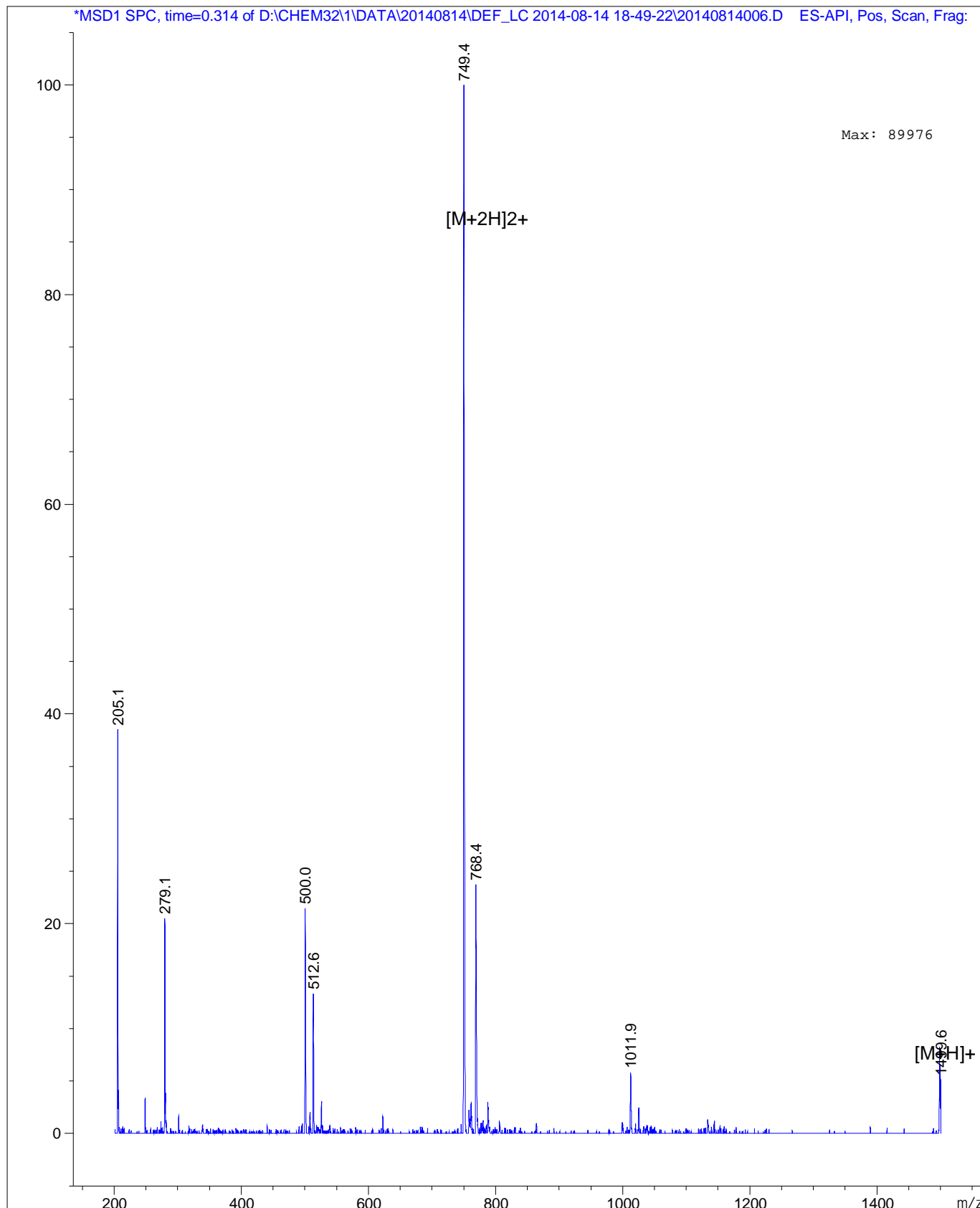
wangjun

Date:

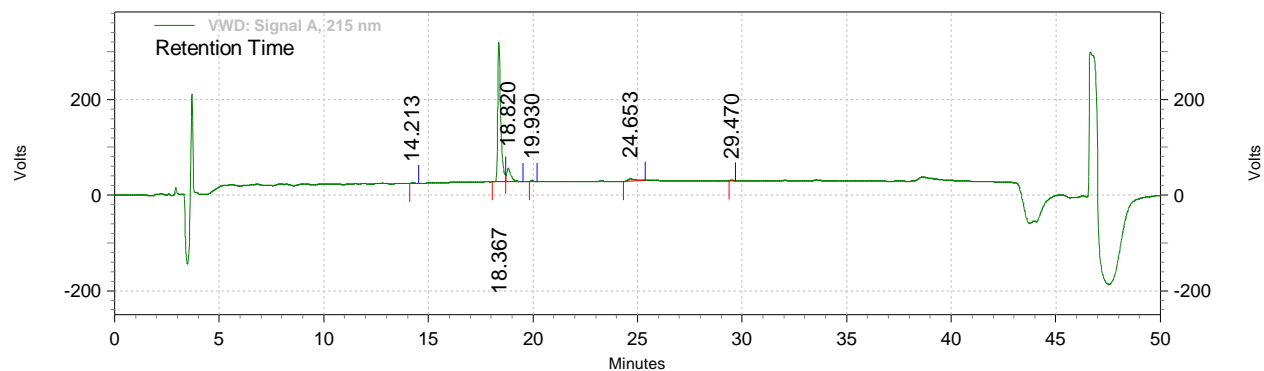
09/18/2014

=====
Acq. Operator : liusuying Seq. Line : 6
Acq. Instrument : 5J-QC-082 Location : Vial 44
Injection Date : 8/14/2014 7:06:40 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140814\DEF_LC 2014-08-14 18-49-22\TEST MS(200-1500)2.
Last changed : 8/14/2014 11:53:24 AM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed : 4/18/2014 11:29:00 AM by YZW

MS Spectrum



Data File: D:\KJ100401\20140828\20140828.rslt\ HIV-1 Con B Gag Peptide-86 .dat
 Method: D:\Method\KJ100401.met
 Acquired: 8/28/2014 3:04:40 PM (GMT +08:00)
 Printed: 8/31/2014 8:31:20 AM (GMT +08:00)
 Column:Agilent HC-C18,5um,4.6*250mm Column Temp:35°C Flow Rate:1.0ml/min
 Mobile Phase A:0.1%TFA water
 Mobile Phase B:0.1%TFA+ACN
 time(min) 0 40 40.3 43 43.3 50
 B% 10 70 95 95 10 10



VWD: Signal A, 215 nm Results

Retention Time	Area	Area %
14.213	248236	0.43
18.367	48125738	83.71
18.820	6727819	11.70
19.930	318421	0.55
24.653	1952543	3.40
29.470	120525	0.21
Totals	57493282	100.00



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-87		
Molecular Formula	C60H99N19O20S3	Cat#	8117
Molecular Weight	1502.83	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	EMMTACQGVGGPGHK		
Item No.	8117_140303_87		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1502.83±2.0	1502.1
3	Peptide Purity (By HPLC)	≥80%	83.7%
4	Identification(Amino Acid Composition by HPLC)	E	2.3
		G	4.6
		H	1.2
		T	1.1
		A	1.2
		P	1.3
		V	1.2
		M	0.9
	K	1.2	
5	Peptide content	80.4%	

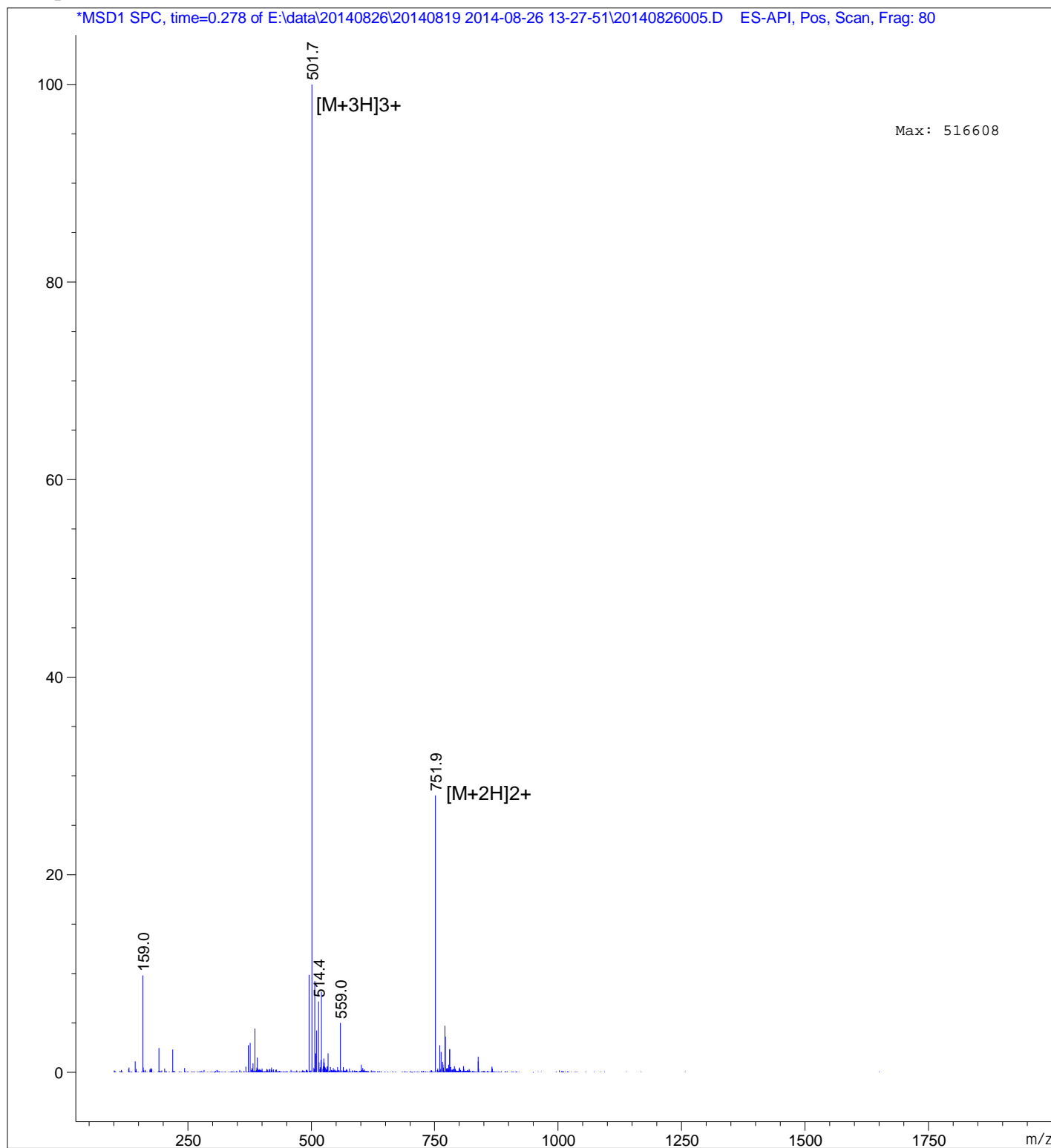
Quality Control By: wangjun

Date: 09/24/2014

=====

Acq. Operator	: SYSTEM	Seq. Line	: 5
Acq. Instrument	: Agilent6120	Location	: 45
Injection Date	: 8/26/2014 1:40:41 PM	Inj	: 1
		Inj Volume	: 5.000 μ l
Acq. Method	: E:\data\20140826\20140819 2014-08-26 13-27-51\LCMS.M		
Last changed	: 8/26/2014 1:27:51 PM by SYSTEM		
Analysis Method	: E:\data\20140826\20140819 2014-08-26 13-27-51\LCMS.M (Sequence Method)		
Last changed	: 8/26/2014 2:30:48 PM by SYSTEM		

MS Spectrum



```

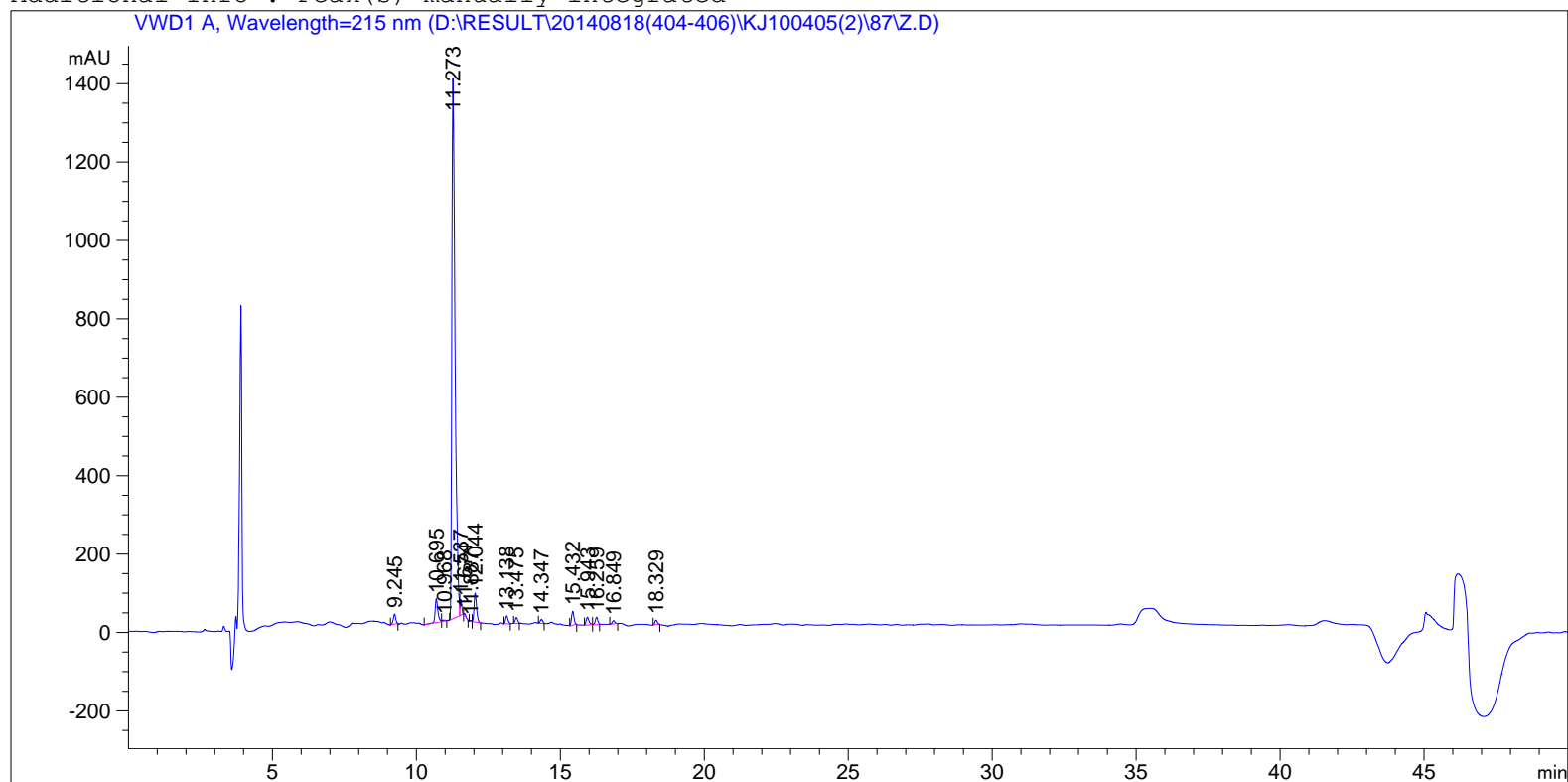
=====
Acq. Operator   :
Acq. Instrument : Instrument 1                Location : Vial 1
Injection Date  : 8/15/2014 7:45:25 PM    Inj Volume : Manually

Acq. Method     : E:\CHEM32\1\METHODS\METHODS\10-70IN50MIN.M
Last changed    : 8/15/2014 7:22:57 PM    (modified after loading)

Analysis Method : C:\CHEM32\1\METHODS\KJ100401.M
Last changed    : 8/21/2014 8:43:37 PM by SYSTEM (modified after loading)

Method Info     : Cloumn:Agilent HC-C18, 5um, 4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	9.245	MM R	0.0961	147.51837	25.59695	1.1457
2	10.695	BV	0.0994	408.42114	60.77600	3.1719
3	10.968	VB	0.1305	22.20661	2.63034	0.1725

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
4	11.273	BV	0.1182	1.07830e4	1379.39746	83.7444
5	11.537	VB	0.0685	183.13455	40.66994	1.4223
6	11.674	BB	0.0681	19.87086	4.54099	0.1543
7	11.887	BV	0.0607	9.23655	2.41112	0.0717
8	12.044	VB	0.0908	443.78162	74.18268	3.4466
9	13.138	MM R	0.0992	122.47871	20.58247	0.9512
10	13.475	MM R	0.1020	93.36286	15.25316	0.7251
11	14.347	MM R	0.1052	66.07353	10.46619	0.5132
12	15.432	MM R	0.0983	210.22621	35.62815	1.6327
13	15.943	MF R	0.1171	139.34039	19.83165	1.0822
14	16.259	FM R	0.1048	121.16934	19.26302	0.9410
15	16.849	BB	0.0944	50.02169	8.17244	0.3885
16	18.329	MM R	0.0877	56.23385	10.68933	0.4367

Totals : 1.28761e4 1730.09191

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-88		
Molecular Formula	C61H104N22O17S	Cat#	8117
Molecular Weight	1449.78	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	ACQGVGGPGHKARVL		
Item No.	8117_140303_88		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1449.78±2.0	1449.3
3	Peptide Purity (By HPLC)	≥80%	94.9%
4	Identification(Amino Acid Composition by HPLC)	E	0.9
		G	4.2
		H	0.9
		R	1.0
		A	1.9
		P	1.0
		C	0.9
		V	2.1
		K	1.0
L	1.0		
5	Peptide content	71.0%	

Quality Control By:

wangjun

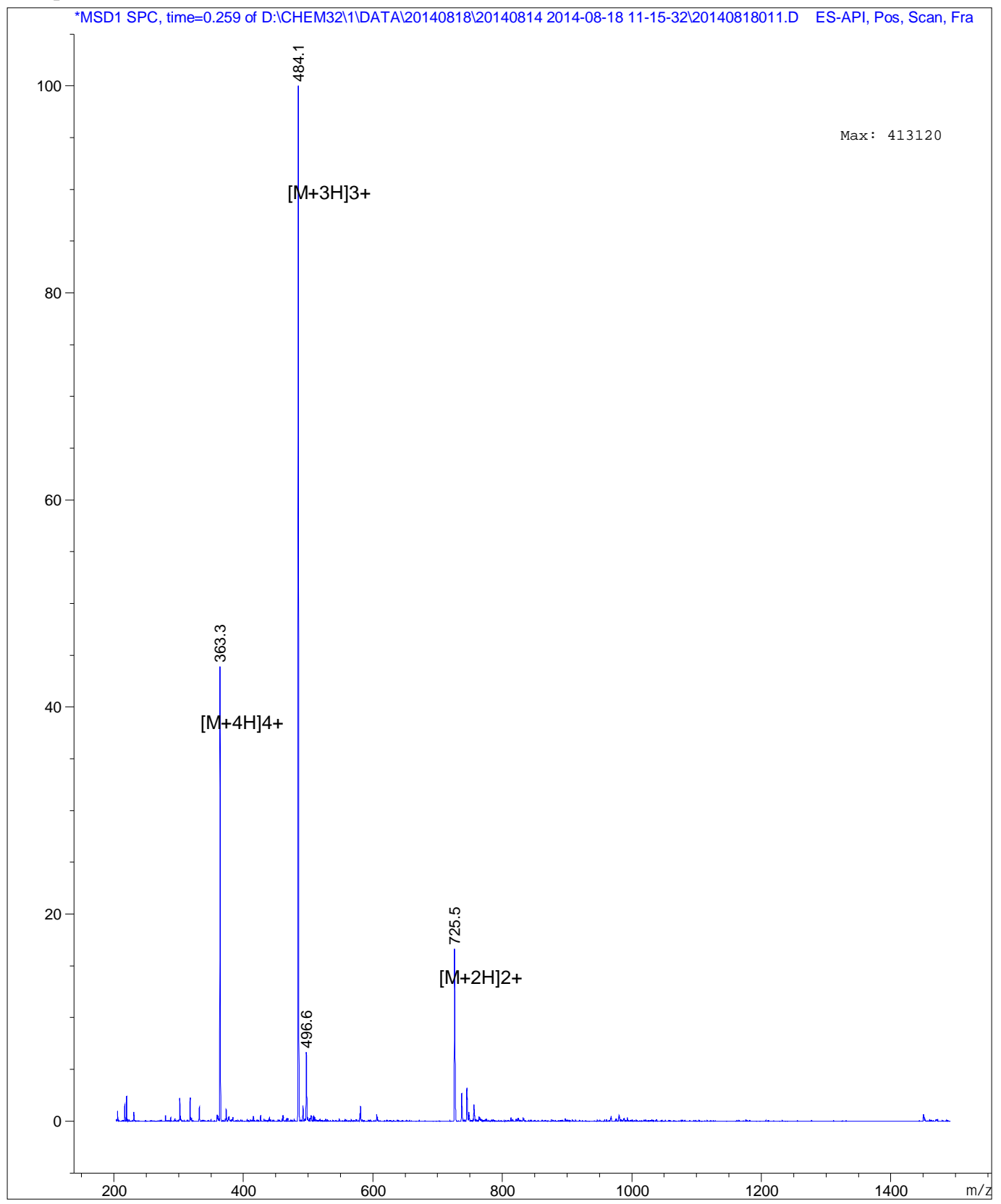
Date:

09/11/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 11
Acq. Instrument	: 5J-QC-082	Location	: Vial 15
Injection Date	: 8/18/2014 11:47:45 AM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\20140818\20140814 2014-08-18 11-15-32\TEST MS(200-1500) 2.		
Last changed	: 8/14/2014 11:53:24 AM by liusuying		
Analysis Method	: D:\METHOD\TEST MS(200-1500)2.M		
Last changed	: 8/14/2014 11:53:24 AM by liusuying		

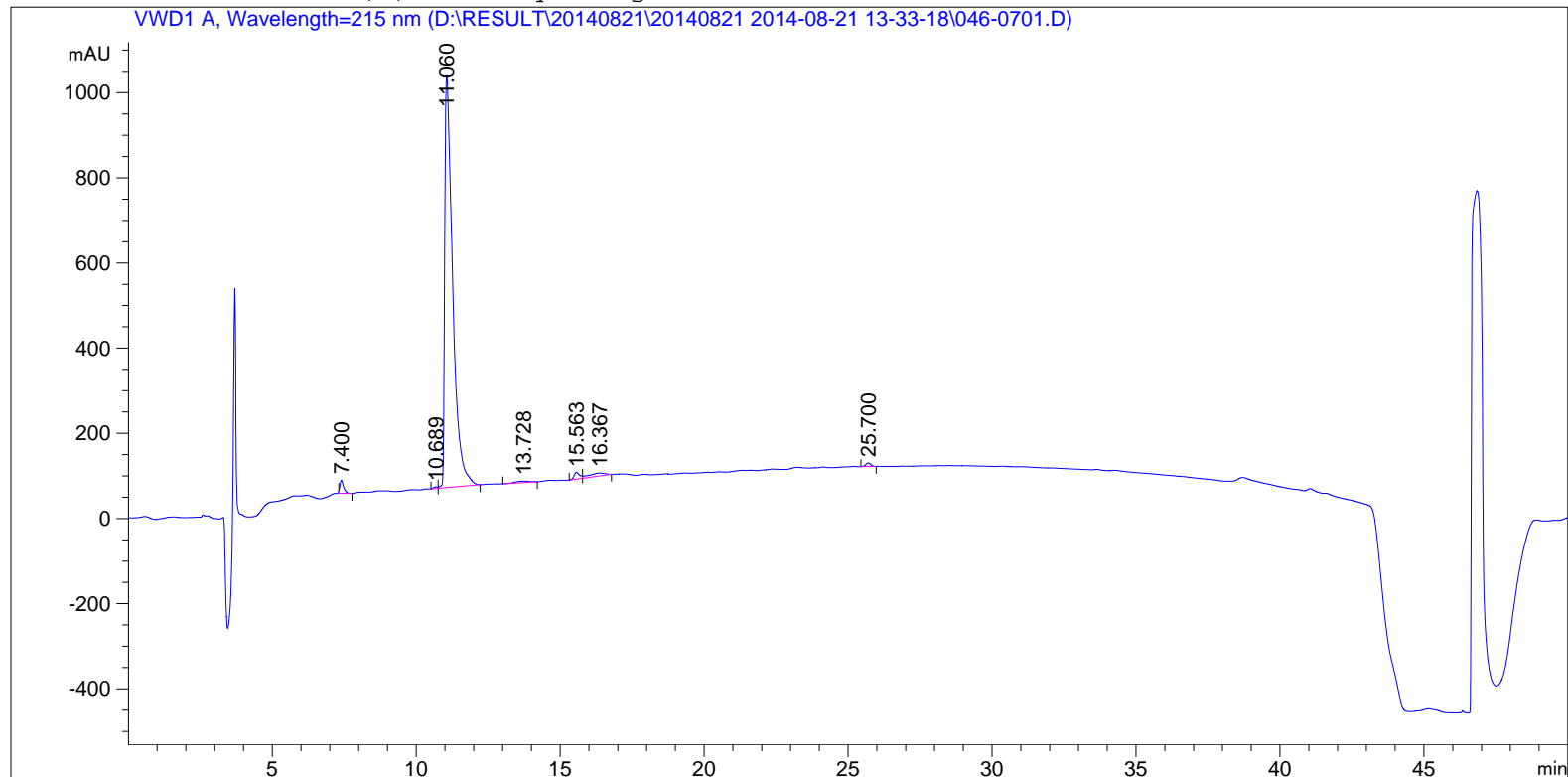
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    7
Acq. Instrument : HPLC 1260                  Location  : Vial 46
Injection Date  : 8/21/2014 6:40:07 PM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\20140821\20140821 2014-08-21 13-33-18\KJ100401.M (Sequence Method)
Last changed    : 8/21/2014 1:33:18 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
=====
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.400	MM R	0.1455	265.53296	30.41811	1.3565
2	10.689	BV	0.1573	37.36930	3.81403	0.1909
3	11.060	VB	0.2674	1.85822e4	970.40240	94.9307
4	13.728	BB	0.5415	112.90745	3.32187	0.5768
5	15.563	BV	0.1969	206.55902	15.66292	1.0552
6	16.367	VB	0.5642	280.00546	6.74686	1.4305
7	25.700	MM R	0.1873	89.90939	8.00139	0.4593

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
Totals :				1.95745e4	1038.36759	

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-89		
Molecular Formula	C64H109N21O18S	Cat#	8117
Molecular Weight	1492.84	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	VGGPGHKARVLA EAM		
Item No.	8117_140303_89		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1492.84±2.0	1492.5
3	Peptide Purity (By HPLC)	≥80%	98.1%
4	Identification(Amino Acid Composition by HPLC)	E	1.0
		G	2.9
		H	1.0
		R	1.1
		A	3.0
		P	1.0
		V	2.1
		M	1.0
		K	1.0
L	1.0		
5	Peptide content	60.5%	

Quality Control By:

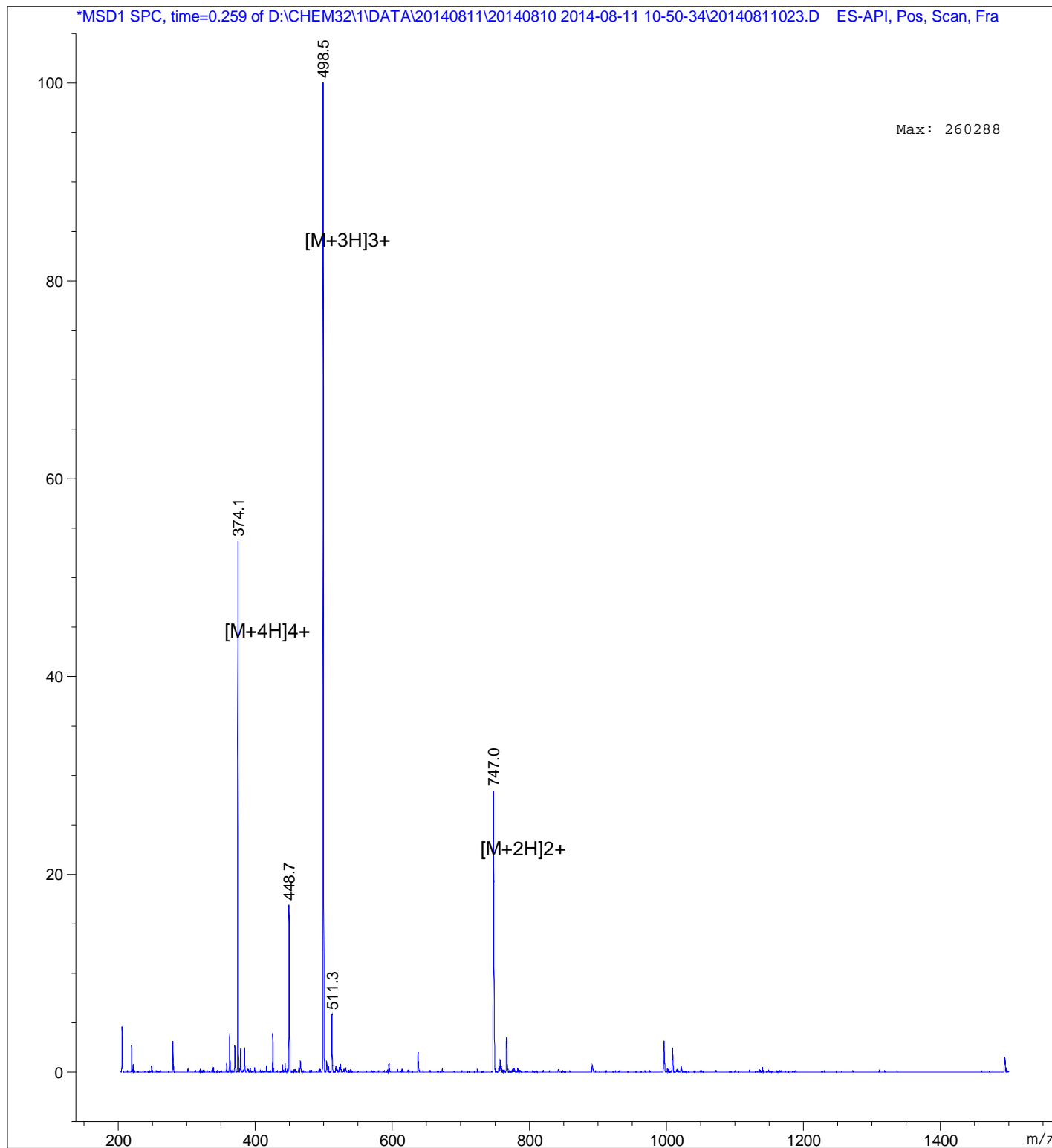
wangjun

Date:

09/18/2014

=====
Acq. Operator : liusuying Seq. Line : 23
Acq. Instrument : 5J-QC-082 Location : Vial 27
Injection Date : 8/11/2014 11:59:29 AM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140811\20140810 2014-08-11 10-50-34\TEST MS(200-1500)2.
Last changed : 8/10/2014 3:32:14 PM by liusuying
Analysis Method : D:\METHOD\MS(100-1000).M
Last changed : 8/10/2014 4:53:59 PM by liusuying

MS Spectrum



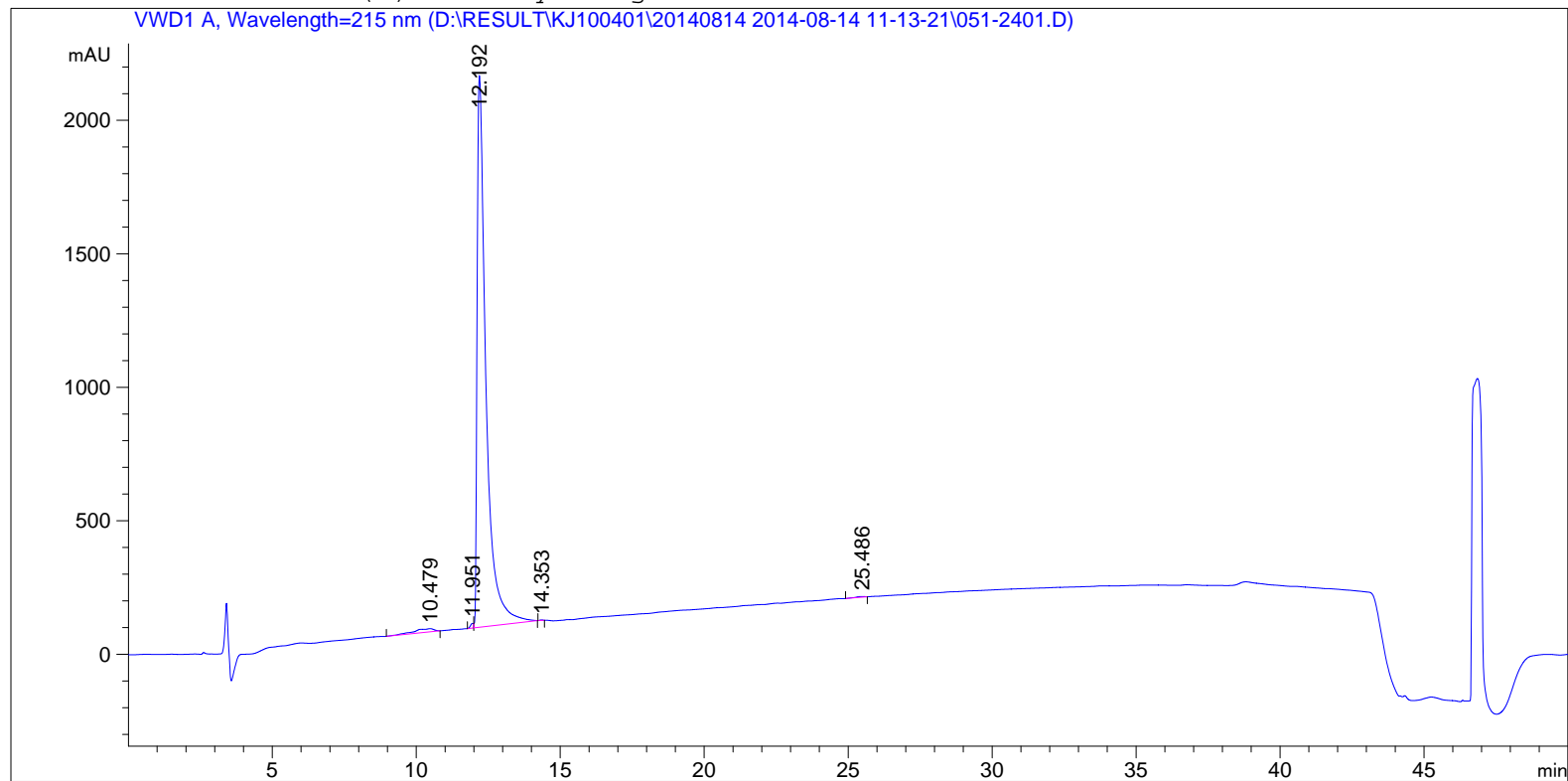
```

=====
Acq. Operator   : SYSTEM                      Seq. Line :   24
Acq. Instrument : HPLC 1260                  Location  : Vial 51
Injection Date  : 8/15/2014 6:46:01 AM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\KJ100401\20140814 2014-08-14 11-13-21\KJ100401.M
Last changed    : 8/14/2014 11:13:21 AM by SYSTEM
Analysis Method : D:\RESULT\KJ100401\20140814 2014-08-14 11-13-21\KJ100401.M (Sequence Method)
Last changed    : 8/15/2014 1:04:30 PM by SYSTEM
                 (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                 Rate:1.0ml/min
                 Mobile Phase A:0.1%TFA+H2O
                 Mobile Phase B:0.1%TFA+ACN
                 time(min)      0      40      40.3      43      43.3      50
                 B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	10.479	BB	0.6929	646.92859	11.90689	1.4322
2	11.951	BV	0.1113	128.78600	17.62293	0.2851
3	12.192	VB	0.3142	4.43181e4	2066.32422	98.1140
4	14.353	BB	0.1063	12.21303	1.86827	0.0270

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	25.486	BB	0.3819	64.00078	2.52326	0.1417

Totals : 4.51701e4 2100.24557

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-90		
Molecular Formula	C67H116N22O21S	Cat#	8117
Molecular Weight	1597.93	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	GHKARVLAEAMSQVT		
Item No.	8117_140303_90		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1597.93±2.0	1596.9
3	Peptide Purity (By HPLC)	≥80%	91.3%
4	Identification(Amino Acid Composition by HPLC)	S	1.4
		E	2.0
		G	1.0
		H	0.9
		R	1.4
		T	1.0
		A	2.9
		V	2.1
		M	0.4
		K	0.9
L	1.0		
5	Peptide content	83.8%	

Quality Control By:

wangjun

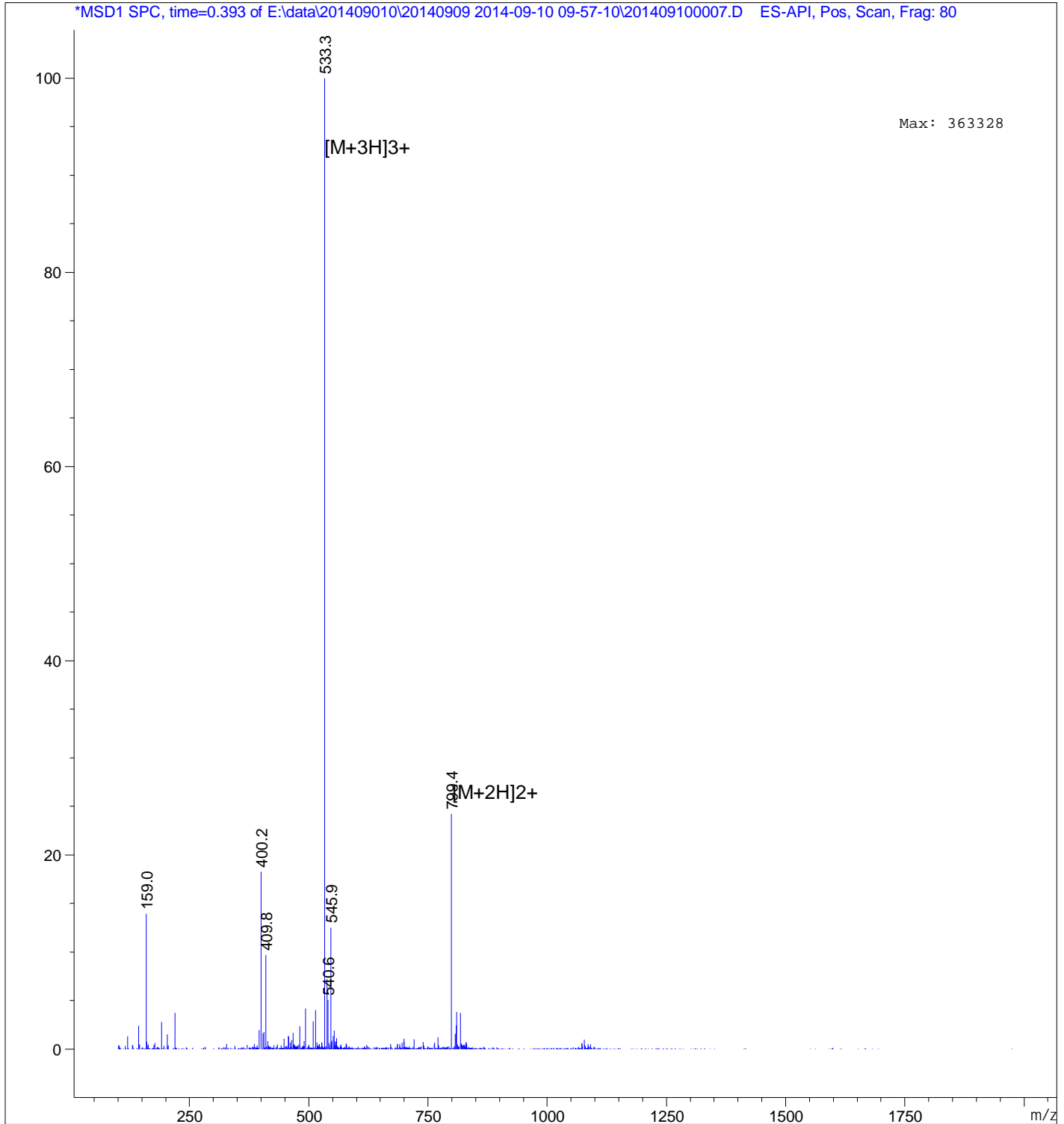
Date:

09/18/2014

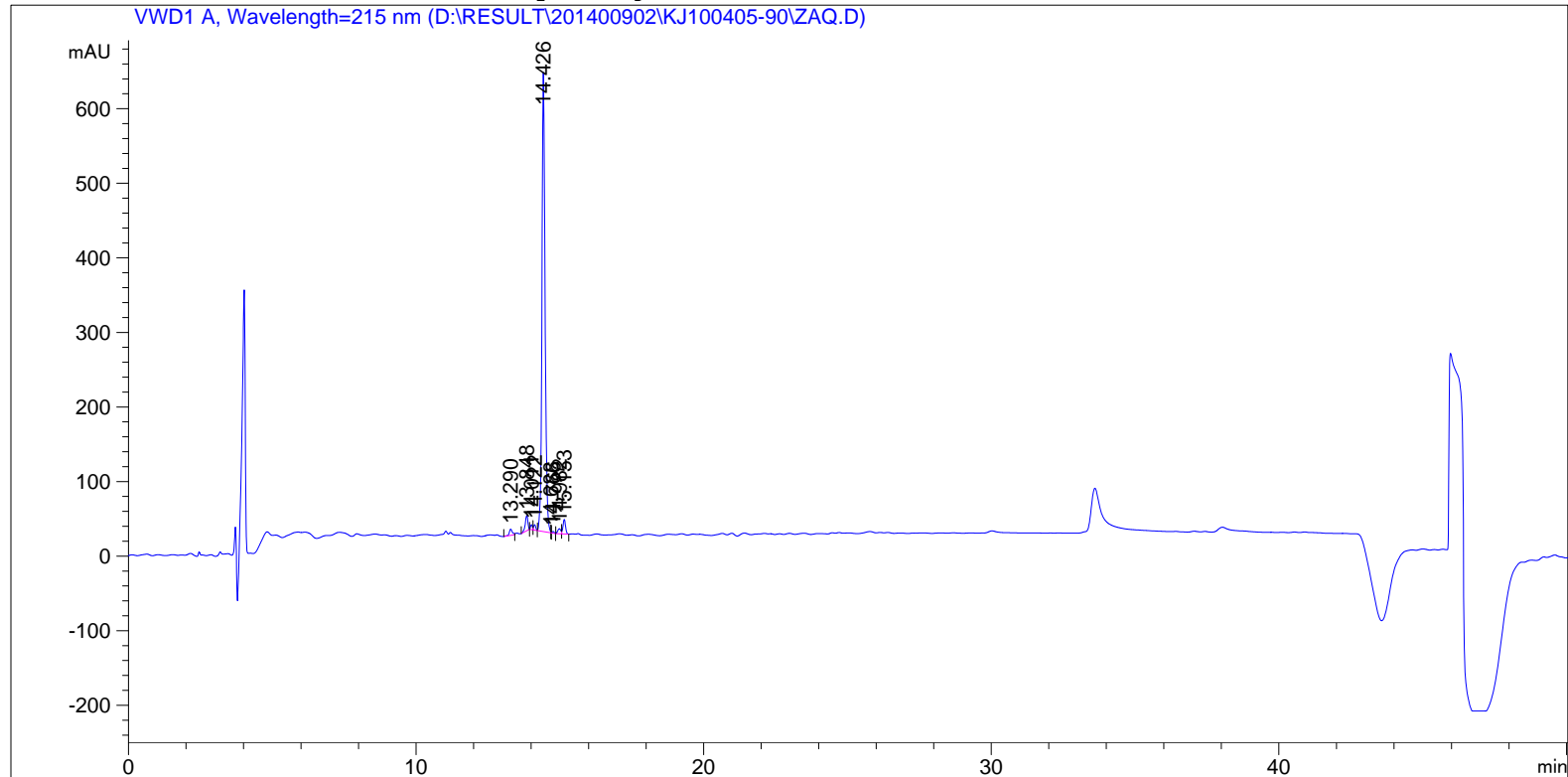
=====

Acq. Operator	: SYSTEM	Seq. Line	: 7
Acq. Instrument	: Agilent6120	Location	: 7
Injection Date	: 9/10/2014 10:15:29 AM	Inj	: 1
		Inj Volume	: 5.000 µl
Acq. Method	: E:\data\201409010\20140909 2014-09-10 09-57-10\LCMS.M		
Last changed	: 9/10/2014 9:57:10 AM by SYSTEM		
Analysis Method	: E:\data\201409010\20140909 2014-09-10 09-57-10\LCMS.M (Sequence Method)		
Last changed	: 9/10/2014 12:58:33 PM by SYSTEM (modified after loading)		

1 Mass Spectra 0.387-0.389 min. of 201409100007.D



=====
 Acq. Operator :
 Acq. Instrument : Instrument 1 Location : Vial 1
 Injection Date : 9/5/2014 7:08:29 PM Inj Volume : Manually
 Acq. Method : D:\CHEM32\1\METHODS\10-70IN50MIN.M
 Last changed : 8/10/2014 8:04:22 AM
 Analysis Method : C:\CHEM32\1\METHODS\WSAH.M
 Last changed : 7/28/2014 4:59:11 PM by SYSTEM
 Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

Sorted By : Signal
 Multiplier : 1.0000
 Dilution : 1.0000
 Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	13.290	BV	0.1105	62.50613	8.36089	1.2282
2	13.848	BB	0.0966	129.29352	20.59299	2.5405
3	14.011	BV	0.0708	29.45222	6.62993	0.5787
4	14.122	VV	0.0794	38.27797	7.38350	0.7521
5	14.426	FM R	0.1258	4648.61230	615.99744	91.3395
6	14.688	FM R	0.0164	1.25176	1.26865	0.0246
7	14.766	VB	0.0774	11.69553	2.39423	0.2298
8	14.982	BV	0.1165	49.33350	6.81746	0.9693
9	15.153	VB	0.0946	118.95468	19.47285	2.3373

Totals : 5089.37762 688.91793

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-91		
Molecular Formula	C₆₄H₁₁₂N₂₀O₂₄S	Cat#	8117
Molecular Weight	1577.84	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	RVLAEAMSQVTNSAT		
Item No.	8117_140303_91		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1577.84±2.0	1576.0
3	Peptide Purity (By HPLC)	≥80%	96.0%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		S	1.9
		E	2.2
		R	1.1
		T	1.8
		A	2.9
		V	2.3
		M	0.8
	L	1.0	
5	Peptide content	64.7%	

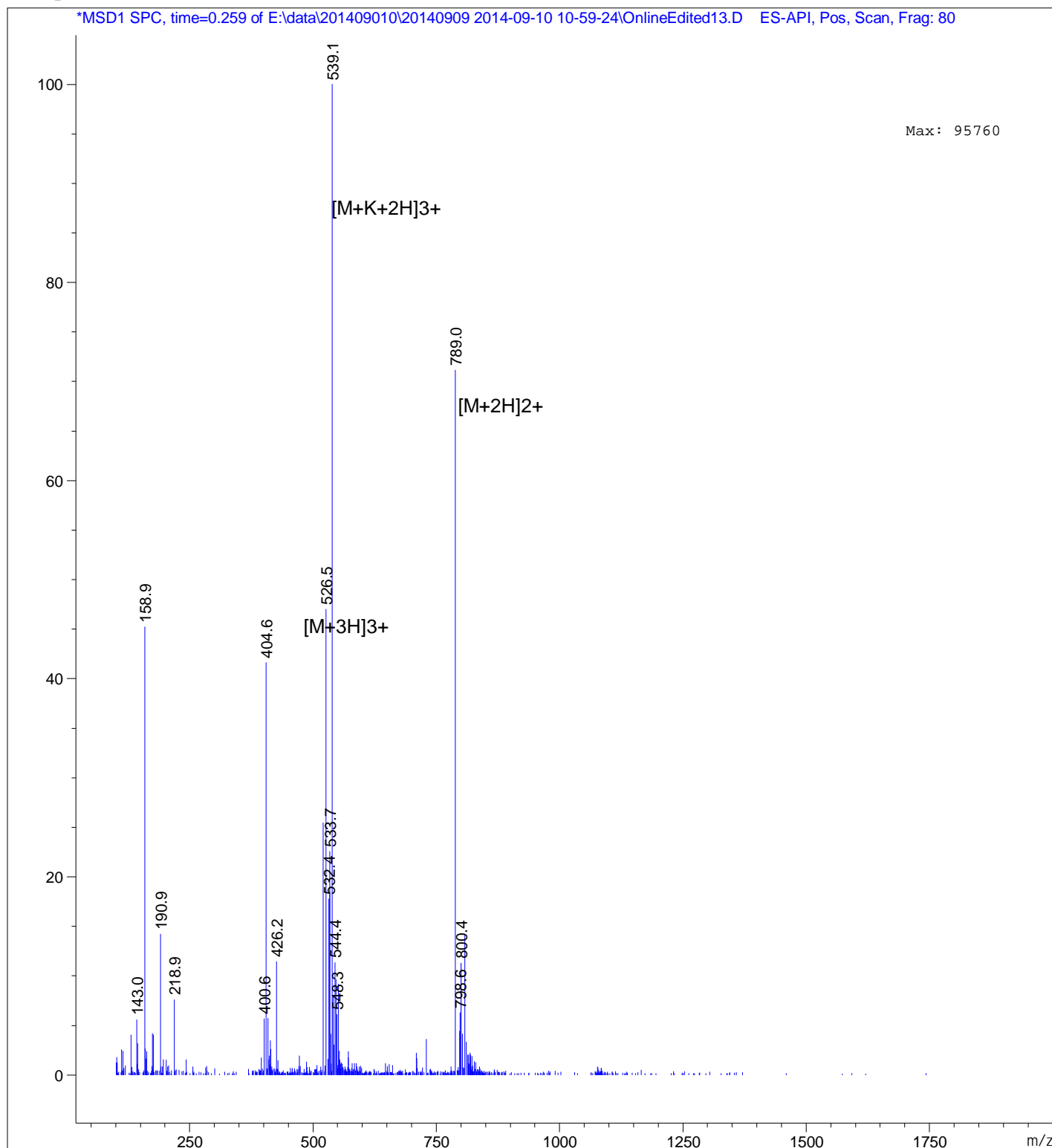
Quality Control By: wangjun

Date: 09/18/2014

=====

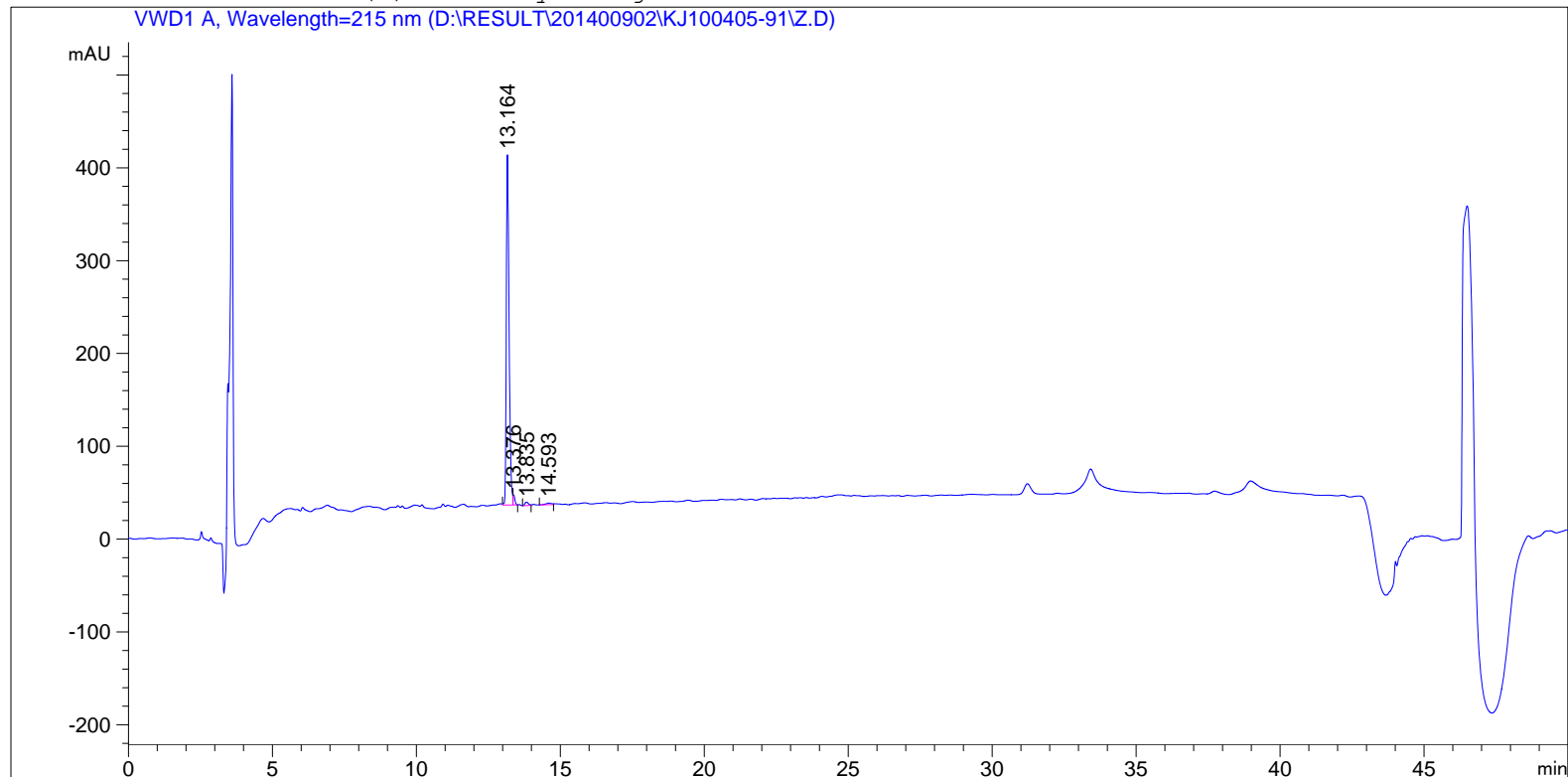
Acq. Operator : SYSTEM	Seq. Line : 29
Acq. Instrument : Agilent6120	Location : 63
Injection Date : 9/10/2014 12:20:23 PM	Inj : 1
	Inj Volume : 5.000 µl
Acq. Method : E:\data\201409010\20140909 2014-09-10 10-59-24\LCMS.M	
Last changed : 9/10/2014 10:59:24 AM by SYSTEM	
Analysis Method : E:\data\201409010\20140909 2014-09-10 10-59-24\LCMS.M (Sequence Method)	
Last changed : 9/10/2014 2:06:07 PM by SYSTEM	

MS Spectrum



```

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 1
Injection Date  : 9/4/2014 7:43:42 AM
                                           Inj Volume : Manually
Acq. Method     : E:\METHODS\10-70IN50MIN.M\10-70IN50MIN.M
Last changed    : 9/3/2014 9:15:27 PM
Analysis Method : C:\CHEM32\1\METHODS\WSAH.M
Last changed    : 7/28/2014 4:59:11 PM by SYSTEM
Additional Info  : Peak(s) manually integrated
  
```



=====
 Area Percent Report
 =====

```

Sorted By       : Signal
Multiplier      : 1.0000
Dilution        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	13.164	VV	0.1019	2520.10498	377.29669	95.9541
2	13.376	VB	0.0681	48.01204	10.74627	1.8281
3	13.835	BV	0.1368	31.41151	3.63412	1.1960
4	14.593	BV	0.1891	26.83580	1.89663	1.0218

Totals : 2626.36434 393.57371

=====
 *** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-92		
Molecular Formula	C65H112N18O25S3	Cat#	8117
Molecular Weight	1641.97	Lot#	140303
Manufacturing Date	09/25/2014	Test Date	09/25/2014
Sequence	EAMSQVTNSATIMMQ		
Item No.	8117_140303_92		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1641.97±2.0	1640.4
3	Peptide Purity (By HPLC)	≥80%	87.9%
4	Identification(Amino Acid Composition by HPLC)	D	1.2
		S	1.9
		E	3.3
		T	2.2
		A	2.1
		V	1.3
		M	1.8
	I	1.3	
5	Peptide content	68.1%	

Quality Control By:

wangjun

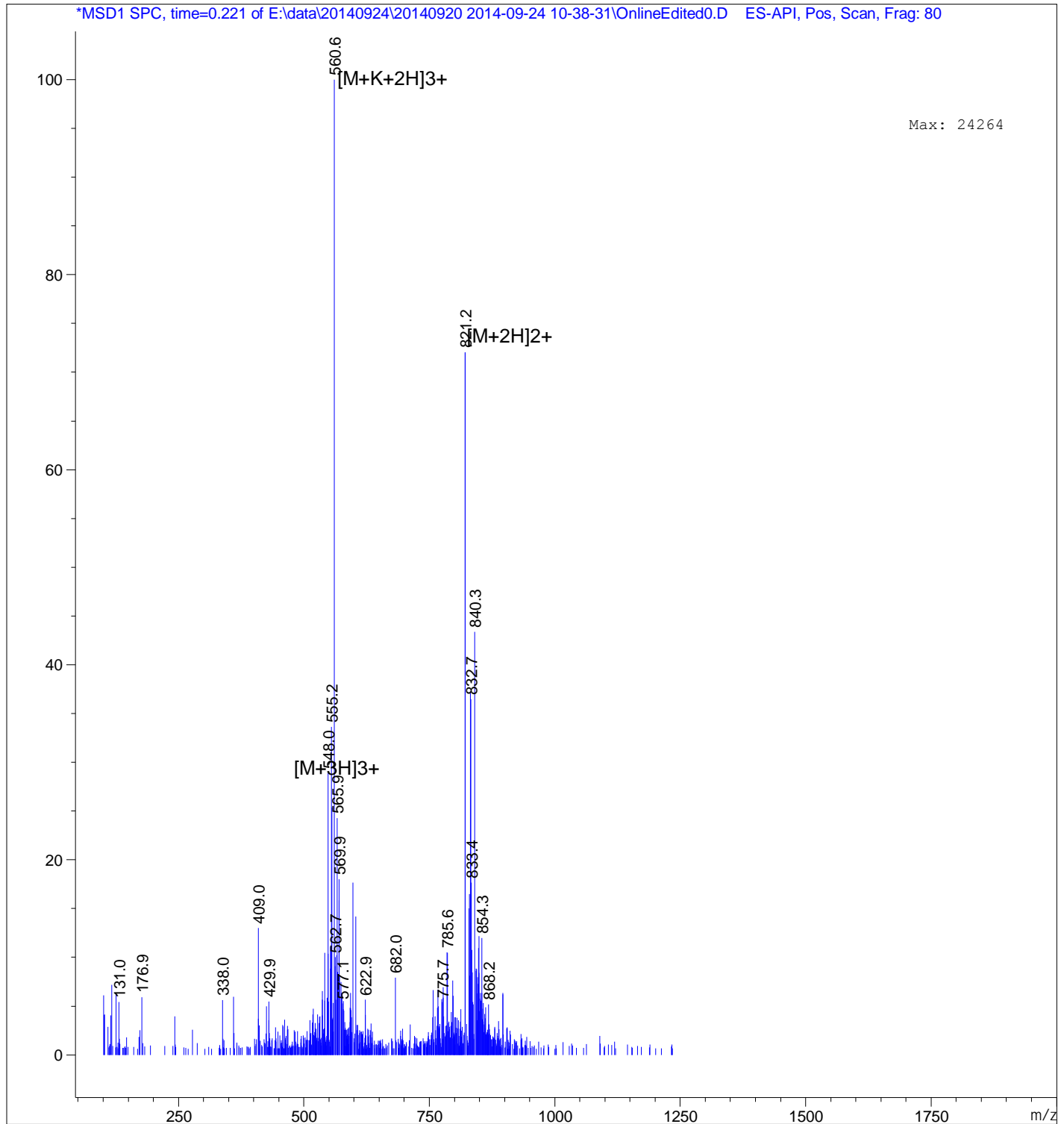
Date:

09/25/2014

```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   12
Acq. Instrument : Agilent6120                         Location  :   11
Injection Date  : 9/24/2014 11:11:01 AM              Inj       :    1
                                                    Inj Volume: 5.000 µl
Acq. Method     : E:\data\20140924\20140920 2014-09-24 10-38-31\LCMS.M
Last changed    : 9/24/2014 10:59:24 AM by SYSTEM
Analysis Method : E:\data\20140924\20140920 2014-09-24 10-38-31\LCMS.M (Sequence Method)
Last changed    : 9/24/2014 11:59:41 AM by SYSTEM
                  (modified after loading)
    
```

MS Spectrum

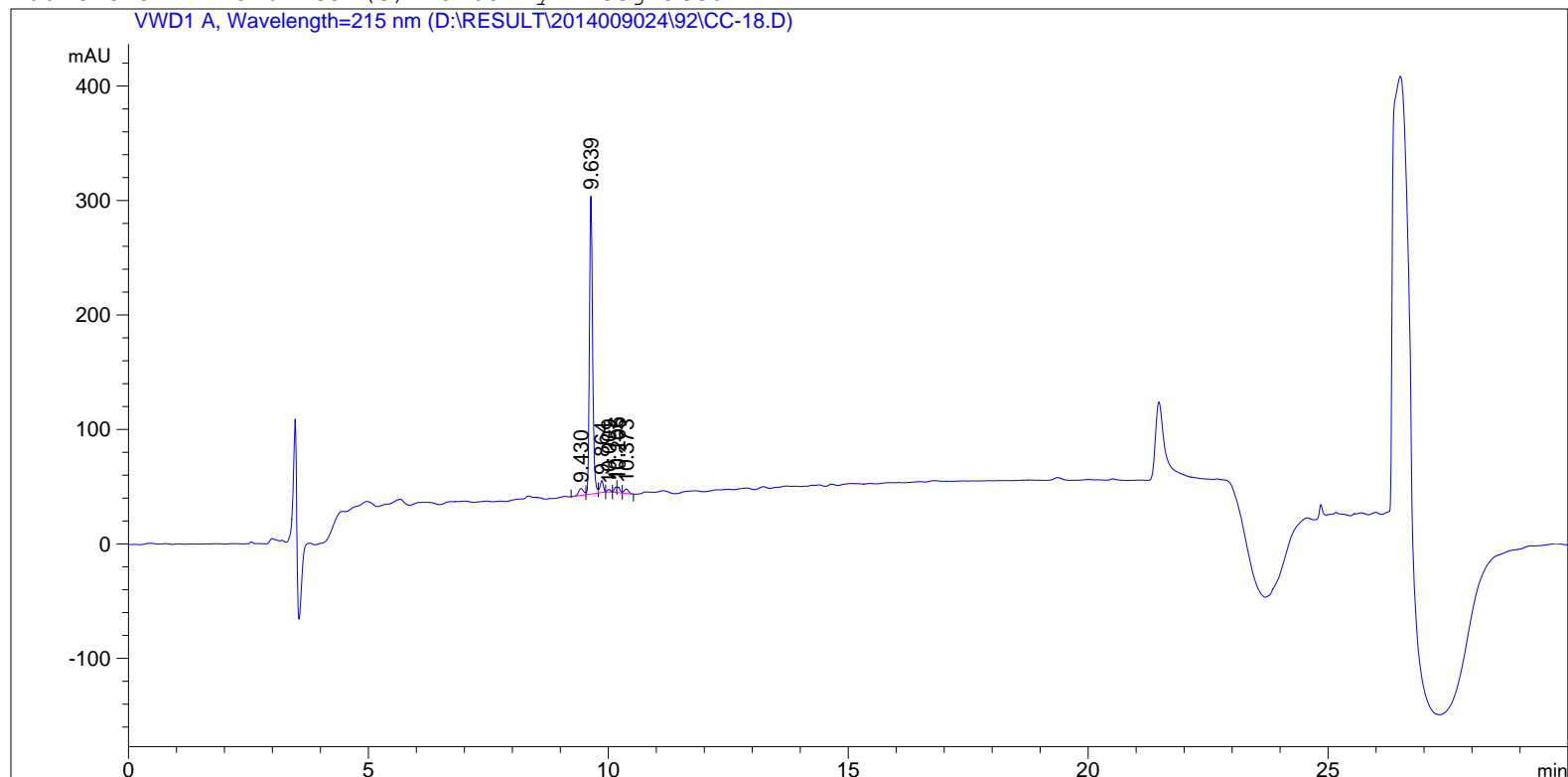


```

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 1
Injection Date  : 9/20/2014 5:45:39 PM
                                           Inj Volume : Manually

Acq. Method     : E:\METHODS\10-70IN50MIN.M\10-70IN30MIN.M
Last changed    : 9/3/2014 9:15:36 PM
Analysis Method : C:\CHEM32\1\METHODS\KJ100401(5-65).M
Last changed    : 9/2/2014 4:19:13 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18, 5um, 4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      20      20.5      23      23.5      30
                  B%             5      65      95      95      5
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	9.430	BV	0.1132	44.21608	5.98583	3.2638
2	9.639	VV	0.0703	1191.26819	260.57272	87.9328
3	9.864	VB	0.0722	48.44315	10.42847	3.5758
4	10.009	BB	0.0857	10.46090	2.11357	0.7722
5	10.156	BV	0.0549	16.20321	4.62322	1.1960

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
6	10.205	VV	0.0634	20.40187	4.82115	1.5060
7	10.373	VB	0.0966	23.75529	3.81968	1.7535
Totals :				1354.74869	292.36465	

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-93		
Molecular Formula	C70H116N22O23S2	Cat#	8117
Molecular Weight	1698.03	Lot#	140303
Manufacturing Date	09/25/2014	Test Date	09/25/2014
Sequence	QVTNSATIMMQRGNF		
Item No.	8117_140303_93		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1698.03±2.0	1696.8
3	Peptide Purity (By HPLC)	≥80%	94.3%
4	Identification(Amino Acid Composition by HPLC)	D	2.2
		S	0.9
		E	2.2
		G	0.9
		R	1.2
		T	1.7
		A	1.0
		V	1.1
		M	1.7
		I	1.0
F	1.1		
5	Peptide content	46.5%	

Quality Control By:

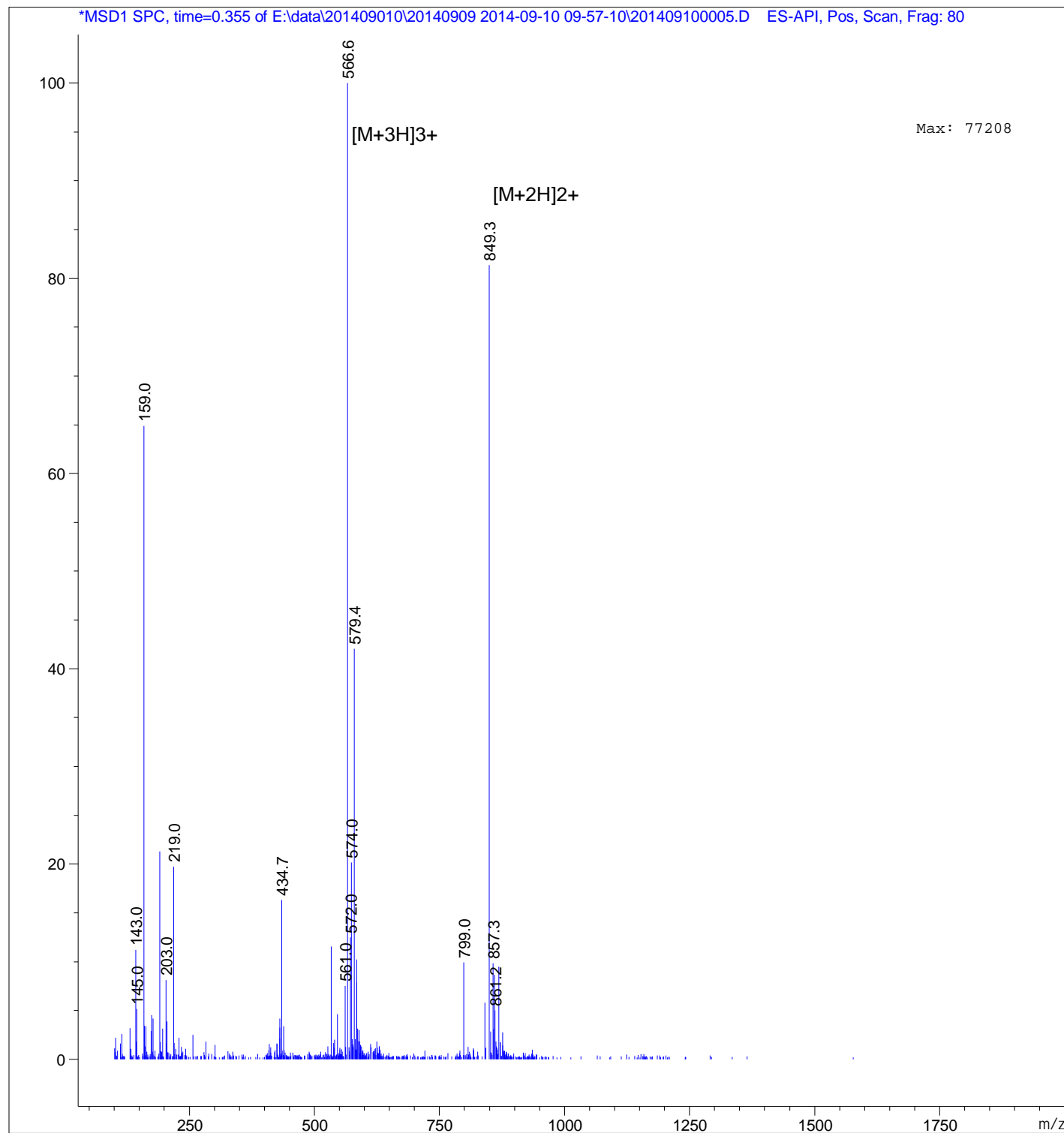
wangjun

Date:

09/25/2014

=====
Acq. Operator : SYSTEM Seq. Line : 5
Acq. Instrument : Agilent6120 Location : 5
Injection Date : 9/10/2014 10:09:47 AM Inj : 1
Inj Volume : 5.000 µl
Acq. Method : E:\data\201409010\20140909 2014-09-10 09-57-10\LCMS.M
Last changed : 9/10/2014 9:57:10 AM by SYSTEM
Analysis Method : E:\data\201409010\20140909 2014-09-10 09-57-10\LCMS.M (Sequence Method)
Last changed : 9/10/2014 12:58:33 PM by SYSTEM
(modified after loading)

MS Spectrum



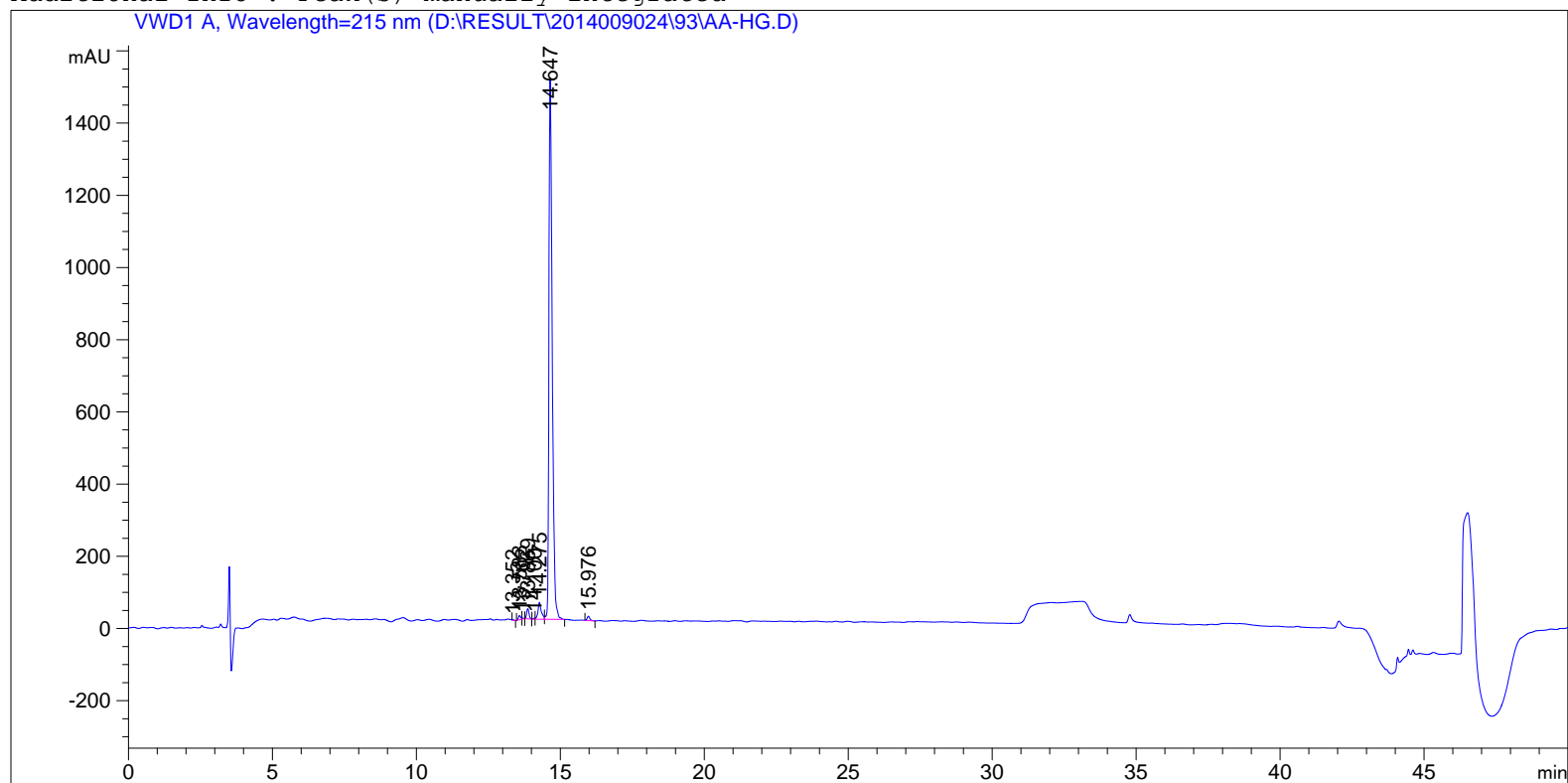

```

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 1
Injection Date  : 9/6/2014 10:44:30 AM
                                           Inj Volume : Manually

Acq. Method     : E:\METHODS\10-70IN50MIN.M\10-70IN50MIN.M
Last changed    : 9/6/2014 9:19:53 AM
                  (modified after loading)

Analysis Method : C:\CHEM32\1\METHODS\KJ100401.M
Last changed    : 9/24/2014 9:23:38 AM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18, 5um, 4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95        95        10        10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       : Signal
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	13.352	VB	0.0724	9.04533	1.94051	0.0717
2	13.583	BV	0.0852	64.18877	11.67014	0.5086
3	13.702	VB	0.0671	9.55872	2.27016	0.0757
4	13.869	BB	0.0895	159.75488	28.02865	1.2658

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	14.100	BV	0.0618	10.72851	2.73217	0.0850
6	14.275	VV	0.1168	383.00159	46.62364	3.0347
7	14.647	VB	0.1205	1.19042e4	1500.64368	94.3228
8	15.976	VB	0.0959	80.23136	12.48896	0.6357

Totals : 1.26208e4 1606.39790

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-94		
Molecular Formula	C73H124N28O22S2	Cat#	8117
Molecular Weight	1810.16	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	SATIMMQRGNFRNQR		
Item No.	8117_140303_94		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1810.16±2.0	1809.6
3	Peptide Purity (By HPLC)	≥80%	88.1%
4	Identification(Amino Acid Composition by HPLC)	D	2.0
		S	0.8
		E	2.0
		G	1.0
		R	3.4
		T	0.8
		A	1.1
		M	1.7
		I	1.1
F	1.1		
5	Peptide content	67.8%	

Quality Control By:

wangjun

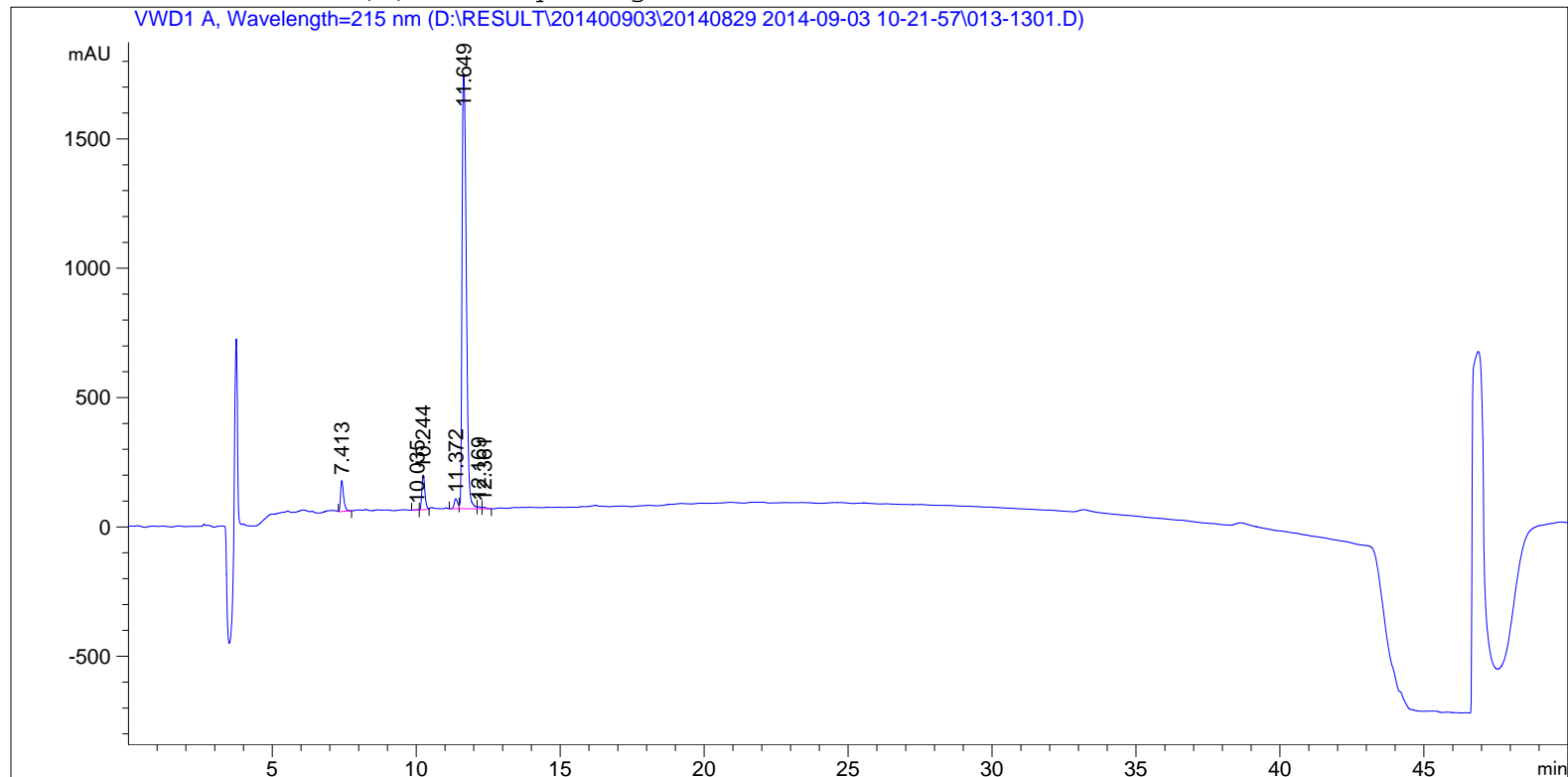
Date:

09/18/2014


```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   13
Acq. Instrument : HPLC 1260                           Location  : Vial 13
Injection Date  : 9/3/2014 8:34:20 PM                 Inj       :    1
                                                    Inj Volume: 20.000 µl
Method          : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M (Sequence Method)
Last changed    : 9/3/2014 7:20:03 PM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm   Column Temp:35°C   Flow
Rate:1.0ml/min
Mobile Phase A:0.1%TFA+H2O
Mobile Phase B:0.1%TFA+ACN
time(min)       0      40      40.3      43      43.3      50
B%              10     70     95        95        10        10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.413	VB	0.1114	884.15808	119.38312	4.5305
2	10.035	BB	0.1127	10.51944	1.38403	0.0539
3	10.244	BV	0.1141	988.06616	133.91489	5.0630
4	11.372	BV	0.1251	320.80185	38.92974	1.6438
5	11.649	VV	0.1645	1.71960e4	1678.96838	88.1148
6	12.169	VV	0.1246	66.97252	7.76578	0.3432
7	12.361	VB	0.1323	48.93695	5.52555	0.2508

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
Totals :				1.95155e4	1985.87149	

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-95		
Molecular Formula	C78H136N30O21S2	Cat#	8117
Molecular Weight	1894.33	Lot#	140303
Manufacturing Date	09/18/2014	Test Date	09/18/2014
Sequence	MMQRGNFRNQRKTVK		
Item No.	8117_140303_95		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1894.33±2.0	1894.0
3	Peptide Purity (By HPLC)	≥80%	87.0%
4	Identification(Amino Acid Composition by HPLC)	D	1.9
		E	2.1
		G	1.0
		R	3.1
		T	0.9
		V	1.1
		M	1.8
		K	2.0
	F	1.0	
5	Peptide content	76.9%	

Quality Control By: wangjun

Date: 09/18/2014

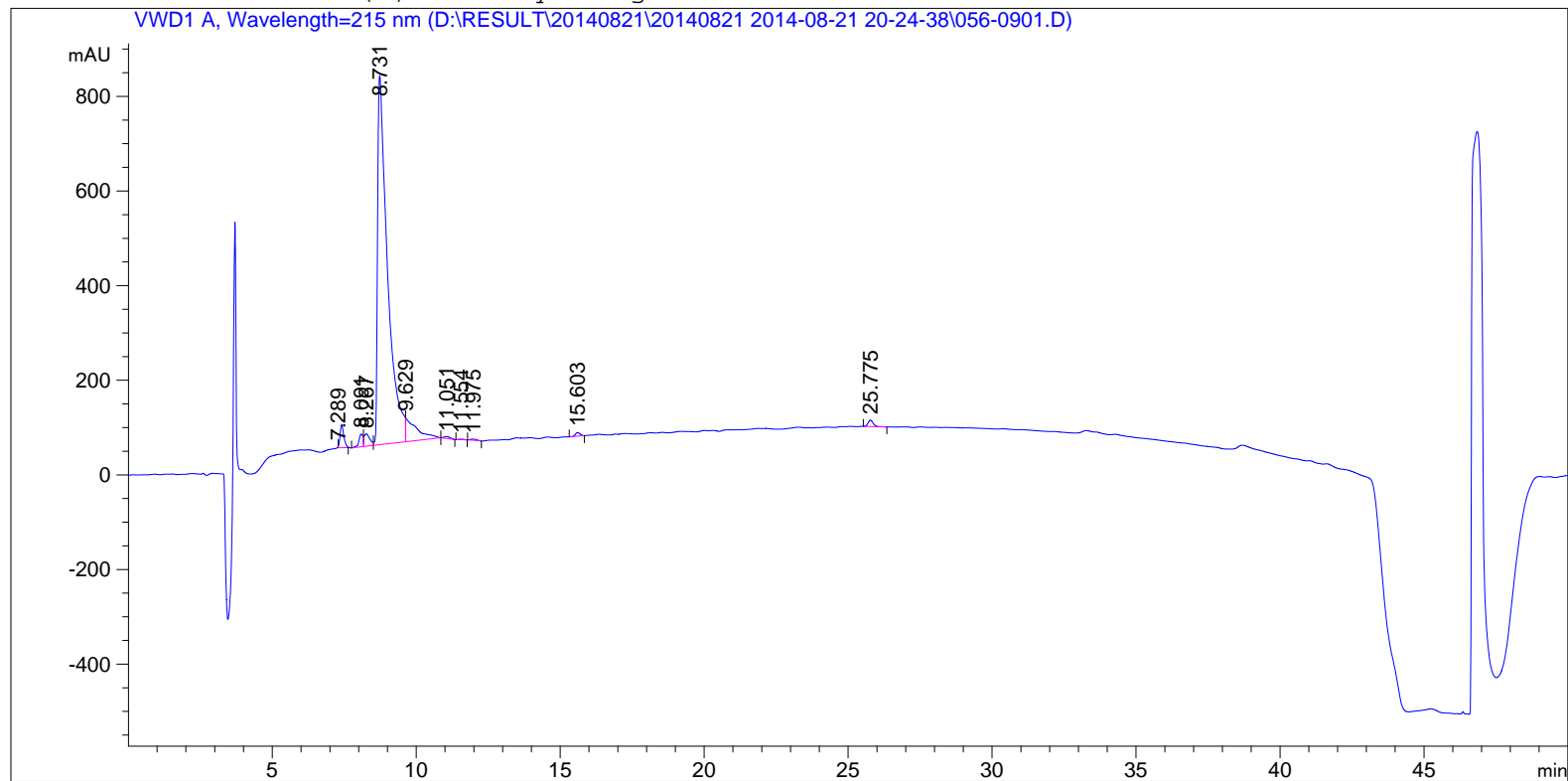

```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    9
Acq. Instrument : HPLC 1260                  Location  : Vial 56
Injection Date  : 8/22/2014 3:13:22 AM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140821\20140821 2014-08-21 20-24-38\KJ100401.M
Last changed    : 8/21/2014 8:24:39 PM by SYSTEM
Analysis Method : D:\RESULT\20140821\20140821 2014-08-21 20-24-38\KJ100401.M (Sequence Method)
Last changed    : 8/22/2014 1:26:04 PM by SYSTEM
                 (modified after loading)

Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                 Rate:1.0ml/min
                 Mobile Phase A:0.1%TFA+H2O
                 Mobile Phase B:0.1%TFA+ACN
                 time(min)      0      40      40.3      43      43.3      50
                 B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.289	MM R	0.1501	437.58313	2.85711	2.0371
2	8.091	BV	0.1502	263.73386	26.94115	1.2278
3	8.267	VV	0.2015	360.76205	25.90328	1.6795
4	8.731	MF R	0.3994	1.86972e4	780.15576	87.0436

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	9.629	FM R	0.4426	1350.68896	50.86206	6.2880
6	11.051	BB	0.2544	60.24043	3.91814	0.2804
7	11.554	BB	0.2065	15.43292	1.25442	0.0718
8	11.975	BB	0.2561	38.58135	2.51373	0.1796
9	15.603	BB	0.1746	87.23989	7.79527	0.4061
10	25.775	BB	0.1903	168.79947	13.65085	0.7858

Totals : 2.14803e4 915.85177

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

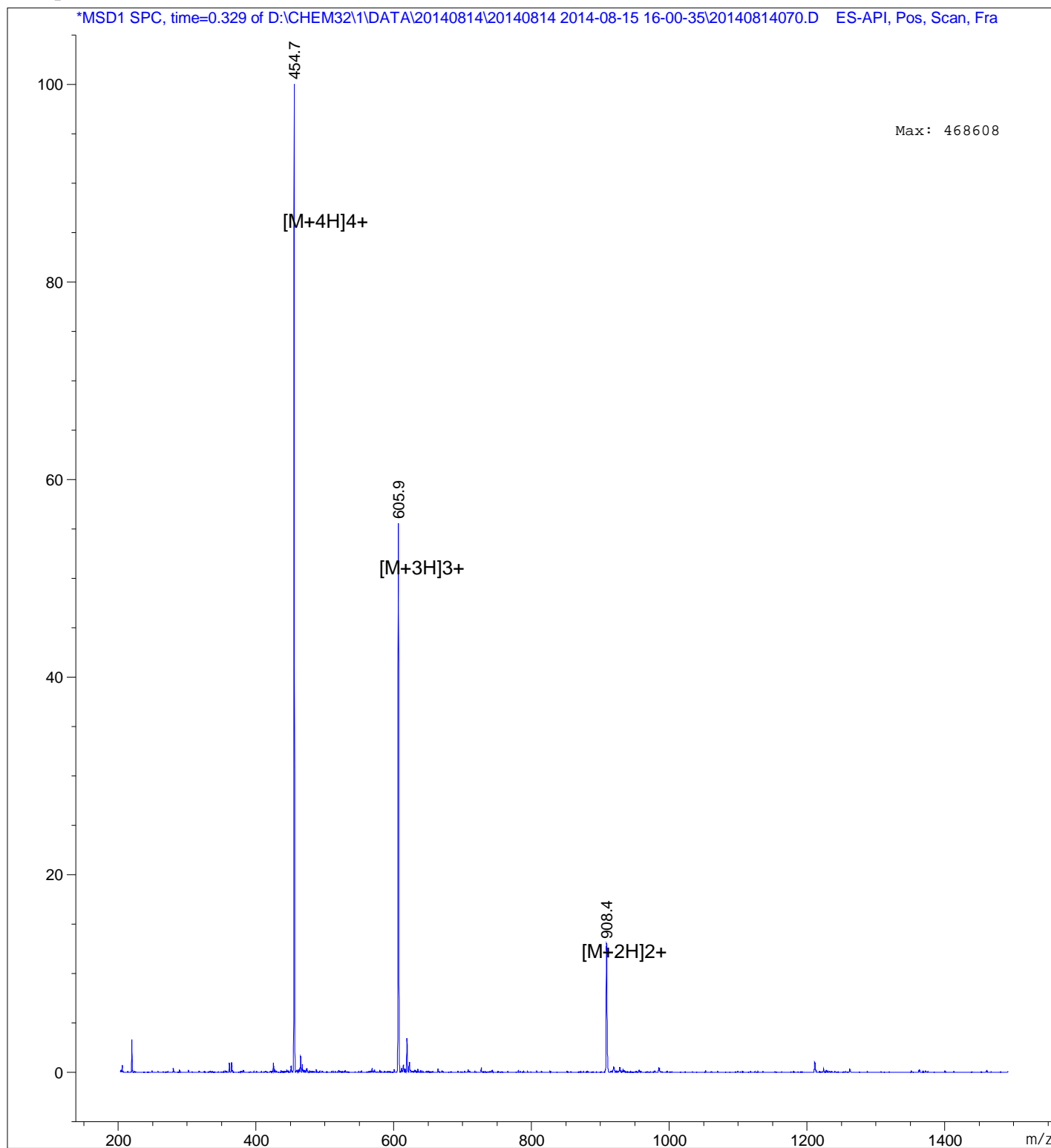
Product Name	HIV-1 Con B Gag Peptide-96		
Molecular Formula	C76H123N27O21S2	Cat#	8117
Molecular Weight	1815.17	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	GNFRNQRKTVKCFNC		
Item No.	8117_140303_96		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1815.17±2.0	1814.8
3	Peptide Purity (By HPLC)	≥80%	89.2%
4	Identification(Amino Acid Composition by HPLC)	D	2.8
		E	0.9
		G	1.1
		R	2.0
		T	0.9
		C	2.0
		V	1.0
		K	2.0
F	2.0		
5	Peptide content	76.9%	

Quality Control By: wangjun

Date: 09/11/2014

=====
Acq. Operator : liusuying Seq. Line : 70
Acq. Instrument : 5J-QC-082 Location : Vial 26
Injection Date : 8/15/2014 7:36:49 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140814\20140814 2014-08-15 16-00-35\TEST MS(200-1500)2.
Last changed : 8/14/2014 11:53:24 AM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed : 4/18/2014 11:29:00 AM by YZW

MS Spectrum



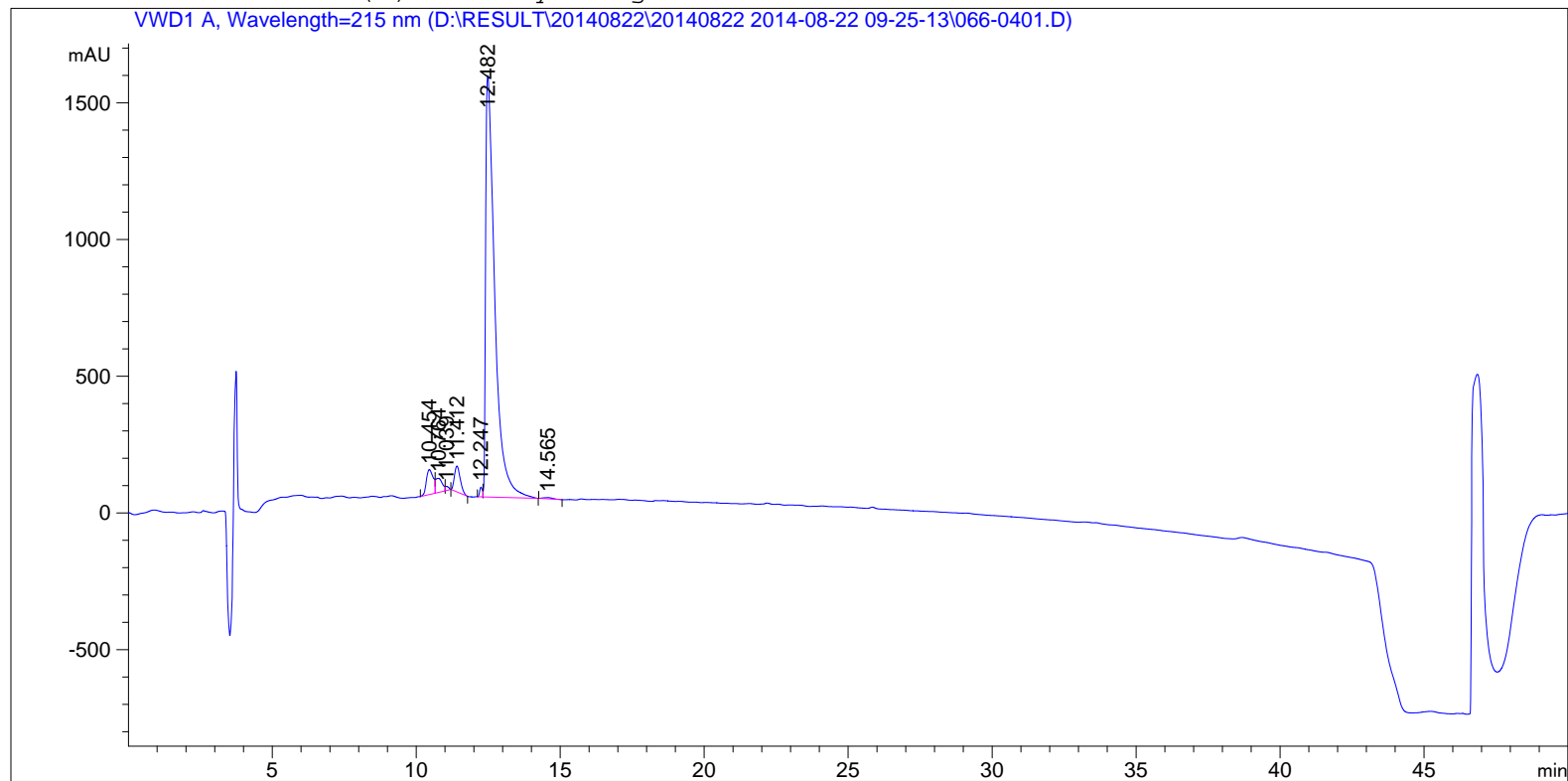
```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    4
Acq. Instrument : HPLC 1260                  Location  : Vial 66
Injection Date  : 8/22/2014 11:59:35 AM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140822\20140822 2014-08-22 09-25-13\KJ100401.M
Last changed    : 8/22/2014 9:25:13 AM by SYSTEM
Analysis Method : D:\RESULT\20140822\20140822 2014-08-22 09-25-13\KJ100401.M (Sequence Method)
Last changed    : 8/25/2014 10:06:34 AM by SYSTEM
                 (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                 Rate:1.0ml/min
                 Mobile Phase A:0.1%TFA+H2O
                 Mobile Phase B:0.1%TFA+ACN
                 time(min)      0      40      40.3      43      43.3      50
                 B%             10     70     95      95     10      10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution        :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	10.454	BV	0.2504	1480.79224	91.22258	3.9050
2	10.764	VV	0.2421	825.68811	51.48869	2.1774
3	11.039	VB	0.1266	116.79548	15.38212	0.3080
4	11.412	BB	0.2229	1334.68127	94.98765	3.5197

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	12.247	BV	0.1009	229.60954	35.27064	0.6055
6	12.482	VB	0.3092	3.38337e4	1540.81433	89.2228
7	14.565	BB	0.3326	99.18073	4.45697	0.2615

Totals : 3.79204e4 1833.62298

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-97		
Molecular Formula	C70H118N24O22S2	Cat#	8117
Molecular Weight	1712.05	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	NQRKTVKCFNCGKEG		
Item No.	8117_140303_97		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1712.05±2.0	1711.2
3	Peptide Purity (By HPLC)	≥80%	90.6%
4	Identification(Amino Acid Composition by HPLC)	D	1.8
		E	2.1
		G	2.0
		R	1.0
		T	1.0
		C	1.8
		V	1.1
		K	3.2
	F	1.1	
5	Peptide content	73.6%	

Quality Control By:

wangjun

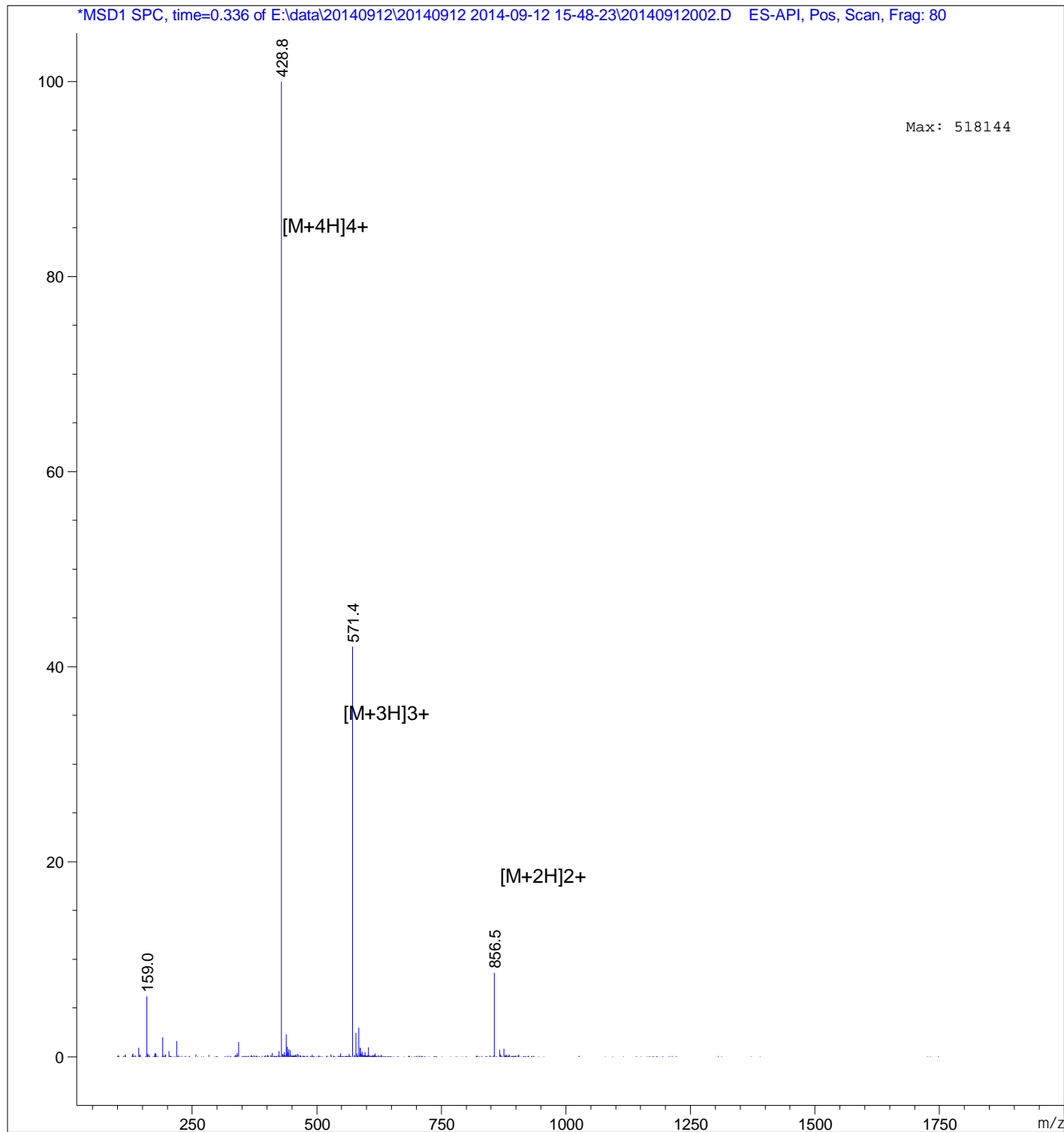
Date:

09/24/2014

=====

Acq. Operator	: SYSTEM	Seq. Line	: 2
Acq. Instrument	: Agilent6120	Location	: 32
Injection Date	: 9/12/2014 3:52:44 PM	Inj	: 1
		Inj Volume	: 5.000 µl
Acq. Method	: E:\data\20140912\20140912 2014-09-12 15-48-23\LCMS.M		
Last changed	: 9/12/2014 3:48:23 PM by SYSTEM		
Analysis Method	: E:\data\20140912\20140912 2014-09-12 15-48-23\LCMS.M (Sequence Method)		
Last changed	: 9/12/2014 3:52:33 PM by SYSTEM		
	(modified after loading)		

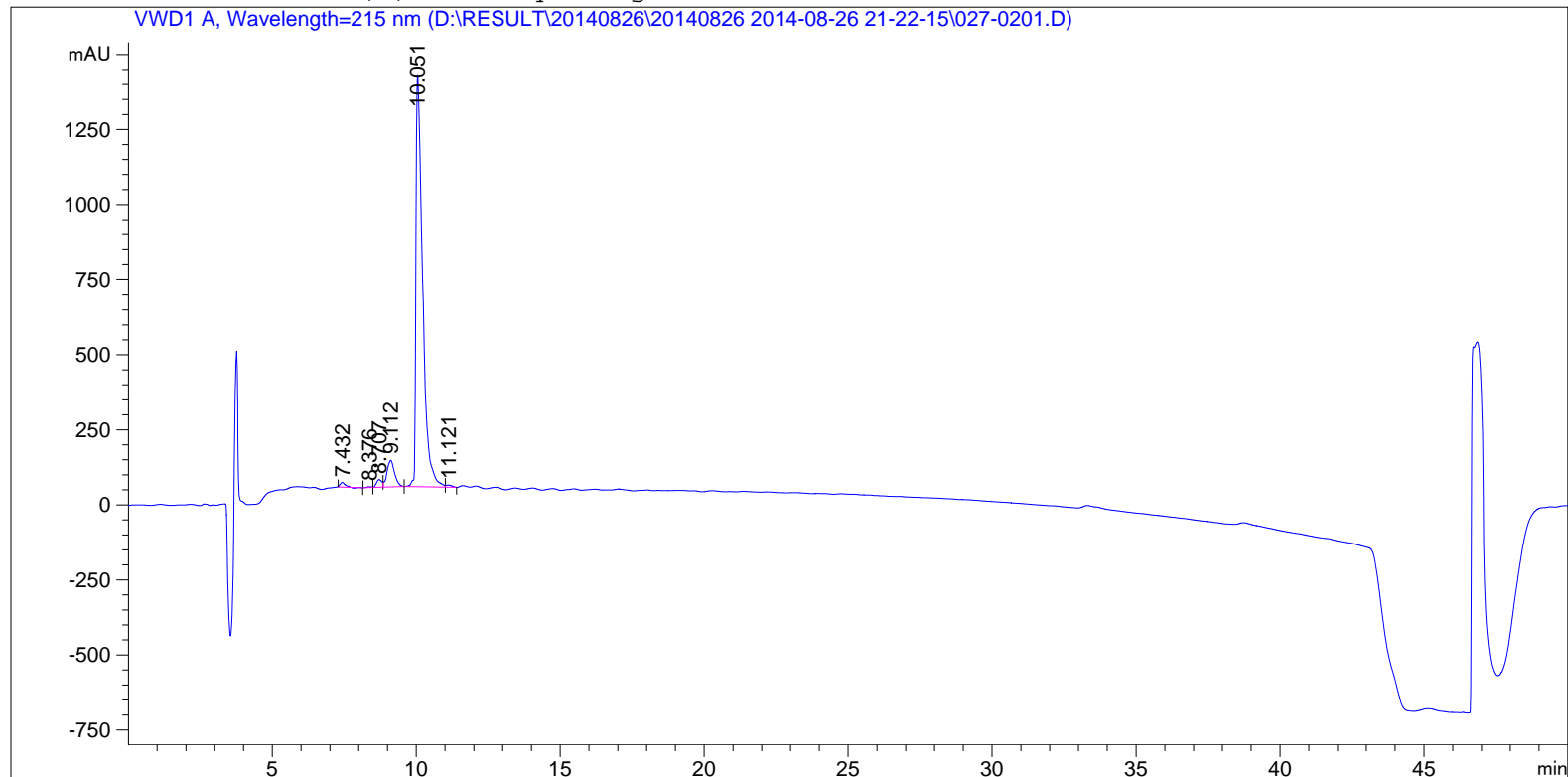
MS Spectrum




```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    2
Acq. Instrument : HPLC 1260                  Location  : Vial 27
Injection Date  : 8/26/2014 10:14:07 PM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\20140826\20140826 2014-08-26 21-22-15\KJ100401.M (Sequence Method)
Last changed    : 8/26/2014 9:22:15 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm           Cloumn Temp:35°C           Flow
Rate:1.0ml/min
Mobile Phase A:0.1%TFA+H2O
Mobile Phase B:0.1%TFA+ACN
time(min)       0         40         40.3        43         43.3        50
B%              10        70         95          95         10          10
    
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
    
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.432	MB R	0.2142	202.55823	15.76066	0.8296
2	8.376	BV	0.1941	34.39559	2.88568	0.1409
3	8.707	VV	0.1959	335.04022	25.57254	1.3722
4	9.112	VB	0.2820	1616.48291	88.55167	6.6205
5	10.051	BV	0.2300	2.21256e4	1373.16992	90.6177
6	11.121	VB	0.2289	102.33851	7.02629	0.4191

Totals : 2.44164e4 1512.96677

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-98		
Molecular Formula	C70H115N21O20S2	Cat#	8117
Molecular Weight	1635.01	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	TVKCFNCGKEGHIAK		
Item No.	8117_140303_98		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1635.01±2.0	1634.4
3	Peptide Purity (By HPLC)	≥80%	86.4%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		E	1.0
		G	1.8
		H	1.0
		T	0.9
		A	1.0
		C	2.0
		V	1.1
		K	3.2
		I	1.0
F	1.0		
5	Peptide content	78.7%	

Quality Control By:

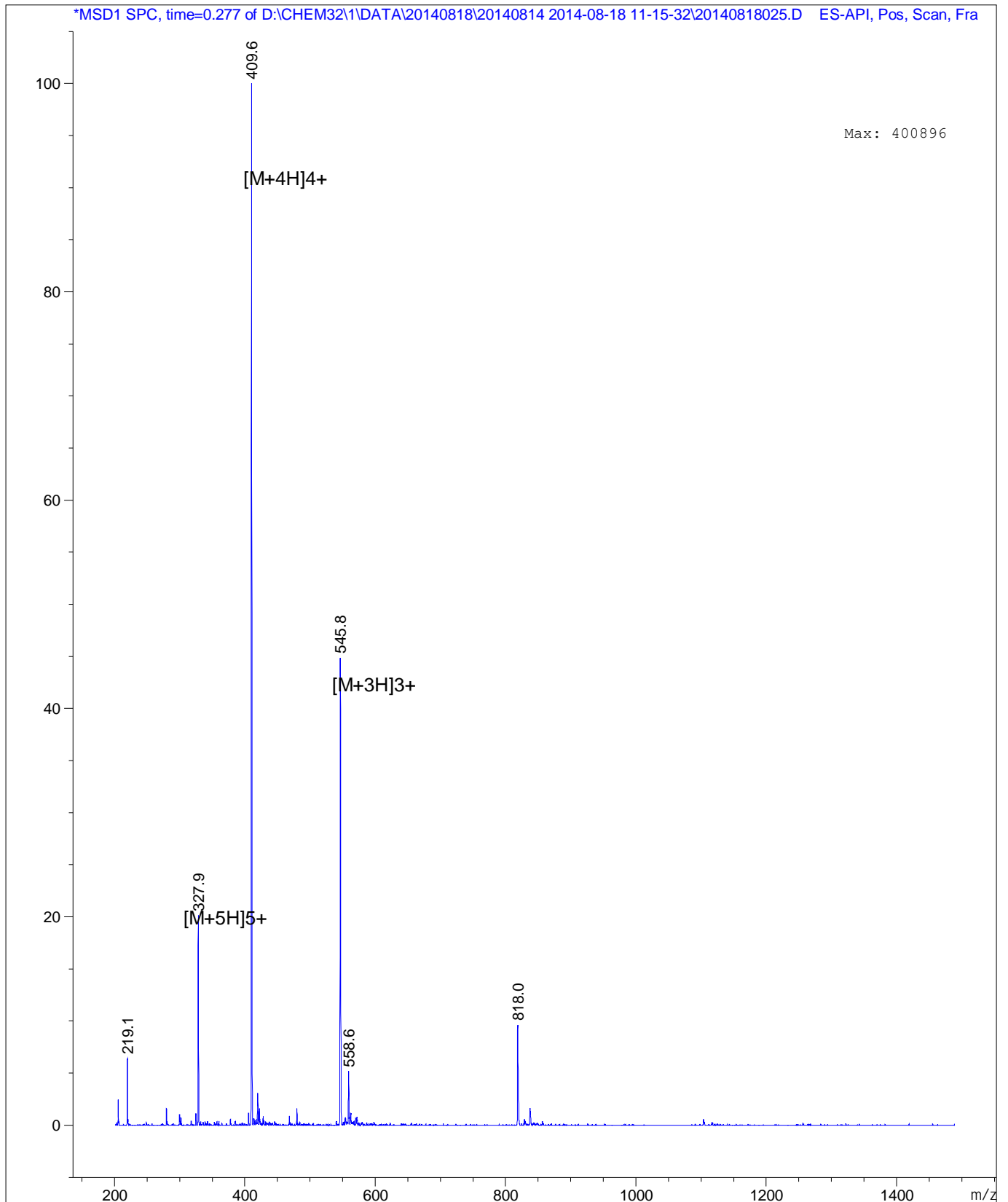
wangjun

Date:

09/24/2014

=====
Acq. Operator : liusuying Seq. Line : 25
Acq. Instrument : 5J-QC-082 Location : Vial 33
Injection Date : 8/18/2014 12:31:02 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140818\20140814 2014-08-18 11-15-32\TEST MS(200-1500)
2.
Last changed : 8/14/2014 11:53:24 AM by liusuying
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M
Last changed : 8/14/2014 11:53:24 AM by liusuying

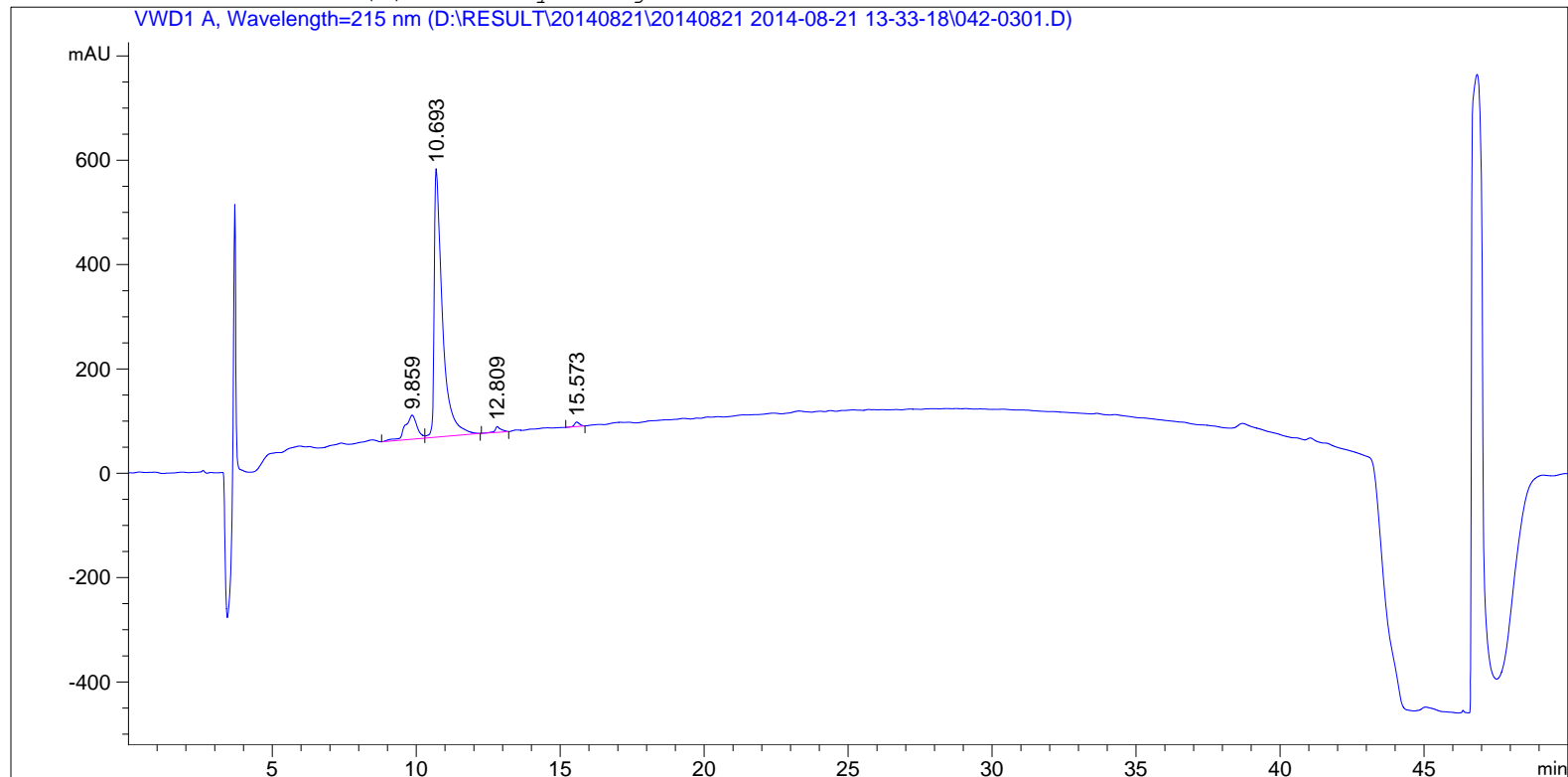
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    3
Acq. Instrument : HPLC 1260                  Location  : Vial 42
Injection Date  : 8/21/2014 3:16:13 PM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\20140821\20140821 2014-08-21 13-33-18\KJ100401.M (Sequence Method)
Last changed    : 8/21/2014 1:33:18 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
Rate:1.0ml/min
Mobile Phase A:0.1%TFA+H2O
Mobile Phase B:0.1%TFA+ACN
time(min)       0      40      40.3      43      43.3      50
B%              10     70      95      95      10      10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      : Signal
Multiplier     : 1.0000
Dilution      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	9.859	BV	0.4124	1336.35767	46.20235	11.2581
2	10.693	VB	0.2769	1.02729e4	514.56030	86.5439
3	12.809	BB	0.1936	156.72025	10.97497	1.3203
4	15.573	BB	0.1895	104.18881	8.46839	0.8777

Totals : 1.18702e4 580.20601

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-99		
Molecular Formula	C68H110N24O20S2	Cat#	8117
Molecular Weight	1647.96	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	FNCGKEGHIKNCRA		
Item No.	8117_140303_99		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1647.96±2.0	1647.2
3	Peptide Purity (By HPLC)	≥80%	92.8%
4	Identification(Amino Acid Composition by HPLC)	D	1.6
		E	1.2
		G	2.1
		H	0.9
		R	1.1
		A	2.1
		C	2.0
		K	2.0
		I	0.9
F	1.0		
5	Peptide content	57.9%	

Quality Control By:

wangjun

Date:

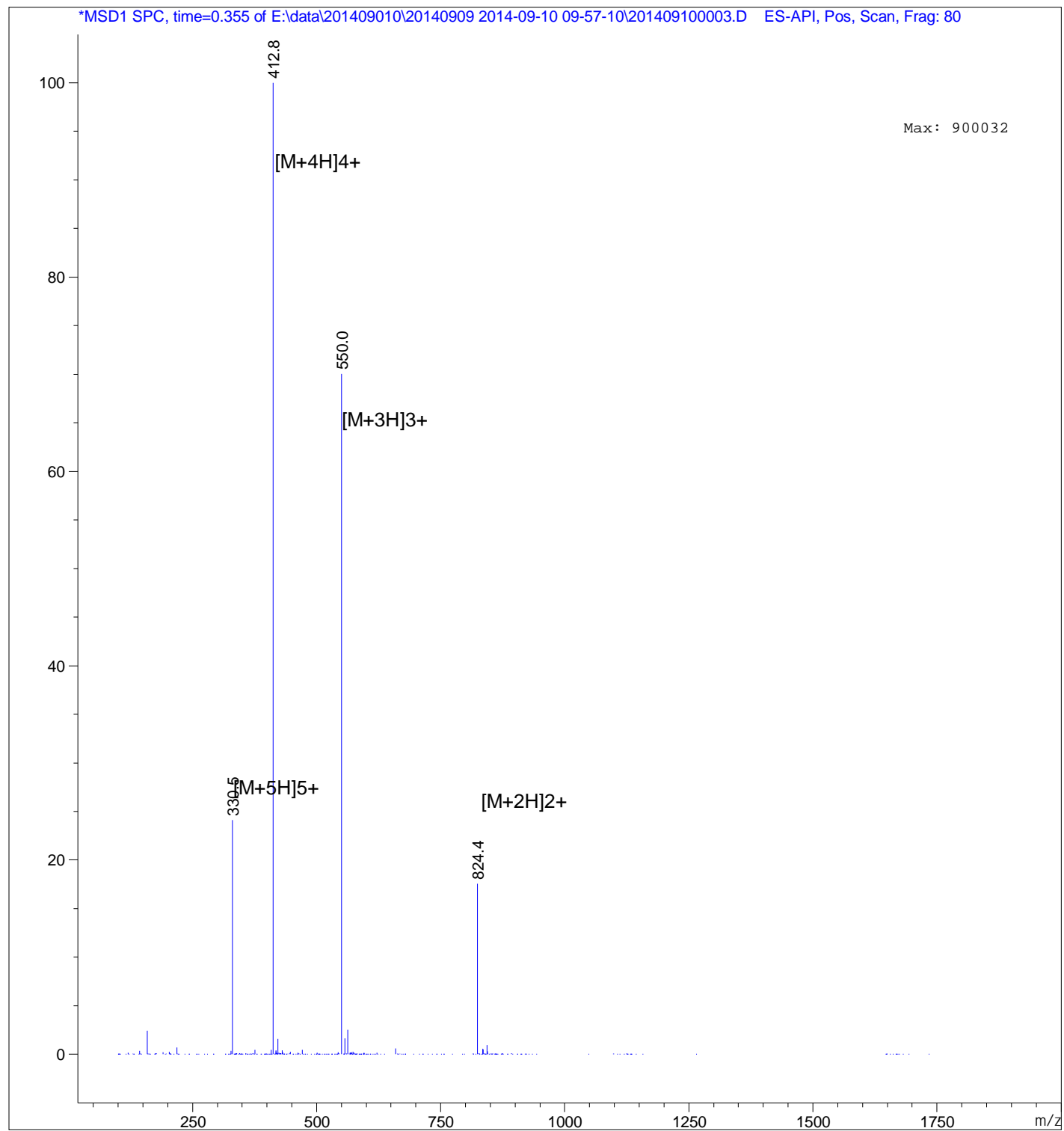
09/24/2014

=====

Acq. Operator : SYSTEM Seq. Line : 3
Acq. Instrument : Agilent6120 Location : 3
Injection Date : 9/10/2014 10:04:08 AM Inj : 1
 Inj Volume : 5.000 µl

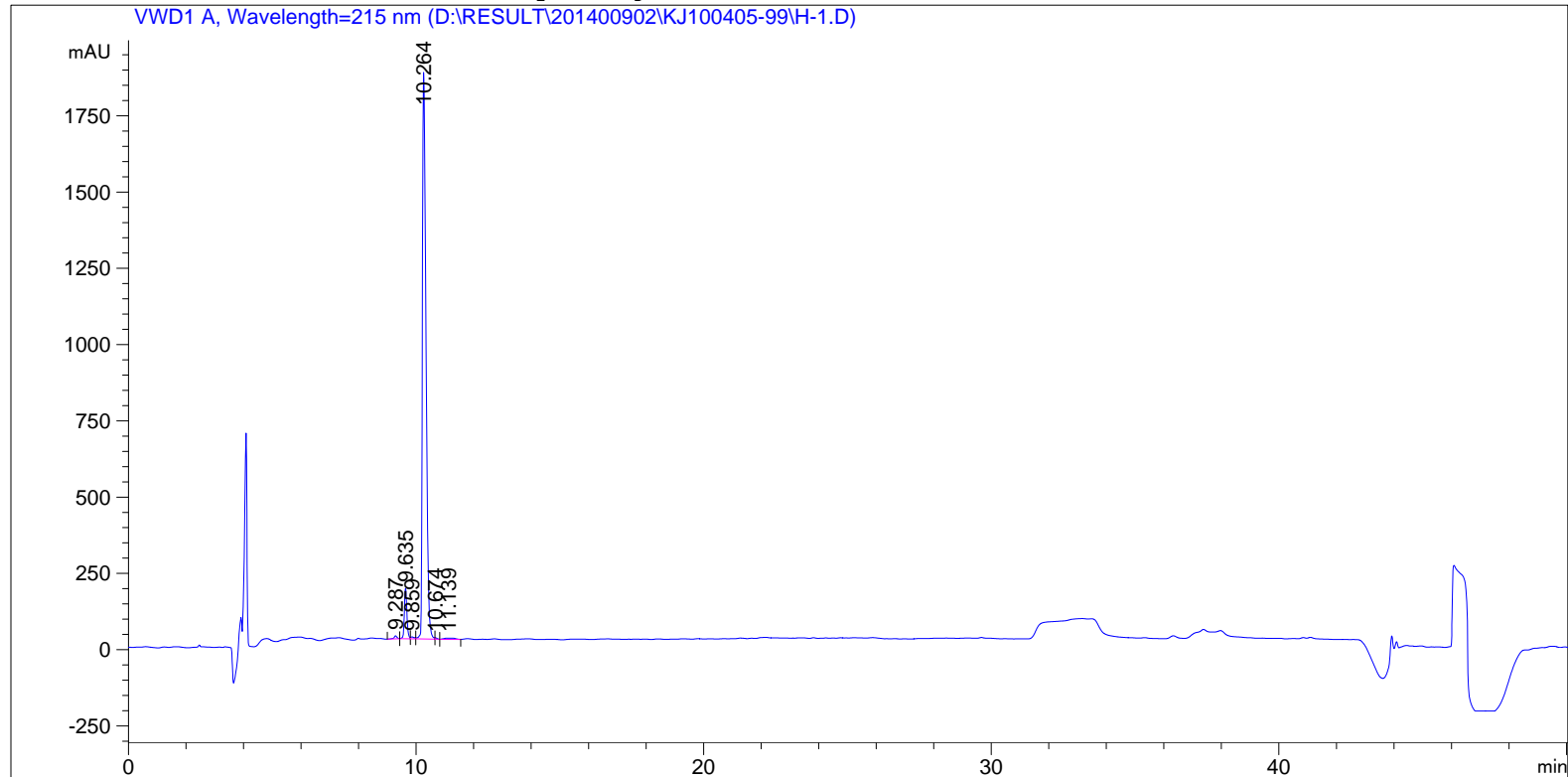
Acq. Method : E:\data\201409010\20140909 2014-09-10 09-57-10\LCMS.M
Last changed : 9/10/2014 9:57:10 AM by SYSTEM
Analysis Method : E:\data\201409010\20140909 2014-09-10 09-57-10\LCMS.M (Sequence Method)
Last changed : 9/10/2014 12:58:33 PM by SYSTEM
 (modified after loading)

MS Spectrum




```

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 1
Injection Date  : 9/1/2014 4:22:00 PM
                                           Inj Volume : Manually
Acq. Method     : D:\CHEM32\1\METHODS\10-70IN50MIN.M
Last changed    : 9/1/2014 2:33:18 PM
Analysis Method : C:\CHEM32\1\METHODS\WSAH.M
Last changed    : 7/28/2014 4:59:11 PM by SYSTEM
Additional Info  : Peak(s) manually integrated
  
```



Area Percent Report

```

Sorted By      : Signal
Multiplier     : 1.0000
Dilution       : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	9.287	BB	0.1055	70.04903	9.94206	0.4021
2	9.635	BV	0.0932	1008.83093	164.96973	5.7910
3	9.859	VV	0.1167	53.29657	6.45807	0.3059
4	10.264	VV	0.1364	1.61584e4	1858.20142	92.7546
5	10.674	VB	0.0825	21.95805	4.22172	0.1260
6	11.139	BV	0.3341	108.06880	4.03825	0.6203

Totals : 1.74207e4 2047.83124

***End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-100		
Molecular Formula	C73H130N28O19S	Cat#	8117
Molecular Weight	1736.14	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	KEGHIAKNCRAPRKK		
Item No.	8117_140303_100		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1736.14±2.0	1735.5
3	Peptide Purity (By HPLC)	≥80%	92.5%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		E	1.1
		G	1.1
		H	0.9
		R	2.1
		A	2.0
		P	1.0
		C	1.0
		K	3.9
I	0.9		
5	Peptide content	66.5%	

Quality Control By:

wangjun

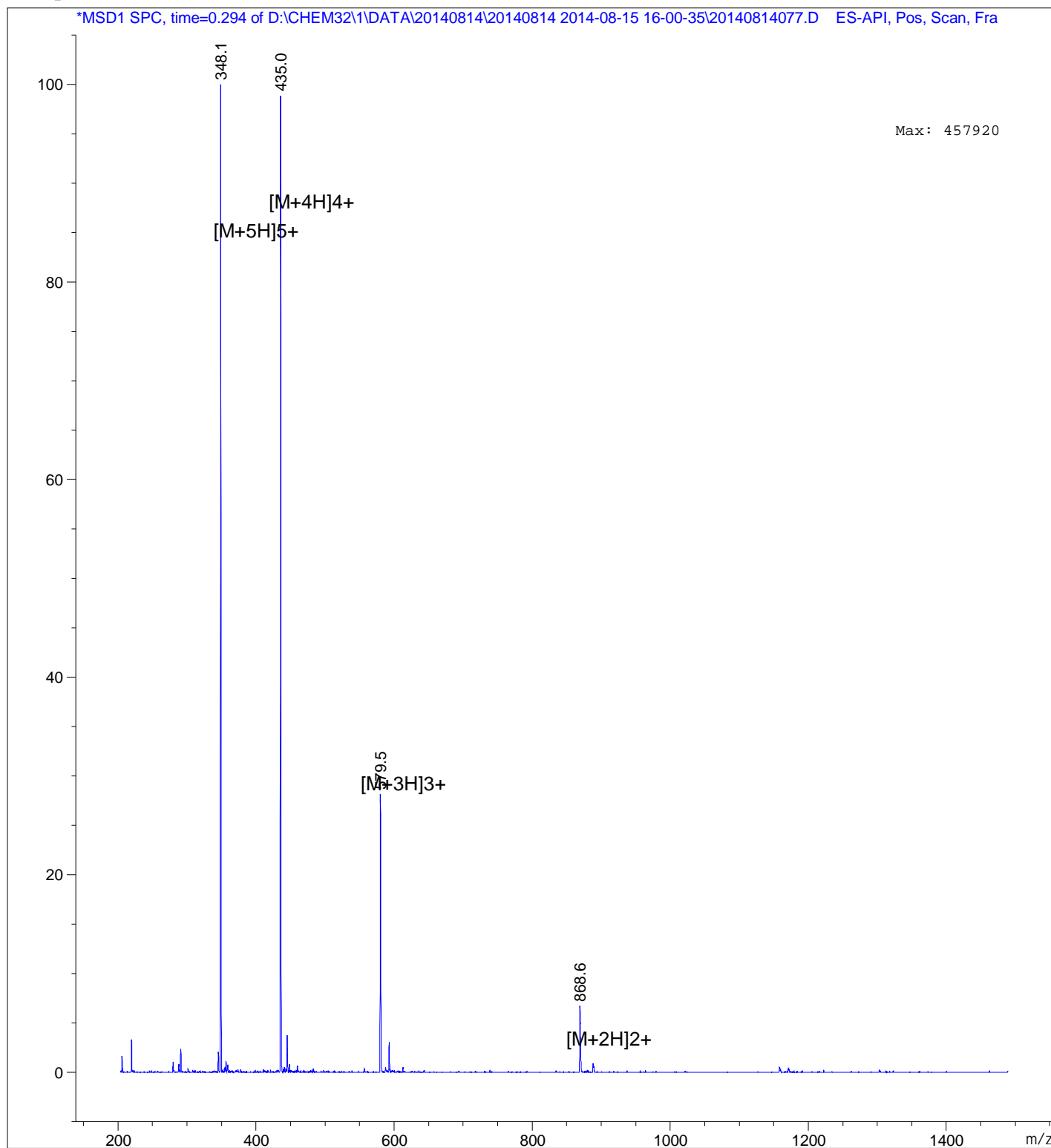
Date:

09/24/2014

```

=====
Acq. Operator   : liusuying                      Seq. Line :   77
Acq. Instrument : 5J-QC-082                      Location  : Vial 35
Injection Date  : 8/15/2014 7:58:29 PM           Inj       :    1
                                                    Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140814\20140814 2014-08-15 16-00-35\TEST MS(200-1500)2.
Last changed    : 8/14/2014 11:53:24 AM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed    : 4/18/2014 11:29:00 AM by YZW
    
```

MS Spectrum



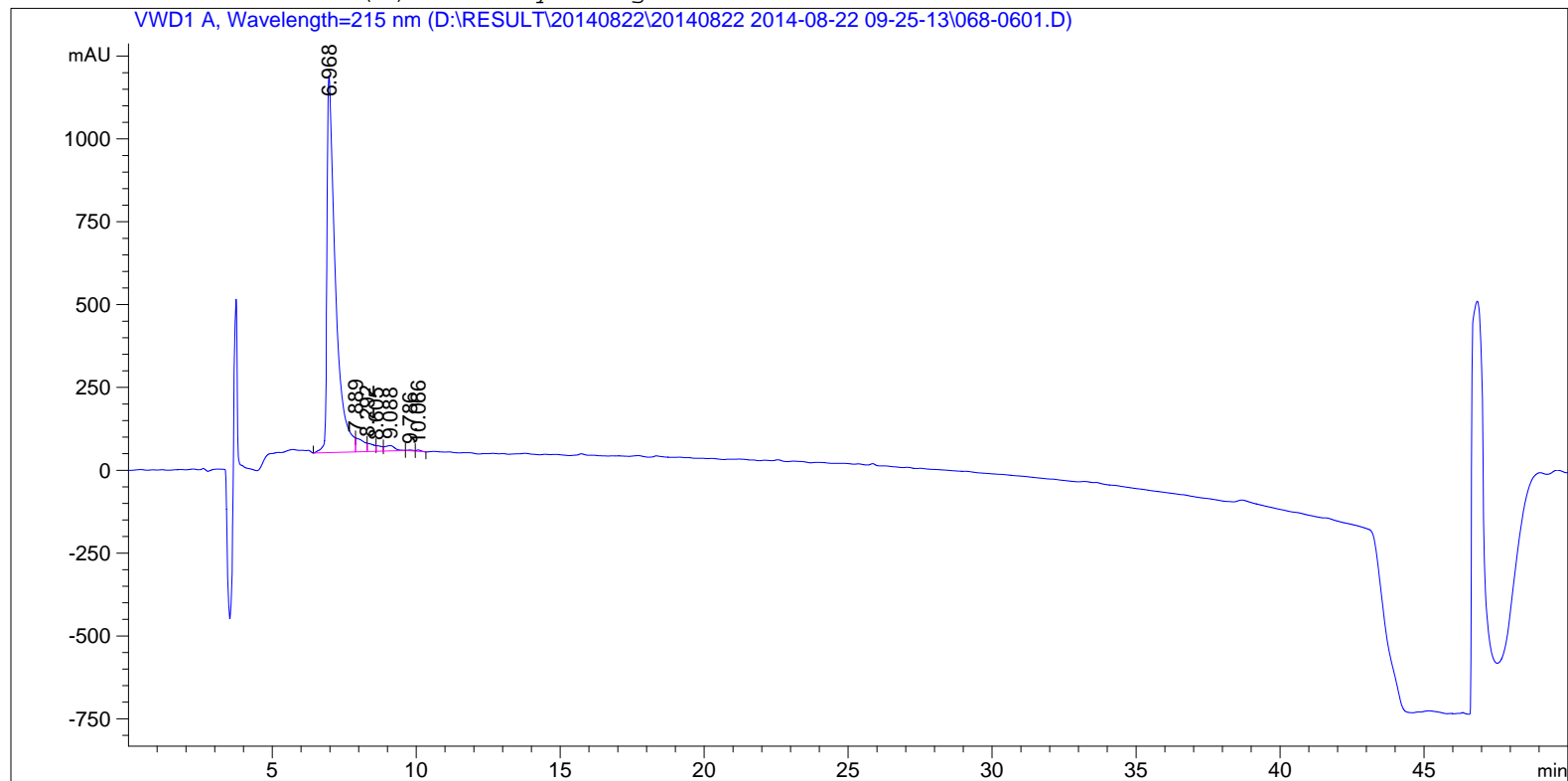
```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    6
Acq. Instrument : HPLC 1260                  Location  : Vial 68
Injection Date  : 8/22/2014 1:41:31 PM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140822\20140822 2014-08-22 09-25-13\KJ100401.M
Last changed    : 8/22/2014 9:25:13 AM by SYSTEM
Analysis Method : D:\RESULT\20140822\20140822 2014-08-22 09-25-13\KJ100401.M (Sequence Method)
Last changed    : 8/25/2014 10:06:34 AM by SYSTEM
                 (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                 Rate:1.0ml/min
                 Mobile Phase A:0.1%TFA+H2O
                 Mobile Phase B:0.1%TFA+ACN
                 time(min)      0      40      40.3      43      43.3      50
                 B%             10     70     95       95      10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	6.968	MF R	0.3406	2.32527e4	1137.66638	92.4689
2	7.889	MF R	0.2510	815.27820	41.95090	3.2421
3	8.292	MF R	0.1968	394.83218	24.93636	1.5701
4	8.605	FM R	0.2211	224.66690	16.93839	0.8934

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	9.088	VB	0.3506	382.34549	15.89925	1.5205
6	9.786	BV	0.2119	31.14030	2.28594	0.1238
7	10.066	VB	0.1565	45.55509	4.23445	0.1812

Totals : 2.51465e4 1243.91166

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-101		
Molecular Formula	C76H131N27O17S2	Cat#	8117
Molecular Weight	1759.23	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	IAKNCRAPRKKGCWK		
Item No.	8117_140303_101		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1759.23±2.0	1758.8
3	Peptide Purity (By HPLC)	≥80%	80.8%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		G	1.0
		R	2.1
		A	2.0
		P	1.0
		C	1.8
		K	4.1
	I	0.9	
5	Peptide content	67.0%	

Quality Control By:

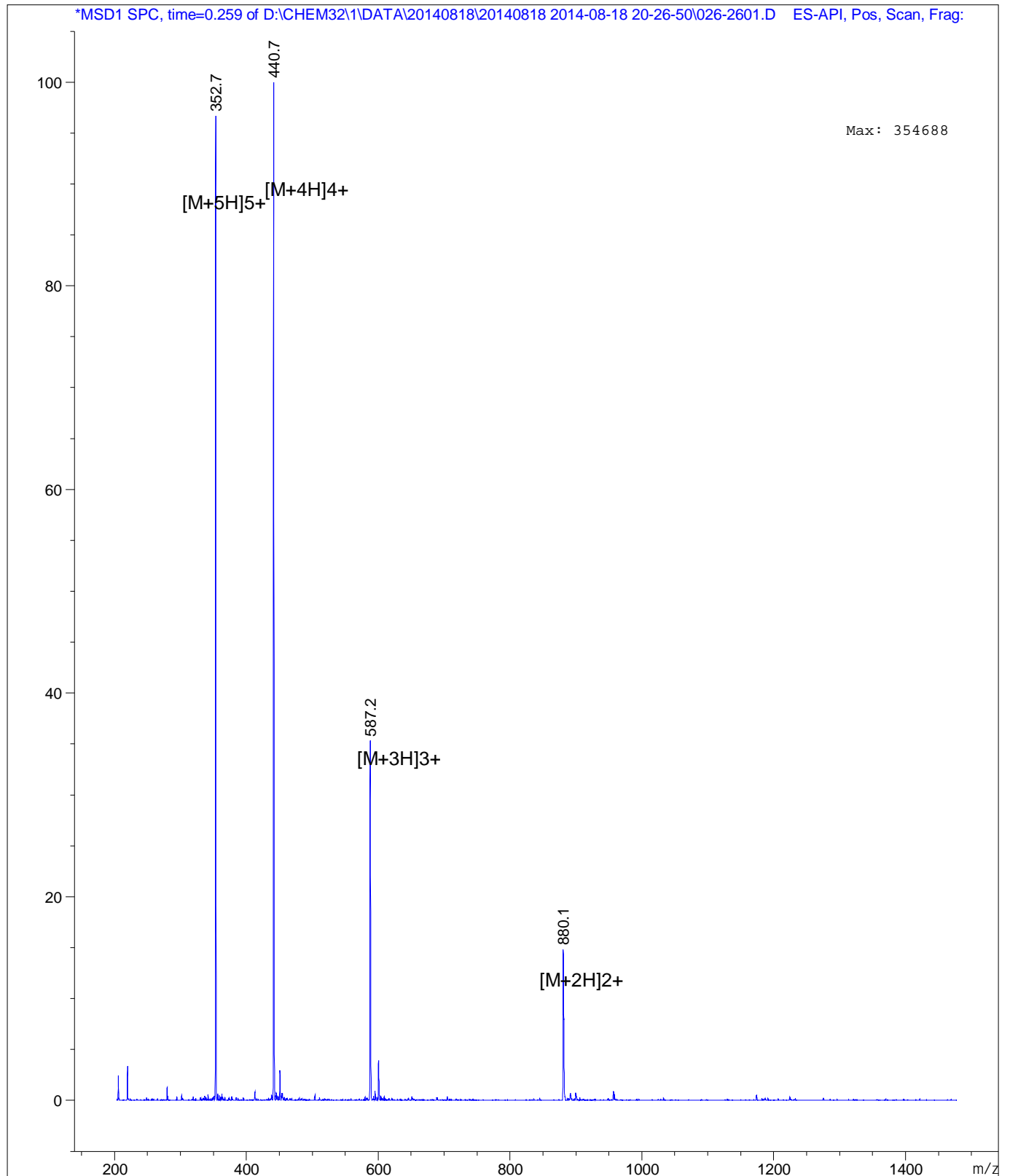
wangjun

Date:

09/24/2014

=====
Acq. Operator : liusuying Seq. Line : 26
Acq. Instrument : 5J-QC-082 Location : Vial 26
Injection Date : 8/18/2014 9:45:05 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140818\20140818 2014-08-18 20-26-50\TEST MS(200-1500)
2.
Last changed : 8/14/2014 11:53:24 AM by liusuying
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M
Last changed : 8/19/2014 2:23:26 PM by liusuying
(modified after loading)

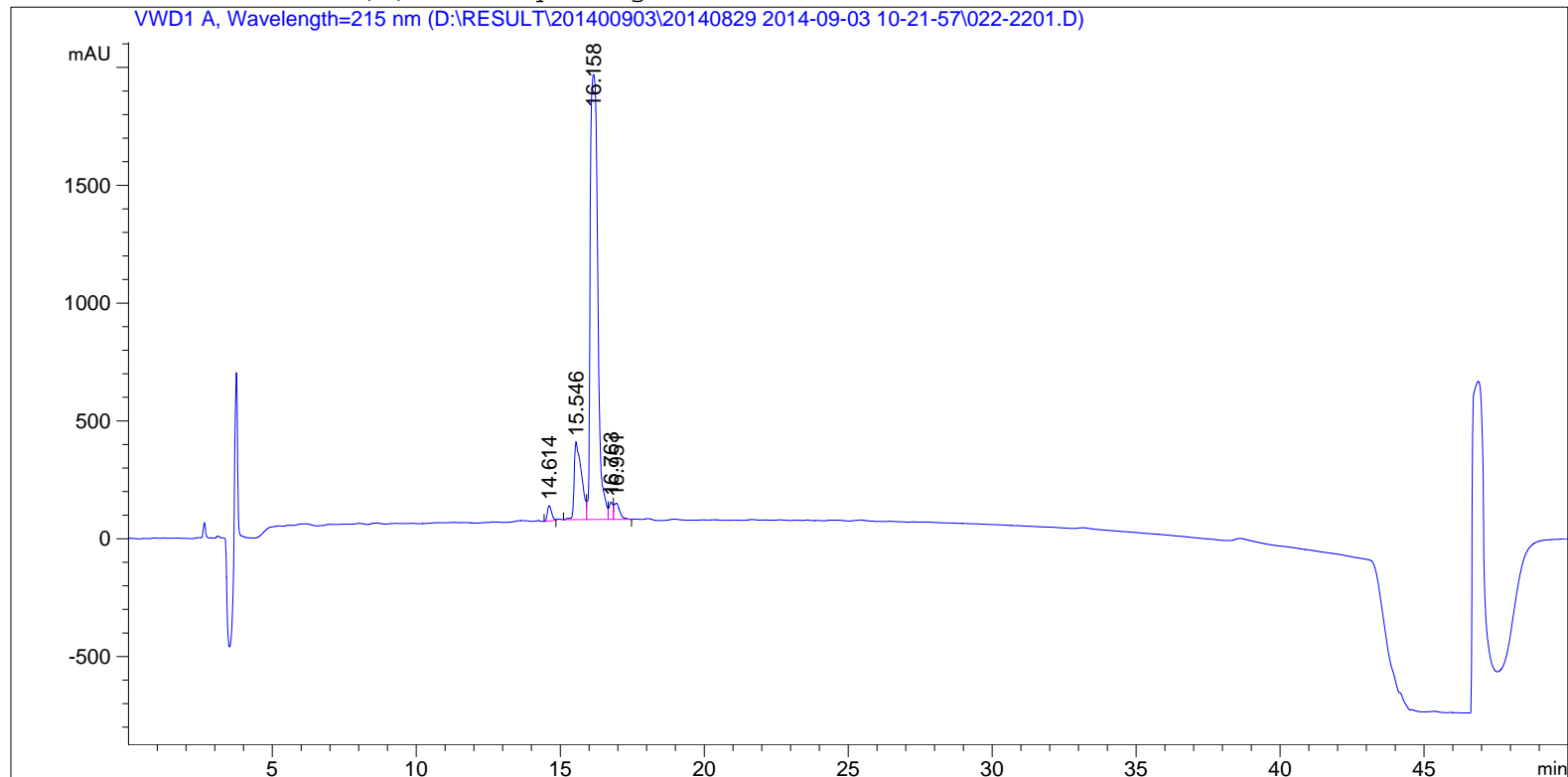
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :   22
Acq. Instrument : HPLC 1260                  Location  : Vial 22
Injection Date  : 9/4/2014 4:13:04 AM        Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M (Sequence Method)
Last changed    : 9/3/2014 7:20:03 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5um,4.6*250mm           Cloumn Temp:35°C           Flow
Rate:1.0ml/min
Mobile Phase A:0.1%TFA+H2O
Mobile Phase B:0.1%TFA+ACN
time(min)       0          40          40.3          43          43.3          50
B%              10         70          95          95          10          10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	14.614	BV	0.1613	662.73065	64.81093	1.5667
2	15.546	BV	0.2339	5809.41650	330.83328	13.7334
3	16.158	VV	0.2911	3.41739e4	1888.80823	80.7867
4	16.763	VV	0.1308	668.36853	73.71464	1.5800
5	16.951	VB	0.1974	986.97510	68.79710	2.3332

Totals : 4.23014e4 2426.96418

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-102		
Molecular Formula	C73H124N26O18S3	Cat#	8117
Molecular Weight	1750.19	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	CRAPRKKKGCWKCGKE		
Item No.	8117_140303_102		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1750.19±2.0	1749.6
3	Peptide Purity (By HPLC)	≥80%	85.2%
4	Identification(Amino Acid Composition by HPLC)	E	1.0
		G	2.0
		R	2.0
		A	1.0
		P	1.0
		C	2.8
	K	4.1	
5	Peptide content	70.9%	

Quality Control By:

wangjun

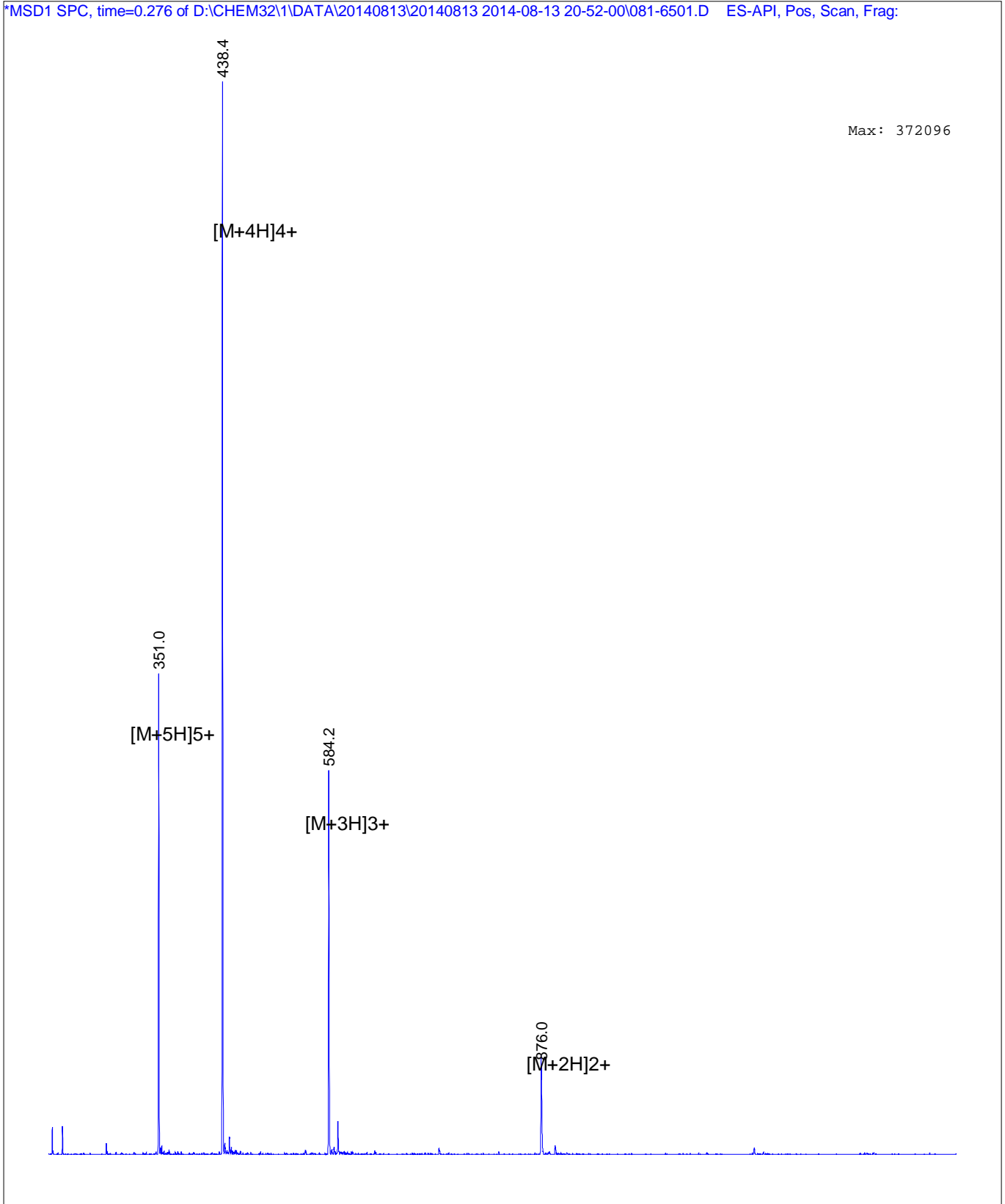
Date:

09/11/2014

```

=====
Acq. Operator   : liusuying           Seq. Line :   65
Acq. Instrument : 5J-QC-082           Location  : Vial 81
Injection Date  : 8/14/2014 12:10:33 AM  Inj       :    1
                                           Inj Volume : 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500)
                                           2.
Last changed    : 8/11/2014 1:22:13 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed    : 4/18/2014 11:29:00 AM by YZW
  
```

MS Spectrum



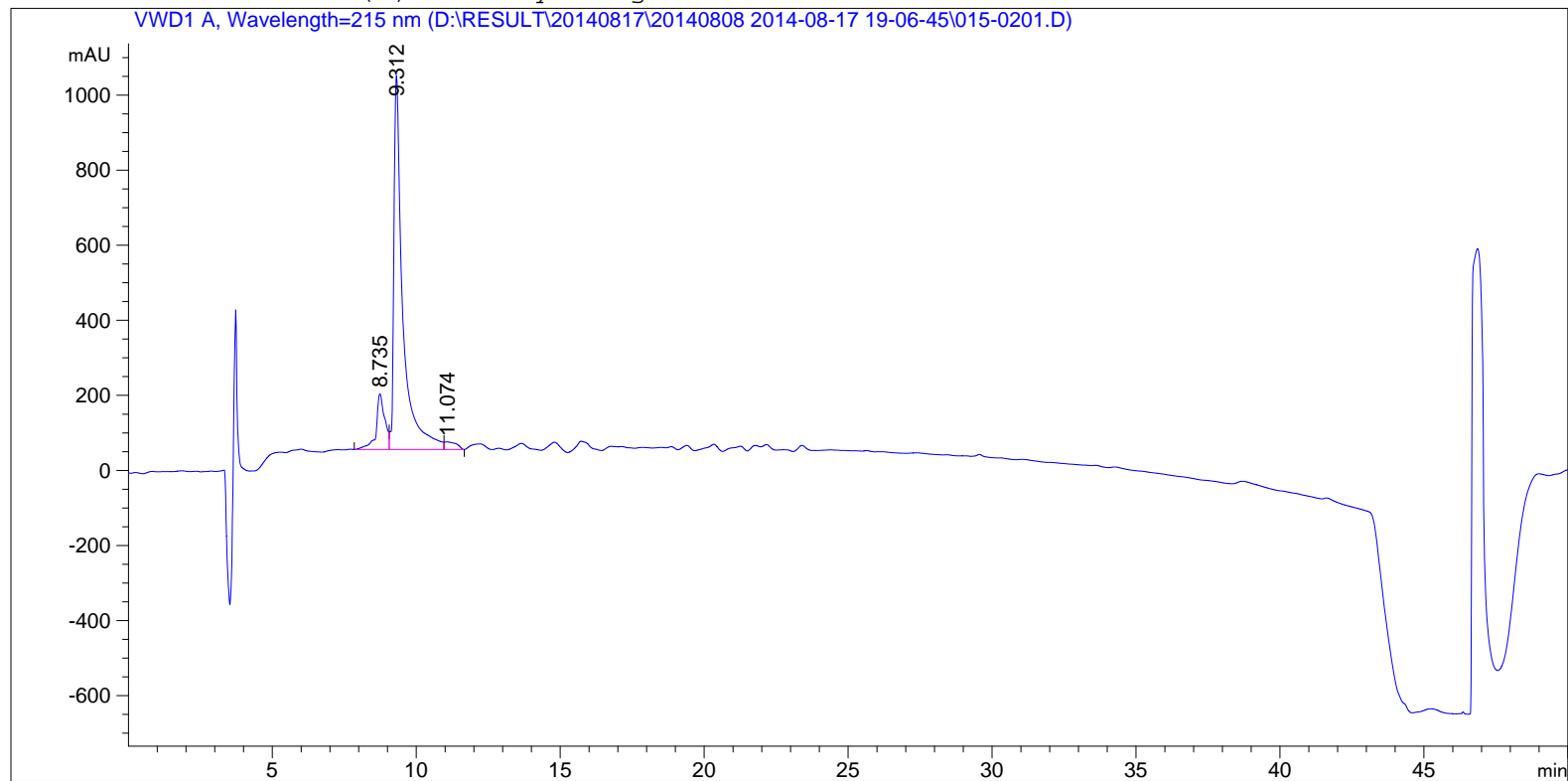
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=====
Acq. Operator   : SYSTEM                               Seq. Line :    2
Acq. Instrument : HPLC 1260                           Location  : Vial 15
Injection Date  : 8/17/2014 7:58:39 PM                Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140817\20140808 2014-08-17 19-06-45\KJ100401.M
Last changed    : 8/17/2014 7:06:45 PM by SYSTEM
Analysis Method : D:\RESULT\20140817\20140808 2014-08-17 19-06-45\KJ100401.M (Sequence Method)
Last changed    : 8/18/2014 9:56:42 AM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95      95     10      10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	8.735	BV	0.2977	3118.45605	148.06483	12.4198
2	9.312	VV	0.3029	2.14050e4	995.32373	85.2495
3	11.074	VB	0.3911	585.21021	20.13595	2.3307

Totals : 2.51087e4 1163.52452

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-103		
Molecular Formula	C74H122N26O19S3	Cat#	8117
Molecular Weight	1776.21	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	RKKGCWKCGKEGHQM		
Item No.	8117_140303_103		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1776.21±2.0	1775.6
3	Peptide Purity (By HPLC)	≥80%	94.7%
4	Identification(Amino Acid Composition by HPLC)	E	2.3
		G	3.2
		H	1.1
		R	1.4
		C	1.9
		M	0.8
	K	4.4	
5	Peptide content	82.3%	

Quality Control By:

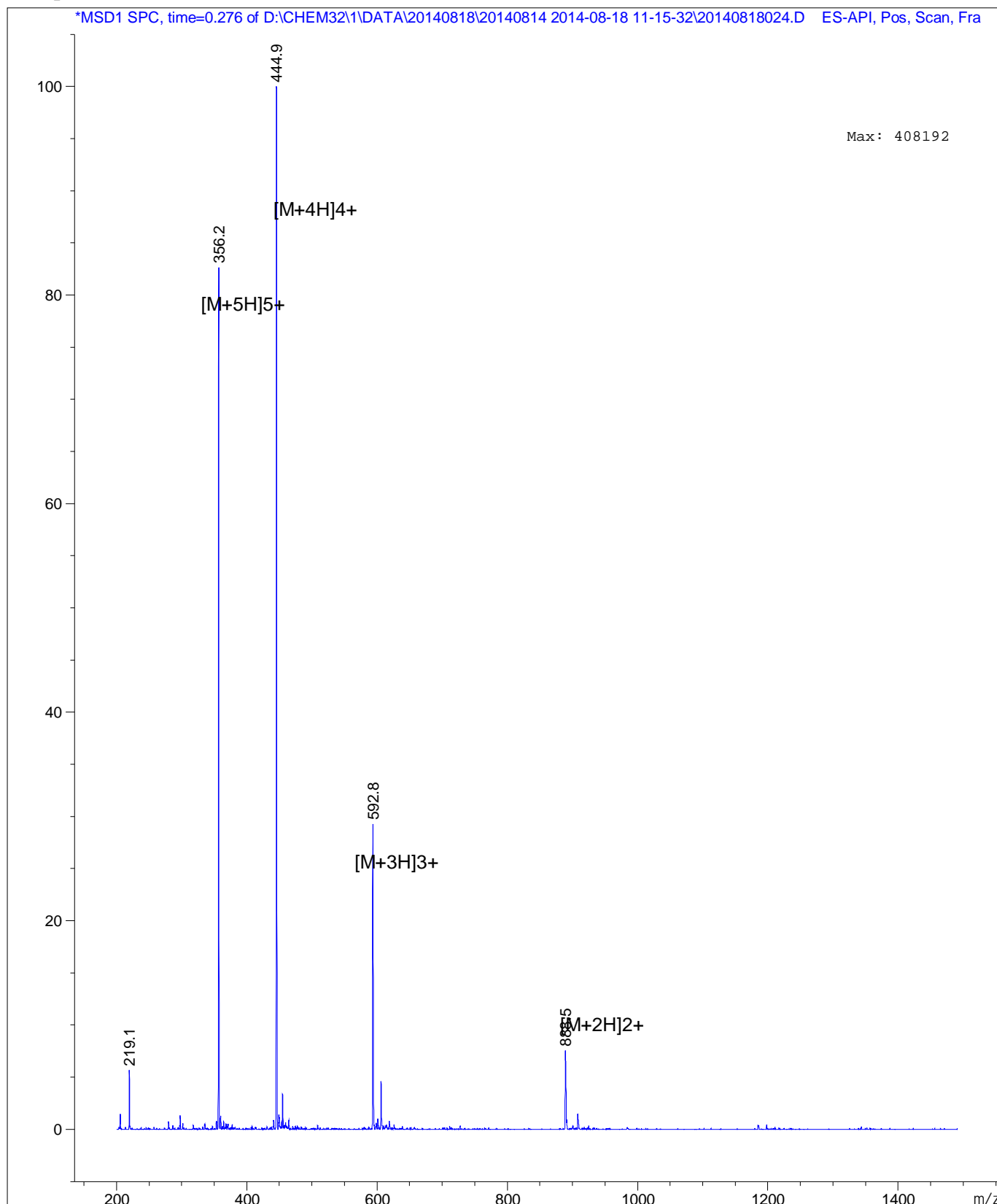
wangjun

Date:

09/24/2014

=====
Acq. Operator : liusuying Seq. Line : 24
Acq. Instrument : 5J-QC-082 Location : Vial 32
Injection Date : 8/18/2014 12:27:57 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140818\20140814 2014-08-18 11-15-32\TEST MS(200-1500)
2.
Last changed : 8/14/2014 11:53:24 AM by liusuying
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M
Last changed : 8/14/2014 11:53:24 AM by liusuying

MS Spectrum



```

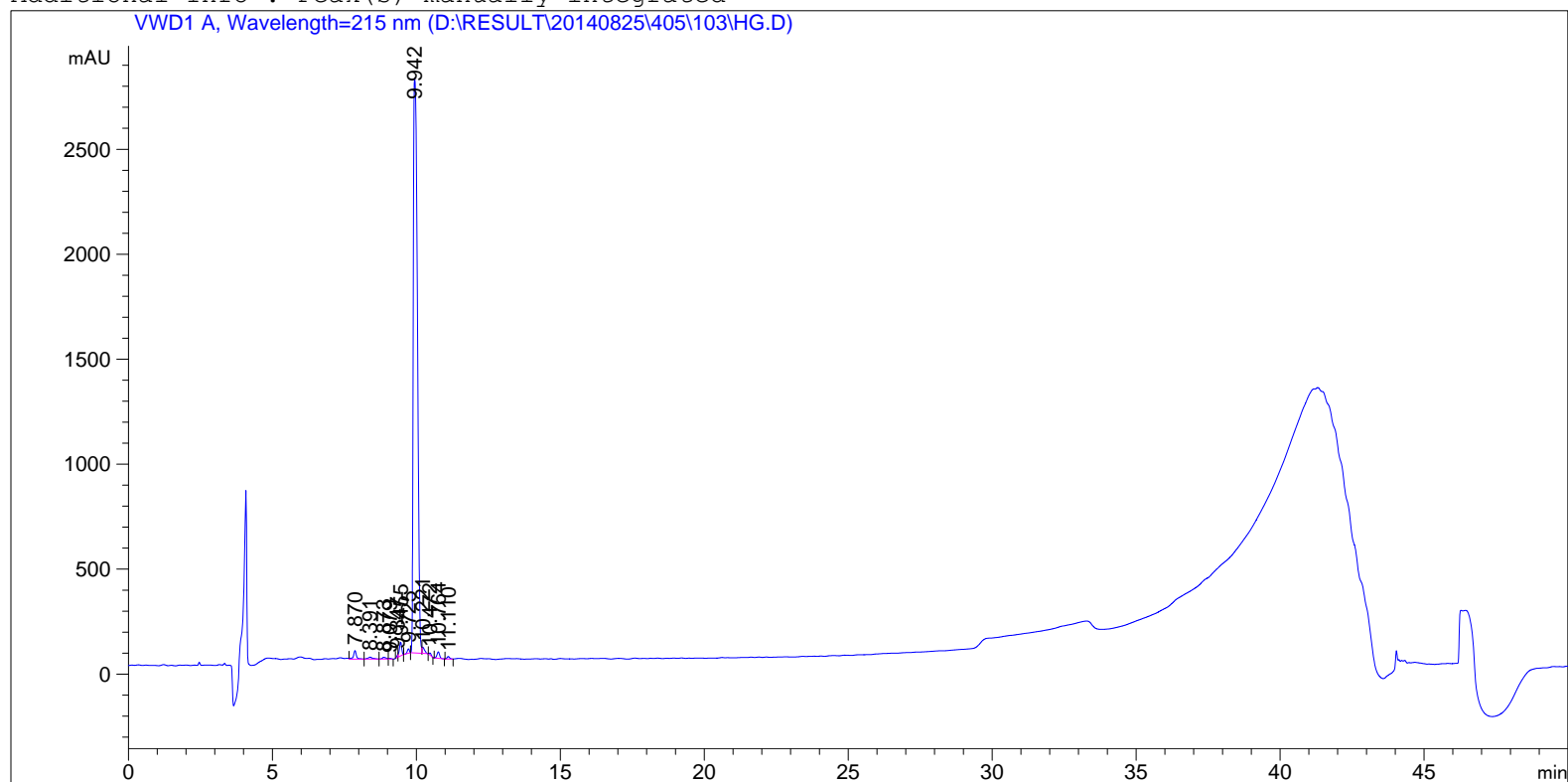
=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 1
Injection Date  : 8/7/2014 11:10:34 AM
                                           Inj Volume : Manually

Acq. Method     : E:\METHODS\10-70IN50MIN.M\10-70IN50MIN.M
Last changed    : 8/7/2014 8:21:03 AM
                  (modified after loading)

Analysis Method : C:\CHEM32\1\METHODS\WASH.M
Last changed    : 8/25/2014 1:28:06 PM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18, 5um, 4.6*250nm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA H2O
                  Mobile Phase B:0.1%TFA ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%              10     70     95        95        10        10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.870	VB	0.1063	300.22485	41.08073	1.0444
2	8.391	BB	0.1579	106.42619	9.20365	0.3702
3	8.873	BV	0.1406	81.29681	8.27307	0.2828

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
4	9.079	VB	0.0932	22.52110	3.69140	0.0783
5	9.347	BV F	0.0423	33.22997	11.99677	0.1156
6	9.455	VB	0.0858	369.04782	65.45535	1.2839
7	9.725	BB	0.0791	102.64494	20.95654	0.3571
8	9.942	BV	0.1620	2.72320e4	2738.93164	94.7357
9	10.221	VB	0.0876	180.23973	29.79283	0.6270
10	10.472	BB	0.0784	48.60702	9.88330	0.1691
11	10.764	BB	0.0966	197.56680	31.30191	0.6873
12	11.110	BB	0.0925	71.42588	11.82258	0.2485

Totals : 2.87452e4 2982.38978

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-104		
Molecular Formula	C71H112N22O22S4	Cat#	8117
Molecular Weight	1754.12	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	CWKCGKEGHQMKDCT		
Item No.	8117_140303_104		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1754.12±2.0	1753.6
3	Peptide Purity (By HPLC)	≥80%	88.5%
4	Identification(Amino Acid Composition by HPLC)	D	0.9
		E	2.1
		G	1.8
		H	1.2
		T	1.0
		C	3.0
		M	0.6
	K	3.4	
5	Peptide content	57.5%	

Quality Control By:

wangjun

Date:

09/24/2014

=====

Acq. Operator : liusuying

Seq. Line : 31

Acq. Instrument : 5J-QC-082

Location : Vial 41

Injection Date : 8/18/2014 12:49:43 PM

Inj : 1

Inj Volume : 3.0 µl

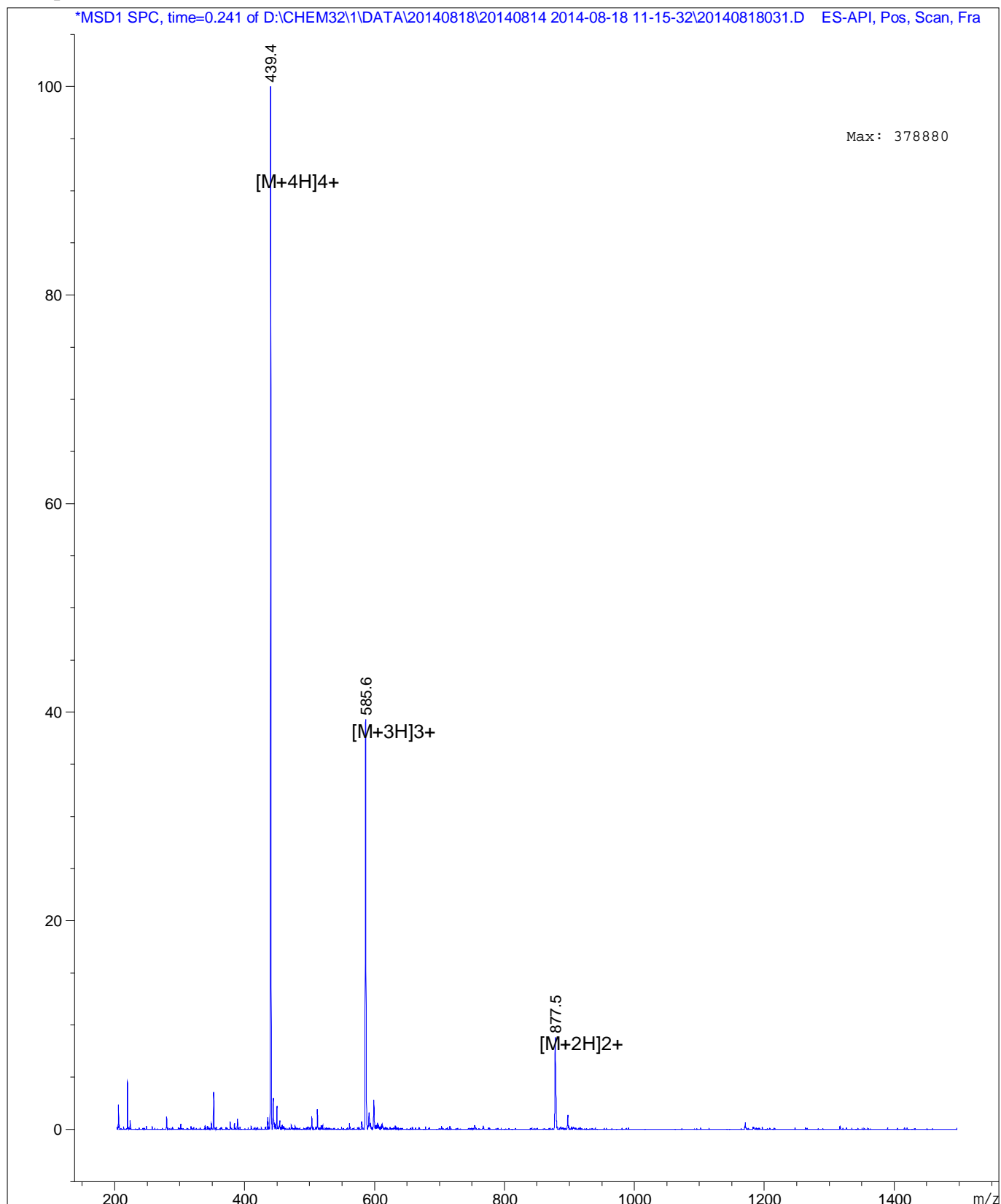
Acq. Method : D:\CHEM32\1\DATA\20140818\20140814 2014-08-18 11-15-32\TEST MS(200-1500)
2.

Last changed : 8/14/2014 11:53:24 AM by liusuying

Analysis Method : D:\METHOD\TEST MS(200-1500)2.M

Last changed : 8/14/2014 11:53:24 AM by liusuying

MS Spectrum



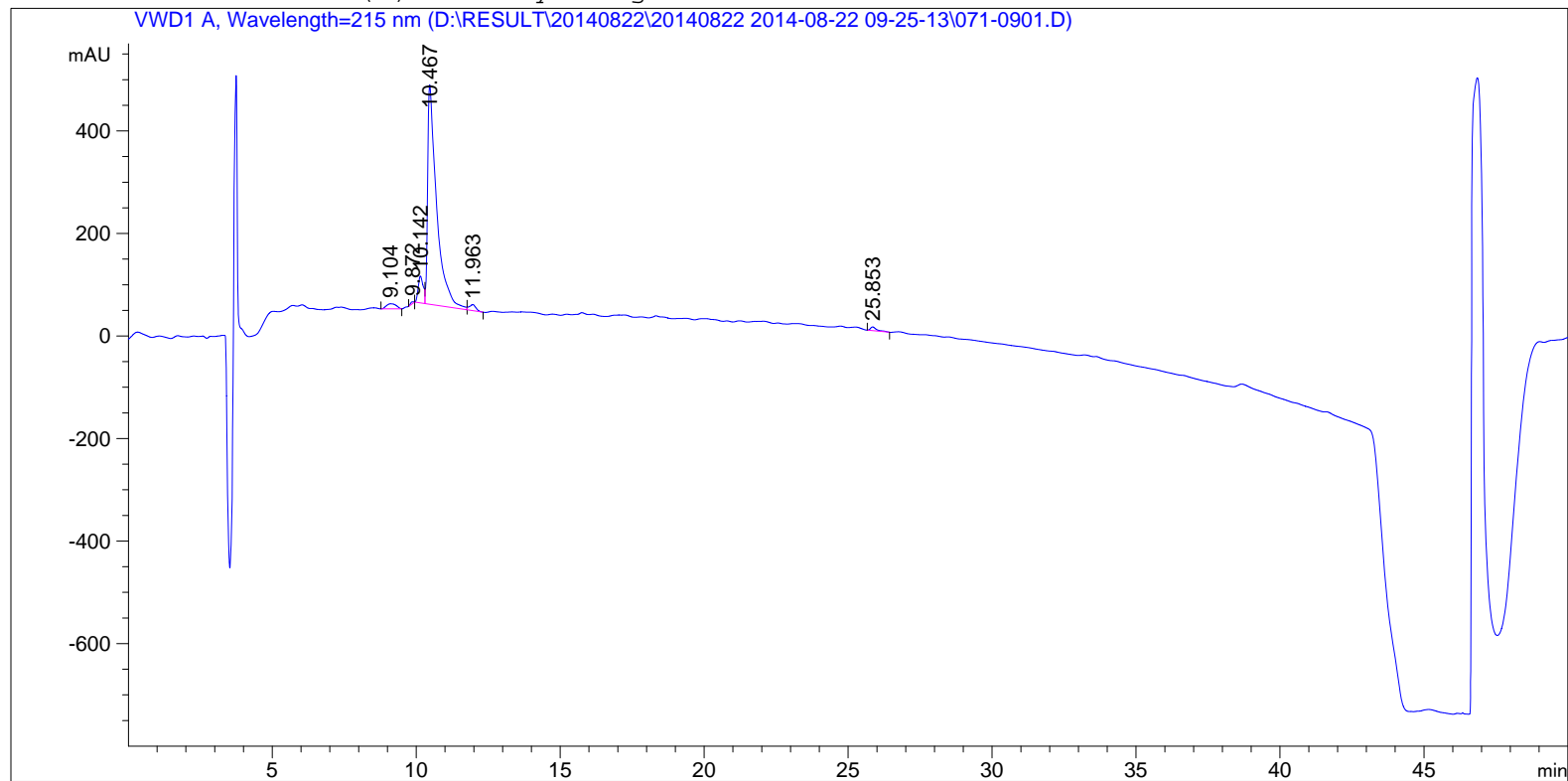
```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    9
Acq. Instrument : HPLC 1260                  Location  : Vial 71
Injection Date  : 8/22/2014 4:14:28 PM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140822\20140822 2014-08-22 09-25-13\KJ100401.M
Last changed    : 8/22/2014 9:25:13 AM by SYSTEM
Analysis Method  : D:\RESULT\20140822\20140822 2014-08-22 09-25-13\KJ100401.M (Sequence Method)
Last changed    : 8/25/2014 10:06:34 AM by SYSTEM
                  (modified after loading)

Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution        :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	9.104	BB	0.3447	238.55299	9.98659	2.2878
2	9.872	BB	0.1301	28.05406	3.40598	0.2690
3	10.142	BV	0.1781	638.07910	52.37834	6.1194
4	10.467	VV	0.2944	9222.88379	427.93289	88.4508

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	11.963	VB	0.2249	186.45625	11.89501	1.7882
6	25.853	BB	0.2224	113.10735	7.35720	1.0847

Totals : 1.04271e4 512.95602

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-105		
Molecular Formula	C67H112N24O25S2	Cat#	8117
Molecular Weight	1717.97	Lot#	140303
Manufacturing Date	09/09/2014	Test Date	09/09/2014
Sequence	GKEGHQMKDCTERQA		
Item No.	8117_140303_105		
	TEST	SPECIFICATION	RESULT
1	Appearance	<i>White or slightly yellowish</i>	<i>Complies</i>
2	Molecular Weight	1717.97 ±2.0	1717.2
3	Peptide Purity (By HPLC)	≥80%	96.0%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		E	3.9
		G	2.3
		H	1.0
		R	1.2
		T	1.0
		A	1.0
		C	0.6
		M	0.7
K	2.1		
5	Peptide content	61.9%	

Quality Control By:

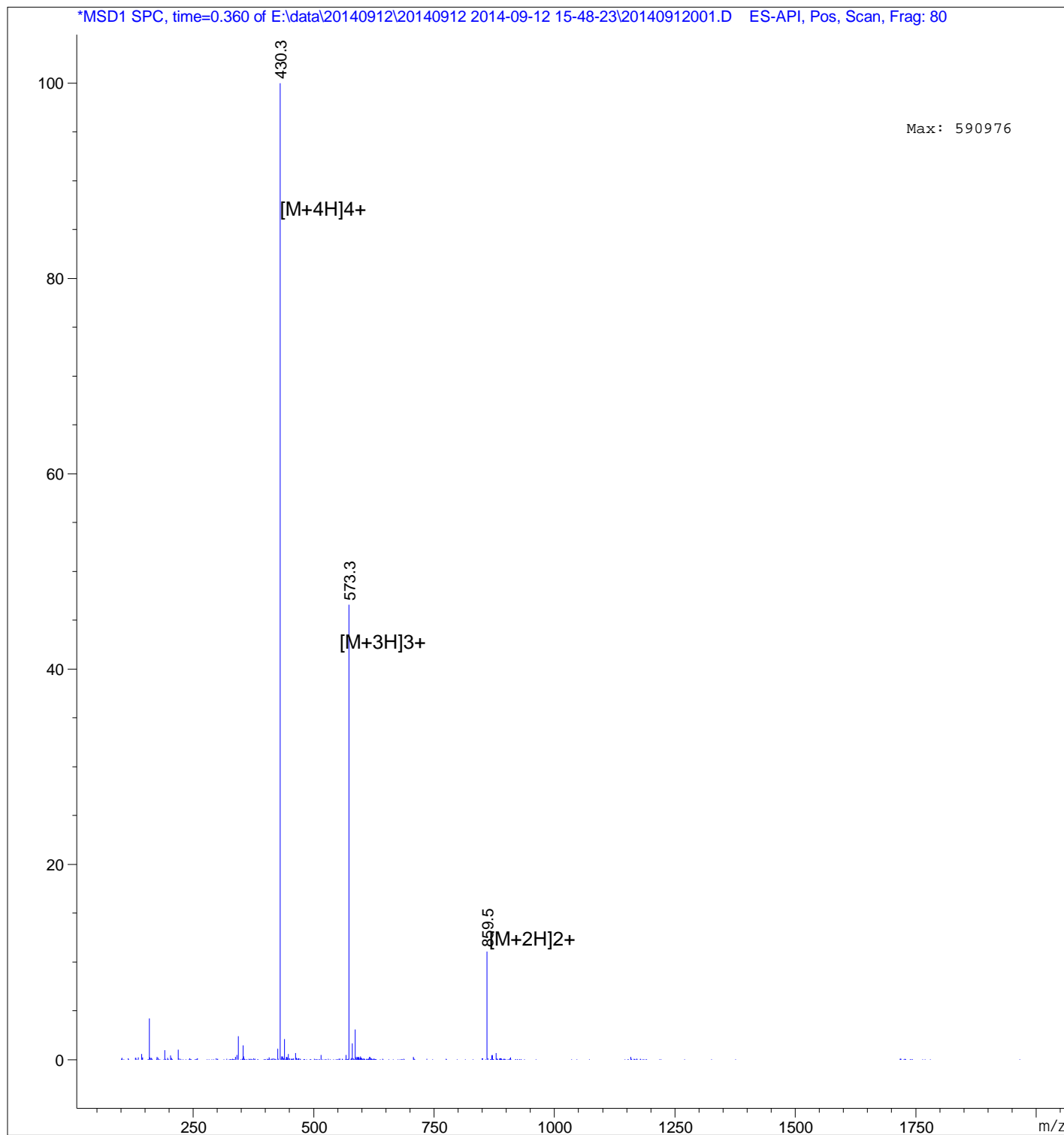
wangjun

Date:

09/09/2014

```
=====
Acq. Operator   : SYSTEM                               Seq. Line :    1
Acq. Instrument : Agilent6120                           Location  :   31
Injection Date  : 9/12/2014 3:49:57 PM                  Inj       :    1
                                                    Inj Volume: 5.000 µl
Acq. Method     : E:\data\20140912\20140912 2014-09-12 15-48-23\LCMS.M
Last changed    : 9/12/2014 3:48:23 PM by SYSTEM
Analysis Method : E:\data\20140912\20140912 2014-09-12 15-48-23\LCMS.M (Sequence Method)
Last changed    : 9/12/2014 3:52:33 PM by SYSTEM
                  (modified after loading)
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MS Spectrum



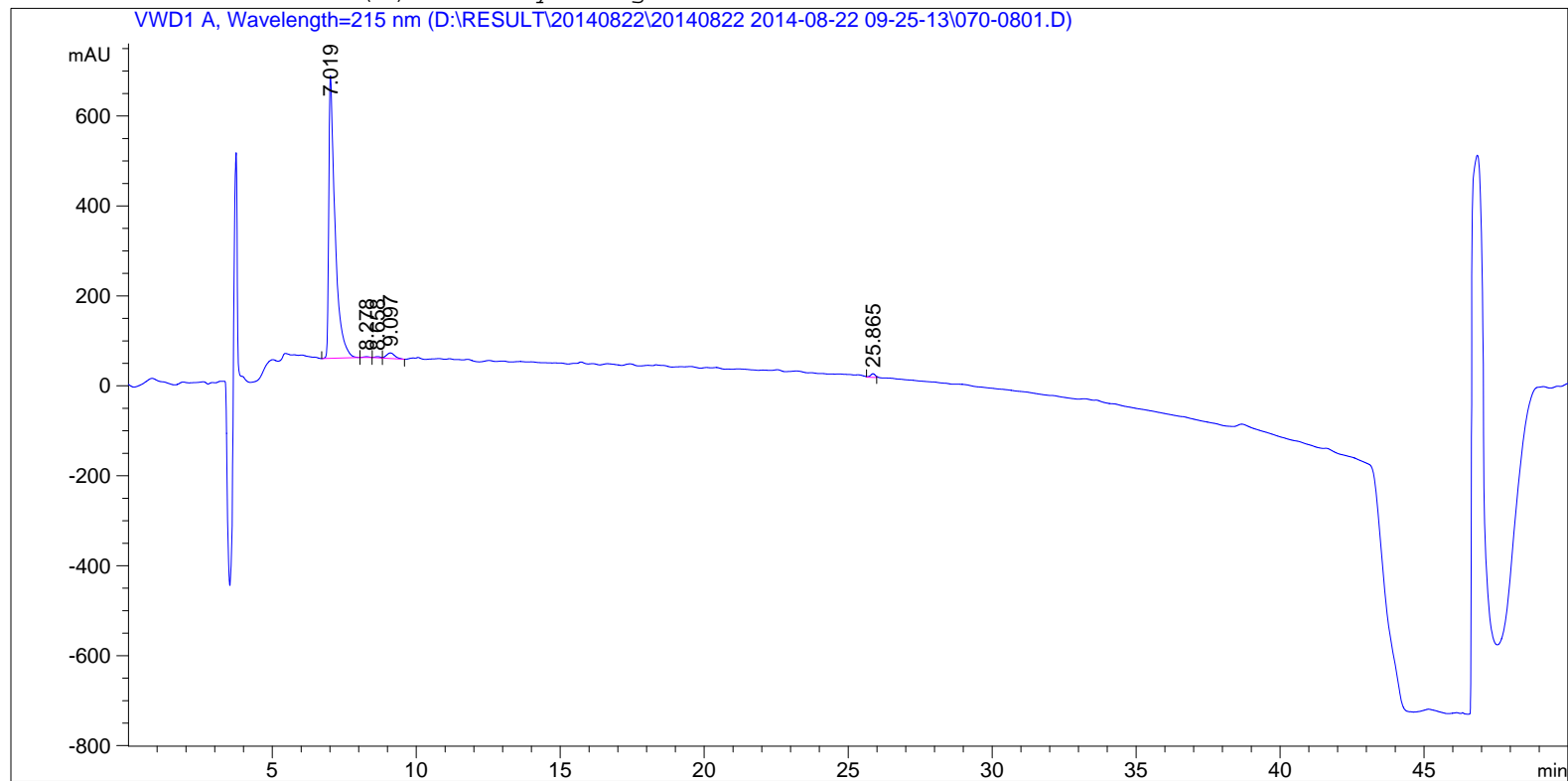
```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    8
Acq. Instrument : HPLC 1260                  Location  : Vial 70
Injection Date  : 8/22/2014 3:23:28 PM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140822\20140822 2014-08-22 09-25-13\KJ100401.M
Last changed    : 8/22/2014 9:25:13 AM by SYSTEM
Analysis Method : D:\RESULT\20140822\20140822 2014-08-22 09-25-13\KJ100401.M (Sequence Method)
Last changed    : 8/25/2014 10:06:34 AM by SYSTEM
                 (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                 Rate:1.0ml/min
                 Mobile Phase A:0.1%TFA+H2O
                 Mobile Phase B:0.1%TFA+ACN
                 time(min)      0      40      40.3      43      43.3      50
                 B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.019	BB	0.2099	9534.79785	628.69556	96.0015
2	8.278	BB	0.2216	22.54083	1.72368	0.2270
3	8.658	BV	0.2057	32.38240	2.50722	0.3260
4	9.097	VB	0.3102	246.89557	12.35131	2.4859

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	25.865	MM R	0.1936	95.30511	8.20419	0.9596

Totals : 9931.92176 653.48195

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-106		
Molecular Formula	C73H116N24O24S2	Cat#	8117
Molecular Weight	1778.07	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	HQMKDCTERQANFLG		
Item No.	8117_140303_106		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1778.07±2.0	1777.5
3	Peptide Purity (By HPLC)	≥80%	80.8%
4	Identification(Amino Acid Composition by HPLC)	D	2.0
		E	2.7
		G	1.2
		H	1.0
		R	1.2
		T	1.0
		A	1.0
		C	0.9
		M	0.8
		K	1.0
	L	1.0	
	F	1.1	
5	Peptide content	74.7%	

Quality Control By:

wangjun

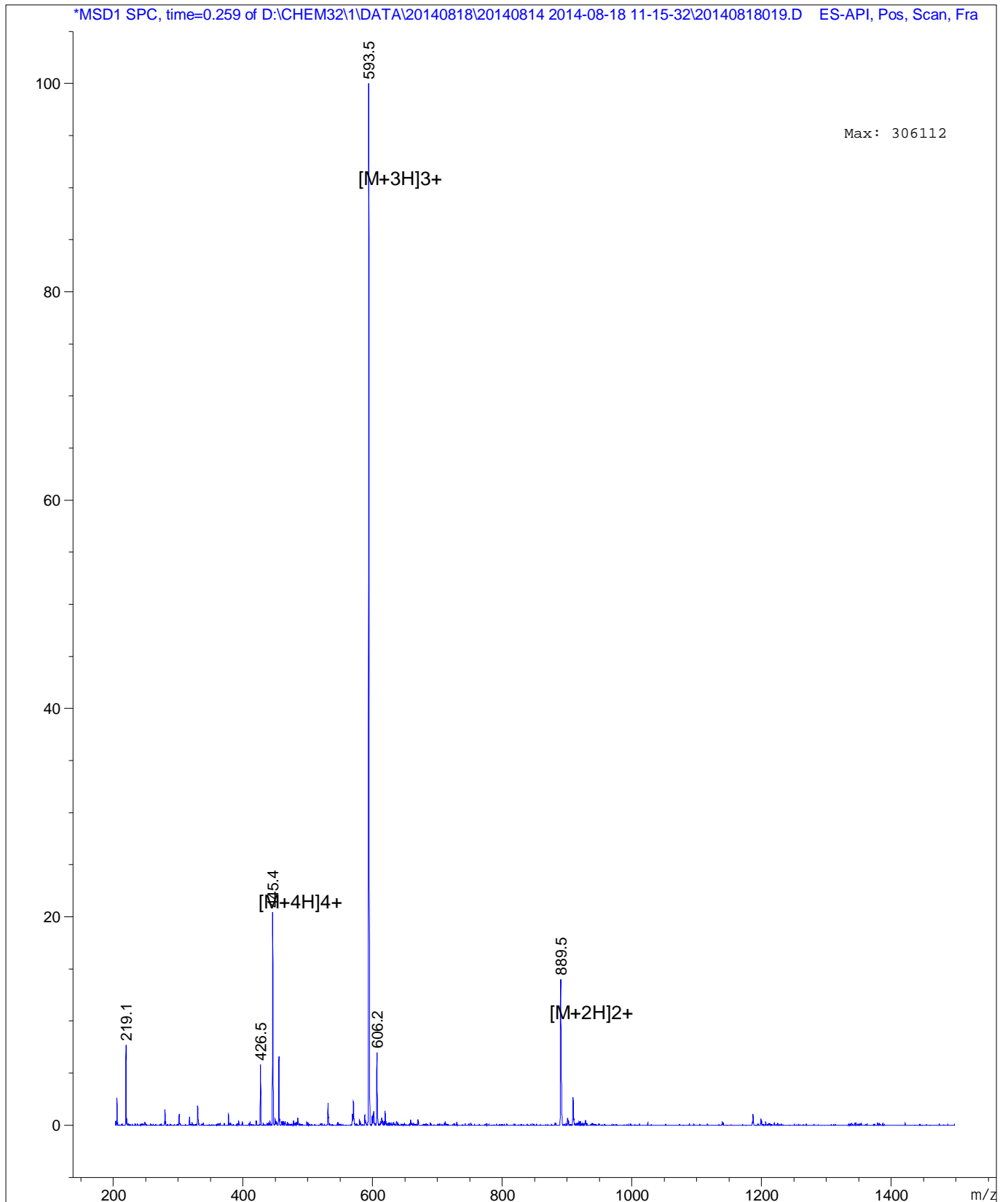
Date:

09/11/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 19
Acq. Instrument	: 5J-QC-082	Location	: Vial 25
Injection Date	: 8/18/2014 12:12:28 PM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\20140818\20140814 2014-08-18 11-15-32\TEST MS(200-1500) 2.		
Last changed	: 8/14/2014 11:53:24 AM by liusuying		
Analysis Method	: D:\METHOD\TEST MS(200-1500)2.M		
Last changed	: 8/14/2014 11:53:24 AM by liusuying		

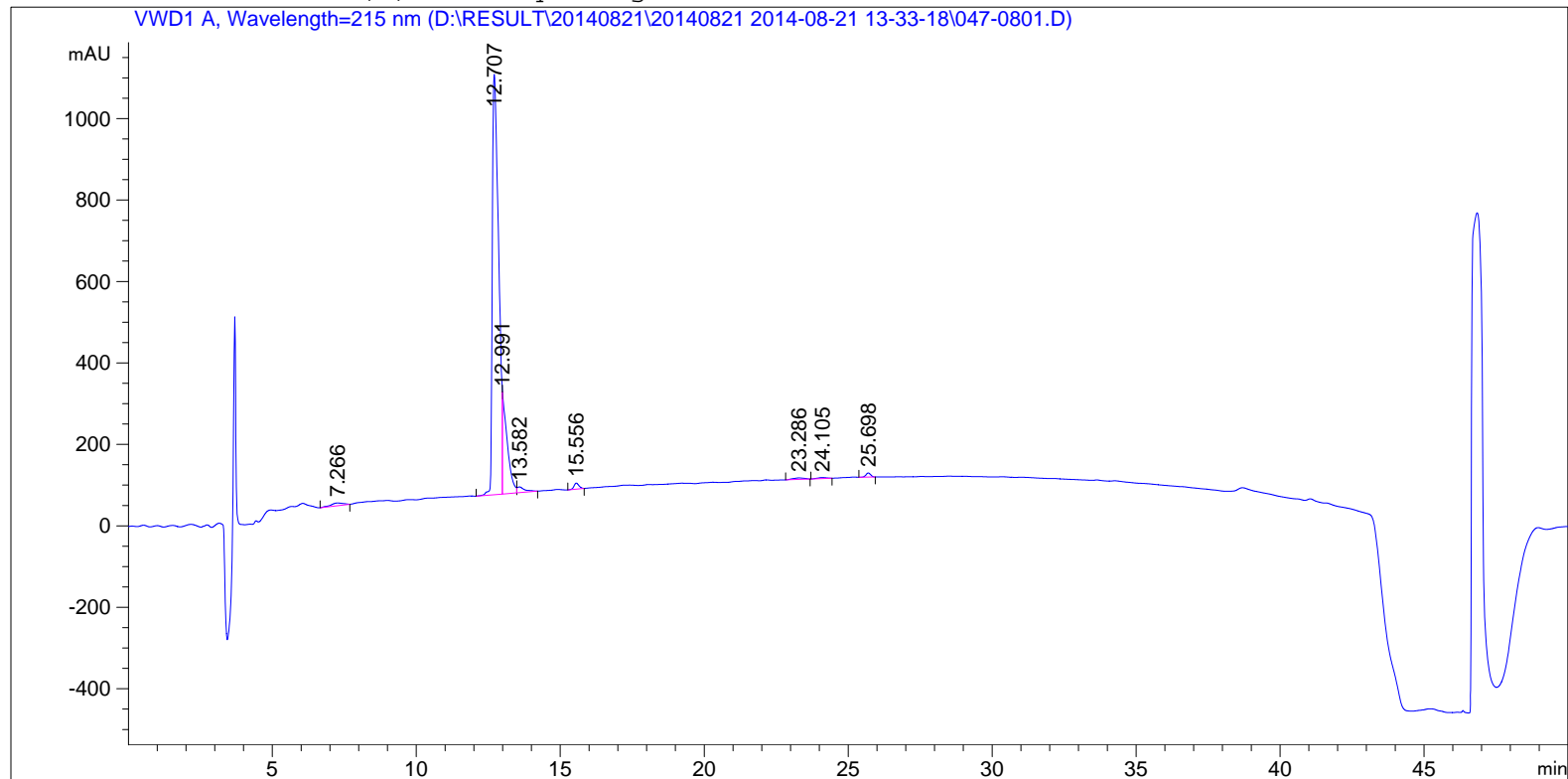
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    8
Acq. Instrument : HPLC 1260                  Location  : Vial 47
Injection Date  : 8/21/2014 7:31:03 PM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\20140821\20140821 2014-08-21 13-33-18\KJ100401.M (Sequence Method)
Last changed    : 8/21/2014 1:33:18 PM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.266	BB	0.4522	198.13925	6.62047	1.0208
2	12.707	MF R	0.2526	1.56775e4	1031.93213	80.7697
3	12.991	FM R	0.1894	2846.83936	250.54630	14.6667
4	13.582	VB	0.2501	249.97079	14.01474	1.2878
5	15.556	BB	0.1831	175.80553	14.84880	0.9057
6	23.286	BB	0.3703	97.17583	3.66586	0.5006
7	24.105	BB	0.2983	51.23587	2.48784	0.2640

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
8	25.698	BB	0.1760	113.46451	10.10571	0.5846

Totals : 1.94102e4 1334.22184

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-107		
Molecular Formula	C79H120N22O23S	Cat#	8117
Molecular Weight	1778.09	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	DCTERQANFLGKIWP		
Item No.	8117_140303_107		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1778.09±2.0	1777.8
3	Peptide Purity (By HPLC)	≥80%	86.2%
4	Identification(Amino Acid Composition by HPLC)	D	2.1
		E	2.0
		G	1.3
		R	1.1
		T	1.0
		A	1.0
		P	1.0
		K	1.0
		I	0.9
		L	1.0
F	1.1		
5	Peptide content	72.4%	

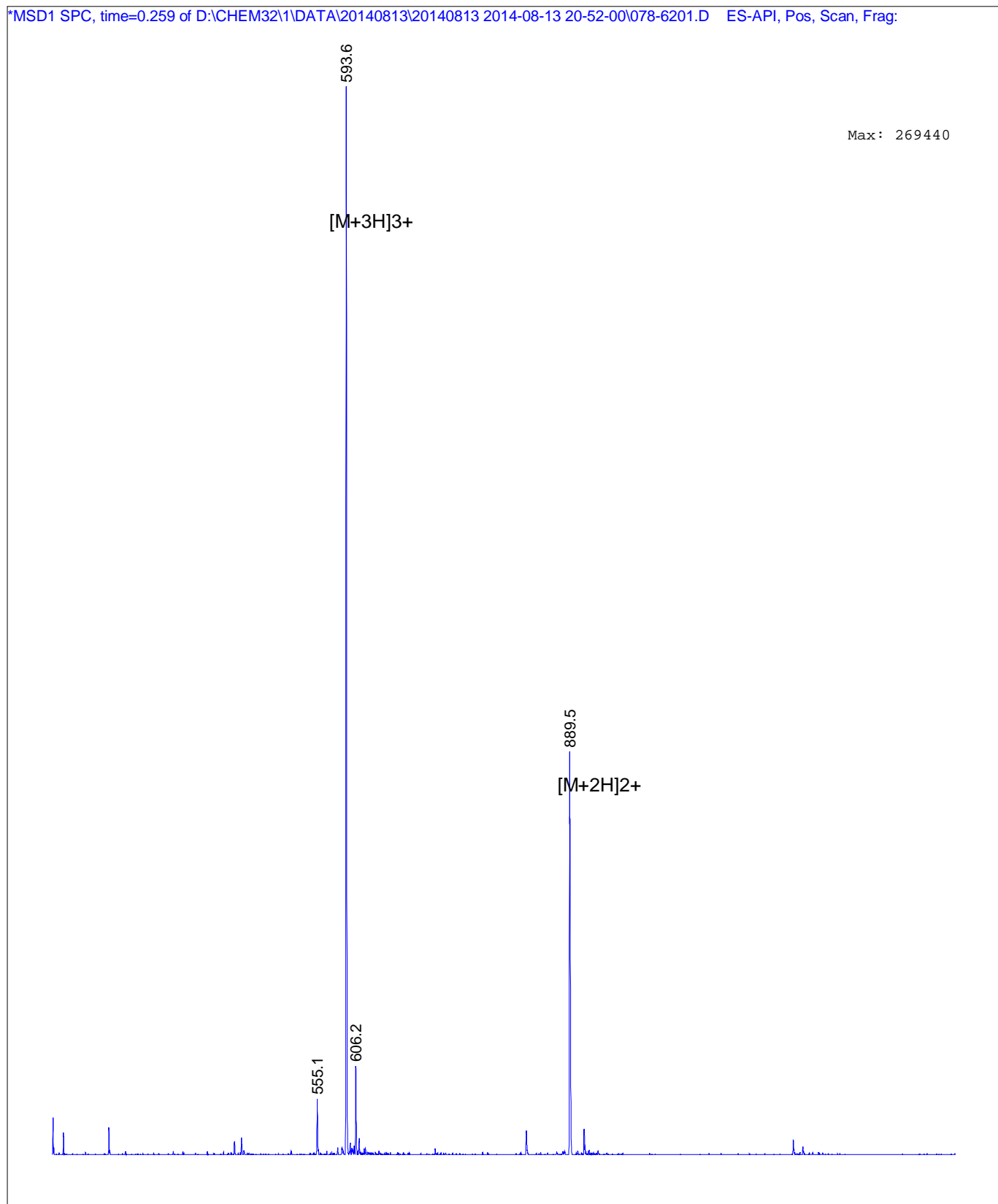
Quality Control By: wangjun

Date: 09/11/2014

```

=====
Acq. Operator   : liusuying                               Seq. Line :   62
Acq. Instrument : 5J-QC-082                               Location  : Vial 78
Injection Date  : 8/14/2014 12:01:09 AM                    Inj       :    1
                                                    Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500)
                2.
Last changed    : 8/11/2014 1:22:13 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed    : 4/18/2014 11:29:00 AM by YZW
  
```

MS Spectrum



```

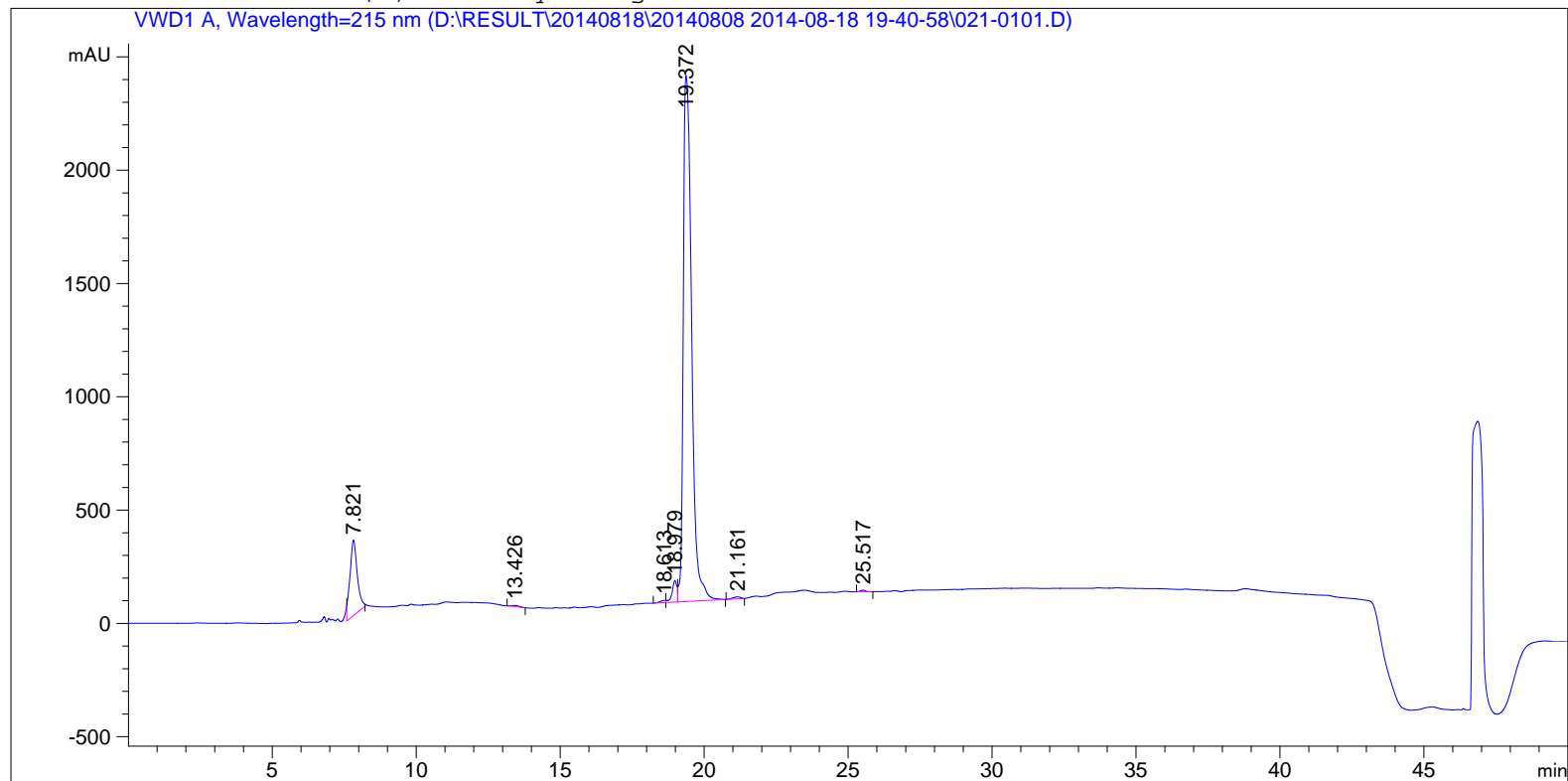
=====
Acq. Operator   : SYSTEM                      Seq. Line :    1
Acq. Instrument : HPLC 1260                  Location  : Vial 21
Injection Date  : 8/18/2014 7:41:53 PM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M
Last changed    : 8/18/2014 7:45:15 PM by SYSTEM
                 (modified after loading)

Analysis Method : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M (Sequence Method)
Last changed    : 8/18/2014 7:40:58 PM by SYSTEM

Method Info     : Cloumn:Agilent HC-C18,5um,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By       : Signal
Multiplier      : 1.0000
Dilution        : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.821	MM R	0.2960	5926.29736	333.65787	10.9515
2	13.426	BB	0.2708	96.66128	5.29855	0.1786
3	18.613	BV	0.1869	125.05546	9.80032	0.2311
4	18.979	VV	0.1621	1079.27417	95.33770	1.9944

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	19.372	VB	0.3165	4.66375e4	2320.50781	86.1836
6	21.161	BB	0.2911	160.61784	8.63270	0.2968
7	25.517	MM R	0.2089	88.73503	7.08102	0.1640

Totals : 5.41141e4 2780.31597

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-108		
Molecular Formula	C80H123N25O19	Cat#	8117
Molecular Weight	1739.1	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	RQANFLGKIWPSHKG		
Item No.	8117_140303_108		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1739.1±2.0	1738.8
3	Peptide Purity (By HPLC)	≥80%	97.5%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	1.2
		E	1.0
		G	1.9
		H	1.1
		R	1.1
		A	1.0
		P	1.0
		K	2.1
		I	0.8
	L	1.0	
	F	1.0	
5	Peptide content	80.8%	

Quality Control By:

wangjun

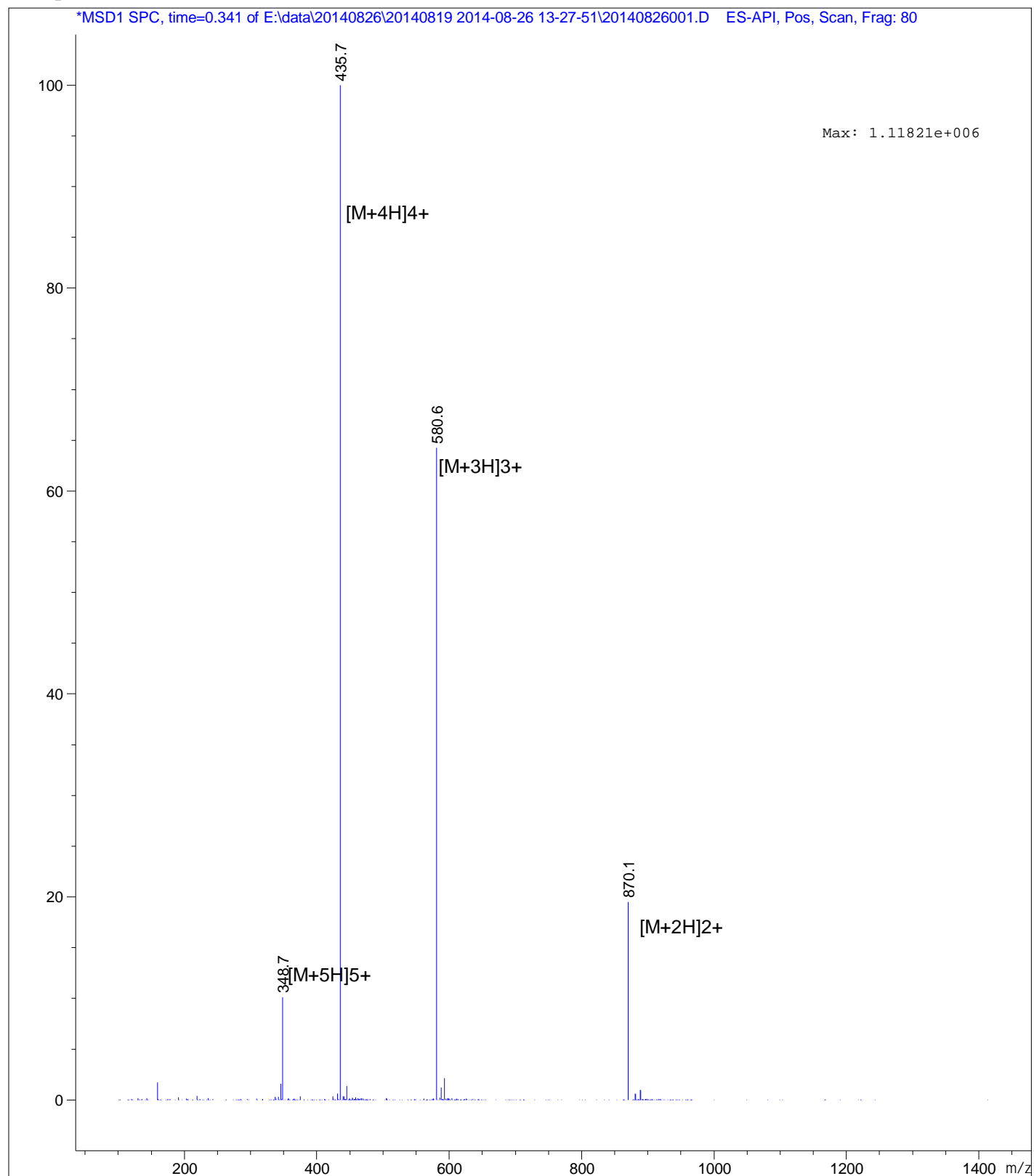
Date:

09/24/2014

```

=====
Acq. Operator   : SYSTEM                               Seq. Line :    1
Acq. Instrument : Agilent6120                         Location  :   41
Injection Date  : 8/26/2014 1:29:19 PM                Inj       :    1
                                                    Inj Volume: 5.000 µl
Method          : E:\data\20140826\20140819 2014-08-26 13-27-51\LCMS.M (Sequence Method)
Last changed    : 8/26/2014 1:27:51 PM by SYSTEM
    
```

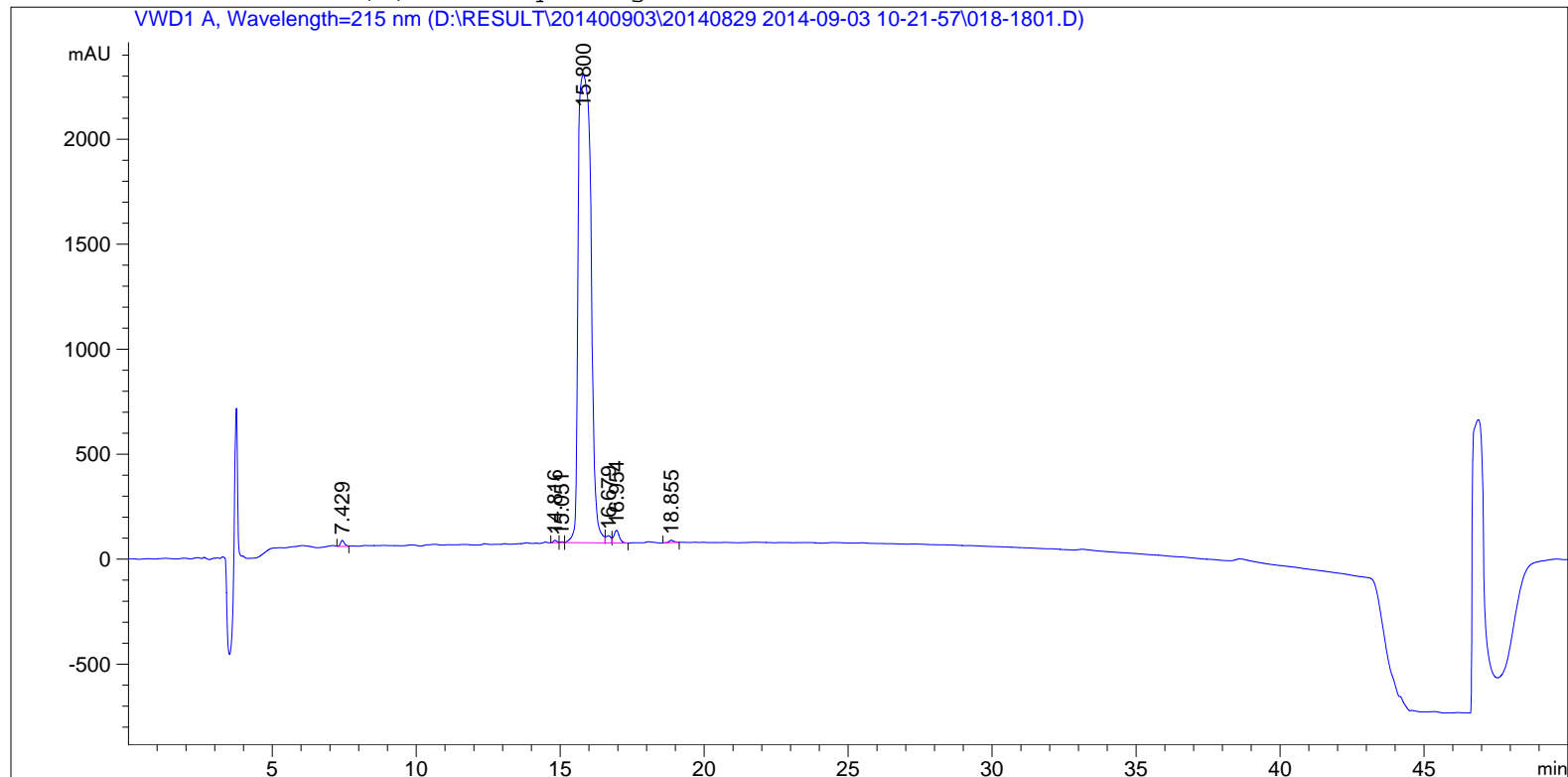
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   18
Acq. Instrument : HPLC 1260                           Location  : Vial 18
Injection Date  : 9/4/2014 12:49:11 AM                 Inj       :    1
                                                    Inj Volume: 20.000 µl
Method         : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M (Sequence Method)
Last changed   : 9/3/2014 7:20:03 PM by SYSTEM
Method Info    : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
=====
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.429	MM R	0.1613	282.55887	29.19717	0.4037
2	14.816	BV	0.1241	91.04475	11.53202	0.1301
3	15.051	VB	0.1003	23.79427	3.78725	0.0340
4	15.800	BV	0.4952	6.82735e4	2229.86108	97.5340
5	16.679	VV	0.1763	423.31625	33.99139	0.6047
6	16.954	VB	0.1960	781.31799	59.97631	1.1162
7	18.855	BB	0.1632	124.19624	11.04096	0.1774

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
Totals :				6.99998e4	2379.38617	

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-109		
Molecular Formula	C79H120N24O18	Cat#	8117
Molecular Weight	1694.06	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	FLGKIWPSHKGRPGN		
Item No.	8117_140303_109		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1694.06±2.0	1694.0
3	Peptide Purity (By HPLC)	≥80%	87.3%
4	Identification(Amino Acid Composition by HPLC)	D	1.4
		S	1.1
		G	3.1
		H	1.1
		R	1.2
		P	2.3
		K	2.2
		I	0.8
	L	0.8	
	F	1.1	
5	Peptide content	67.7%	

Quality Control By:

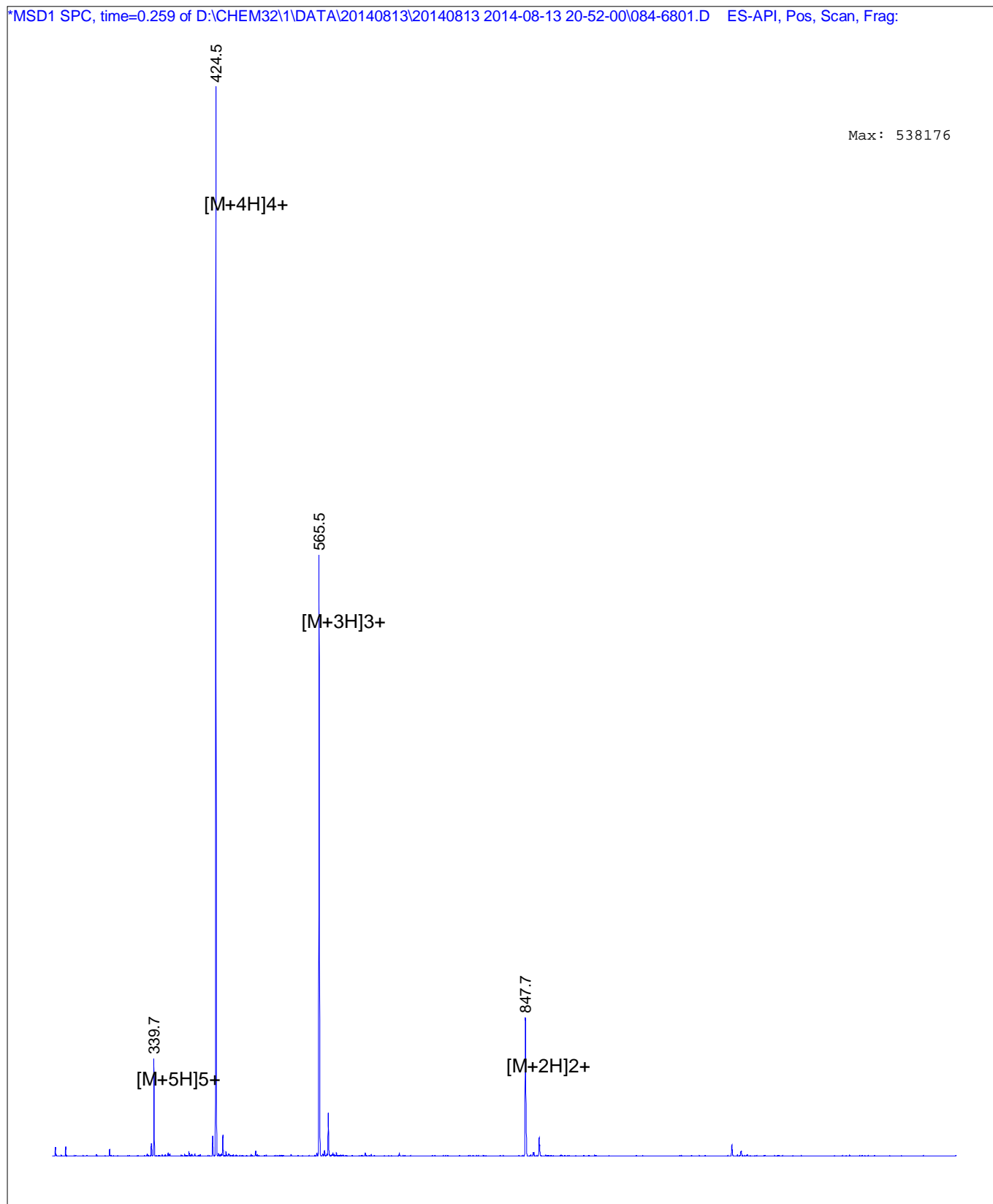
wangjun

Date:

09/24/2014

=====
Acq. Operator : liusuying Seq. Line : 68
Acq. Instrument : 5J-QC-082 Location : Vial 84
Injection Date : 8/14/2014 12:19:45 AM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500)
2.
Last changed : 8/11/2014 1:22:13 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed : 4/18/2014 11:29:00 AM by YZW

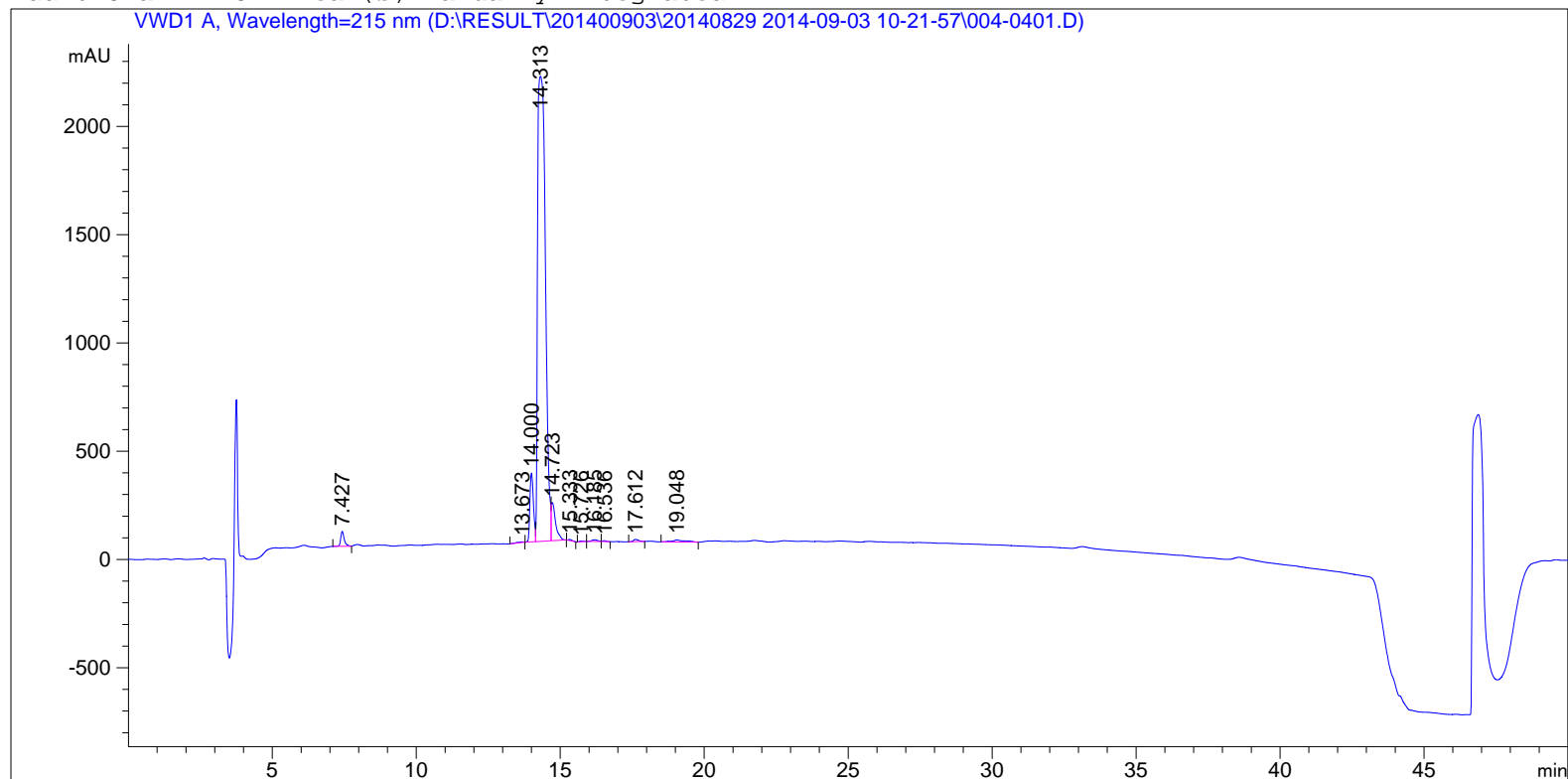
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :    4
Acq. Instrument : HPLC 1260                           Location  : Vial 4
Injection Date  : 9/3/2014 12:55:42 PM                Inj       :    1
                                                    Inj Volume: 20.000 µl
Acq. Method     : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M
Last changed    : 9/3/2014 10:21:57 AM by SYSTEM
Analysis Method : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M (Sequence Method)
Last changed    : 9/3/2014 7:20:03 PM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.427	MM R	0.1400	577.52130	68.75005	1.2487
2	13.673	BB	0.2278	55.18005	3.20640	0.1193
3	14.000	BV	0.1349	2725.07837	318.21329	5.8921
4	14.313	VV	0.3032	4.03558e4	2148.11182	87.2567
5	14.723	VB	0.1544	1864.67920	176.30200	4.0318

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
6	15.333	BB	0.1481	50.60632	5.22032	0.1094
7	15.726	BB	0.1338	28.23865	3.30230	0.0611
8	16.185	BV	0.2256	117.07493	7.86708	0.2531
9	16.536	VB	0.1334	38.76974	4.29096	0.0838
10	17.612	BB	0.1947	127.61504	10.29031	0.2759
11	19.048	BB	0.4001	308.95200	9.71204	0.6680

Totals : 4.62496e4 2755.26657

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-110		
Molecular Formula	C79H118N24O20	Cat#	8117
Molecular Weight	1724.04	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	IWPSHKGRPGNFLQS		
Item No.	8117_140303_110		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1724.04±2.0	1723.5
3	Peptide Purity (By HPLC)	≥80%	97.9%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	1.8
		E	1.1
		G	1.9
		H	1.0
		R	1.0
		P	1.9
		K	1.1
		I	1.0
		L	1.0
F	0.9		
5	Peptide content	86.0%	

Quality Control By:

wangjun

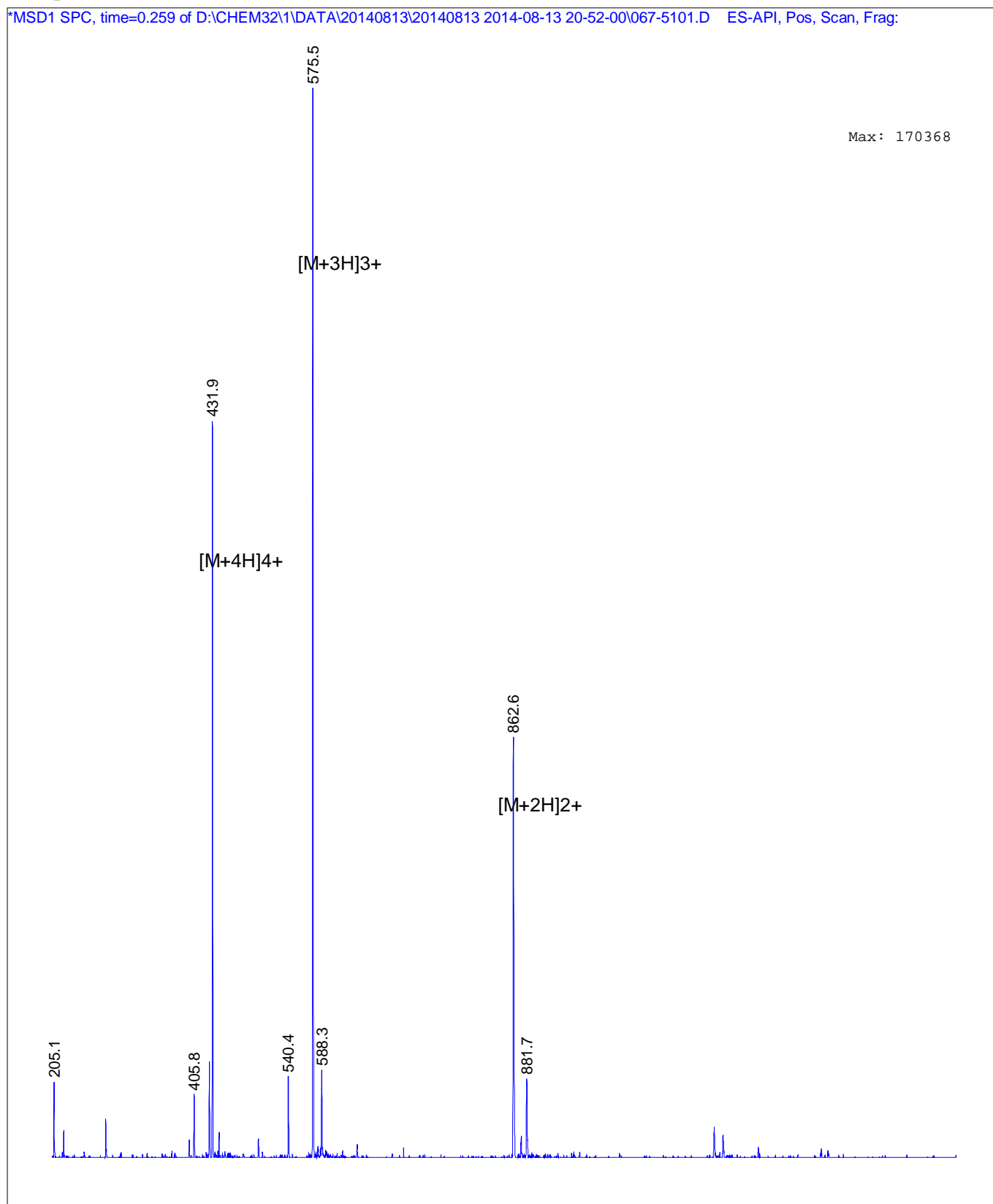
Date:

09/11/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 51
Acq. Instrument	: 5J-QC-082	Location	: Vial 67
Injection Date	: 8/13/2014 11:26:48 PM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500) 2.		
Last changed	: 8/11/2014 1:22:13 PM by liusuying		
Analysis Method	: D:\METHOD\TEST MS(500-15000).M		
Last changed	: 4/18/2014 11:29:00 AM by YZW		

MS Spectrum



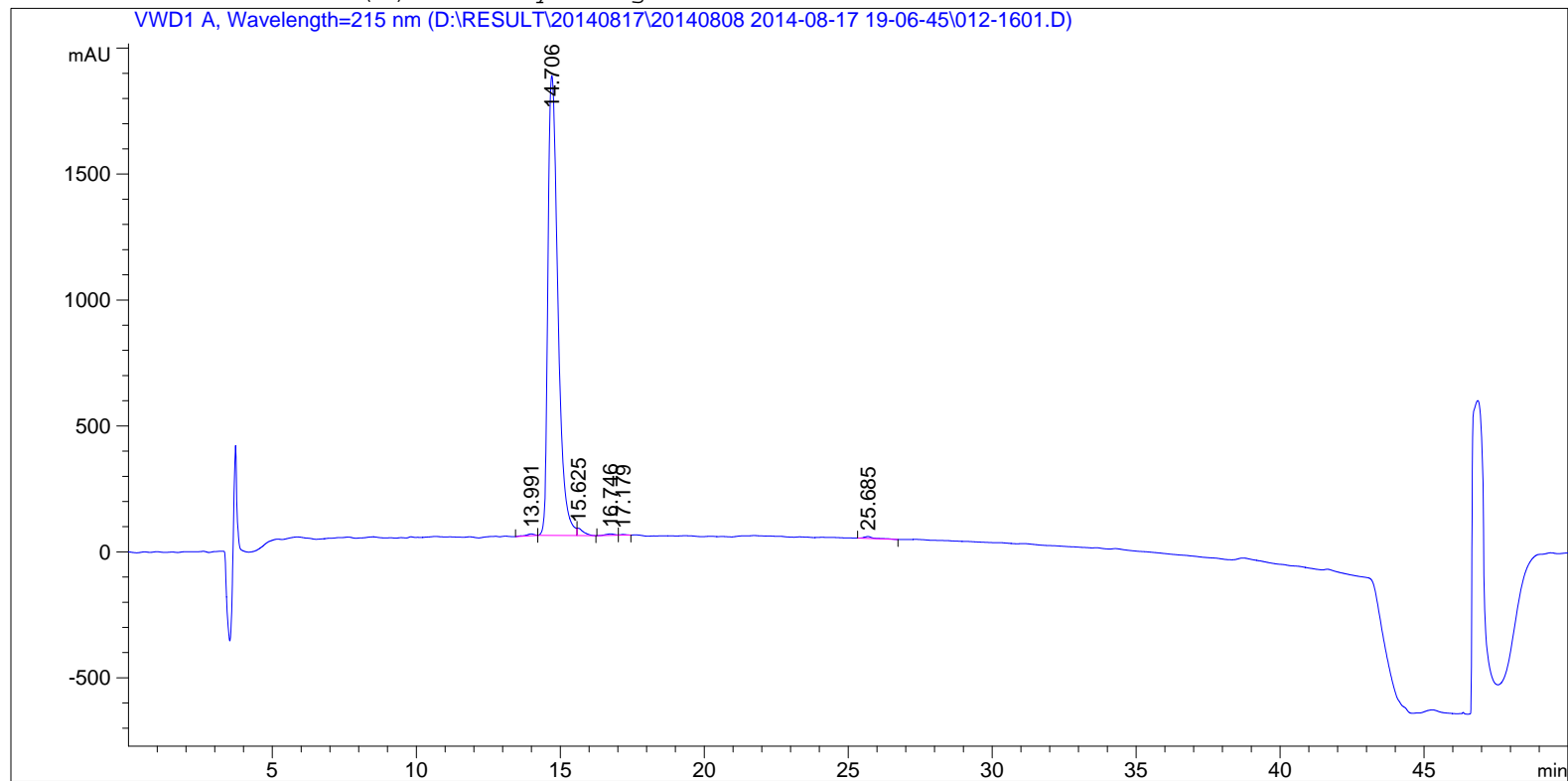
```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   16
Acq. Instrument : HPLC 1260                           Location  : Vial 12
Injection Date  : 8/18/2014 7:52:03 AM                Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method    : D:\RESULT\20140817\20140808 2014-08-17 19-06-45\KJ100401.M
Last changed   : 8/17/2014 7:06:45 PM by SYSTEM
Analysis Method: D:\RESULT\20140817\20140808 2014-08-17 19-06-45\KJ100401.M (Sequence Method)
Last changed   : 8/18/2014 10:23:47 AM by SYSTEM
                (modified after loading)

Method Info    : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                Rate:1.0ml/min
                Mobile Phase A:0.1%TFA+H2O
                Mobile Phase B:0.1%TFA+ACN
                time(min)      0      40      40.3      43      43.3      50
                B%            10      70      95      95      10      10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	13.991	BB	0.2771	140.55641	7.12723	0.3125
2	14.706	BV	0.3755	4.40413e4	1825.51855	97.9056
3	15.625	VB	0.2164	446.47409	29.03692	0.9925
4	16.746	BV	0.3429	125.00584	5.88216	0.2779

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	17.179	VB	0.2149	38.98471	2.79132	0.0867
6	25.685	BB	0.3423	191.11684	7.78763	0.4249

Totals : 4.49834e4 1878.14383

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-111		
Molecular Formula	C75H118N26O21	Cat#	8117
Molecular Weight	1720.0	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	HKGRPGNFLQSRPEP		
Item No.	8117_140303_111		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1720.0±2.0	1719.6
3	Peptide Purity (By HPLC)	≥80%	96.0%
4	Identification(Amino Acid Composition by HPLC)	D	0.9
		S	1.2
		E	2.0
		G	2.0
		H	1.0
		R	2.1
		P	2.9
		K	1.0
	L	1.0	
	F	1.0	
5	Peptide content	70.5%	

Quality Control By:

wangjun

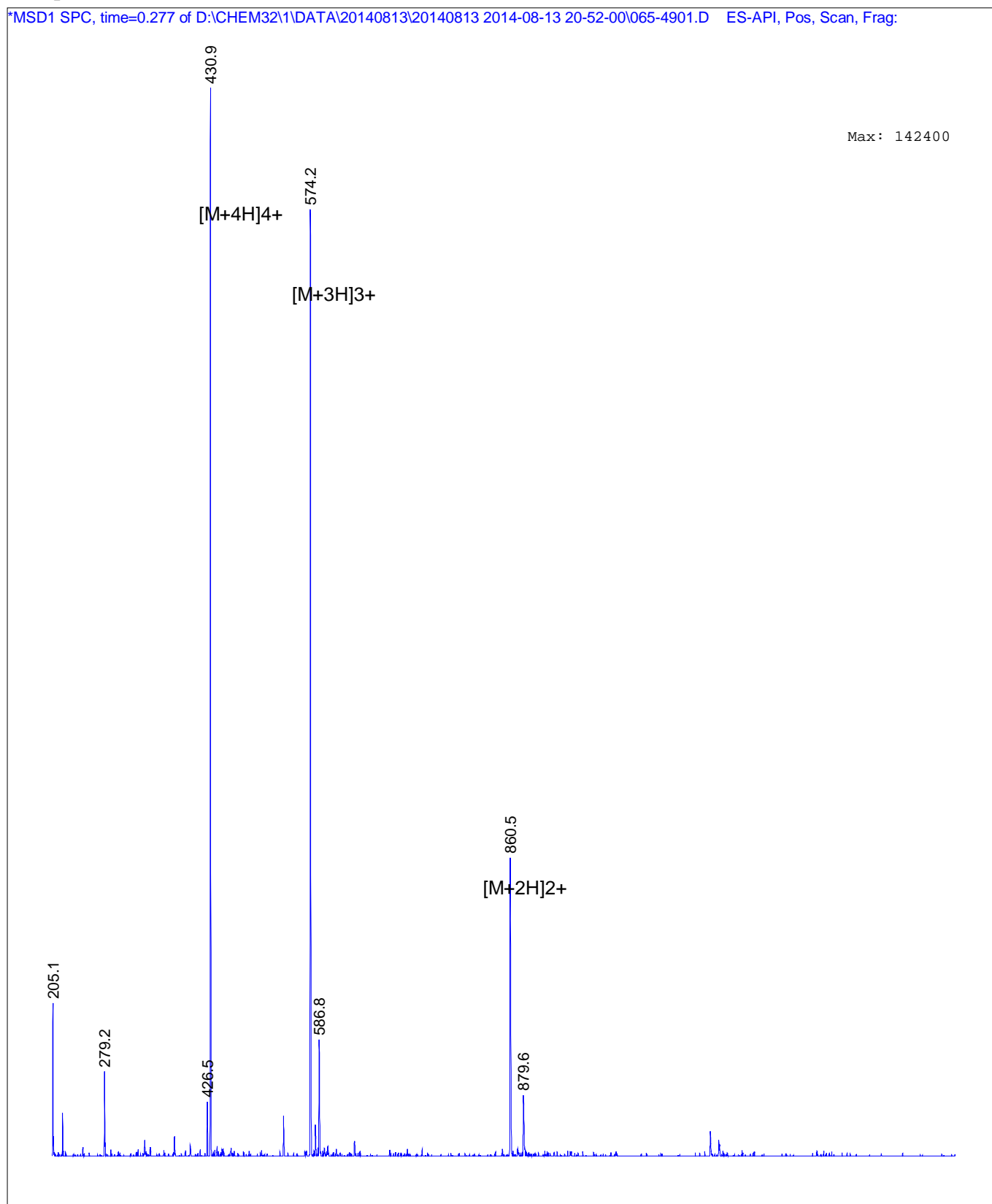
Date:

09/24/2014

```

=====
Acq. Operator   : liusuying                     Seq. Line : 49
Acq. Instrument : 5J-QC-082                     Location  : Vial 65
Injection Date  : 8/13/2014 11:20:35 PM         Inj       : 1
                                                    Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500)
                : 2.
Last changed    : 8/11/2014 1:22:13 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed    : 4/18/2014 11:29:00 AM by YZW
    
```

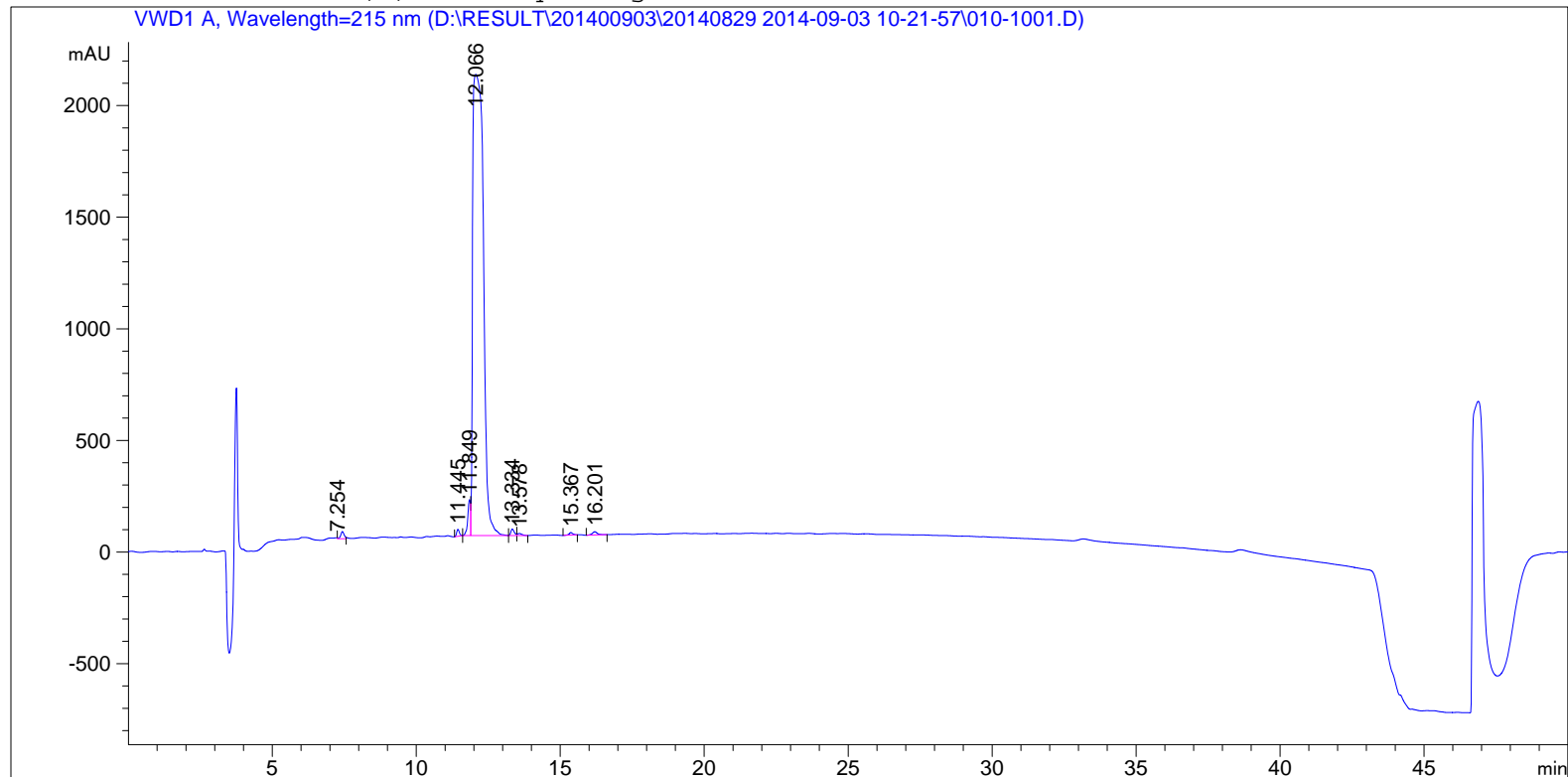
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   10
Acq. Instrument : HPLC 1260                           Location  : Vial 10
Injection Date  : 9/3/2014 6:01:29 PM                 Inj       :    1
                                                    Inj Volume: 20.000 µl
Acq. Method     : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M
Last changed    : 9/3/2014 10:21:57 AM by SYSTEM
Analysis Method : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M (Sequence Method)
Last changed    : 9/3/2014 7:20:03 PM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
=====
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.254	MM R	0.1439	277.14383	4.32457	0.5058
2	11.445	BB	0.0997	202.03702	31.55603	0.3687
3	11.849	BV	0.0997	1058.25098	160.91917	1.9312
4	12.066	VB	0.4151	5.26278e4	2066.38696	96.0427
5	13.334	BV	0.1267	240.88136	29.07335	0.4396

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
6	13.578	VB	0.1555	101.44091	9.43280	0.1851
7	15.367	BB	0.1340	101.84630	11.20670	0.1859
8	16.201	BB	0.1859	186.87276	14.73941	0.3410

Totals : 5.47963e4 2327.63900

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-112		
Molecular Formula	C72H110N20O22	Cat#	8117
Molecular Weight	1607.85	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	PGNFLQSRPEPTAPP		
Item No.	8117_140303_112		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1607.85±2.0	1607.0
3	Peptide Purity (By HPLC)	≥80%	98.9%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	1.2
		E	1.9
		G	1.0
		R	1.0
		T	0.9
		A	1.0
		P	4.9
		L	1.0
F	1.0		
5	Peptide content	92.8%	

Quality Control By:

wangjun

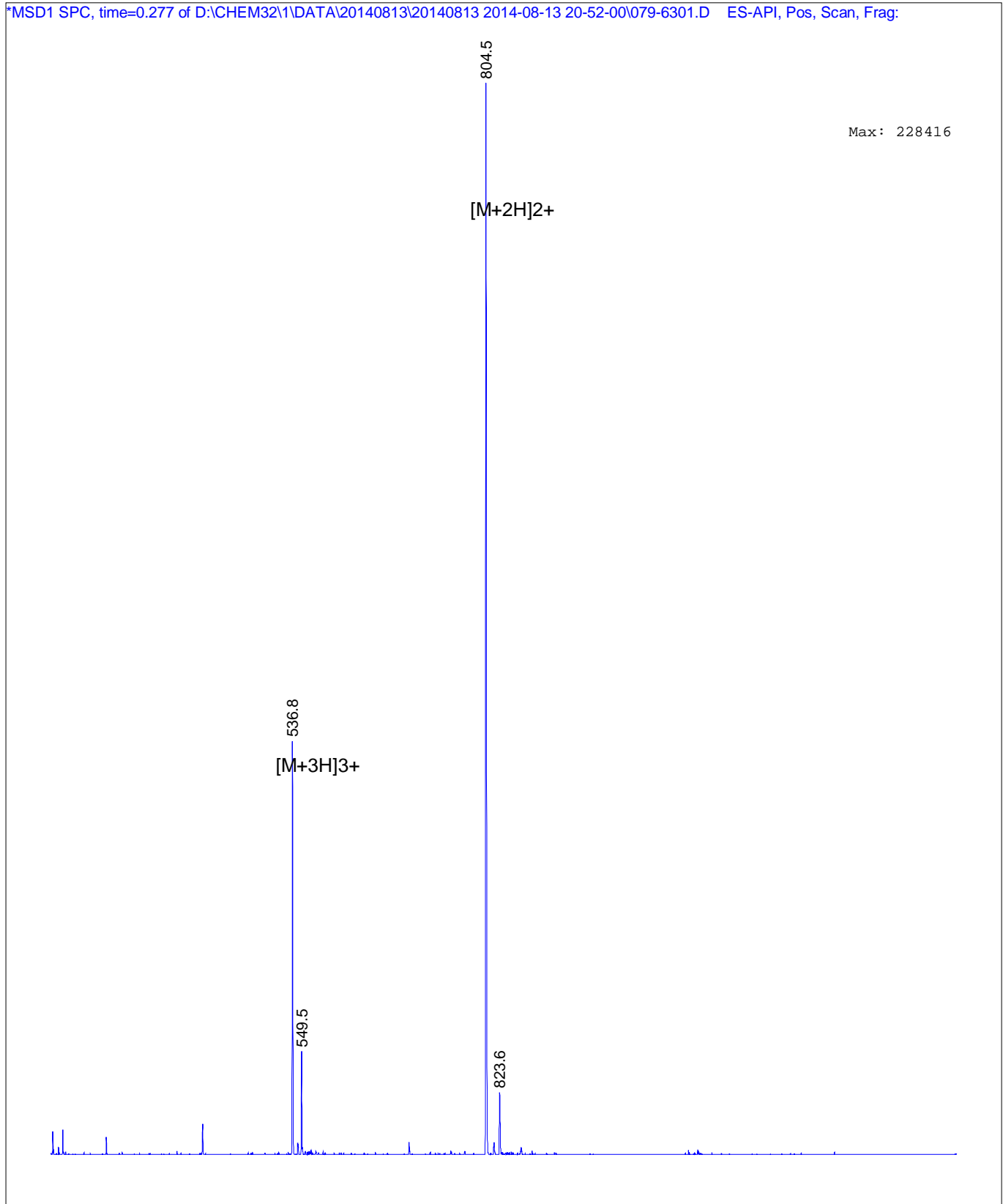
Date:

09/24/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 63
Acq. Instrument	: 5J-QC-082	Location	: Vial 79
Injection Date	: 8/14/2014 12:04:15 AM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500) 2.		
Last changed	: 8/11/2014 1:22:13 PM by liusuying		
Analysis Method	: D:\METHOD\TEST MS(500-15000).M		
Last changed	: 4/18/2014 11:29:00 AM by YZW		

MS Spectrum



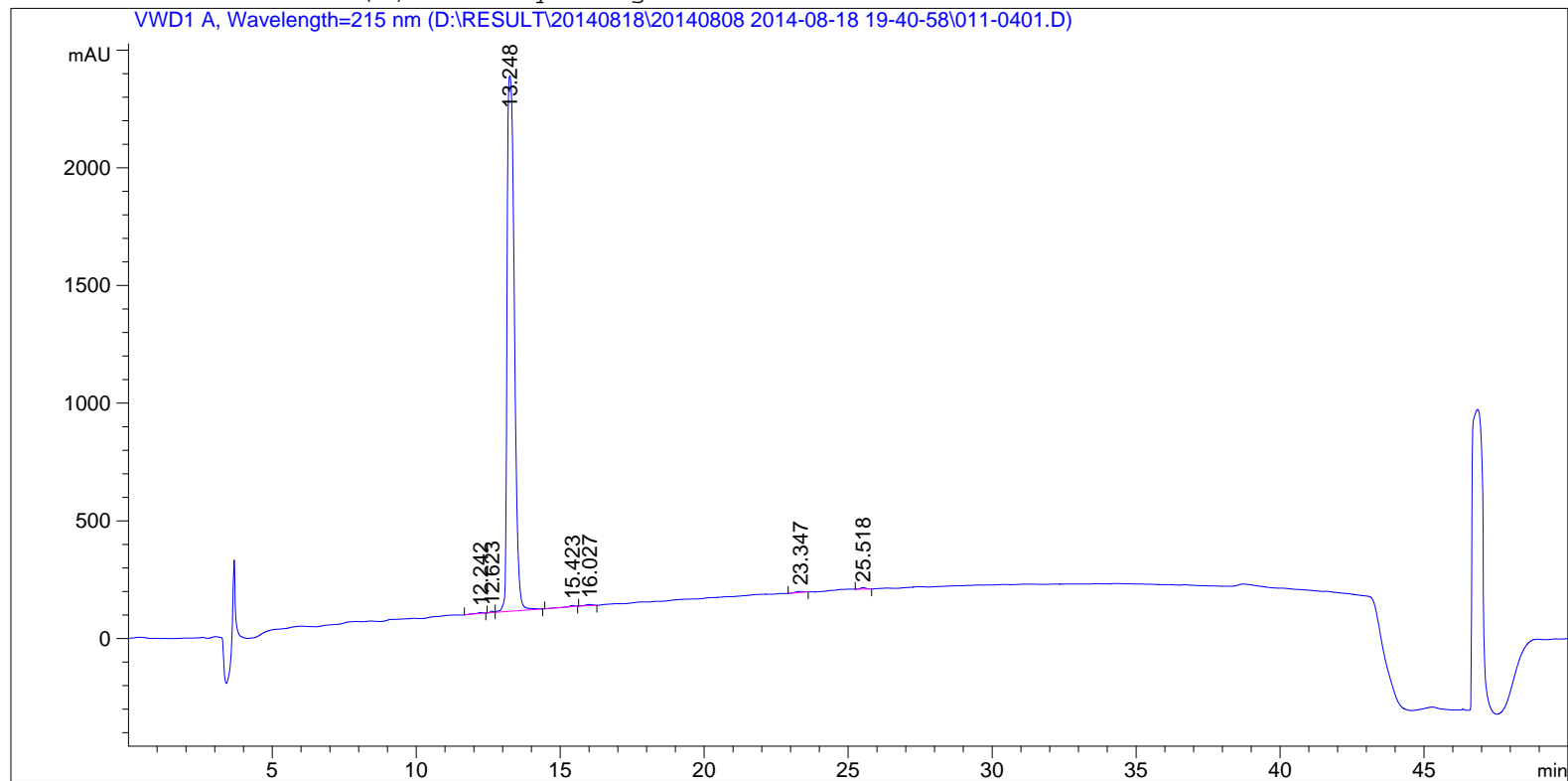
```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    4
Acq. Instrument : HPLC 1260                  Location  : Vial 11
Injection Date  : 8/18/2014 10:14:42 PM      Inj       :    1
                                           Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M
Last changed    : 8/18/2014 7:45:15 PM by SYSTEM
Analysis Method : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M (Sequence Method)
Last changed    : 8/19/2014 10:12:31 AM by SYSTEM
                 (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                 Rate:1.0ml/min
                 Mobile Phase A:0.1%TFA+H2O
                 Mobile Phase B:0.1%TFA+ACN
                 time(min)      0      40      40.3      43      43.3      50
                 B%             10     70     95      95     10      10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.242	BB	0.2786	76.57082	3.87350	0.1911
2	12.623	BV	0.1347	50.13570	5.58717	0.1251
3	13.248	VB	0.2781	3.96202e4	2275.47485	98.9001
4	15.423	BB	0.1950	65.89138	4.86652	0.1645

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	16.027	BB	0.2631	85.45307	4.93232	0.2133
6	23.347	BB	0.3292	84.00216	4.06315	0.2097
7	25.518	BB	0.1896	78.56387	6.25017	0.1961

Totals : 4.00608e4 2305.04768

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-113		
Molecular Formula	C74H113N19O26	Cat#	8117
Molecular Weight	1684.88	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	LQSRPEPTAPPEESF		
Item No.	8117_140303_113		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1684.88±2.0	1683.8
3	Peptide Purity (By HPLC)	≥80%	96.6%
4	Identification(Amino Acid Composition by HPLC)	S	1.9
		E	3.8
		R	1.1
		T	0.9
		A	1.0
		P	4.3
		L	1.0
	F	1.0	
5	Peptide content	83.6%	

Quality Control By:

wangjun

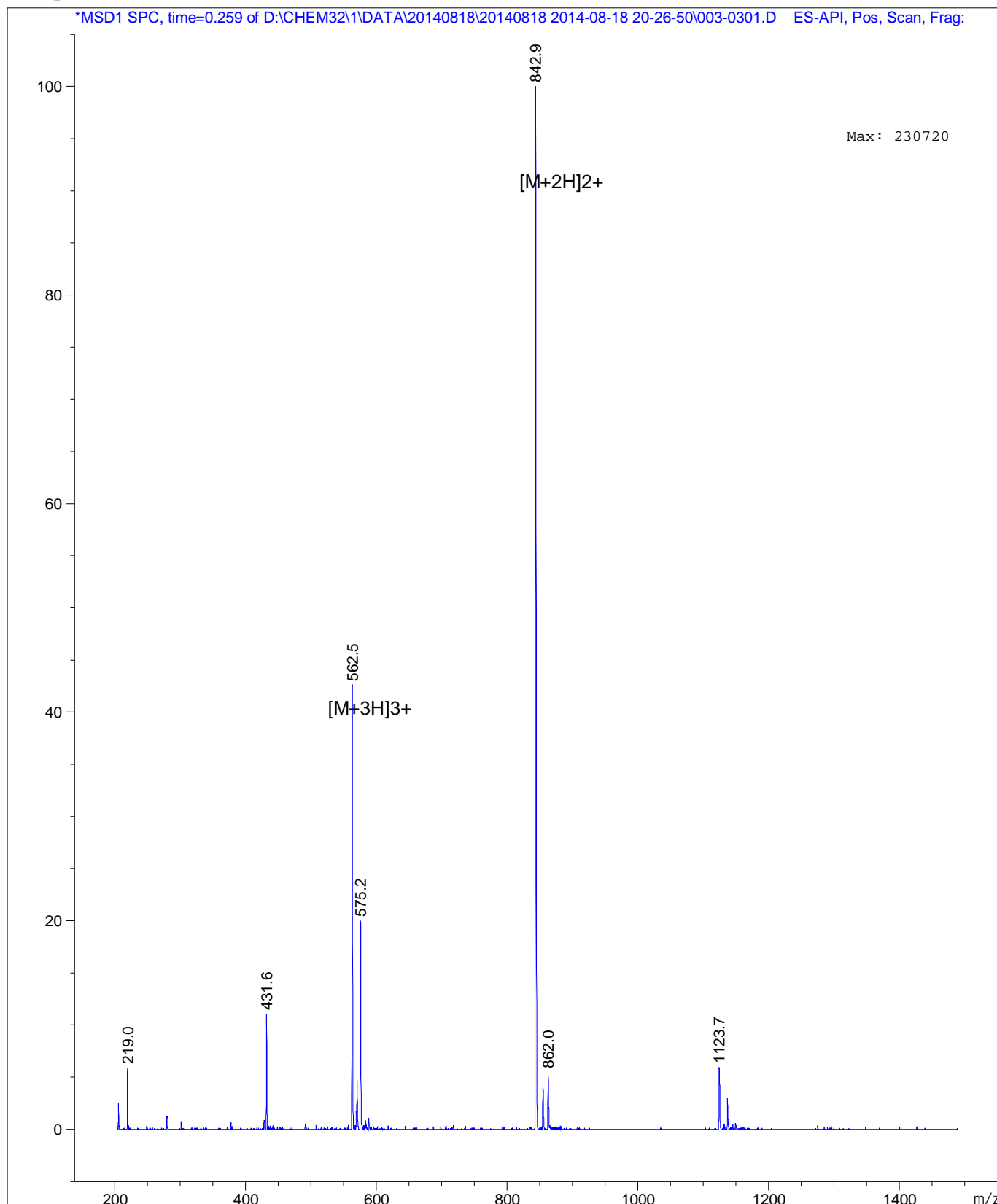
Date:

09/24/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 3
Acq. Instrument	: 5J-QC-082	Location	: Vial 3
Injection Date	: 8/18/2014 8:33:57 PM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\20140818\20140818 2014-08-18 20-26-50\TEST MS(200-1500) 2.		
Last changed	: 8/14/2014 11:53:24 AM by liusuying		
Analysis Method	: D:\METHOD\TEST MS(200-1500)2.M		
Last changed	: 8/14/2014 11:53:24 AM by liusuying		

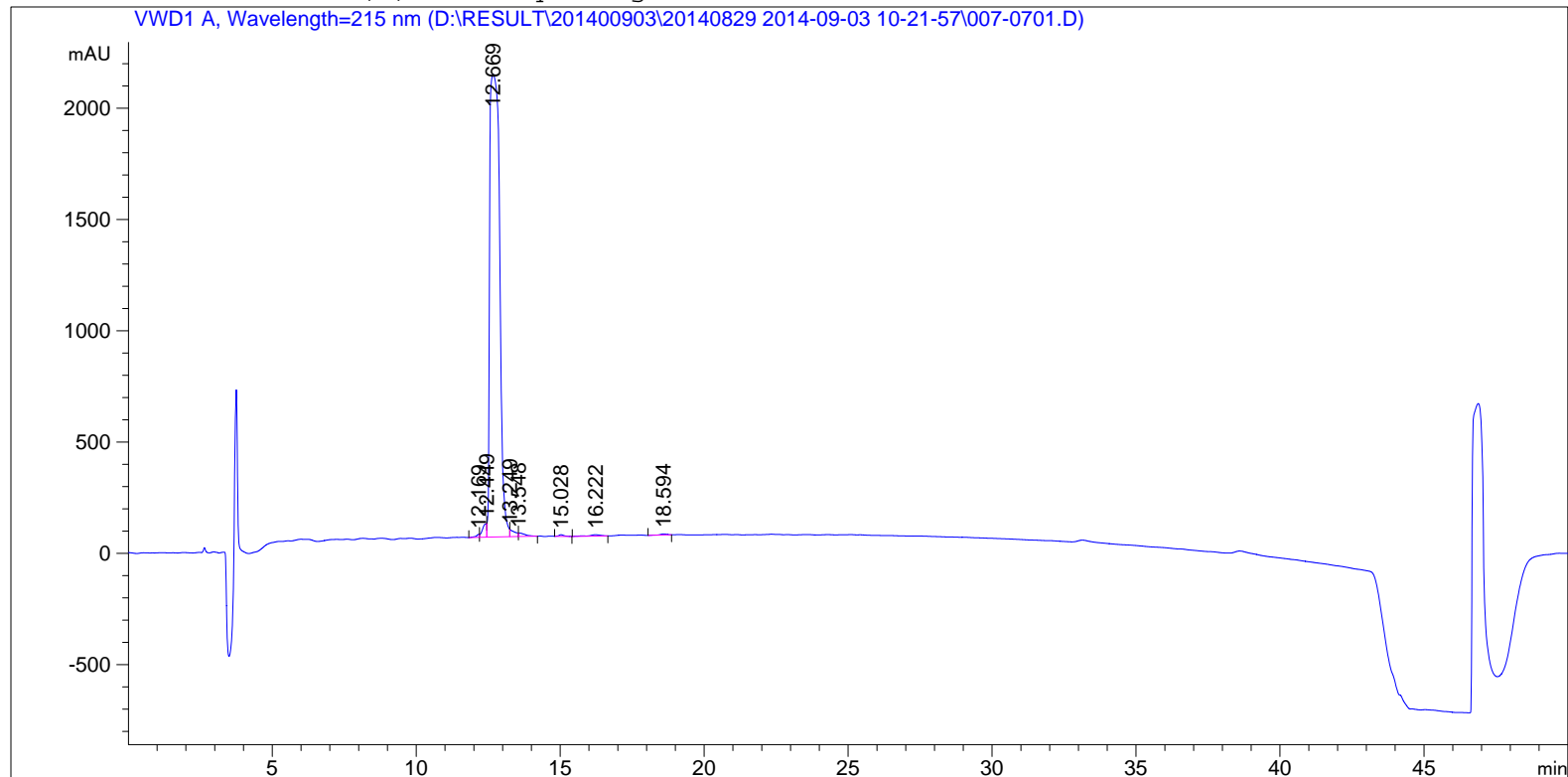
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                               Seq. Line :    7
Acq. Instrument : HPLC 1260                           Location  : Vial 7
Injection Date  : 9/3/2014 3:28:30 PM                 Inj       :    1
                                                    Inj Volume: 20.000 µl
Acq. Method     : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M
Last changed    : 9/3/2014 10:21:57 AM by SYSTEM
Analysis Method : D:\RESULT\201400903\20140829 2014-09-03 10-21-57\KJ100401.M (Sequence Method)
Last changed    : 9/3/2014 7:20:03 PM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.169	BV	0.1148	108.77338	13.53096	0.2127
2	12.449	MF R	0.1676	622.41797	61.88256	1.2169
3	12.669	FM R	0.3961	4.94228e4	2079.61426	96.6257
4	13.249	MF R	0.1634	401.58136	33.72145	0.7851
5	13.548	FM R	0.2664	254.22926	15.90381	0.4970

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
6	15.028	BB	0.1689	88.71790	7.50358	0.1735
7	16.222	BB	0.4156	169.93123	6.05091	0.3322
8	18.594	BB	0.2452	80.24439	4.89527	0.1569

Totals : 5.11487e4 2223.10280

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-114		
Molecular Formula	C76H108N18O26	Cat#	8117
Molecular Weight	1689.85	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	PEPTAPPEESFRFGE		
Item No.	8117_140303_114		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1689.85±2.0	1689.0
3	Peptide Purity (By HPLC)	≥80%	97.4%
4	Identification(Amino Acid Composition by HPLC)	S	0.9
		E	3.5
		G	1.2
		R	1.1
		T	1.0
		A	1.0
		P	4.0
	F	2.2	
5	Peptide content	88.7%	

Quality Control By:

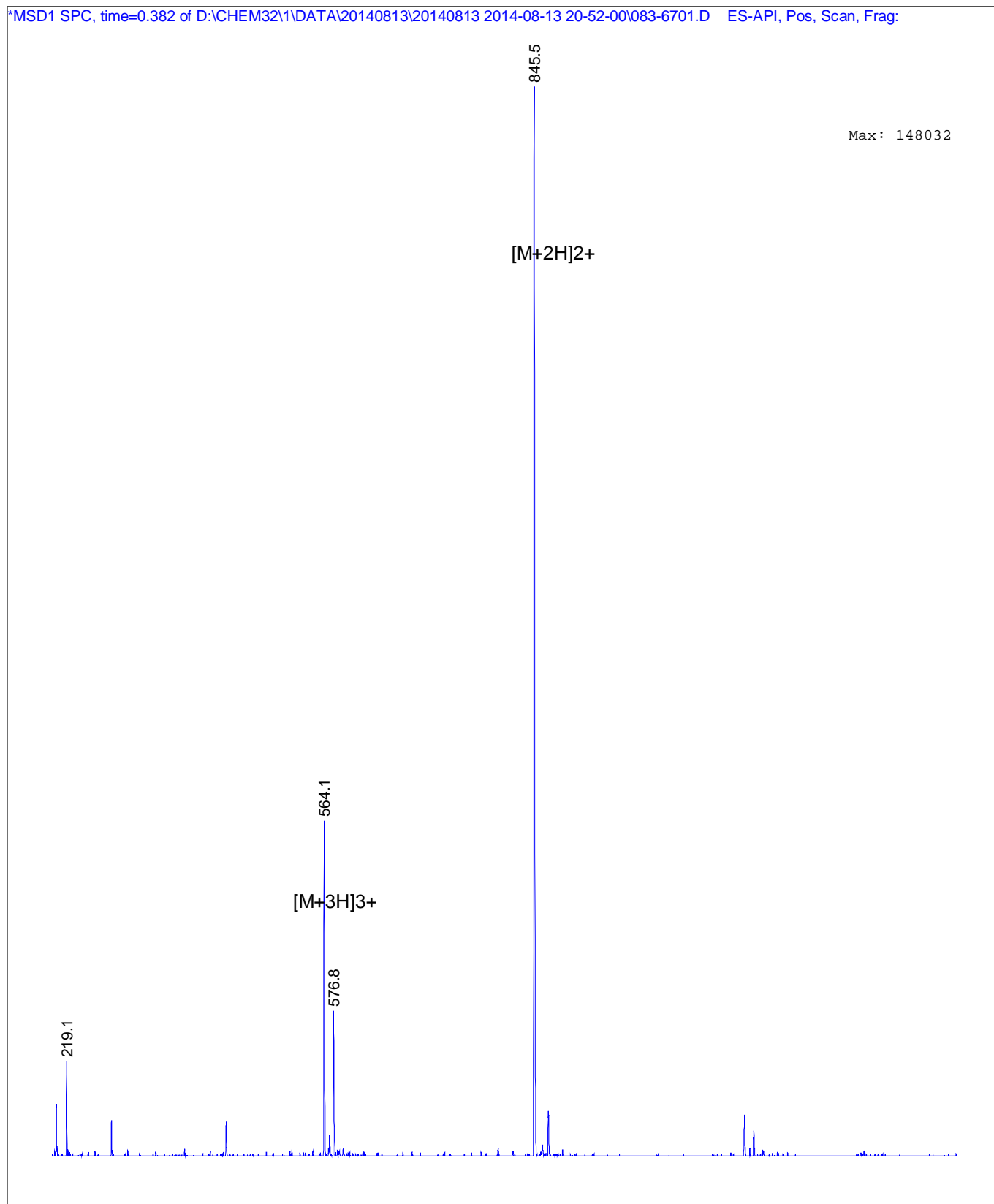
wangjun

Date:

09/11/2014

=====
Acq. Operator : liusuying Seq. Line : 67
Acq. Instrument : 5J-QC-082 Location : Vial 83
Injection Date : 8/14/2014 12:16:40 AM Inj : 1
Inj Volume : 3.0 μ l
Acq. Method : D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500)
2.
Last changed : 8/11/2014 1:22:13 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed : 4/18/2014 11:29:00 AM by YZW

MS Spectrum

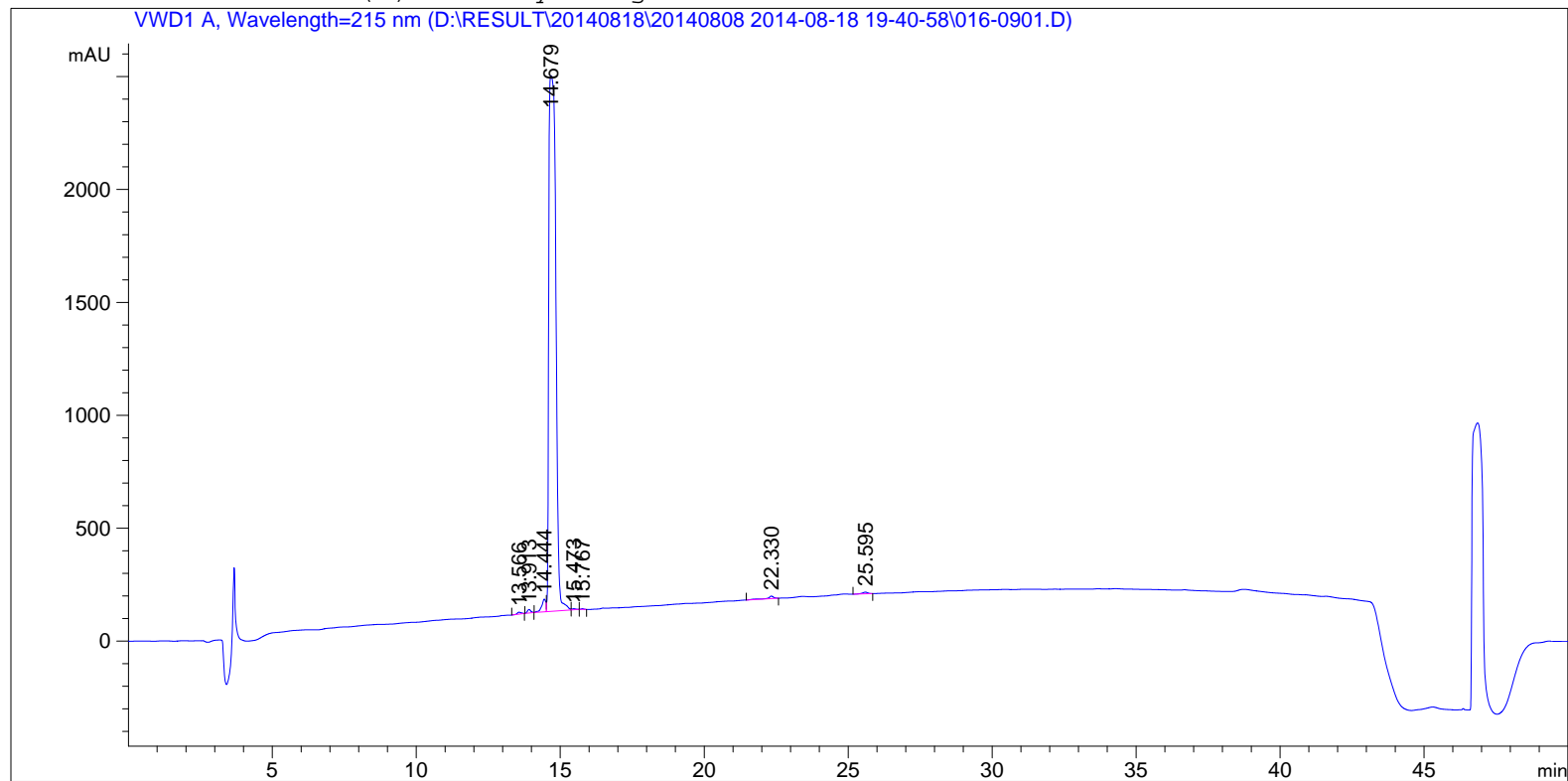


```
=====
Acq. Operator   : SYSTEM                               Seq. Line :    9
Acq. Instrument : HPLC 1260                           Location  : Vial 16
Injection Date  : 8/19/2014 2:29:22 AM                 Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M
Last changed    : 8/18/2014 7:45:15 PM by SYSTEM
Analysis Method : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M (Sequence Method)
Last changed    : 8/19/2014 10:12:31 AM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5um,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95      10       10
=====
```

Additional Info : Peak(s) manually integrated



=====
Area Percent Report
=====

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	13.566	BB	0.1376	79.17121	8.58078	0.1932
2	13.913	BB	0.1237	121.46557	15.28888	0.2963
3	14.444	BV	0.1403	556.53259	56.32174	1.3578
4	14.679	VV	0.2733	3.99118e4	2372.35254	97.3737

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	15.473	VB	0.1404	44.58042	4.66838	0.1088
6	15.767	BB	0.1056	19.06111	2.90302	0.0465
7	22.330	BB	0.1966	157.15781	11.00539	0.3834
8	25.595	BB	0.1979	98.51952	7.32690	0.2404

Totals : 4.09883e4 2478.44762

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-115		
Molecular Formula	C74H108N18O28	Cat#	8117
Molecular Weight	1697.83	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	APPEESFRFGGEETT		
Item No.	8117_140303_115		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1697.83±2.0	1697.0
3	Peptide Purity (By HPLC)	≥80%	91.1%
4	Identification(Amino Acid Composition by HPLC)	S	1.2
		E	4.0
		G	1.0
		R	1.1
		T	2.7
		A	1.0
		P	1.9
	F	2.1	
5	Peptide content	94.9%	

Quality Control By:

wangjun

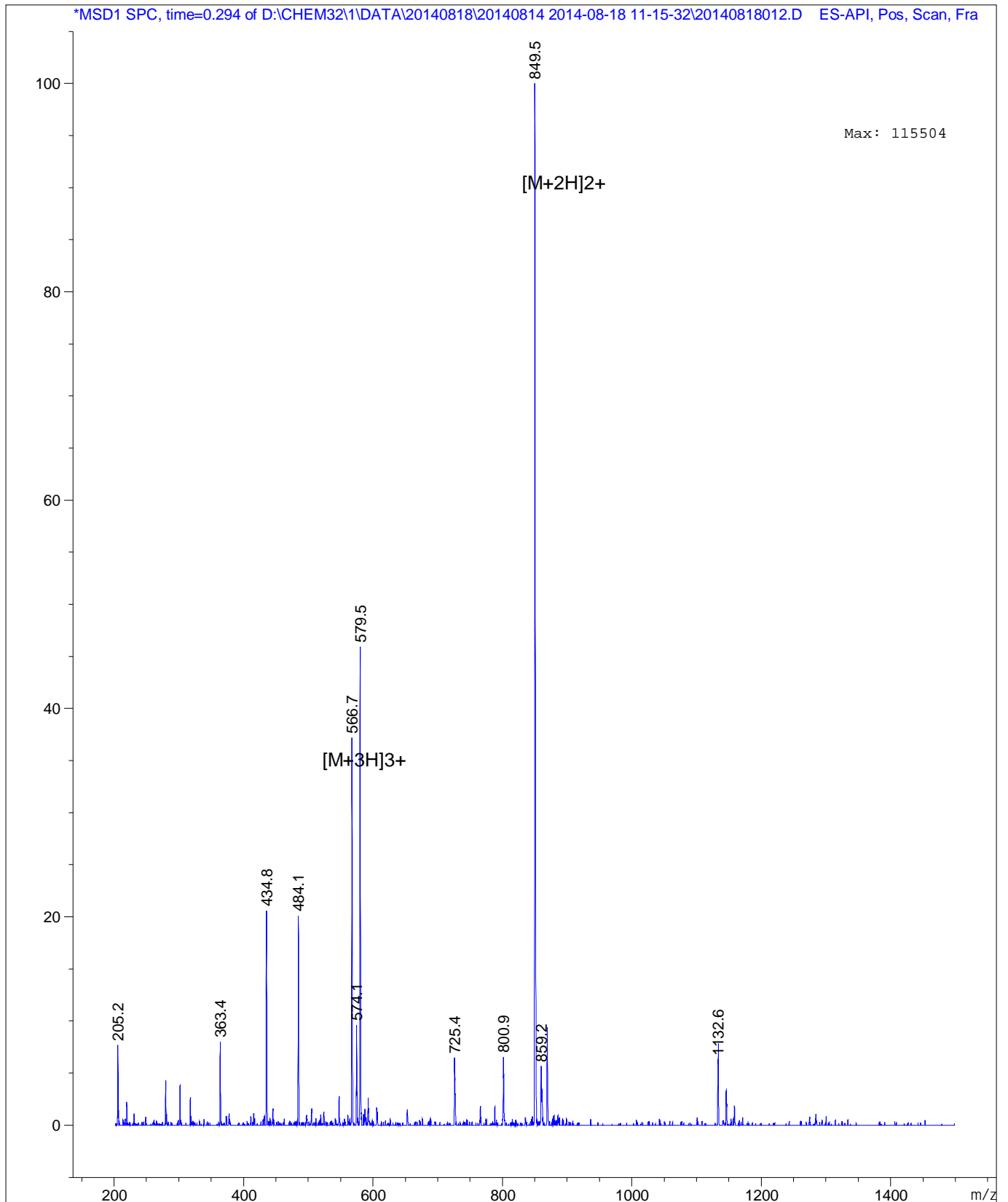
Date:

09/24/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 12
Acq. Instrument	: 5J-QC-082	Location	: Vial 16
Injection Date	: 8/18/2014 11:50:51 AM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\20140818\20140814 2014-08-18 11-15-32\TEST MS(200-1500) 2.		
Last changed	: 8/14/2014 11:53:24 AM by liusuying		
Analysis Method	: D:\METHOD\TEST MS(200-1500)2.M		
Last changed	: 8/14/2014 11:53:24 AM by liusuying		

MS Spectrum



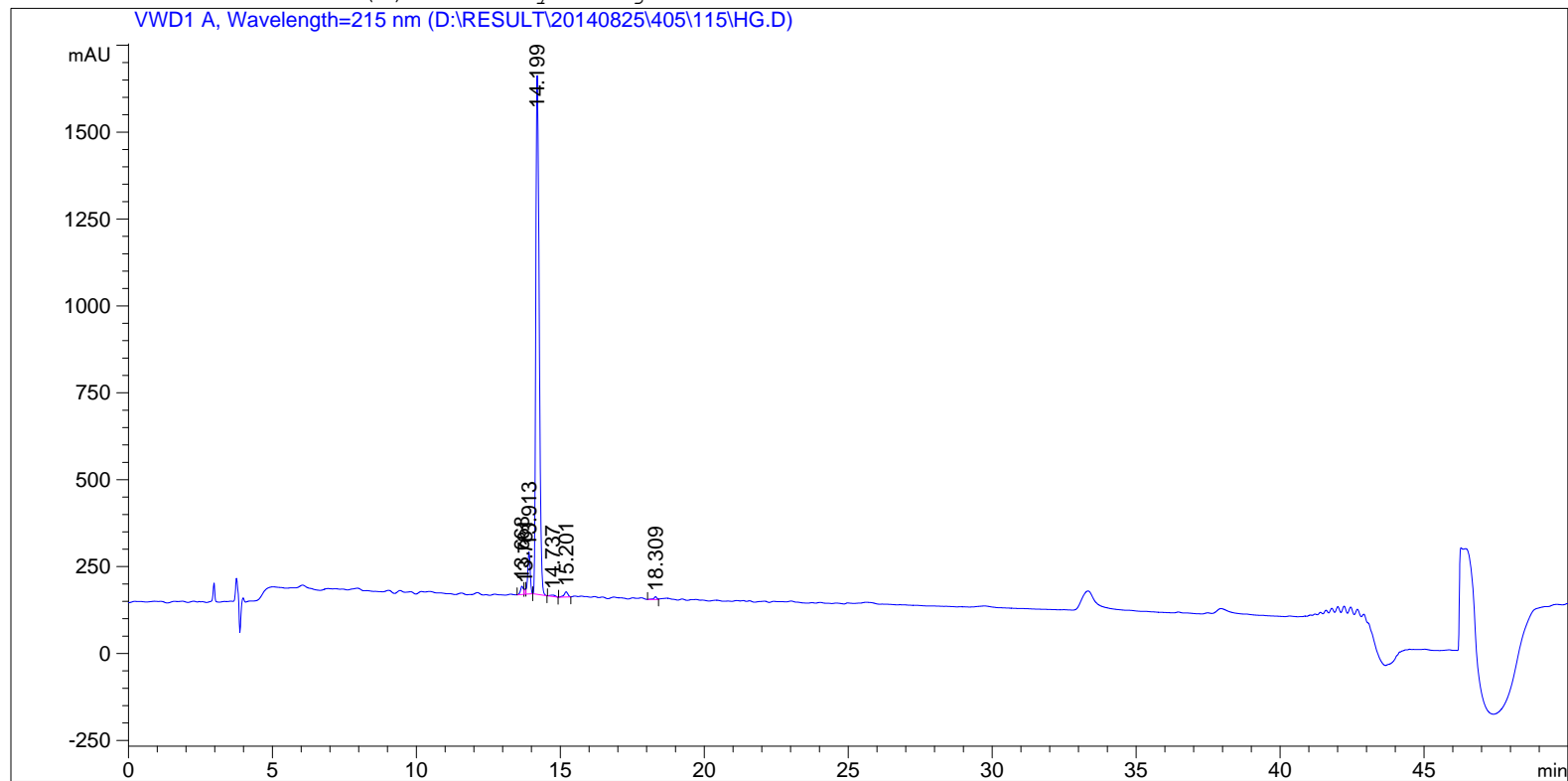
```

=====
Acq. Operator   :
Acq. Instrument : Instrument 1           Location : Vial 1
Injection Date  : 8/8/2014 8:21:07 AM
                                           Inj Volume : Manually

Acq. Method     : E:\METHODS\10-70IN50MIN.M\10-70IN50MIN.M
Last changed    : 7/25/2014 8:25:00 AM
Analysis Method : C:\CHEM32\1\METHODS\WASH.M
Last changed    : 8/25/2014 1:28:06 PM by SYSTEM
                 (modified after loading)

Method Info     : Cloumn:Agilent HC-C18, 5um, 4.6*250nm      Cloumn Temp:35°C      Flow
                 Rate:1.0ml/min
                 Mobile Phase A:0.1%TFA H2O
                 Mobile Phase B:0.1%TFA ACN
                 time(min)      0      40      40.3      43      43.3      50
                 B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      : Signal
Multiplier     : 1.0000
Dilution      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	13.668	BV	0.1007	163.18237	23.87928	1.2127
2	13.781	VV	0.0536	54.14262	14.82193	0.4024
3	13.913	VB	0.0936	734.79474	121.38161	5.4605
4	14.199	BB	0.1288	1.22562e4	1492.71716	91.0795

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	14.737	BB	0.1865	49.01622	4.10058	0.3643
6	15.201	BB	0.1362	133.74037	14.83781	0.9939
7	18.309	BV	0.1125	65.51200	8.44767	0.4868

Totals : 1.34566e4 1680.18605

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-116		
Molecular Formula	C75H114N20O28	Cat#	8117
Molecular Weight	1743.91	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	ESFRFG EETTPSQK		
Item No.	8117_140303_116		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1743.91±2.0	1743.3
3	Peptide Purity (By HPLC)	≥80%	98.9%
4	Identification(Amino Acid Composition by HPLC)	S	1.8
		E	4.2
		G	1.0
		R	1.1
		T	2.9
		P	1.0
		K	1.1
	F	1.9	
5	Peptide content	73.8%	

Quality Control By:

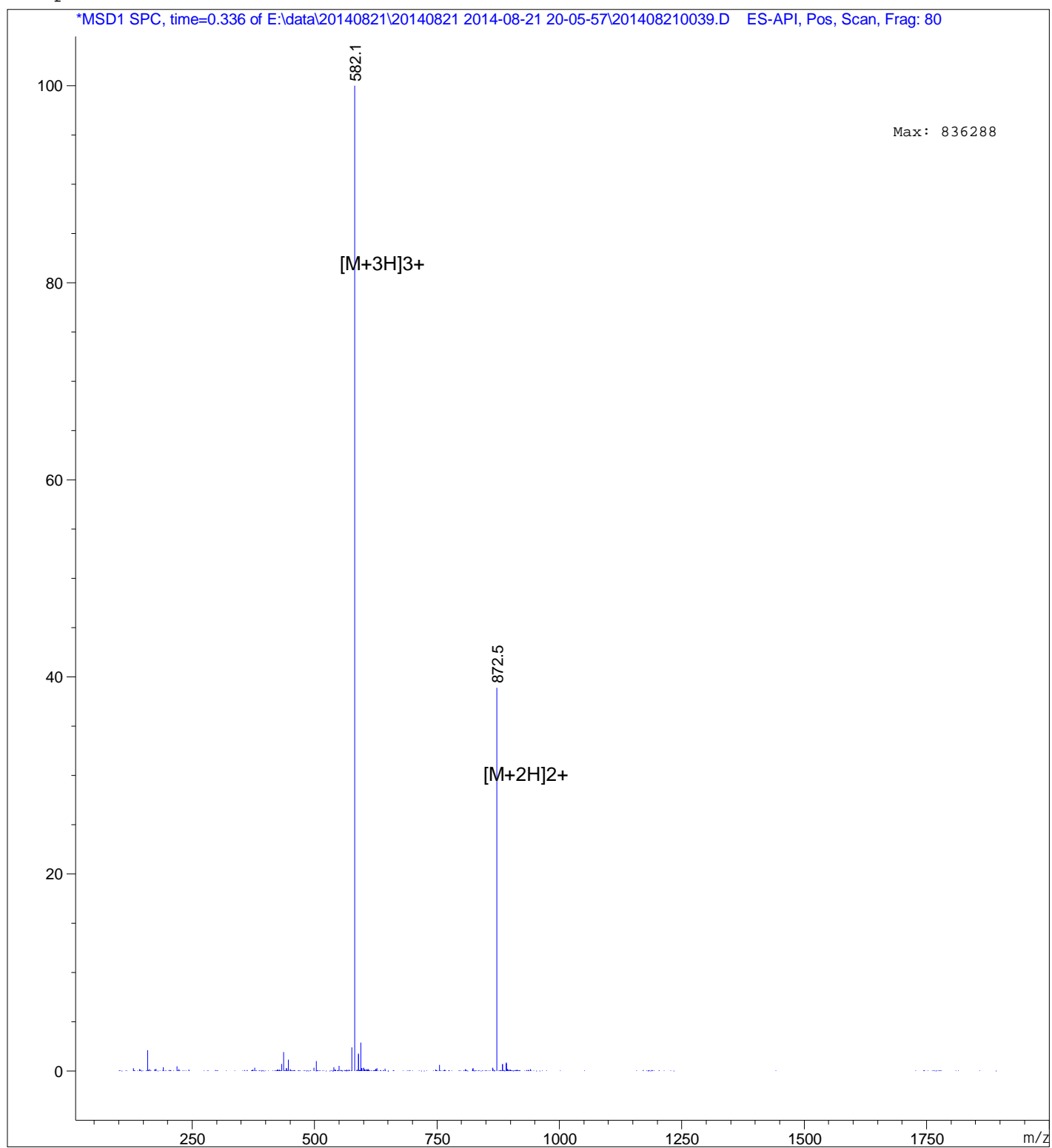
wangjun

Date:

09/24/2014

```
=====
Acq. Operator   : SYSTEM                      Seq. Line :   42
Acq. Instrument : Agilent6120                 Location  :   43
Injection Date  : 8/21/2014 10:04:00 PM      Inj       :    1
                                                    Inj Volume: 5.000 µl
Acq. Method     : E:\data\20140821\20140821 2014-08-21 20-05-57\LCMS.M
Last changed    : 8/21/2014 8:05:57 PM by SYSTEM
Analysis Method : E:\data\20140821\20140821 2014-08-21 20-05-57\LCMS.M (Sequence Method)
Last changed    : 8/22/2014 8:07:38 PM by SYSTEM
```

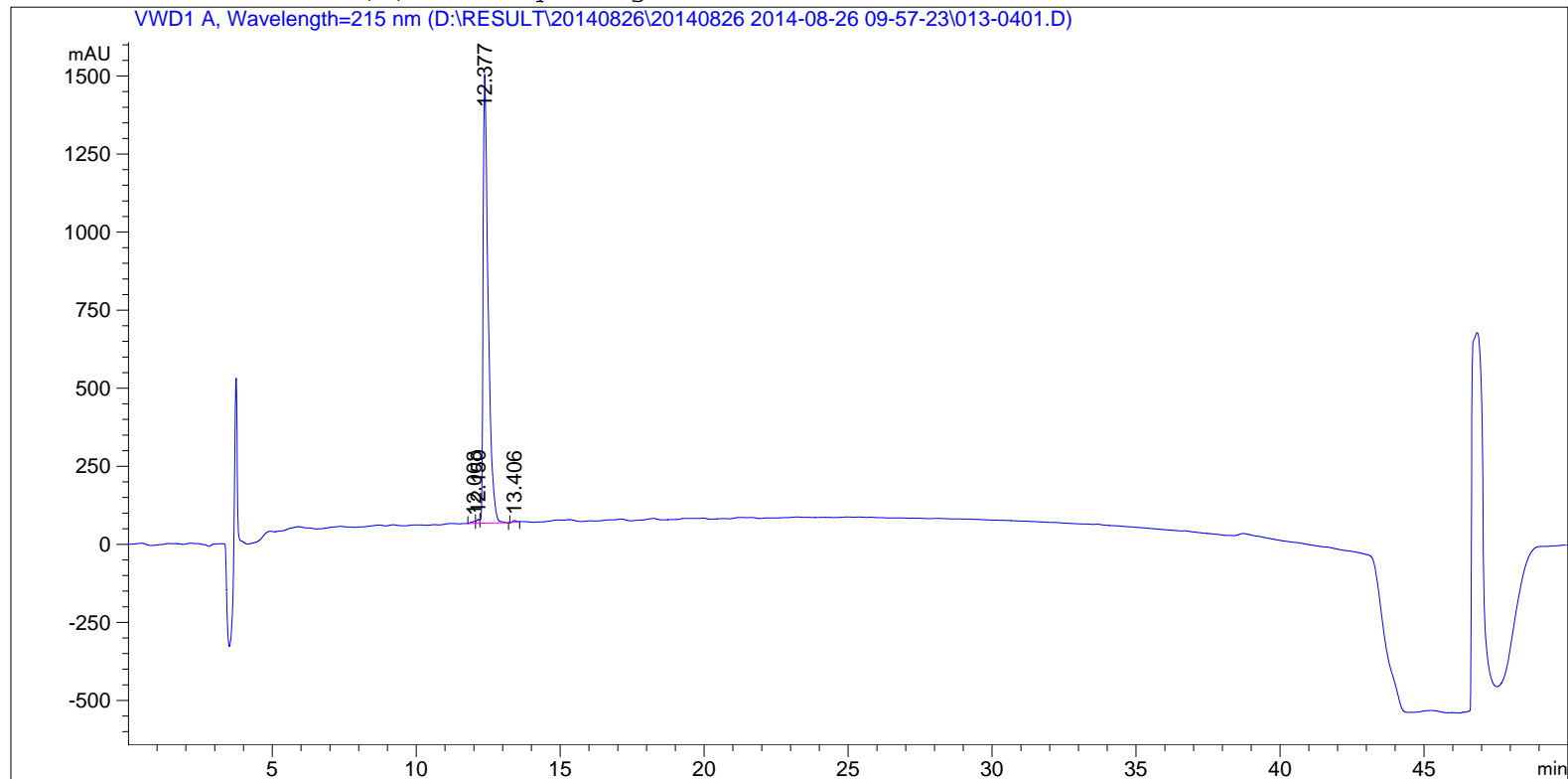
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    4
Acq. Instrument : HPLC 1260                  Location  : Vial 13
Injection Date  : 8/26/2014 12:31:07 PM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\20140826\20140826 2014-08-26 09-57-23\KJ100401.M (Sequence Method)
Last changed    : 8/26/2014 9:57:23 AM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	12.008	BV	0.1221	59.75504	6.76118	0.3351
2	12.150	VV	0.1084	89.41026	12.21922	0.5014
3	12.377	VB	0.1791	1.76342e4	1437.38611	98.8968
4	13.406	BB	0.1264	47.53607	5.58118	0.2666

Totals : 1.78309e4 1461.94768

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-117		
Molecular Formula	C73H114N18O28	Cat#	8117
Molecular Weight	1691.89	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	FGEETTPSQKQEPI		
Item No.	8117_140303_117		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1691.89±2.0	1691.0
3	Peptide Purity (By HPLC)	≥80%	95.5%
4	Identification(Amino Acid Composition by HPLC)	S	1.1
		E	5.2
		G	1.0
		T	2.8
		P	1.8
		K	1.0
		I	1.0
F	1.0		
5	Peptide content	95.5%	

Quality Control By:

wangjun

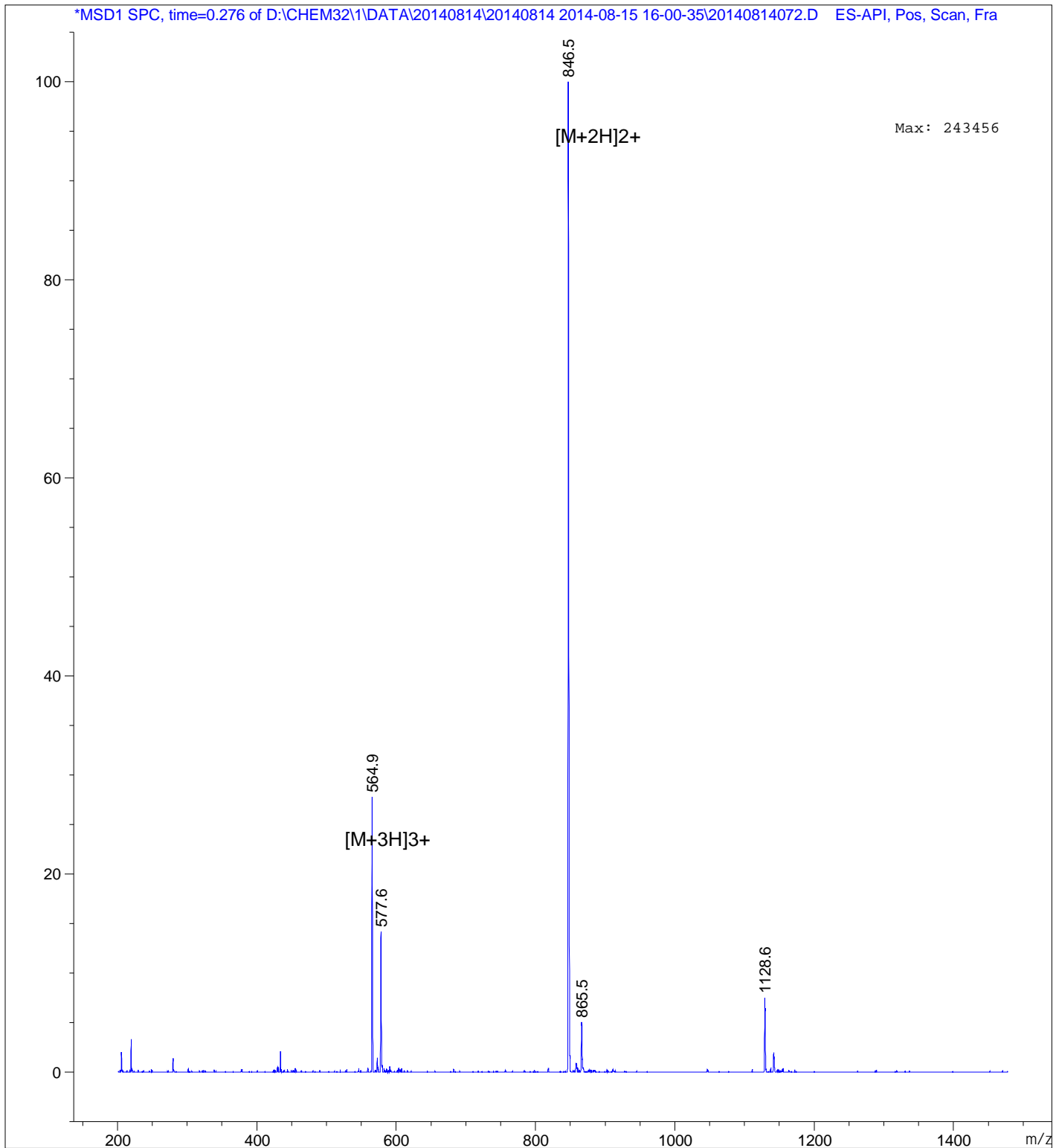
Date:

09/11/2014

```
=====
Acq. Operator   : liusuying                      Seq. Line :   72
Acq. Instrument : 5J-QC-082                      Location  : Vial 28
Injection Date  : 8/15/2014 7:42:58 PM           Inj       :    1
                                                    Inj Volume: 3.0 µl

Acq. Method     : D:\CHEM32\1\DATA\20140814\20140814 2014-08-15 16-00-35\TEST MS(200-1500)2.
Last changed    : 8/14/2014 11:53:24 AM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed    : 4/18/2014 11:29:00 AM by YZW
```

MS Spectrum



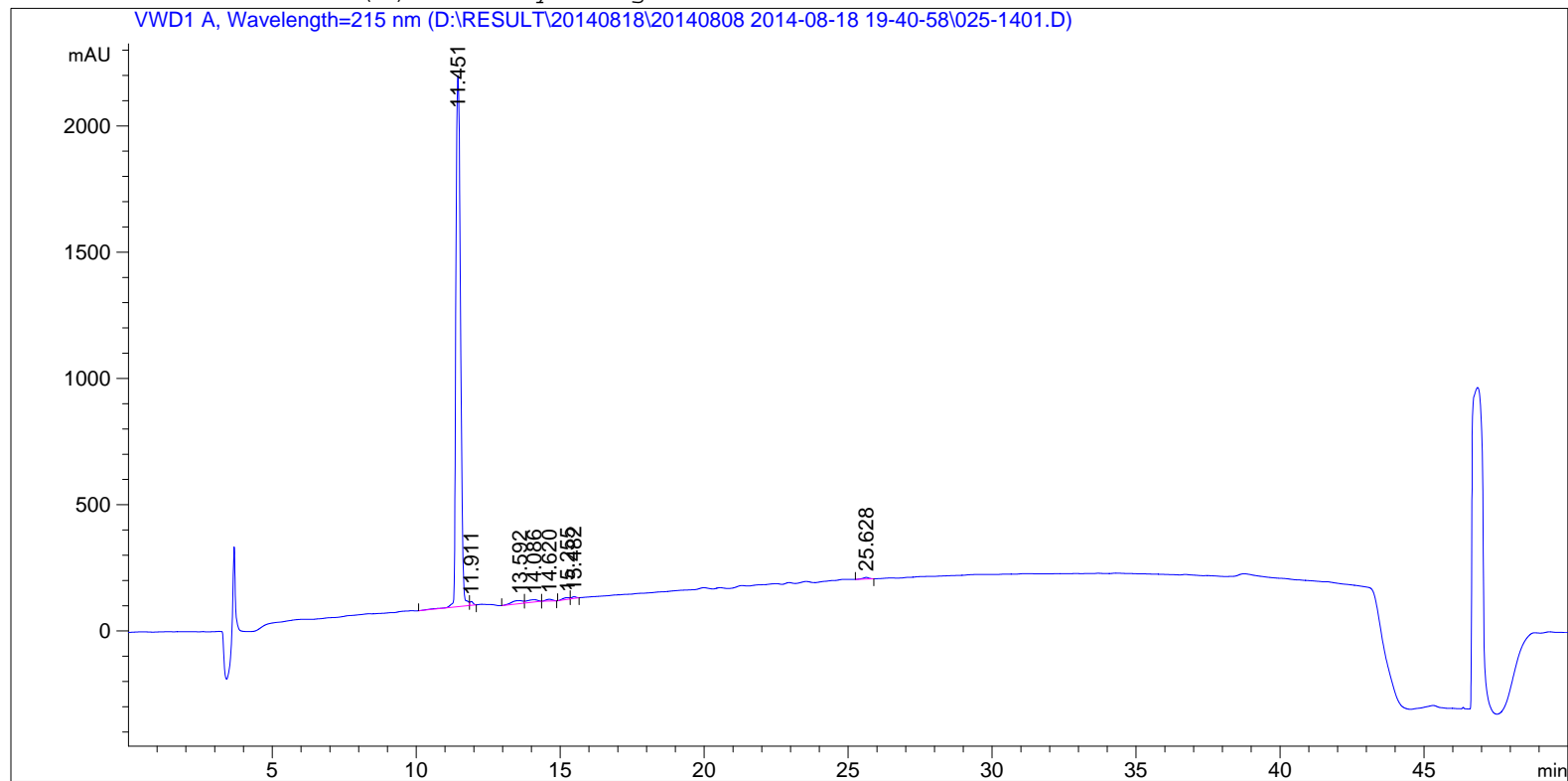
```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   14
Acq. Instrument : HPLC 1260                           Location  : Vial 25
Injection Date  : 8/19/2014 6:44:12 AM                Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M
Last changed    : 8/18/2014 7:45:15 PM by SYSTEM
Analysis Method : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M (Sequence Method)
Last changed    : 8/19/2014 11:00:02 AM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5um,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95      95     10      10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	11.451	BV	0.1803	2.34863e4	2103.19751	95.4971
2	11.911	VB	0.1175	118.13663	15.06511	0.4804
3	13.592	BV	0.3768	352.56506	11.82587	1.4336
4	14.086	VB	0.3708	242.17784	9.20979	0.9847

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	14.620	BB	0.2588	105.50578	6.76970	0.4290
6	15.255	BV	0.2857	117.68034	6.64286	0.4785
7	15.482	VB	0.1645	76.46796	6.78369	0.3109
8	25.628	BB	0.2123	94.89794	6.53793	0.3859

Totals : 2.45938e4 2166.03247

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-118		
Molecular Formula	C73H123N19O28	Cat#	8117
Molecular Weight	1714.97	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	TTTPSQKQEPIDKEL		
Item No.	8117_140303_118		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1714.97±2.0	1714.5
3	Peptide Purity (By HPLC)	≥80%	91.9%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		S	0.9
		E	3.6
		T	3.1
		P	2.0
		K	2.1
		I	1.0
L	1.0		
5	Peptide content	74.3%	

Quality Control By:

wangjun

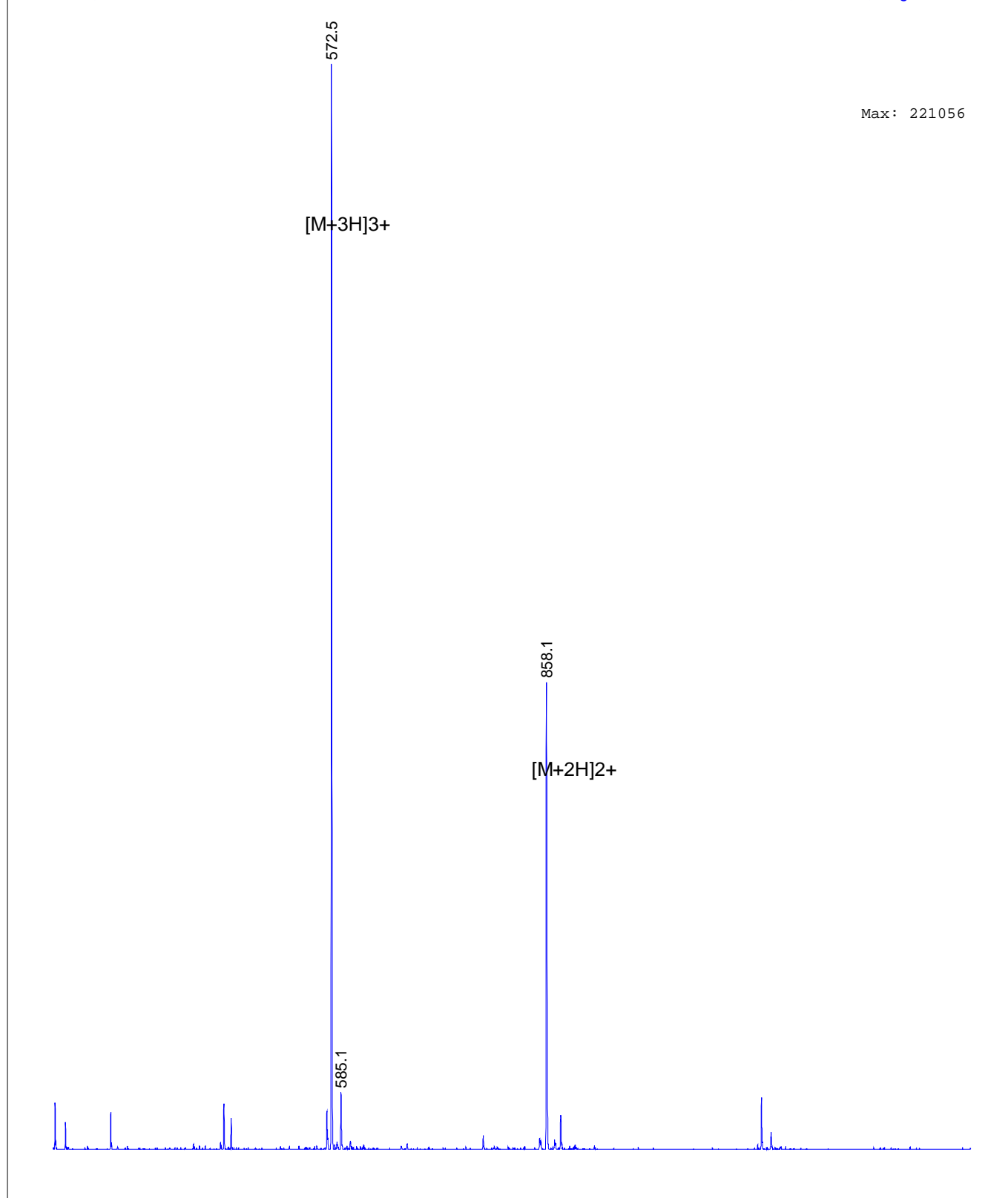
Date:

09/11/2014

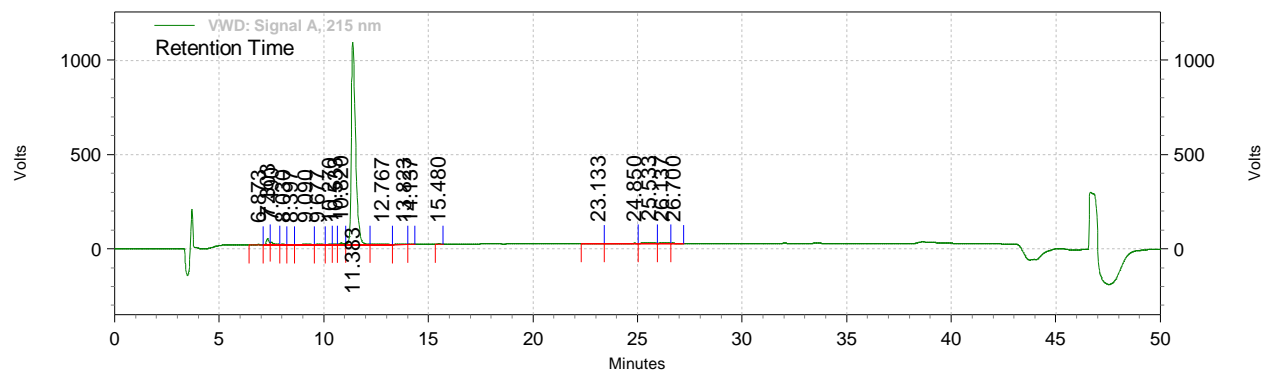
```
=====
Acq. Operator   : liusuying                      Seq. Line :   54
Acq. Instrument : 5J-QC-082                      Location  : Vial 70
Injection Date  : 8/13/2014 11:36:08 PM          Inj       :    1
                                                    Inj Volume: 3.0 µl
Acq. Method     : D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500)
                                                    2.
Last changed    : 8/11/2014 1:22:13 PM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed    : 4/18/2014 11:29:00 AM by YZW
```

MS Spectrum

MSD1 SPC, time=0.259 of D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\070-5401.D ES-API, Pos, Scan, Frag:



Data File: D:\KJ100401\20140828\20140828.rslt\HIV-1 Con B Gag Peptide-118.dat
 Method: D:\Method\KJ100401.met
 Acquired: 8/28/2014 6:31:41 PM (GMT +08:00)
 Printed: 8/31/2014 8:50:42 AM (GMT +08:00)
 Column:Agilent HC-C18,5um,4.6*250mm Column Temp:35°C Flow Rate:1.0ml/min
 Mobile Phase A:0.1%TFA water
 Mobile Phase B:0.1%TFA+ACN
 time(min) 0 40 40.3 43 43.3 50
 B% 10 70 95 95 10 10



VWD: Signal A, 215 nm Results

Retention Time	Area	Area %
6.873	700086	0.25
7.303	4860726	1.75
7.490	2521270	0.91
8.030	524989	0.19
8.397	348868	0.13
9.090	1371338	0.49
9.677	770261	0.28
10.270	515775	0.19
10.533	589673	0.21
10.820	2083495	0.75
11.383	254791626	91.90
12.767	1018364	0.37
13.823	657764	0.24
14.137	290862	0.10
15.480	344090	0.12
23.133	1090176	0.39
24.850	1212471	0.44
25.533	2306449	0.83
26.137	929910	0.34
26.700	333108	0.12
Totals	277261301	100.00



CERTIFICATE OF ANALYSIS

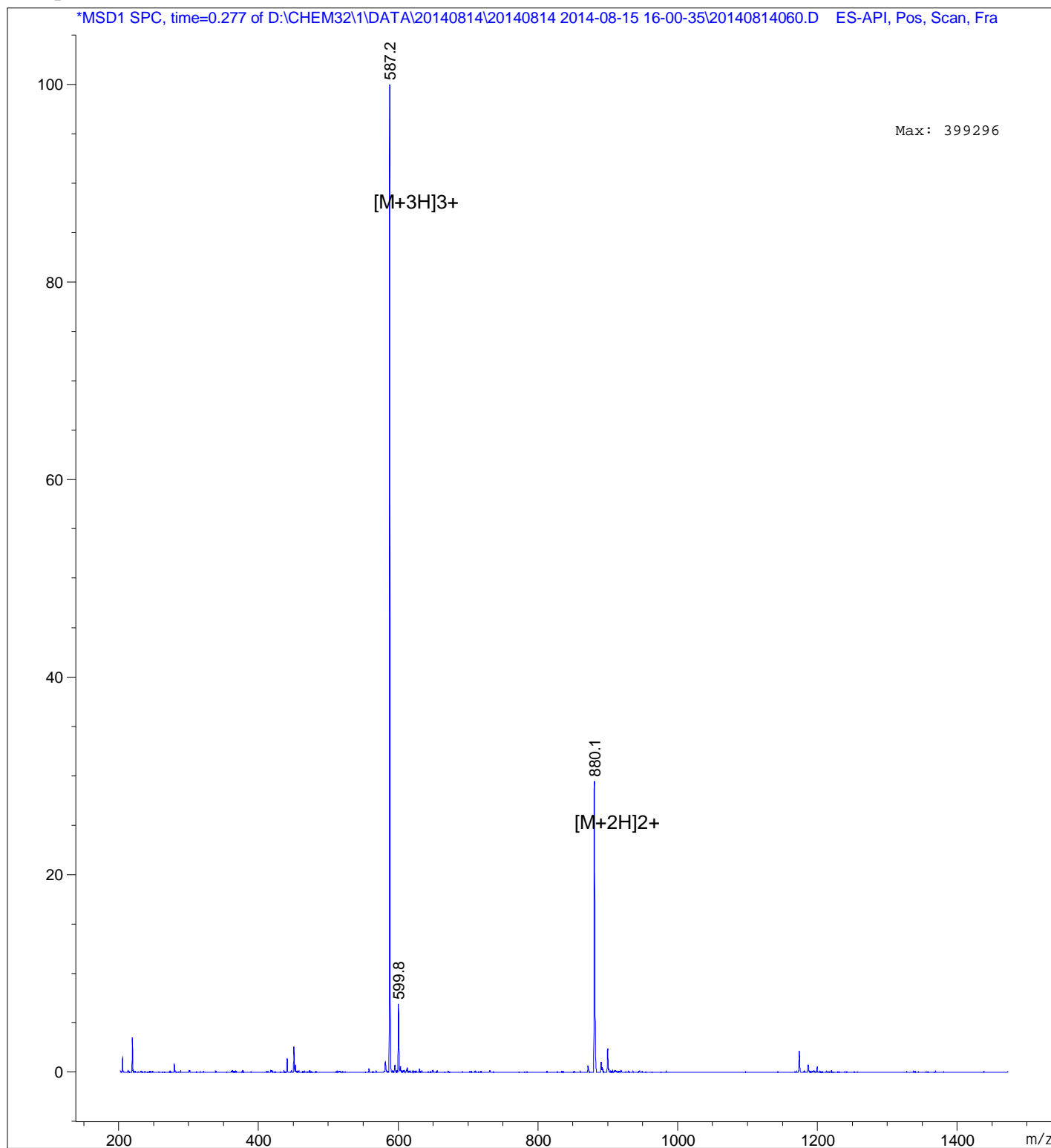
Product Name	HIV-1 Con B Gag Peptide-119		
Molecular Formula	C79H127N19O26	Cat#	8117
Molecular Weight	1759.07	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	SQKQEPIDKELYPLA		
Item No.	8117_140303_119		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1759.07±2.0	1758.6
3	Peptide Purity (By HPLC)	≥80%	95.0%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		S	1.0
		E	3.7
		A	1.0
		P	2.0
		Y	0.9
		K	2.1
		I	0.9
L	1.9		
5	Peptide content	79.8%	

Quality Control By: wangjun

Date: 09/11/2014

=====
Acq. Operator : liusuying Seq. Line : 60
Acq. Instrument : 5J-QC-082 Location : Vial 14
Injection Date : 8/15/2014 7:05:50 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140814\20140814 2014-08-15 16-00-35\TEST MS(200-1500).2.
Last changed : 8/14/2014 11:53:24 AM by liusuying
Analysis Method : D:\METHOD\TEST MS(500-15000).M
Last changed : 4/18/2014 11:29:00 AM by YZW

MS Spectrum



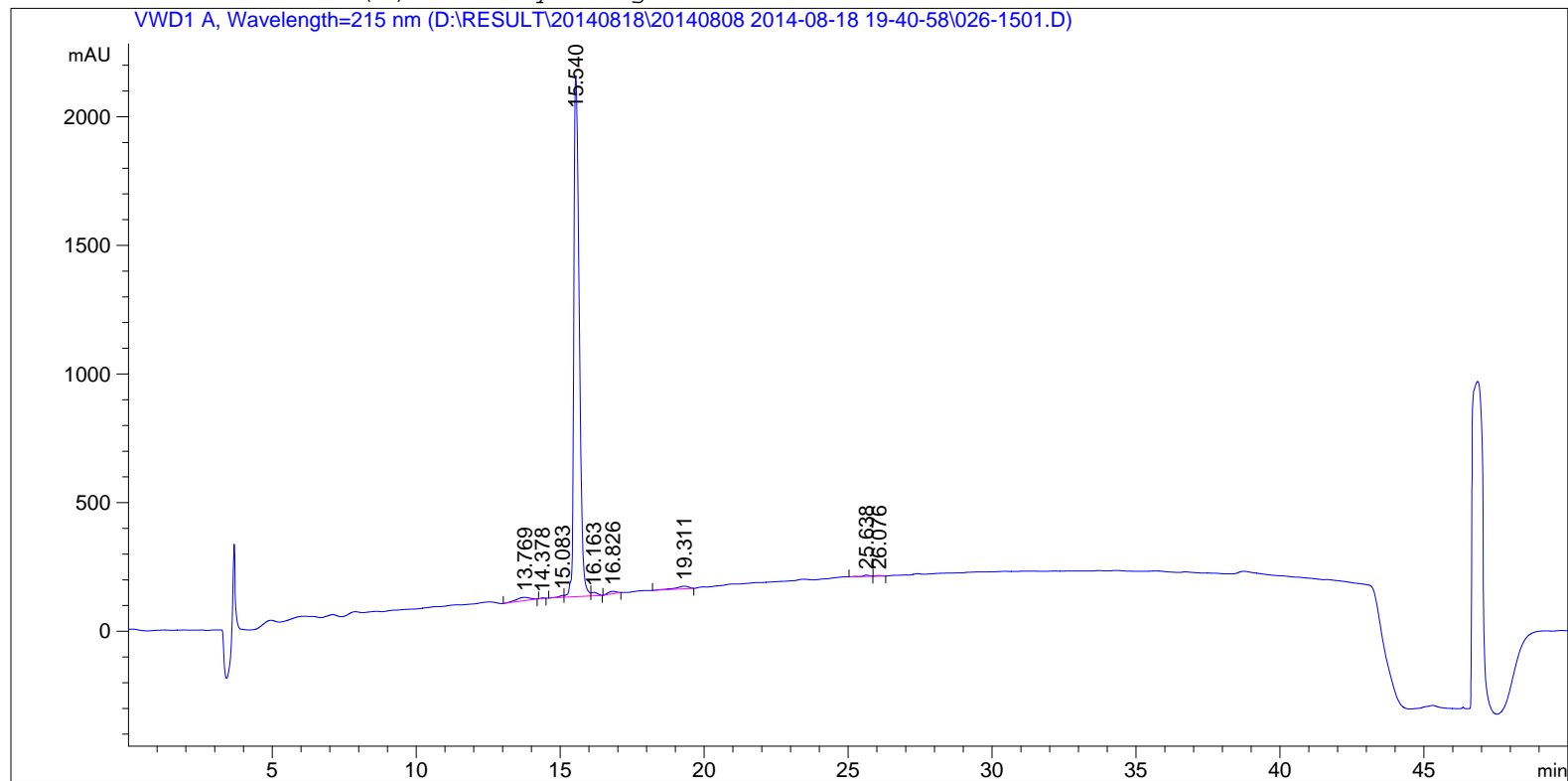
```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   15
Acq. Instrument : HPLC 1260                           Location  : Vial 26
Injection Date  : 8/19/2014 7:35:10 AM                Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M
Last changed    : 8/18/2014 7:45:15 PM by SYSTEM
Analysis Method : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M (Sequence Method)
Last changed    : 8/19/2014 11:00:02 AM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	13.769	BB	0.5264	441.14792	12.63423	1.5760
2	14.378	BB	0.1148	18.41332	2.47511	0.0658
3	15.083	BV	0.1727	90.84800	7.42498	0.3245
4	15.540	VV	0.2092	2.66035e4	2025.51318	95.0386

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	16.163	VB	0.2372	200.48221	13.34689	0.7162
6	16.826	BB	0.3336	194.50998	9.54912	0.6949
7	19.311	BB	0.4960	347.83731	10.32500	1.2426
8	25.638	BB	0.2093	71.52354	5.08020	0.2555
9	26.076	BB	0.2001	24.05800	1.92057	0.0859

Totals : 2.79923e4 2088.26930

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-120		
Molecular Formula	C78H127N19O25	Cat#	8117
Molecular Weight	1731.05	Lot#	140303
Manufacturing Date	09/11/2014	Test Date	09/11/2014
Sequence	EPIDKELYPLASLRS		
Item No.	8117_140303_120		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1731.05±2.0	1730.4
3	Peptide Purity (By HPLC)	≥80%	96.1%
4	Identification(Amino Acid Composition by HPLC)	D	1.0
		S	1.7
		E	2.2
		R	1.0
		A	1.0
		P	1.8
		Y	1.0
		K	1.0
		I	1.0
L	3.0		
5	Peptide content	96.5%	

Quality Control By:

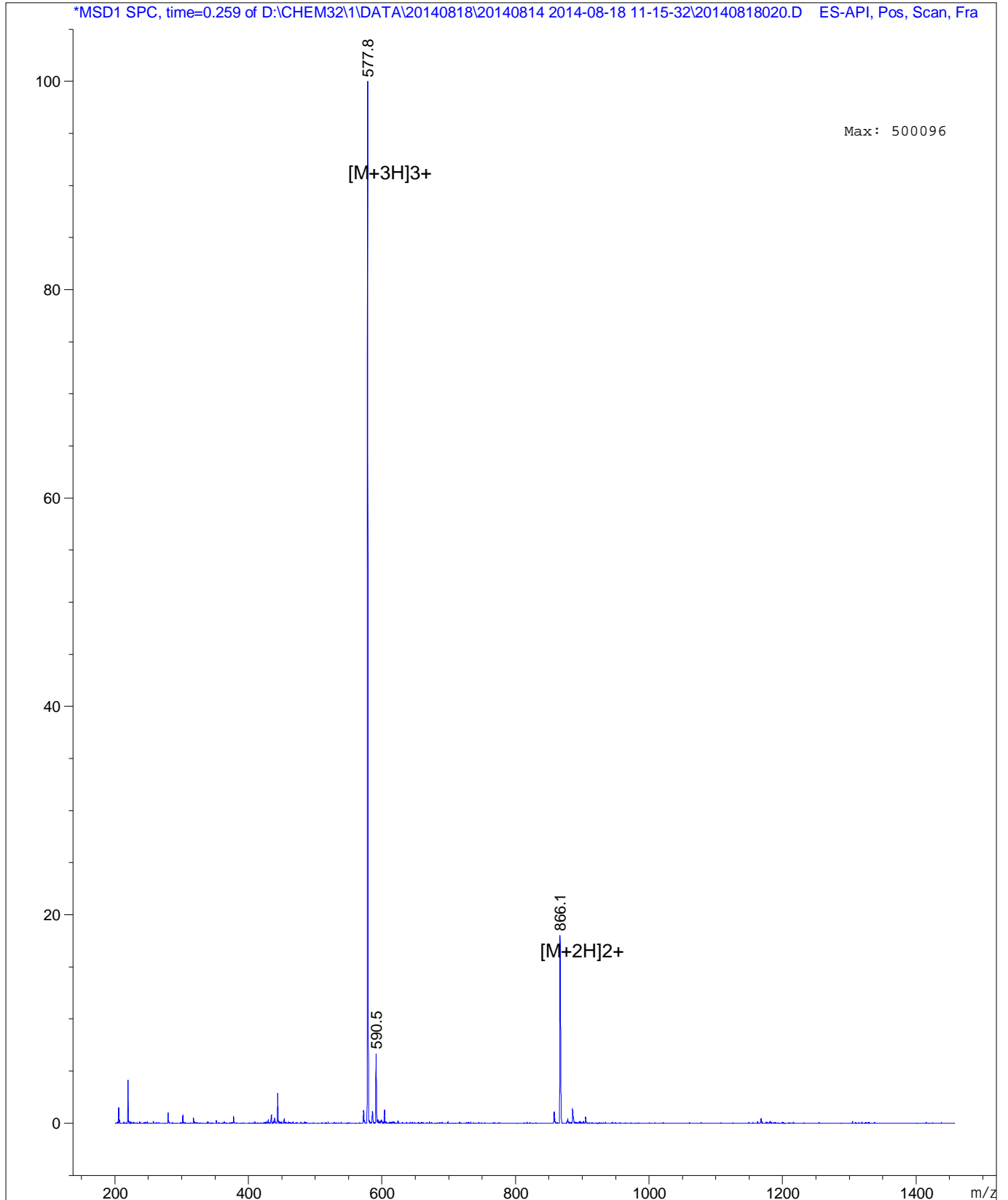
wangjun

Date:

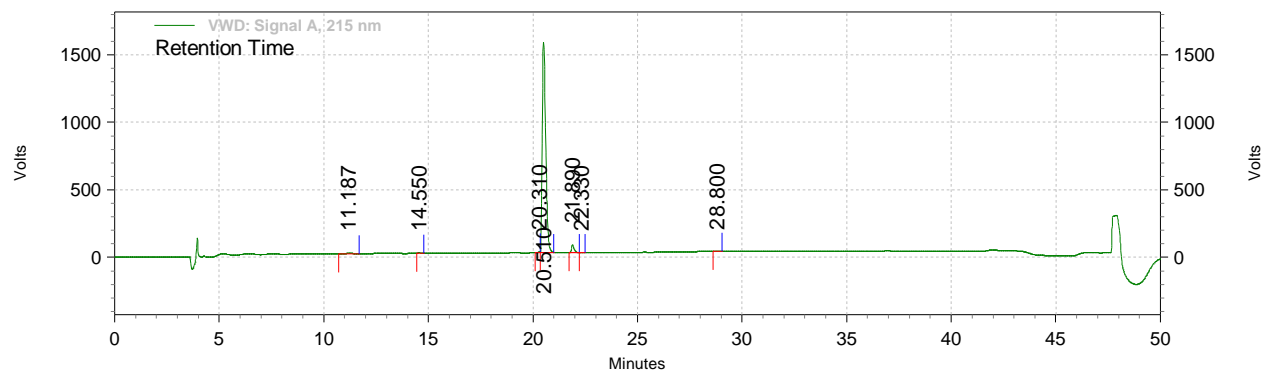
09/11/2014

=====
Acq. Operator : liusuying Seq. Line : 20
Acq. Instrument : 5J-QC-082 Location : Vial 26
Injection Date : 8/18/2014 12:15:32 PM Inj : 1
Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140818\20140814 2014-08-18 11-15-32\TEST MS(200-1500)
2.
Last changed : 8/14/2014 11:53:24 AM by liusuying
Analysis Method : D:\METHOD\TEST MS(200-1500)2.M
Last changed : 8/14/2014 11:53:24 AM by liusuying

MS Spectrum



Data File: D:\KJ100401\20140827-1\20140827.rslt\HIV-1 Con B Gag Peptide-120.dat
 Method: D:\Method\KJ100401(5-65).met
 Acquired: 8/27/2014 5:03:18 PM (GMT +08:00)
 Printed: 8/31/2014 8:15:09 AM (GMT +08:00)
 Column:Agilent HC-C18,5um,4.6*250mm Column Temp:35°C Flow Rate:1.0ml/min
 Mobile Phase A:0.1%TFA water
 Mobile Phase B:0.1%TFA+ACN
 time(min) 0 40 42 44 44.5 50
 B% 5 65 95 95 5 5



VWD: Signal A, 215 nm Results

Retention Time	Area	Area %
11.187	2489988	0.78
14.550	702828	0.22
20.310	577523	0.18
20.510	305372707	96.07
21.890	8203936	2.58
22.330	103069	0.03
28.800	428308	0.13
Totals	317878359	100.00



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-121		
Molecular Formula	C79H126N20O22	Cat#	8117
Molecular Weight	1708.07	Lot#	140303
Manufacturing Date	09/09/2014	Test Date	09/09/2014
Sequence	KELYPLASLRSLFGN		
Item No.	8117_140303_121		
TEST		SPECIFICATION	RESULT
1	Appearance	<i>White or slightly yellowish</i>	<i>Complies</i>
2	Molecular Weight	1708.07±2.0	1707.6
3	Peptide Purity (By HPLC)	≥80%	97.3%
4	Identification(Amino Acid Composition by HPLC)	D	1.1
		S	1.7
		E	0.9
		G	1.1
		R	1.0
		A	1.0
		P	1.0
		Y	1.0
		K	1.0
		L	4.0
F	1.0		
5	Peptide content	83.3%	

Quality Control By:

wangjun

Date:

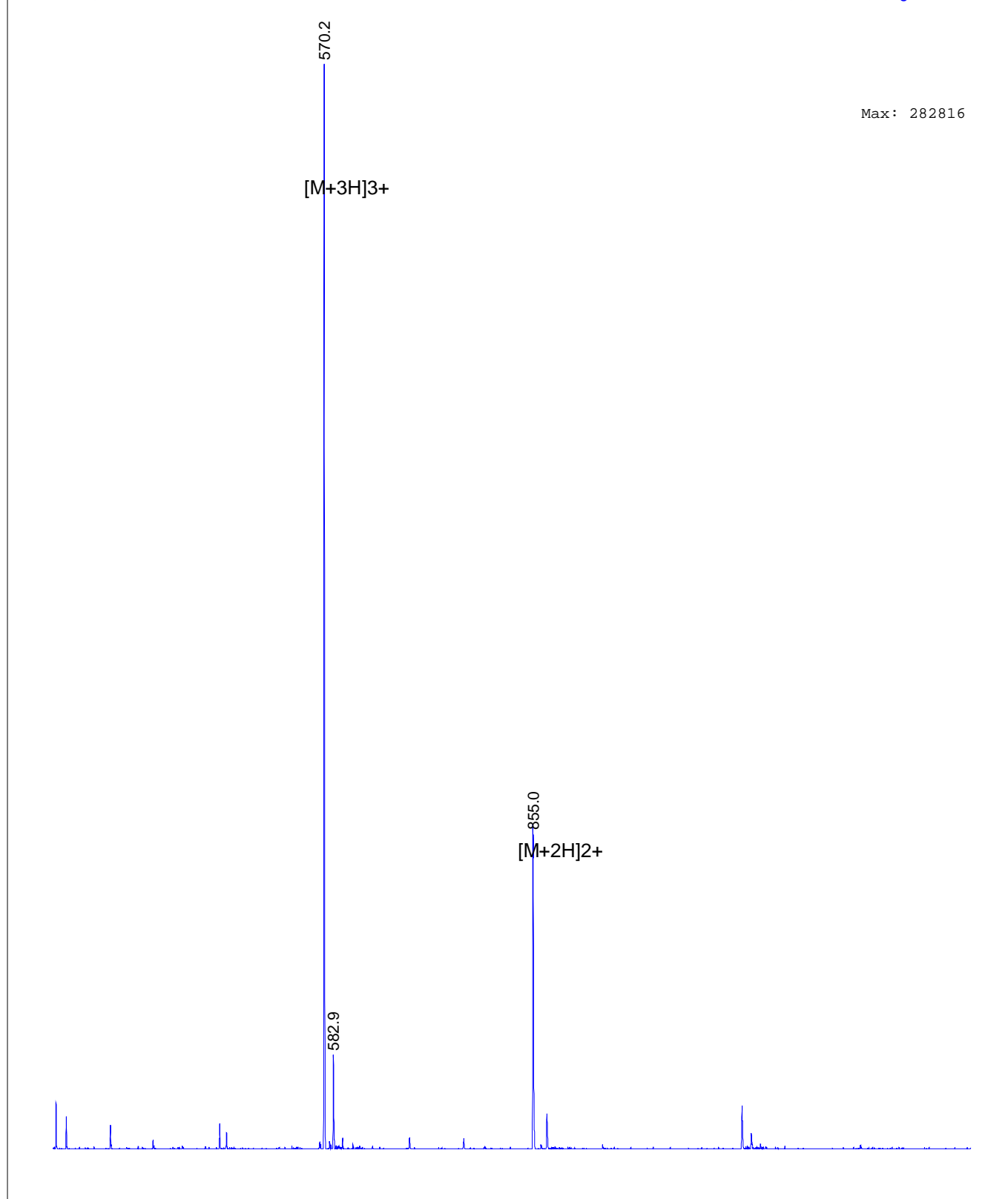
09/09/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 57
Acq. Instrument	: 5J-QC-082	Location	: Vial 73
Injection Date	: 8/13/2014 11:45:24 PM	Inj	: 1
		Inj Volume	: 3.0 µl
Acq. Method	: D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\TEST MS(200-1500) 2.		
Last changed	: 8/11/2014 1:22:13 PM by liusuying		
Analysis Method	: D:\METHOD\TEST MS(500-15000).M		
Last changed	: 4/18/2014 11:29:00 AM by YZW		

MS Spectrum

MSD1 SPC, time=0.470 of D:\CHEM32\1\DATA\20140813\20140813 2014-08-13 20-52-00\073-5701.D ES-API, Pos, Scan, Frag:



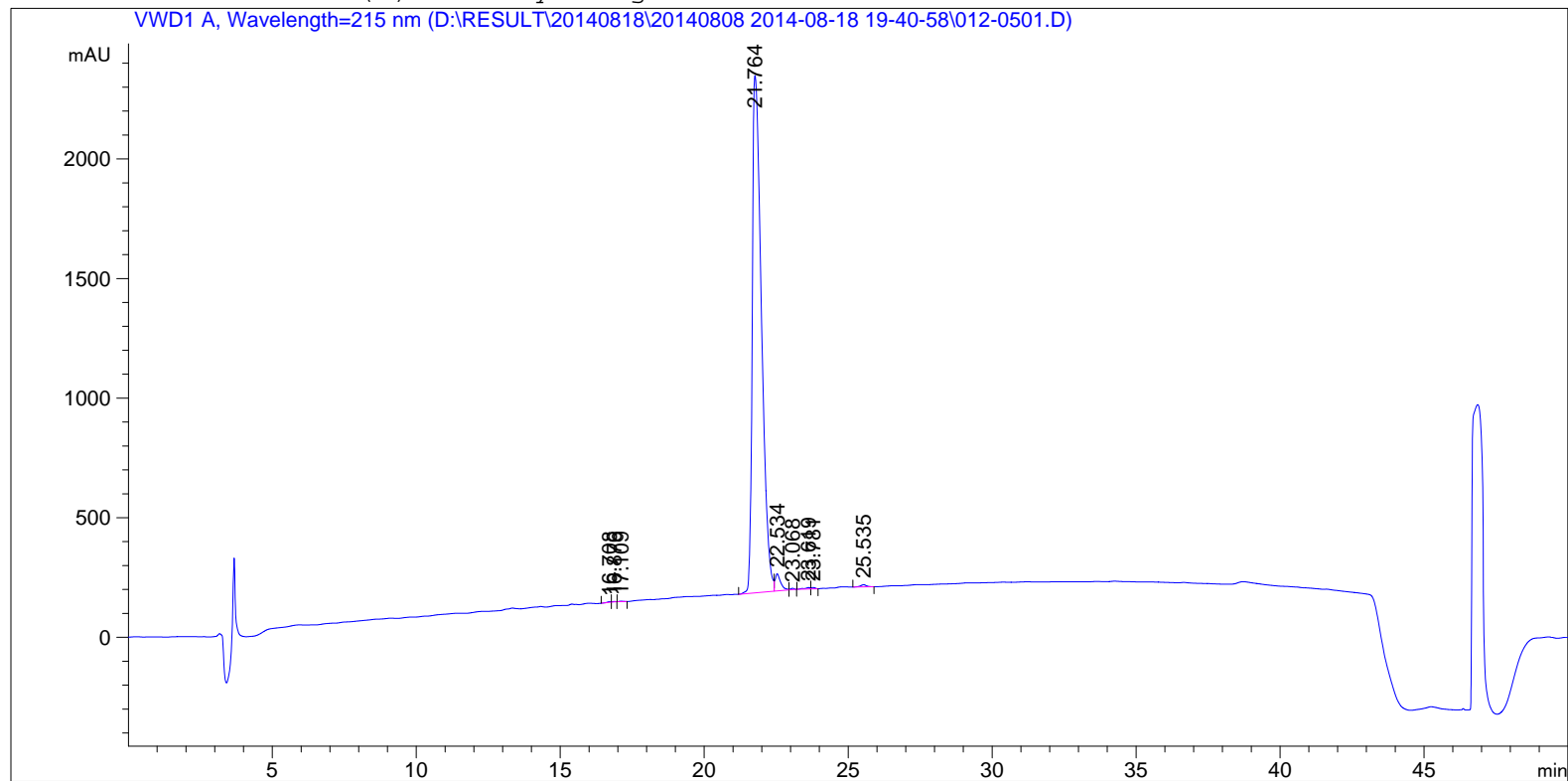
```

=====
Acq. Operator   : SYSTEM                               Seq. Line :    5
Acq. Instrument : HPLC 1260                             Location  : Vial 12
Injection Date  : 8/18/2014 11:05:36 PM                Inj       :    1
                                                    Inj Volume: 20.000 µl

Acq. Method     : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M
Last changed    : 8/18/2014 7:45:15 PM by SYSTEM
Analysis Method : D:\RESULT\20140818\20140808 2014-08-18 19-40-58\KJ100401.M (Sequence Method)
Last changed    : 8/19/2014 10:12:31 AM by SYSTEM
                  (modified after loading)

Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95      10       10
  
```

Additional Info : Peak(s) manually integrated



=====
 Area Percent Report
 =====

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution       :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	16.708	BV	0.1309	27.42536	3.04919	0.0560
2	16.876	VB	0.1224	15.97184	1.87539	0.0326
3	17.109	BB	0.1519	15.00953	1.59290	0.0306
4	21.764	BV	0.3352	4.76644e4	2162.41675	97.3045

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
5	22.534	VV	0.1889	960.01892	71.83838	1.9598
6	23.068	VB	0.1313	46.15621	5.31325	0.0942
7	23.619	BV	0.1825	78.46424	5.88612	0.1602
8	23.781	VB	0.1305	48.69910	5.59837	0.0994
9	25.535	BB	0.2113	128.66298	9.02470	0.2627

Totals : 4.89849e4 2266.59504

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-122		
Molecular Formula	C68H109N19O23	Cat#	8117
Molecular Weight	1560.79	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	PLASLRSLFGNDPSS		
Item No.	8117_140303_122		
	TEST	SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1560.79±2.0	1560.0
3	Peptide Purity (By HPLC)	≥80%	91.6%
4	Identification(Amino Acid Composition by HPLC)	D	2.2
		S	3.6
		G	1.0
		R	1.1
		A	1.0
		P	2.1
		L	3.0
	F	1.0	
5	Peptide content	94.5%	

Quality Control By:

wangjun

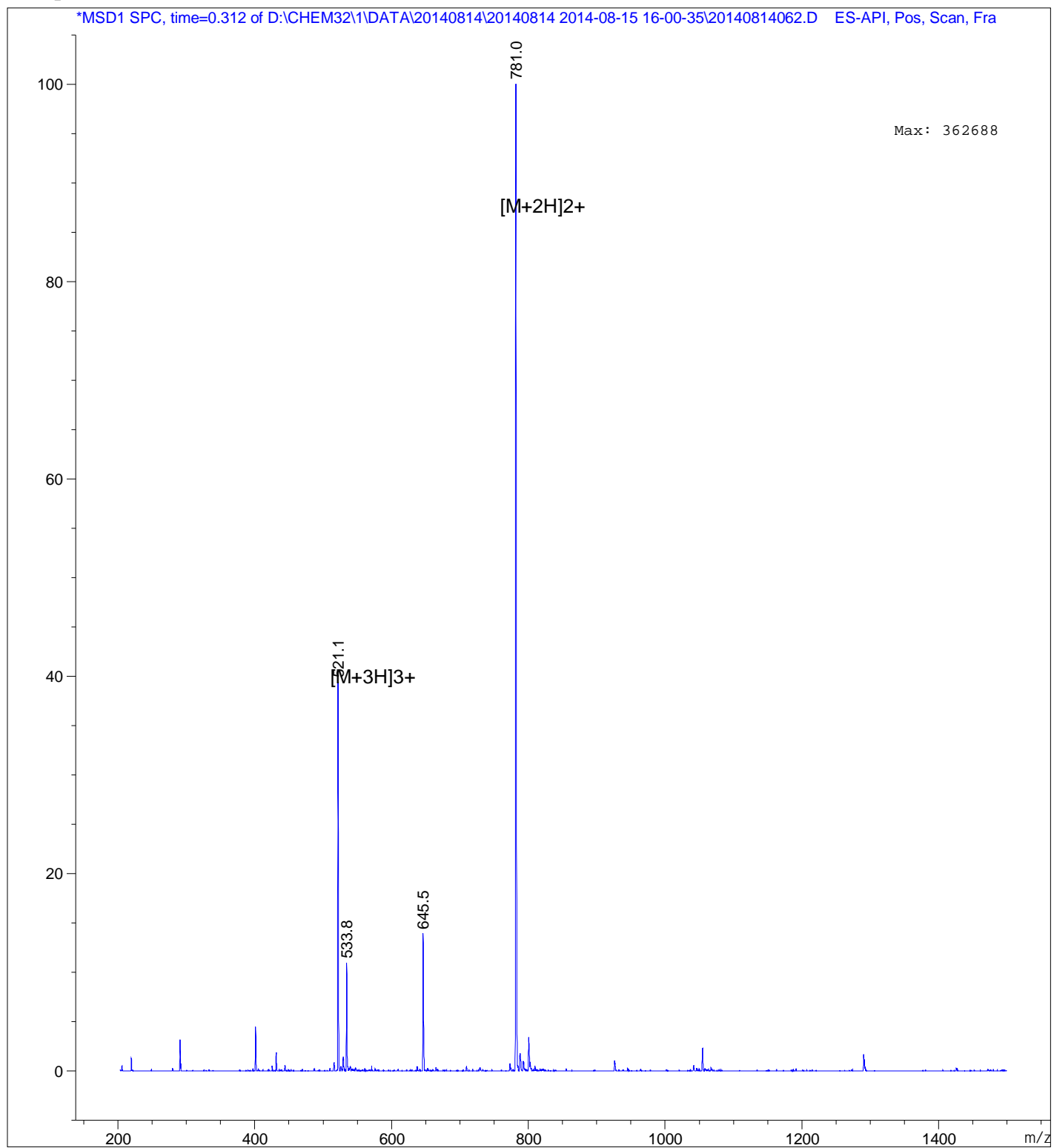
Date:

09/24/2014

=====

Acq. Operator	: liusuying	Seq. Line	: 62
Acq. Instrument	: 5J-QC-082	Location	: Vial 16
Injection Date	: 8/15/2014 7:12:02 PM	Inj	: 1
		Inj Volume	: 3.0 μ l
Acq. Method	: D:\CHEM32\1\DATA\20140814\20140814 2014-08-15 16-00-35\TEST MS(200-1500)2.		
Last changed	: 8/14/2014 11:53:24 AM by liusuying		
Analysis Method	: D:\METHOD\TEST MS(500-15000).M		
Last changed	: 4/18/2014 11:29:00 AM by YZW		

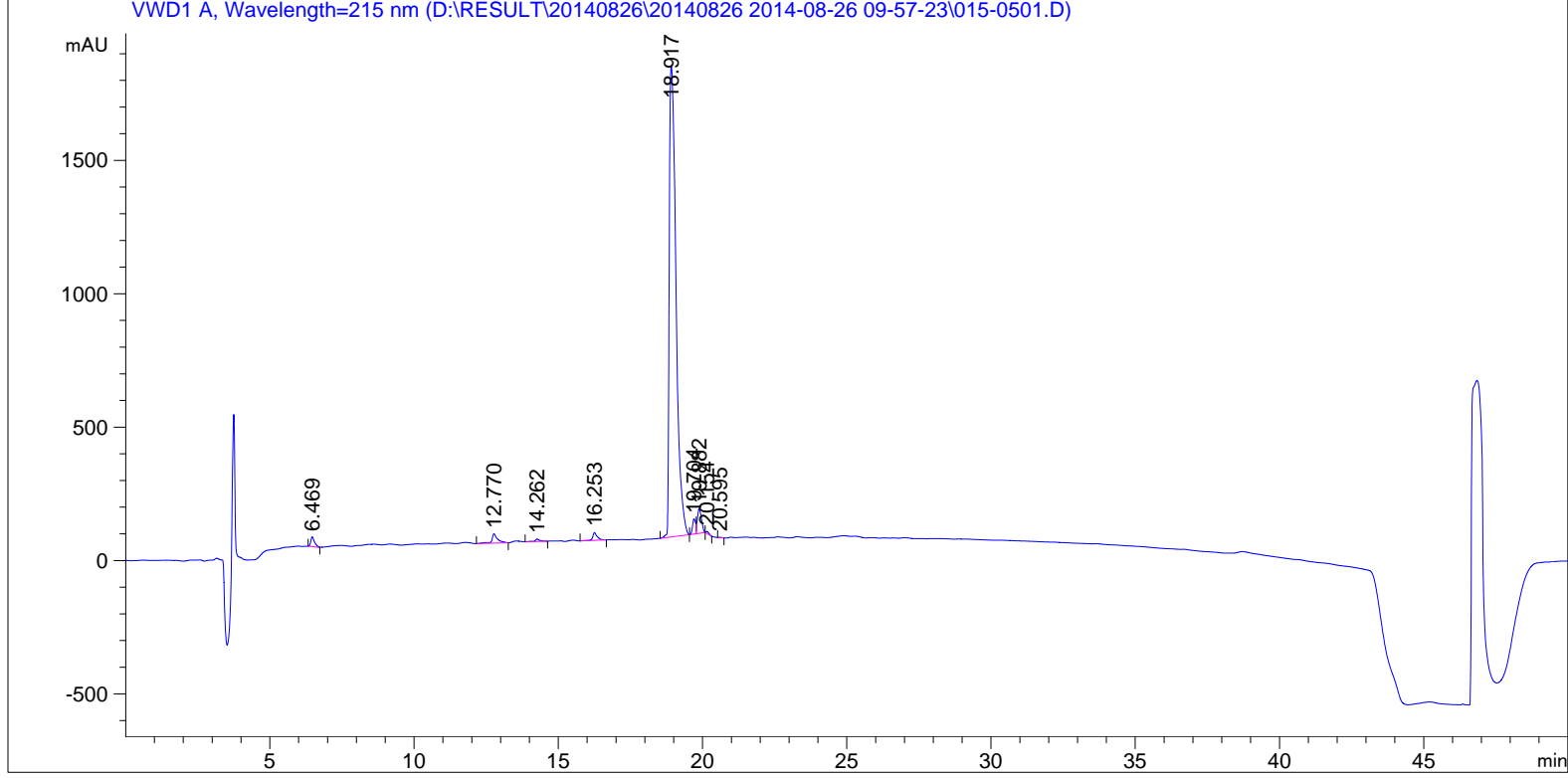
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    5
Acq. Instrument : HPLC 1260                  Location  : Vial 15
Injection Date  : 8/26/2014 1:22:09 PM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\20140826\20140826 2014-08-26 09-57-23\KJ100401.M (Sequence Method)
Last changed    : 8/26/2014 9:57:23 AM by SYSTEM
Method Info     : Cloumn:Agilent HC-C18,5µm,4.6*250mm      Cloumn Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
    
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By       :      Signal
Multiplier      :      1.0000
Dilution        :      1.0000
Use Multiplier & Dilution Factor with ISTDs
    
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	6.469	MM R	0.1513	332.64963	36.64401	1.0659
2	12.770	BB	0.1881	494.06879	35.77789	1.5831
3	14.262	BB	0.1638	105.31535	8.91709	0.3375
4	16.253	BB	0.1556	319.97107	29.03819	1.0253
5	18.917	BB	0.2587	2.85714e4	1766.89661	91.5516
6	19.704	BV	0.1103	412.12091	57.06116	1.3206
7	19.882	VB	0.1567	910.04272	91.73182	2.9161

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
8	20.154	BB	0.1122	54.32711	7.80188	0.1741
9	20.595	BB	0.1107	8.08149	1.16834	0.0259

Totals : 3.12080e4 2035.03698

=====
*** End of Report ***



CERTIFICATE OF ANALYSIS

Product Name	HIV-1 Con B Gag Peptide-123		
Molecular Formula	C56H89N17O20	Cat#	8117
Molecular Weight	1320.48	Lot#	140303
Manufacturing Date	09/24/2014	Test Date	09/24/2014
Sequence	LRSLFGNDPSSQ		
Item No.	8117_140303_123		
TEST		SPECIFICATION	RESULT
1	Appearance	White or slightly yellowish	Complies
2	Molecular Weight	1320.48±2.0	1320.0
3	Peptide Purity (By HPLC)	≥80%	92.8%
4	Identification(Amino Acid Composition by HPLC)	D	1.8
		S	3.3
		E	1.0
		G	1.0
		R	1.0
		P	1.0
		L	2.0
F	1.0		
5	Peptide content	88.1%	

Quality Control By:

wangjun

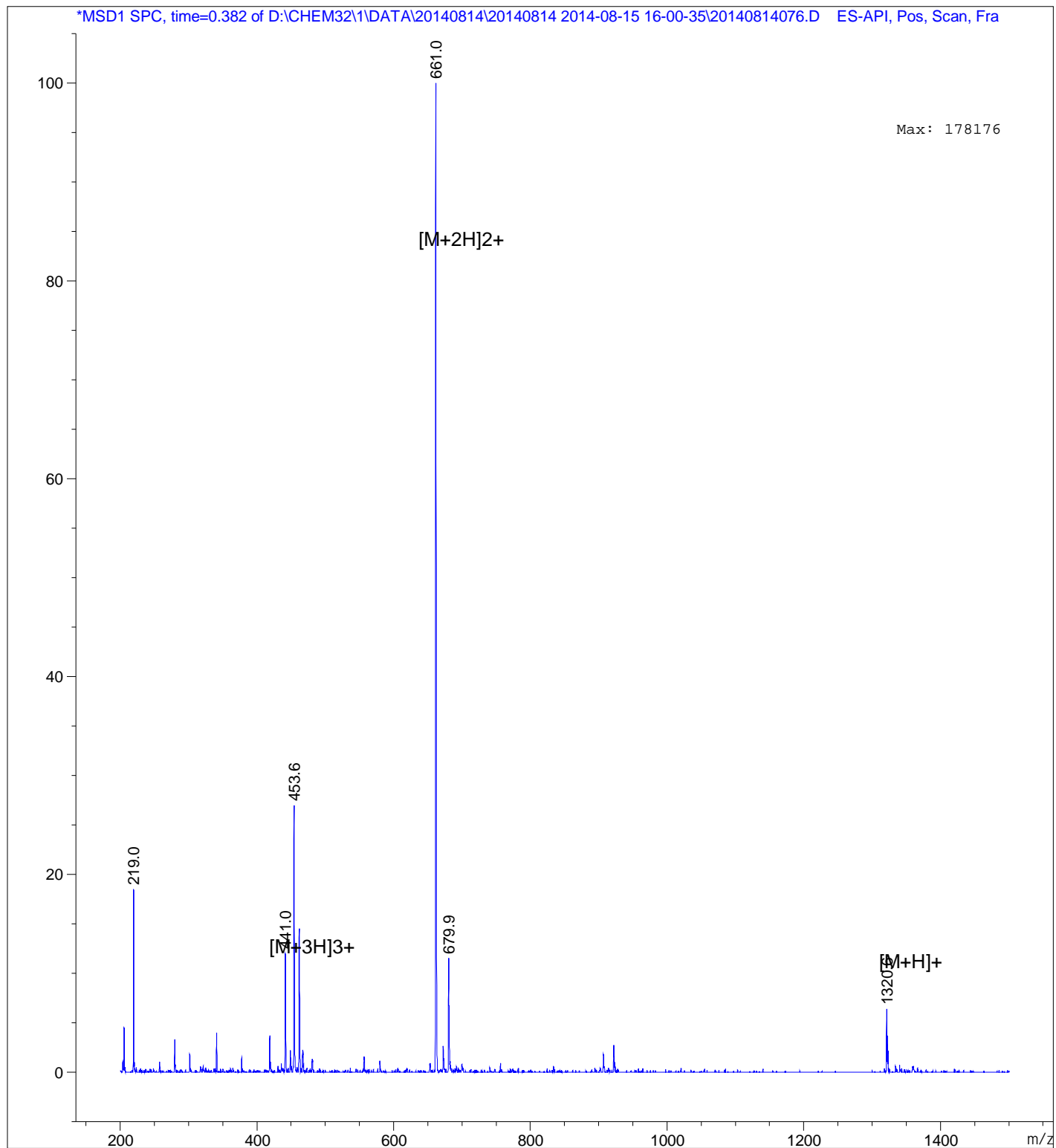
Date:

09/24/2014

=====

Acq. Operator : liusuying	Seq. Line : 76
Acq. Instrument : 5J-QC-082	Location : Vial 34
Injection Date : 8/15/2014 7:55:21 PM	Inj : 1
	Inj Volume : 3.0 µl
Acq. Method : D:\CHEM32\1\DATA\20140814\20140814 2014-08-15 16-00-35\TEST MS(200-1500).2.	
Last changed : 8/14/2014 11:53:24 AM by liusuying	
Analysis Method : D:\METHOD\TEST MS(500-15000).M	
Last changed : 4/18/2014 11:29:00 AM by YZW	

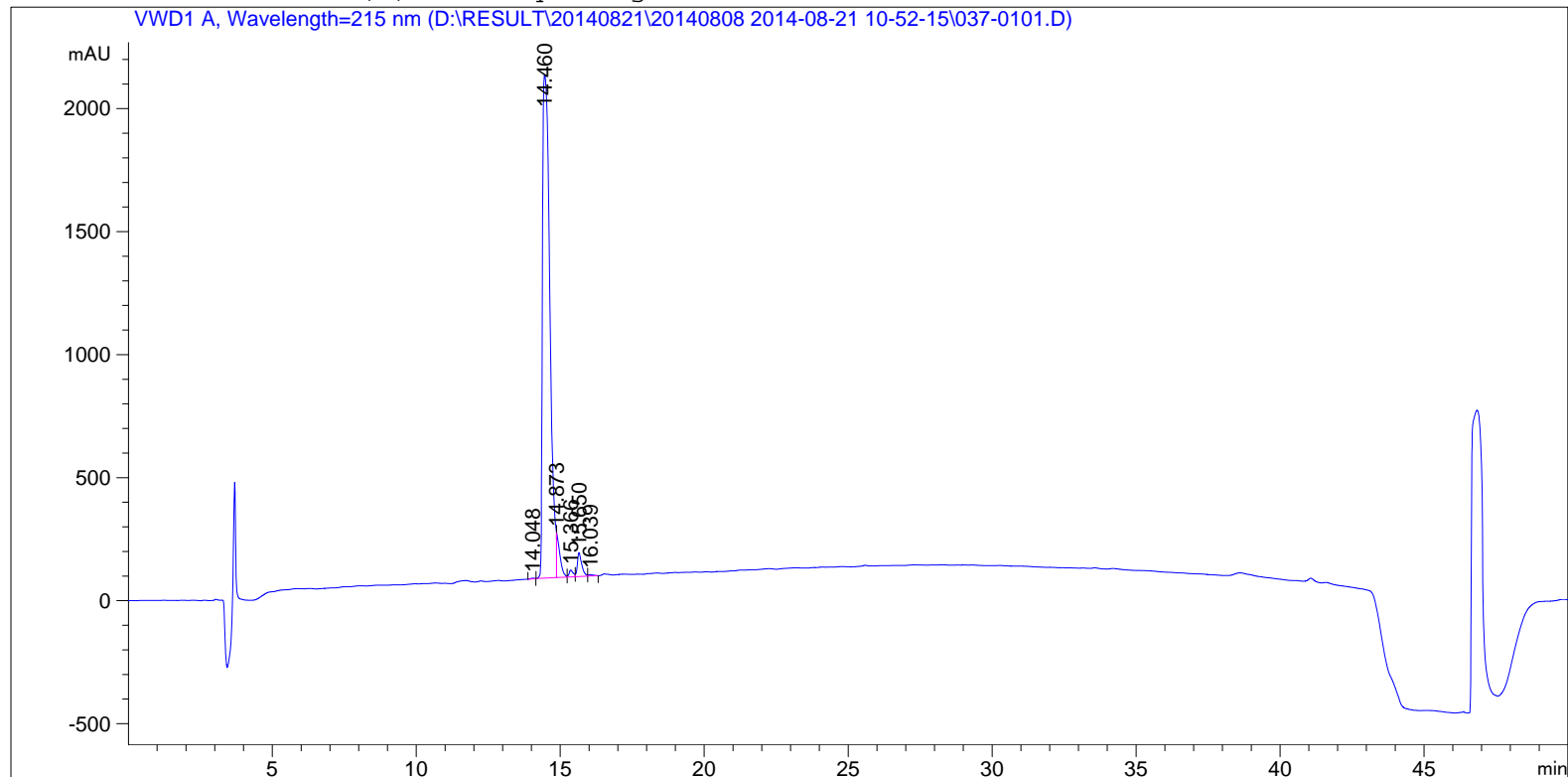
MS Spectrum



```

=====
Acq. Operator   : SYSTEM                      Seq. Line :    1
Acq. Instrument : HPLC 1260                  Location  : Vial 37
Injection Date  : 8/21/2014 10:53:06 AM      Inj       :    1
                                           Inj Volume: 20.000 µl
Method          : D:\RESULT\20140821\20140808 2014-08-21 10-52-15\KJ100401.M (Sequence Method)
Last changed    : 8/21/2014 10:52:15 AM by SYSTEM
Method Info     : Column:Agilent HC-C18,5µm,4.6*250mm      Column Temp:35°C      Flow
                  Rate:1.0ml/min
                  Mobile Phase A:0.1%TFA+H2O
                  Mobile Phase B:0.1%TFA+ACN
                  time(min)      0      40      40.3      43      43.3      50
                  B%             10     70     95       95     10       10
  
```

Additional Info : Peak(s) manually integrated



Area Percent Report

```

Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: VWD1 A, Wavelength=215 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	14.048	BB	0.1410	22.41638	2.61558	0.0574
2	14.460	MF R	0.2952	3.62650e4	2047.61011	92.8271
3	14.873	FM R	0.1279	1407.04700	183.36555	3.6016
4	15.366	VV	0.1394	274.95557	28.29037	0.7038
5	15.650	VV	0.1505	1026.18018	97.69428	2.6267
6	16.039	VB	0.2050	71.67611	5.46617	0.1835

Totals : 3.90673e4 2365.04207

=====
*** End of Report ***