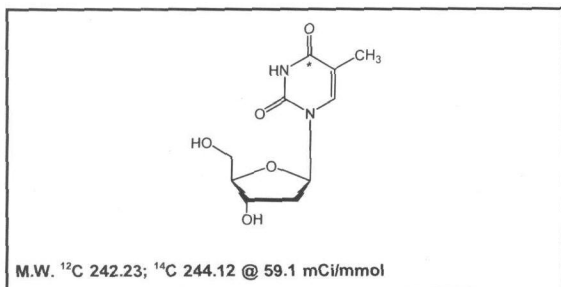




Product Data Sheet

MC-291

Thymidine, [4-¹⁴C]-



Lot #: 212-077-0591-A-20110221-WW

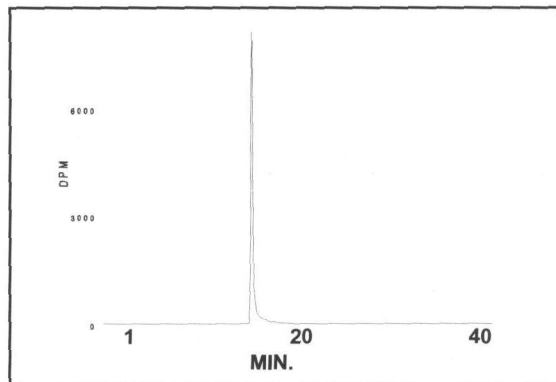
Specific Activity: 59.1 mCi/mmol

Concentration: 0.1 mCi/ml; 413.07 µg/ml

Packaged in: Sterile water solution

Date of Analysis: February 21, 2011

Radiochemical Purity: 99.6%



HPLC ANALYSIS LOT 212-077-0591-A-20110221-WW
File Name: inti3199 Date and Time: 2/21/2011 11:53:21 A
Unit 18 Radio

Peak #	Area %	Time	Area
1	0.02	14.98330	2.63807
2	99.61	15.27330	13588.36720
3	0.14	16.70670	19.60450
4	0.23	17.42000	31.19900
Totals	100.00		13641.80877

Stability and Storage Recommendation: The rate of decomposition is approximately 0.5%/month for the first six months after purification when stored at 0-5°C.

Product Warranty: Stated on the reverse side of this Product Data Sheet.

Caution: Not For Use In Humans Or Clinical Diagnosis. This product is intended for investigational or manufacturing use only. It is pharmaceutically unrefined and is not intended for use in humans. Responsibility for its use in humans, as a diagnostic reagent, and compliance with federal laws rests solely with the purchaser.

MC-291

Thymidine, [4-¹⁴C]-

Lot 212-077-0591-A-20110221-WW

A) All chromatograms were run using the HPLC method described on the Product Data Sheet.

Concentrations and volumes:

Standard solution concentration was 1.0 mg/ml.

Thymidine, [4-¹⁴C]- concentration was 150.0 µCi/ml.

Volume of standard alone injection was 1.0 µl.

Volume of **Thymidine, [4-¹⁴C]-** alone injection was 1.0 µl.

Co-injection solution consisted of 1.0 µl **Thymidine, [4-¹⁴C]-** + 1.0 µl standard.

Volume of co-injection was 2.0 µl.

Volume of blank injection was 1.0 µl.

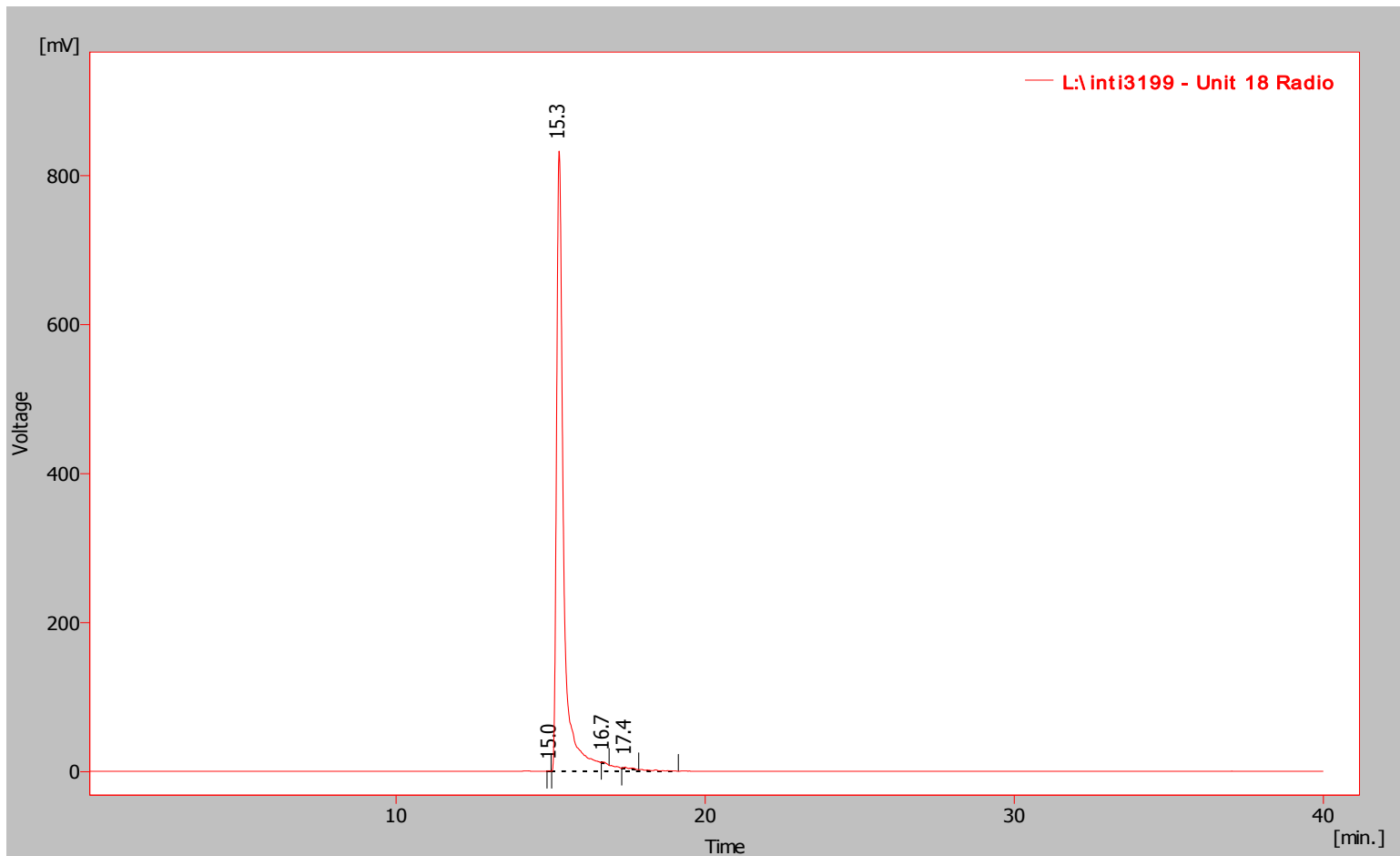
B) Mass spectrometry - Positive mode

C) NMR

MC-291
Thymidine, [4-14C]-
Lot 212-077-0591-A-20110221-WW

Chromatogram Info:

File Name	: L:\inti3199	File Created	: 10/23/2013 3:43:28 PM
Origin	: Acquired, Acquisition started 2/21/2011 11:13:24 AM	Acquired Date	: 2/21/2011 11:53:21 AM
Project	: Test	By	: Administrator
Method	: Unit18_40_min_run	By	: Administrator
Description	: Radiochemical trace of 14C material alone	Modified	: 10/23/2013 3:52 PM
Created	: 8/9/2007 1:12 PM		
Column	:	Detection	: Radiochemical
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



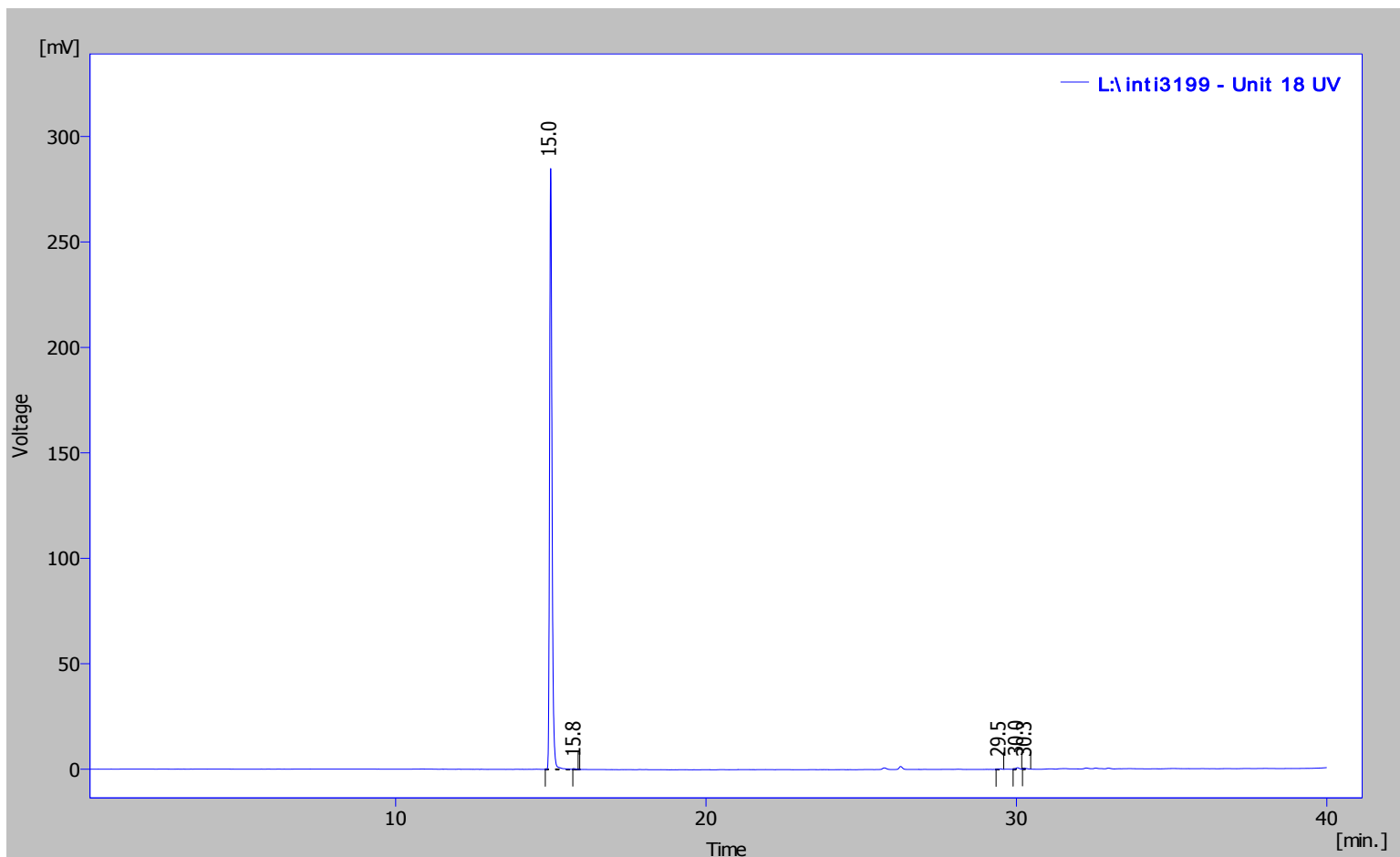
Result Table (Uncal - L:\inti3199 - Unit 18 Radio)

	Compound Name	Reten. Time [min]	Area [%]	Area [mV.s]	Height [mV]	Height [%]	Efficiency [th.pl]
1		14.983	0.019	2.638	0.439	0.053	246250.984
2		15.273	99.623	13590.436	832.413	99.476	0.000
3		16.707	0.129	17.536	1.784	0.213	90742.561
4		17.420	0.229	31.199	2.158	0.258	17497.055
		Total	100.000	13641.809	836.795	100.000	

MC-291
Thymidine, [4-14C]-
Lot 212-077-0591-A-20110221-WW

Chromatogram Info:

File Name	: L:\inti3199	File Created	: 10/23/2013 3:43:28 PM
Origin	: Acquired, Acquisition started 2/21/2011 11:13:24 AM	Acquired Date	: 2/21/2011 11:53:21 AM
Project	: Test	By	: Administrator
Method	: Unit18_40_min_run	By	: Administrator
Description	: UV trace of 14C material alone	Modified	: 10/23/2013 3:51 PM
Created	: 8/9/2007 1:12 PM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



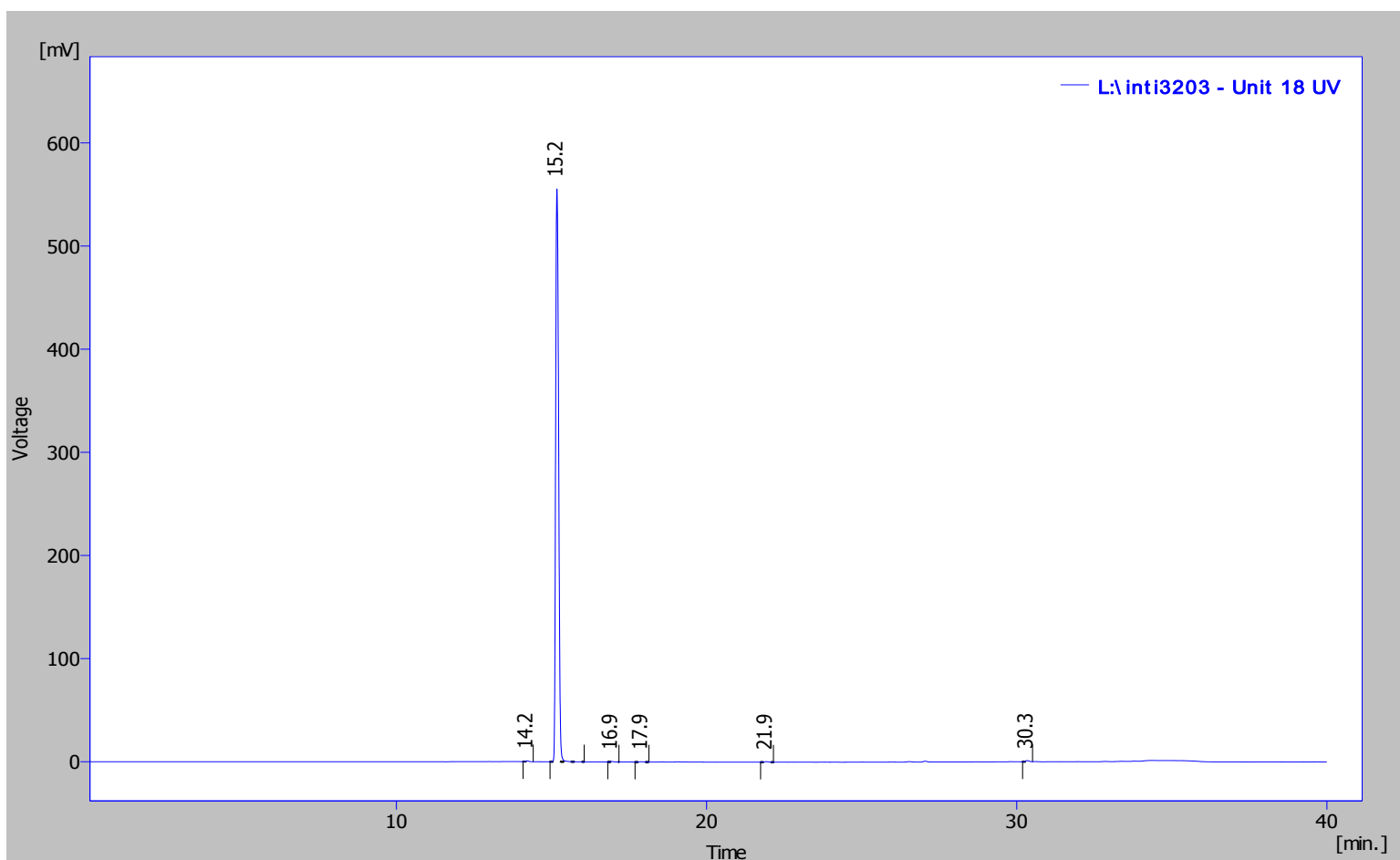
Result Table (Uncal - L:\inti3199 - Unit 18 UV)

	Compound Name	Reten. Time [min]	Area [%]	Area [mV.s]	Height [mV]	Height [%]	Efficiency [th.pl]
1		14.997	99.386	1547.204	284.917	99.509	0.000
2		15.780	0.062	0.965	0.201	0.070	263267.279
3		29.473	0.099	1.536	0.236	0.083	480524.315
4		30.033	0.306	4.767	0.690	0.241	466592.107
5		30.297	0.147	2.290	0.280	0.098	374352.486
		Total	100.000	1556.763	286.324	100.000	

MC-291
Thymidine, [4-14C]-
Lot 212-077-0591-A-20110221-WW

Chromatogram Info:

File Name	: L:\inti3203	File Created	: 10/23/2013 3:43:28 PM
Origin	: Acquired, Acquisition started 2/22/2011 2:08:13 PM	Acquired Date	: 2/22/2011 2:48:12 PM
Project	: Test	By	: Administrator
Method	: Unit18_40_min_run	By	: Administrator
Description	: UV trace of standard alone	Modified	: 10/23/2013 3:54 PM
Created	: 8/9/2007 1:12 PM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



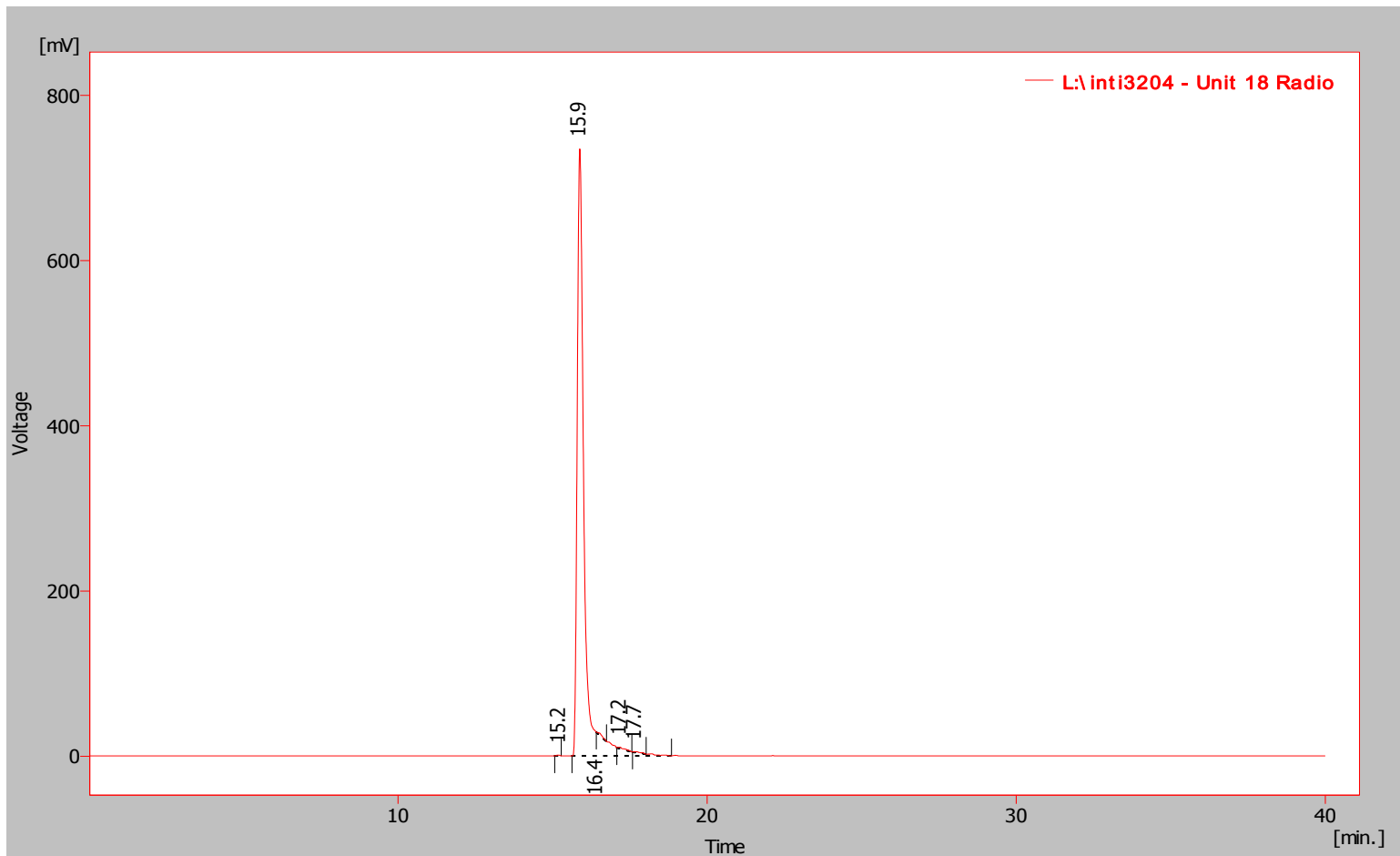
Result Table (Uncal - L:\inti3203 - Unit 18 UV)

	Compound Name	Reten. Time [min]	Area [%]	Area [mV.s]	Height [mV]	Height [%]	Efficiency [th.pl]
1		14.210	0.142	5.337	0.814	0.146	114661.566
2		15.177	99.341	3726.438	555.418	99.427	103986.113
3		16.937	0.094	3.538	0.505	0.090	120410.137
4		17.900	0.074	2.772	0.311	0.056	70923.913
5		21.920	0.118	4.425	0.475	0.085	121967.508
6		30.333	0.231	8.659	1.095	0.196	369707.275
		Total	100.000	3751.169	558.617	100.000	

MC-291
Thymidine, [4-14C]-
Lot 212-077-0591-A-20110221-WW

Chromatogram Info:

File Name	: L:\inti3204	File Created	: 10/23/2013 3:43:28 PM
Origin	: Acquired, Acquisition started 2/22/2011 3:08:59 PM	Acquired Date	: 2/22/2011 3:48:58 PM
Project	: Test	By	: Administrator
Method	: Unit18_40_min_run	By	: Administrator
Description	: Radiochemical trace of 14C material co-injected with standard	Modified	: 10/23/2013 3:56 PM
Created	: 8/9/2007 1:12 PM		
Column	:	Detection	: Radiochemical
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



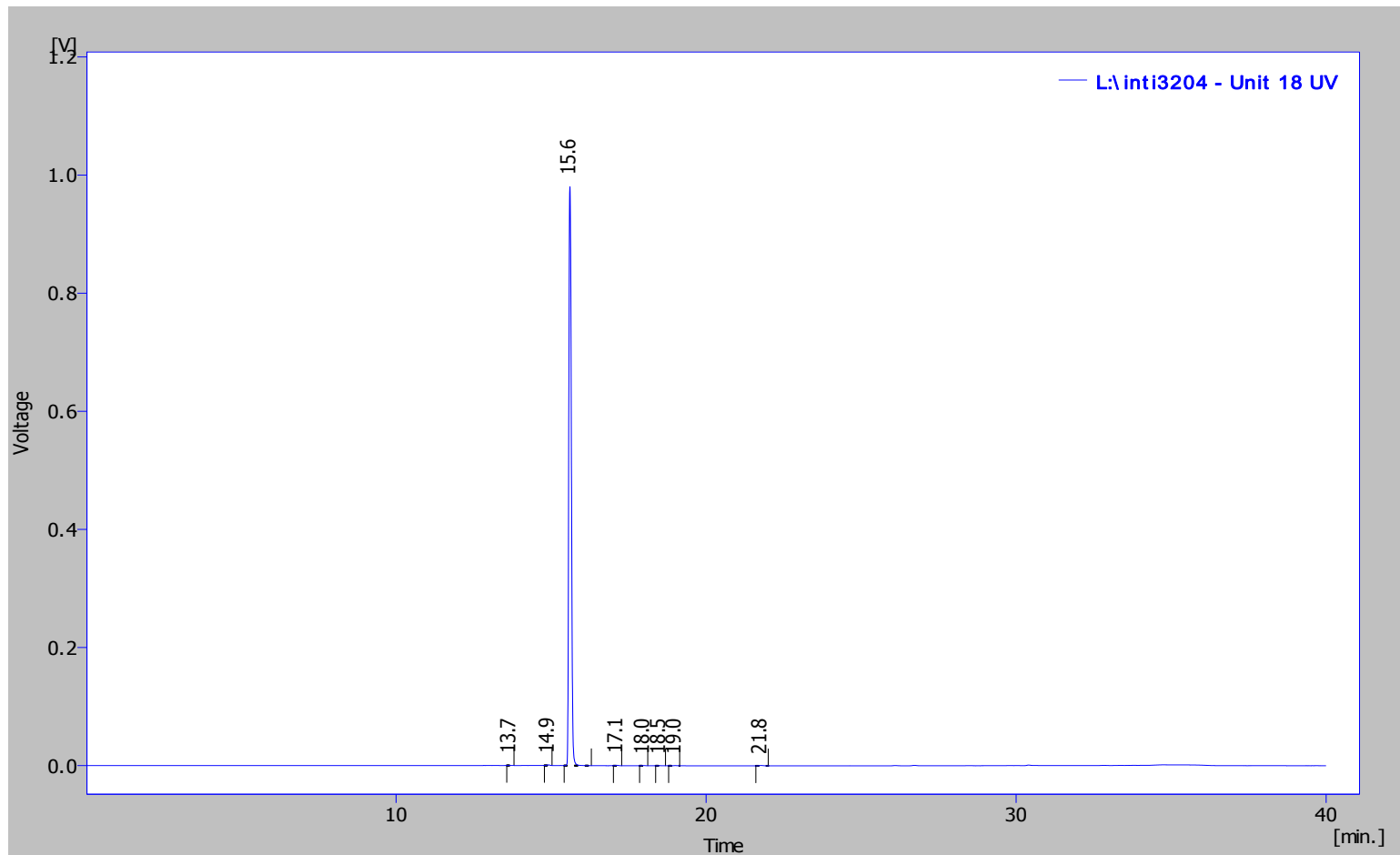
Result Table (Uncal - L:\inti3204 - Unit 18 Radio)

	Compound Name	Reten. Time [min]	Area [%]	Area [mV.s]	Height [mV]	Height [%]	Efficiency [th.pl]
1		15.223	0.064	7.459	0.932	0.126	117187.486
2		15.880	99.287	11509.446	734.723	99.454	0.000
3		16.423	0.231	26.772	0.135	0.018	53633.933
4		17.193	0.238	27.568	2.008	0.272	19654.928
5		17.677	0.180	20.808	0.955	0.129	27024.304
		Total	100.000	11592.053	738.753	100.000	

MC-291
Thymidine, [4-14C]-
Lot 212-077-0591-A-20110221-WW

Chromatogram Info:

File Name	: L:\inti3204	File Created	: 10/23/2013 3:43:28 PM
Origin	: Acquired, Acquisition started 2/22/2011 3:08:59 PM	Acquired Date	: 2/22/2011 3:48:58 PM
Project	: Test	By	: Administrator
Method	: Unit18_40_min_run	By	: Administrator
Description	: UV trace of 14C material co-injected with standard	Modified	: 10/23/2013 3:59 PM
Created	: 8/9/2007 1:12 PM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



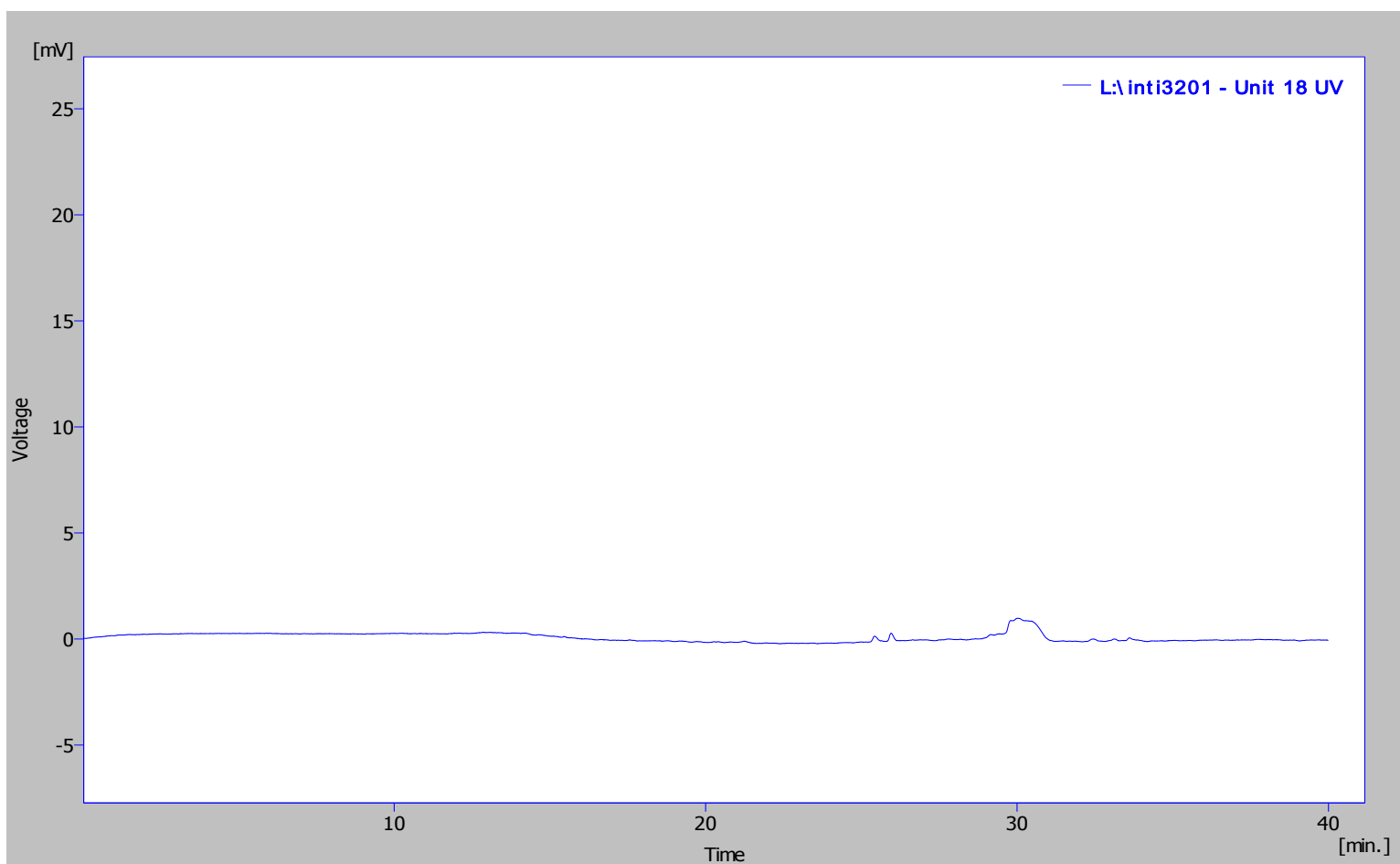
Result Table (Uncal - L:\inti3204 - Unit 18 UV)

	Compound Name	Reten. Time [min]	Area [%]	Area [mV.s]	Height [mV]	Height [%]	Efficiency [th.pl]
1		13.670	0.019	1.058	0.153	0.016	102209.033
2		14.910	0.112	6.376	1.047	0.106	160873.582
3		15.607	99.593	5662.448	980.557	99.673	155694.095
4		17.120	0.072	4.098	0.652	0.066	185836.523
5		17.977	0.045	2.553	0.342	0.035	150785.314
6		18.500	0.022	1.238	0.177	0.018	131548.433
7		19.000	0.047	2.673	0.301	0.031	93138.611
8		21.767	0.091	5.149	0.547	0.056	125362.090
		Total	100.000	5685.593	983.775	100.000	

MC-291
Thymidine, [4-14C]-
Lot 212-077-0591-A-20110221-WW

Chromatogram Info:

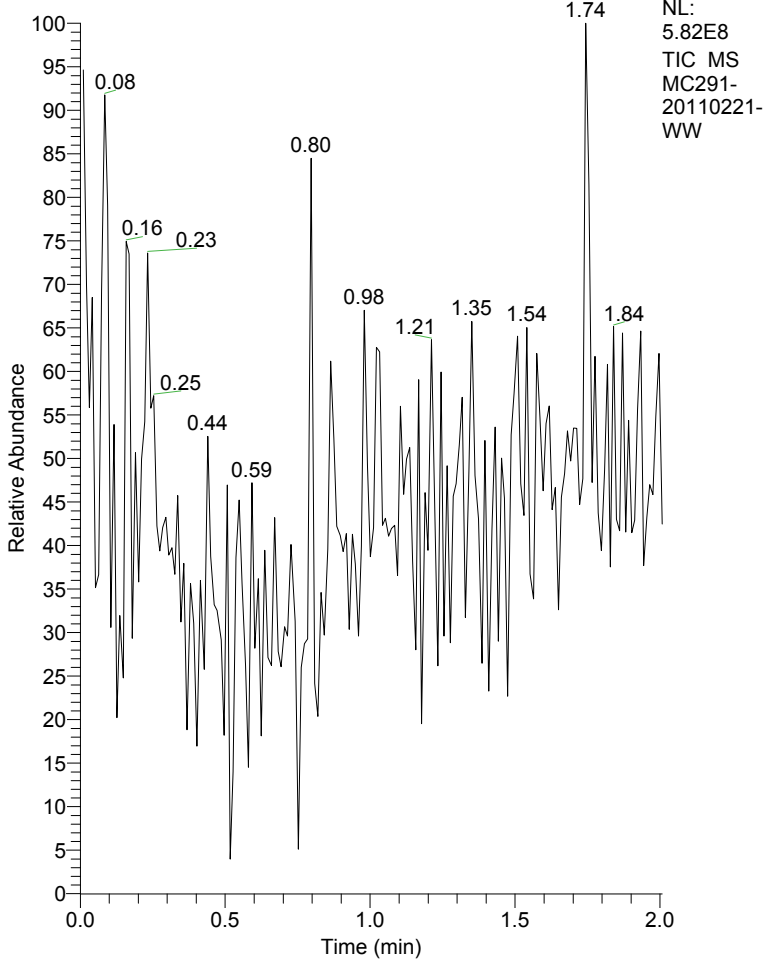
File Name	: L:\inti3201	File Created	: 10/23/2013 3:43:28 PM
Origin	: Acquired, Acquisition started 2/22/2011 12:03:55 PM	Acquired Date	: 2/22/2011 12:43:54 PM
Project	: Test	By	: Administrator
Method	: Unit18_40_min_run	By	: Administrator
Description	: UV trace of blank injection	Modified	: 10/23/2013 4:23 PM
Created	: 8/9/2007 1:12 PM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



Result Table (Uncal - L:\inti3201 - Unit 18 UV)

Compound Name	Reten. Time [min]	Area [%]	Area [mV.s]	Height [mV]	Height [%]	Efficiency [th.pl]
No peak to report						

RT: 0.00 - 2.01



NL:
5.82E8
TIC MS
MC291-
20110221-
WW

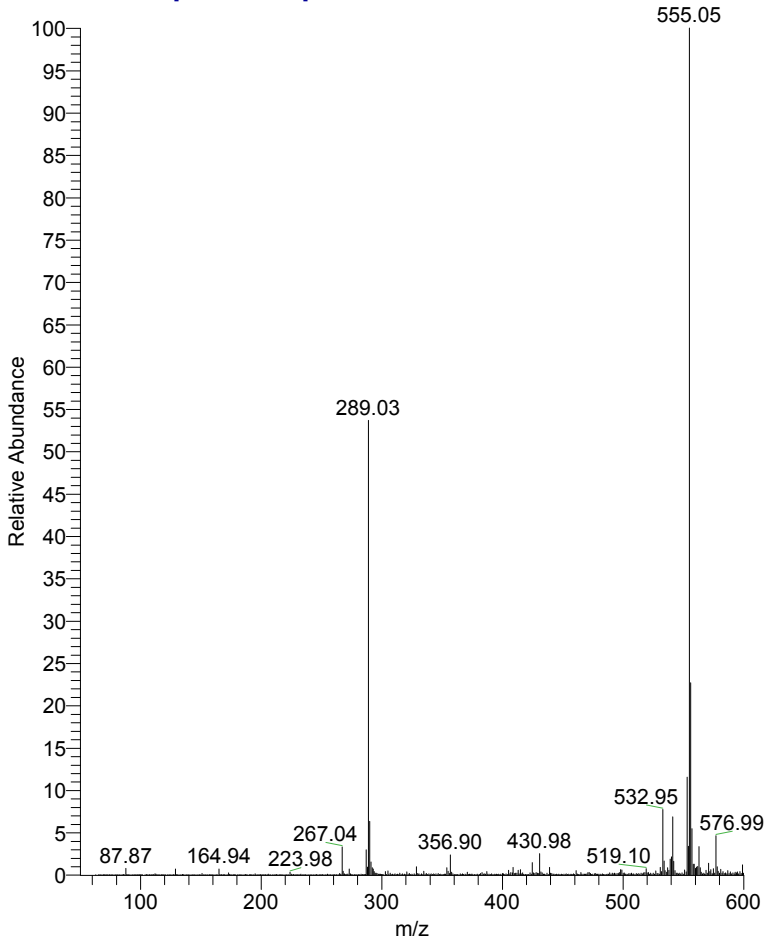
MC291-20110221-WW#1-186 RT: 0.01-2.01 AV:

T: + c NSI Full ms [50.00-600.00]

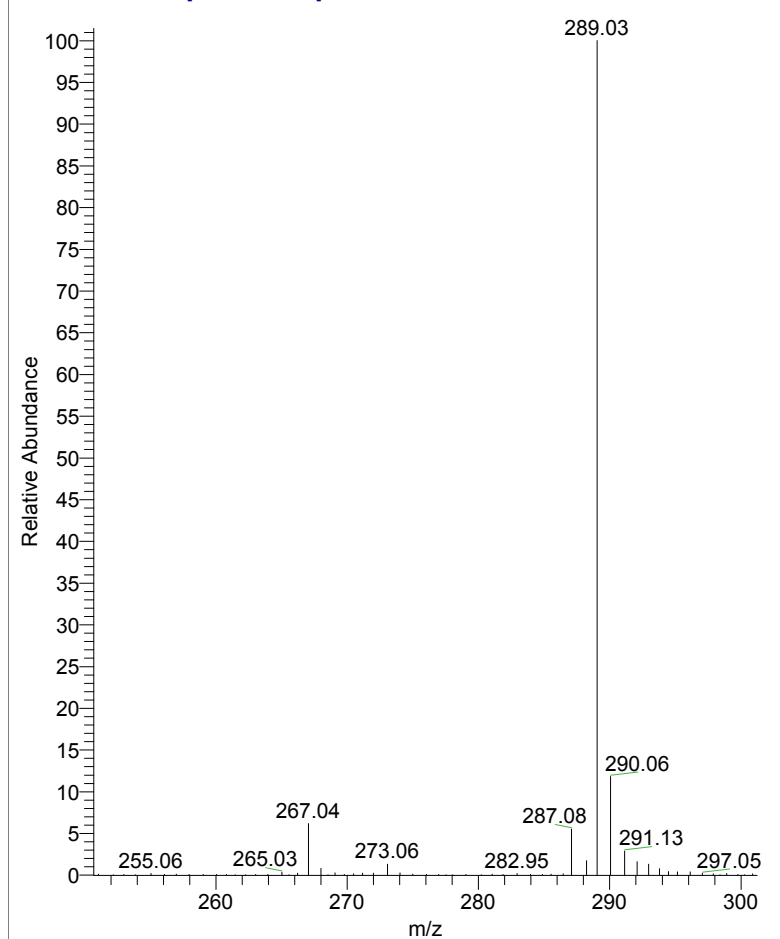
m/z= 252.72-294.52

m/z	Intensity	Relative
255.06	70395.9	0.16
265.03	143328.3	0.33
266.22	87849.1	0.20
267.04	2644257.2	6.17
268.01	342377.0	0.80
269.06	109656.7	0.26
271.16	84573.4	0.20
272.00	82835.2	0.19
273.06	556517.6	1.30
274.03	106034.4	0.25
282.95	69718.6	0.16
287.08	2365325.1	5.52
288.24	731956.2	1.71
289.03	42867936.6	100.00
290.06	5048587.8	11.78
291.13	1229371.8	2.87
292.10	689343.2	1.61
292.95	546422.5	1.27
293.79	328682.1	0.77
294.48	171496.3	0.40

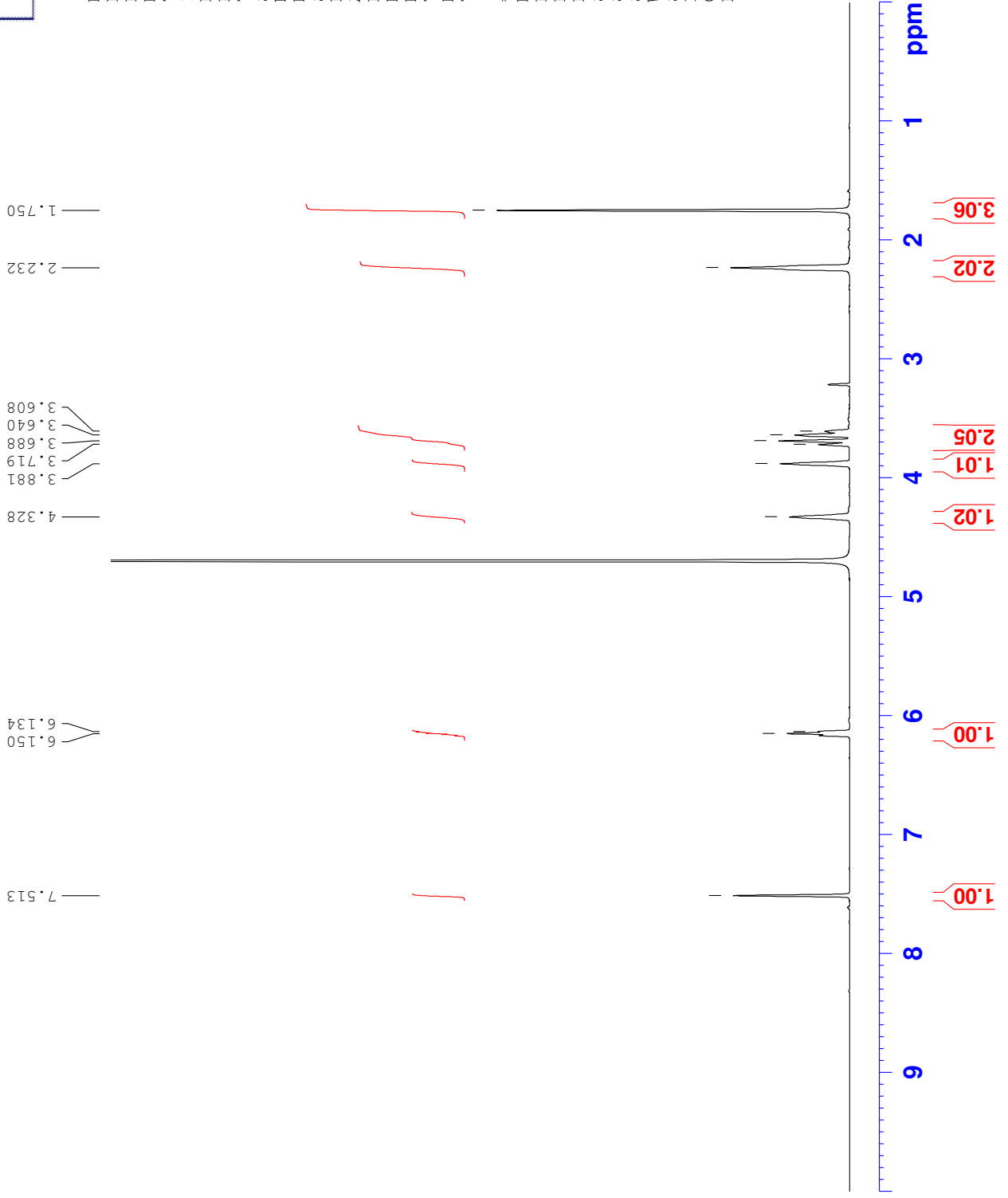
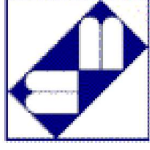
MC291-20110221-WW #1-186 RT: 0.01-2.01 AV: 186 NL: 7.99E7
T: + c NSI Full ms [50.00-600.00]



MC291-20110221-WW #1-186 RT: 0.01-2.01 AV: 186 NL: 4.29E7
T: + c NSI Full ms [50.00-600.00]



MC291 1H NMR in D2O
Batch 20110221-WW



NAME MC291-20110221-WW
EXPNO 1
PROCNO 1
Date_ 20110223
Time 9.36
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT D2O
NS 512
DS 2
SWH 8278.146 Hz
FIDRES 0.126314 Hz
AQ 3.9584243 sec
RG 181
DW 60.400 use
DE 6.50 use
TE 292.7 K
D1 2.00000000 sec
TD0 1

==== CHANNEL f1 =====
NUC1 1H
P1 14.50 use
PL1 -0.70 dB
PL1W 10.03411102 W
SF01 400.1324710 MHz
SI 32768
SF 400.1300000 MHz
WDW no
SSB 0
LB 0.00 Hz
GB 0
PC 1.00