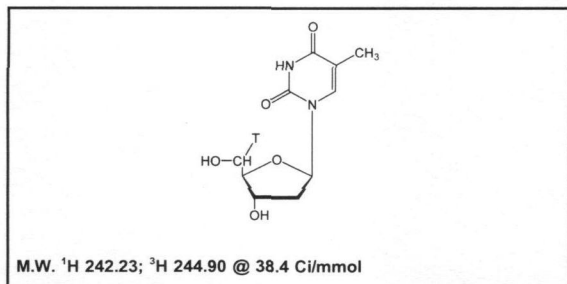




Product Data Sheet

MT-846

Thymidine, [5'-³H]-



Lot #: 167-080-0384-A-20090331-NT

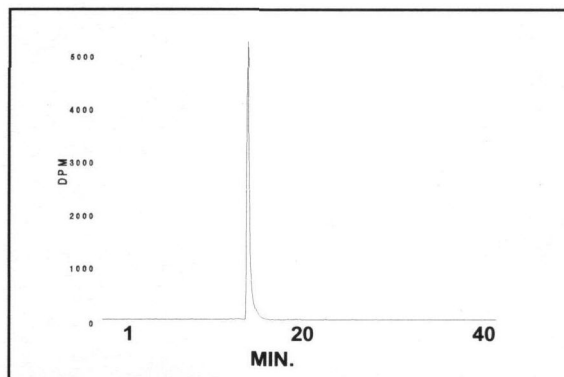
Specific Activity: 38.4 Ci/mmol

Concentration: 1.0 mCi/ml; 6.38 µg/ml

Packaged in: Ethanol : water (1 : 1) solution

Date of Analysis: June 04, 2009

Radiochemical Purity: 99.5%



HPLC ANALYSIS LOT 167-080-0384-A-20090331-NT
File Name: int41927 Date and Time: 6/4/2009 11:42:23 AM
Unit 4 Radio

Peak #	Area %	Time	Area
1	0.50	13.87670	50.77420
2	99.50	14.88000	10192.12738
Totals	100.00		10242.90158

Stability and Storage Recommendation: The rate of decomposition is approximately 1%/month for the first six months after purification when stored at -20°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.

MT-846

Thymidine, [5'-³H]-

Lot 167-080-0384-A-20090331-NT

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, [5'-³H]- concentration was 420.0 µCi/mL.

Volume of standard alone injection was 2.0 µL.

Volume of **Thymidine, [5'-³H]-** alone injection was 1.0 µL.

Co-injection solution consisted of 1.0 µL **Thymidine, [5'-³H]-** + 2.0 µL standard.

Volume of co-injection was 3.0 µL.

Volume of blank injection was 1.0 µL.

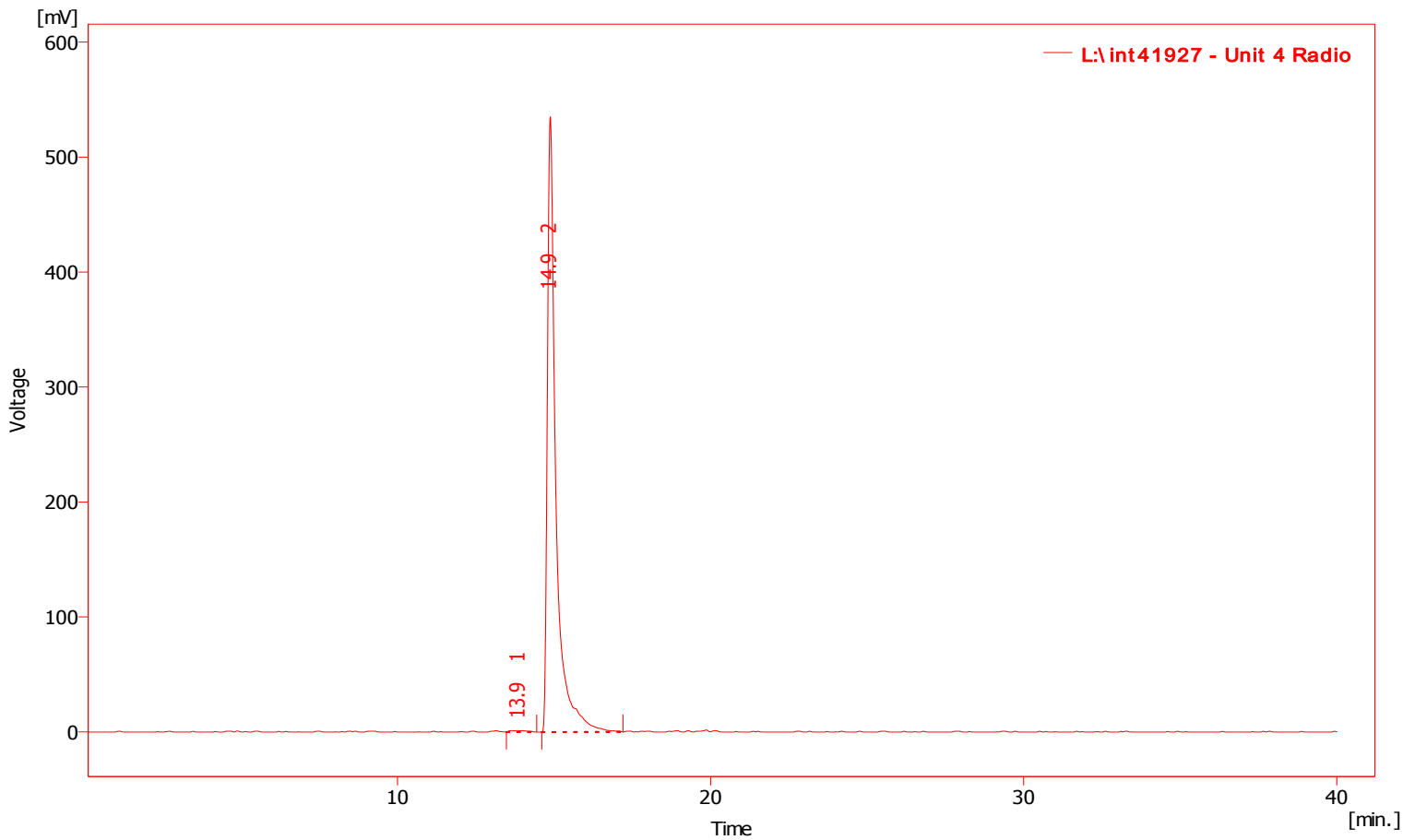
B) Mass spectrometry – Positive mode

C) NMR

MT-846
Thymidine, [5'-3H]-
Lot 167-080-0384-A-20090331-NT

Chromatogram Info:

File Name	: L:\int41927	File Created	: 3/18/2014 12:07:47 PM
Origin	: Acquired, Acquisition started 6/4/2009 11:02:24 AM	Acquired Date	: 6/4/2009 11:42:23 AM
Project	: Test	By	: Administrator
Method	: Unit4-40minrun	By	: Administrator
Description	: Radiochemical trace of 3H material alone	Modified	: 3/18/2014 12:32 PM
Created	: 6/12/2008 10:30 AM	Detection	: Radiochemical
Column	:	Temperature	:
Mobile Phase	:	Pressure	:
Flow Rate	:	Note	:



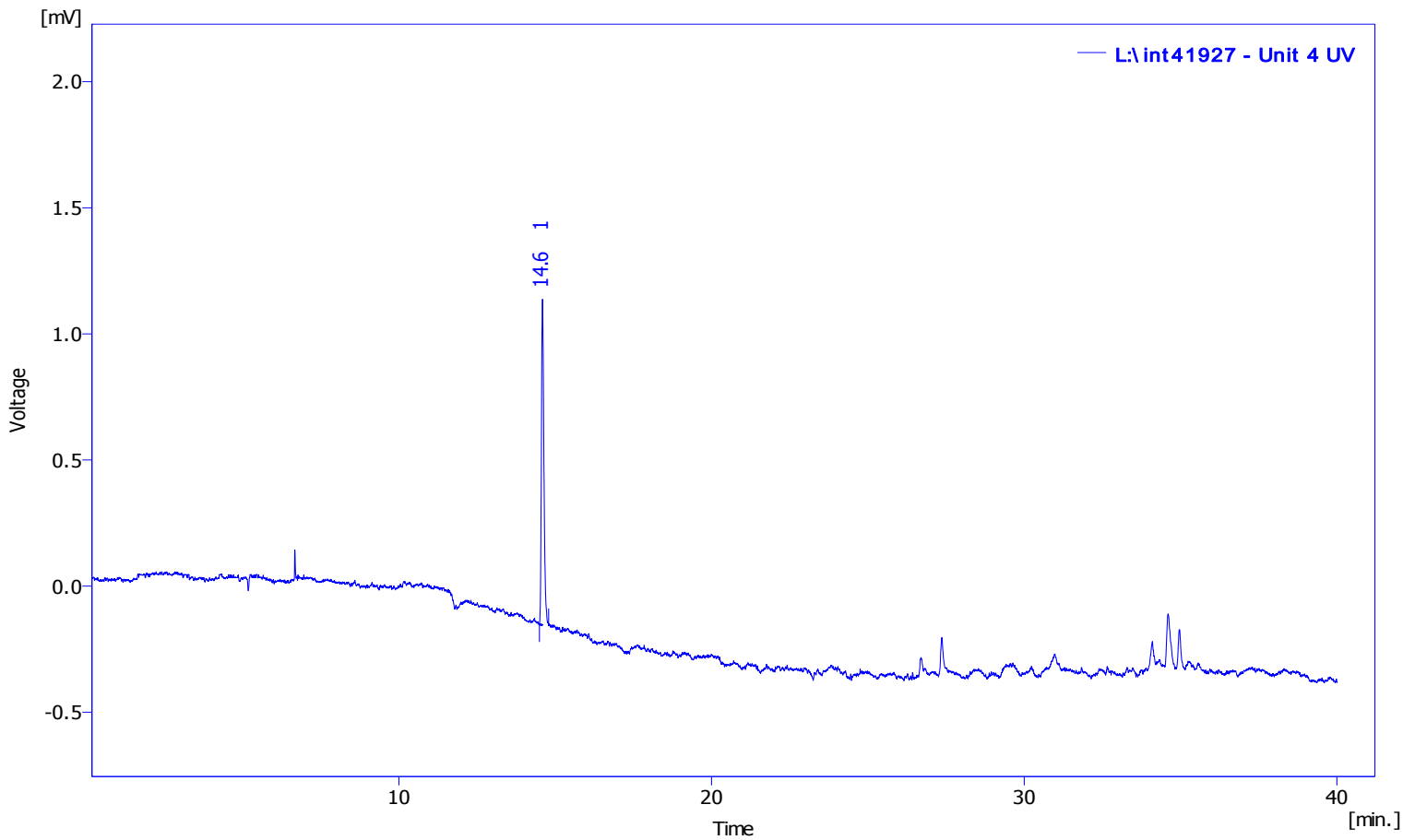
Result Table (Uncal - L:\int41927 - Unit 4 Radio)

	Compound Name	Reten. Time [min]	Area [mV.s]	Height [mV]	Area [%]	Height [%]	Efficiency [th.pl]	Eff/I [t.p./m]	Symmetry/Tailing [-]	Response Factor	Resolution [-]
1		13.88	50.774	1.29	0.50	0.24	1863.25	37264.98	1.13		
2		14.88	10192.127	535.11	99.50	99.76	20160.19	403203.87	2.18		1.2
		Total	10242.902	536.40	100.00	100.00					

MT-846
Thymidine, [5'-3H]-
Lot 167-080-0384-A-20090331-NT

Chromatogram Info:

File Name	: L:\int41927	File Created	: 3/18/2014 12:07:47 PM
Origin	: Acquired, Acquisition started 6/4/2009 11:02:24 AM	Acquired Date	: 6/4/2009 11:42:23 AM
Project	: Test	By	: Administrator
Method	: Unit4-40minrun	By	: Administrator
Description	: UV trace of 3H material alone	Modified	: 3/18/2014 12:12 PM
Created	: 6/12/2008 10:30 AM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



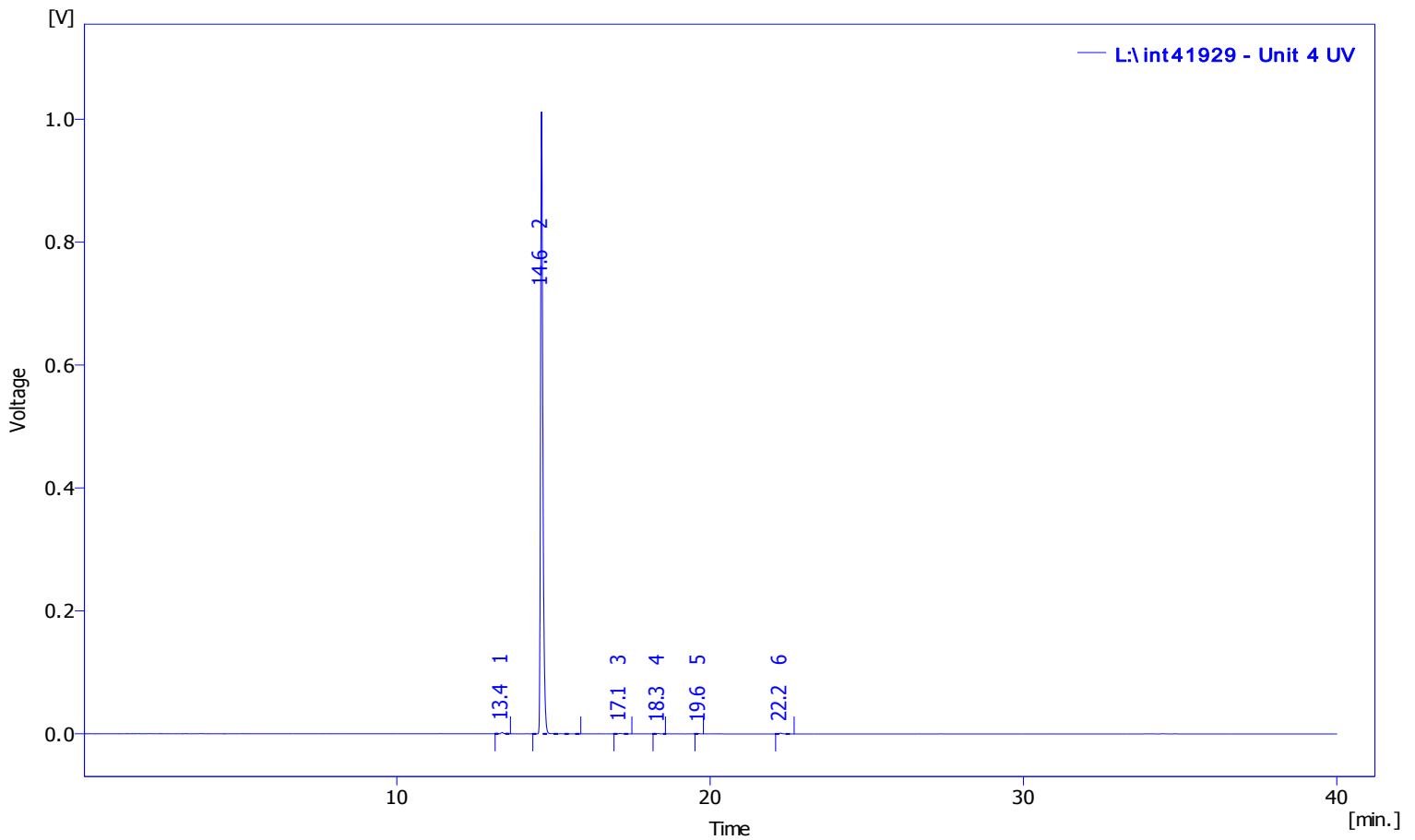
Result Table (Uncal - L:\int41927 - Unit 4 UV)

	Compound Name	Reten. Time [min]	Area [mV.s]	Height [mV]	Area [%]	Height [%]	Efficiency [th.pl]	Eff/l [t.p./m]	Symmetry/Tailing [-]	Response Factor	Resolution [-]
1		14.59	7.182	1.29	100.00	100.00	157077.72	3141554.36	1.30		
		Total	7.182	1.29	100.00	100.00					

MT-846
Thymidine, [5'-3H]-
Lot 167-080-0384-A-20090331-NT

Chromatogram Info:

File Name	: L:\int41929	File Created	: 3/18/2014 12:07:47 PM
Origin	: Acquired, Acquisition started 6/4/2009 2:07:53 PM	Acquired Date	: 6/4/2009 2:47:51 PM
Project	: Test	By	: Administrator
Method	: Unit4-40minrun	By	: Administrator
Description	: UV trace of standard material alone	Modified	: 3/18/2014 12:36 PM
Created	: 6/12/2008 10:30 AM	Detection	: UV 267nm
Column	:	Temperature	:
Mobile Phase	:	Pressure	:
Flow Rate	:	Note	:



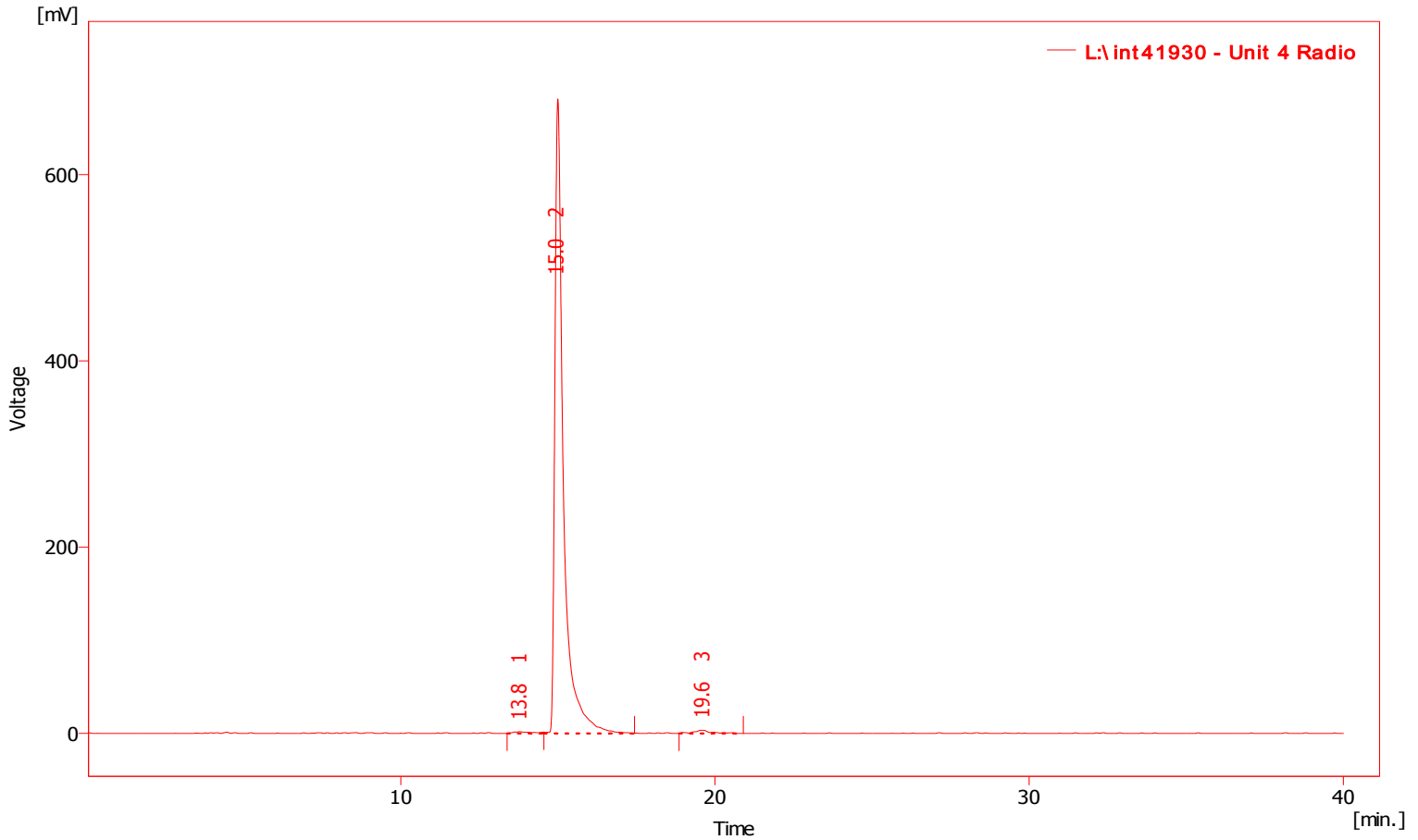
Result Table (Uncal - L:\int41929 - Unit 4 UV)

	Compound Name	Reten. Time [min]	Area [mV.s]	Height [mV]	Area [%]	Height [%]	Efficiency [th.pl]	Eff/l [t.p./m]	Symmetry/Tailing [-]	Response Factor	Resolution [-]
1		13.35	11.945	2.27	0.23	0.22	168064.50	3361289.96	1.43		
2		14.62	5167.597	1012.19	99.41	99.48	201369.31	4027386.26	1.43		9.7
3		17.12	4.248	0.73	0.08	0.07	253808.65	5076172.93	1.43		18.9
4		18.34	2.789	0.55	0.05	0.05	317141.53	6342830.62	1.40		9.2
5		19.65	2.154	0.32	0.04	0.03	176726.69	3534533.84	0.98		8.2
6		22.25	9.726	1.37	0.19	0.13	314750.27	6295005.33	1.94		15.1
		Total	5198.459	1017.43	100.00	100.00					

MT-846
Thymidine, [5'-3H]-
Lot 167-080-0384-A-20090331-NT

Chromatogram Info:

File Name	: L:\int41930	File Created	: 3/18/2014 12:07:47 PM
Origin	: Acquired, Acquisition started 6/4/2009 3:12:59 PM	Acquired Date	: 6/4/2009 3:52:58 PM
Project	: Test	By	: Administrator
Method	: Unit4-40minrun	By	: Administrator
Description	: Radiochemical trace of 3H material co-injected with standard	Modified	: 3/18/2014 12:40 PM
Created	: 6/12/2008 10:30 AM		
Column	:	Detection	: Radiochemical
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



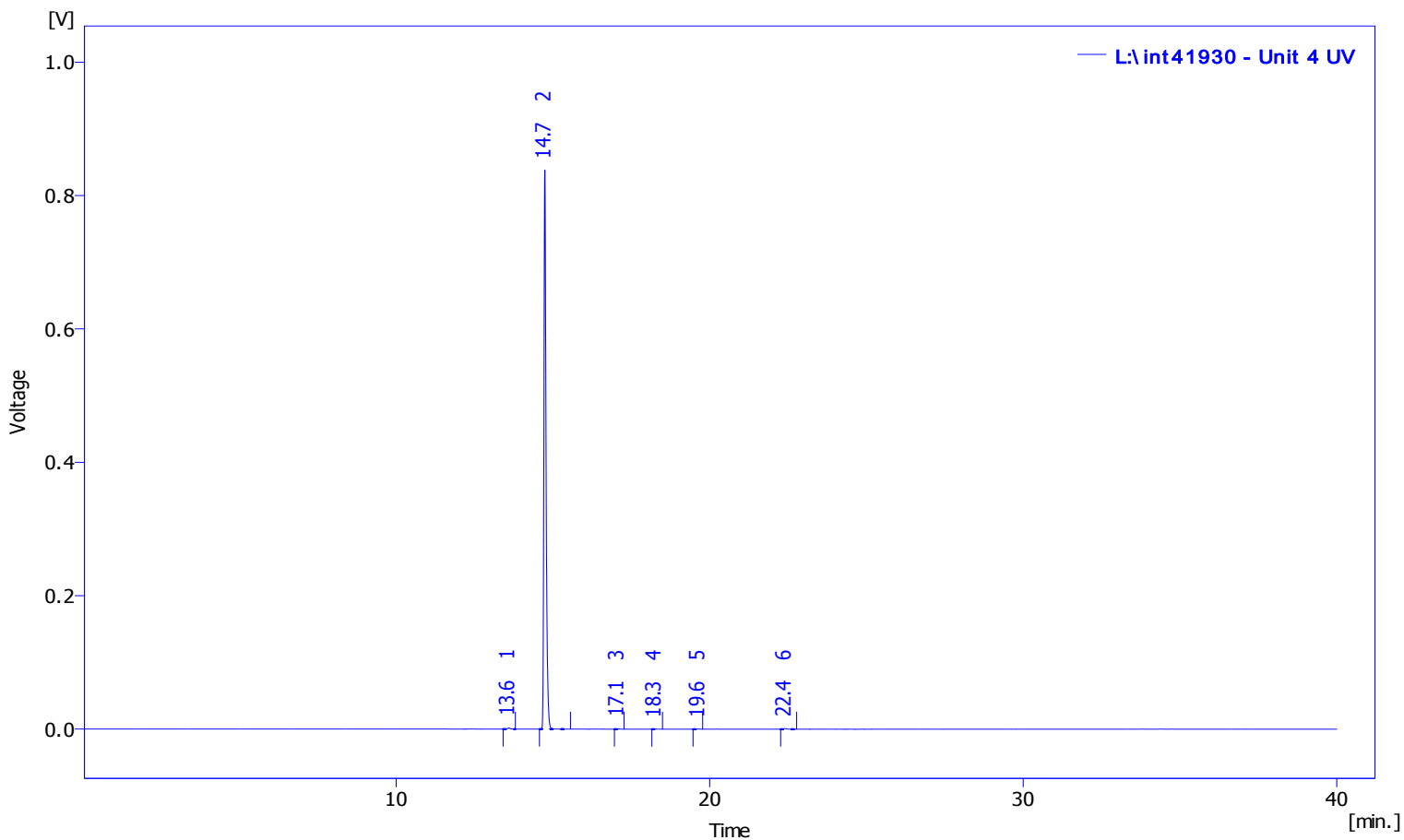
Result Table (Uncal - L:\int41930 - Unit 4 Radio)

	Compound Name	Reten. Time [min]	Area [mV.s]	Height [mV]	Area [%]	Height [%]	Efficiency [th.pl]	Eff/I [t.p./m]	Symmetry/Tailing [-]	Response Factor	Resolution [-]
1		13.82	82.768	1.92	0.63	0.28	2973.53	59470.52	1.36		
2		15.00	12944.734	681.38	98.31	99.22	20477.56	409551.30	2.27		1.6
3		19.64	139.659	3.44	1.06	0.50	9954.18	199083.67	1.15		7.7
		Total	13167.161	686.74	100.00	100.00					

MT-846
Thymidine, [5'-3H]-
Lot 167-080-0384-A-20090331-NT

Chromatogram Info:

File Name	: L:\int41930	File Created	: 3/18/2014 12:07:47 PM
Origin	: Acquired, Acquisition started 6/4/2009 3:12:59 PM	Acquired Date	: 6/4/2009 3:52:58 PM
Project	: Test	By	: Administrator
Method	: Unit4-40minrun	By	: Administrator
Description	: UV trace of 3H material co-injected with standard	Modified	: 3/18/2014 12:39 PM
Created	: 6/12/2008 10:30 AM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



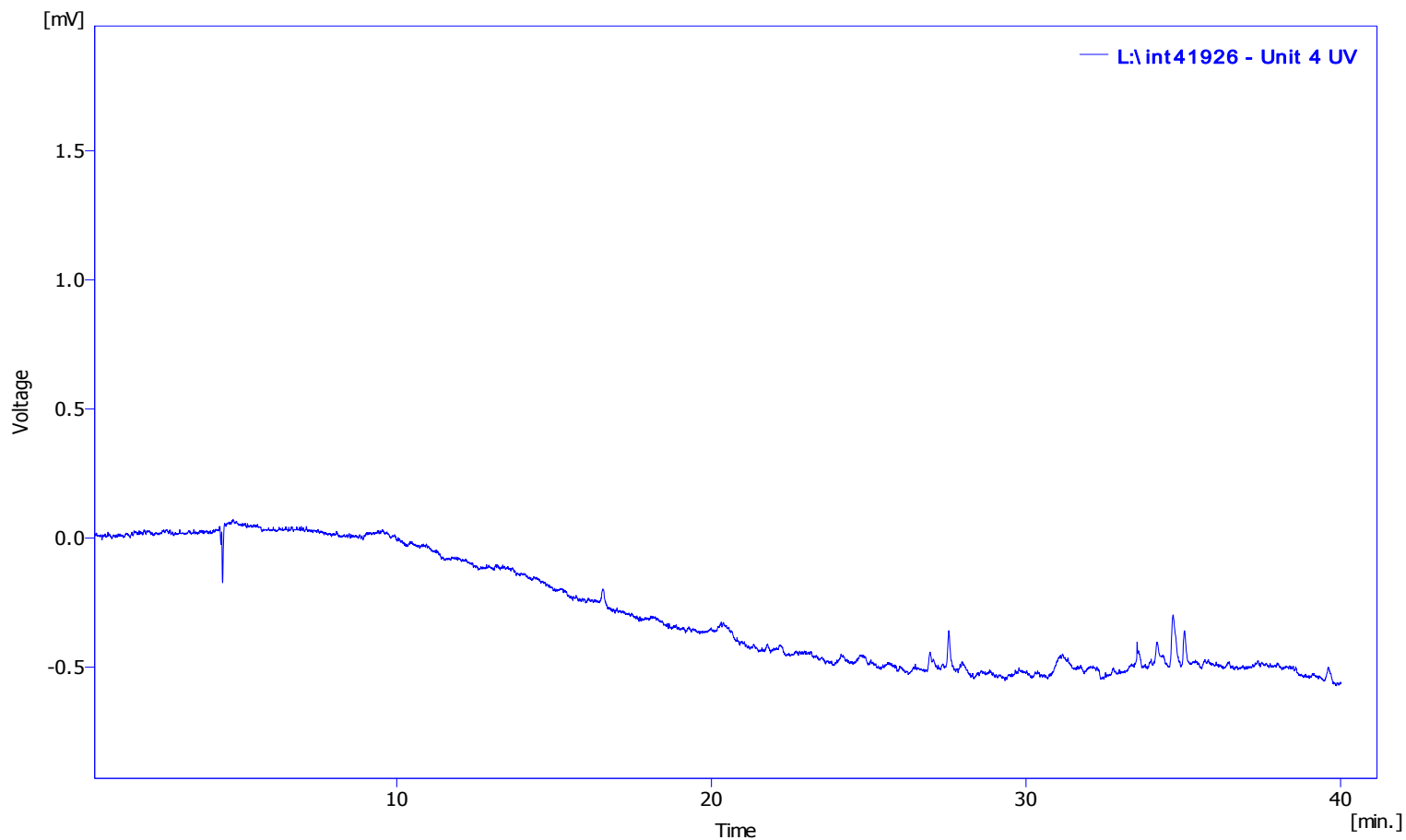
Result Table (Uncal - L:\int41930 - Unit 4 UV)

	Compound Name	Reten. Time [min]	Area [mV.s]	Height [mV]	Area [%]	Height [%]	Efficiency [th.pl]	Eff/l [t.p./m]	Symmetry/Tailing [-]	Response Factor	Resolution [-]
1		13.59	9.864	1.81	0.24	0.22	147336.78	2946735.57	1.35		
2		14.74	4023.162	838.03	99.41	99.52	223922.78	4478455.65	1.33		8.7
3		17.07	3.045	0.57	0.08	0.07	252131.56	5042631.11	1.48		17.9
4		18.25	2.390	0.42	0.06	0.05	288412.55	5768251.08	1.52		8.8
5		19.64	1.856	0.24	0.05	0.03	148449.13	2968982.52	0.96		8.2
6		22.40	6.873	0.98	0.17	0.12	343179.06	6863581.23	1.96		15.5
		Total	4047.189	842.07	100.00	100.00					

MT-846
Thymidine, [5'-3H]-
Lot 167-080-0384-A-20090331-NT

Chromatogram Info:

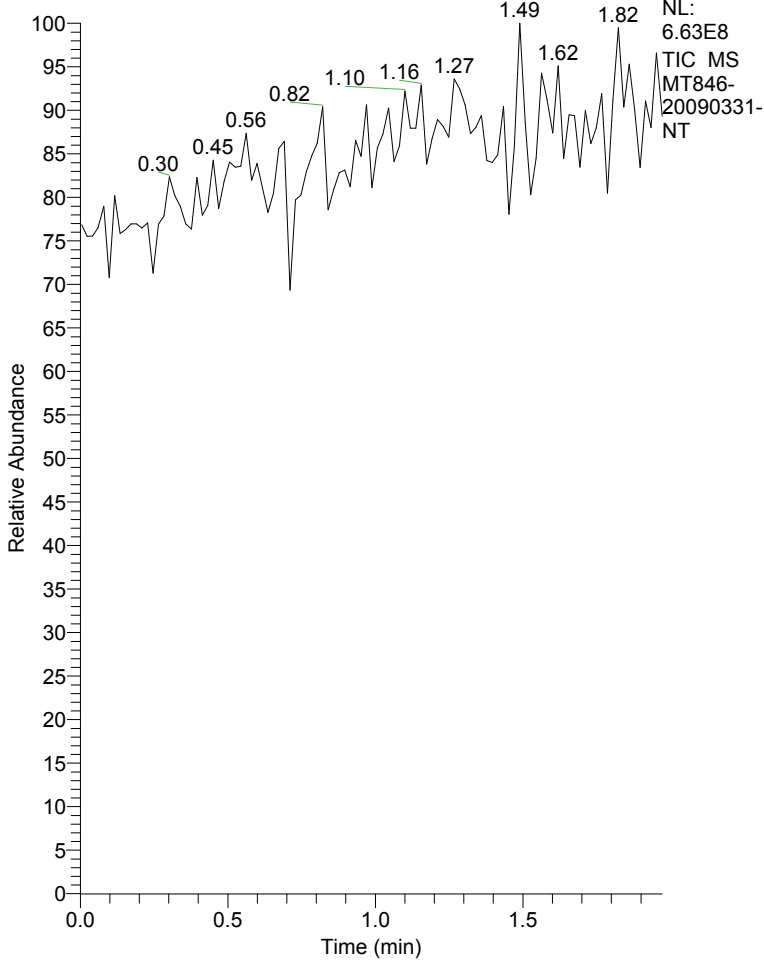
File Name	: L:\int41926	File Created	: 3/18/2014 12:07:47 PM
Origin	: Acquired, Acquisition started 6/4/2009 9:48:26 AM	Acquired Date	: 6/4/2009 10:28:25 AM
Project	: Test	By	: Administrator
Method	: Unit4-40minrun	By	: Administrator
Description	: UV trace of blank injection	Modified	: 3/18/2014 12:12 PM
Created	: 6/12/2008 10:30 AM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



Result Table (Uncal - L:\int41926 - Unit 4 UV)

Compound Name	Reten. Time [min]	Area [mV.s]	Height [mV]	Area [%]	Height [%]	Efficiency [th.pl]	Eff/l [t.p./m]	Symmetry/Tailing [-]	Response Factor	Resolution [-]
No peak to report										

RT: 0.00 - 1.97



MT846-20090331-NT#1-107 RT: 0.01-1.97 AV:

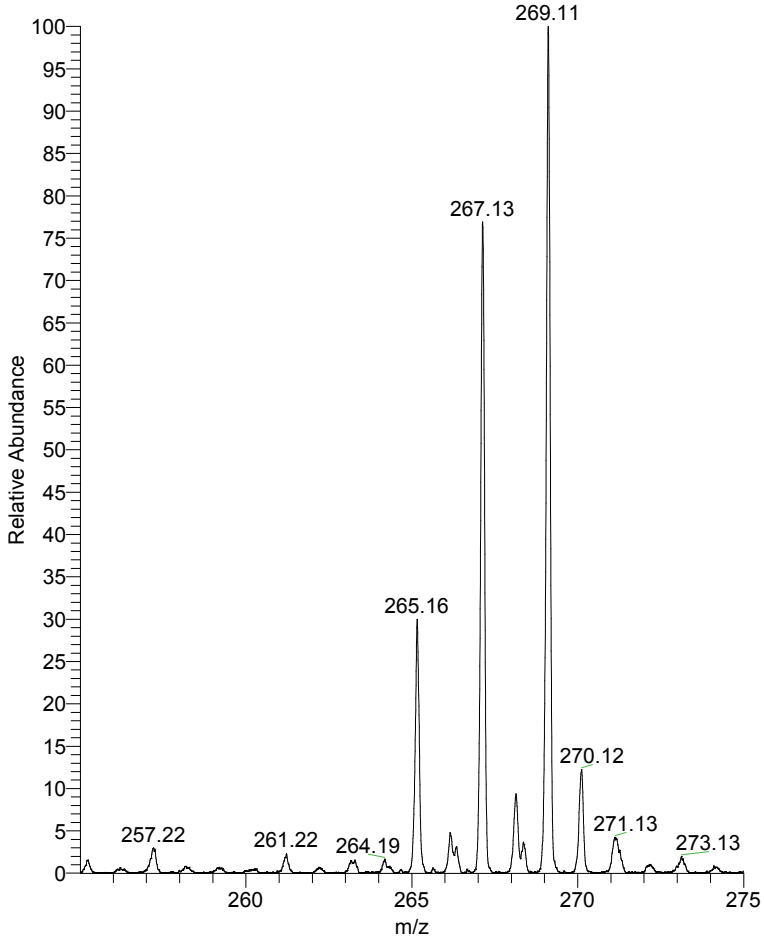
T: + p NSI Z ms [255.00-275.00]

m/z = 264.58-270.72

m/z	Intensity	Relative
264.67	653657.9	0.33
265.16	60560696.0	30.47
265.66	1017836.4	0.51
266.23	15753673.0	7.93
267.13	152098784.	76.53
	0	
267.61	491164.1	0.25
268.19	28477210.0	14.33
269.11	198756384.	100.00
	0	
269.53	598815.6	0.30
270.10	27036558.0	13.60
270.56	365311.4	0.18

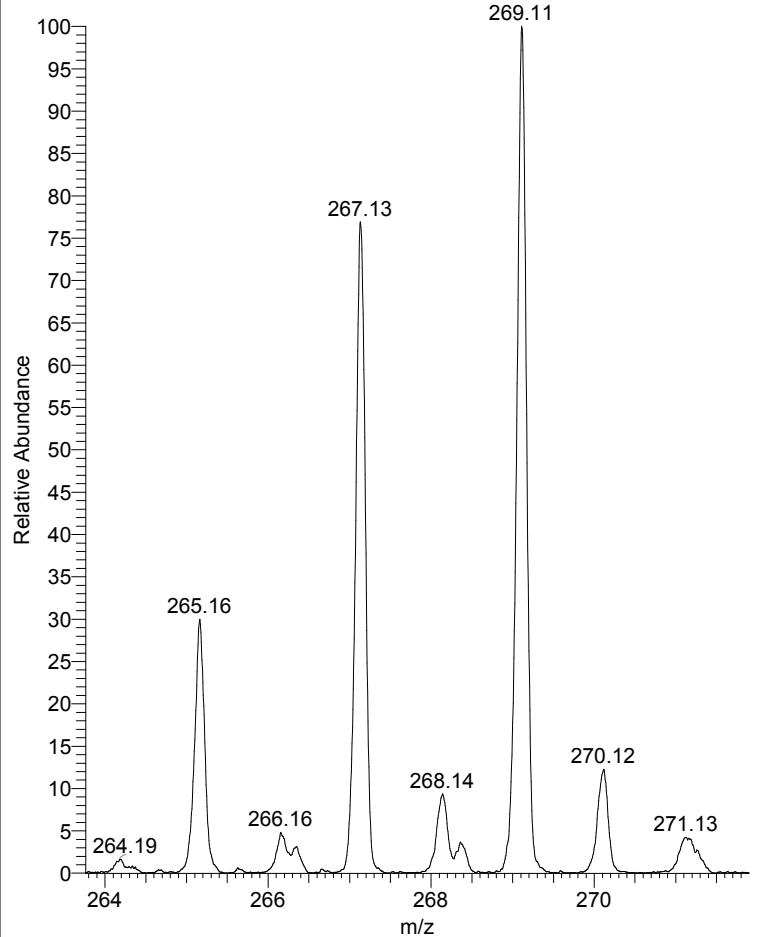
MT846-20090331-NT #1-107 RT: 0.01-1.97 AV: 107 NL: 7.01E6

T: + p NSI Z ms [255.00-275.00]



MT846-20090331-NT #1-107 RT: 0.01-1.97 AV: 107 NL: 7.01E6

T: + p NSI Z ms [255.00-275.00]



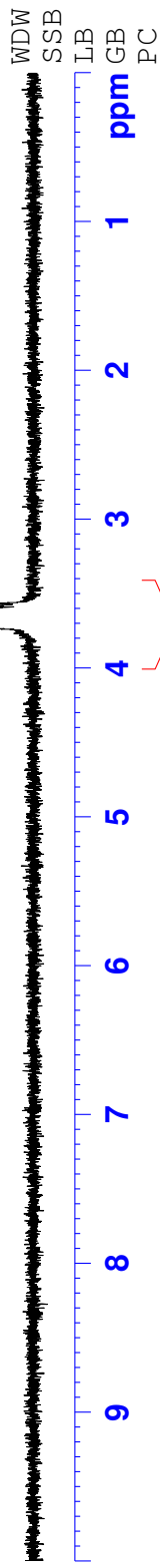
MT846 3H NMR in D2O
Batch 20090331-NT



3.729
3.717
3.707
3.694
3.688
3.681
3.663
3.652
3.642
3.625
3.608
3.580
3.564

NAME M
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PROCNO 2009
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RG 4
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DE
TE 3
D1 2.0000
TD0

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SI 3
SF 320.130



1.00