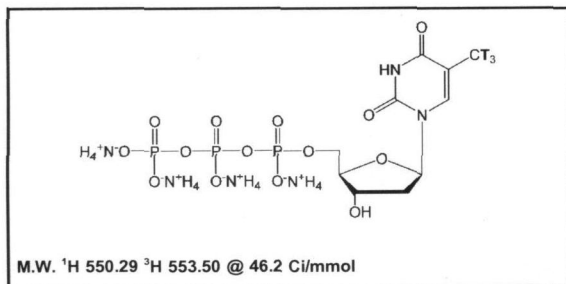




Product Data Sheet

MT-781M

Thymidine 5'-triphosphate, tetraammonium salt, [methyl-³H]-



Lot #: 186-130-0462-A-20100804-TN

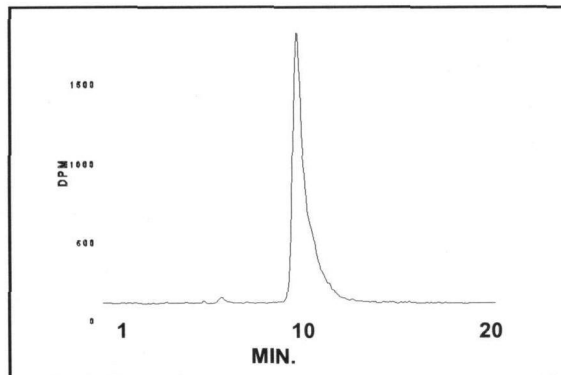
Specific Activity: 46.2 Ci/mmol

Concentration: 1.0 mCi/ml; 11.98 µg/ml

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

Date of Analysis: September 13, 2010

Radiochemical Purity: 99.2%



HPLC ANALYSIS LOT 186-130-0462-A-20100804-TN
File Name: int20685 Date and Time: 9/13/2010 3:49:06 PM
Unit 2 Radio

Peak #	Area %	Time	Area
1	0.74	6.10670	62.20992
2	99.26	9.88000	8318.62450
Totals	100.00		8380.83442

Storage Recommendation: Store 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-781M

Thymidine 5'-triphosphate, tetraammonium salt, [methyl-³H]-

Lot 186-130-0462-A-20100804-TN

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.

³H Material concentration was 0.1 mCi/ml.

Volume of standard alone injection was 3.0 µl.

Volume of ³H Material alone injection was 2.0 µl.

Co-injection solution consisted of 4.0 µl ³H Material + 1.0 µl standard.

Volume of co-injection was 5.0 µl.

Volume of blank injection was 2.0 µl.

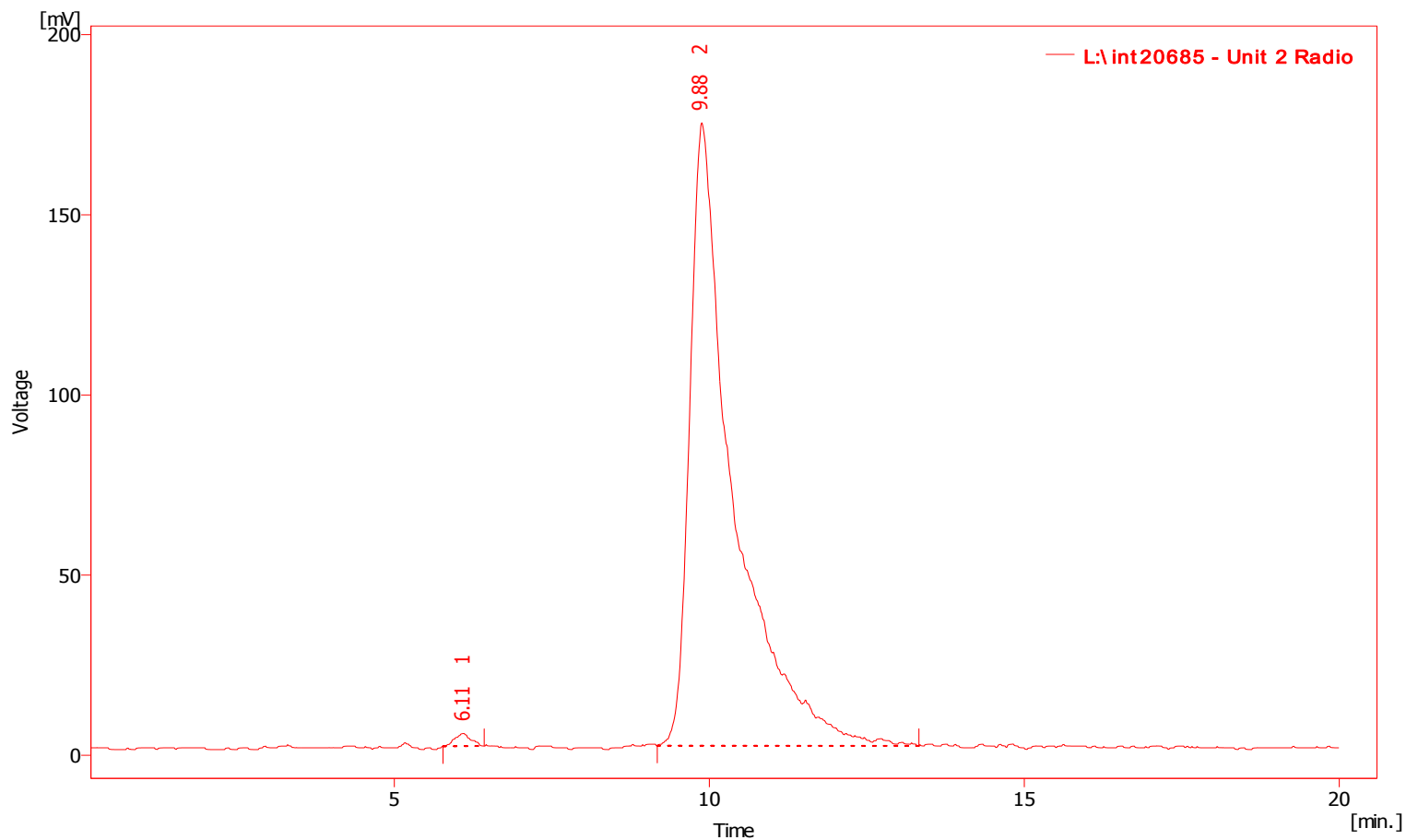
B) Mass spectrometry – Negative mode

C) NMR

MT-781M
Thymidine 5'-triphosphate, tetraammonium salt, [methyl-3H]-
Lot 186-130-0462-A-20100804-TN

Chromatogram Info:

File Name	: L:\int20685	File Created	: 3/11/2014 11:57:45 AM
Origin	: Acquired, Acquisition started 9/13/2010 3:29:06 PM	Acquired Date	: 9/13/2010 3:49:06 PM
Project	: Test	By	: Administrator
Method	: unit2-20minrun	By	: Administrator
Description	: Radiochemical trace of 3H material alone	Modified	: 3/11/2014 12:15 PM
Created	: 8/8/2007 9:12 AM		
Column	:	Detection	: Radiochemical
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



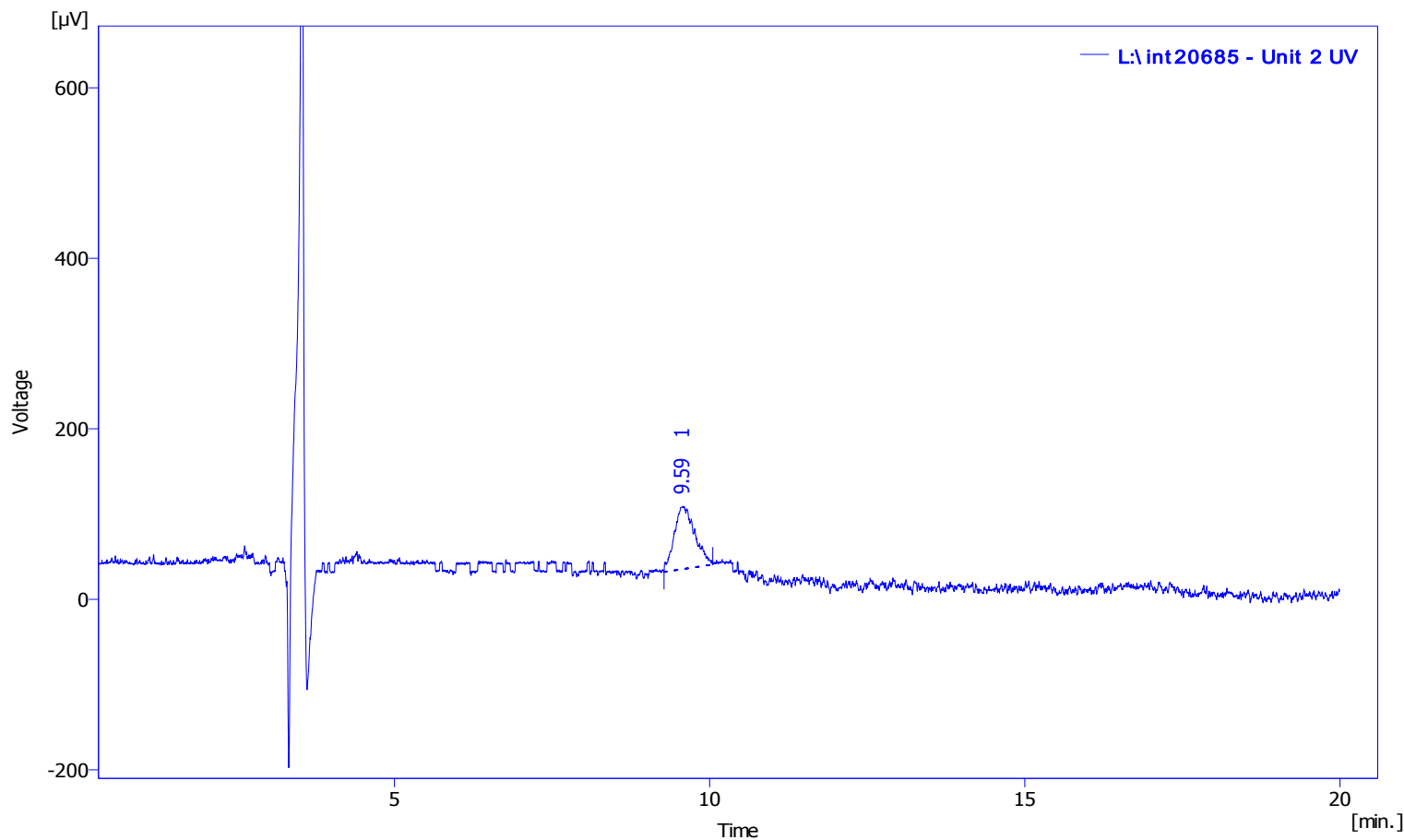
Result Table (Uncal - L:\int20685 - Unit 2 Radio)

	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		6.11	62.210	3.52	0.74	1.99	2513.99	50279.83	0.96		
2		9.88	8318.625	172.90	99.26	98.01	1607.56	32151.24	2.59		5.1
		Total	8380.834	176.42	100.00	100.00					

MT-781M
Thymidine 5'-triphosphate, tetraammonium salt, [methyl-3H]-
Lot 186-130-0462-A-20100804-TN

Chromatogram Info:

File Name	: L:\int20685	File Created	: 3/11/2014 11:57:45 AM
Origin	: Acquired, Acquisition started 9/13/2010 3:29:06 PM	Acquired Date	: 9/13/2010 3:49:06 PM
Project	: Test	By	: Administrator
Method	: unit2-20minrun	By	: Administrator
Description	: UV trace of 3H material alone	Modified	: 3/11/2014 12:17 PM
Created	: 8/8/2007 9:12 AM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



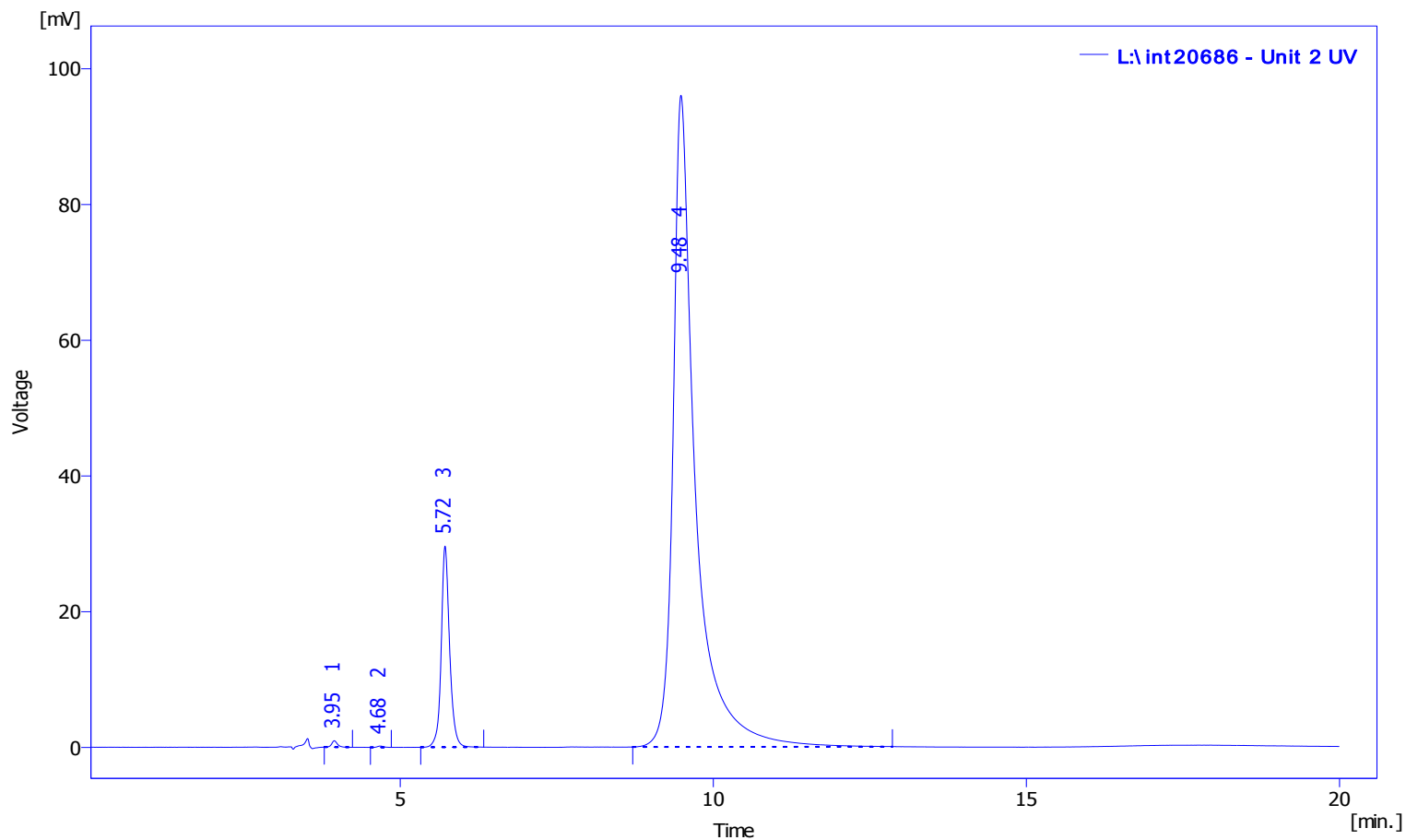
Result Table (Uncal - L:\int20685 - Unit 2 UV)

	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		9.59	1.658	0.07	100.00	100.00	3928.62	78572.40	1.20		
		Total	1.658	0.07	100.00	100.00					

MT-781M
Thymidine 5'-triphosphate, tetraammonium salt, [methyl-3H]-
Lot 186-130-0462-A-20100804-TN

Chromatogram Info:

File Name	: L:\int20686	File Created	: 3/11/2014 11:57:45 AM
Origin	: Acquired, Acquisition started 9/13/2010 3:58:13 PM	Acquired Date	: 9/13/2010 4:18:13 PM
Project	: Test	By	: Administrator
Method	: unit2-20minrun	By	: Administrator
Description	: UV trace of standard material alone	Modified	: 3/11/2014 12:18 PM
Created	: 8/8/2007 9:12 AM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



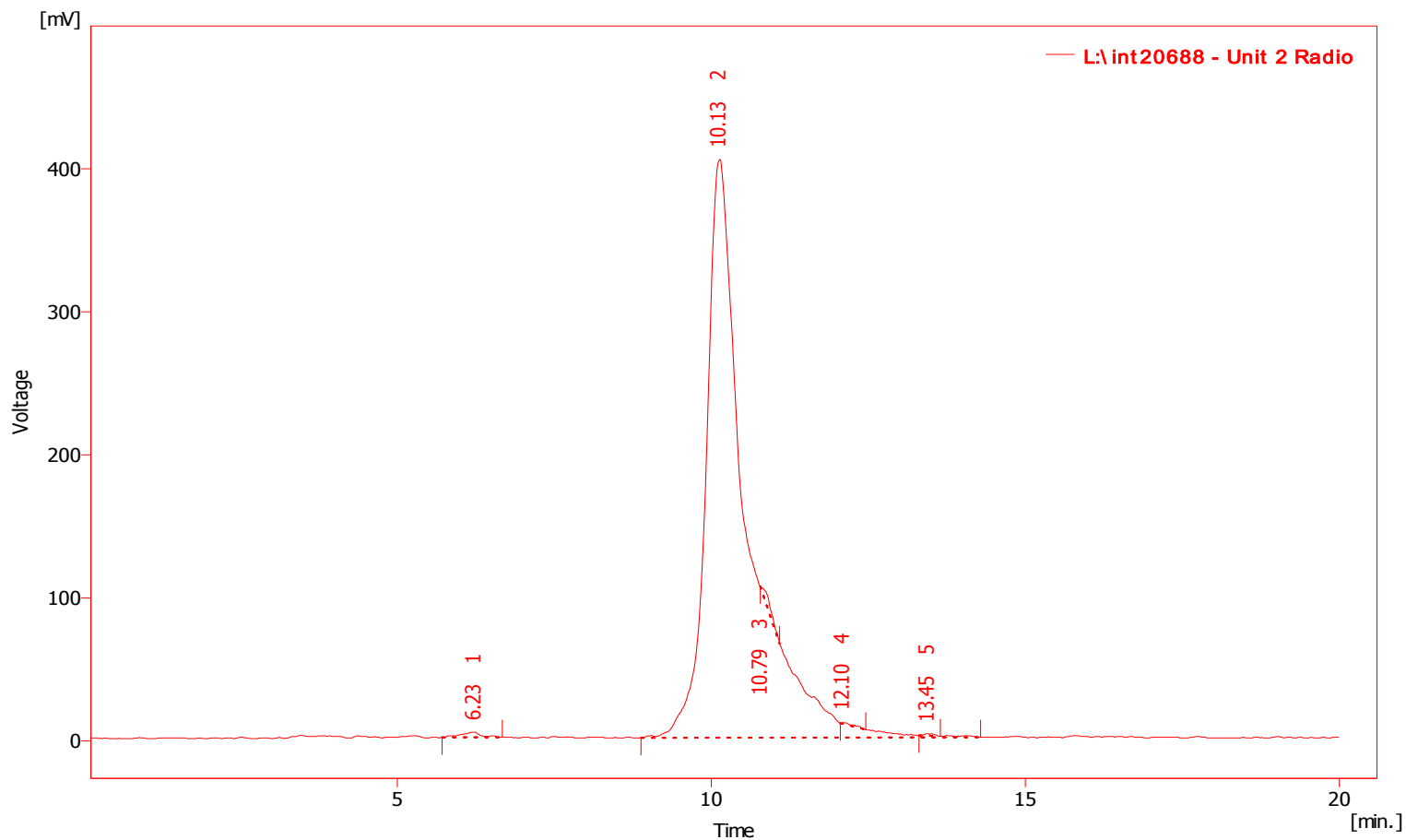
Result Table (Uncal - L:\int20686 - Unit 2 UV)

	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		3.95	6.091	0.95	0.23	0.75	9905.97	198119.44	1.14		
2		4.68	1.359	0.20	0.05	0.16	10649.40	212988.01	1.14		4.3
3		5.72	276.308	29.63	10.37	23.37	9693.27	193865.40	1.09		5.0
4		9.48	2381.552	96.02	89.35	75.73	5184.52	103690.37	1.76		10.0
		Total	2665.310	126.80	100.00	100.00					

MT-781M
Thymidine 5'-triphosphate, tetraammonium salt, [methyl-3H]-
Lot 186-130-0462-A-20100804-TN

Chromatogram Info:

File Name	: L:\int20688	File Created	: 3/11/2014 11:57:45 AM
Origin	: Acquired, Acquisition started 9/14/2010 9:18:49 AM	Acquired Date	: 9/14/2010 9:38:48 AM
Project	: Test	By	: Administrator
Method	: unit2-20minrun	By	: Administrator
Description	: Radiochemical trace of 3H material co-injected with standard	Modified	: 3/11/2014 12:22 PM
Created	: 8/8/2007 9:12 AM		
Column	:	Detection	: Radiochemical
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



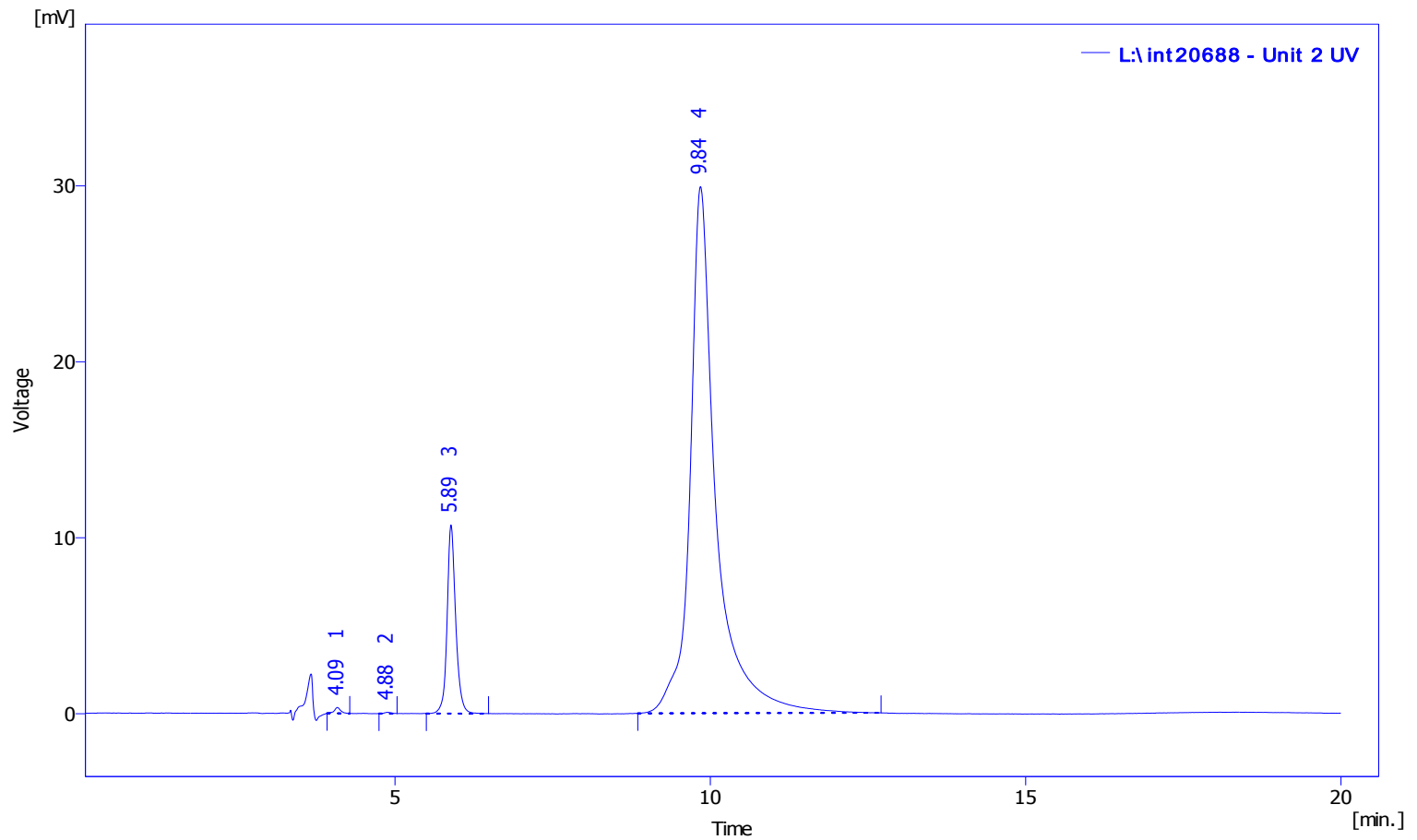
Result Table (Uncal - L:\int20688 - Unit 2 Radio)

	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		6.23	79.907	3.60	0.43	0.87	2017.16	40343.24	0.87		
2		10.13	18264.314	404.35	98.90	98.23	2275.49	45509.75	2.16		5.6
3		10.79	85.519	1.06	0.46	0.26	403367.55	8067351.08	11.50		1.4
4		12.10	20.029	1.10	0.11	0.27	93112.28	1862245.56	5.00		11.6
5		13.45	17.078	1.54	0.09	0.37	26826.01	536520.21	1.10		5.6
		Total	18466.848	411.63	100.00	100.00					

MT-781M
Thymidine 5'-triphosphate, tetraammonium salt, [methyl-3H]-
Lot 186-130-0462-A-20100804-TN

Chromatogram Info:

File Name	: L:\int20688	File Created	: 3/11/2014 11:57:45 AM
Origin	: Acquired, Acquisition started 9/14/2010 9:18:49 AM	Acquired Date	: 9/14/2010 9:38:48 AM
Project	: Test	By	: Administrator
Method	: unit2-20minrun	By	: Administrator
Description	: UV trace of 3H material co-injected with standard	Modified	: 3/11/2014 12:21 PM
Created	: 8/8/2007 9:12 AM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	: Impurities came from standard material		



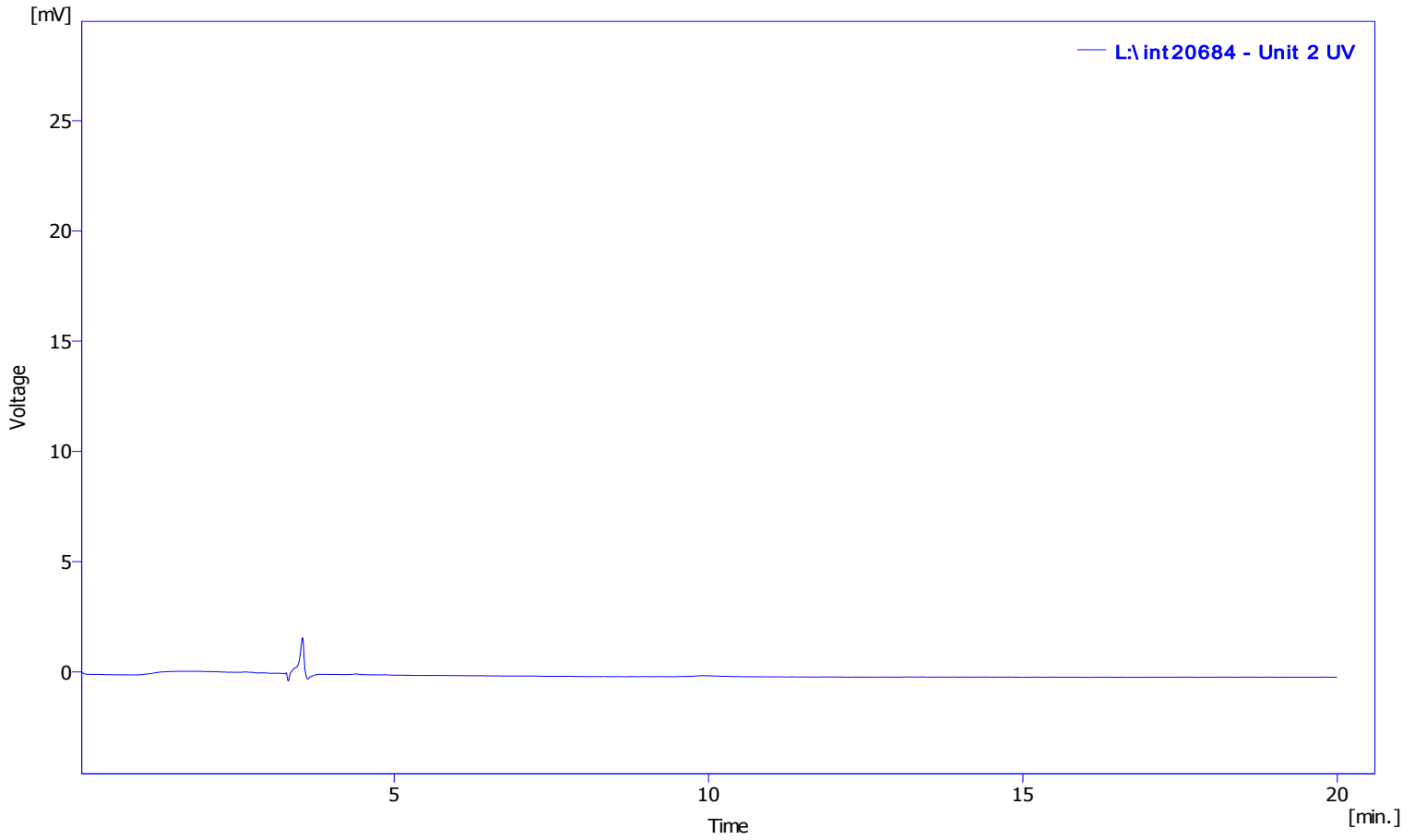
Result Table (Uncal - L:\int20688 - Unit 2 UV)

	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		4.09	2.337	0.34	0.24	0.82	9917.52	198350.31	0.95		
2		4.88	0.533	0.08	0.06	0.18	9679.71	193594.19	1.08		4.4
3		5.89	101.498	10.72	10.62	26.11	9794.73	195894.65	1.14		4.6
4		9.84	851.491	29.93	89.08	72.89	4381.86	87637.11	1.33		9.5
		Total	955.860	41.06	100.00	100.00					

MT-781M
Thymidine 5'-triphosphate, tetraammonium salt, [methyl-3H]-
Lot 186-130-0462-A-20100804-TN

Chromatogram Info:

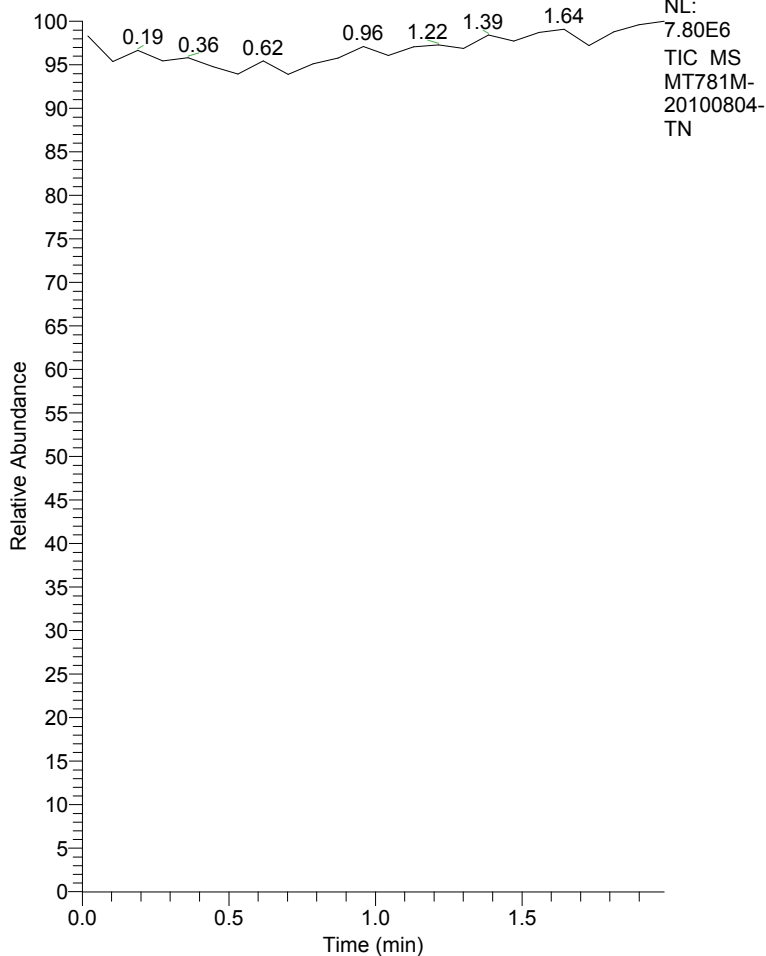
File Name	: L:\int20684	File Created	: 3/11/2014 11:57:45 AM
Origin	: Acquired, Acquisition started 9/13/2010 3:04:12 PM	Acquired Date	: 9/13/2010 3:24:11 PM
Project	: Test	By	: Administrator
Method	: unit2-20minrun	By	: Administrator
Description	: UV trace of blank injection	Modified	: 3/11/2014 12:23 PM
Created	: 8/8/2007 9:12 AM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



Result Table (Uncal - L:\int20684 - Unit 2 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 - 1.98



MT781M-20100804-TN#1-24 RT: 0.02-1.98 AV:

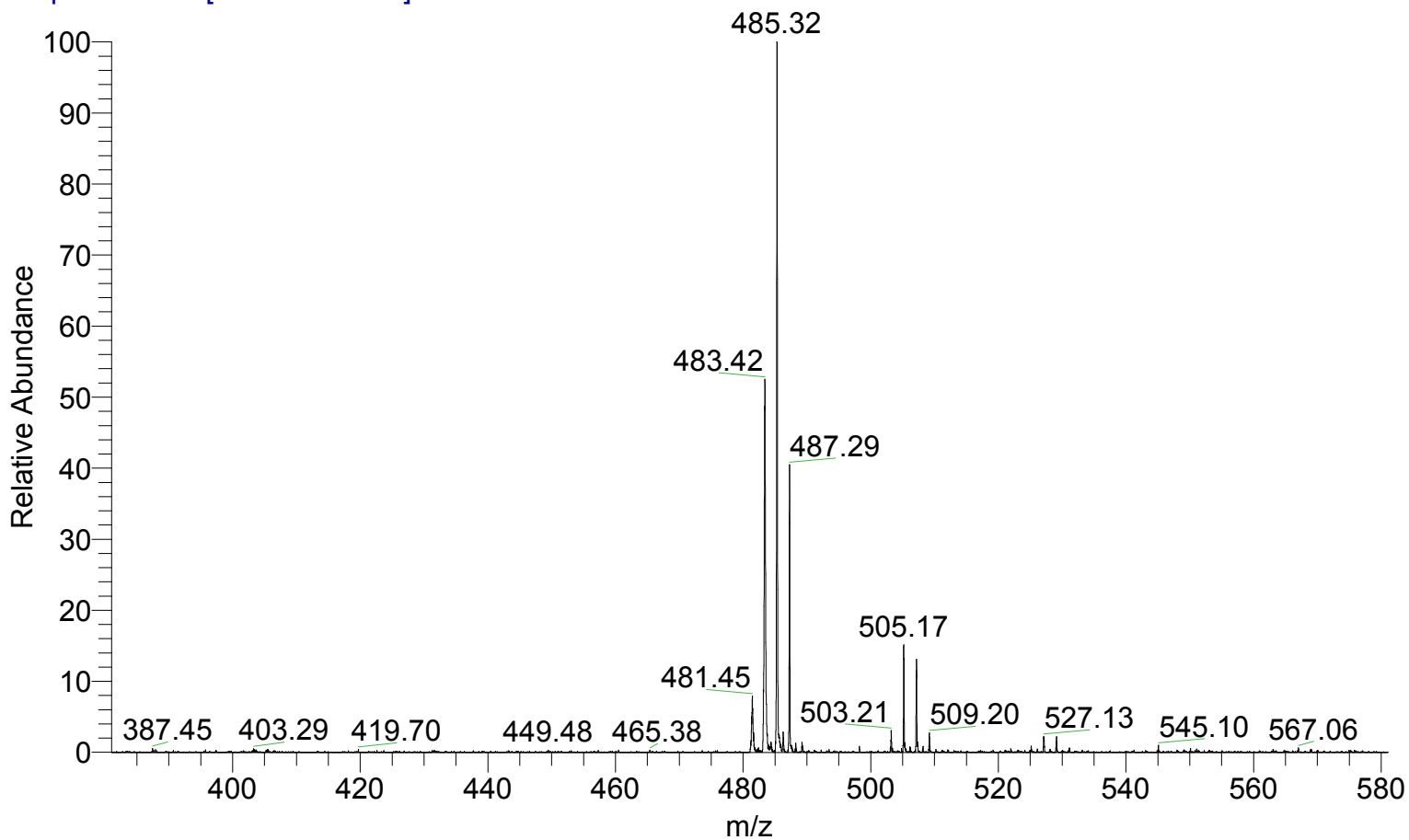
T: - p NSI Z ms [381.00-581.00]

m/z = 471.31-517.35

m/z	Intensity	Relative
481.46	358295.7	14.36
482.36	24829.3	1.00
483.42	2236162.3	89.62
484.24	82099.0	3.29
485.33	2495143.8	100.00
486.17	106748.6	4.28
487.29	793542.4	31.80
488.20	23368.1	0.94
489.26	31775.3	1.27
491.26	6436.5	0.26
503.23	62068.8	2.49
504.17	6929.6	0.28
505.20	317659.2	12.73
506.14	18337.3	0.73
507.19	290650.9	11.65
508.16	15199.0	0.61
509.20	60311.1	2.42
510.22	5892.4	0.24
511.25	5935.0	0.24
517.25	5601.7	0.22

MT781M-20100804-TN #1-24 RT: 0.02-1.98 AV: 24 NL: 8.37E4

T: - p NSI Z ms [381.00-581.00]



MT781M 3H NMR in D2O
Batch 20100804-TN



BRUKER

1.799
1.754
1.689
1.673
1.632

2.852

5.234
5.225
5.212

NAME MT781M-20100804-TN
EXPNO 1
PROCNO 1
Date_ 20100914
Time_ 20.18
INSTRUM spect
PROBHD 5 mm DUX 3H-1H
PULPROG zg
TD 16384
SOLVENT D2O
NS 5000
DS 2
SWH 6172.839 Hz
FIDRES 0.376760 Hz
AQ 1.3271540 sec
RG 46341
DW 81.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1

==== CHANNEL f1 =====
NUC1 3H
P1 10.00 usec
PL1 2.00 dB
SFO1 320.1321857 MHz
SI 32768
SF 320.1305850 MHz
WDW no
SSB 0
LB 0.00 Hz
GB 0
PC 1.00

