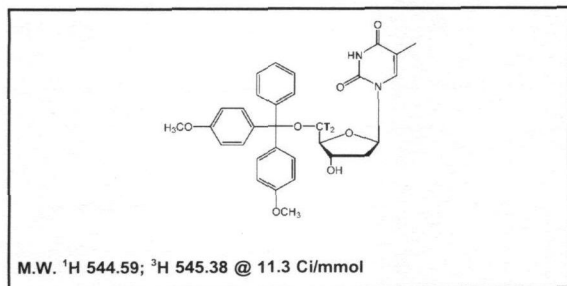




## Product Data Sheet

**MT-1507**

### 5'-O-(4,4'-Dimethoxytrityl) thymidine, [5'-<sup>3</sup>H]



**Lot #:** 846-074-0113-A-20101220-JP

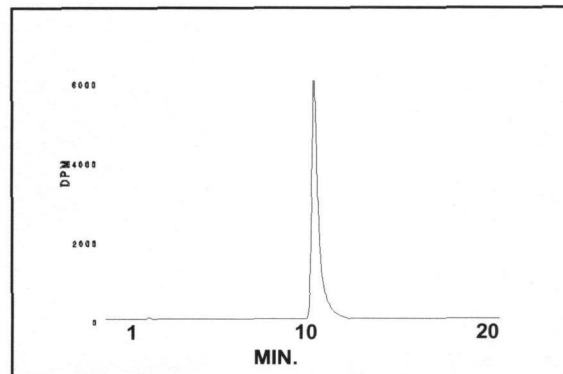
**Specific Activity:** 11.3 Ci/mmol

**Concentration:** 1.0 mCi/ml; 48.26 µg/ml

**Packaged in:** Dioxane : triethylamine (98 : 2) solution

**Date of Analysis:** December 20, 2010

**Radiochemical Purity:** 99.4%



HPLC ANALYSIS LOT 846-074-0113-A-20101220-JP  
File Name: intd3760 Date and Time: 12/20/2010 2:51:05 P  
Unit 13 Radio

Peak #	Area %	Time	Area
1	0.43	2.19330	65.43171
2	99.45	10.64670	15072.15281
3	0.09	11.35330	14.03636
4	0.03	12.47670	3.93200
Totals	100.00		15155.55288

**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-1507**

**5'-DMT-Thymidine, [5-<sup>3</sup>H]-**

**Lot 846-074-0113-A-20101220-JP**

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

**Concentrations and volumes:**

Standard solution concentration was 0.5 mg/ml.

**5'-DMT-Thymidine, [5-<sup>3</sup>H]-** concentration was 0.1 mCi/ml.

Volume of standard alone injection was 10.0 µl.

Volume of **5'-DMT-Thymidine, [5-<sup>3</sup>H]-** alone injection was 2.0 µl.

Co-injection solution consisted of 2.0 µl **5'-DMT-Thymidine, [5-<sup>3</sup>H]-** + 10.0 µl standard.

Volume of co-injection was 12.0 µl.

Volume of blank injection was 2.0 µl.

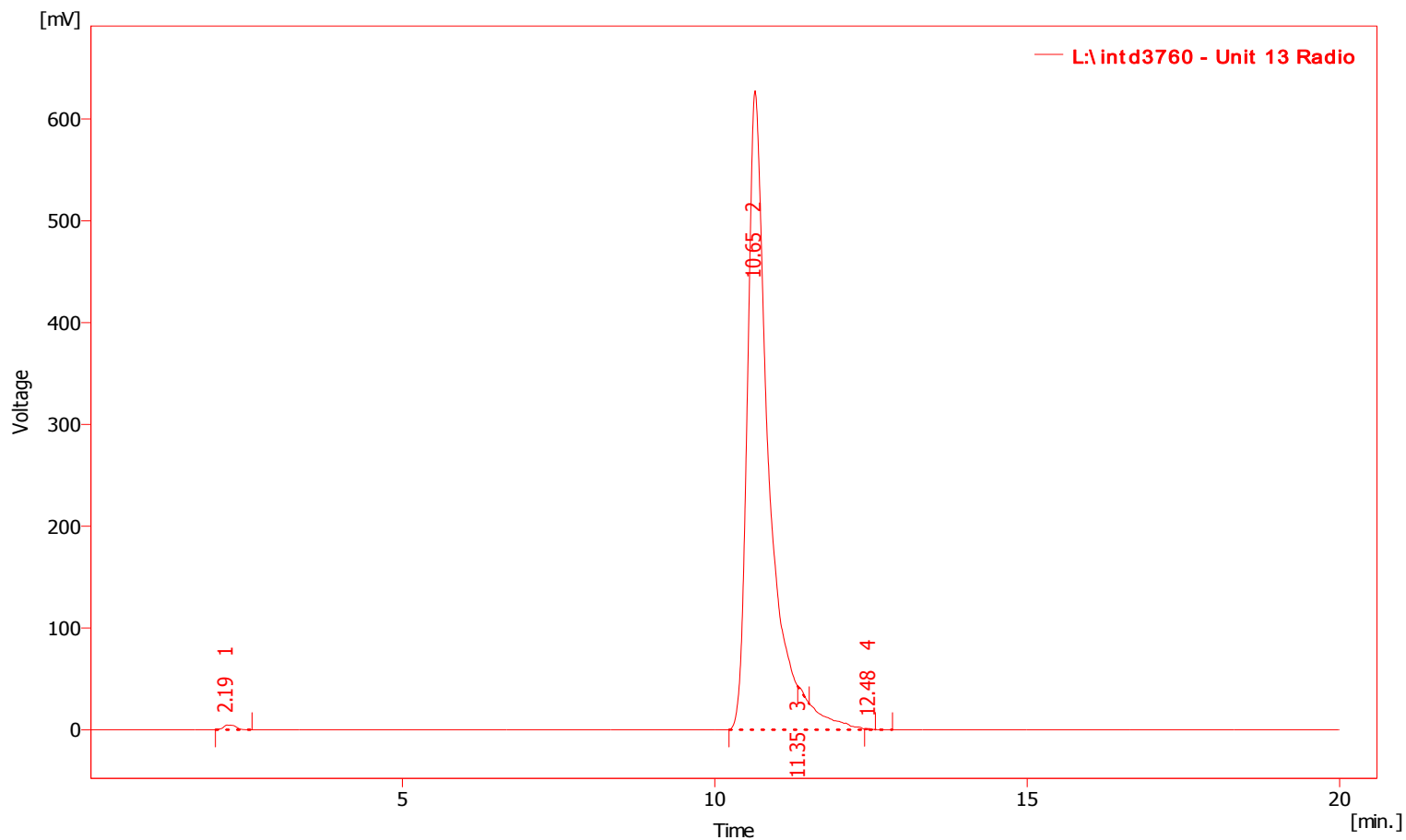
**B) Mass spectrometry – Positive mode**

**C) NMR**

**MT-1507**  
**5'-DMT-Thymidine, [5-3H]-**  
**Lot 846-074-0113-A-20101220-JP**

Chromatogram Info:

File Name	: L:\intd3760	File Created	: 3/24/2014 3:04:45 PM
Origin	: Acquired, Acquisition started 12/20/2010 2:26:42 PM	Acquired Date	: 12/20/2010 2:51:05 PM
Project	: Test	By	: Administrator
Method	: Unit13_20_min_run	By	: Administrator
Description	: Radiochemical trace of 3H material alone	Modified	: 3/24/2014 3:14 PM
Created	: 8/8/2007 9:26 AM		
Column	:	Detection	: Radiochemical
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



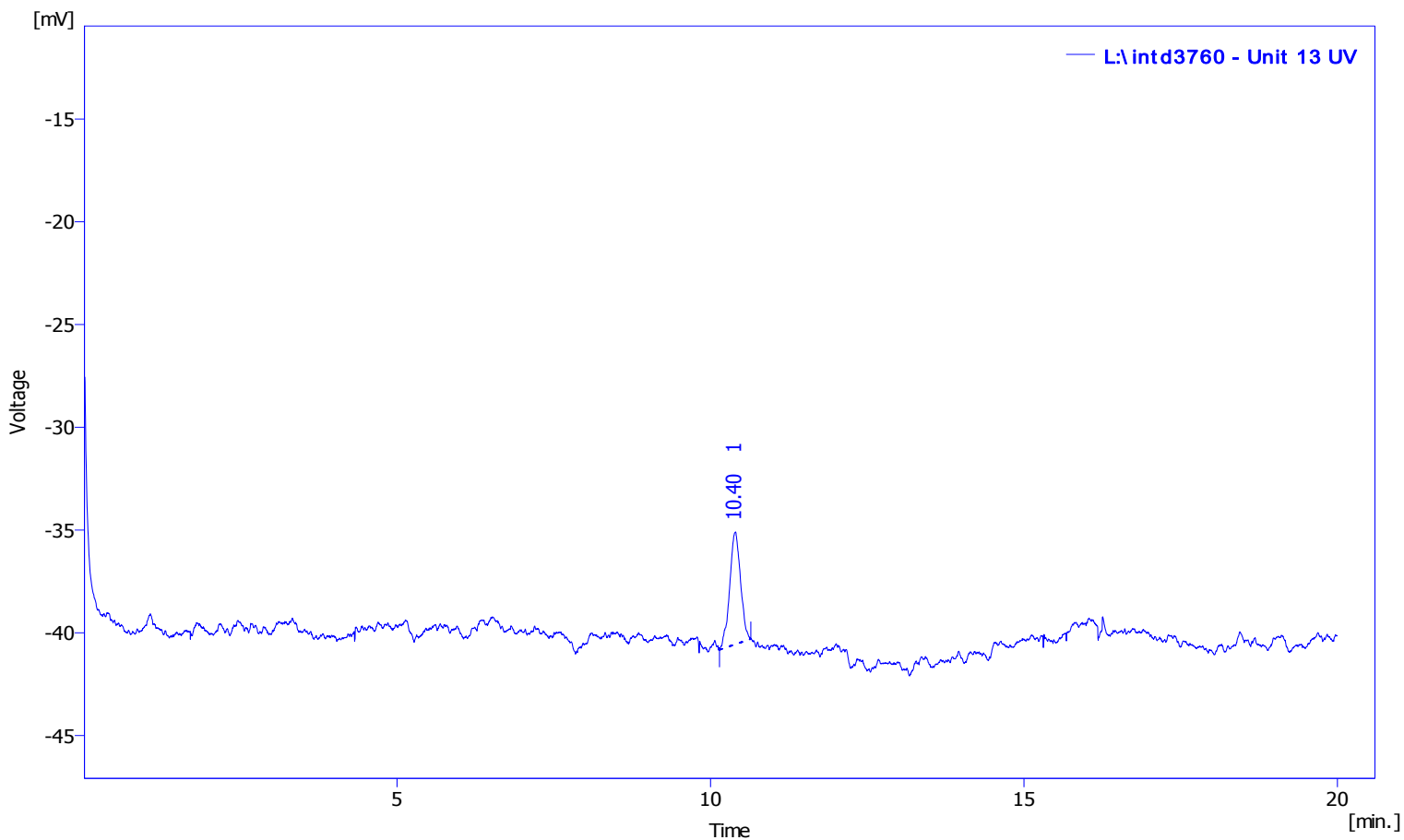
Result Table (Uncal - L:\intd3760 - Unit 13 Radio)

	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		2.19	65.432	4.71	0.43	0.74	664.34	13286.82	1.24		
2		10.65	15072.153	627.71	99.45	98.91	0.00	0.00	3.03		18.8
3		11.35	14.036	1.45	0.09	0.23	110696.85	2213937.04	3.71		2.4
4		12.48	3.932	0.73	0.03	0.11	150453.71	3009074.17	0.94		9.5
		Total	15155.553	634.60	100.00	100.00					

**MT-1507**  
**5'-DMT-Thymidine, [5-3H]-**  
**Lot 846-074-0113-A-20101220-JP**

Chromatogram Info:

File Name	: L:\intd3760	File Created	: 3/24/2014 3:04:45 PM
Origin	: Acquired, Acquisition started 12/20/2010 2:26:42 PM	Acquired Date	: 12/20/2010 2:51:05 PM
Project	: Test	By	: Administrator
Method	: Unit13_20_min_run	By	: Administrator
Description	: UV trace of 3H material alone	Modified	: 3/24/2014 3:16 PM
Created	: 8/8/2007 9:26 AM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



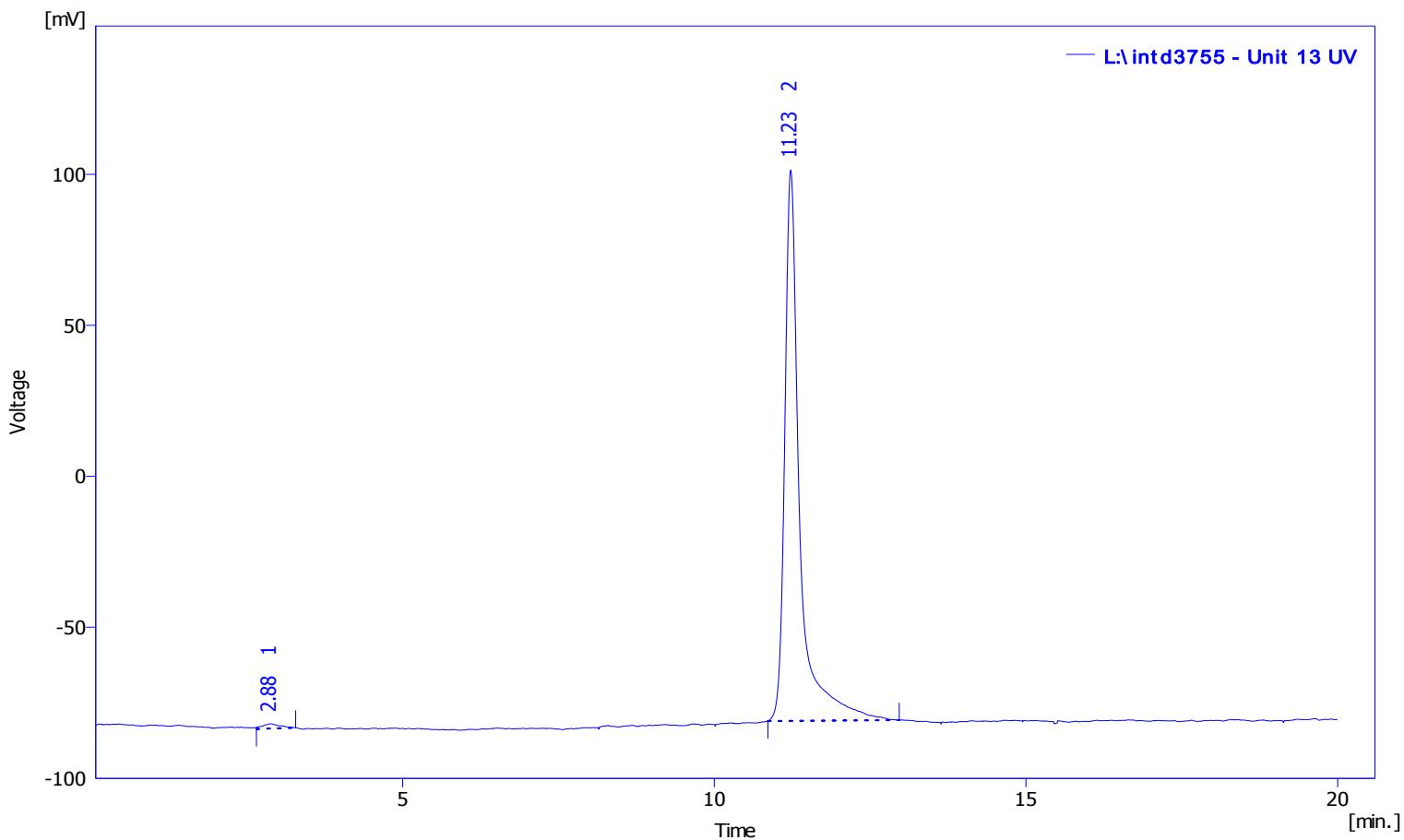
Result Table (Uncal - L:\intd3760 - Unit 13 UV)

	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		10.40	65.866	5.47	100.00	100.00	15955.19	319103.86	0.97		
		Total	65.866	5.47	100.00	100.00					

**MT-1507**  
**5'-DMT-Thymidine, [5-3H]-**  
**Lot 846-074-0113-A-20101220-JP**

Chromatogram Info:

File Name	: L:\intd3755	File Created	: 3/24/2014 3:04:45 PM
Origin	: Acquired, Acquisition started 12/20/2010 10:00:20 AM	Acquired Date	: 12/20/2010 10:22:49 AM
Project	: Test	By	: Administrator
Method	: Unit13_20_min_run	By	: Administrator
Description	: UV trace of standard alone	Modified	: 3/24/2014 3:07 PM
Created	: 8/8/2007 9:26 AM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



Result Table (Uncal - L:\intd3755 - Unit 13 UV)

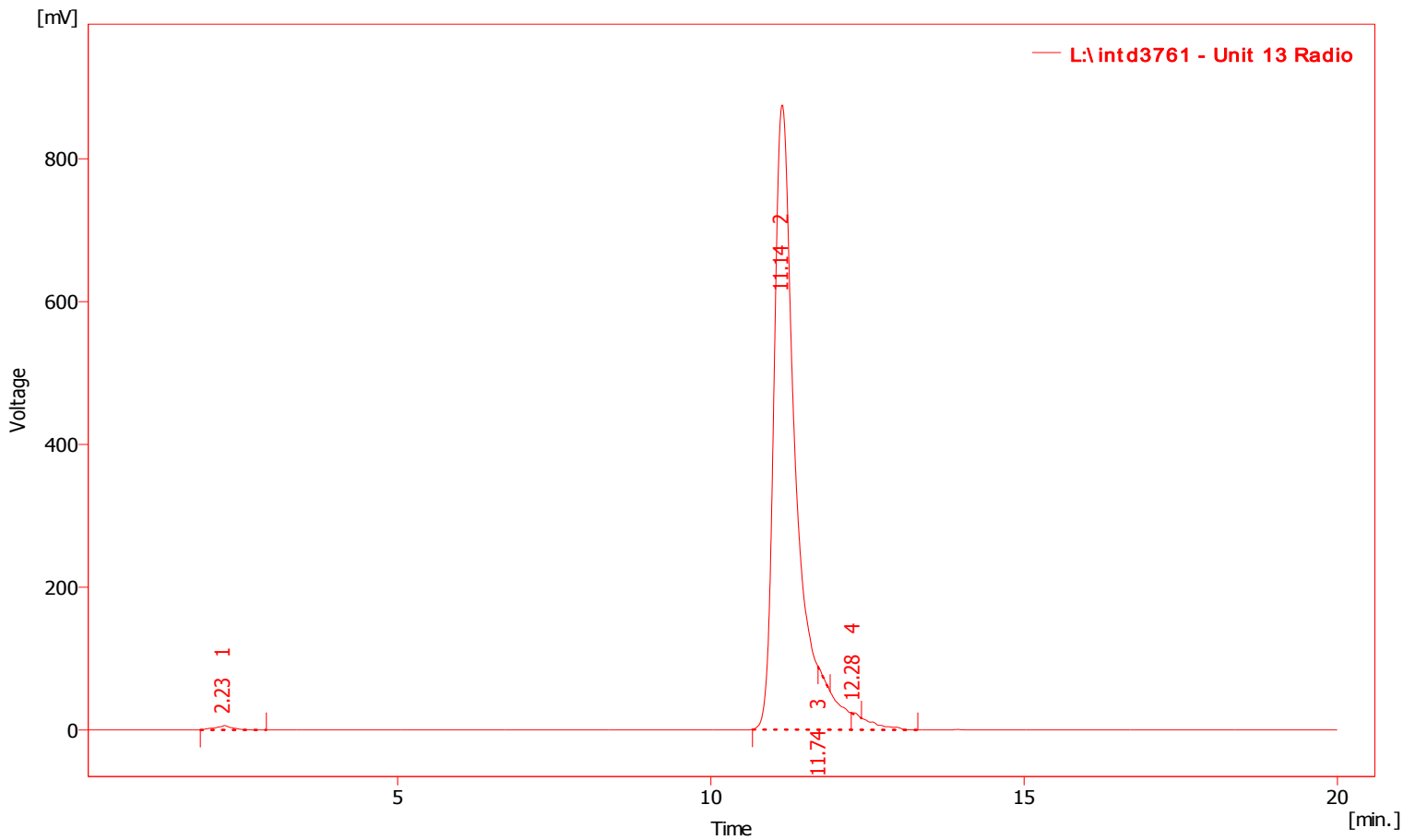
	Compound Name	Reten. Time [min]	Area [mV.s]	Height [mV]	Area [%]	Height [%]	Efficiency [th.pl]	Eff/I [t.p./m]	Symmetry/Tailing [-]	Response Factor	Resolution [-]
1		2.88	30.786	1.58	1.00	0.86	470.56	9411.12	1.41		
2		11.23	3055.019	182.42	99.00	99.14	1790.05	35800.90	1.86		17.4
		Total	3085.805	184.00	100.00	100.00					



**MT-1507**  
**5'-DMT-Thymidine, [5-3H]-**  
**Lot 846-074-0113-A-20101220-JP**

Chromatogram Info:

File Name	: L:\intd3761	File Created	: 3/24/2014 3:04:44 PM
Origin	: Acquired, Acquisition started 12/20/2010 2:52:21 PM	Acquired Date	: 12/20/2010 3:30:40 PM
Project	: Test	By	: Administrator
Method	: Unit13_20_min_run	By	: Administrator
Description	: Radiochemical trace of 3H material co-injected with standard	Modified	: 3/24/2014 3:19 PM
Created	: 8/8/2007 9:26 AM		
Column	:	Detection	: Radiochemical
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



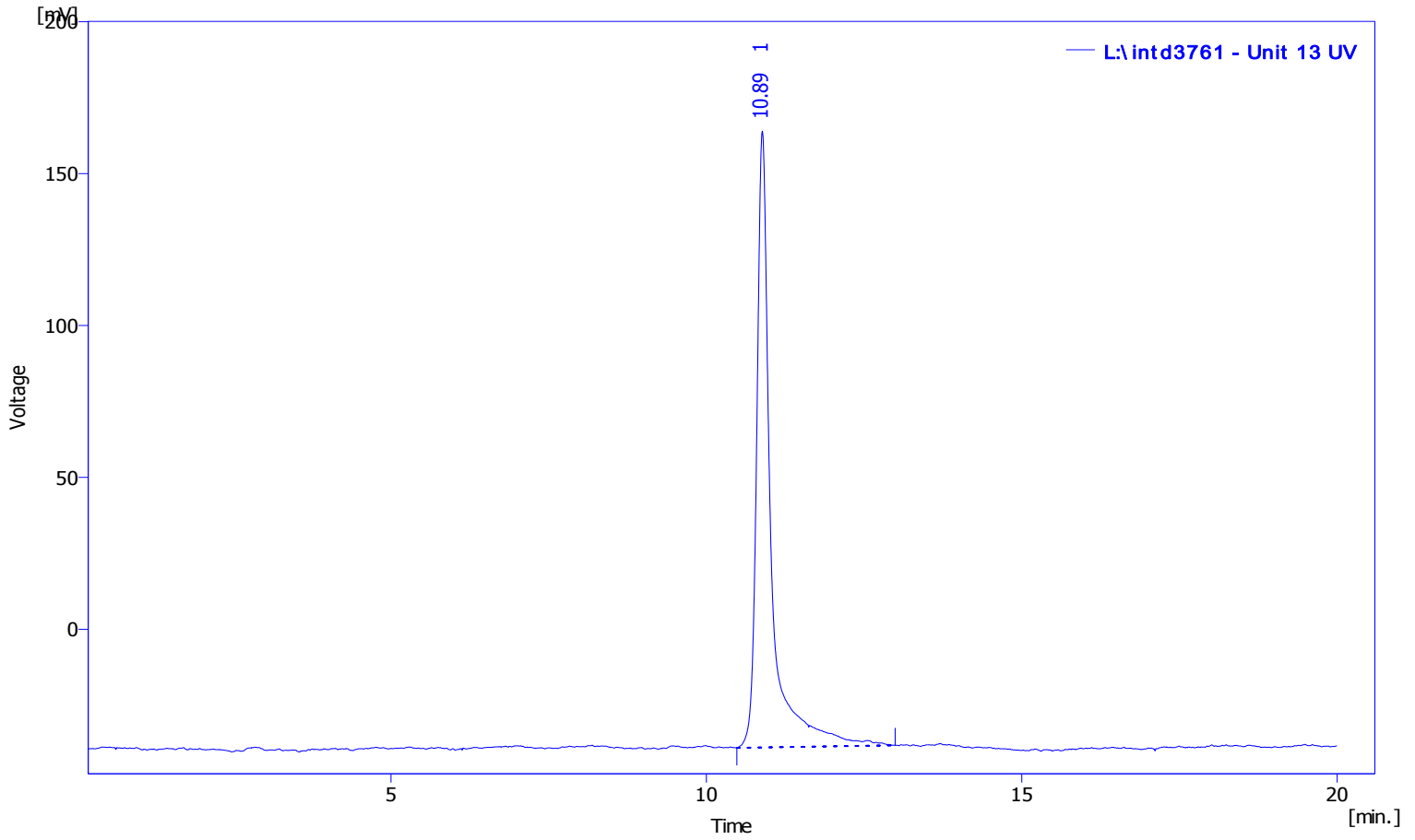
Result Table (Uncal - L:\intd3761 - Unit 13 Radio)

	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		2.23	116.099	6.16	0.53	0.70	211.02	4220.34	1.02		
2		11.14	21866.764	874.81	99.35	98.89	0.00	0.00	2.69		17.7
3		11.74	10.829	1.44	0.05	0.16	53328.56	1066571.30	4.00		2.0
4		12.28	16.289	2.18	0.07	0.25	161805.08	3236101.63	2.00		5.5
		Total	22009.980	884.59	100.00	100.00					

**MT-1507**  
**5'-DMT-Thymidine, [5-3H]-**  
**Lot 846-074-0113-A-20101220-JP**

Chromatogram Info:

File Name	: L:\intd3761	File Created	: 3/24/2014 3:04:44 PM
Origin	: Acquired, Acquisition started 12/20/2010 2:52:21 PM	Acquired Date	: 12/20/2010 3:30:40 PM
Project	: Test	By	: Administrator
Method	: Unit13_20_min_run	By	: Administrator
Description	: UV trace of 3H material co-injected with standard	Modified	: 3/24/2014 3:10 PM
Created	: 8/8/2007 9:26 AM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



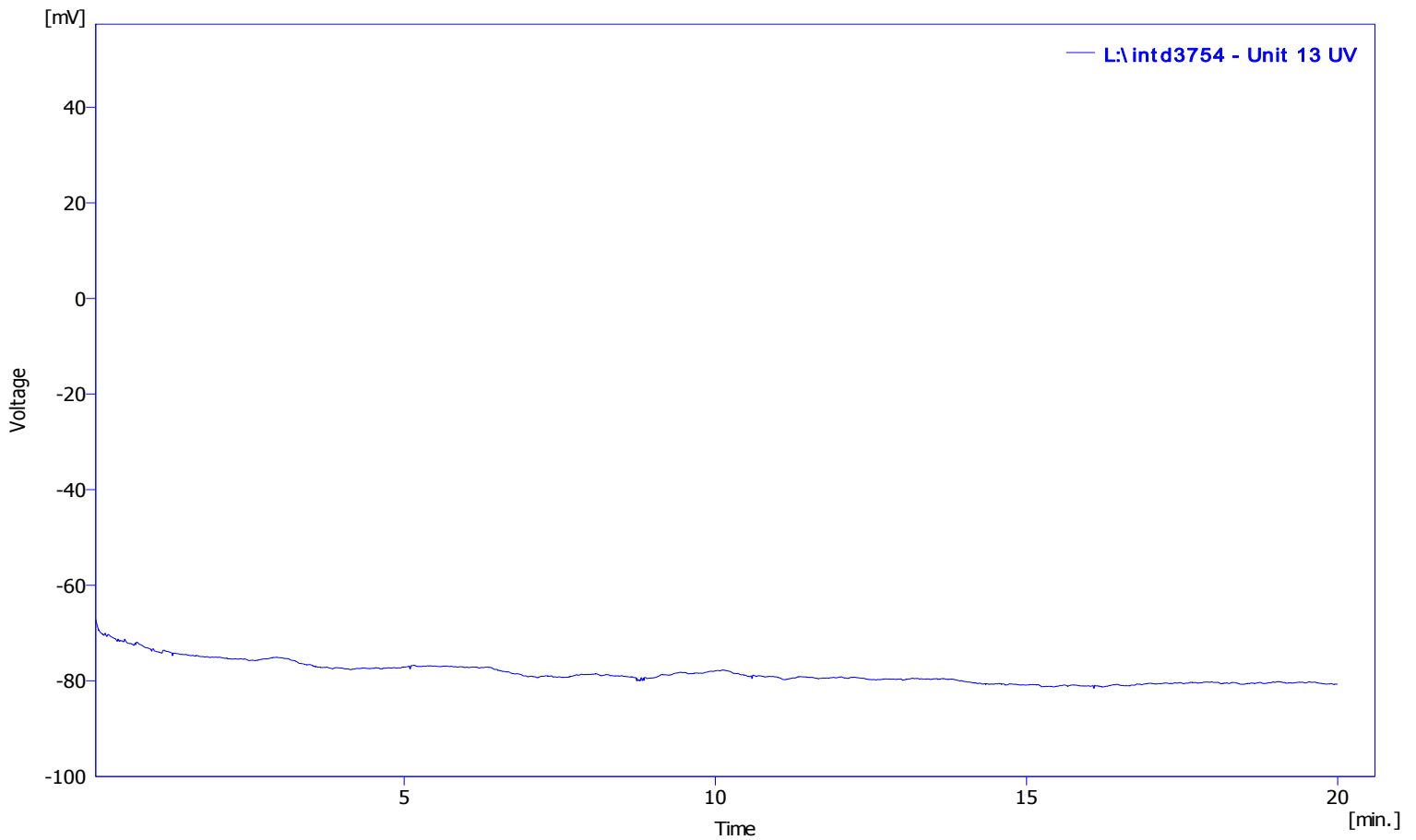
Result Table (Uncal - L:\intd3761 - Unit 13 UV)

	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		10.89	3207.909	202.88	100.00	100.00	1134.14	22682.76	1.86		
		Total	3207.909	202.88	100.00	100.00					

**MT-1507**  
**5'-DMT-Thymidine, [5-3H]-**  
**Lot 846-074-0113-A-20101220-JP**

Chromatogram Info:

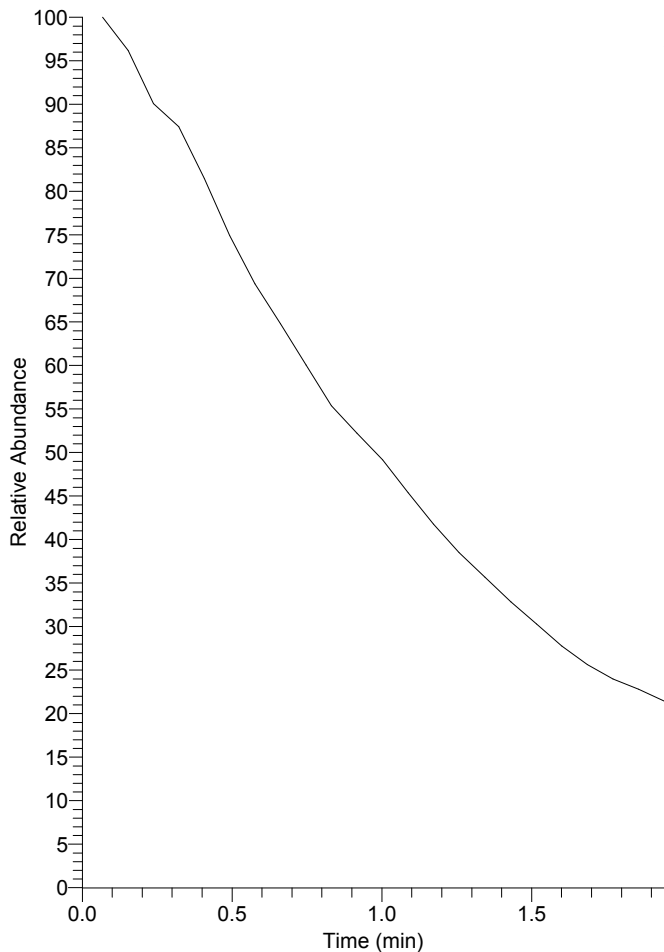
File Name	: L:\intd3754	File Created	: 3/24/2014 3:04:45 PM
Origin	: Acquired, Acquisition started 12/20/2010 9:13:59 AM	Acquired Date	: 12/20/2010 9:45:20 AM
Project	: Test	By	: Administrator
Method	: Unit13_20_min_run	By	: Administrator
Description	: UV trace of blank injection	Modified	: 3/24/2014 3:08 PM
Created	: 8/8/2007 9:26 AM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



*Result Table (Uncal - L:\intd3754 - Unit 13 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 [-]
No peak to report										

RT: 0.00 - 1.94



NL:  
2.72E8  
TIC MS  
MT1507-  
20101220-  
JP-MS

MT1507-20101220-JP-MS#1-23 RT: 0.07-1.94

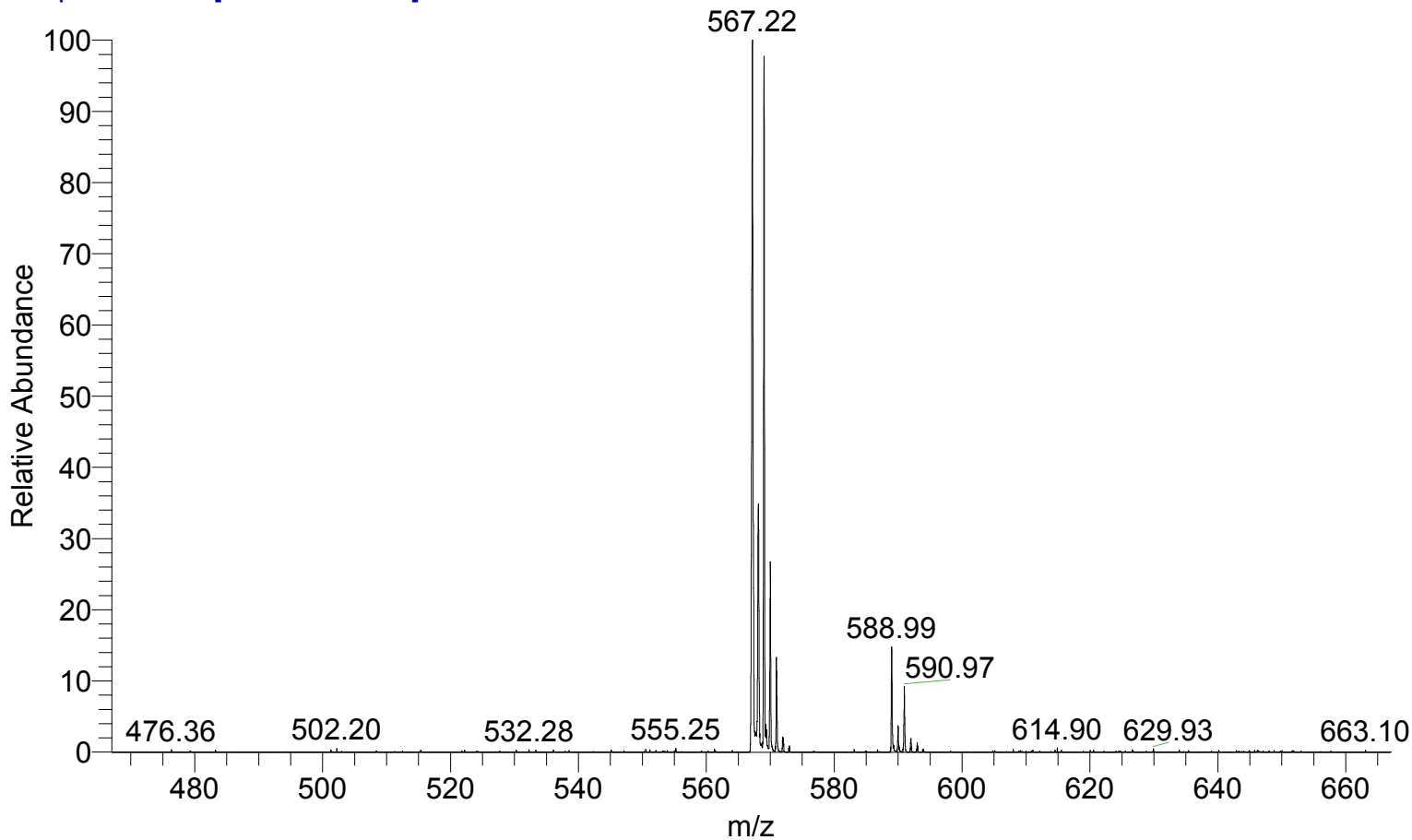
T: + p NSI Z ms [467.00-667.00]

m/z= 560.87-586.63

m/z	Intensity	Relative
564.01	16380.0	0.03
567.21	58810056.0	100.00
568.12	20168832.0	34.29
569.04	36819752.0	62.61
569.99	10225841.0	17.39
570.99	4888774.0	8.31
571.98	913867.7	1.55
572.98	251685.9	0.43
574.00	12575.7	0.02
575.19	1165.4	0.00
576.89	17003.3	0.03
579.12	1744.0	0.00
582.02	1277.1	0.00
583.15	33637.6	0.06
583.83	988.7	0.00
584.98	18391.6	0.03

MT1507-20101220-JP-MS #1-23 RT: 0.07-1.94 AV: 23 NL: 1.17E6

T: + p NSI Z ms [467.00-667.00]



MT1507 3H NMR in MeOD  
Batch 20101220-JP



**BRUKER**

3.427  
3.382  
3.372  
3.341

NAME MT1507-20101220-JP  
EXPNO 1  
PROCNO 1  
Date\_ 20101220  
Time\_ 18.42  
INSTRUM spect  
PROBHD 5 mm DUX 3H-1H  
PULPROG zg  
TD 16384  
SOLVENT MeOD  
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

