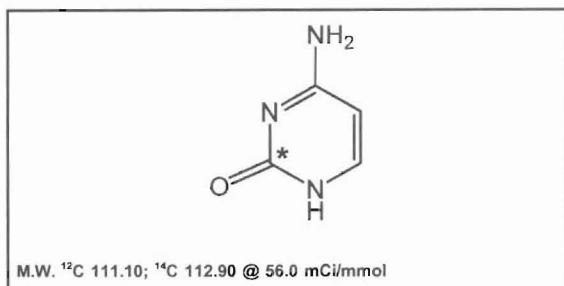




Product Data Sheet

MC-131

Cytosine, [2-¹⁴C]-



Lot #: 154-042-056-A-20120808-AAH

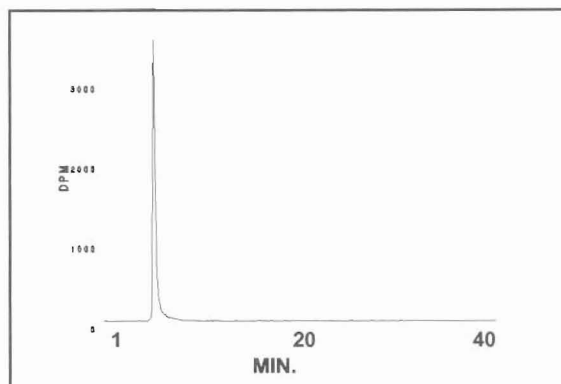
Specific Activity: 56.0 mCi/mmol

Concentration: 0.1 mCi/ml; 201.60 µg/ml

Packaged in: Sterile water solution

Date of Analysis: August 10, 2012

Radiochemical Purity: 99.1%



HPLC ANALYSIS LOT 154-042-056-A-20120808-AAH
File Name: int21788 Date and Time: 8/10/2012 10:28:49 A
Unit 2 Radio

Peak #	Area %	Time	Area
1	99.14	5.09000	7681.60031
2	0.30	6.83000	22.95546
3	0.14	9.46000	10.92006
4	0.43	10.81000	33.02912
Totals	100.00		7748.50495

Stability and Storage Recommendation: The rate of decomposition is approximately 0.1-0.2%/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-131

Cytosine, [2-¹⁴C]-

Lot 154-042-056-A-20120808-AAH

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.

Cytosine, [2-¹⁴C]- concentration was 50.0 µCi/ml.

Volume of standard alone injection was 1.0 µl.

Volume of **Cytosine, [2-¹⁴C]-** alone injection was 1.0 µl.

Co-injection solution consisted of 2.0 µl **Cytosine, [2-¹⁴C]-** + 1.0 µl standard.

Volume of co-injection was 3.0 µl.

Volume of blank injection was 1.0 µl.

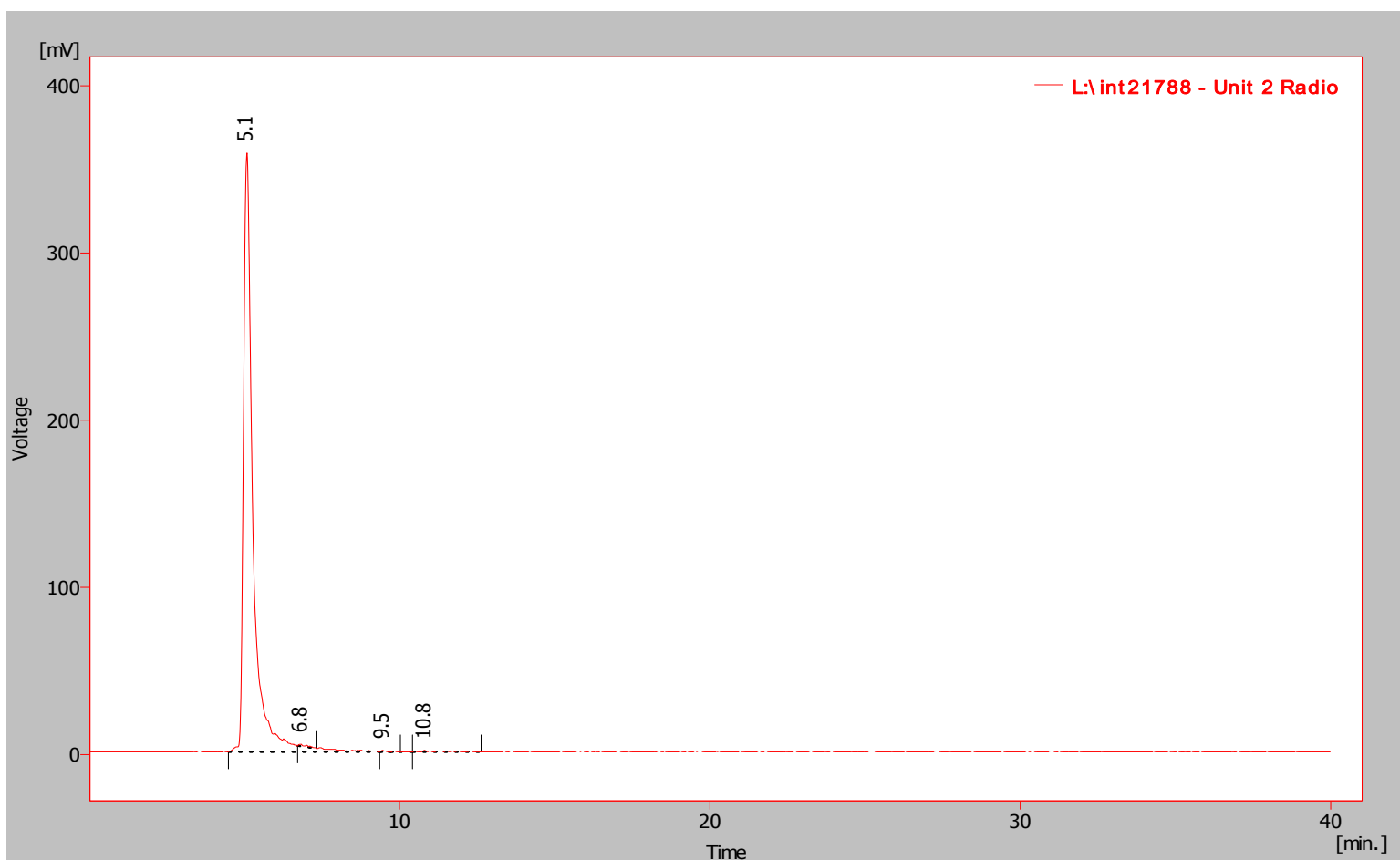
B) Mass spectrometry- Positive Mode

C) NMR

MC-131
Cytosine, [2-14C]-
Lot 154-042-056-A-20120808-AAH

Chromatogram Info:

File Name	: L:\int21788	File Created	: 10/14/2013 2:00:48 PM
Origin	: Acquired, Acquisition started 8/10/2012 9:48:50 AM	Acquired Date	: 8/10/2012 10:28:49 AM
Project	: Test	By	: Administrator
Method	: Unit2-40minrun	By	: Administrator
Description	: Radiochemical trace of 14C material alone	Modified	: 10/14/2013 2:18 PM
Created	: 6/16/2007 8:19 AM		
Column	:	Detection	: Radiochemical
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



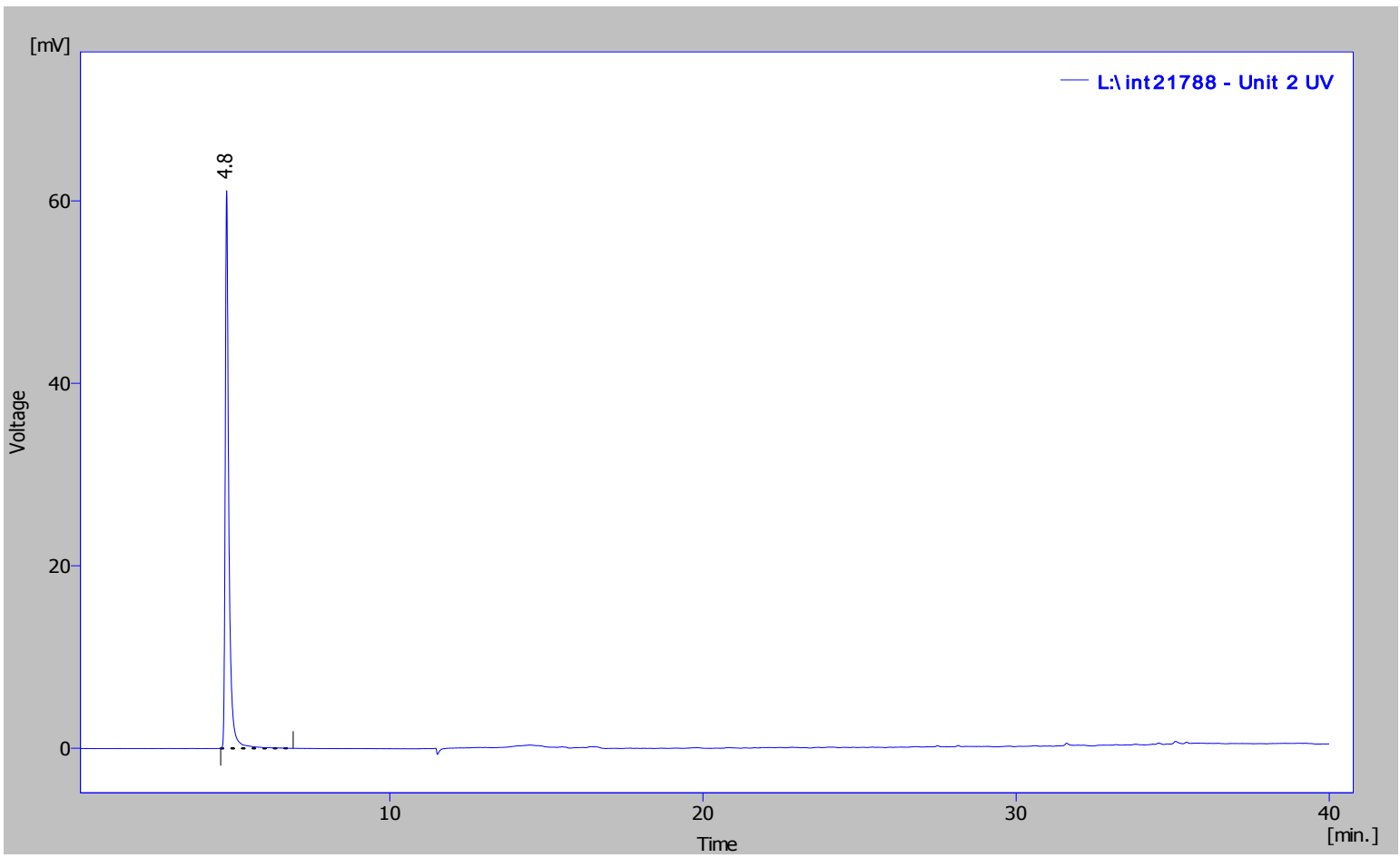
Result Table (Uncal - L:\int21788 - Unit 2 Radio)

	Compound Name	Reten. Time [min]	Area [%]	Area [mV.s]	Height [mV]	Height [%]	Efficiency [th.pl]
1		5.09	99.13	7648.57	358.17	99.13	1830.75
2		6.84	0.30	22.96	1.28	0.35	13224.09
3		9.47	0.14	10.92	0.93	0.26	17191.43
4		10.82	0.43	33.03	0.94	0.26	45040.35
		Total	100.00	7715.48	361.31	100.00	

MC-131
Cytosine, [2-14C]-
Lot 154-042-056-A-20120808-AAH

Chromatogram Info:

File Name	: L:\int21788	File Created	: 10/14/2013 2:00:48 PM
Origin	: Acquired, Acquisition started 8/10/2012 9:48:50 AM	Acquired Date	: 8/10/2012 10:28:49 AM
Project	: Test	By	: Administrator
Method	: Unit2-40minrun	By	: Administrator
Description	: UV trace of 14C material alone	Modified	: 10/14/2013 2:19 PM
Created	: 6/16/2007 8:19 AM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



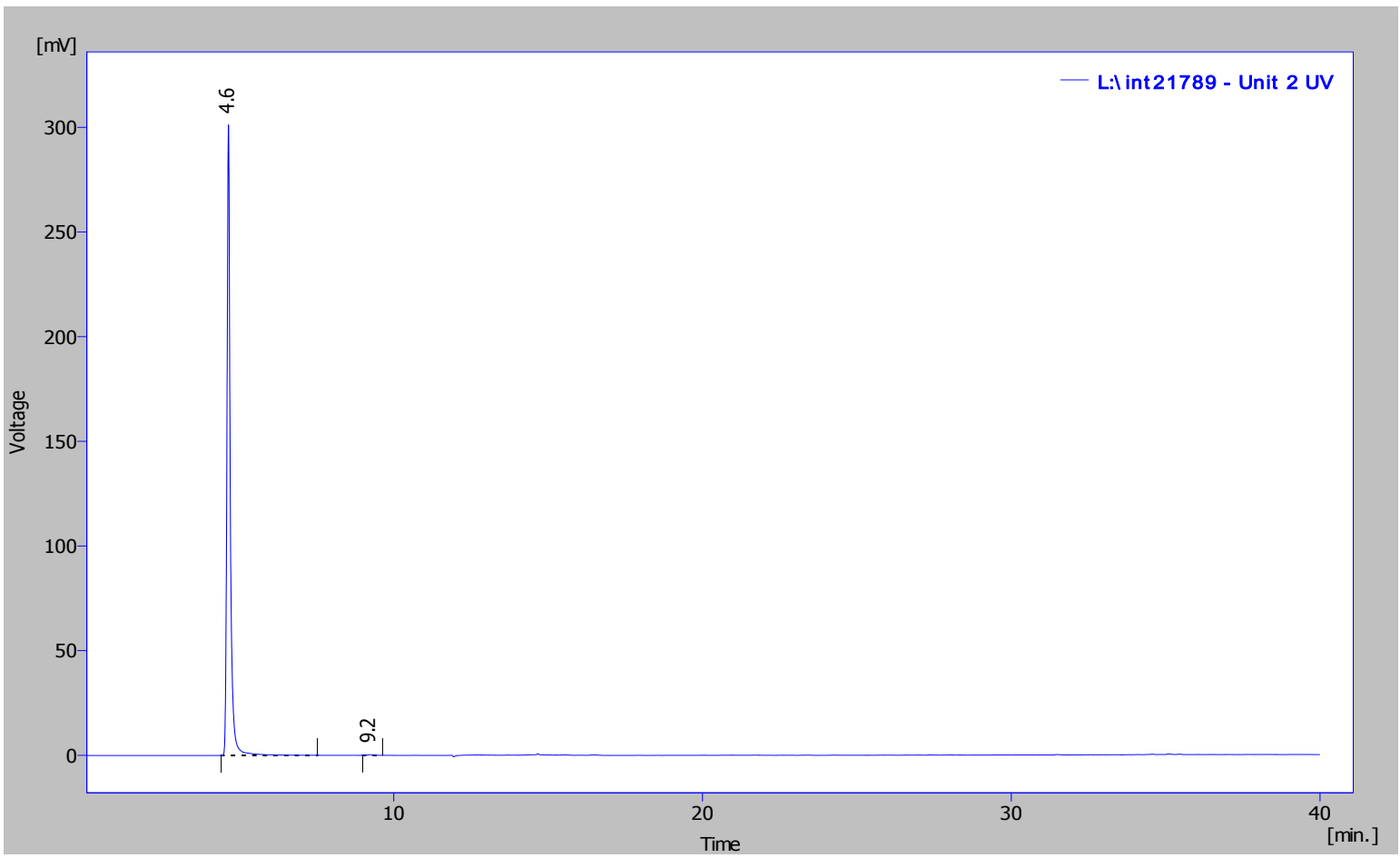
Result Table (Uncal - L:\int21788 - Unit 2 UV)

	Compound Name	Reten. Time [min]	Area [%]	Area [mV.s]	Height [mV]	Height [%]	Efficiency [th.pl]
1		4.79	100.00	492.08	61.15	100.00	9896.13
		Total	100.00	492.08	61.15	100.00	

MC-131
Cytosine, [2-14C]-
Lot 154-042-056-A-20120808-AAH

Chromatogram Info:

File Name	: L:\int21789	File Created	: 10/14/2013 2:00:48 PM
Origin	: Acquired, Acquisition started 8/10/2012 10:57:05 AM	Acquired Date	: 8/10/2012 11:37:04 AM
Project	: Test	By	: Administrator
Method	: Unit2-40minrun	By	: Administrator
Description	: UV trace of standard material alone	Modified	: 10/14/2013 2:20 PM
Created	: 6/16/2007 8:19 AM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



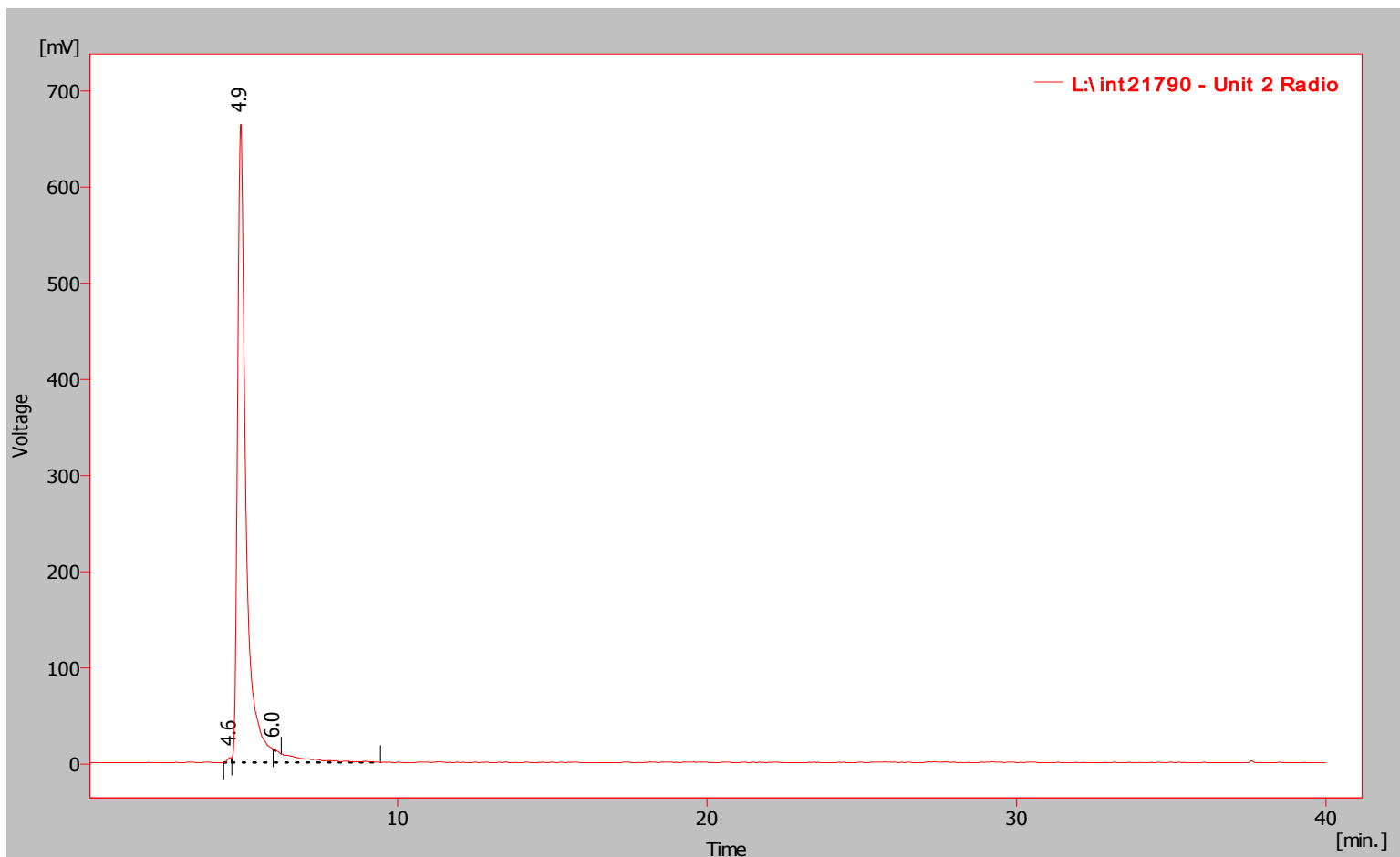
Result Table (Uncal - L:\int21789 - Unit 2 UV)

	Compound Name	Reten. Time [min]	Area [%]	Area [mV.s]	Height [mV]	Height [%]	Efficiency [th.pl]
1		4.65	99.80	2260.26	301.18	99.90	10513.21
2		9.22	0.20	4.63	0.30	0.10	8902.58
		Total	100.00	2264.89	301.48	100.00	

MC-131
Cytosine, [2-14C]-
Lot 154-042-056-A-20120808-AAH

Chromatogram Info:

File Name	: L:\int21790	File Created	: 10/14/2013 2:00:48 PM
Origin	: Acquired, Acquisition started 8/10/2012 12:17:10 PM	Acquired Date	: 8/10/2012 12:57:09 PM
Project	: Test	By	: Administrator
Method	: Unit2-40minrun	By	: Administrator
Description	: Radiochemical trace of 14C material co-injected with standard	Modified	: 10/14/2013 2:22 PM
Created	: 6/16/2007 8:19 AM		
Column	:	Detection	: Radiochemical
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



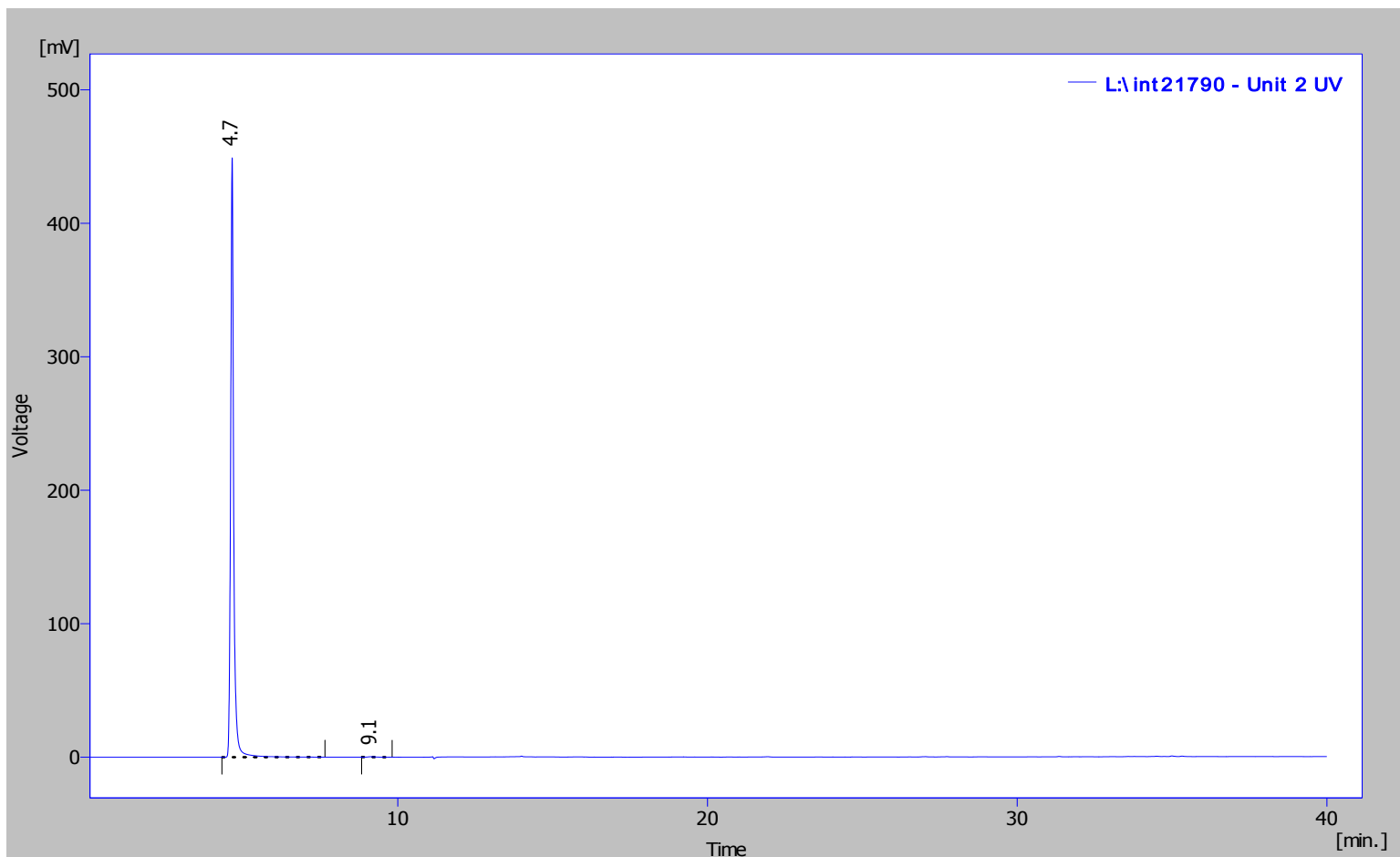
Result Table (Uncal - L:\int21790 - Unit 2 Radio)

	Compound Name	Reten. Time [min]	Area [%]	Area [mV.s]	Height [mV]	Height [%]	Efficiency [th.pl]
1		4.59	0.35	46.84	5.26	0.79	4565.89
2		4.93	99.57	13271.09	663.58	99.15	2100.90
3		5.99	0.08	10.84	0.42	0.06	124373.15
	Total		100.00	13328.77	669.27	100.00	

MC-131
Cytosine, [2-14C]-
Lot 154-042-056-A-20120808-AAH

Chromatogram Info:

File Name	: L:\int21790	File Created	: 10/14/2013 2:00:48 PM
Origin	: Acquired, Acquisition started 8/10/2012 12:17:10 PM	Acquired Date	: 8/10/2012 12:57:09 PM
Project	: Test	By	: Administrator
Method	: Unit2-40minrun	By	: Administrator
Description	: UV trace of 14C material co-injected with standard	Modified	: 10/14/2013 2:23 PM
Created	: 6/16/2007 8:19 AM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



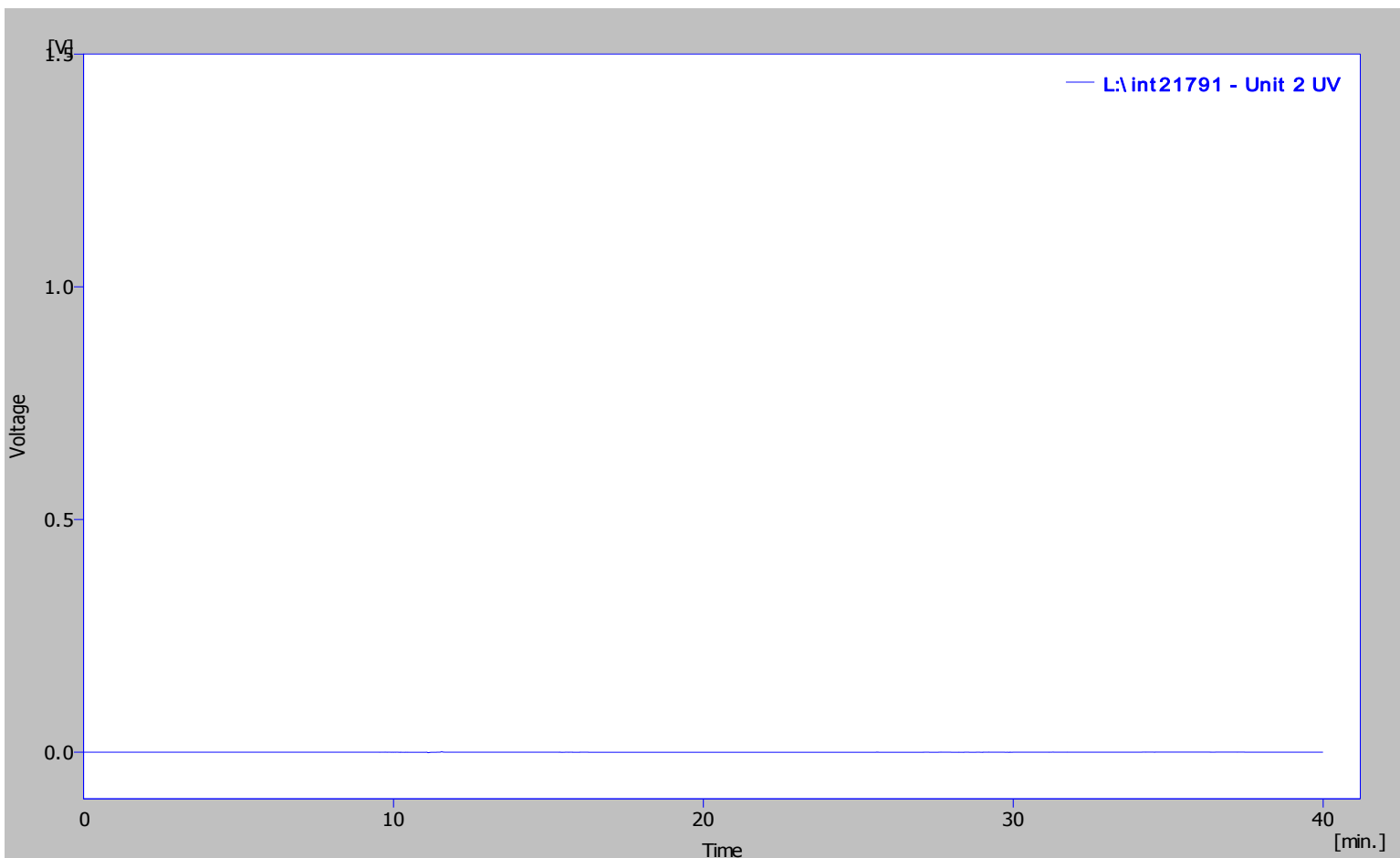
Result Table (Uncal - L:\int21790 - Unit 2 UV)

	Compound Name	Reten. Time [min]	Area [%]	Area [mV.s]	Height [mV]	Height [%]	Efficiency [th.pl]
1		4.65	99.81	3106.27	449.14	99.92	12819.24
2		9.13	0.19	5.84	0.34	0.08	7584.26
		Total	100.00	3112.10	449.48	100.00	

MC-131
Cytosine, [2-14C]-
Lot 154-042-056-A-20120808-AAH

Chromatogram Info:

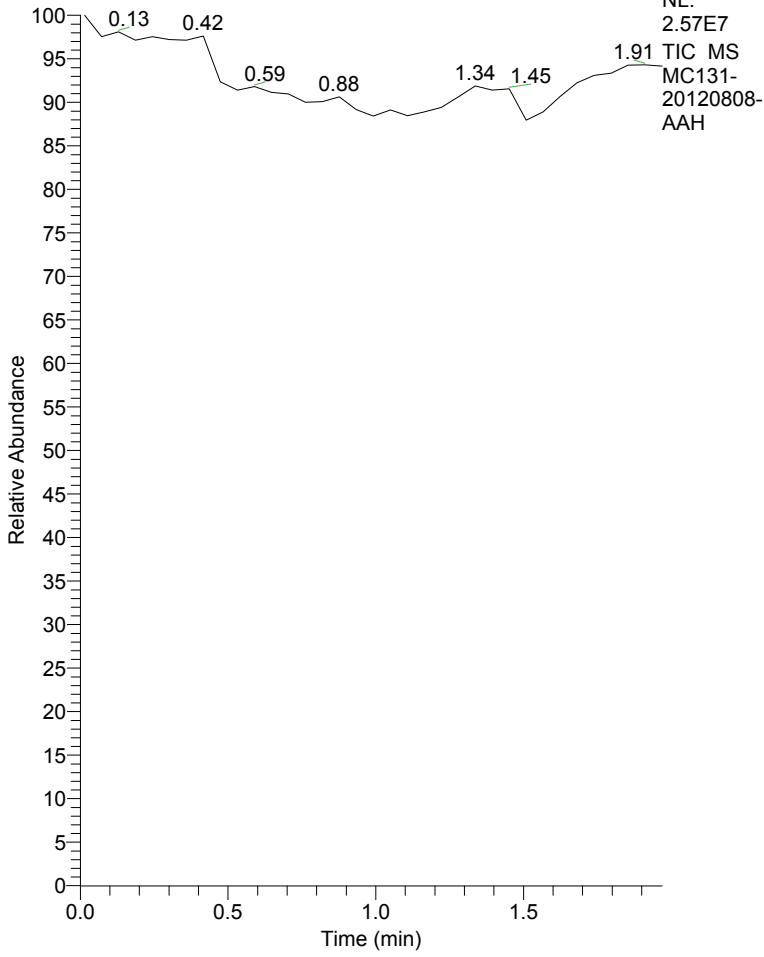
File Name	: L:\int21791	File Created	: 10/14/2013 2:08:21 PM
Origin	: Acquired, Acquisition started 8/10/2012 1:53:45 PM	Acquired Date	: 8/10/2012 2:33:44 PM
Project	: Test	By	: Administrator
Method	: Unit2-40minrun	By	: Administrator
Description	: UV trace of blank injection	Modified	: 10/14/2013 2:17 PM
Created	: 6/16/2007 8:19 AM		
Column	:	Detection	: UV 267nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



Result Table (Uncal - L:\int21791 - Unit 2 UV)

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

RT: 0.00 - 1.97



MC131-20120808-AAH#1-35 RT: 0.01-1.97 AV:

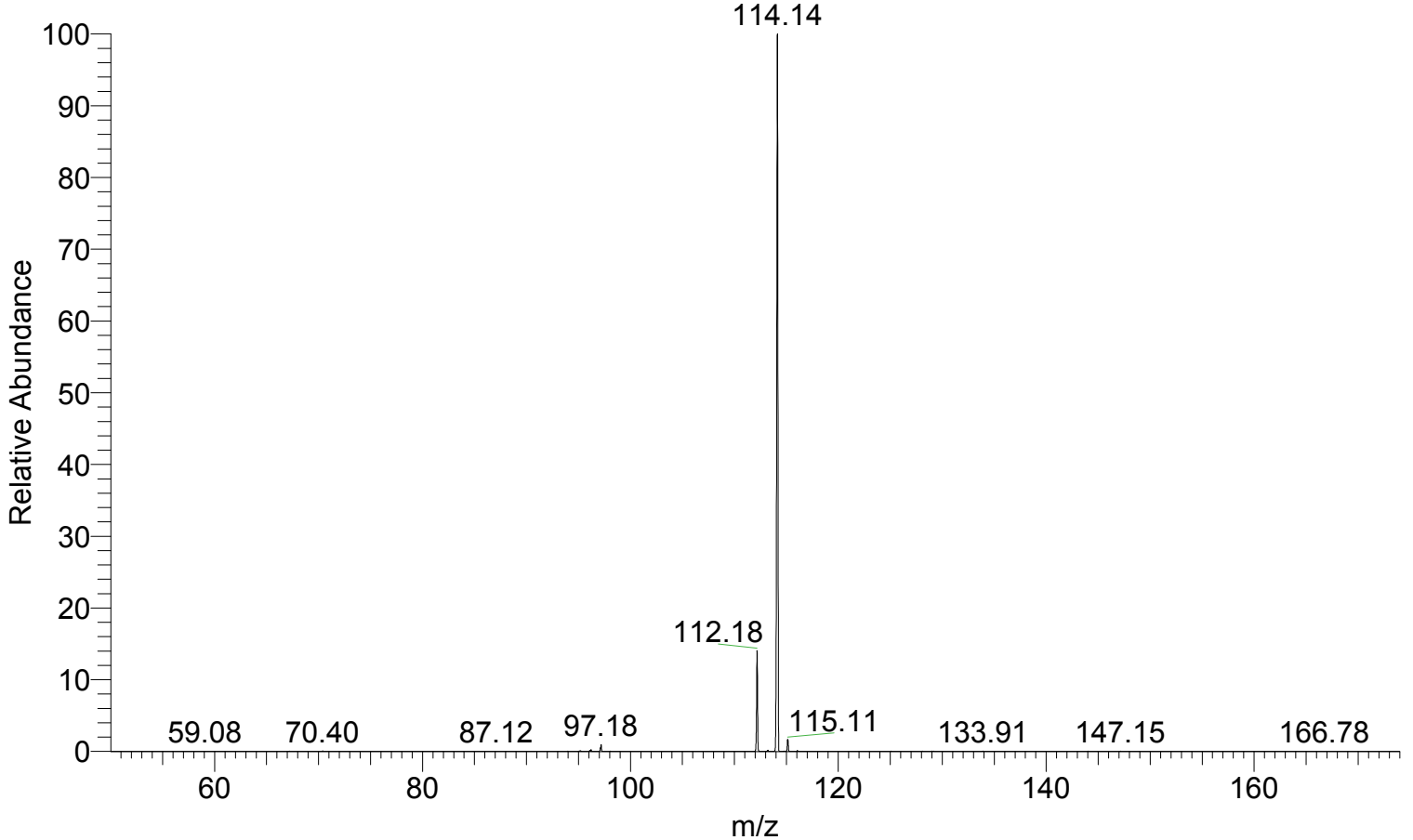
T: + p ESI Z ms [50.00-174.00]

m/z = 107.59-120.68

m/z	Intensity	Relative
111.15	911.8	0.00
112.18	2358434.3	11.35
113.18	26262.3	0.13
114.12	20785618.0	100.00
115.12	306293.8	1.47
116.09	12331.8	0.06
117.07	1450.5	0.01
118.08	2891.8	0.01
120.17	717.9	0.00

MC131-20120808-AAH #1-35 RT: 0.01-1.97 AV: 35 NL: 7.73E5

T: + p ESI Z ms [50.00-174.00]



MC131 1H NMR in D2O
Batch 20120808-AAH



7.329
7.305
5.802
5.779

NAME MC131-20120808-AAH
EXPNO 1
PROCNO 1
Date_ 20120808
Time_ 14.23
INSTRUM spect
PROBHD 5 mm DUX 3H-1H
PULPROG zg30
TD 65536
SOLVENT D2O
NS 512
DS 2
SWH 5411.255 Hz
FIDRES 0.082569 Hz
AQ 6.0555763 sec
RG 362
DW 92.400 usec
DE 6.50 usec
TE 300.0 K
D1 1.00000000 sec
TD0 1

==== CHANNEL f1 =====
NUC1 1H
P1 7.25 usec
PL1 0.00 dB
SFO1 300.1318534 MHz
SI 32768
SF 300.1300061 MHz
WDW no
SSB 0
LB 0.00 Hz
GB 0
PC 1.00

