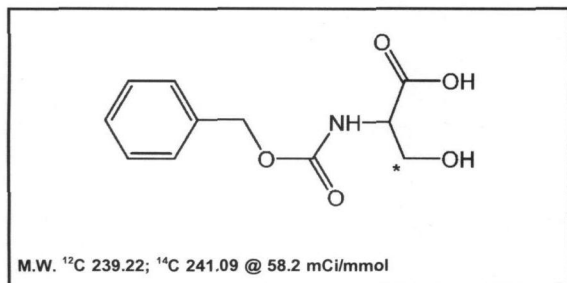




Product Data Sheet

MC-2344

Z-D,L-Serine, [3-¹⁴C]-



Lot #: 194-084-0582-A-20100416-NT

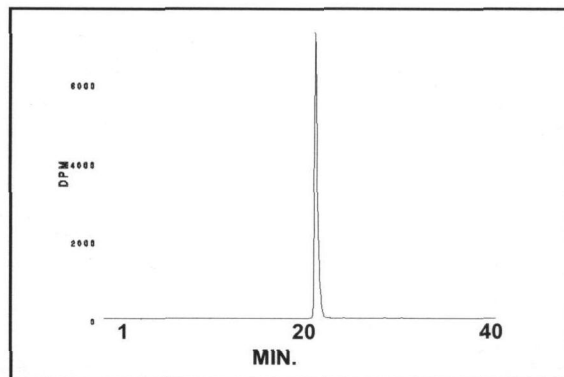
Specific Activity: 58.2 mCi/mmol

Concentration: 0.1 mCi/ml; 414.24 μ g/ml

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

Date of Analysis: April 16, 2010

Radiochemical Purity: 99.7%



HPLC ANALYSIS LOT 194-084-0582-A-20100416-NT
File Name: intrn2158 Date and Time: 4/16/2010 11:27:54 A
Unit 21 Radio

Peak #	Area %	Time	Area
1	0.13	21.26670	19.98837
2	99.74	21.68000	15889.14679
3	0.14	22.98000	22.07790
Totals	100.00		15931.21306

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.

MC-2344

Z-D,L-Serine, [3-¹⁴C]-

Lot 194-084-0582-A-20100416-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.

Z-D,L-Serine, [3-¹⁴C]- concentration was 0.1 mCi/ml.

Volume of standard alone injection was 15.0 µl.

Volume of **Z-D,L-Serine, [3-¹⁴C]-** alone injection was 1.0 µl.

Co-injection solution consisted of 1.0 µl **Z-D,L-Serine, [3-¹⁴C]-** + 15.0 µl standard.

Volume of co-injection was 16.0 µl.

Volume of blank injection was 1.0 µl.

B) Mass spectrometry – Positive mode

C) NMR

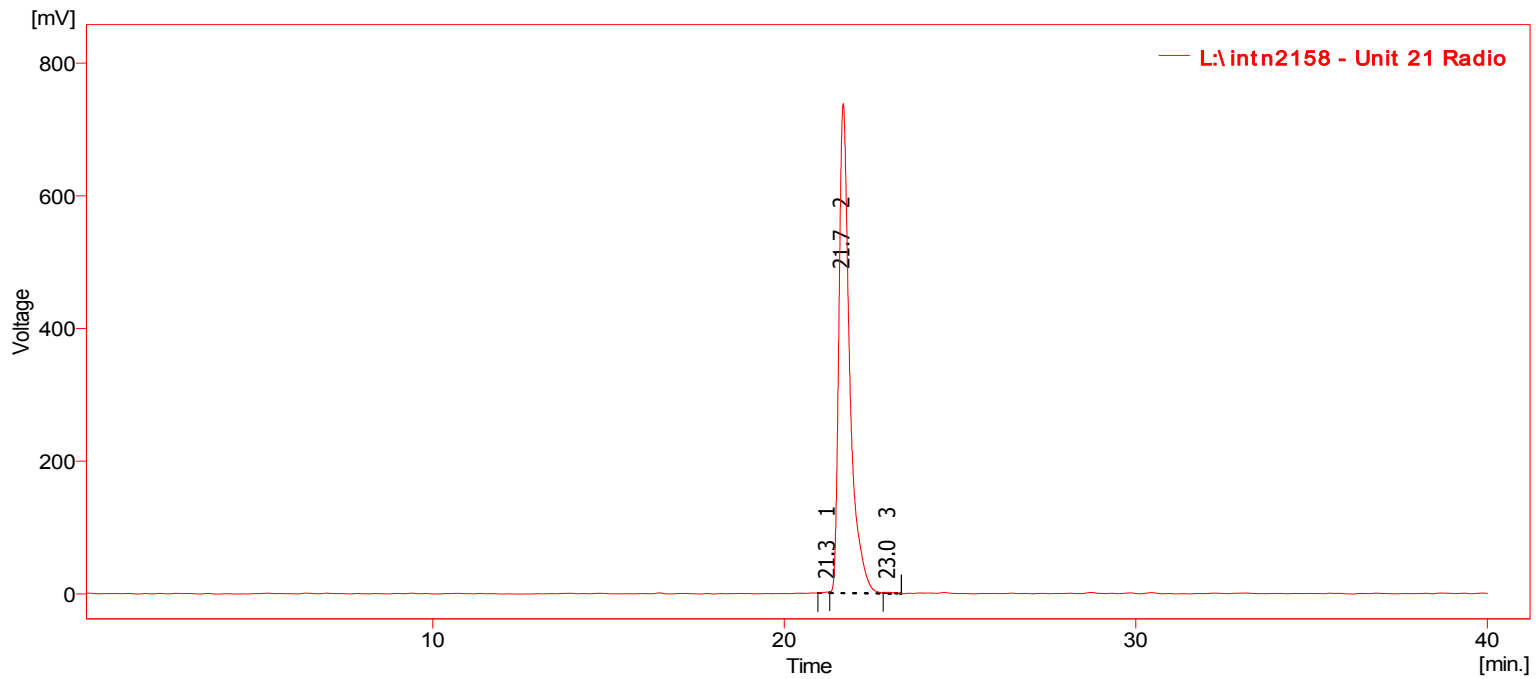
MC-2344
Z-D,L-Serine, [3-14C]-
Lot 194-084-0582-A-20100416-NT

Chromatogram Info:

File Name : L:\intn2158 File Created : 5/14/2014 10:32:51 AM
 Origin : Acquired, Acquisition started 4/16/2010 10:47:56 AM Acquired Date : 4/16/2010 11:27:54 AM
 Project : Work1 By : Administrator

Method : Unit_21_40_min_run By : Administrator
 Description : Radiochemical trace of 14C material alone
 Created : 4/17/2008 10:21 AM Modified : 5/14/2014 11:13 AM

Column : Detection : Radiochemical
 Mobile Phase : Temperature :
 Flow Rate : Pressure :
 Note :



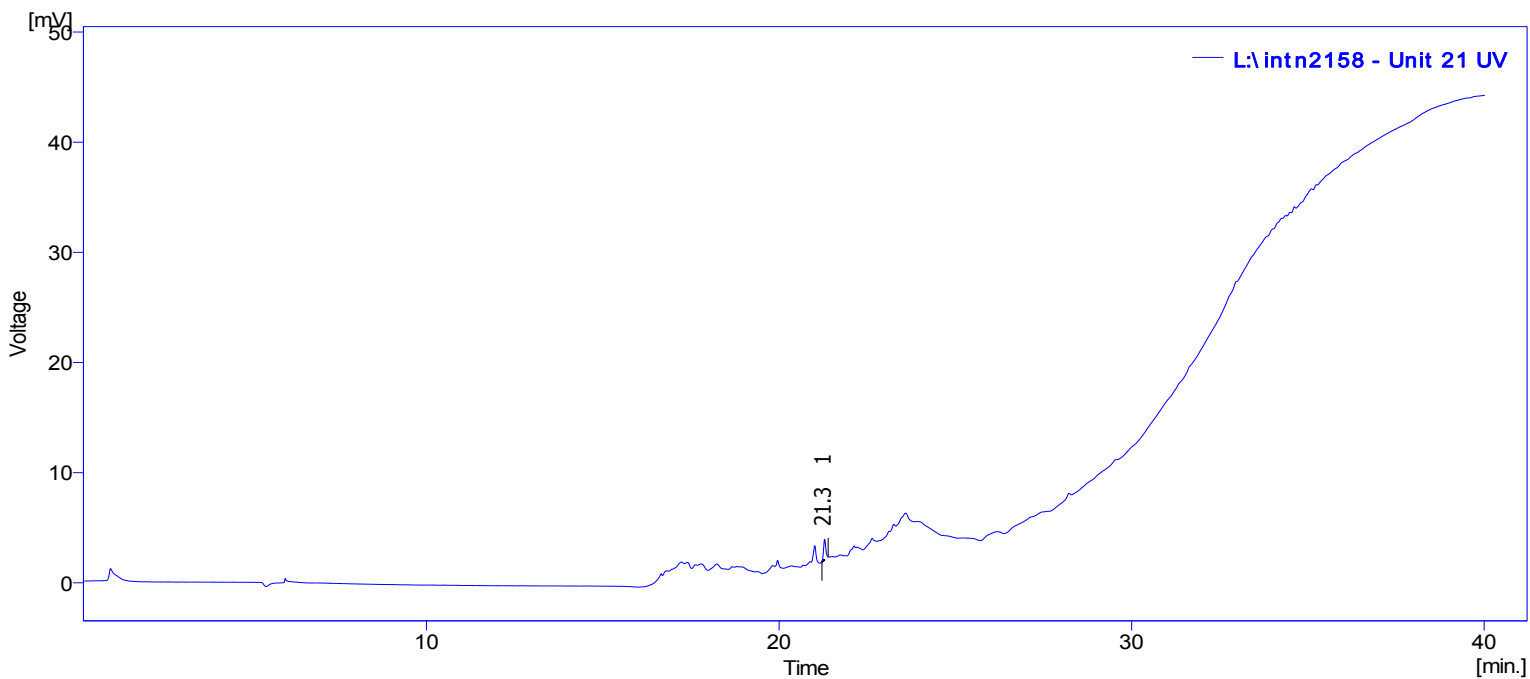
Result Table (Uncal - L:\intn2158 - Unit 21 Radio)

	Compound Name	Reten. Time [min]	Area [mV.s]	Height [mV]	Area [%]	Height [%]	W05 [min]	Efficiency [th.pl]	Eff/I [t.p./m]	Resolution [-]	Symmetry/Tailing [-]	Response Factor
1		21.27	19.988	1.73	0.13	0.2	0.21	56816	1136318		0.54	
2		21.68	15889.147	738.07	99.74	99.6	0.31	27688	553765	0.94	2.64	
3		22.98	22.078	1.31	0.14	0.2	0.22	62320	1246395	2.93	1.56	
	Total		15931.213	741.11	100.00	100.0						

MC-2344
Z-D,L-Serine, [3-14C]-
Lot 194-084-0582-A-20100416-NT

Chromatogram Info:

File Name	: L:\intn2158	File Created	: 5/14/2014 10:32:51 AM
Origin	: Acquired, Acquisition started 4/16/2010 10:47:56 AM	Acquired Date	: 4/16/2010 11:27:54 AM
Project	: Work1	By	: Administrator
Method	: Unit_21_40_min_run	By	: Administrator
Description	: UV trace of 14C material alone		
Created	: 4/17/2008 10:21 AM	Modified	: 5/14/2014 11:14 AM
Column	:	Detection	: UV 250nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



Result Table (Uncal - L:\intn2158 - Unit 21 UV)

	Compound Name	Reten. Time [min]	Area [mV.s]	Height [mV]	Area [%]	Height [%]	W05 [min]	Efficiency [th.pl]	Eff/I [t.p./m]	Resolution [-]	Symmetry/Tailing [-]	Response Factor
1		21.29	7.982	1.85	100.00	100.0	0.07	512626	10252529		1.13	
		Total	7.982	1.85	100.00	100.0						

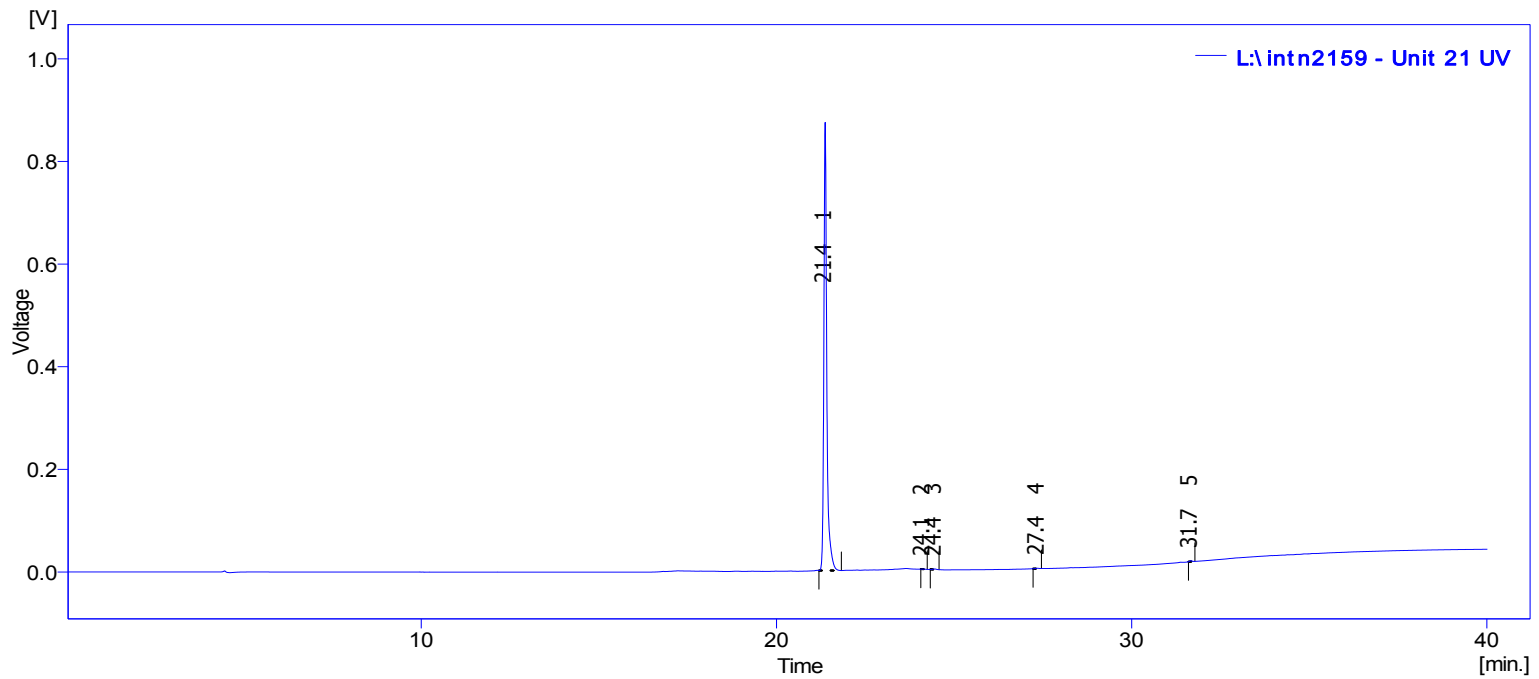
MC-2344
Z-D,L-Serine, [3-14C]-
Lot 194-084-0582-A-20100416-NT

Chromatogram Info:

File Name : L:\intn2159 File Created : 5/14/2014 10:32:51 AM
 Origin : Acquired, Acquisition started 4/16/2010 11:37:37 AM Acquired Date : 4/16/2010 12:17:35 PM
 Project : Work1 By : Administrator

Method : Unit_21_40_min_run By : Administrator
 Description : UV trace of standard material alone
 Created : 4/17/2008 10:21 AM Modified : 5/14/2014 11:18 AM

Column : Detection : UV 250nm
 Mobile Phase : Temperature :
 Flow Rate : Pressure :
 Note :



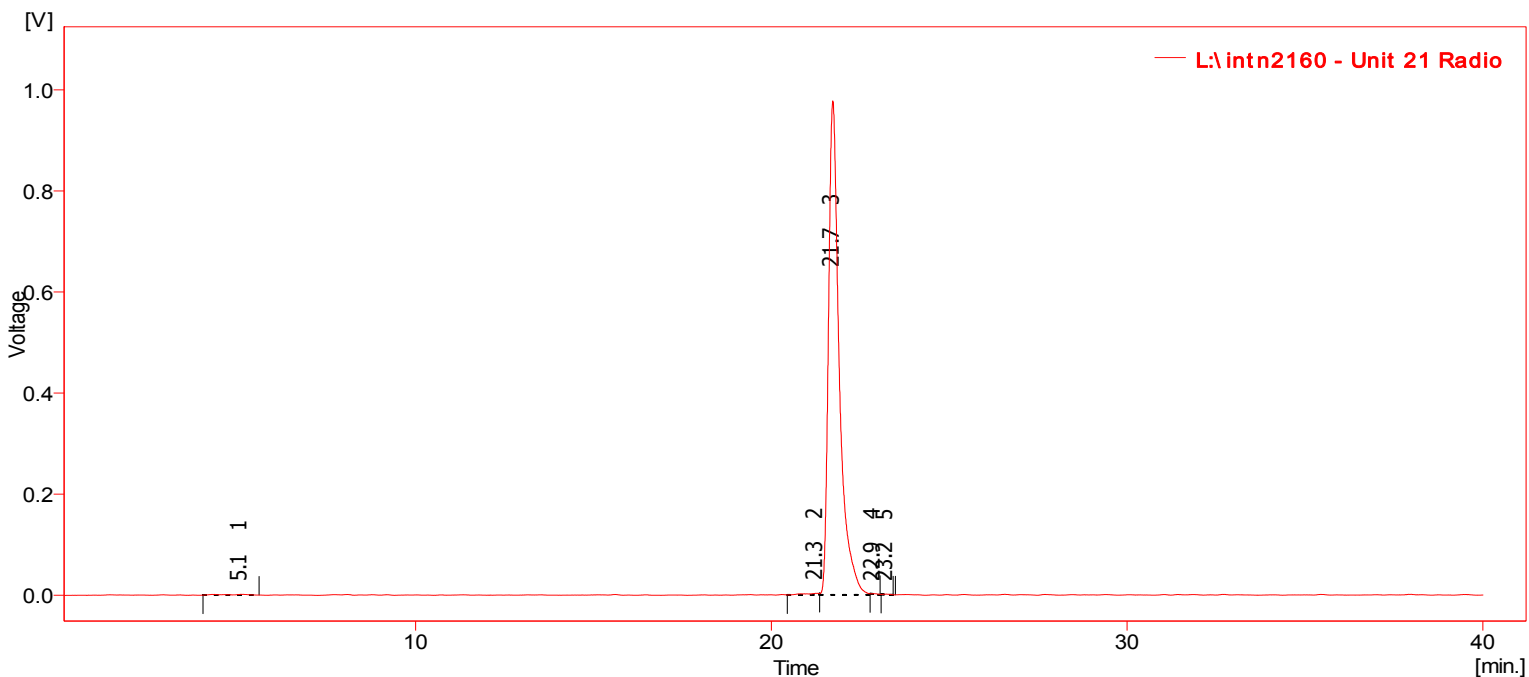
Result Table (Uncal - L:\intn2159 - Unit 21 UV)

	Compound Name	Reten. Time [min]	Area [mV.s]	Height [mV]	Area [%]	Height [%]	W05 [min]	Efficiency [th.pl]	Eff/I [t.p./m]	Resolution [-]	Symmetry/Tailing [-]	Response Factor
1		21.37	5046.934	873.22	99.56	99.5	0.08	364319	7286371		1.44	
2		24.13	2.203	0.42	0.04	0.0	0.09	429576	8591524	19.18	1.23	
3		24.45	7.777	1.24	0.15	0.1	0.10	310161	6203212	1.97	1.03	
4		27.35	4.424	0.72	0.09	0.1	0.10	414404	8288089	16.83	0.91	
5		31.67	7.986	1.77	0.16	0.2	0.08	868030	17360590	28.30	1.16	
	Total		5069.326	877.38	100.00	100.0						

MC-2344
Z-D,L-Serine, [3-14C]-
Lot 194-084-0582-A-20100416-NT

Chromatogram Info:

File Name	: L:\intn2160	File Created	: 5/14/2014 10:32:51 AM
Origin	: Acquired, Acquisition started 4/16/2010 12:57:18 PM	Acquired Date	: 4/16/2010 1:37:16 PM
Project	: Work1	By	: Administrator
Method	: Unit_21_40_min_run	By	: Administrator
Description	: Radiochemical trace of 14C material co-injected with standard		
Created	: 4/17/2008 10:21 AM	Modified	: 5/14/2014 11:15 AM
Column	:	Detection	: Radiochemical
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



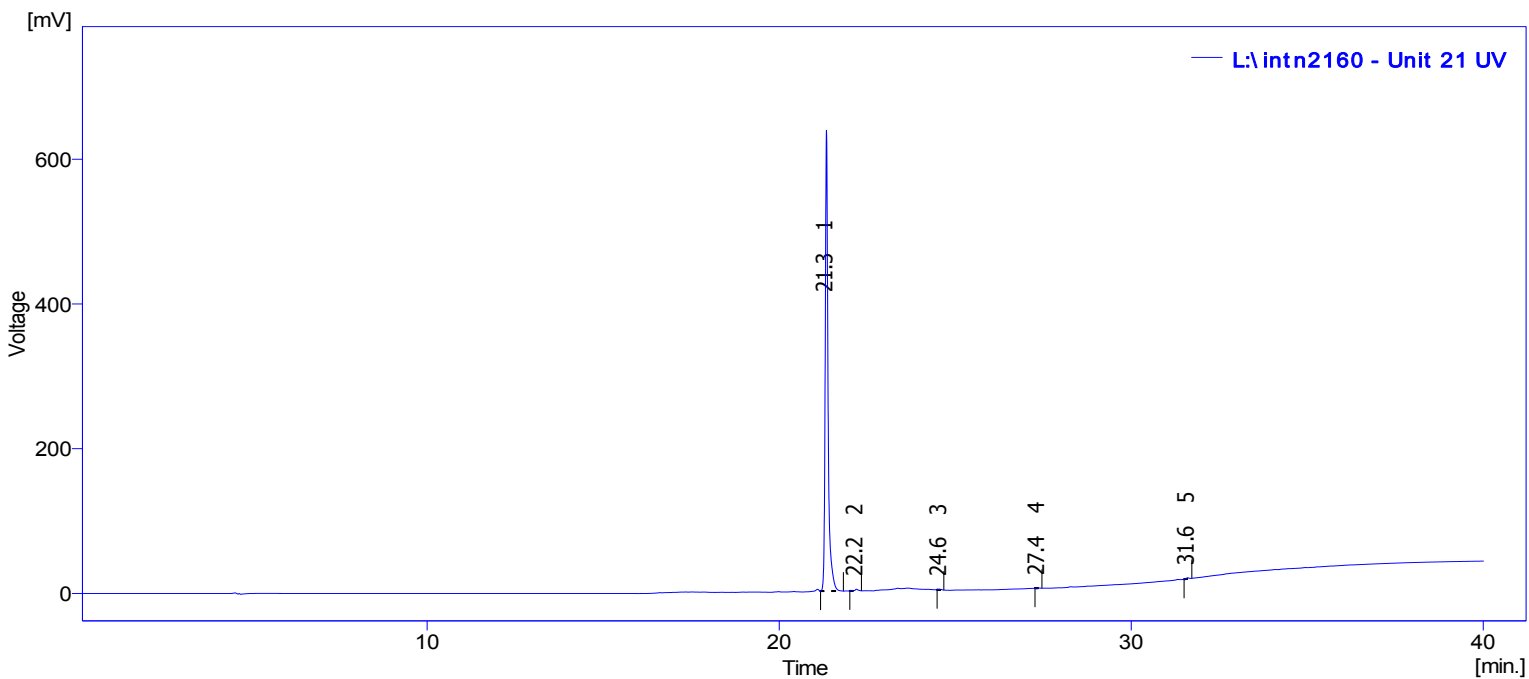
Result Table (Uncal - L:\intn2160 - Unit 21 Radio)

	Compound Name	Reten. Time [min]	Area [mV.s]	Height [mV]	Area [%]	Height [%]	W05 [min]	Efficiency [th.pl]	Eff/I [t.p./m]	Resolution [-]	Symmetry/Tailing [-]	Response Factor
1		5.08	69.634	1.51	0.33	0.2	0.30	1622	32446		0.71	
2		21.26	97.635	3.34	0.47	0.3	0.63	6376	127524	20.68	0.57	
3		21.73	20760.532	977.68	99.12	99.3	0.30	29057	581144	0.59	2.88	
4		22.87	6.625	0.63	0.03	0.1	0.19	83183	1663662	2.78	1.46	
5		23.23	10.862	0.98	0.05	0.1	0.16	112030	2240598	1.19	1.24	
		Total	20945.288	984.14	100.00	100.0						

MC-2344
Z-D,L-Serine, [3-14C]-
Lot 194-084-0582-A-20100416-NT

Chromatogram Info:

File Name	: L:\intn2160	File Created	: 5/14/2014 10:32:51 AM
Origin	: Acquired, Acquisition started 4/16/2010 12:57:18 PM	Acquired Date	: 4/16/2010 1:37:16 PM
Project	: Work1	By	: Administrator
Method	: Unit_21_40_min_run	By	: Administrator
Description	: UV trace of 14C material co-injected with standard	Modified	: 5/14/2014 11:16 AM
Created	: 4/17/2008 10:21 AM		
Column	:	Detection	: UV 250nm
Mobile Phase	:	Temperature	:
Flow Rate	:	Pressure	:
Note	:		



Result Table (Uncal - L:\intn2160 - Unit 21 UV)

Compound Name	Reten. Time [min]	Area [mV.s]	Height [mV]	Area [%]	Height [%]	W05 [min]	Efficiency [th.pl]	Eff/I [t.p./m]	Resolution [-]	Symmetry/Tailing [-]	Response Factor
1	21.34	3575.715	636.29	99.19	99.2	0.08	394325	7886500		1.46	
2	22.19	14.527	2.29	0.40	0.4	0.08	392932	7858639	6.14	0.89	
3	24.57	4.483	0.76	0.12	0.1	0.10	357807	7156139	15.56	1.15	
4	27.36	2.366	0.44	0.07	0.1	0.09	475951	9519027	17.33	1.04	
5	31.60	7.928	1.58	0.22	0.2	0.09	683110	13662196	27.33	1.06	
Total		3605.019	641.36	100.00	100.0						

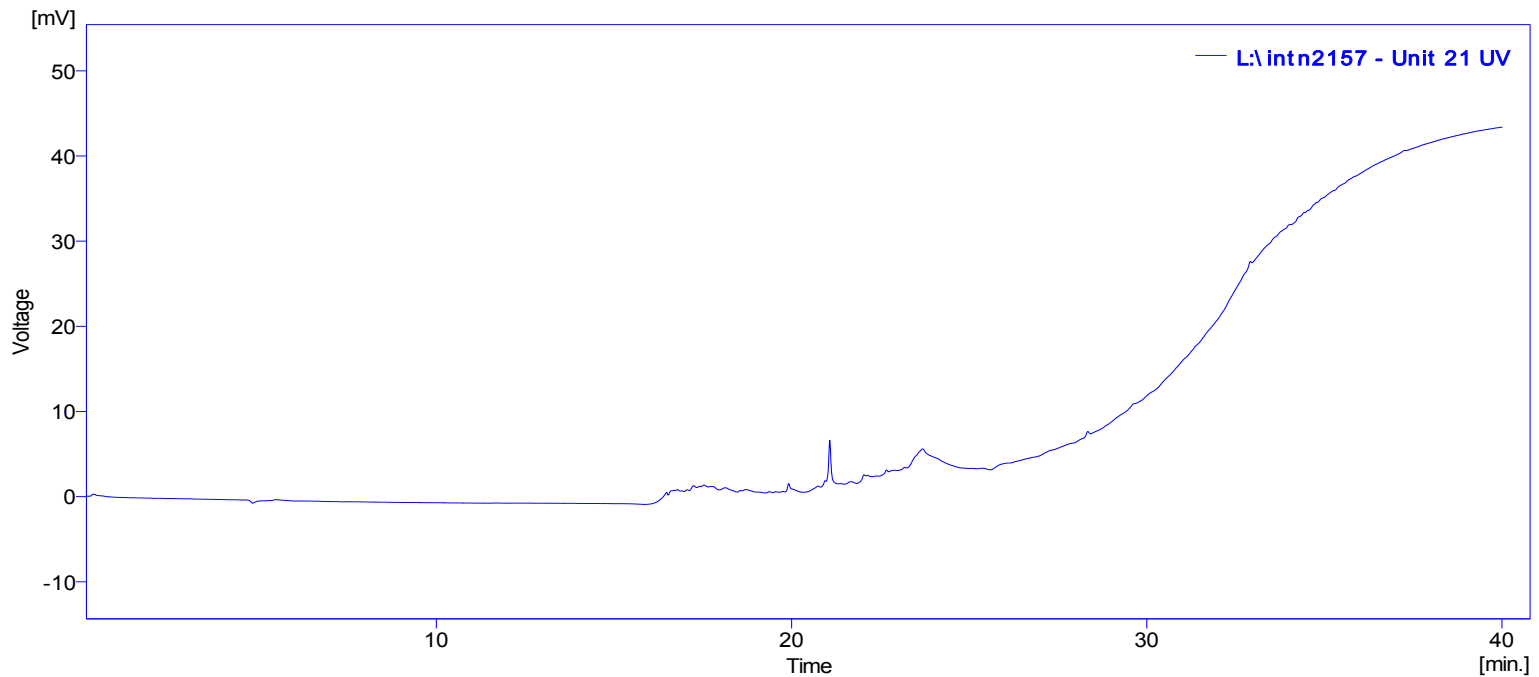
MC-2344
Z-D,L-Serine, [3-14C]-
Lot 194-084-0582-A-20100416-NT

Chromatogram Info:

File Name : L:\intn2157 File Created : 5/14/2014 10:32:51 AM
 Origin : Acquired, Acquisition started 4/16/2010 9:57:51 AM Acquired Date : 4/16/2010 10:37:50 AM
 Project : Work1 By : Administrator

Method : Unit_21_40_min_run By : Administrator
 Description : UV trace of blank injection
 Created : 4/17/2008 10:21 AM Modified : 5/14/2014 11:18 AM

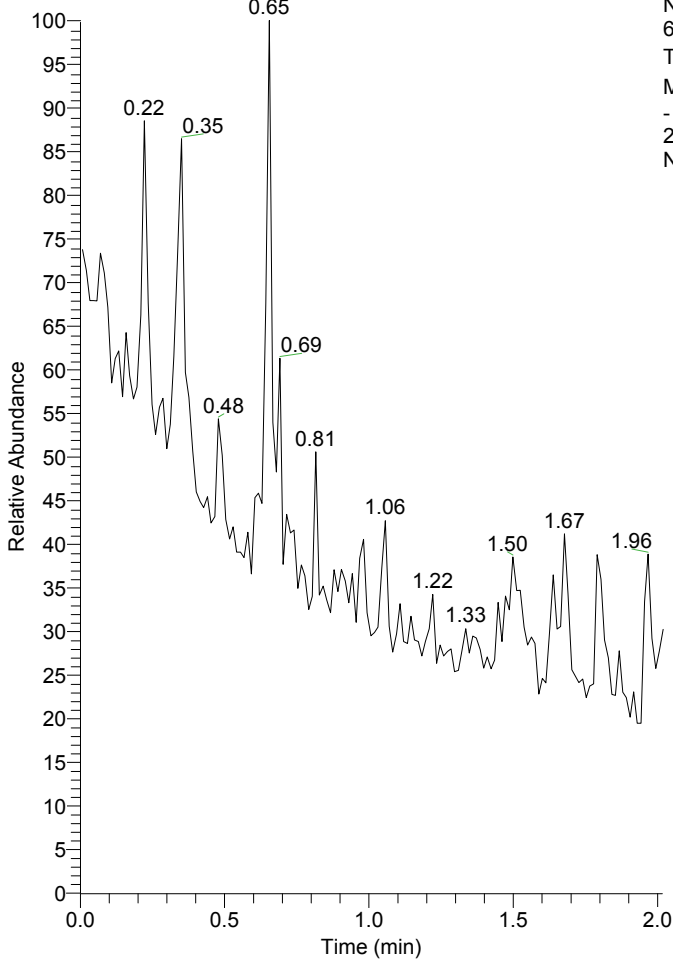
Column : Detection : UV 250nm
 Mobile Phase : Temperature :
 Flow Rate : Pressure :
 Note :



Result Table (Uncal - L:\intn2157 - Unit 21 UV)

Compound Name	Reten. Time [min]	Area [mV.s]	Height [mV]	Area [%]	Height [%]	W05 [min]	Efficiency [th.pl]	Eff/l [t.p./m]	Resolution [-]	Symmetry/Tailing [-]	Response Factor
No peak to report											

RT: 0.00 - 2.02



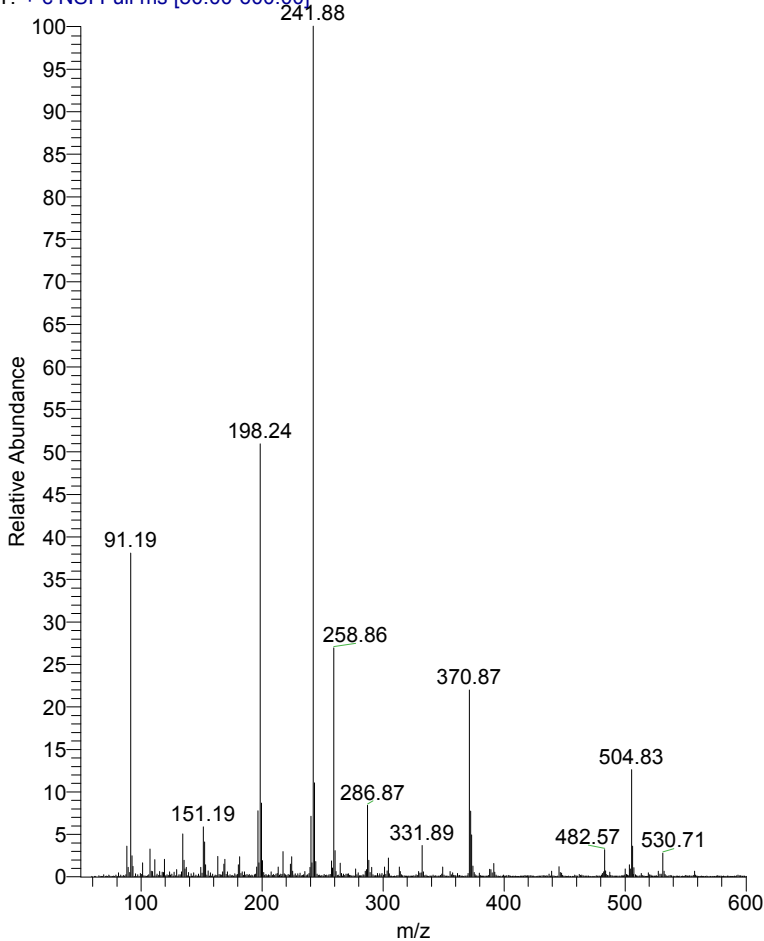
NL:
6.24E7
TIC MS
MC2344-
20100416-
NT-MS

MC2344-20100416-NT-MS#1-160 RT:
T: + c NSI Full ms [50.00-600.00]

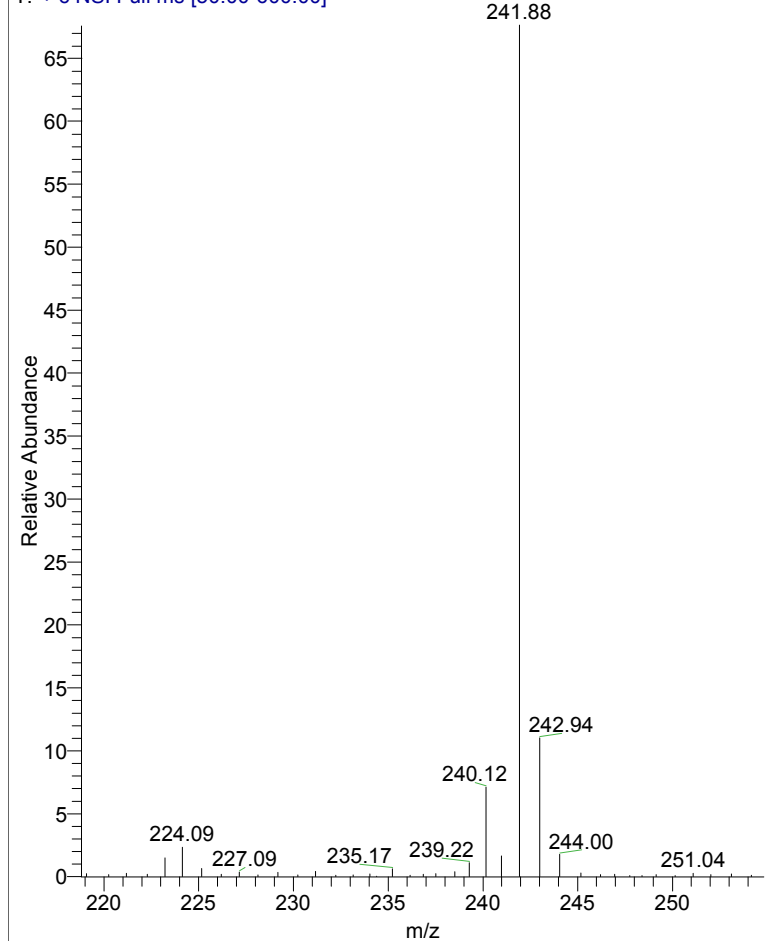
m/z= 234.15-250.72

m/z	Intensity	Relative
238.47	18251.6	0.36
239.22	54908.3	1.08
240.12	360682.2	7.08
240.93	82711.1	1.62
241.88	5094320.0	100.00
242.94	560316.7	11.00
244.00	88592.4	1.74
245.11	13908.5	0.27
246.14	6628.7	0.13
246.89	7994.3	0.16
247.69	3645.2	0.07
248.33	2758.8	0.05
249.08	7561.6	0.15
250.08	3416.9	0.07

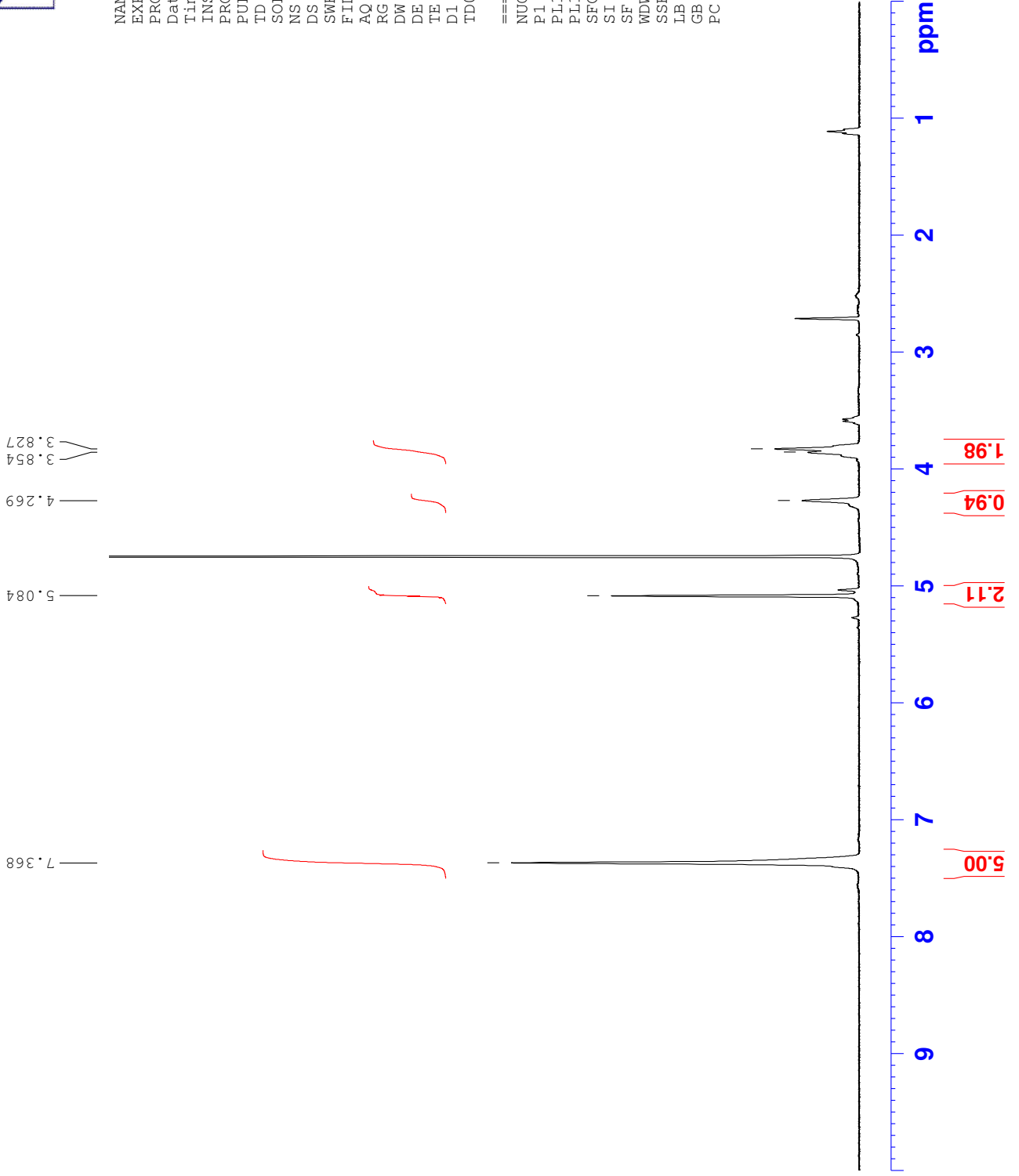
MC2344-20100416-NT-MS #1-160 RT: 0.01-2.02 AV: 160 NL: 5.09E6
T: + c NSI Full ms [50.00-600.00]



MC2344-20100416-NT-MS #1-160 RT: 0.01-2.02 AV: 160 NL: 5.09E6
T: + c NSI Full ms [50.00-600.00]



MC2344 1H NMR in D2O
Batch 20100416-NT



NAME MC2344-20100416-NT
EXPNO 1
PROCNO 1
Date_ 20100419
Time 11.35
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 4
DW 60.400 usec
DE 6.50 usec
TE 294.5 K
D1 1.00000000 sec
TD0 1
===== CHANNEL f1 =====
NUC1 1H
P1 14.50 usec
PL1 -0.70 dB
PL1W 10.03411102 W
SF01 400.1324710 MHz
SI 32768
SF 400.1299812 MHz
WDW no
SSB 0
LB 0.00 Hz
GB 0
PC 1.00