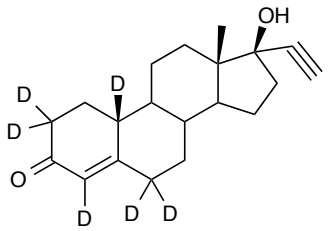
Certificate of Analysis



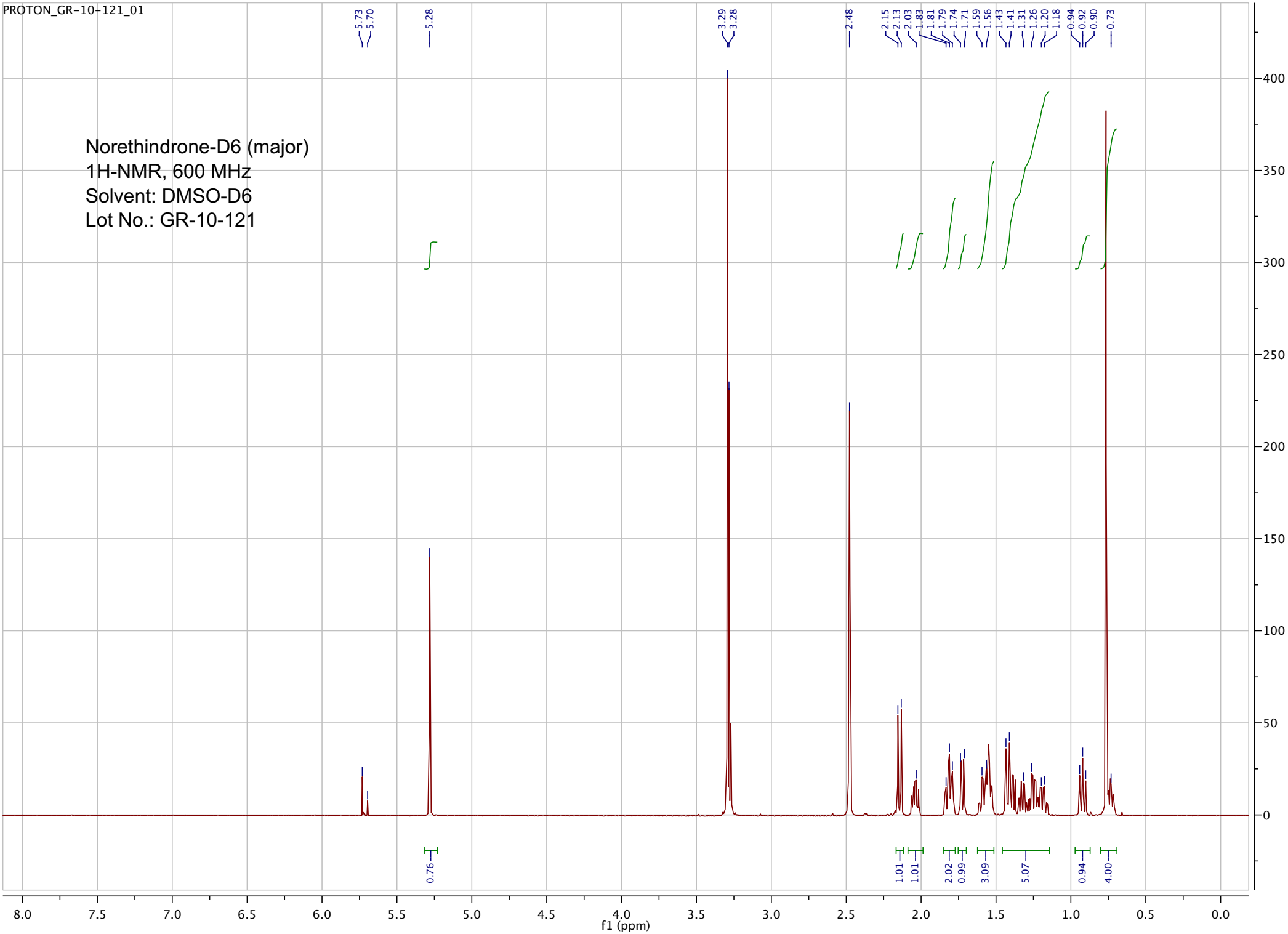
Name:	**Norethindrone-D6 (major)**
Lot#:	GR-10-121
Test Date:	04/05/2022 (re-test date: 04/05/2027)
CAS No.:	68-22-4 (unlabeled)
MF:	$C_{20}H_{20}D_6O_2$
MW:	304.47
Appearance:	Off-white solid
Purity:	99.9% by HPLC; 99% atom D
^{1}H-NMR:	Conforms (shows a trace of DCM)
MS-ESI (+)	Conforms (shows peak at m/z = 305.24 $[M+H]^+$)
Storage	Store at -18°C in a dry place away from direct sunlight

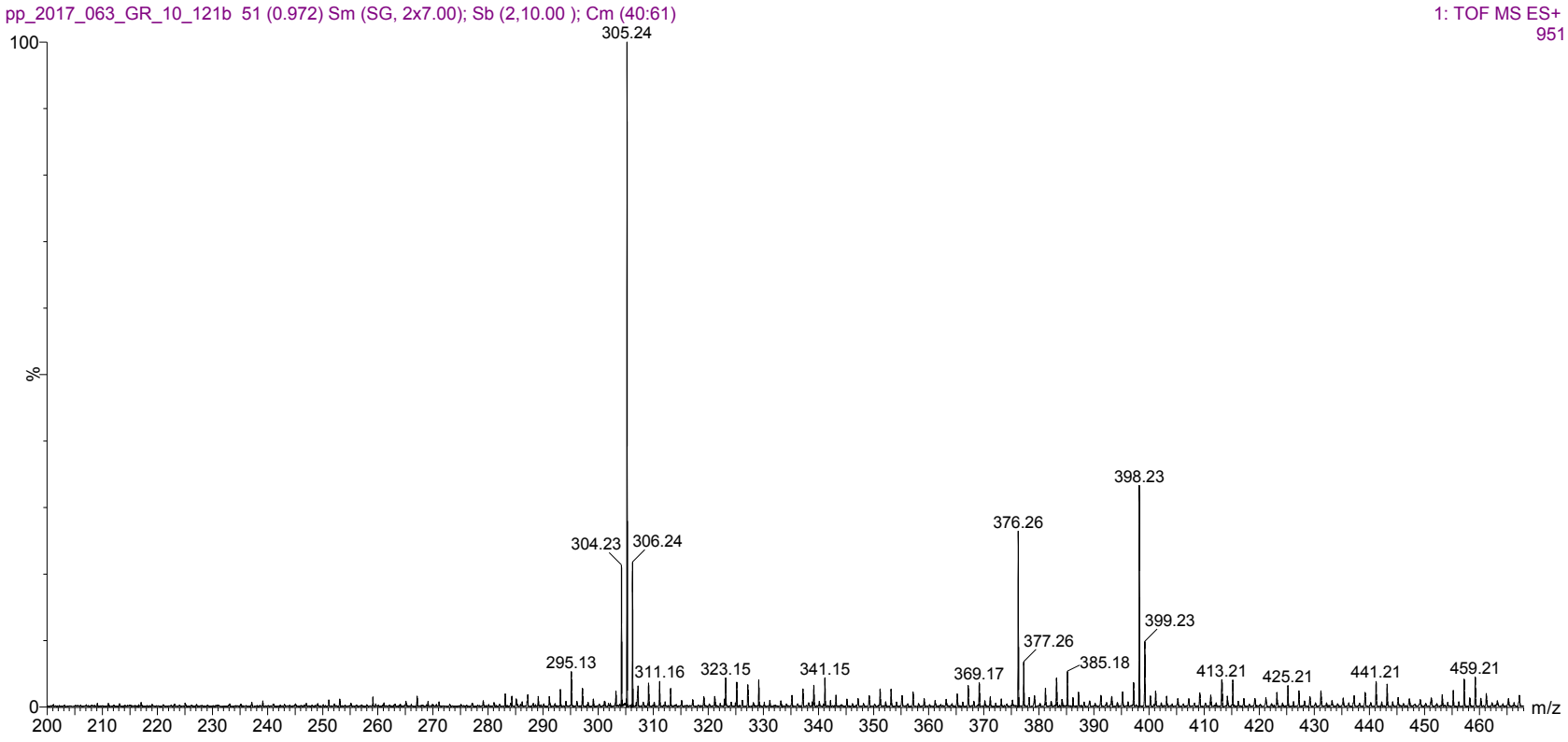
Approved by:

Date: 04/05/2022

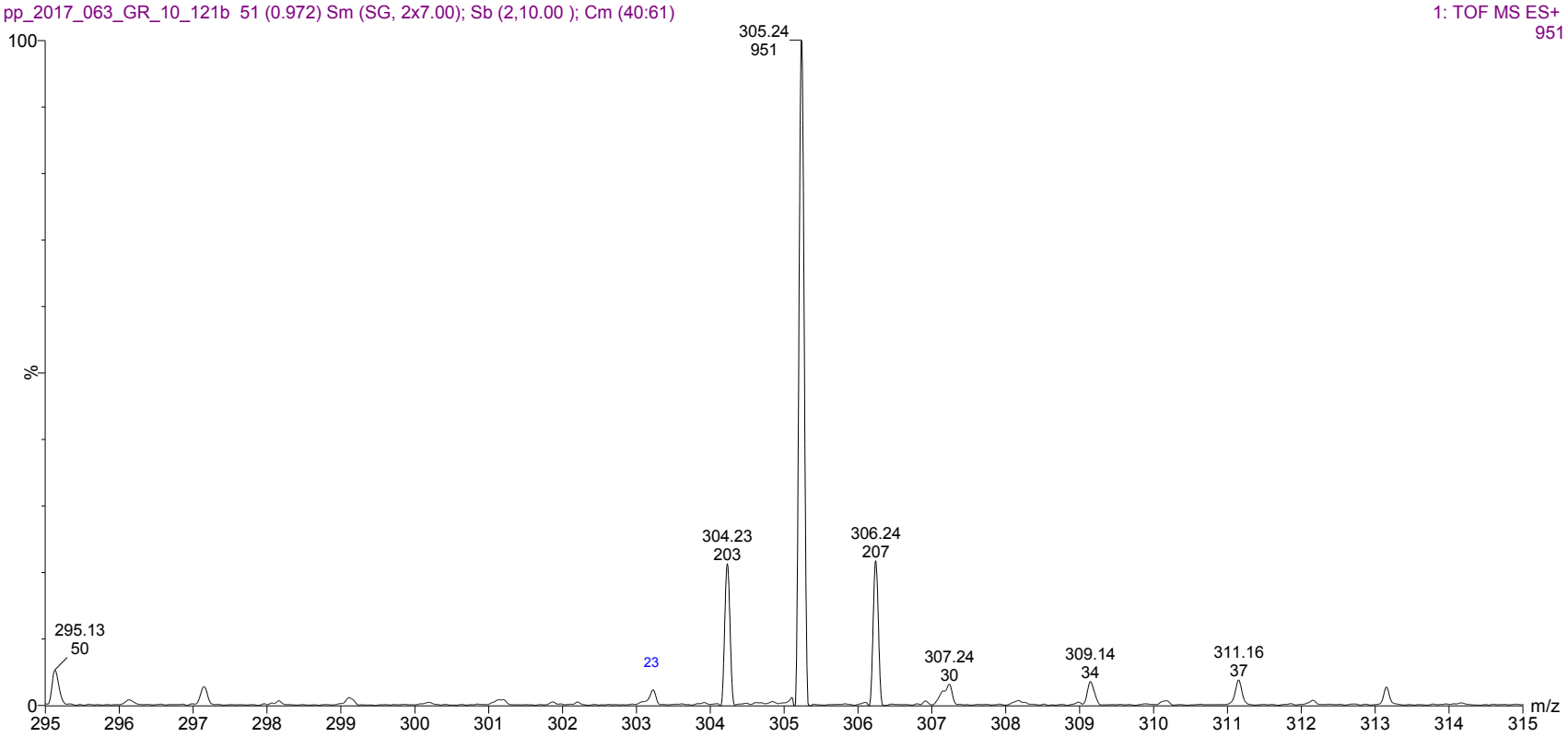
Viorica Rusu, QC/QA Manager

700, Collip Circle, The Research Park, London, ON, N6G 4X8
Ph: (647)4079078, e-mail: grusu@esschemco.com, www.esschemco.com


PROTON_GR-10-121_01
Norethindrone-D6 (major)
1H-NMR, 600 MHz
Solvent: DMSO-D6
Lot No.: GR-10-121
5.73
5.70
5.28
3.29
3.28
2.48
2.15
2.13
2.03
1.83
1.81
1.79
1.74
1.71
1.59
1.56
1.43
1.41
1.31
1.26
1.20
1.18
0.94
0.92
0.90
0.73
0.76
1.01
1.01
2.02
0.99
3.09
5.07
0.94
4.00
f1 (ppm)



ESI-MS spectrum for sample GR-10-121. Shows monoisotopic [M+H]+ mass.

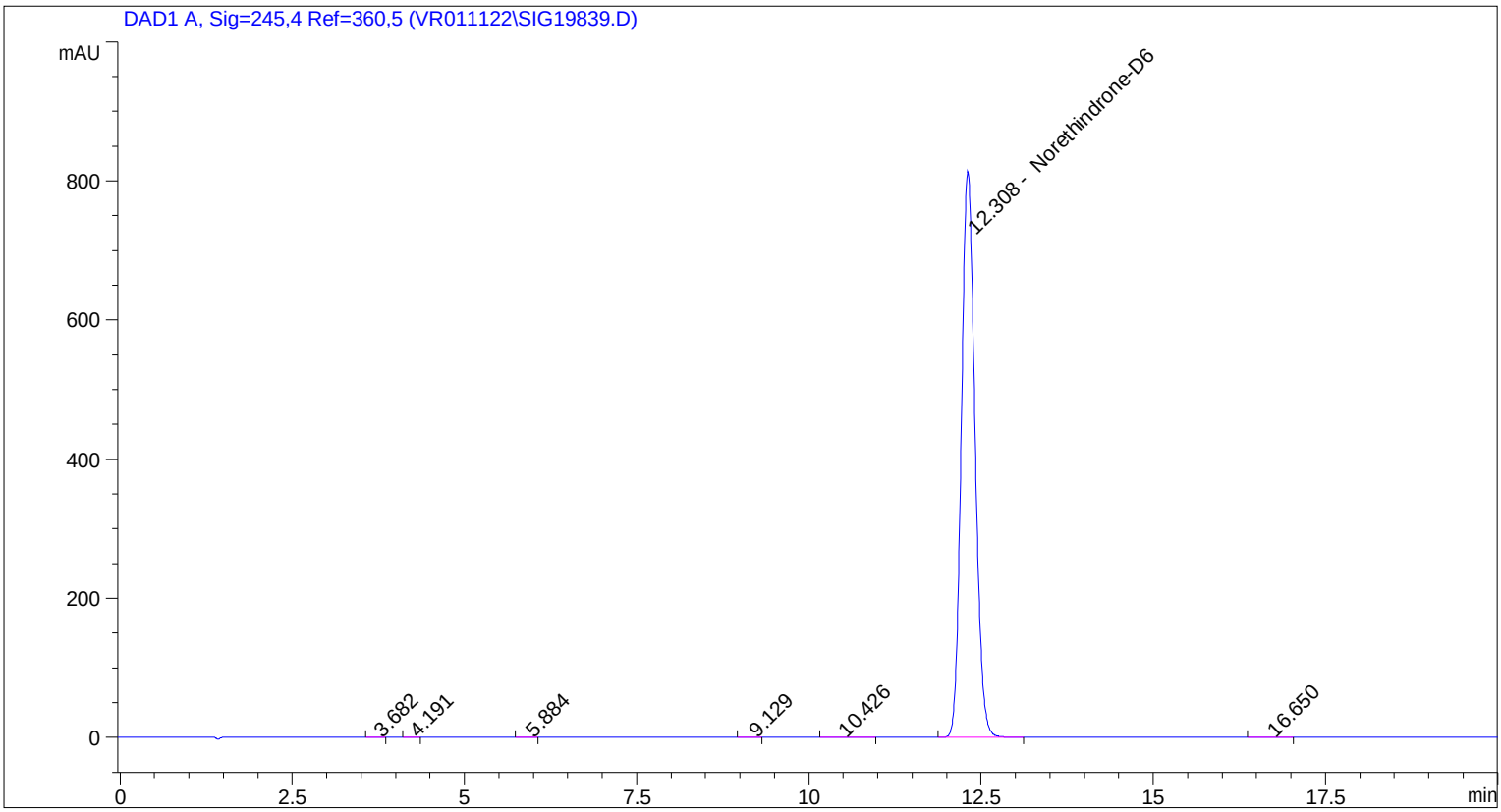


Expansion of above showing intensity labels.

Data File C:\CHEM32\1\DATA\VR011122\SIG19839.D
Sample Name: GR-10-121

==========

Acq. Operator : vrusu
Acq. Instrument : Instrument 1 Location : Vial 80
Injection Date : 4/5/2022 8:57:57 AM
Inj Volume : 10.0 µl
Acq. Method : C:\CHEM32\1\METHODS\VR040522_121.M
Last changed : 4/5/2022 8:56:56 AM by vrusu
Analysis Method : C:\CHEM32\1\METHODS\VR040522_121PM.M
Last changed : 4/5/2022 12:03:38 PM by vrusu



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Area Percent Report

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Sorted By : Signal
Calib. Data Modified : 4/5/2022 12:02:49 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=245,4 Ref=360,5

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	3.682	BB	0.0946	2.50435	0.0223	?
2	4.191	BB	0.1036	7.75909e-1	6.904e-3	?
3	5.884	BB	0.1125	9.70936e-1	8.639e-3	?
4	9.129	BB	0.1285	1.28994	0.0115	?
5	10.426	BB	0.1888	3.88357	0.0346	?
6	12.308	BB	0.2151	1.12261e4	99.8884	Norethindrone-D6
7	16.650	BB	0.2453	3.11705	0.0277	?

Totals : 1.12386e4

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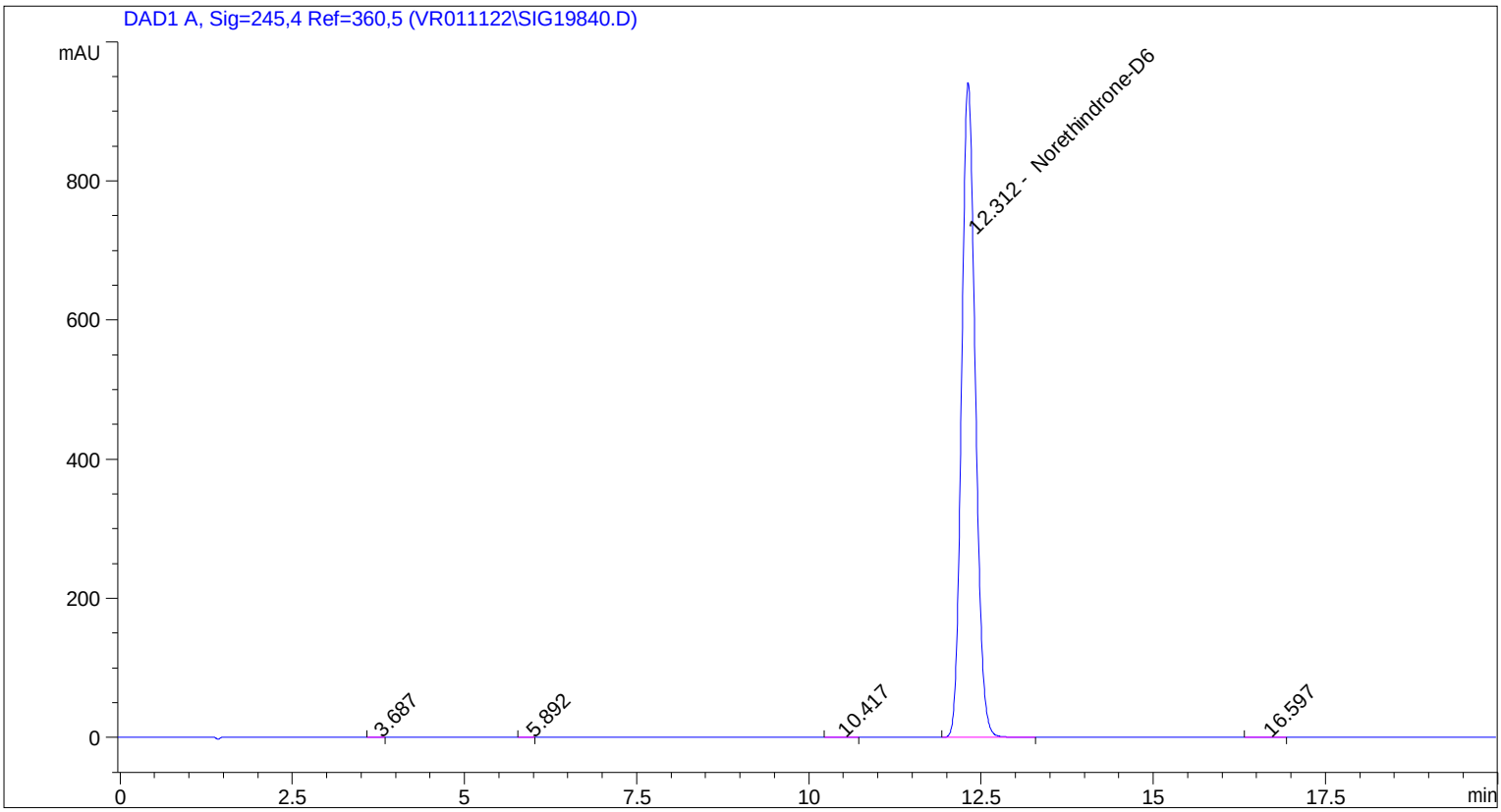
*** End of Report ***

Data File C:\CHEM32\1\DATA\VR011122\SIG19840.D
Sample Name: GR-10-121 spl-2

==========

Acq. Operator : vrusu
Acq. Instrument : Instrument 1 Location : Vial 81
Injection Date : 4/5/2022 9:19:50 AM
Inj Volume : 10.0 µl
Acq. Method : C:\CHEM32\1\METHODS\VR040522_121.M
Last changed : 4/5/2022 9:18:45 AM by vrusu
Analysis Method : C:\CHEM32\1\METHODS\VR040522_121PM.M
Last changed : 4/5/2022 12:03:38 PM by vrusu



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Area Percent Report

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Sorted By : Signal
Calib. Data Modified : 4/5/2022 12:02:49 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 A, Sig=245,4 Ref=360,5

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	3.687	BB	0.1024	2.95777	0.0227	?
2	5.892	BB	0.1070	9.69887e-1	7.430e-3	?
3	10.417	BB	0.1579	3.88432	0.0298	?
4	12.312	BB	0.2156	1.30424e4	99.9149	Norethindrone-D6
5	16.597	BB	0.2164	3.29266	0.0252	?

Totals : 1.30535e4

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*** End of Report ***