



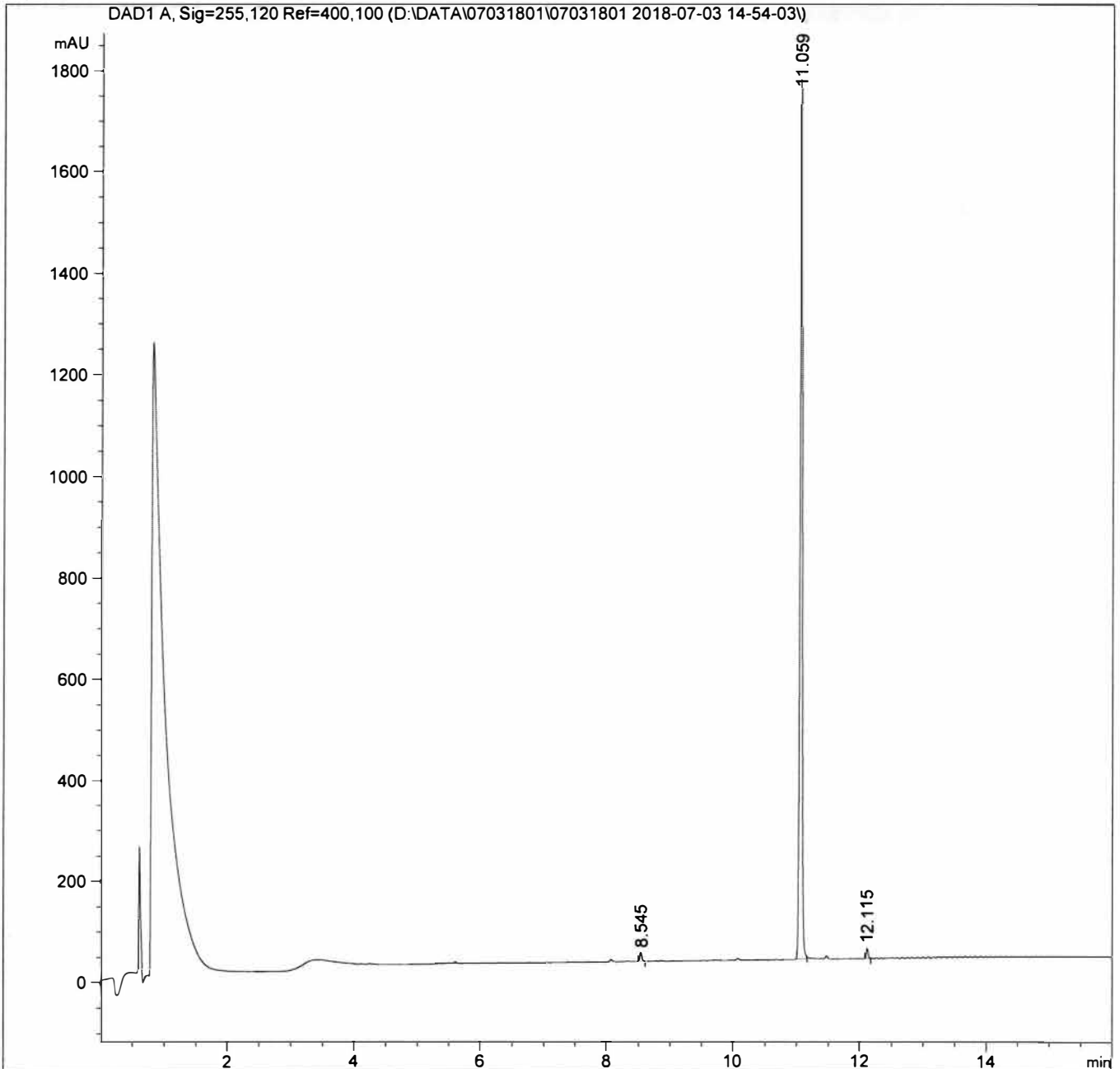
=====

Acq. Operator	: SYSTEM	Seq. Line	: 10
Acq. Instrument	: LCMS-1	Location	: P2-B8
Injection Date	: 7/3/2018 5:42:29 PM	Inj	: 1
		Inj Volume	: 1.000 µl

Acq. Method : D:\DATA\07031801\07031801 2018-07-03 14-54-03\Purity195_315.M
Last changed : 7/3/2018 2:54:04 PM by SYSTEM
Analysis Method : C:\Chem32\1\Methods\Purity195_315.M
Last changed : 6/6/2017 9:45:25 AM by SYSTEM
Method Info : Operator: GA
Gradient Method Starting @ 100 % Water/0 % Acetonitrile to 0 % Water/100 % Acetonitrile in 13 min, then 3 min at 100/0, post-run time 2 min. Flow rate:0.3 ml/min, column Zorbax Eclipse Plus C-18, 2.1x50 mm, 1.8 micron particule size. Agilent 1290 Infinity II LC system, Agilent 6120 Quadropole MS Detector. No UV Reference.

Additional Info : Peak(s) manually integrated

Current Chromatogram(s)



Sample Name: P-704S-A-10X (218071001) Lufenuron

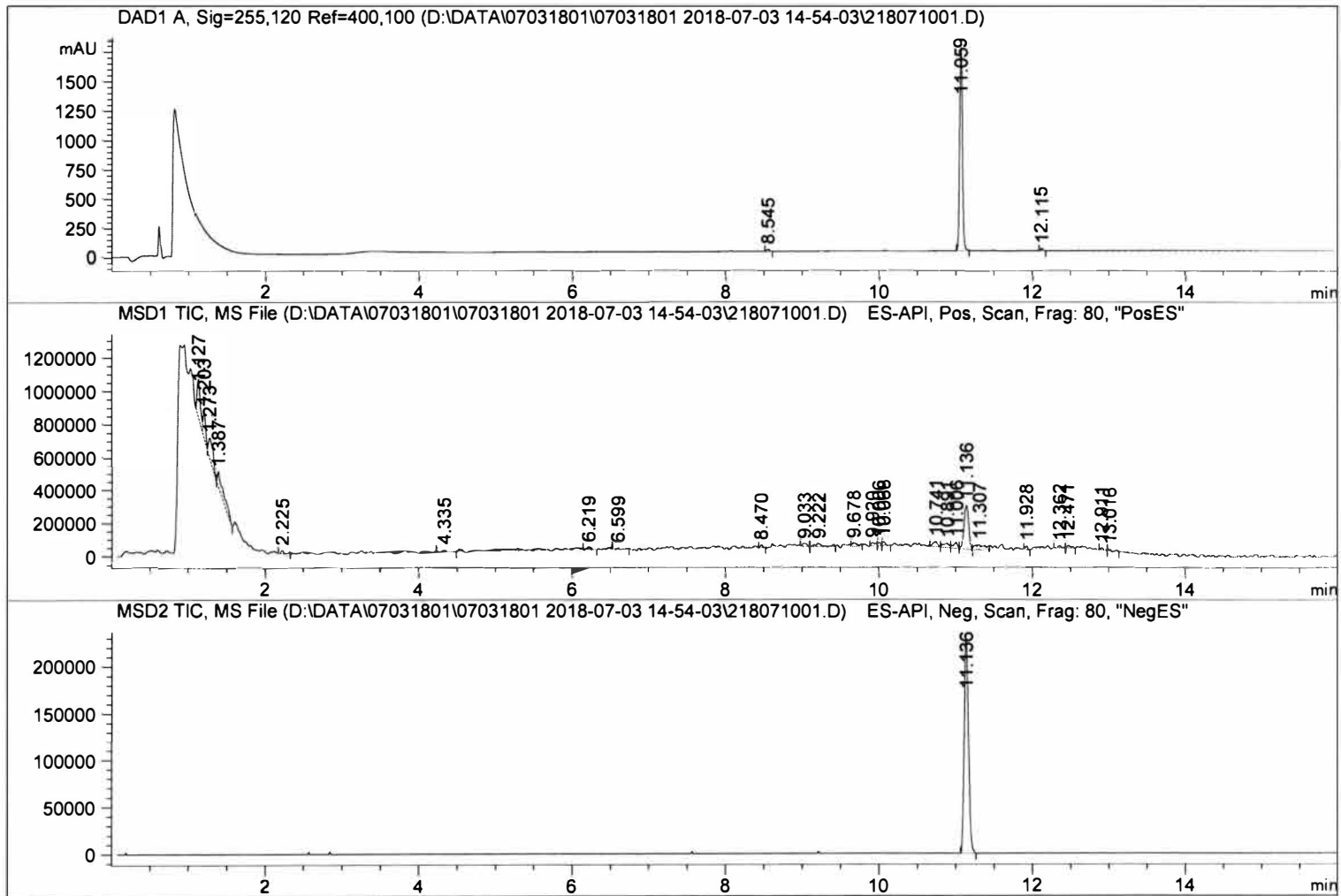
=====

Acq. Operator	: SYSTEM	Seq. Line	: 10
Acq. Instrument	: LCMS-1	Location	: P2-B8
Injection Date	: 7/3/2018 5:42:29 PM	Inj	: 1
		Inj Volume	: 1.000 µl

Acq. Method : D:\DATA\07031801\07031801 2018-07-03 14-54-03\Purity195_315.M
Last changed : 7/3/2018 2:54:04 PM by SYSTEM
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Additional Info : Peak(s) manually integrated

=====



Sample Name: P-704S-A-10X (218071001) Lufenuron

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=====
Acq. Operator   : SYSTEM                               Seq. Line :   10
Acq. Instrument : LCMS-1                               Location  :   P2-B8
Injection Date  : 7/3/2018 5:42:29 PM                 Inj       :    1
                                                    Inj Volume: 1.000 µl

Acq. Method     : D:\DATA\07031801\07031801 2018-07-03 14-54-03\Purity195_315.M
Last changed    : 7/3/2018 2:54:04 PM by SYSTEM
Analysis Method : C:\Chem32\1\Methods\Purity195_315.M
Last changed    : 6/6/2017 9:45:25 AM by SYSTEM
Method Info     : Operator: GA
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                  rate:0.3 ml/min, column Zorbax Eclipse Plus C-18, 2.1x50 mm, 1.8 micron
                  particule size. Agilent 1290 Infinity II LC system, Agilent 6120 Quadropole
                  MS Detector. No UV Reference.
    
```

Additional Info : Peak(s) manually integrated

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 Area Percent Report
 =====

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Sorted By      :      Signal
Multiplier     :      1.0000
Dilution      :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs
    
```

Signal 1: DAD1 A, Sig=255,120 Ref=400,100

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	8.545	BB	0.0343	39.35989	17.48276	0.8607
2	11.059	BB	0.0423	4492.30127	1729.33289	98.2385
3	12.115	BB	0.0306	41.19076	20.35591	0.9008

Totals : 4572.85191 1767.17156

Signal 2: MSD1 TIC, MS File

Peak #	RetTime [min]	Type	Width [min]	Area	Height	Area %
1	1.127	BV	0.0449	6.69729e5	2.31542e5	13.7873
2	1.203	VV	0.0363	3.55806e5	1.65113e5	7.3247
3	1.273	VV	0.0752	5.48032e5	1.21541e5	11.2819
4	1.387	VV	0.0761	5.71877e5	9.71970e4	11.7728
5	2.225	BB	0.0295	3.50846e4	1.98303e4	0.7223
6	4.335	BB	0.0556	3.31353e4	1.20813e4	0.6821
7	6.219	BB	0.0471	3.58158e4	1.29468e4	0.7373
8	6.599	BB	0.0705	3.16624e4	7480.47998	0.6518
9	8.470	BB	0.0272	2.80340e4	1.65021e4	0.5771
10	9.033	BV	0.0606	8.63766e4	2.03871e4	1.7782
11	9.222	VB	0.1020	1.55436e5	1.99571e4	3.1999
12	9.678	BB	0.0761	1.12680e5	2.14398e4	2.3197
13	9.920	BV	0.0600	8.29419e4	2.17298e4	1.7075

Sample Name: P-704S-A-10X (218071001) Lufenuron

```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   10
Acq. Instrument : LCMS-1                               Location  :   P2-B8
Injection Date  : 7/3/2018 5:42:29 PM                 Inj       :    1
                                                    Inj Volume: 1.000 µl

Acq. Method     : D:\DATA\07031801\07031801 2018-07-03 14-54-03\Purity195_315.M
Last changed    : 7/3/2018 2:54:04 PM by SYSTEM
Analysis Method : C:\Chem32\1\Methods\Purity195_315.M
Last changed    : 6/6/2017 9:45:25 AM by SYSTEM
Method Info     : Operator: GA
                  Gradient Method Starting @ 100 % Water/0 % Acetonitrile to 0 % Water/100 %
                  Acetonitrile in 13 min, then 3 min at 100/0, post-run time 2 min. Flow
                  rate:0.3 ml/min, column Zorbax Eclipse Plus C-18, 2.1x50 mm, 1.8 micron
                  particule size. Agilent 1290 Infinity II LC system, Agilent 6120 Quadropole
                  MS Detector. No UV Reference.
    
```

Additional Info : Peak(s) manually integrated

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Peak #	RetTime [min]	Type	Width [min]	Area	Height	Area %
14	10.006	VV	0.0403	4.83944e4	1.93472e4	0.9963
15	10.068	VB	0.0338	4.31985e4	2.22524e4	0.8893
16	10.741	BV	0.0637	1.24938e5	3.26763e4	2.5720
17	10.891	VV	0.0667	1.45169e5	2.85581e4	2.9885
18	11.006	VV	0.0530	1.33001e5	3.70655e4	2.7380
19	11.136	VV	0.0671	1.11409e6	2.67425e5	22.9351
20	11.307	VB	0.1367	2.80773e5	3.07778e4	5.7801
21	11.928	BV	0.0345	4.90602e4	2.11360e4	1.0100
22	12.362	BV	0.0438	4.11314e4	1.31935e4	0.8467
23	12.471	VV	0.0626	7.02421e4	1.87137e4	1.4460
24	12.911	BV	0.0369	2.97950e4	1.34706e4	0.6134
25	13.016	VB	0.0533	3.11914e4	9755.21387	0.6421

Totals : 4.85760e6 1.28212e6

Signal 3: MSD2 TIC, MS File

Peak #	RetTime [min]	Type	Width [min]	Area	Height	Area %
1	11.136	BB	0.0644	8.93240e5	2.27284e5	100.0000

Totals : 8.93240e5 2.27284e5

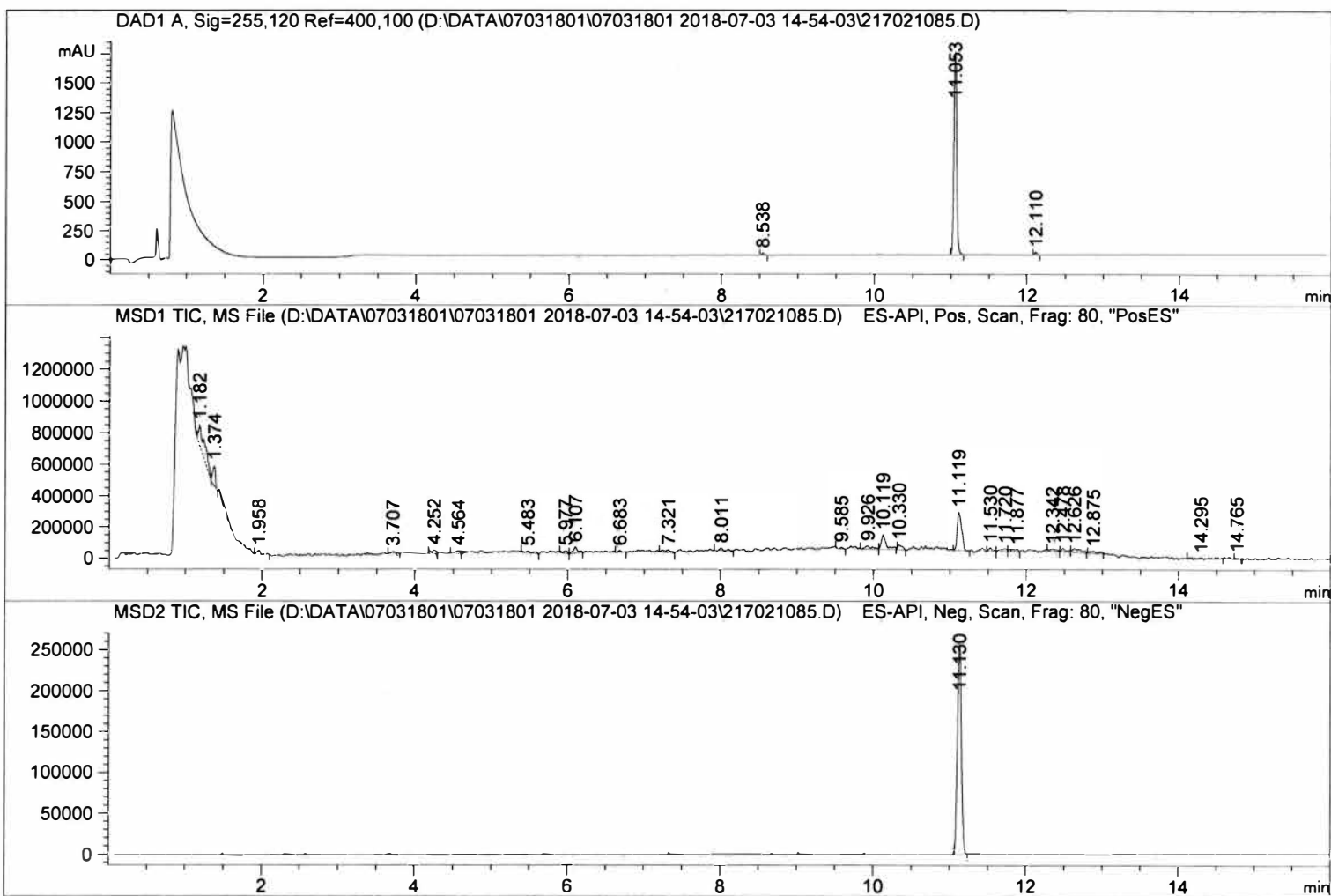
*** End of Report ***

Sample Name: P-704S-A-10X (217021085) Lufenuron

```
=====
Acq. Operator   : SYSTEM                               Seq. Line :   11
Acq. Instrument : LCMS-1                               Location  :   P2-B9
Injection Date  : 7/3/2018 6:01:05 PM                 Inj       :    1
                                                    Inj Volume: 1.000 µl

Acq. Method     : D:\DATA\07031801\07031801 2018-07-03 14-54-03\Purity195_315.M
Last changed    : 7/3/2018 2:54:04 PM by SYSTEM
Analysis Method : C:\Chem32\1\Methods\Purity195_315.M
Last changed    : 6/6/2017 9:45:25 AM by SYSTEM
Method Info     : Operator: GA
                  Gradient Method Starting @ 100 % Water/0 % Acetonitrile to 0 % Water/100 %
                  Acetonitrile in 13 min, then 3 min at 100/0, post-run time 2 min. Flow
                  rate:0.3 ml/min, column Zorbax Eclipse Plus C-18, 2.1x50 mm, 1.8 micron
                  particule size. Agilent 1290 Infinity II LC system, Agilent 6120 Quadruple
                  MS Detector. No UV Reference.
=====
```

Additional Info : Peak(s) manually integrated



Sample Name: P-704S-A-10X (217021085) Lufenuron

```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   11
Acq. Instrument : LCMS-1                               Location  :   P2-B9
Injection Date  : 7/3/2018 6:01:05 PM                 Inj       :    1
                                                    Inj Volume: 1.000 µl

Acq. Method     : D:\DATA\07031801\07031801 2018-07-03 14-54-03\Purity195_315.M
Last changed    : 7/3/2018 2:54:04 PM by SYSTEM
Analysis Method : C:\Chem32\1\Methods\Purity195_315.M
Last changed    : 6/6/2017 9:45:25 AM by SYSTEM
Method Info     : Operator: GA
                  Gradient Method Starting @ 100 % Water/0 % Acetonitrile to 0 % Water/100 %
                  Acetonitrile in 13 min, then 3 min at 100/0, post-run time 2 min. Flow
                  rate:0.3 ml/min, column Zorbax Eclipse Plus C-18, 2.1x50 mm, 1.8 micron
                  particule size. Agilent 1290 Infinity II LC system, Agilent 6120 Quadropole
                  MS Detector. No UV Reference.

```

Additional Info : Peak(s) manually integrated

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=====
                          Area Percent Report
=====

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Sorted By           :      Signal
Multiplier          :      1.0000
Dilution           :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

```

Signal 1: DAD1 A, Sig=255,120 Ref=400,100

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	8.538	BB	0.0339	36.05498	16.23389	0.7958
2	11.053	BB	0.0422	4452.75244	1718.87061	98.2783
3	12.110	BB	0.0317	41.95017	20.66566	0.9259

Totals : 4530.75759 1755.77016

Signal 2: MSD1 TIC, MS File

Peak #	RetTime [min]	Type	Width [min]	Area	Height	Area %
1	1.182	BV	0.1112	8.60288e5	1.28980e5	18.5835
2	1.374	VV	0.0429	3.18971e5	1.32554e5	6.8902
3	1.958	BB	0.0539	8.62748e4	2.57438e4	1.8637
4	3.707	BB	0.0253	1.87714e4	1.23691e4	0.4055
5	4.252	BV	0.0601	9.91203e4	2.74682e4	2.1411
6	4.564	BV	0.0471	6.35254e4	1.86992e4	1.3722
7	5.483	BV	0.1052	8.75765e4	1.08665e4	1.8918
8	5.977	BV	0.0615	6.13232e4	1.66538e4	1.3247
9	6.107	VB	0.0606	1.65720e5	4.02297e4	3.5798
10	6.683	BB	0.0366	2.25445e4	1.03155e4	0.4870
11	7.321	BV	0.0874	1.05947e5	1.70342e4	2.2886
12	8.011	BB	0.0334	1.85032e4	1.45083e4	0.3997
13	9.585	BV	0.0398	2.85990e4	1.03063e4	0.6178

Sample Name: P-704S-A-10X (217021085) Lufenuron

```

=====
Acq. Operator   : SYSTEM                               Seq. Line :   11
Acq. Instrument : LCMS-1                               Location  :   P2-B9
Injection Date  : 7/3/2018 6:01:05 PM                 Inj       :    1
                                                    Inj Volume: 1.000 µl

Acq. Method     : D:\DATA\07031801\07031801 2018-07-03 14-54-03\Purity195_315.M
Last changed    : 7/3/2018 2:54:04 PM by SYSTEM
Analysis Method : C:\Chem32\1\Methods\Purity195_315.M
Last changed    : 6/6/2017 9:45:25 AM by SYSTEM
Method Info     : Operator: GA
                  Gradient Method Starting @ 100 % Water/0 % Acetonitrile to 0 % Water/100 %
                  Acetonitrile in 13 min, then 3 min at 100/0, post-run time 2 min. Flow
                  rate:0.3 ml/min, column Zorbax Eclipse Plus C-18, 2.1x50 mm, 1.8 micron
                  particule size. Agilent 1290 Infinity II LC system, Agilent 6120 Quadropole
                  MS Detector. No UV Reference.

```

Additional Info : Peak(s) manually integrated

```

=====
Peak RetTime Type  Width      Area      Height      Area
#      [min]      [min]      [min]      [min]      [min]      %
-----|-----|-----|-----|-----|-----|-----|
 14   9.926  BV    0.0929  1.52519e5  2.17538e4  3.2946
 15  10.119  VB    0.0753  4.25585e5  9.36247e4  9.1933
 16  10.330  BB    0.0563  1.25383e5  3.23719e4  2.7085
 17  11.119  BB    0.0636  1.03102e6  2.46810e5 22.2715
 18  11.530  BV    0.0561  9.18685e4  2.85518e4  1.9845
 19  11.720  VV    0.0685  1.34208e5  2.56294e4  2.8991
 20  11.877  VV    0.1128  1.32321e5  1.95428e4  2.8583
 21  12.342  BV    0.0802  1.08933e5  1.94410e4  2.3531
 22  12.478  VB    0.0514  9.72164e4  2.81510e4  2.1000
 23  12.626  BB    0.0948  2.09477e5  2.92220e4  4.5250
 24  12.875  BB    0.1107  1.20834e5  1.66369e4  2.6102
 25  14.295  BB    0.1290  4.82728e4  4933.34912 1.0428
 26  14.765  BB    0.0234  1.45106e4  1.05692e4  0.3135

```

```
Totals :                               4.62931e6  1.04297e6
```

Signal 3: MSD2 TIC, MS File

```

Peak RetTime Type  Width      Area      Height      Area
#      [min]      [min]      [min]      [min]      [min]      %
-----|-----|-----|-----|-----|-----|-----|
  1  11.130  BB    0.0573  9.46754e5  2.59964e5 100.0000

```

```
Totals :                               9.46754e5  2.59964e5
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*** End of Report ***

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Catalog No: P-704S-A-10X

Description: Lufenuron

Lot: 218071001

Solvent: Acetone

Hazards: Refer to SDS for complete safety information

Date Certified:

Expiration:

Sample Size: 1 mL

Components: 1

Storage Condition: Freeze (<-10 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO 17034 Scope of Accreditation: Yes



Signal Word: Danger

Component	CAS #	Purity % (HPLC)	Prepared Concentration ¹ (µg/mL)	Certified Analyte Concentration ² (µg/mL)
Lufenuron	103055-07-8	98.5	1007	992

P-704S-A-10X
218071001
LOT

P-704S-A-10X
217021085
LOT

DRAFT

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

¹ All weights are traceable through NIST, Test No. 822-275872-11

² Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is $\pm 2.4\%$. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information