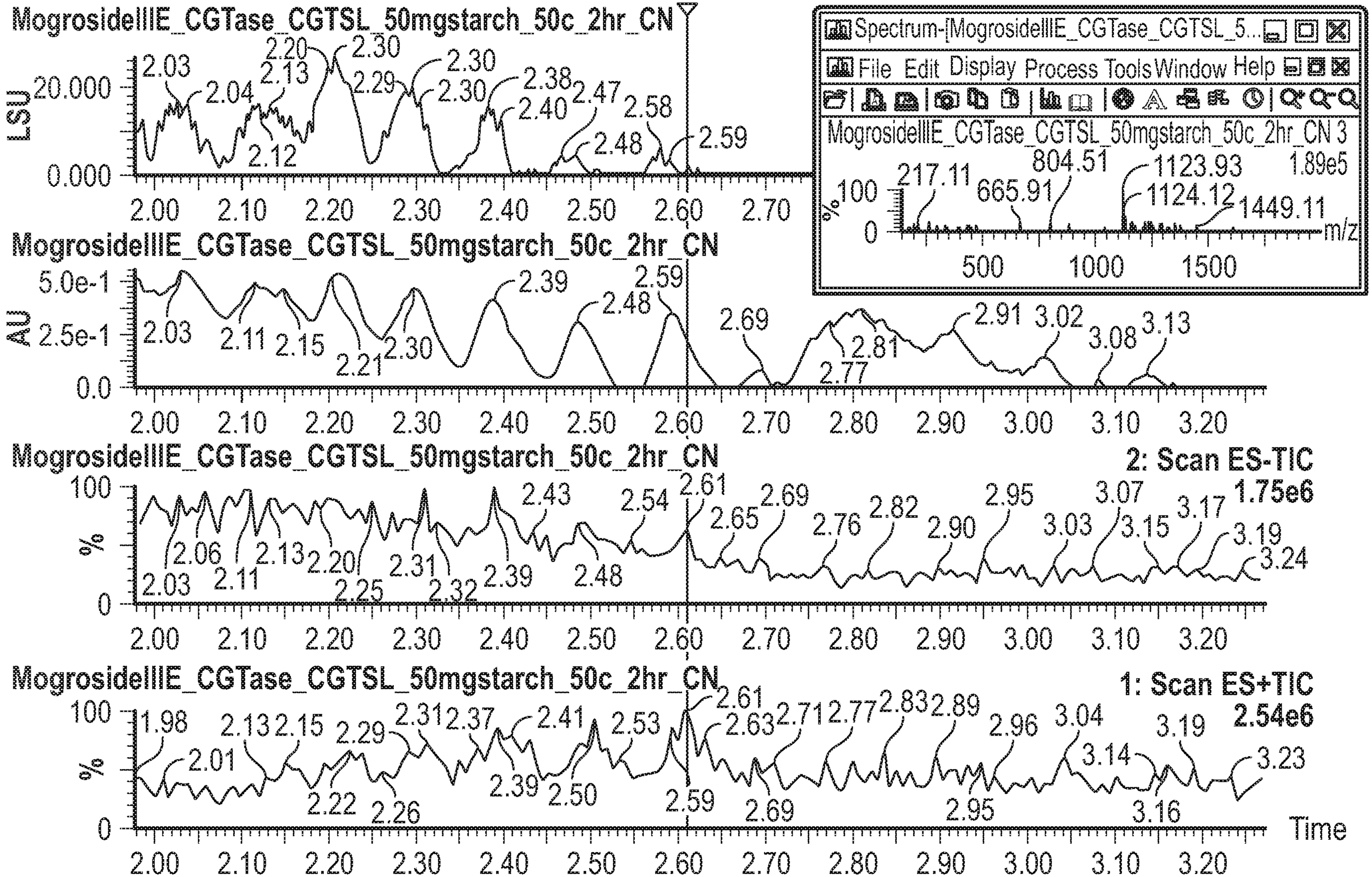

MogrosideIIIE_CGTase_CGTSL_50mgstarch_50c_2hr_CN
LSU
20.000
0.000
2.03
2.04
2.13
2.20
2.30
2.29
2.30
2.30
2.38
2.40
2.47
2.58
2.12
2.48
2.59
2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70
Spectrum-[MogrosideIIIE_CGTase_CGTSL_5...
File Edit Display Process Tools Window Help
MogrosideIIIE_CGTase_CGTSL_50mgstarch_50c_2hr_CN 3
%
100
0
217.11
665.91
804.51
1123.93
1124.12
1449.11
1.89e5
m/z
500 1000 1500
MogrosideIIIE_CGTase_CGTSL_50mgstarch_50c_2hr_CN
AU
5.0e-1
2.5e-1
0.0
2.03
2.11
2.15
2.21
2.30
2.39
2.48
2.59
2.69
2.77
2.81
2.91
3.02
3.08
3.13
2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 2.80 2.90 3.00 3.10 3.20
MogrosideIIIE_CGTase_CGTSL_50mgstarch_50c_2hr_CN
2: Scan ES-TIC
1.75e6
100
%
0
2.03
2.06
2.11
2.13
2.20
2.25
2.31
2.32
2.39
2.43
2.48
2.54
2.61
2.65
2.69
2.76
2.82
2.90
2.95
3.03
3.07
3.15
3.17
3.19
3.24
2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 2.80 2.90 3.00 3.10 3.20
MogrosideIIIE_CGTase_CGTSL_50mgstarch_50c_2hr_CN
1: Scan ES+TIC
2.54e6
100
%
0
1.98
2.01
2.13
2.15
2.22
2.26
2.29
2.31
2.37
2.39
2.41
2.50
2.53
2.59
2.61
2.63
2.69
2.71
2.77
2.83
2.89
2.95
2.96
3.04
3.14
3.16
3.19
3.23
Time
2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 2.80 2.90 3.00 3.10 3.20

FIG. 1

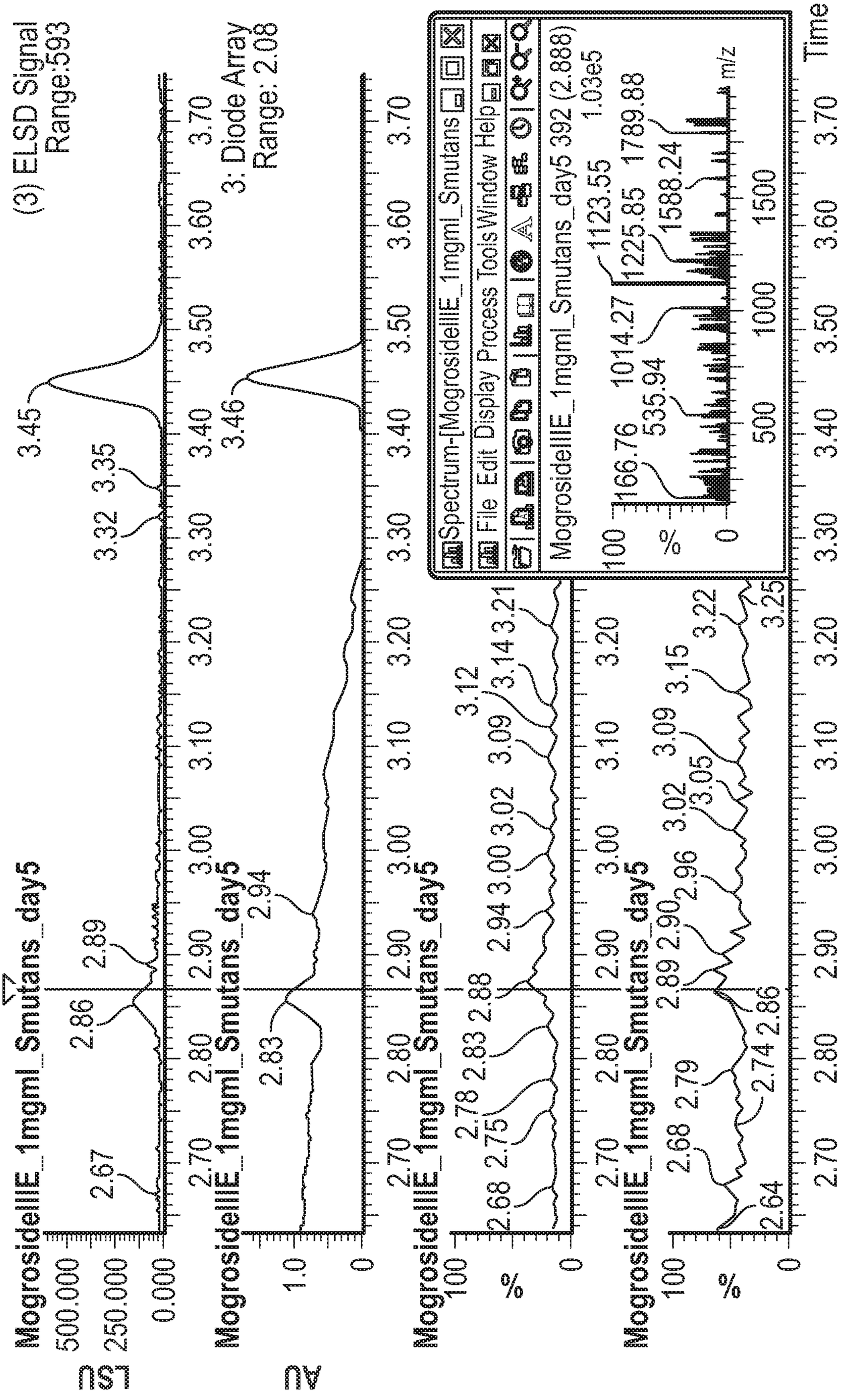

(3) ELSD Signal
Range:593
3.45
3.32
3.35
3.30
3.40
3.50
3.60
3: Diode Array
Range: 2.08
3.46
Spectrum-[MogrosidellE_1mgml_Smutans_day5
File Edit Display Process Tools Window Help
MogrosidellE_1mgml_Smutans_day5
1123.55
1225.85
1588.24
1789.88
1014.27
535.94
166.76
100
%
0
500
1000
1500
m/z
Time
MogrosidellE_1mgml_Smutans_day5
2.86
2.89
2.83
2.94
2.78
2.88
3.12
3.14
3.21
2.79
2.74
2.90
3.00
3.02
3.09
3.15
3.22
2.80
3.10
3.20
2.96
3.05
3.25
2.89
2.67
2.68
2.75
2.64
2.70
nsl
AU
500.000
250.000
0.000
1.0
0

FIG. 2

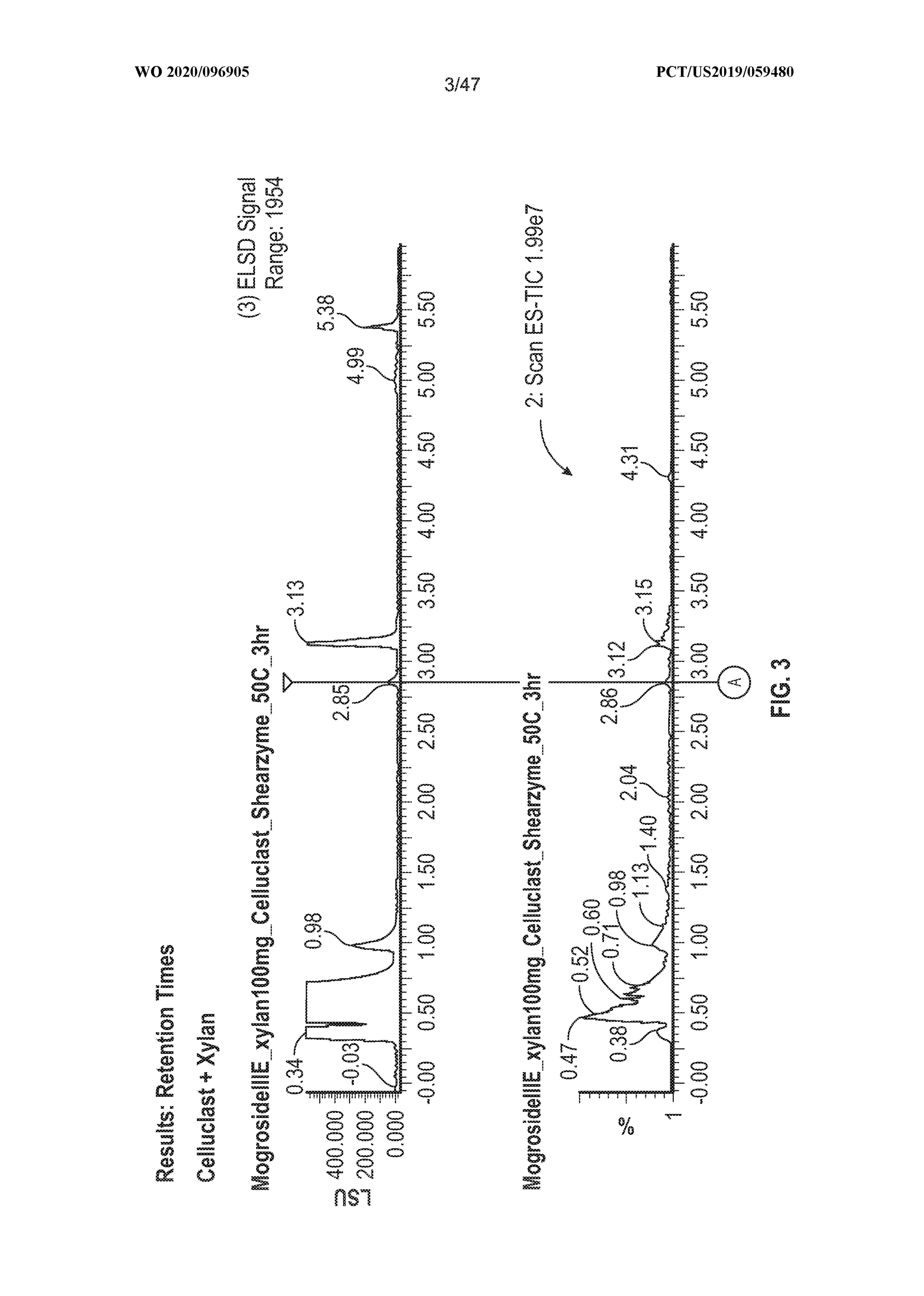

Results: Retention Times
Celluclast + Xylan
MogrosideIIE_xylan100mg_Celluclast_Shearzyme_50C_3hr
nst
0.34
-0.03
0.98
2.85
MogrosideIIE_xylan100mg_Celluclast_Shearzyme_50C_3hr
0.47
0.38
0.52
0.60
0.71
0.98
1.13
1.40
2.04
2.86
3.12
4.31
5.38
4.99
5.50
(3) ELSD Signal
Range: 1954
2: Scan ES- TIC 1.99e7
%
A

FIG. 3

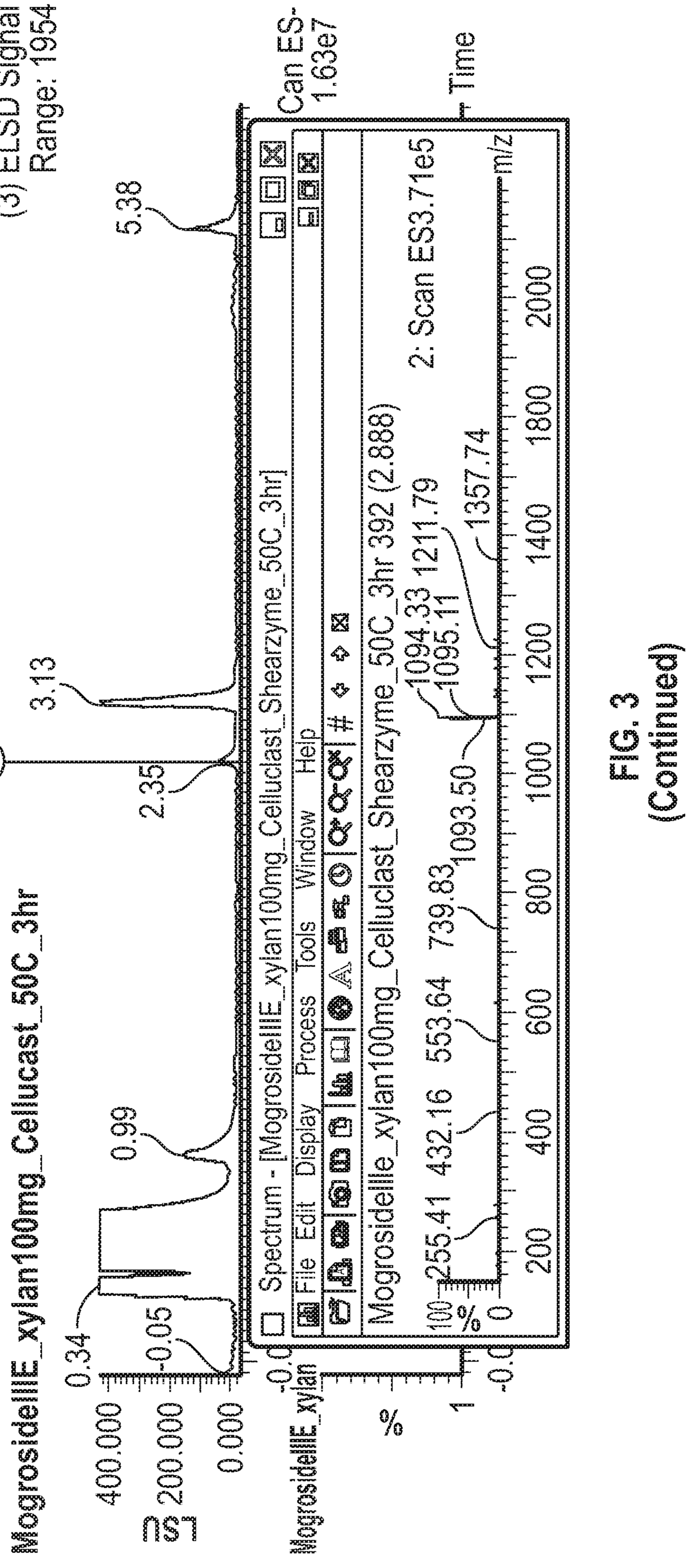


FIG. 3
(Continued)

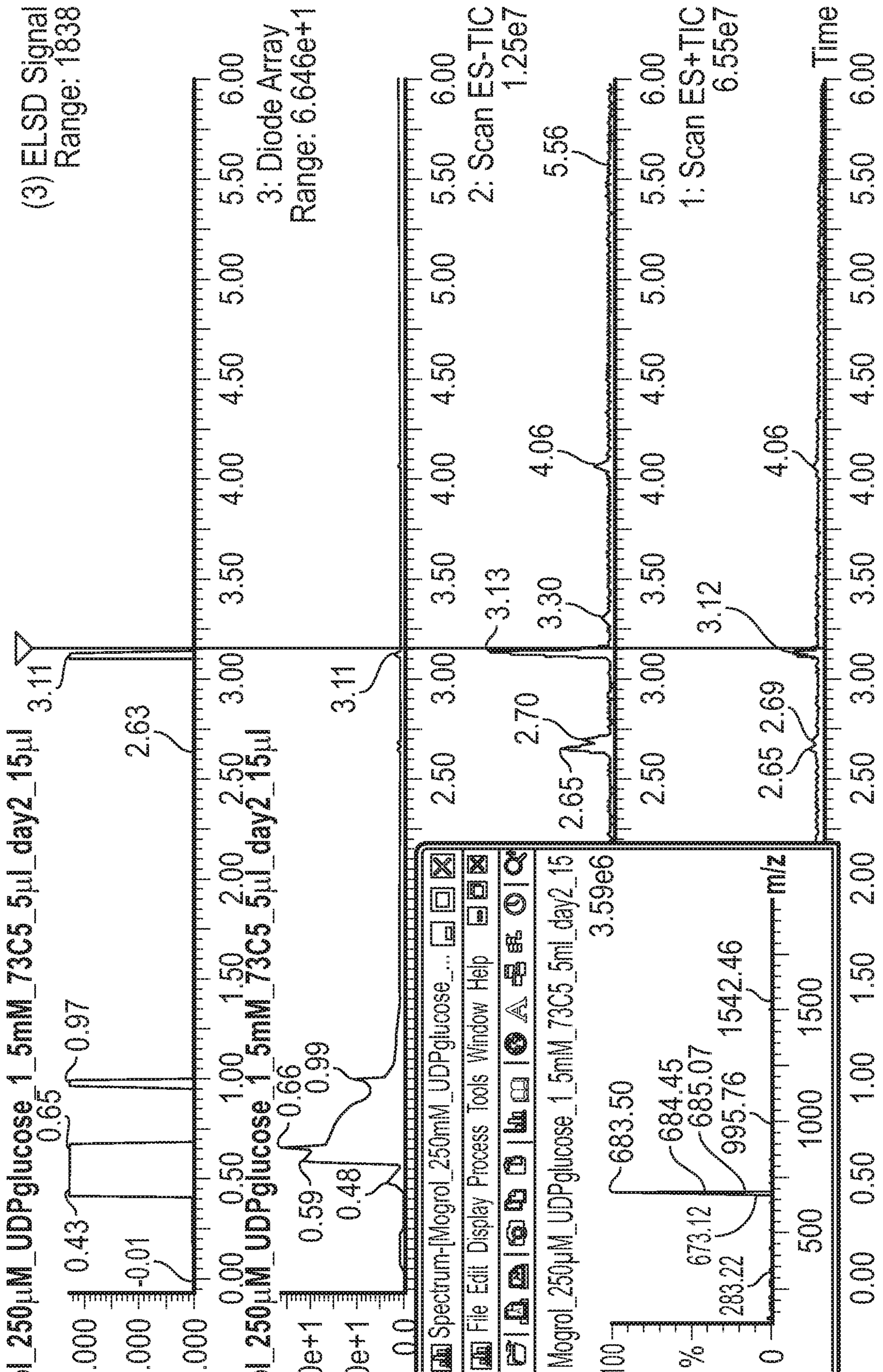

(3) ELSD Signal
Range: 1838
3: Diode Array
Range: 6.646e+1
2: Scan ES-TIC
1.25e7
1: Scan ES+TIC
6.55e7
Time
Mogrol_250µM_UDPglucose_1_5mM_73C5_5µl_day2_15µl
Mogrol_250µM_UDPglucose_1_5mM_73C5_5µl_day2_15µl
Spectrum-[Mogrol_250µM_UDPglucose_...
File Edit Display Process Tools Window Help
Mogrol_250µM_UDPglucose_1_5mM_73C5_5ml_day2_15
3.59e6
m/z
nA
nV
%

FIG. 4

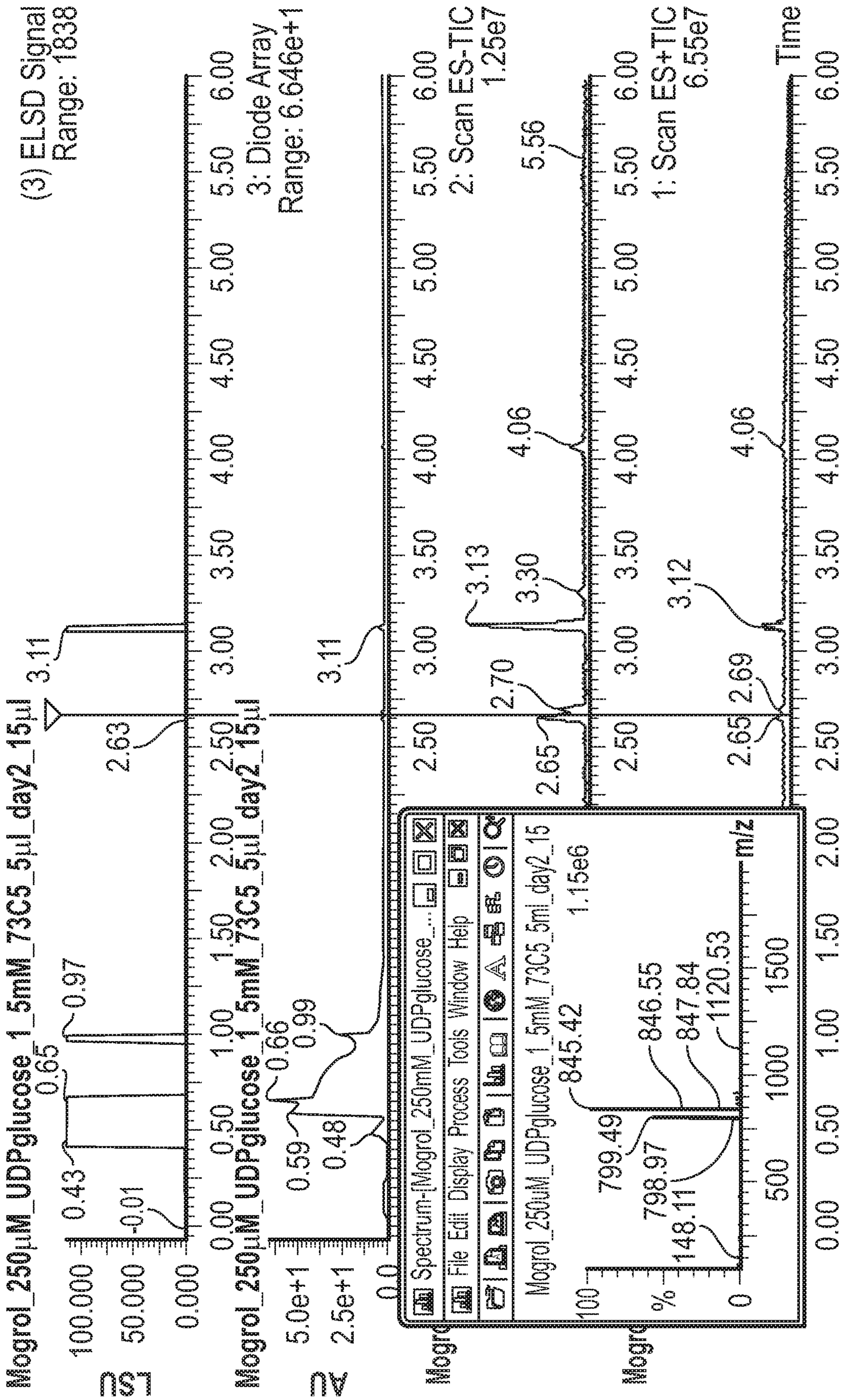

(3) ELSD Signal
Range: 1838
3: Diode Array
Range: 6.646e+1
2: Scan ES-TIC
1.25e7
1: Scan ES+TIC
6.55e7
Time
Mogrol_250µM_UDPglucose_1_5mM_73C5_5µl_day2_15µl
Mogrol_250µM_UDPglucose_1_5mM_73C5_5µl_day2_15µl
Mogrol_250uM_UDPglucose_1_5mM_73C5_5ml_day2_15
Mogrol_250uM_UDPglucose_1_5mM_73C5_5ml_day2_15
Spectrum-[Mogrol_250uM_UDPglucose_...
File Edit Display Process Tools Window Help
m/z
1.15e6
845.42
846.55
847.84
1120.53
799.49
798.97
148.11
nA
%

FIG. 5

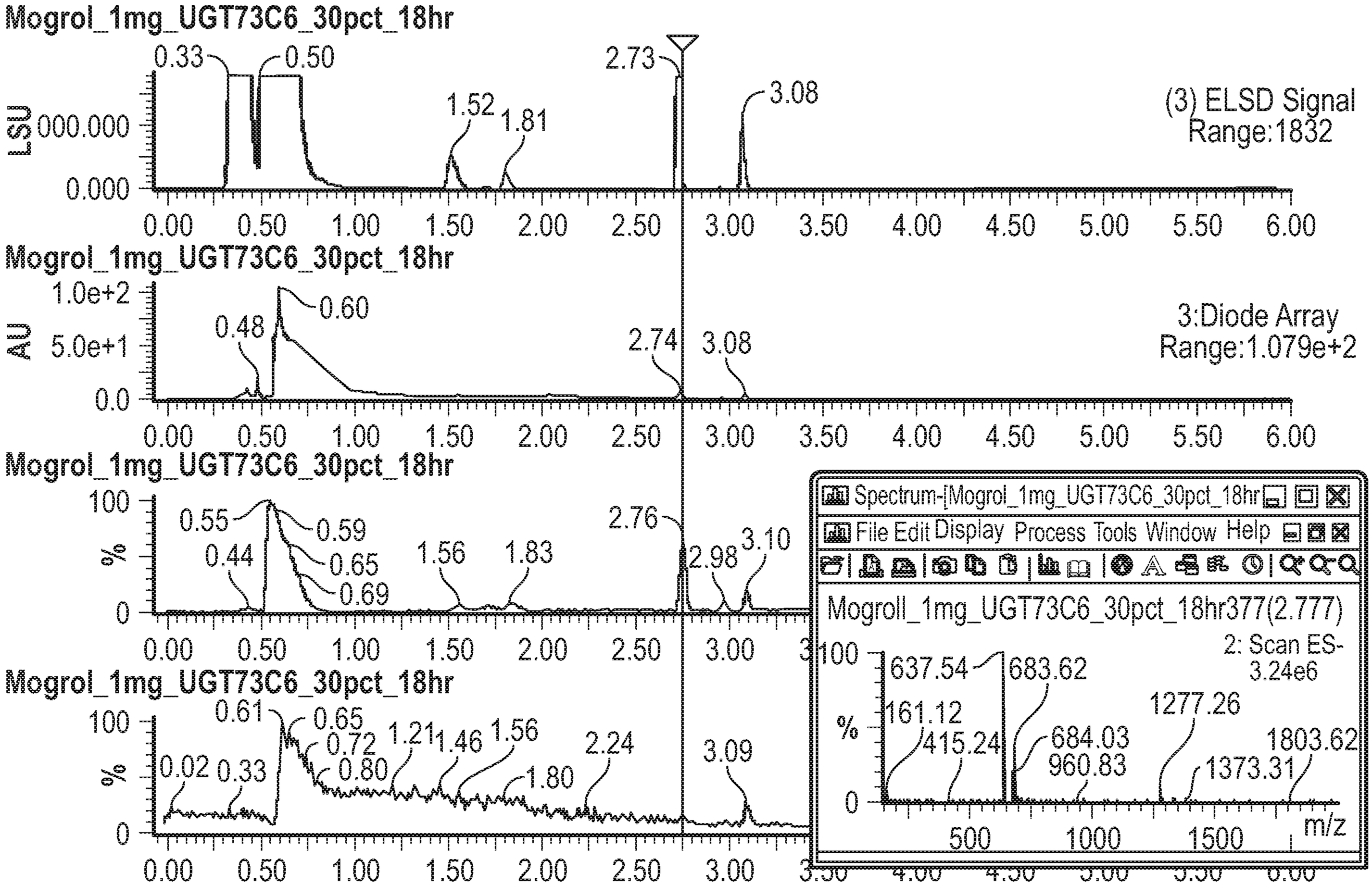

Mogrol_1mg_UGT73C6_30pct_18hr
LSU
000.000
0.000
0.33
0.50
1.52
1.81
2.73
3.08
(3) ELSD Signal
Range:1832
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
Mogrol_1mg_UGT73C6_30pct_18hr
AU
1.0e+2
5.0e+1
0.0
0.48
0.60
2.74
3.08
3:Diode Array
Range:1.079e+2
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
Mogrol_1mg_UGT73C6_30pct_18hr
100
%
0
0.55
0.44
0.59
0.65
0.69
1.56
1.83
2.76
2.98
3.10
0.00 0.50 1.00 1.50 2.00 2.50 3.00
Mogrol_1mg_UGT73C6_30pct_18hr
100
%
0
0.61
0.02
0.33
0.65
0.72
0.80
1.21
1.46
1.56
1.80
2.24
3.09
0.00 0.50 1.00 1.50 2.00 2.50 3.00
Spectrum-[Mogrol_1mg_UGT73C6_30pct_18hr
File Edit Display Process Tools Window Help
Mogroll_1mg_UGT73C6_30pct_18hr377(2.777)
2: Scan ES-
3.24e6
100
%
0
637.54
683.62
161.12
415.24
1277.26
684.03
960.83
1373.31
1803.62
500 1000 1500
m/z

FIG. 6

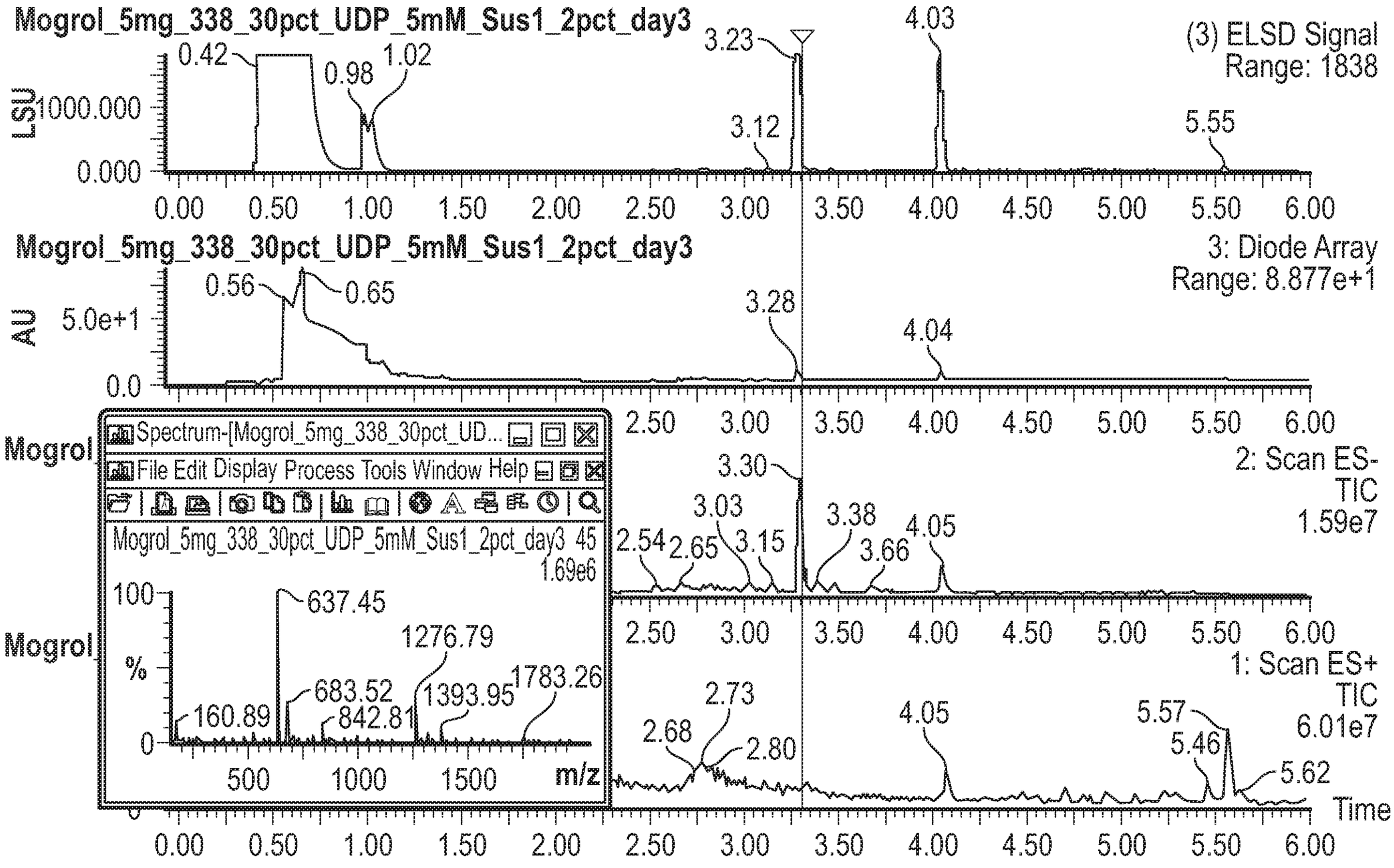

Mogrol_5mg_338_30pct_UDP_5mM_Sus1_2pct_day3
LSU
1000.000
0.000
0.42
0.98
1.02
3.23
3.12
4.03
5.55
(3) ELSD Signal
Range: 1838
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
Mogrol_5mg_338_30pct_UDP_5mM_Sus1_2pct_day3
AU
5.0e+1
0.0
0.56
0.65
3.28
4.04
3: Diode Array
Range: 8.877e+1
Spectrum-[Mogrol_5mg_338_30pct_UD...
File Edit Display Process Tools Window Help
Mogrol_5mg_338_30pct_UDP_5mM_Sus1_2pct_day3 45
1.69e6
100
%
0
637.45
1276.79
683.52
1393.95
1783.26
160.89
842.81
500 1000 1500 m/z
Mogrol
Mogrol
2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
3.30
3.03
3.38
4.05
2.54
2.65
3.15
3.66
2: Scan ES-
TIC
1.59e7
2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
2.73
2.68
2.80
4.05
5.57
5.46
5.62
1: Scan ES+
TIC
6.01e7
Time
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00

FIG. 7

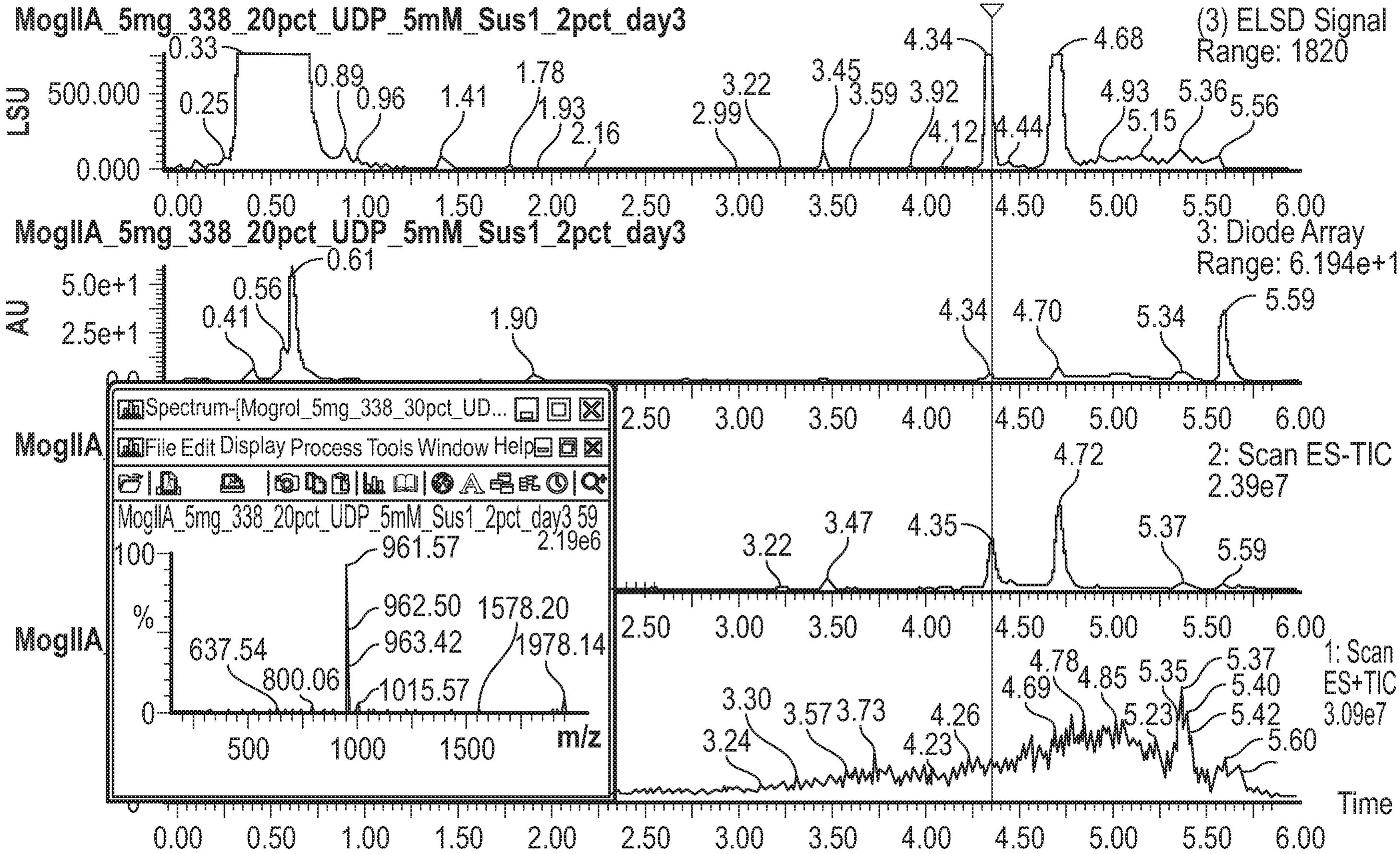

MogIIA_5mg_338_20pct_UDP_5mM_Sus1_2pct_day3
(3) ELSD Signal
Range: 1820
LSU
500.000
0.000
0.33
0.25
0.89
0.96
1.41
1.78
1.93
2.16
2.99
3.22
3.45
3.59
3.92
4.12
4.34
4.44
4.68
4.93
5.15
5.36
5.56
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
MogIIA_5mg_338_20pct_UDP_5mM_Sus1_2pct_day3
3: Diode Array
Range: 6.194e+1
AU
5.0e+1
2.5e+1
0.41
0.56
0.61
1.90
4.34
4.70
5.34
5.59
2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
Spectrum-[Mogrol_5mg_338_30pct_UD...
File Edit Display Process Tools Window Help
MogIIA_5mg_338_20pct_UDP_5mM_Sus1_2pct_day3 59
2.19e6
100
%
0
961.57
962.50
963.42
1578.20
1978.14
637.54
800.06
1015.57
500 1000 1500
m/z
MogIIA
MogIIA
2: Scan ES-TIC
2.39e7
4.72
3.22
3.47
4.35
5.37
5.59
2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
1: Scan
ES+TIC
3.09e7
4.78
4.69
4.85
5.35
5.37
5.40
5.42
5.60
3.30
3.57
3.73
4.26
3.24
4.23
5.23
Time
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00

FIG. 8

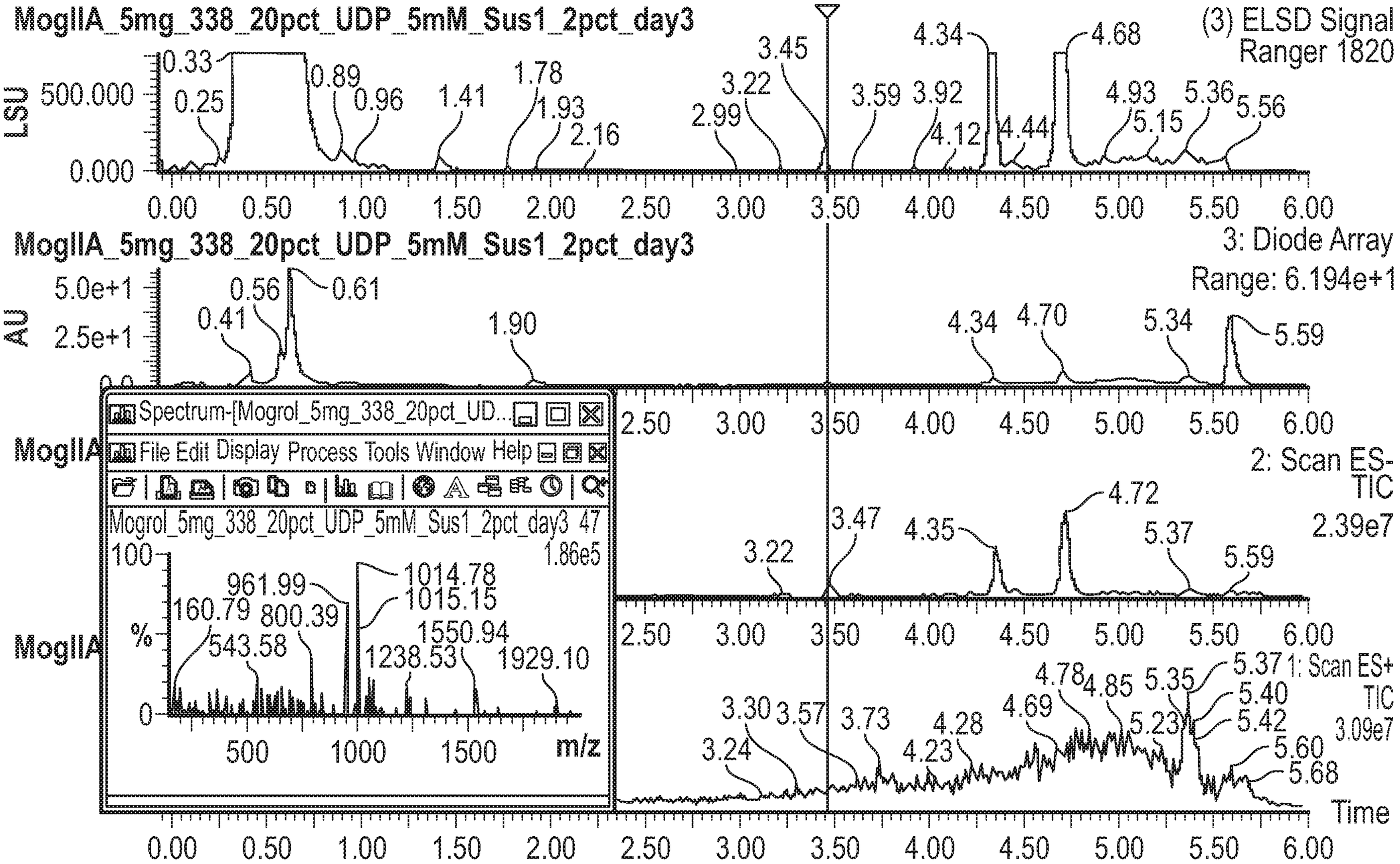

MogIIA_5mg_338_20pct_UDP_5mM_Sus1_2pct_day3
(3) ELSD Signal
Ranger 1820
LSU
500.000
0.000
0.33
0.25
0.89
0.96
1.41
1.78
1.93
2.16
2.99
3.22
3.45
3.59
3.92
4.12
4.34
4.44
4.68
4.93
5.15
5.36
5.56
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
MogIIA_5mg_338_20pct_UDP_5mM_Sus1_2pct_day3
3: Diode Array
Range: 6.194e+1
AU
5.0e+1
2.5e+1
0.41
0.56
0.61
1.90
4.34
4.70
5.34
5.59
Spectrum-[Mogrol_5mg_338_20pct_UD...
File Edit Display Process Tools Window Help
Mogrol_5mg_338_20pct_UDP_5mM_Sus1_2pct_day3 47
1.86e5
100
%
0
961.99
1014.78
1015.15
160.79
800.39
1550.94
543.58
1238.53
1929.10
500 1000 1500 m/z
MogIIA
2: Scan ES-
TIC
2.39e7
3.22
3.47
4.35
4.72
5.37
5.59
MogIIA
1: Scan ES+
TIC
3.09e7
3.24
3.30
3.57
3.73
4.23
4.28
4.69
4.78
4.85
5.23
5.35
5.37
5.40
5.42
5.60
5.68
Time
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00

FIG. 9

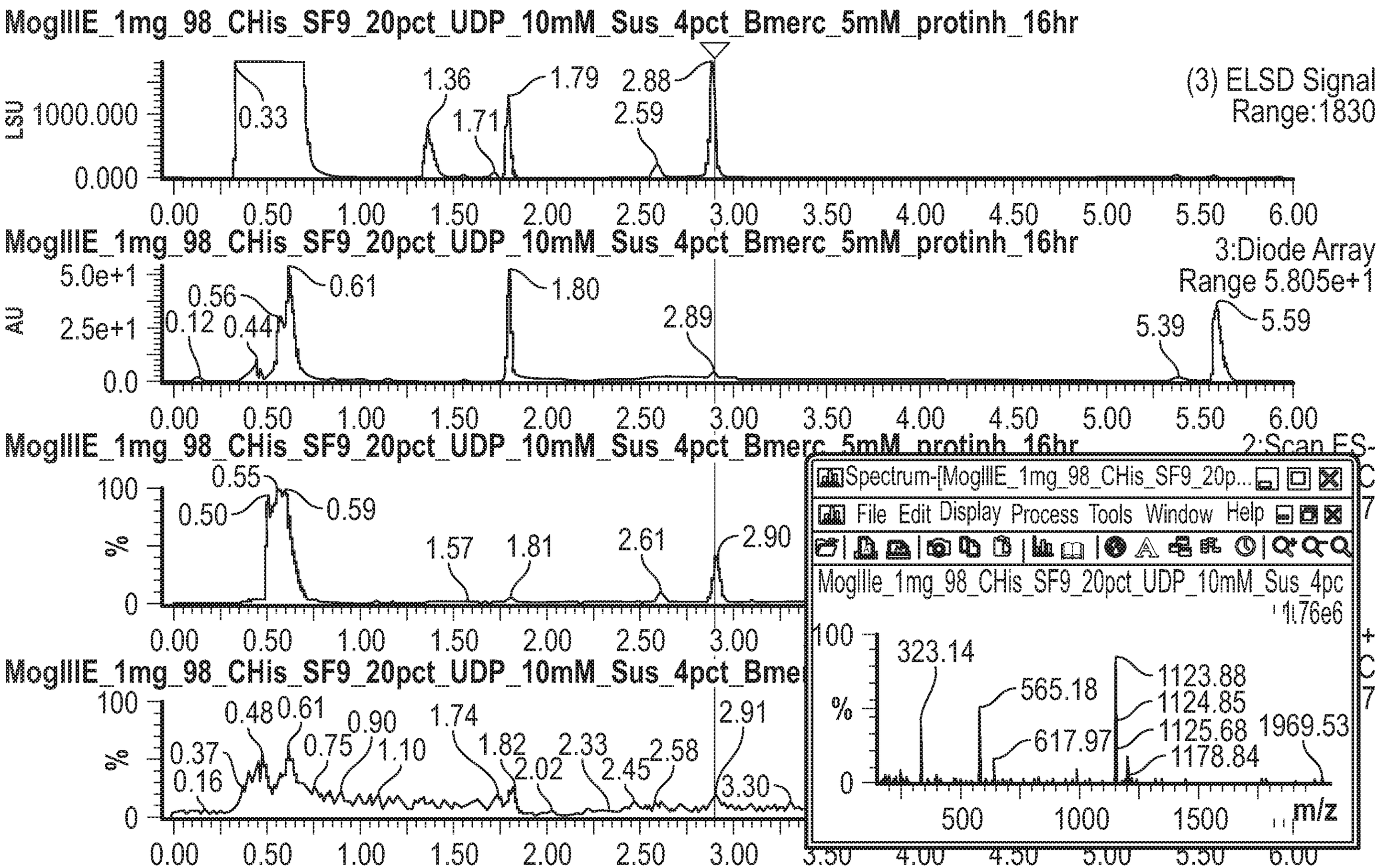

MogIIIE_1mg_98_CHis_SF9_20pct_UDP_10mM_Sus_4pct_Bmerc_5mM_protinh_16hr
LSU
1000.000
0.000
0.33
1.36
1.71
1.79
2.59
2.88
(3) ELSD Signal
Range:1830
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
MogIIIE_1mg_98_CHis_SF9_20pct_UDP_10mM_Sus_4pct_Bmerc_5mM_protinh_16hr
3:Diode Array
Range 5.805e+1
AU
5.0e+1
2.5e+1
0.0
0.12
0.56
0.44
0.61
1.80
2.89
5.39
5.59
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
MogIIIE_1mg_98_CHis_SF9_20pct_UDP_10mM_Sus_4pct_Bmerc_5mM_protinh_16hr
2:Scan ES-
100
%
0
0.50
0.55
0.59
1.57
1.81
2.61
2.90
0.00 0.50 1.00 1.50 2.00 2.50 3.00
MogIIIE_1mg_98_CHis_SF9_20pct_UDP_10mM_Sus_4pct_Bme
100
%
0
0.16
0.37
0.48
0.61
0.75
0.90
1.10
1.74
1.82
2.02
2.33
2.45
2.58
2.91
3.30
0.00 0.50 1.00 1.50 2.00 2.50 3.00
Spectrum-[MogIIIE_1mg_98_CHis_SF9_20p...
File Edit Display Process Tools Window Help
MogIIIe_1mg_98_CHis_SF9_20pct_UDP_10mM_Sus_4pc
1l.76e6
100
%
0
323.14
565.18
617.97
1123.88
1124.85
1125.68
1178.84
1969.53
500 1000 1500
m/z
3.50 4.00 4.50 5.00 5.50 6.00

FIG. 10

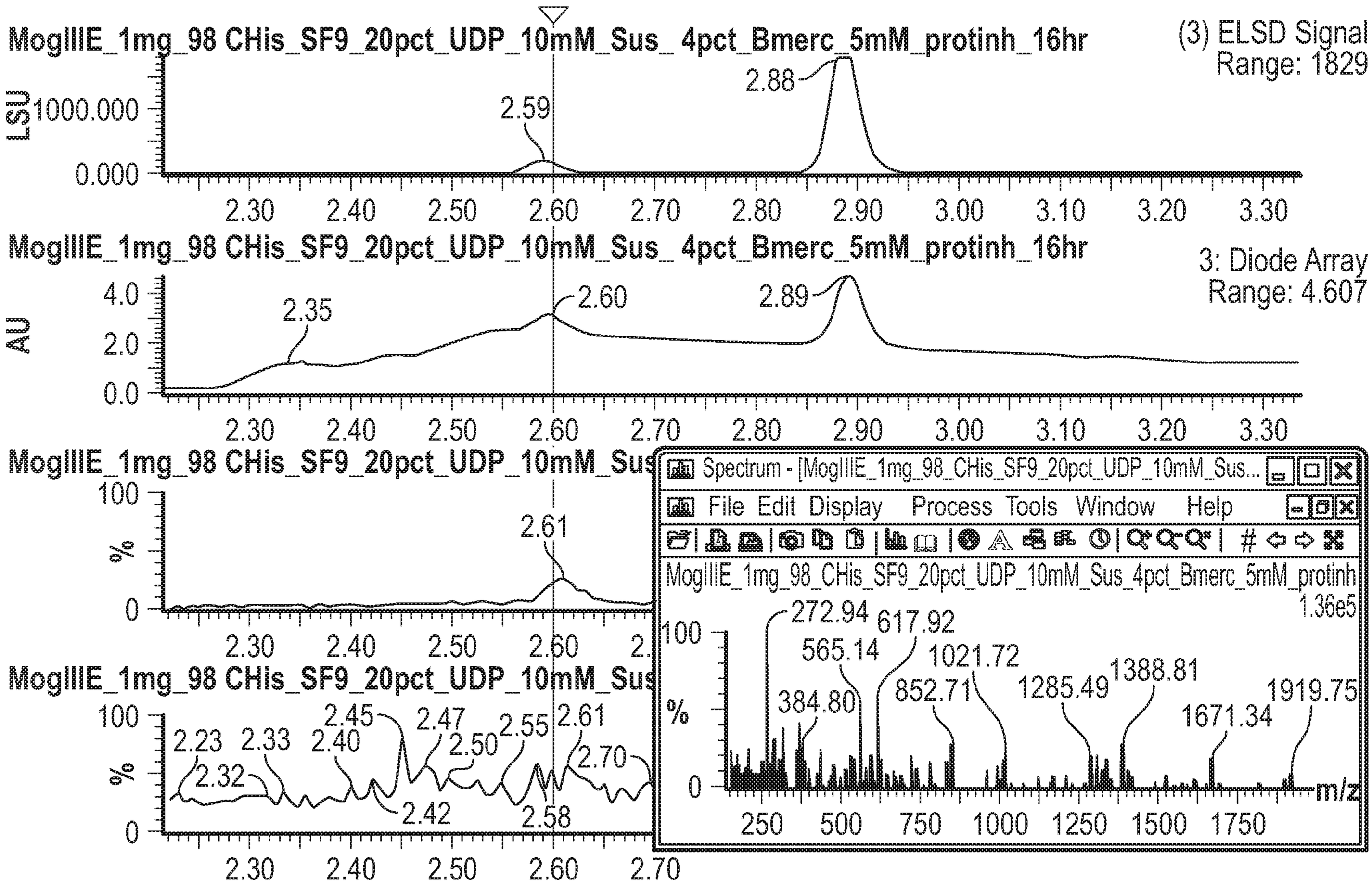

MogIIIE_1mg_98 CHis_SF9_20pct_UDP_10mM_Sus_ 4pct_Bmerc_5mM_protinh_16hr
(3) ELSD Signal
Range: 1829
LSU
1000.000
0.000
2.59
2.88
2.30 2.40 2.50 2.60 2.70 2.80 2.90 3.00 3.10 3.20 3.30
MogIIIE_1mg_98 CHis_SF9_20pct_UDP_10mM_Sus_ 4pct_Bmerc_5mM_protinh_16hr
3: Diode Array
Range: 4.607
AU
4.0
2.0
0.0
2.35
2.60
2.89
2.30 2.40 2.50 2.60 2.70 2.80 2.90 3.00 3.10 3.20 3.30
MogIIIE_1mg_98 CHis_SF9_20pct_UDP_10mM_Sus
100
%
0
2.61
2.30 2.40 2.50 2.60 2.
MogIIIE_1mg_98 CHis_SF9_20pct_UDP_10mM_Sus
100
%
0
2.23 2.33 2.40 2.45 2.47 2.50 2.55 2.61 2.70
2.32
2.42
2.58
2.30 2.40 2.50 2.60 2.70
Spectrum - [MogIIIE_1mg_98_CHis_SF9_20pct_UDP_10mM_Sus...
File Edit Display Process Tools Window Help
MogIIIE_1mg_98_CHis_SF9_20pct_UDP_10mM_Sus_4pct_Bmerc_5mM_protinh
1.36e5
100
%
0
272.94
617.92
565.14
1021.72
384.80
852.71
1285.49
1388.81
1671.34
1919.75
m/z
250 500 750 1000 1250 1500 1750

FIG. 11

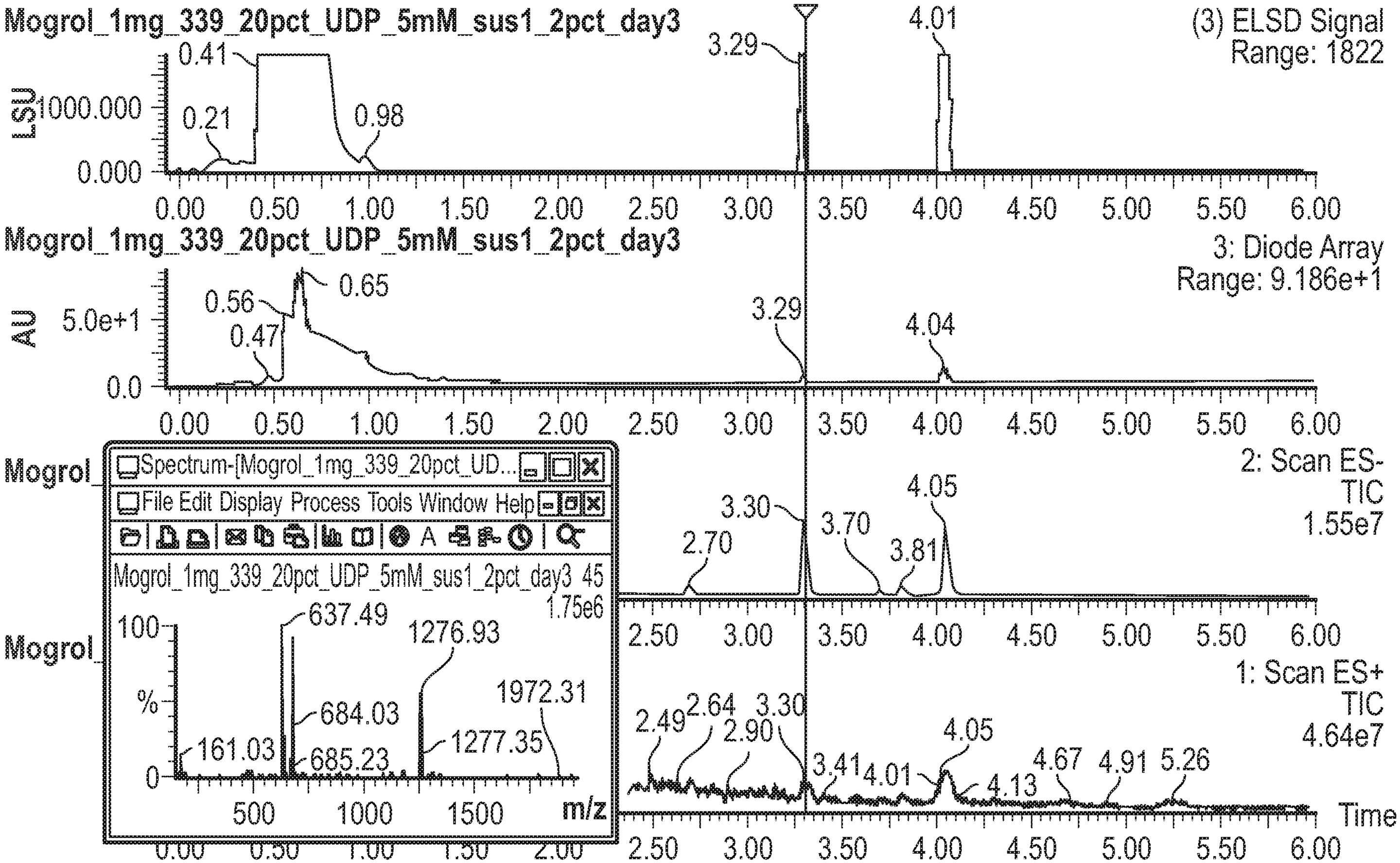

Mogrol_1mg_339_20pct_UDP_5mM_sus1_2pct_day3
(3) ELSD Signal
Range: 1822
LSU
1000.000
0.000
0.41
0.21
0.98
3.29
4.01
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
Mogrol_1mg_339_20pct_UDP_5mM_sus1_2pct_day3
3: Diode Array
Range: 9.186e+1
AU
5.0e+1
0.0
0.56
0.65
0.47
3.29
4.04
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
Mogrol
Spectrum-[Mogrol_1mg_339_20pct_UD...
File Edit Display Process Tools Window Help
Mogrol_1mg_339_20pct_UDP_5mM_sus1_2pct_day3 45
1.75e6
100
%
0
637.49
1276.93
1972.31
684.03
161.03
685.23
1277.35
500 1000 1500 m/z
Mogrol
2: Scan ES-
TIC
1.55e7
3.30
4.05
2.70
3.70
3.81
2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
1: Scan ES+
TIC
4.64e7
2.49
2.64
3.30
2.90
4.05
3.41
4.01
4.13
4.67
4.91
5.26
Time
2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00

FIG. 12

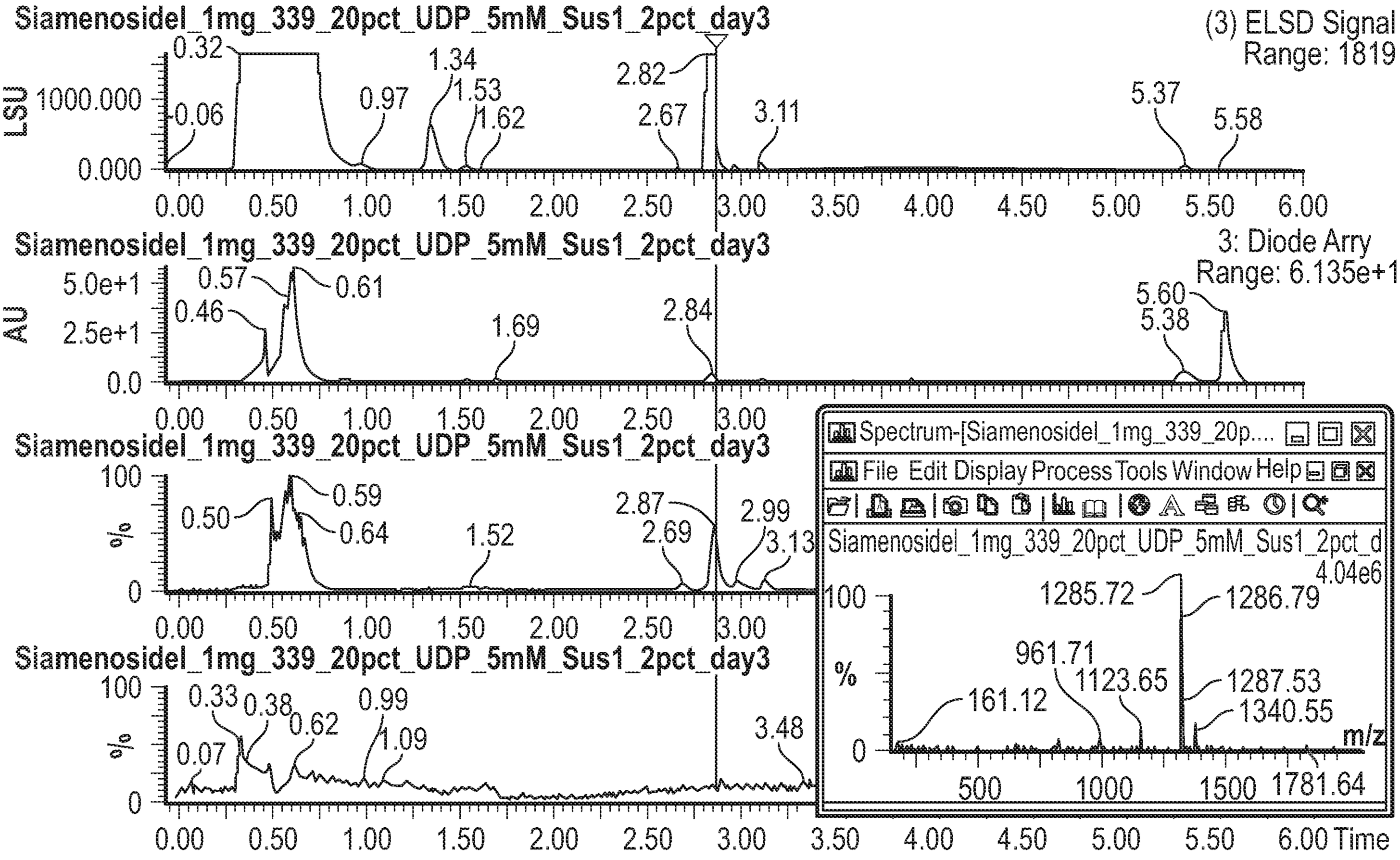

Siamenosidel_1mg_339_20pct_UDP_5mM_Sus1_2pct_day3
(3) ELSD Signal
Range: 1819
LSU
1000.000
0.000
0.32
0.06
0.97
1.34
1.53
1.62
2.82
2.67
3.11
5.37
5.58
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
Siamenosidel_1mg_339_20pct_UDP_5mM_Sus1_2pct_day3
3: Diode Arry
Range: 6.135e+1
AU
5.0e+1
2.5e+1
0.0
0.57
0.61
0.46
1.69
2.84
5.60
5.38
0.00 0.50 1.00 1.50 2.00 2.50 3.00
Siamenosidel_1mg_339_20pct_UDP_5mM_Sus1_2pct_day3
100
%
0
0.50
0.59
0.64
1.52
2.87
2.69
2.99
3.13
0.00 0.50 1.00 1.50 2.00 2.50 3.00
Siamenosidel_1mg_339_20pct_UDP_5mM_Sus1_2pct_day3
100
%
0
0.33
0.38
0.62
0.99
1.09
0.07
3.48
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 Time
Spectrum-[Siamenosidel_1mg_339_20p....
File Edit Display Process Tools Window Help
Siamenosidel_1mg_339_20pct_UDP_5mM_Sus1_2pct_d
4.04e6
100
%
0
1285.72
1286.79
961.71
1123.65
1287.53
161.12
1340.55
m/z
500 1000 1500 1781.64

FIG. 13

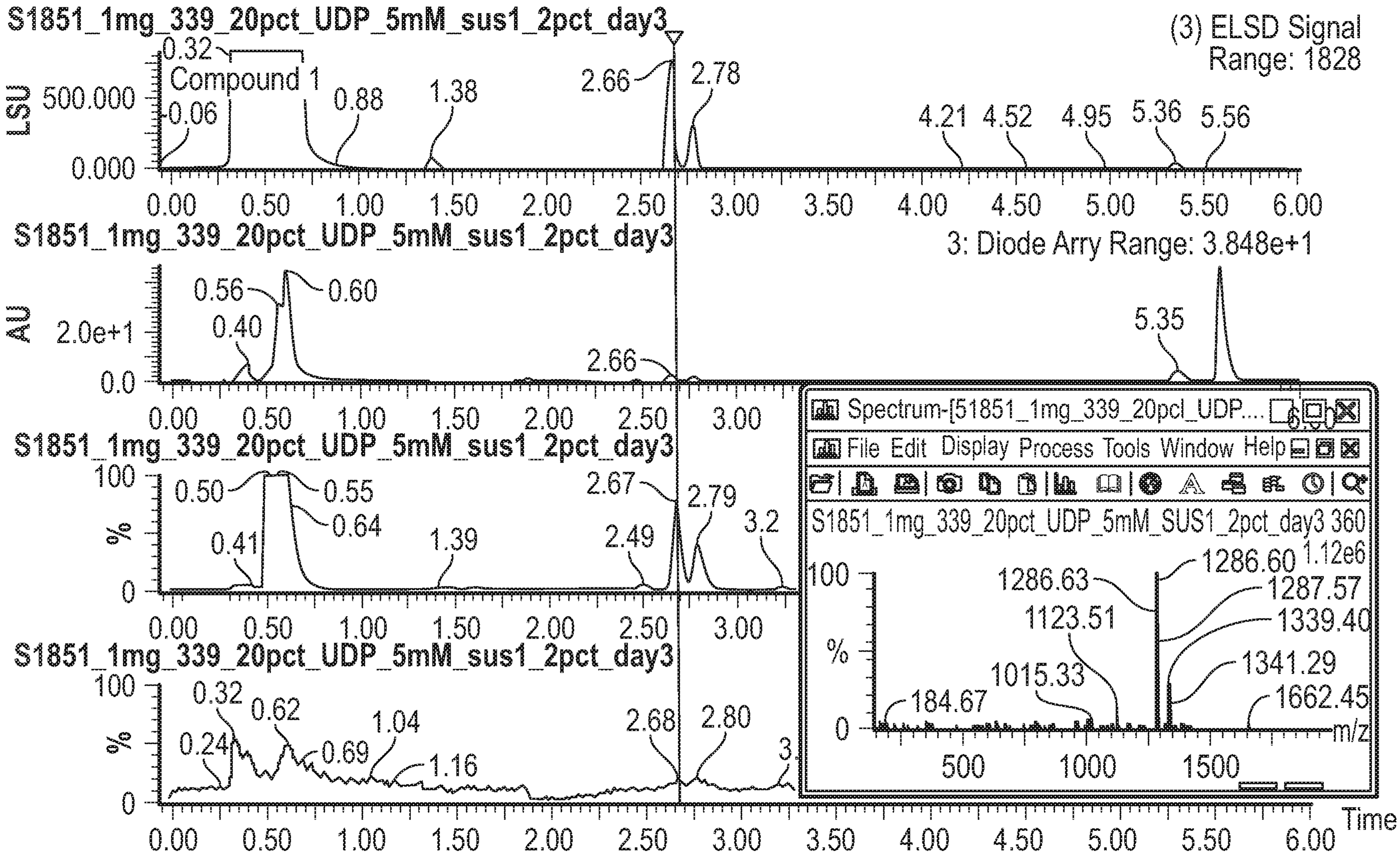

S1851_1mg_339_20pct_UDP_5mM_sus1_2pct_day3
(3) ELSD Signal
Range: 1828
LSU
500.000
0.000
0.32
Compound 1
0.06
0.88
1.38
2.66
2.78
4.21
4.52
4.95
5.36
5.56
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
S1851_1mg_339_20pct_UDP_5mM_sus1_2pct_day3
3: Diode Arry Range: 3.848e+1
AU
2.0e+1
0.0
0.56
0.60
0.40
2.66
5.35
0.00 0.50 1.00 1.50 2.00 2.50 3.00
S1851_1mg_339_20pct_UDP_5mM_sus1_2pct_day3
100
%
0
0.50
0.55
0.64
0.41
1.39
2.67
2.79
2.49
3.2
0.00 0.50 1.00 1.50 2.00 2.50 3.00
S1851_1mg_339_20pct_UDP_5mM_sus1_2pct_day3
100
%
0
0.32
0.62
1.04
0.24
0.69
1.16
2.68
2.80
3
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
Time
Spectrum-[51851_1mg_339_20pcl_UDP....
File Edit Display Process Tools Window Help
S1851_1mg_339_20pct_UDP_5mM_SUS1_2pct_day3 360
100
%
0
1286.60
1.12e6
1286.63
1287.57
1123.51
1339.40
1341.29
1015.33
184.67
1662.45
m/z
500 1000 1500

FIG. 14

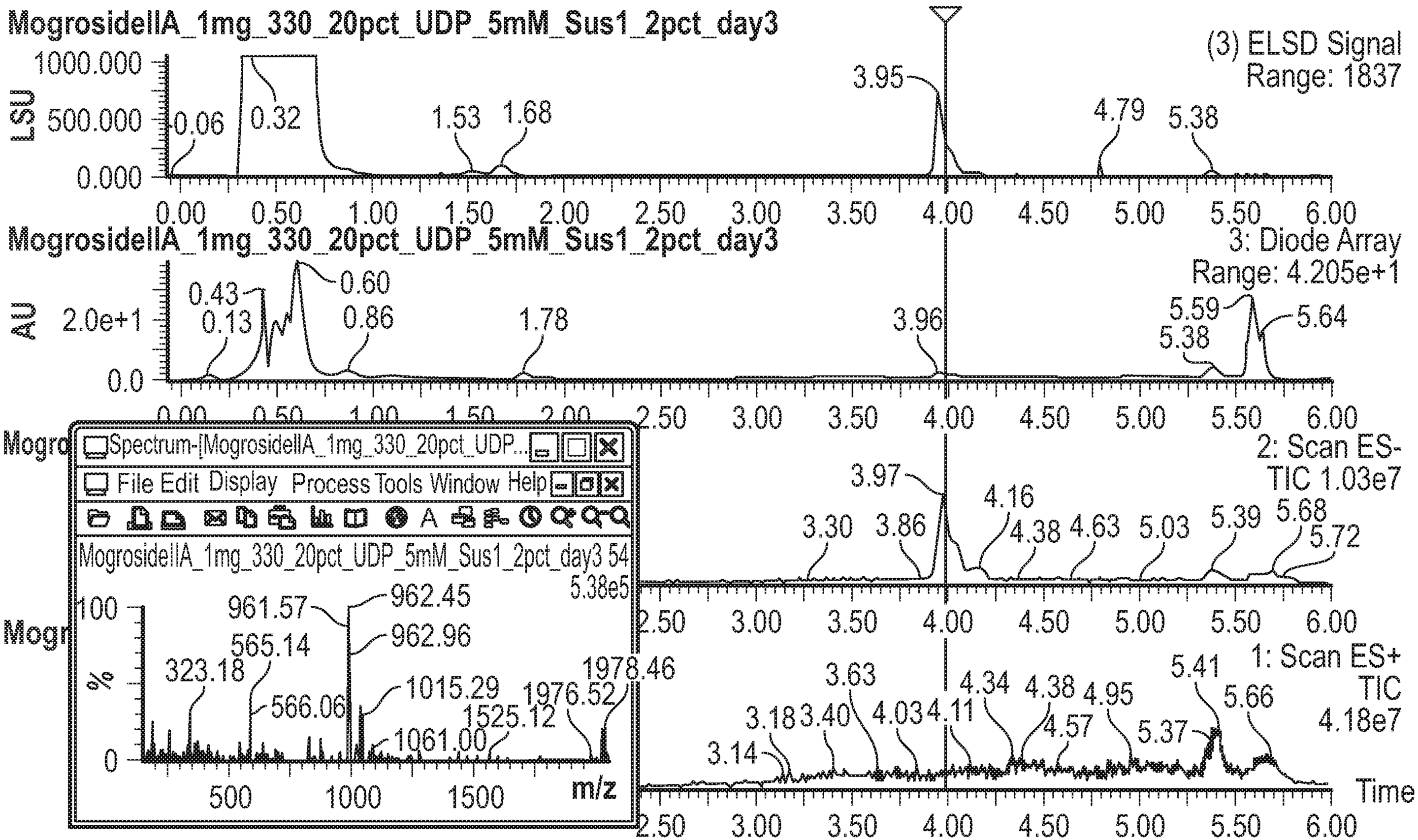

MogrosideIIA_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
(3) ELSD Signal
Range: 1837
LSU
1000.000
500.000
0.000
0.06
0.32
1.53
1.68
3.95
4.79
5.38
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
MogrosideIIA_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
3: Diode Array
Range: 4.205e+1
AU
2.0e+1
0.0
0.43
0.13
0.60
0.86
1.78
3.96
5.59
5.38
5.64
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
Mogro
Spectrum-[MogrosideIIA_1mg_330_20pct_UDP...
File Edit Display Process Tools Window Help
MogrosideIIA_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3 54
5.38e5
100
%
0
961.57
962.45
962.96
565.14
323.18
566.06
1015.29
1976.52
1978.46
1525.12
1061.00
500
1000
1500
m/z
Mogr
2: Scan ES-
TIC 1.03e7
3.97
4.16
3.30
3.86
4.38
4.63
5.03
5.39
5.68
5.72
2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
1: Scan ES+
TIC
4.18e7
3.63
4.34
4.38
4.95
5.41
5.66
3.18
3.40
4.03
4.11
4.57
5.37
3.14
Time
2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00

FIG. 15

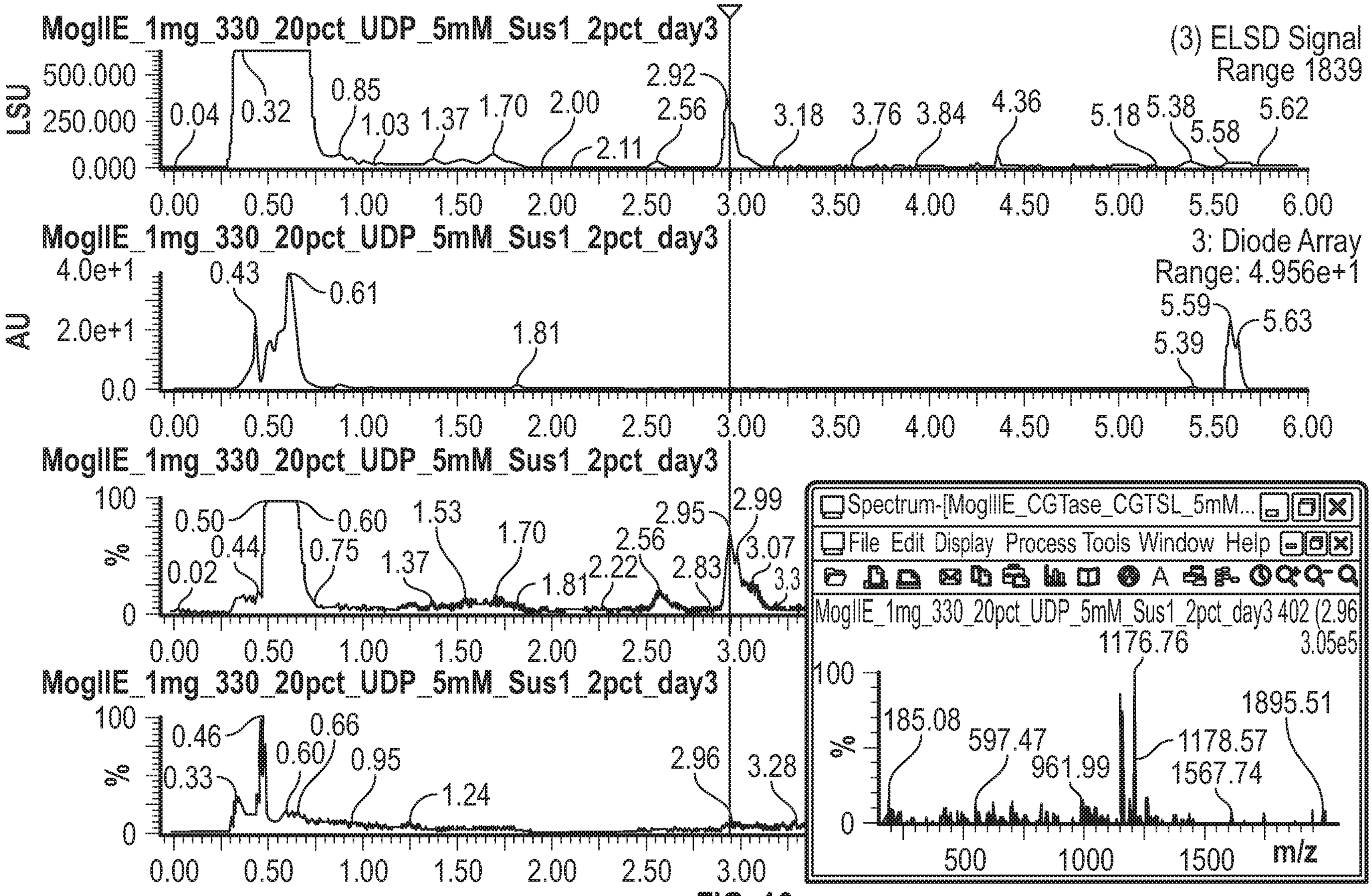

MogIIE_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
(3) ELSD Signal
Range 1839
LSU
500.000
250.000
0.000
0.04
0.32
0.85
1.03
1.37
1.70
2.00
2.11
2.56
2.92
3.18
3.76
3.84
4.36
5.18
5.38
5.58
5.62
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
MogIIE_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
3: Diode Array
Range: 4.956e+1
AU
4.0e+1
2.0e+1
0.0
0.43
0.61
1.81
5.39
5.59
5.63
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
MogIIE_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
100
%
0
0.02
0.44
0.50
0.60
0.75
1.37
1.53
1.70
1.81
2.22
2.56
2.83
2.95
2.99
3.07
3.3
0.00 0.50 1.00 1.50 2.00 2.50 3.00
MogIIE_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
100
%
0
0.33
0.46
0.60
0.66
0.95
1.24
2.96
3.28
0.00 0.50 1.00 1.50 2.00 2.50 3.00
Spectrum-[MogIIIE_CGTase_CGTSL_5mM...
File Edit Display Process Tools Window Help
MogIIE_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3 402 (2.96
3.05e5
100
%
0
185.08
597.47
961.99
1176.76
1178.57
1567.74
1895.51
500 1000 1500 m/z

FIG. 16

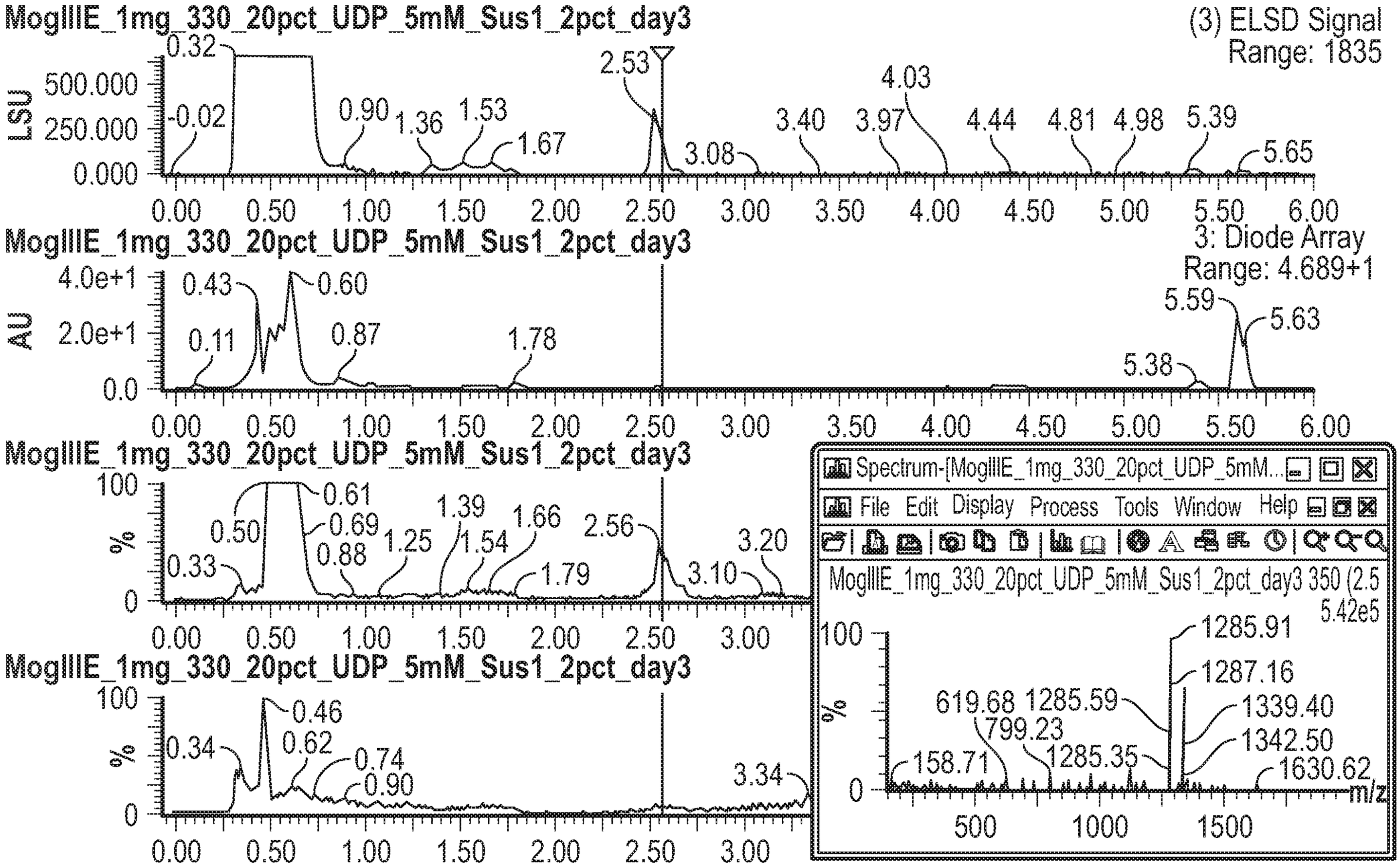

MogIIIE_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
(3) ELSD Signal
Range: 1835
LSU
500.000
250.000
0.000
0.32
-0.02
0.90
1.36
1.53
1.67
2.53
3.08
3.40
3.97
4.03
4.44
4.81
4.98
5.39
5.65
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
MogIIIE_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
3: Diode Array
Range: 4.689+1
AU
4.0e+1
2.0e+1
0.0
0.43
0.60
0.11
0.87
1.78
5.59
5.63
5.38
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
MogIIIE_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
100
%
0
0.33
0.50
0.61
0.69
0.88
1.25
1.39
1.54
1.66
1.79
2.56
3.10
3.20
0.00 0.50 1.00 1.50 2.00 2.50 3.00
MogIIIE_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
100
%
0
0.34
0.46
0.62
0.74
0.90
3.34
0.00 0.50 1.00 1.50 2.00 2.50 3.00
Spectrum-[MogIIIE_1mg_330_20pct_UDP_5mM...
File Edit Display Process Tools Window Help
MogIIIE_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3 350 (2.5
5.42e5
100
%
0
1285.91
1287.16
619.68
1285.59
799.23
1339.40
1342.50
158.71
1285.35
1630.62
m/z
500
1000
1500

FIG. 17

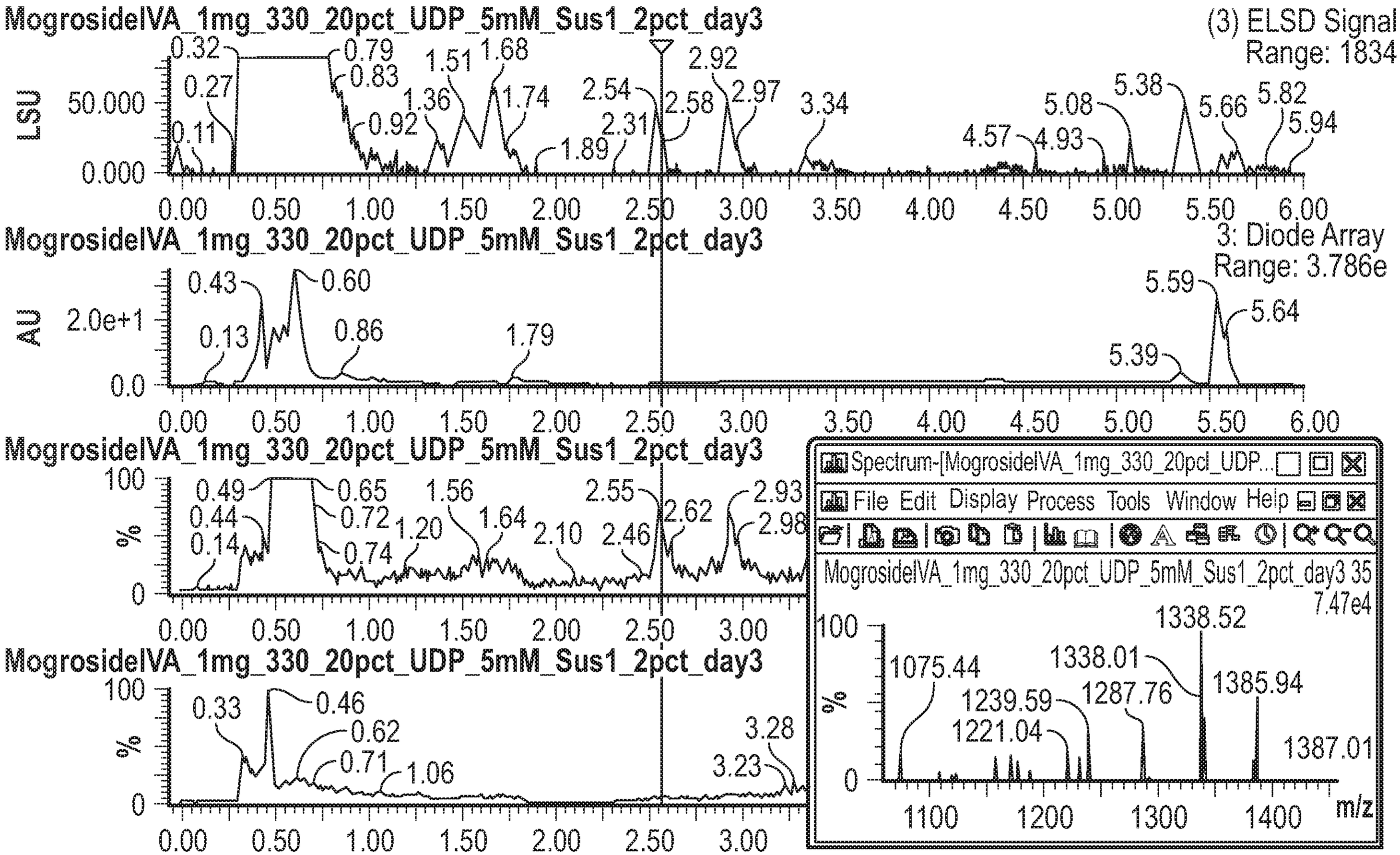

MogrosideIVA_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
(3) ELSD Signal
Range: 1834
LSU
50.000
0.000
0.32
0.27
0.11
0.79
0.83
0.92
1.51
1.36
1.68
1.74
1.89
2.54
2.31
2.58
2.92
2.97
3.34
4.57
4.93
5.08
5.38
5.66
5.82
5.94
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
MogrosideIVA_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
3: Diode Array
Range: 3.786e
AU
2.0e+1
0.0
0.43
0.13
0.60
0.86
1.79
5.59
5.64
5.39
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
MogrosideIVA_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
100
%
0
0.49
0.44
0.14
0.65
0.72
0.74
1.20
1.56
1.64
2.10
2.55
2.46
2.62
2.93
2.98
0.00 0.50 1.00 1.50 2.00 2.50 3.00
MogrosideIVA_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
100
%
0
0.33
0.46
0.62
0.71
1.06
3.28
3.23
0.00 0.50 1.00 1.50 2.00 2.50 3.00
Spectrum-[MogrosideIVA_1mg_330_20pcl_UDP...
File Edit Display Process Tools Window Help
MogrosideIVA_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3 35
7.47e4
100
%
0
1075.44
1239.59
1221.04
1338.01
1287.76
1338.52
1385.94
1387.01
1100 1200 1300 1400
m/z

FIG. 18

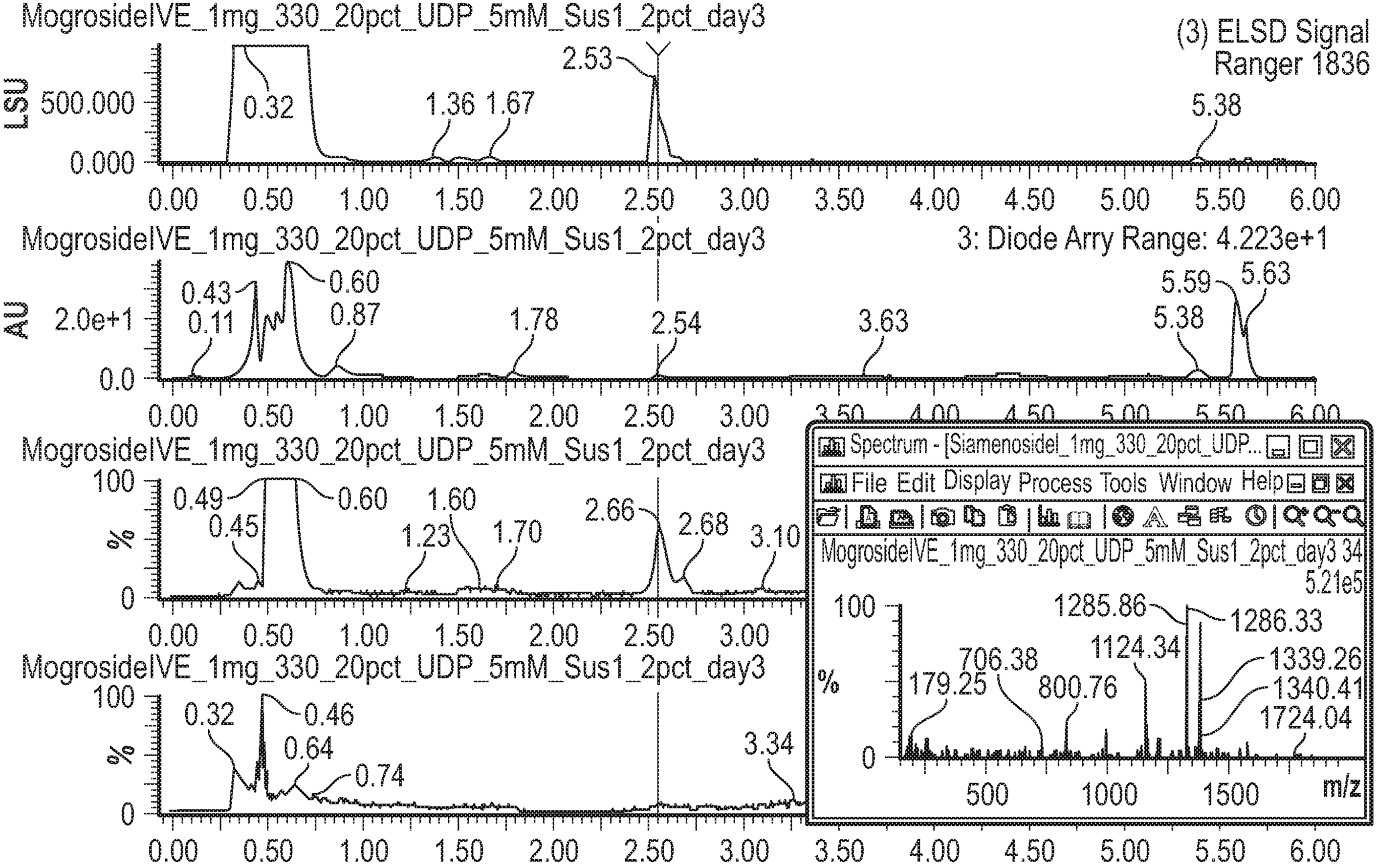

MogrosideIVE_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
(3) ELSD Signal
Ranger 1836
LSU
500.000
0.000
0.32
1.36 1.67
2.53
5.38
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
MogrosideIVE_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
3: Diode Arry Range: 4.223e+1
AU
2.0e+1
0.0
0.43
0.11
0.60
0.87
1.78
2.54
3.63
5.59
5.63
5.38
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
MogrosideIVE_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
100
%
0
0.49
0.45
0.60
1.60
1.23
1.70
2.66
2.68
3.10
0.00 0.50 1.00 1.50 2.00 2.50 3.00
MogrosideIVE_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
100
%
0
0.32
0.46
0.64
0.74
3.34
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
Spectrum - [Siamenoside1_1mg_330_20pct_UDP...
File Edit Display Process Tools Window Help
MogrosideIVE_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3 34
5.21e5
100
%
0
179.25
706.38
800.76
1124.34
1285.86
1286.33
1339.26
1340.41
1724.04
500 1000 1500 m/z

FIG. 19

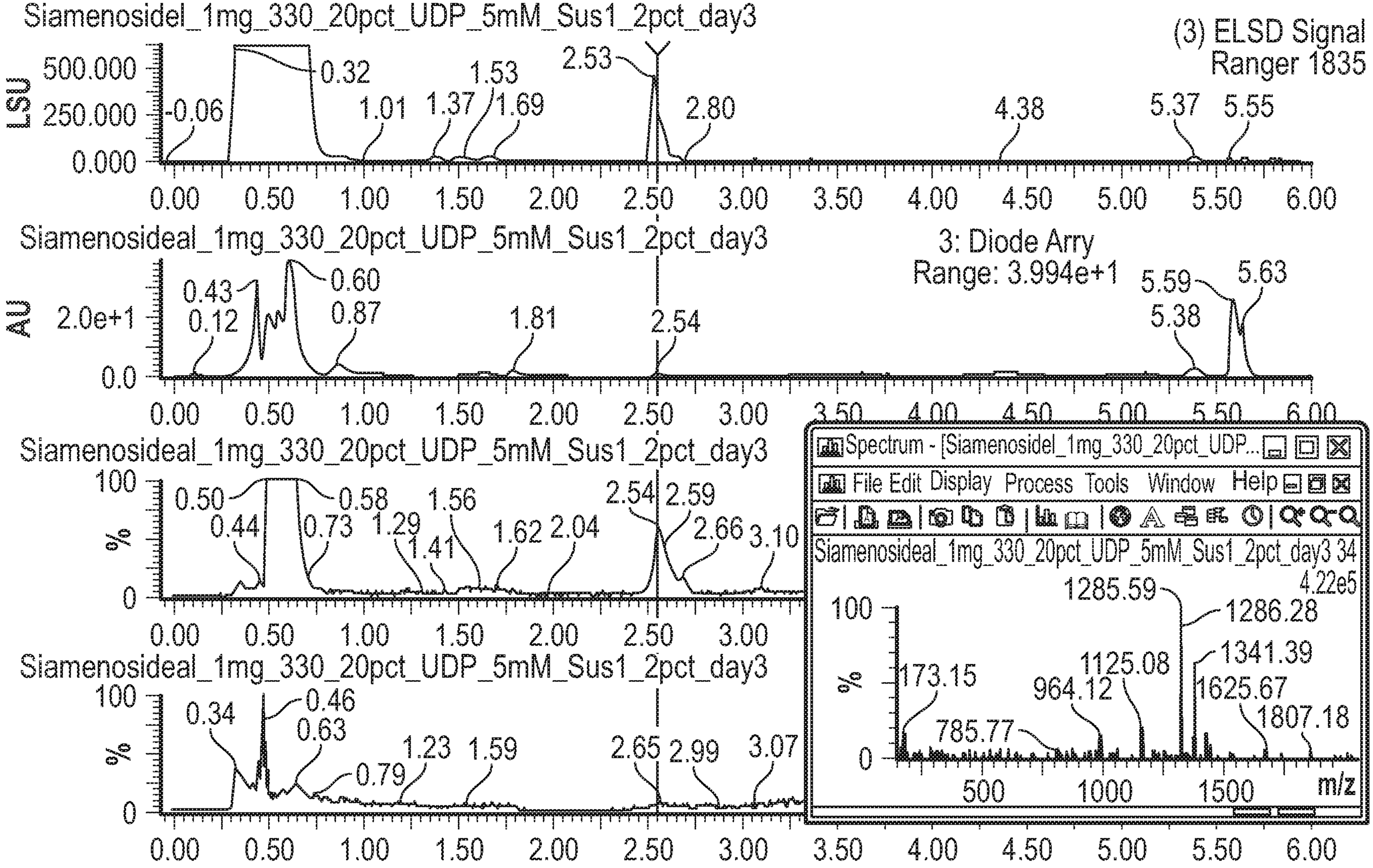

Siamenosidel_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
(3) ELSD Signal
Ranger 1835
LSU
500.000
250.000
0.000
-0.06
0.32
1.01
1.37
1.53
1.69
2.53
2.80
4.38
5.37
5.55
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
Siamenosideal_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
3: Diode Arry
Range: 3.994e+1
AU
2.0e+1
0.0
0.12
0.43
0.60
0.87
1.81
2.54
5.38
5.59
5.63
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
Siamenosideal_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
100
%
0
0.44
0.50
0.58
0.73
1.29
1.41
1.56
1.62
2.04
2.54
2.59
2.66
3.10
0.00 0.50 1.00 1.50 2.00 2.50 3.00
Siamenosideal_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3
100
%
0
0.34
0.46
0.63
0.79
1.23
1.59
2.65
2.99
3.07
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00
Spectrum - [Siamenosidel_1mg_330_20pct_UDP...
File Edit Display Process Tools Window Help
Siamenosideal_1mg_330_20pct_UDP_5mM_Sus1_2pct_day3 34
4.22e5
100
%
0
173.15
785.77
964.12
1125.08
1285.59
1286.28
1341.39
1625.67
1807.18
500
1000
1500
m/z

FIG. 20

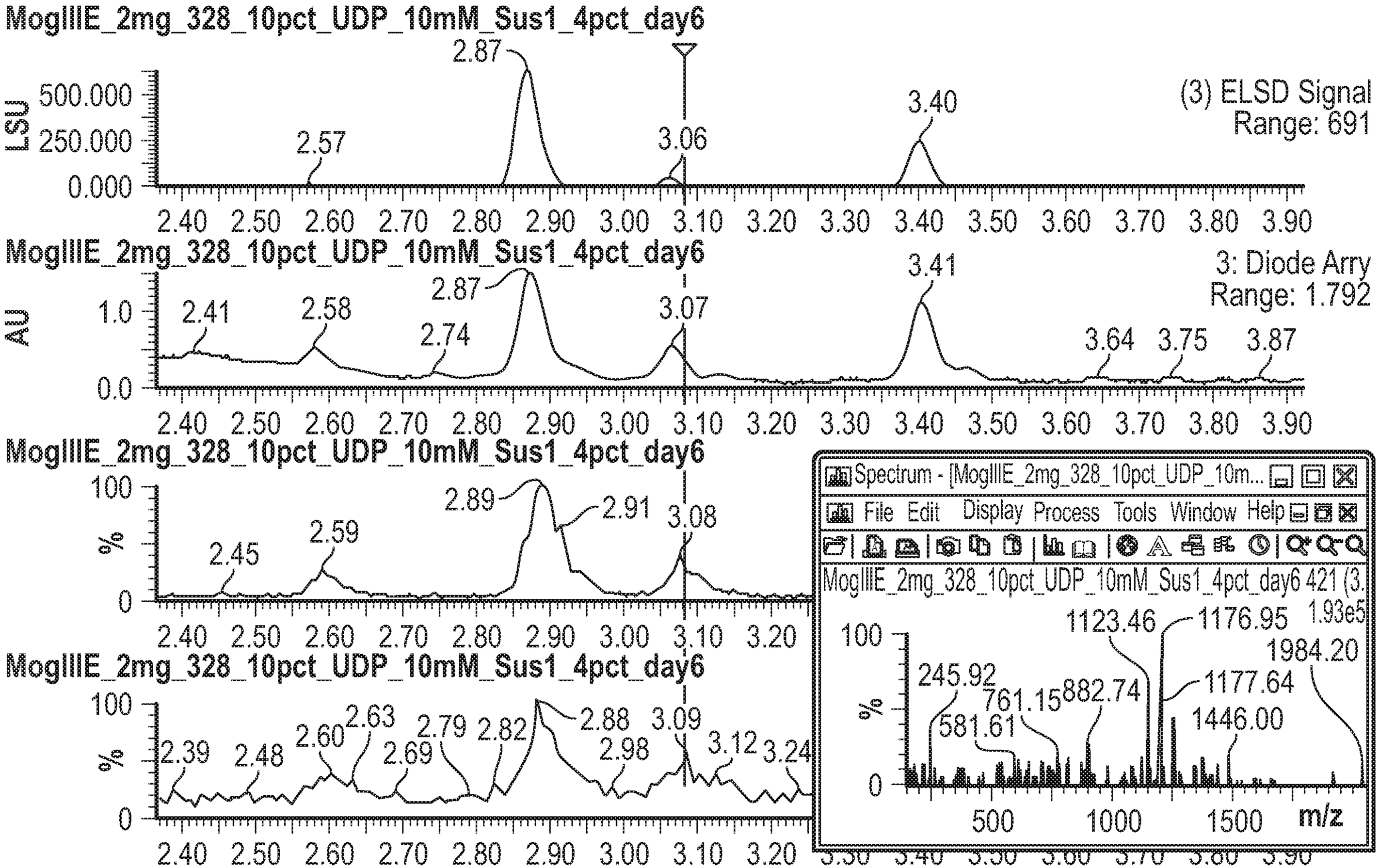

MoglIIE_2mg_328_10pct_UDP_10mM_Sus1_4pct_day6
LSU
500.000
250.000
0.000
2.87
2.57
3.06
3.40
(3) ELSD Signal
Range: 691
2.40 2.50 2.60 2.70 2.80 2.90 3.00 3.10 3.20 3.30 3.40 3.50 3.60 3.70 3.80 3.90
MoglIIE_2mg_328_10pct_UDP_10mM_Sus1_4pct_day6
AU
1.0
0.0
2.41
2.58
2.74
2.87
3.07
3.41
3.64
3.75
3.87
3: Diode Arry
Range: 1.792
2.40 2.50 2.60 2.70 2.80 2.90 3.00 3.10 3.20 3.30 3.40 3.50 3.60 3.70 3.80 3.90
MoglIIE_2mg_328_10pct_UDP_10mM_Sus1_4pct_day6
%
100
0
2.45
2.59
2.89
2.91
3.08
2.40 2.50 2.60 2.70 2.80 2.90 3.00 3.10 3.20
MoglIIE_2mg_328_10pct_UDP_10mM_Sus1_4pct_day6
%
100
0
2.39
2.48
2.60
2.63
2.69
2.79
2.82
2.88
2.98
3.09
3.12
3.24
2.40 2.50 2.60 2.70 2.80 2.90 3.00 3.10 3.20
Spectrum - [MoglIIE_2mg_328_10pct_UDP_10m...
File Edit Display Process Tools Window Help
MoglIIE_2mg_328_10pct_UDP_10mM_Sus1_4pct_day6 421 (3.
%
100
0
245.92
581.61
761.15
882.74
1123.46
1176.95
1177.64
1446.00
1984.20
1.93e5
500
1000
1500
m/z

FIG. 21

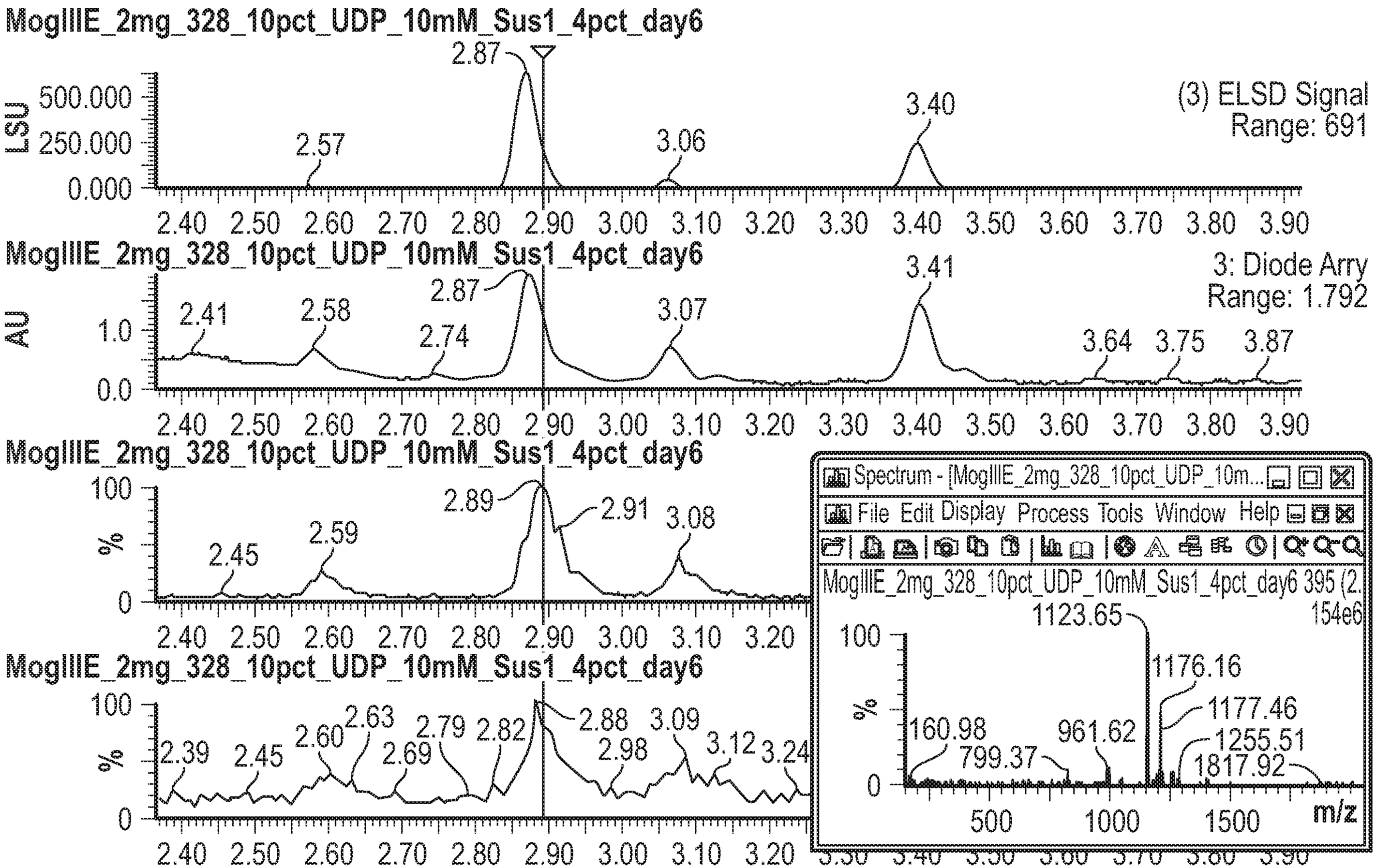

MogIIIE_2mg_328_10pct_UDP_10mM_Sus1_4pct_day6
LSU
500.000
250.000
0.000
2.87
2.57
3.06
3.40
(3) ELSD Signal
Range: 691
2.40 2.50 2.60 2.70 2.80 2.90 3.00 3.10 3.20 3.30 3.40 3.50 3.60 3.70 3.80 3.90
MogIIIE_2mg_328_10pct_UDP_10mM_Sus1_4pct_day6
AU
1.0
0.0
2.41
2.58
2.74
2.87
3.07
3.41
3.64
3.75
3.87
3: Diode Arry
Range: 1.792
2.40 2.50 2.60 2.70 2.80 2.90 3.00 3.10 3.20 3.30 3.40 3.50 3.60 3.70 3.80 3.90
MogIIIE_2mg_328_10pct_UDP_10mM_Sus1_4pct_day6
100
%
0
2.45
2.59
2.89
2.91
3.08
2.40 2.50 2.60 2.70 2.80 2.90 3.00 3.10 3.20
MogIIIE_2mg_328_10pct_UDP_10mM_Sus1_4pct_day6
100
%
0
2.39
2.45
2.60
2.63
2.69
2.79
2.82
2.88
2.98
3.09
3.12
3.24
2.40 2.50 2.60 2.70 2.80 2.90 3.00 3.10 3.20
Spectrum - [MogIIIE_2mg_328_10pct_UDP_10m...
File Edit Display Process Tools Window Help
MogIIIE_2mg_328_10pct_UDP_10mM_Sus1_4pct_day6 395 (2.
154e6
100
%
0
1123.65
1176.16
1177.46
1255.51
1817.92
160.98
799.37
961.62
500
1000
1500
m/z

FIG. 22

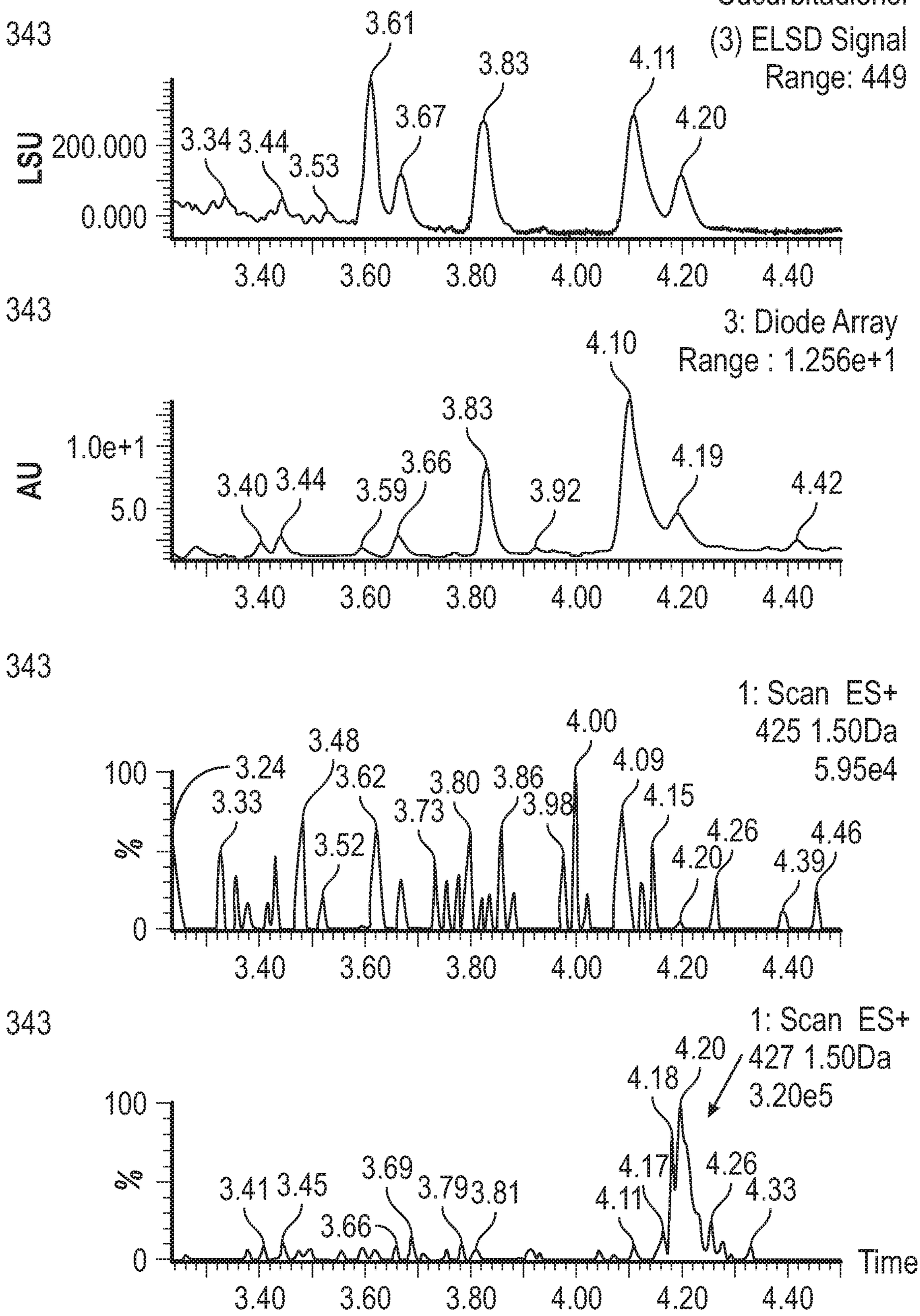

Cucurbitadienol
343
(3) ELSD Signal
Range: 449
LSU
200.000
0.000
3.34
3.44
3.53
3.61
3.67
3.83
4.11
4.20
3.40
3.60
3.80
4.00
4.20
4.40
343
3: Diode Array
Range : 1.256e+1
AU
1.0e+1
5.0
3.40
3.44
3.59
3.66
3.83
3.92
4.10
4.19
4.42
3.40
3.60
3.80
4.00
4.20
4.40
343
1: Scan ES+
425 1.50Da
5.95e4
%
100
0
3.24
3.33
3.48
3.52
3.62
3.73
3.80
3.86
3.98
4.00
4.09
4.15
4.20
4.26
4.39
4.46
3.40
3.60
3.80
4.00
4.20
4.40
343
1: Scan ES+
427 1.50Da
3.20e5
%
100
0
3.41
3.45
3.66
3.69
3.79
3.81
4.11
4.17
4.18
4.20
4.26
4.33
Time
3.40
3.60
3.80
4.00
4.20
4.40

FIG. 23

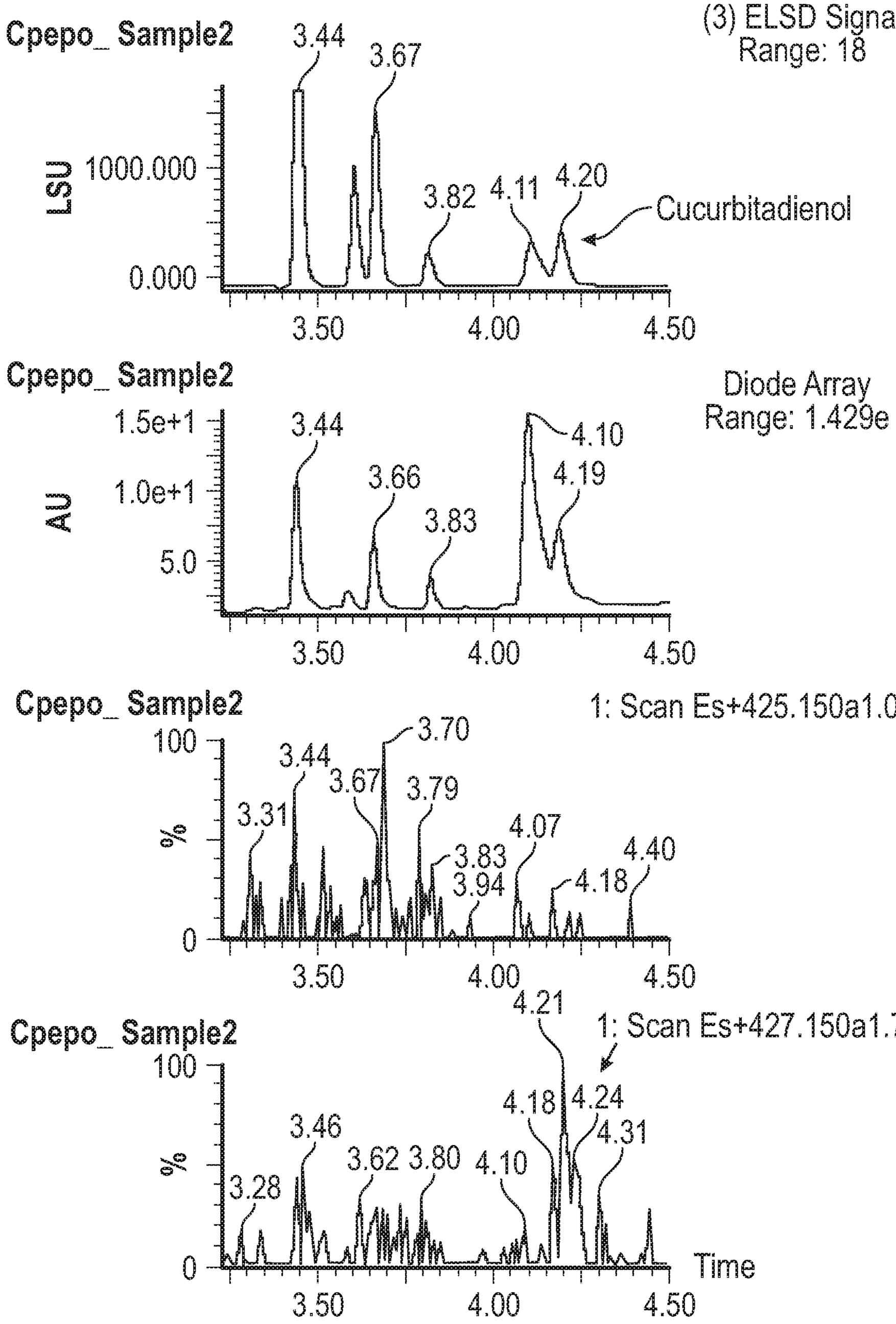

Cpepo_ Sample2
(3) ELSD Signal
Range: 18
LSU
1000.000
0.000
3.44
3.67
3.82
4.11
4.20
Cucurbitadienol
3.50
4.00
4.50
Cpepo_ Sample2
Diode Array
Range: 1.429e
AU
1.5e+1
1.0e+1
5.0
3.44
3.66
3.83
4.10
4.19
3.50
4.00
4.50
Cpepo_ Sample2
1: Scan Es+425.150a1.07
%
100
0
3.31
3.44
3.67
3.70
3.79
3.83
3.94
4.07
4.18
4.40
3.50
4.00
4.50
Cpepo_ Sample2
1: Scan Es+427.150a1.71
%
100
0
3.28
3.46
3.62
3.80
4.10
4.18
4.21
4.24
4.31
Time
3.50
4.00
4.50

FIG. 24

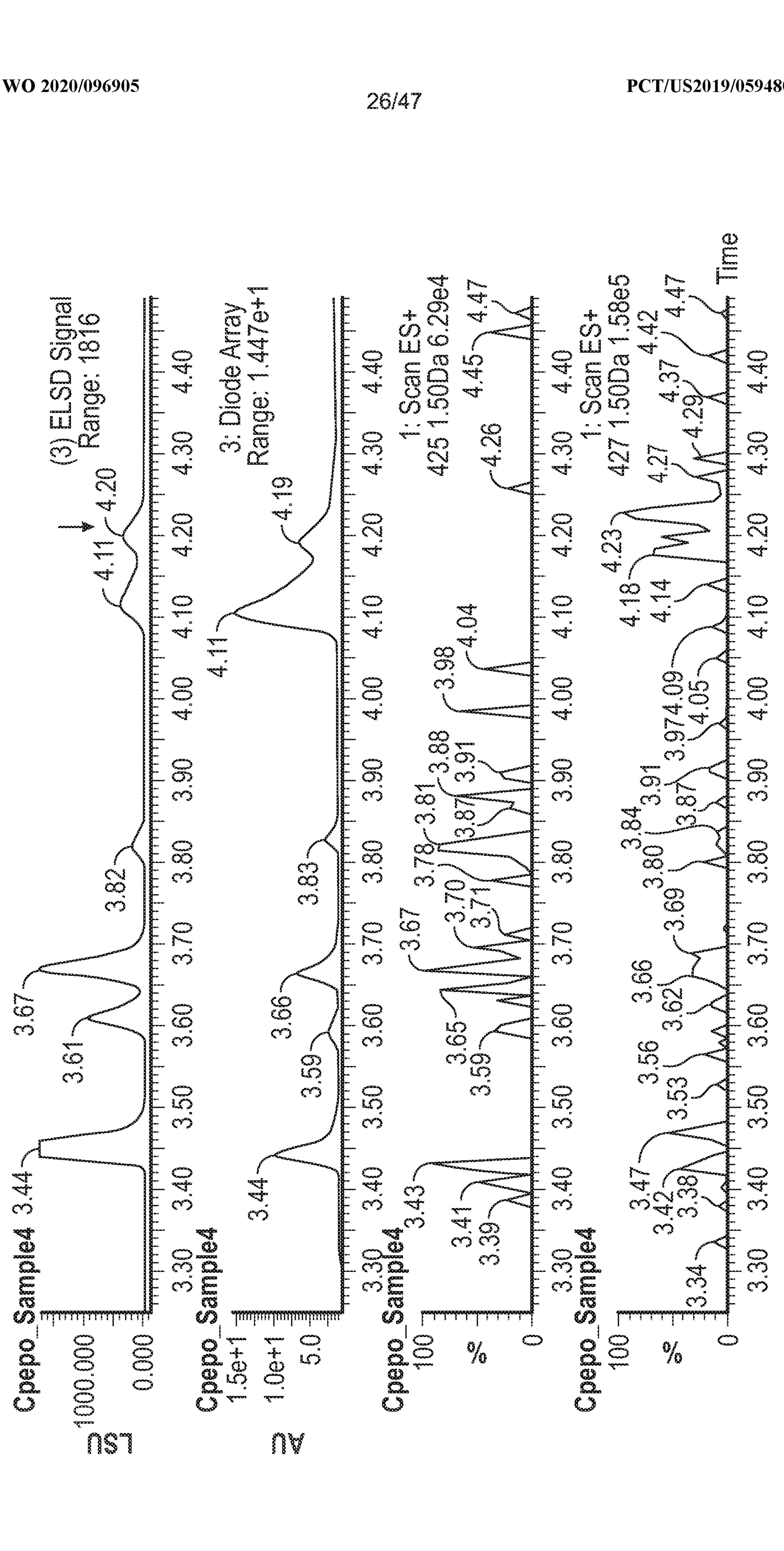

Cpepo_Sample4
ns1
1000.000
0.000
3.44
3.67
3.61
3.82
av
1.5e+1
1.0e+1
5.0
3.59
3.66
3.83
%
100
0
3.43
3.41
3.39
3.65
3.59
3.67
3.78
3.81
3.88
3.70
3.71
3.87
3.91
3.34
3.38
3.42
3.47
3.53
3.56
3.62
3.66
3.69
3.80
3.84
3.87
3.91
3.97
3.30
3.40
3.50
3.60
3.70
3.80
3.90
4.00
4.10
4.20
4.30
Time
4.11
4.20
4.19
3.98
4.04
4.26
4.23
4.18
4.14
4.27
4.29
4.37
4.42
4.45
4.47
4.09
4.05
1: Scan ES+
425 1.50Da 6.29e4
427 1.50Da 1.58e5
3: Diode Array
Range: 1.447e+1
(3) ELSD Signal
Range: 1816

FIG. 25

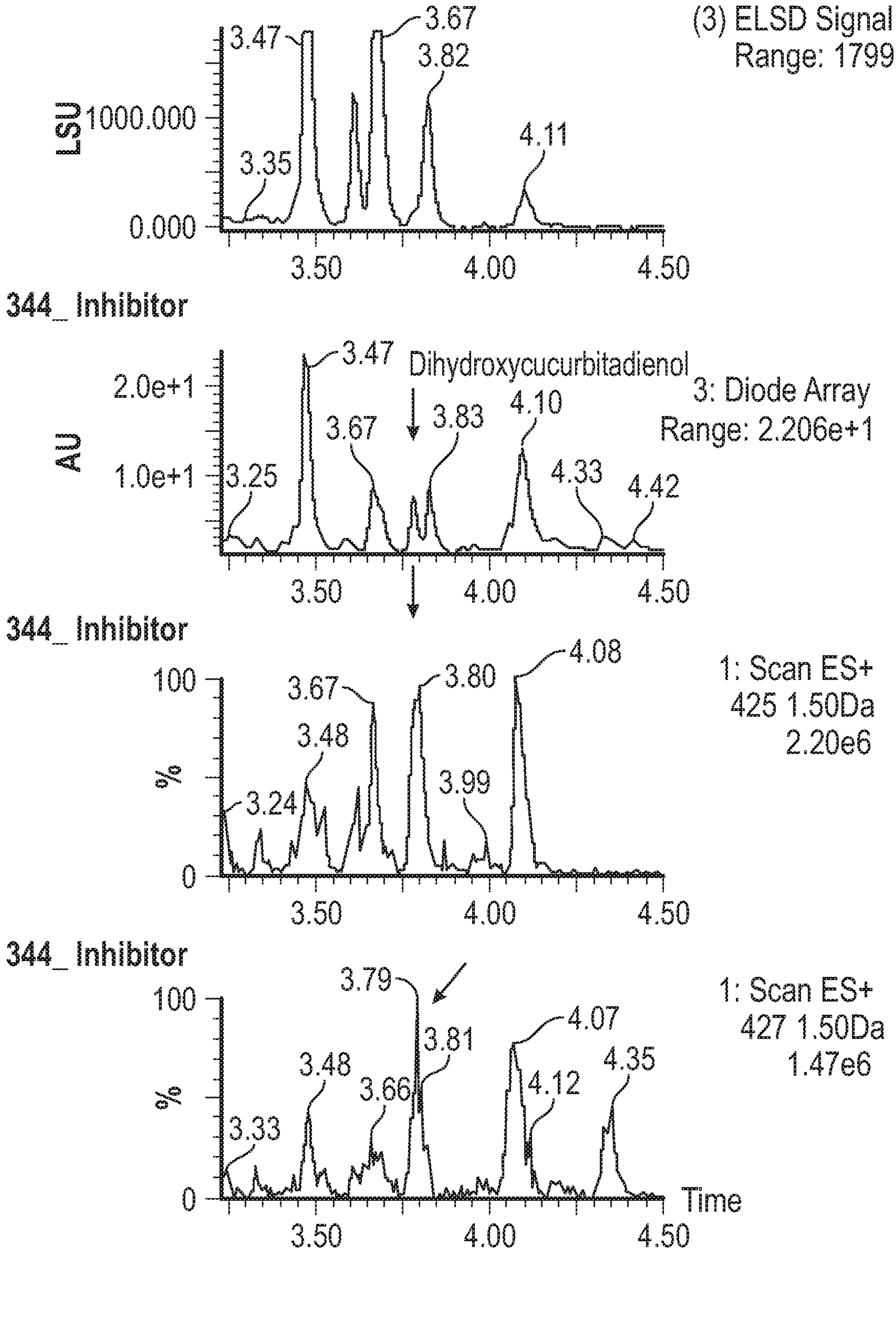

344_ Inhibitor
(3) ELSD Signal
Range: 1799
LSU
1000.000
0.000
3.47
3.67
3.82
3.35
4.11
3.50
4.00
4.50
344_ Inhibitor
3: Diode Array
Range: 2.206e+1
AU
2.0e+1
1.0e+1
3.47
Dihydroxycucurbitadienol
3.67
3.83
4.10
3.25
4.33
4.42
3.50
4.00
4.50
344_ Inhibitor
1: Scan ES+
425 1.50Da
2.20e6
100
%
0
3.67
3.80
4.08
3.48
3.24
3.99
3.50
4.00
4.50
344_ Inhibitor
1: Scan ES+
427 1.50Da
1.47e6
100
%
0
3.79
3.81
4.07
3.48
3.66
4.12
4.35
3.33
Time
3.50
4.00
4.50

FIG. 26

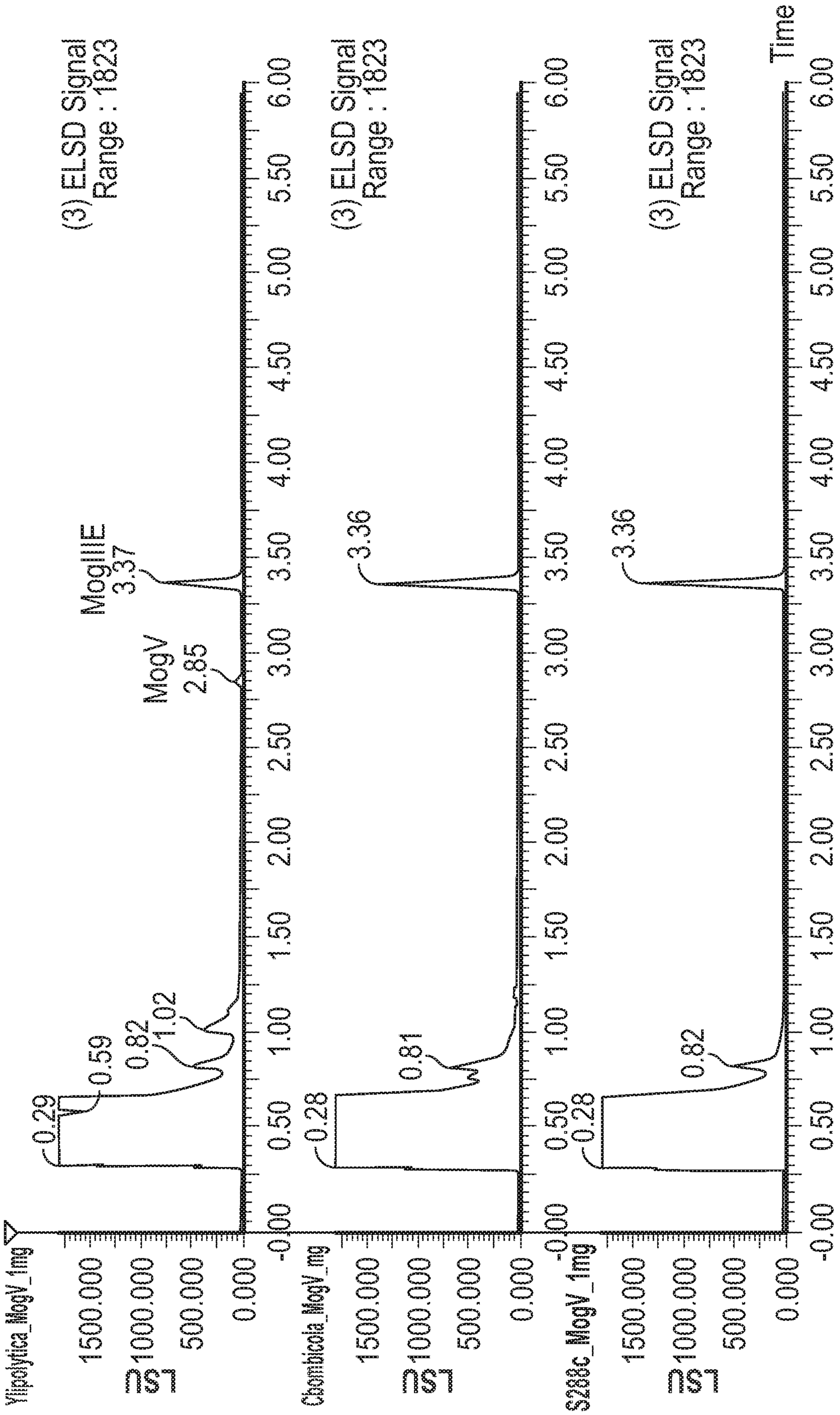

(3) ELSD Signal
Range : 1823
MogIIE
3.37
MogV
2.85
0.29
0.59
0.82
1.02
3.36
0.81
0.28
0.82
Time
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00
-0.00
0.000
500.000
1000.000
1500.000
nsl
Yllipolytica_MogV_1mg
Cbombicola_MogV_mg
S288c_MogV_1mg

FIG. 27A

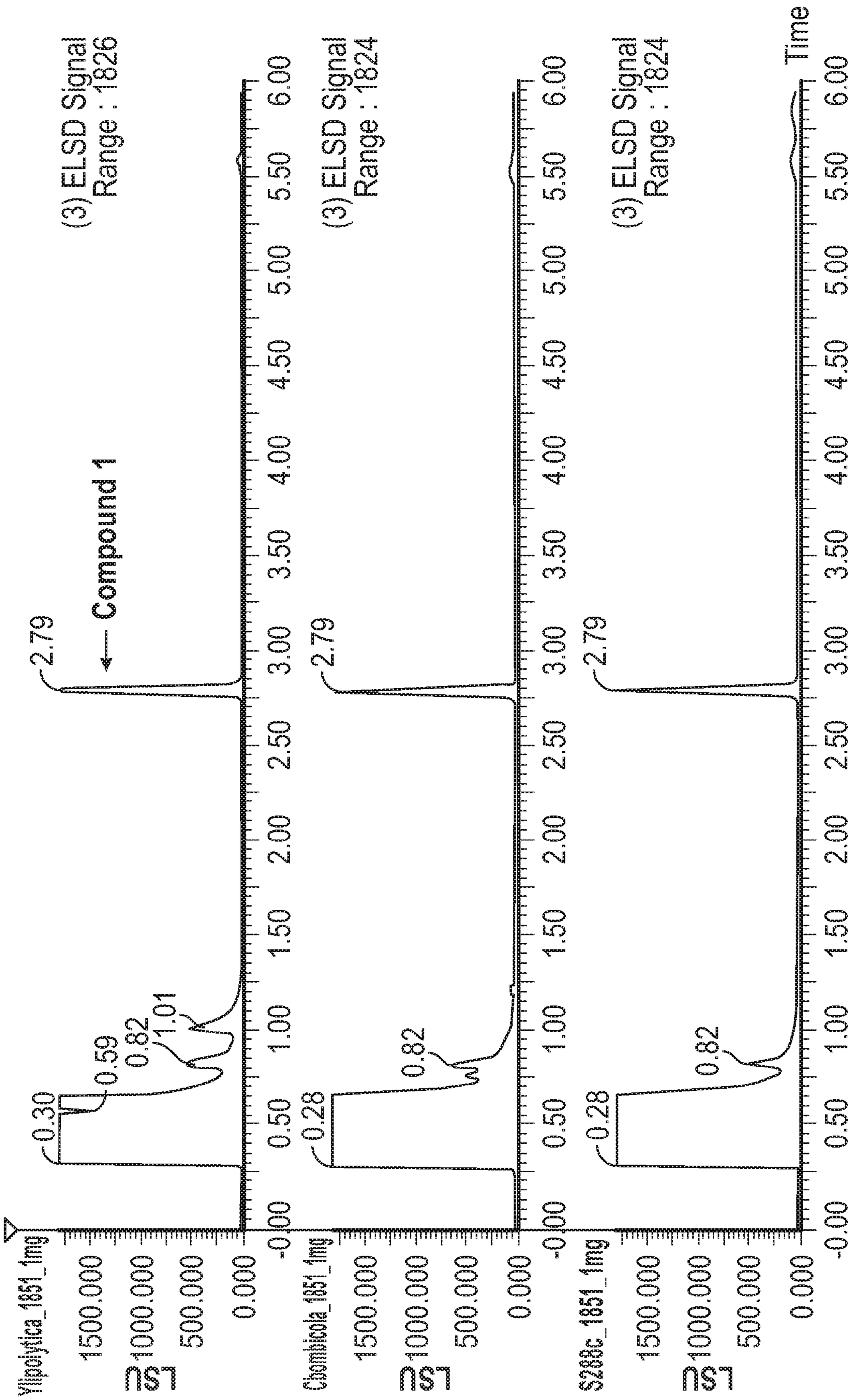

Time
(3) ELSD Signal
Range : 1826
(3) ELSD Signal
Range : 1824
(3) ELSD Signal
Range : 1824
(3) ELSD Signal
Range : 1824
Compound 1
2.79
0.30
0.59
0.82
1.01
0.28
0.82
0.28
0.82
Ylipolytica_1851_1mg
Chombicola_1851_1mg
S288c_1851_1mg
nsi
1500.000
1000.000
500.000
0.000
-0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00

FIG. 27B

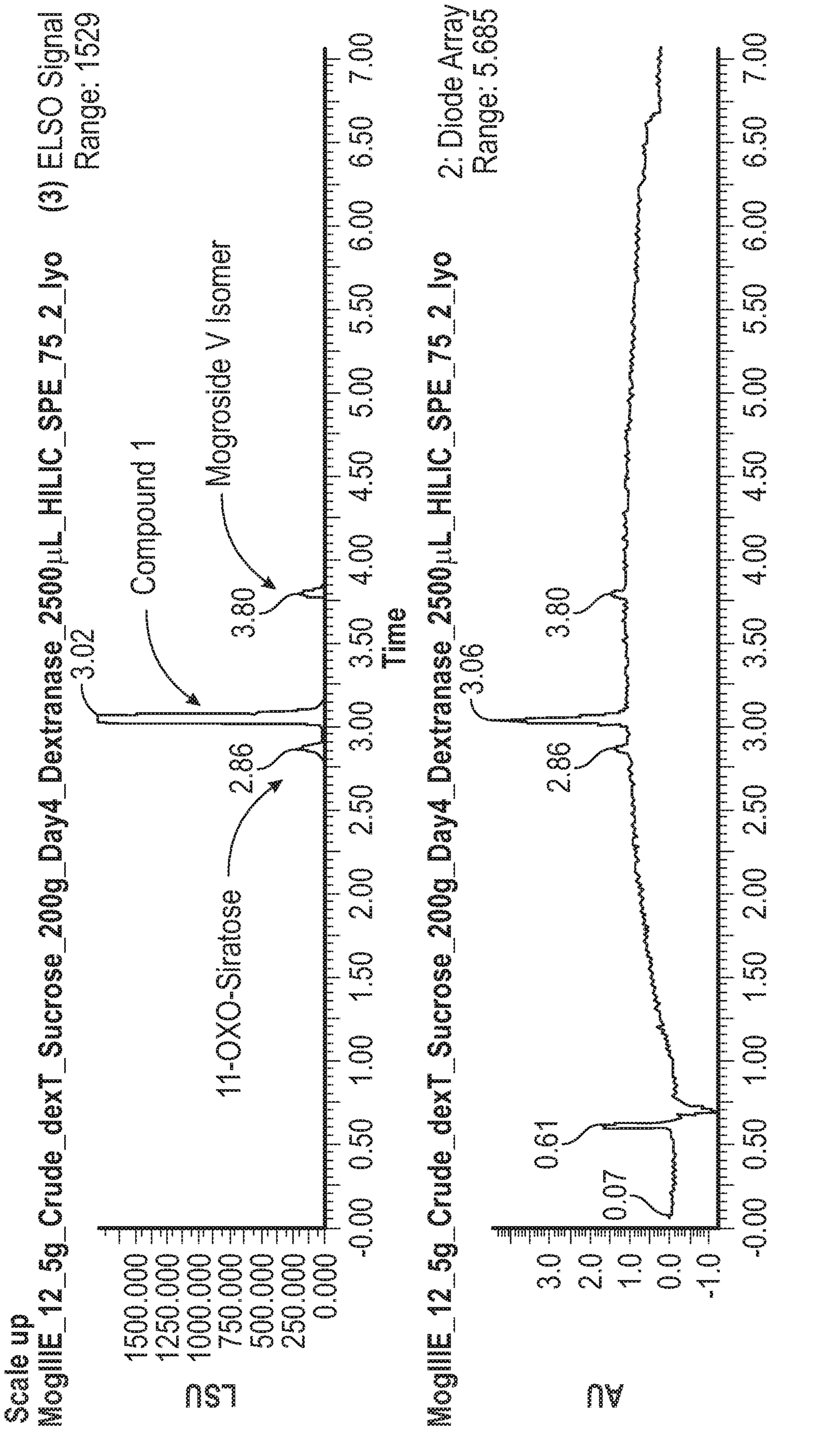

Scale up
MogIIE_12_5g_Crude_dexT_Sucrose_200g_Day4_Dextranase_2500µL_HILIC_SPE_75_2_lyo (3) ELSO Signal
Range: 1529
MogIIE_12_5g_Crude_dexT_Sucrose_200g_Day4_Dextranase_2500µL_HILIC_SPE_75_2_lyo 2: Diode Array
Range: 5.685
11-OXO-Siratose
2.86
Compound 1
3.02
Mogroside V Isomer
3.80
3.06
0.61
0.07
Time
ELSU
AU

FIG. 28

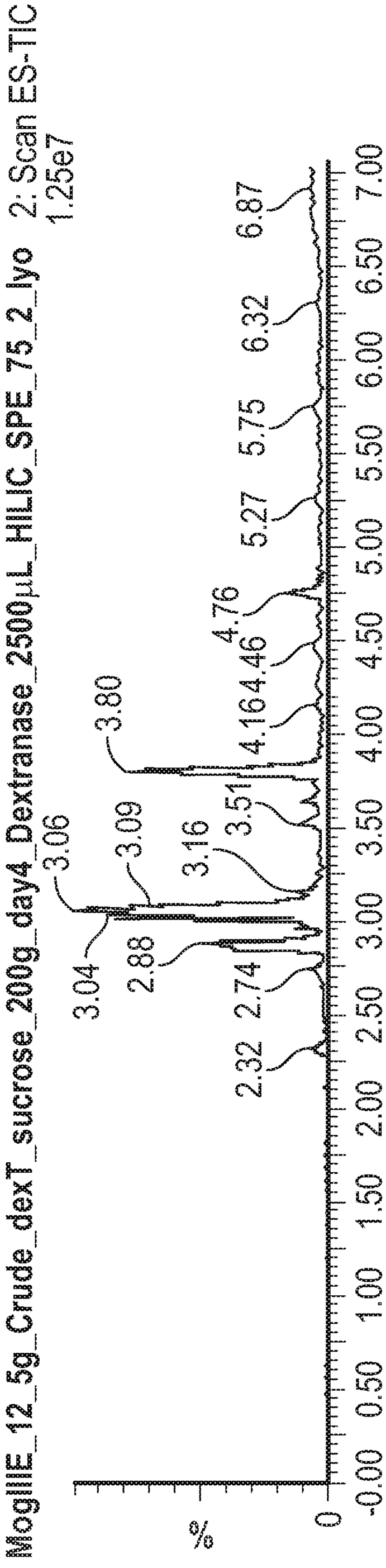


FIG. 28
(Continued)

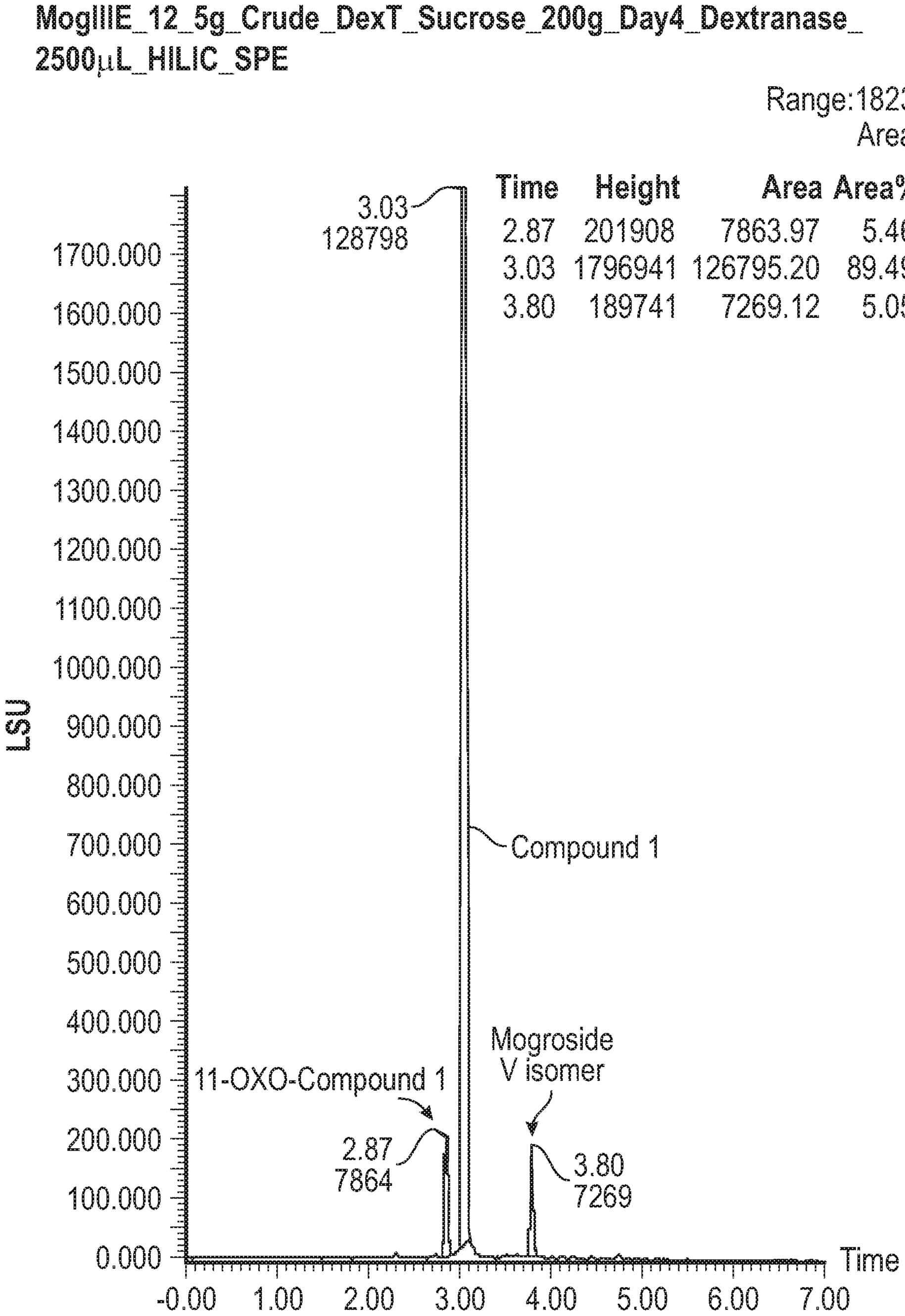

MogIIIE_12_5g_Crude_DexT_Sucrose_200g_Day4_Dextranase_2500µL_HILIC_SPE
Range:1823
Area
Time Height Area Area%
2.87 201908 7863.97 5.46
3.03 1796941 126795.20 89.49
3.80 189741 7269.12 5.05
3.03
128798
LSU
1700.000
1600.000
1500.000
1400.000
1300.000
1200.000
1100.000
1000.000
900.000
800.000
700.000
600.000
500.000
400.000
300.000
200.000
100.000
0.000
Compound 1
Mogroside V isomer
11-OXO-Compound 1
2.87
7864
3.80
7269
Time
-0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00

FIG. 29

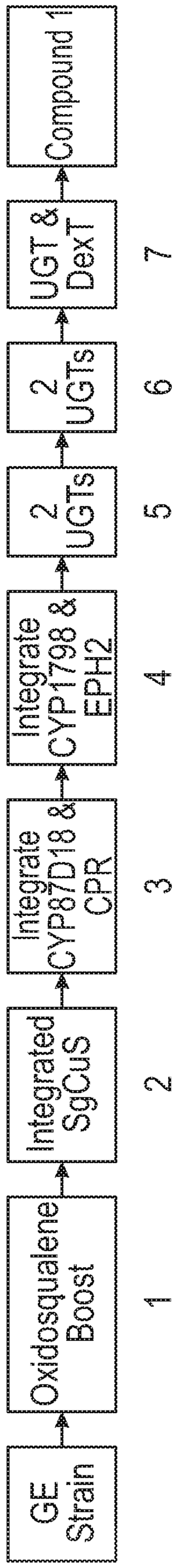

GE Strain
Oxidosqualene Boost
Integrated SgCuS
Integrate CYP87D18 & CPR
Integrate CYP1798 & EPH2
2 UGTs
2 UGTs
UGT & DexT
Compound 1
1
2
3
4
5
6
7

FIG. 30

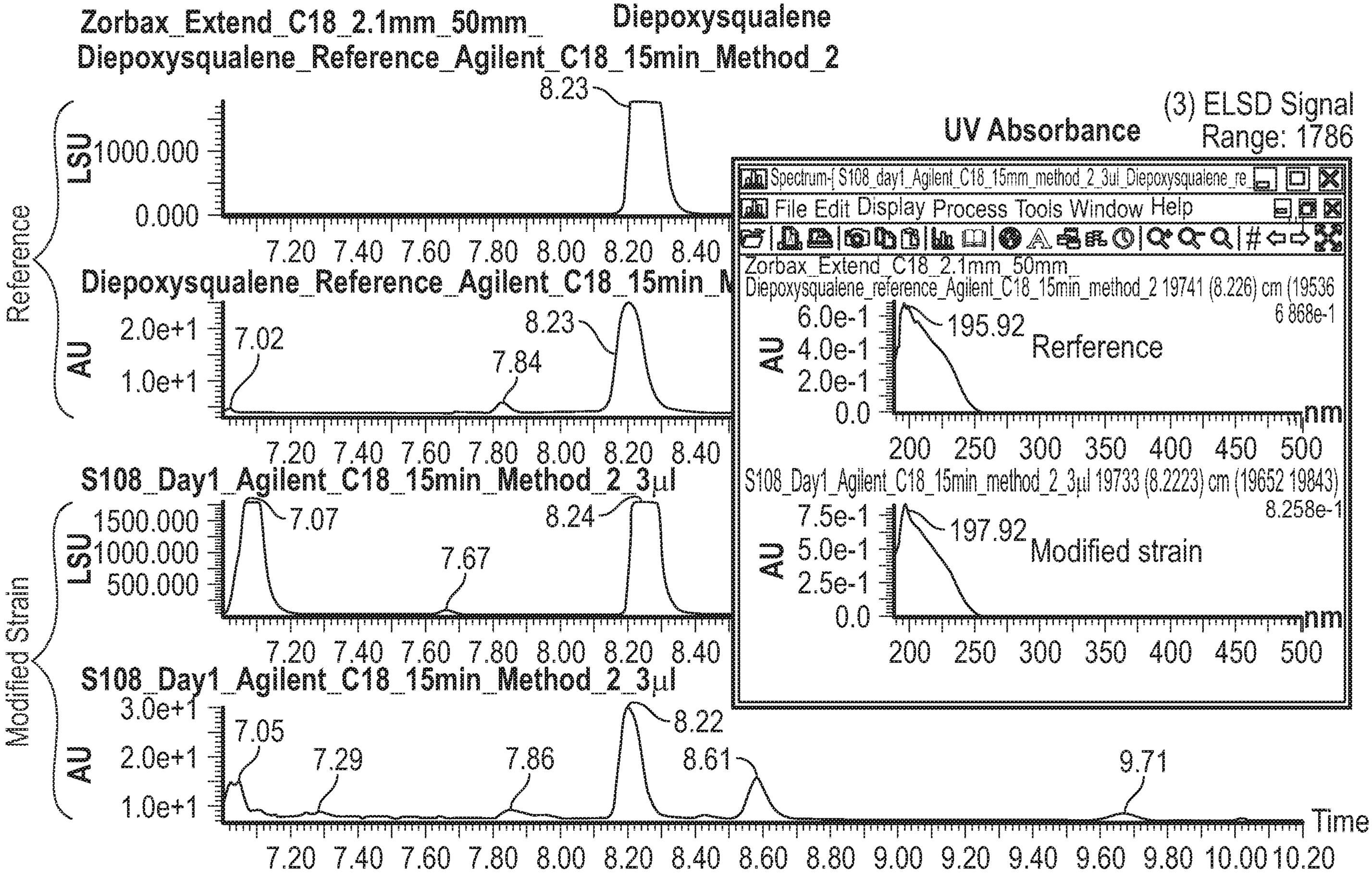

Zorbax_Extend_C18_2.1mm_50mm_
Diepoxysqualene_Reference_Agilent_C18_15min_Method_2
Diepoxysqualene
8.23
LSU
1000.000
0.000
7.20 7.40 7.60 7.80 8.00 8.20 8.40
Reference
Diepoxysqualene_Reference_Agilent_C18_15min_M
AU
2.0e+1
1.0e+1
7.02
7.84
8.23
7.20 7.40 7.60 7.80 8.00 8.20 8.40
S108_Day1_Agilent_C18_15min_Method_2_3µl
1500.000
1000.000
500.000
7.07
7.67
8.24
7.20 7.40 7.60 7.80 8.00 8.20 8.40
Modified Strain
S108_Day1_Agilent_C18_15min_Method_2_3µl
3.0e+1
2.0e+1
1.0e+1
7.05
7.29
7.86
8.22
8.61
9.71
Time
7.20 7.40 7.60 7.80 8.00 8.20 8.40 8.60 8.80 9.00 9.20 9.40 9.60 9.80 10.00 10.20
UV Absorbance
(3) ELSD Signal
Range: 1786
Spectrum-[S108_day1_Agilent_C18_15mm_method_2_3ul_Diepoxysqualene_re
File Edit Display Process Tools Window Help
Zorbax_Extend_C18_2.1mm_50mm_
Diepoxysqualene_reference_Agilent_C18_15min_method_2 19741 (8.226) cm (19536
6 868e-1
6.0e-1
4.0e-1
2.0e-1
0.0
195.92
Rerference
nm
200 250 300 350 400 450 500
S108_Day1_Agilent_C18_15min_method_2_3µl 19733 (8.2223) cm (19652 19843)
8.258e-1
7.5e-1
5.0e-1
2.5e-1
0.0
197.92
Modified strain
nm
200 250 300 350 400 450 500

FIG. 31

C Melo

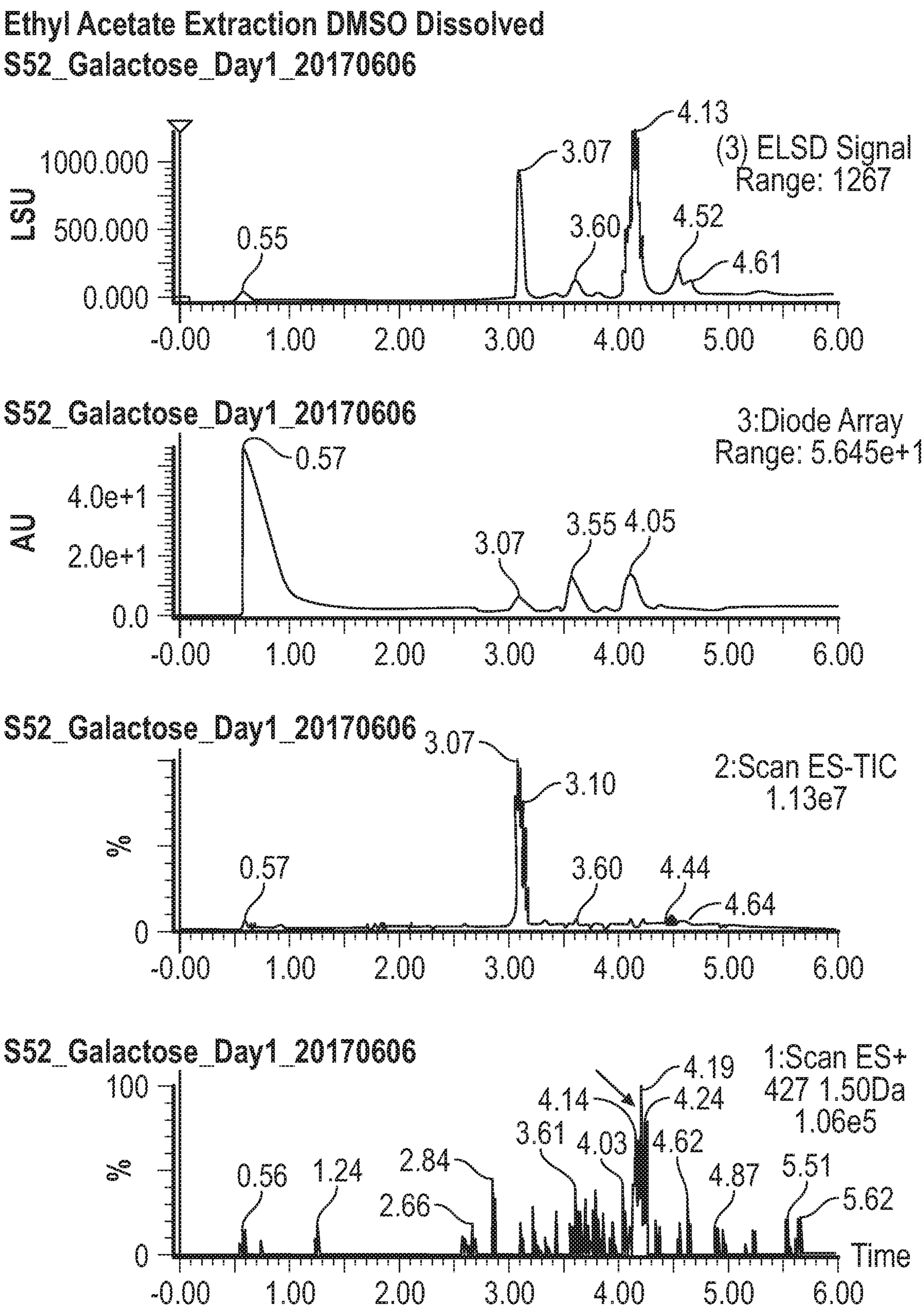

Ethyl Acetate Extraction DMSO Dissolved
S52_Galactose_Day1_20170606
LSU
1000.000
500.000
0.000
0.55
3.07
3.60
4.13
4.52
4.61
(3) ELSD Signal
Range: 1267
-0.00
1.00
2.00
3.00
4.00
5.00
6.00
S52_Galactose_Day1_20170606
AU
4.0e+1
2.0e+1
0.0
0.57
3.07
3.55
4.05
3:Diode Array
Range: 5.645e+1
S52_Galactose_Day1_20170606
%
0
0.57
3.07
3.10
3.60
4.44
4.64
2:Scan ES-TIC
1.13e7
S52_Galactose_Day1_20170606
100
%
0
0.56
1.24
2.84
2.66
3.61
4.14
4.03
4.19
4.24
4.62
4.87
5.51
5.62
1:Scan ES+
427 1.50Da
1.06e5
Time

FIG. 32

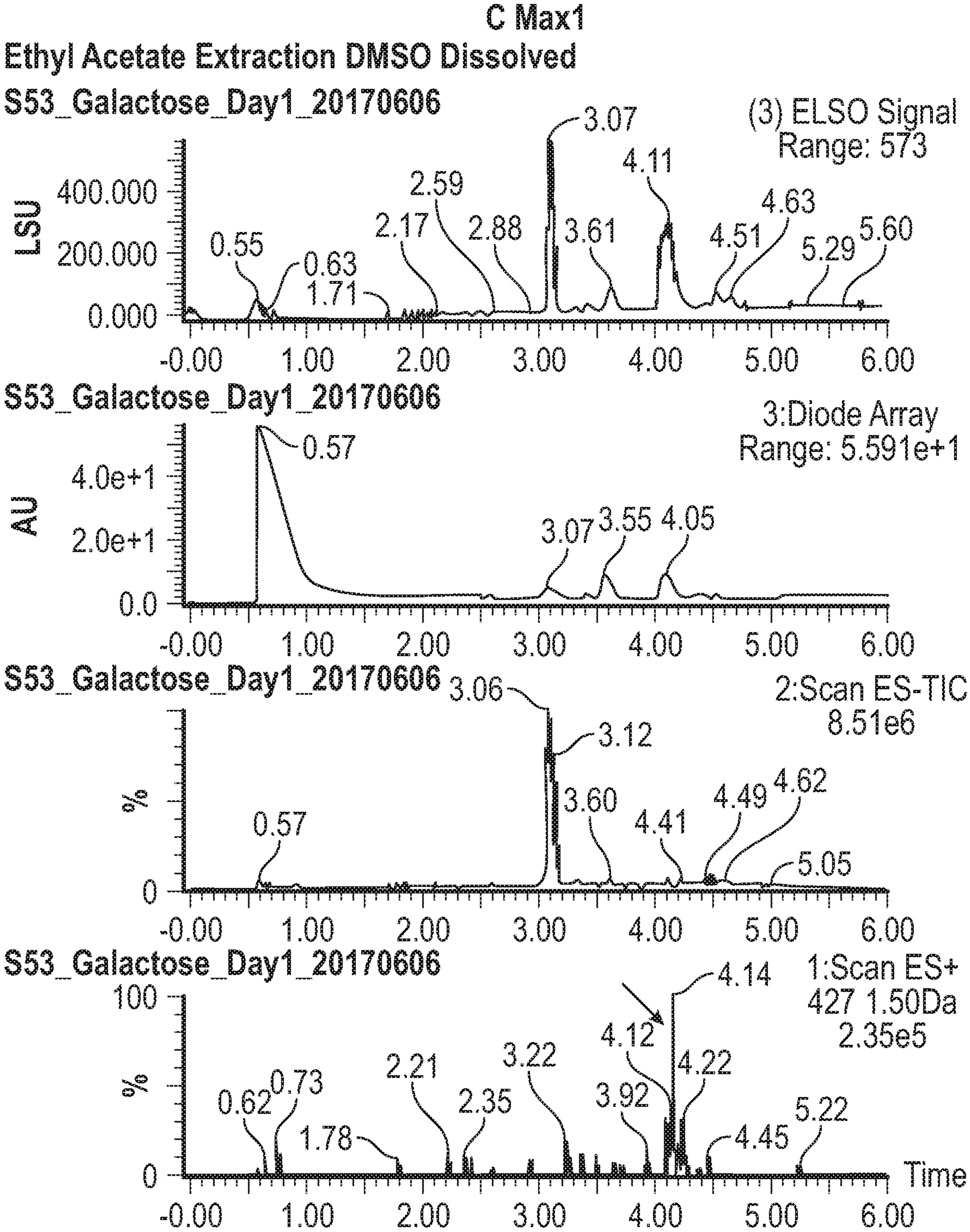


FIG. 32
(Continued)

PSX Native

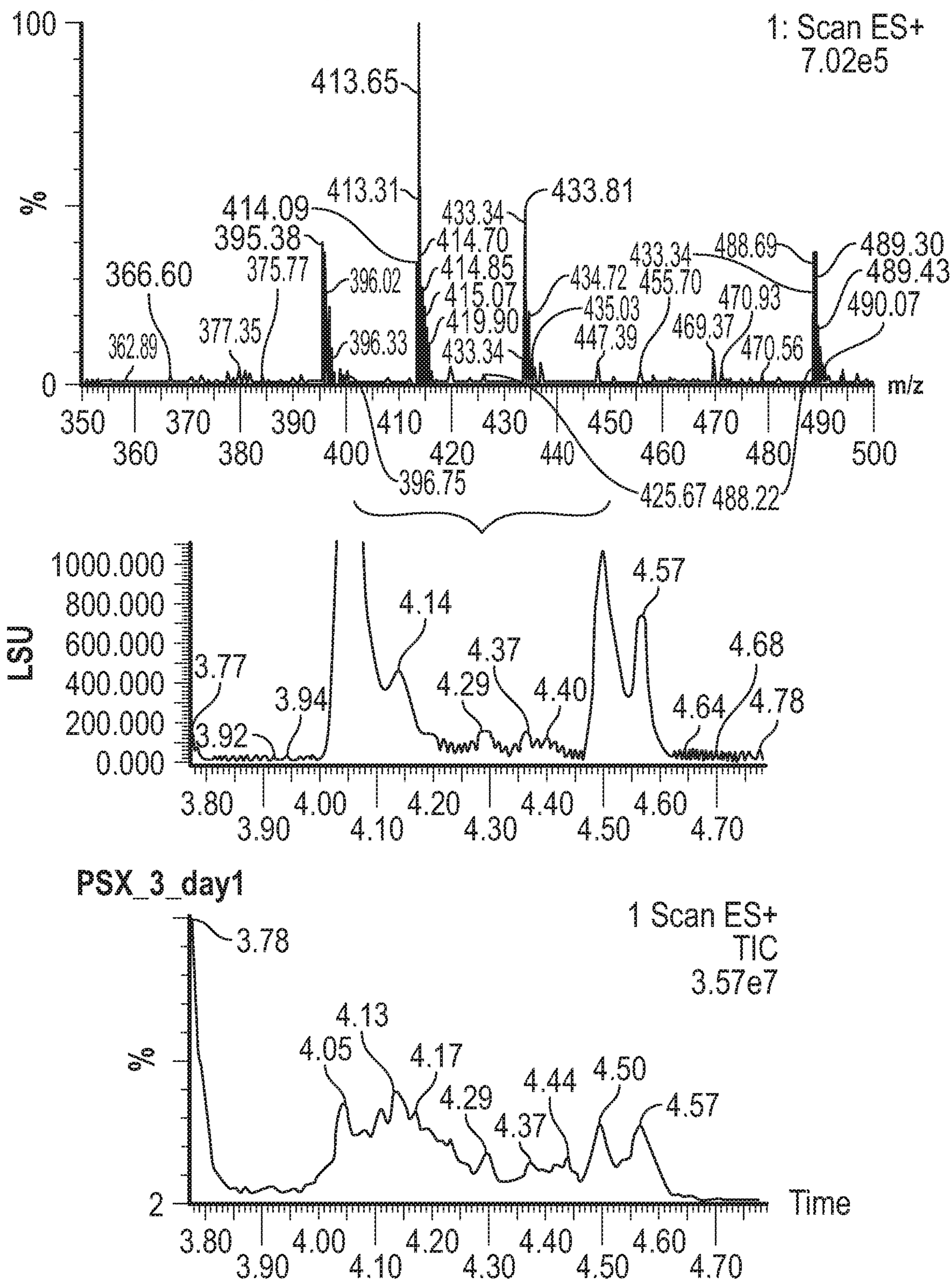


FIG. 33

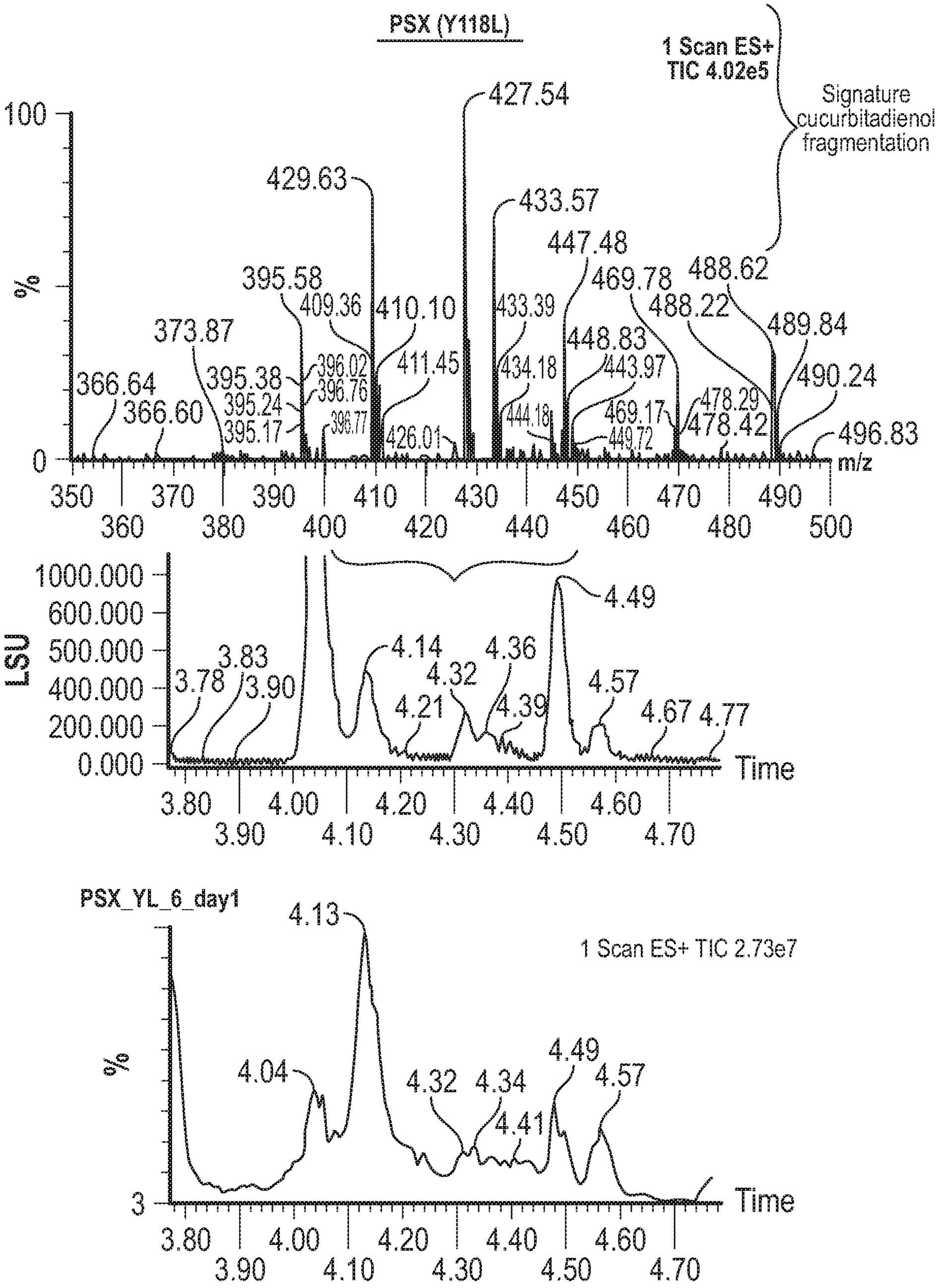


FIG. 33
(Continued)

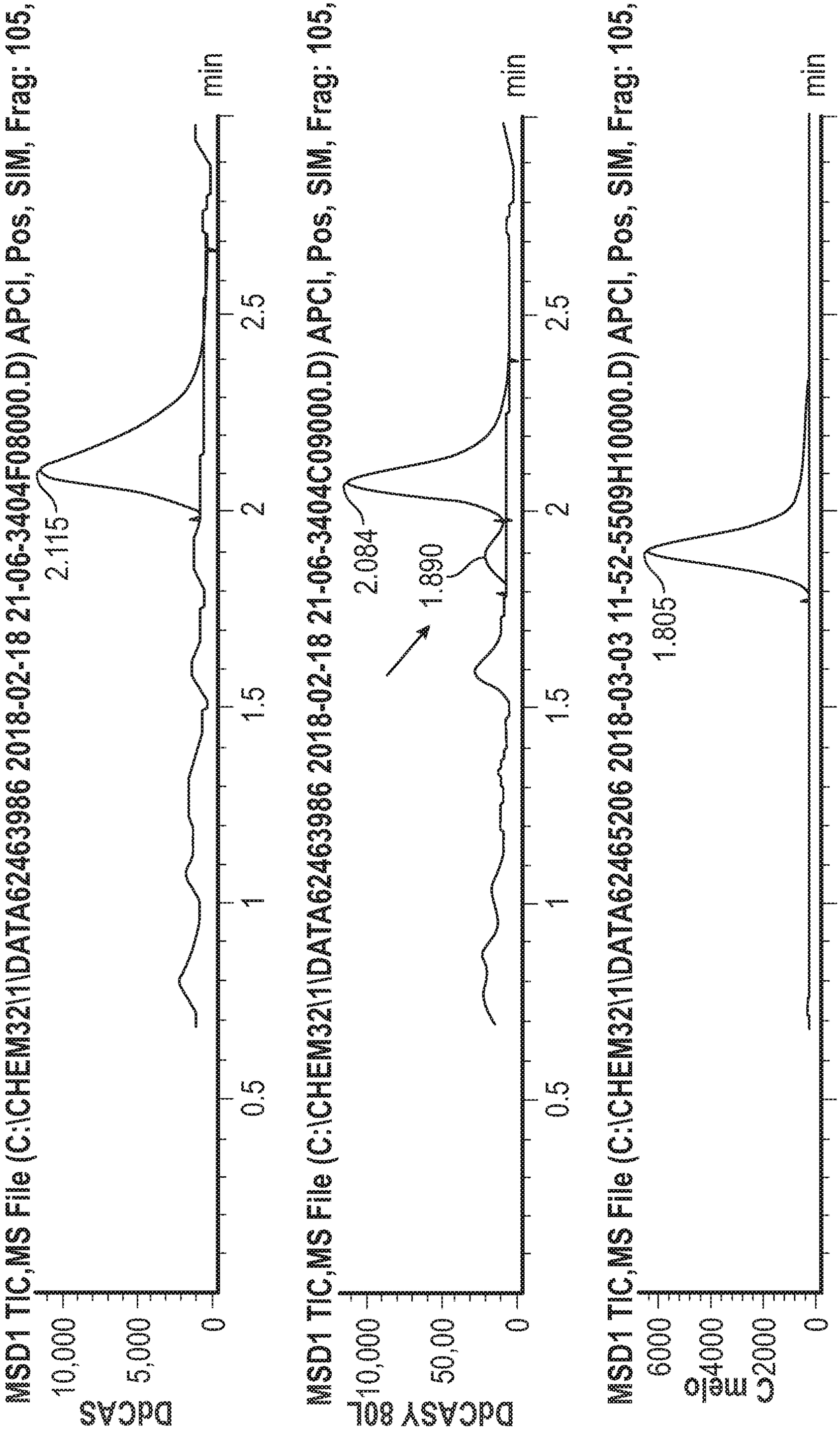

MSD1 TIC,MS File (C:\CHEM32\1\DATA\246398 6 2018-02-18 21-06-3404F08000.D) APCI, Pos, SIM, Frag: 105,
DaCAS
10,000
5,000
0
0.5
1
1.5
2
2.5
min
2.115
MSD1 TIC,MS File (C:\CHEM32\1\DATA\246398 3 2018-02-18 21-06-3404C09000.D) APCI, Pos, SIM, Frag: 105,
DaCASY 80L
10,000
50,00
0
0.5
1
1.5
2
2.5
min
2.084
1.890
MSD1 TIC,MS File (C:\CHEM32\1\DATA\246520 3 2018-03-03 11-52-5509H10000.D) APCI, Pos, SIM, Frag: 105,
6000
4000
2000
0
0.5
1
1.5
2
2.5
min
1.805

FIG. 34

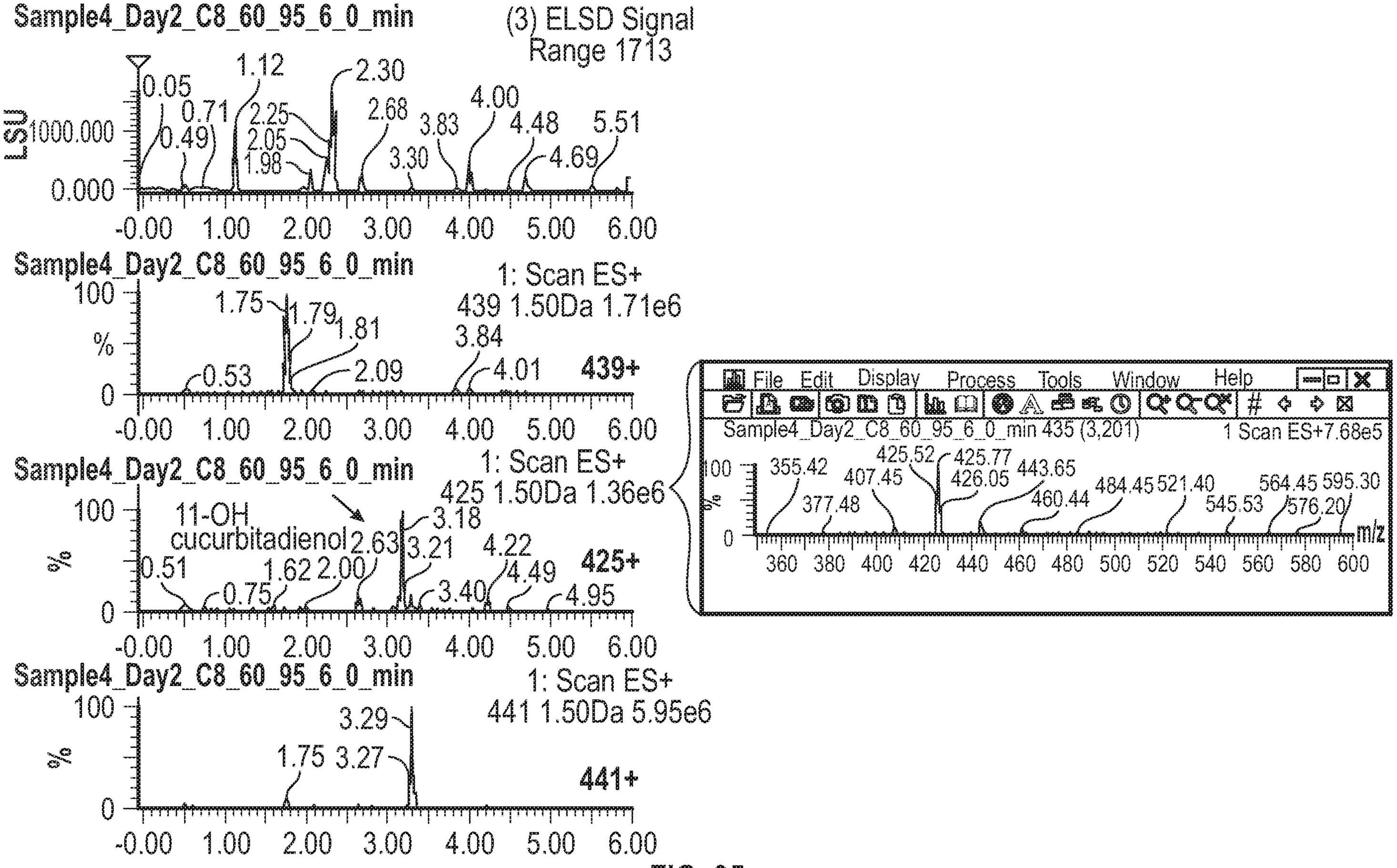

Sample4_Day2_C8_60_95_6_0_min
(3) ELSD Signal
Range 1713
LSU
1000.000
0.000
0.05
0.49
0.71
1.12
2.25
2.05
1.98
2.30
2.68
3.30
3.83
4.00
4.48
4.69
5.51
-0.00 1.00 2.00 3.00 4.00 5.00 6.00
Sample4_Day2_C8_60_95_6_0_min
1: Scan ES+
439 1.50Da 1.71e6
100
%
0
1.75
1.79
1.81
0.53
2.09
3.84
4.01
439+
-0.00 1.00 2.00 3.00 4.00 5.00 6.00
Sample4_Day2_C8_60_95_6_0_min
1: Scan ES+
425 1.50Da 1.36e6
100
%
0
11-OH
cucurbitadienol
0.51
0.75
1.62
2.00
2.63
3.18
3.21
3.40
4.22
4.49
4.95
425+
-0.00 1.00 2.00 3.00 4.00 5.00 6.00
Sample4_Day2_C8_60_95_6_0_min
1: Scan ES+
441 1.50Da 5.95e6
100
%
0
1.75
3.27
3.29
441+
-0.00 1.00 2.00 3.00 4.00 5.00 6.00
File Edit Display Process Tools Window Help
Sample4_Day2_C8_60_95_6_0_min 435 (3,201)
1 Scan ES+7.68e5
100
%
0
355.42
377.48
407.45
425.52
425.77
426.05
443.65
460.44
484.45
521.40
545.53
564.45
576.20
595.30
m/z
360 380 400 420 440 460 480 500 520 540 560 580 600

FIG. 35

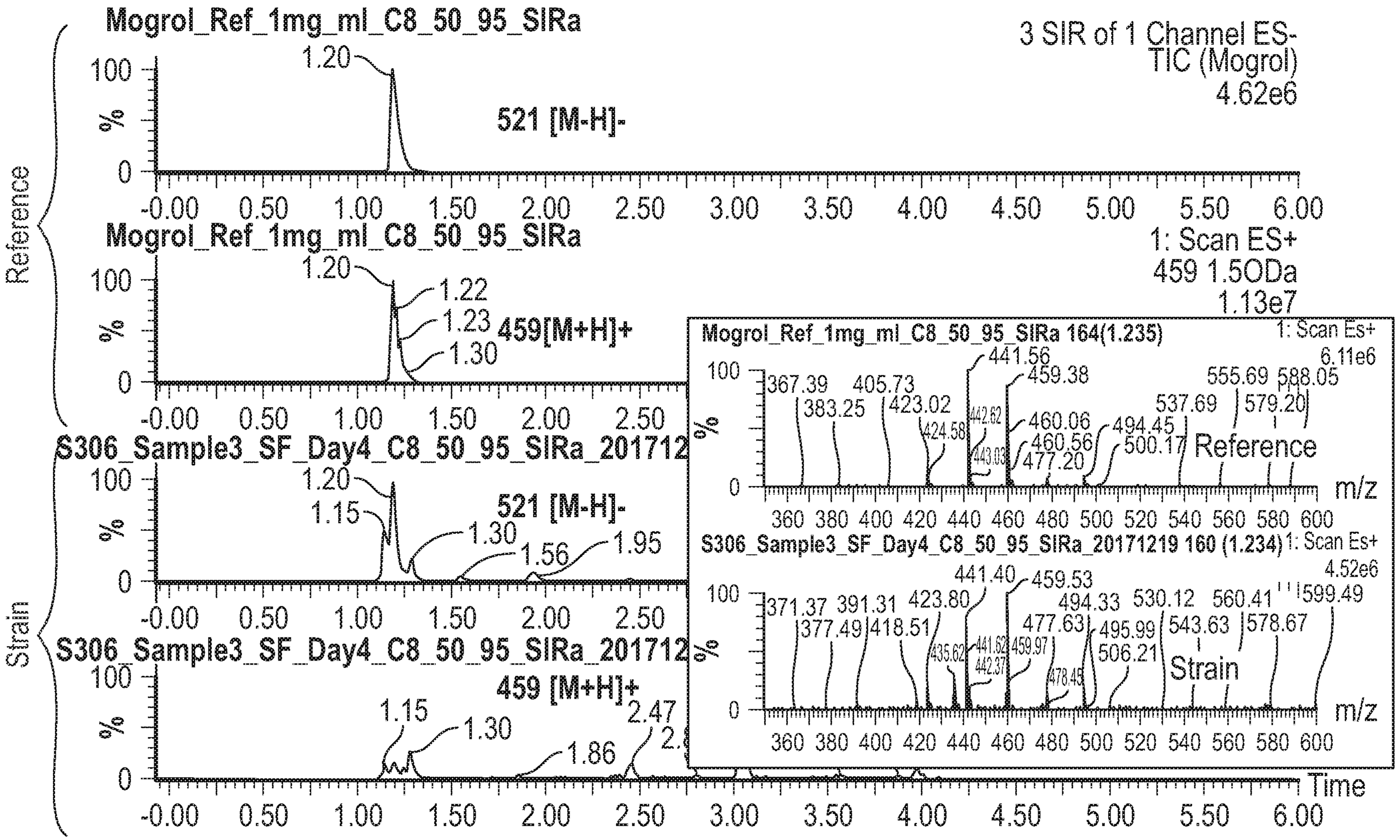

Reference
Mogrol_Ref_1mg_ml_C8_50_95_SIRa
3 SIR of 1 Channel ES-
TIC (Mogrol)
4.62e6
1.20
521 [M-H]-
1: Scan ES+
459 1.5ODa
1.13e7
Mogrol_Ref_1mg_ml_C8_50_95_SIRa
1.20
1.22
1.23
459[M+H]+
1.30
Mogrol_Ref_1mg_ml_C8_50_95_SIRa 164(1.235)
1: Scan Es+
6.11e6
441.56
459.38
367.39
405.73
383.25
423.02
555.69
588.05
537.69
579.20
442.62
424.58
460.06
494.45
443.03
460.56
500.17
477.20
Reference
m/z
S306_Sample3_SF_Day4_C8_50_95_SIRa_201712
521 [M-H]-
1.20
1.15
1.30
1.56
1.95
S306_Sample3_SF_Day4_C8_50_95_SIRa_20171219 160 (1.234)
1: Scan Es+
4.52e6
441.40
459.53
371.37
391.31
423.80
494.33
530.12
560.41
599.49
377.49
418.51
477.63
495.99
543.63
578.67
435.62
441.62
459.97
442.37
506.21
478.45
Strain
m/z
Strain
S306_Sample3_SF_Day4_C8_50_95_SIRa_201712
459 [M+H]+
1.15
1.30
2.47
1.86
Time
-0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00
%
100
0
360
380
400
420
440
460
480
500
520
540
560
580
600

FIG. 36

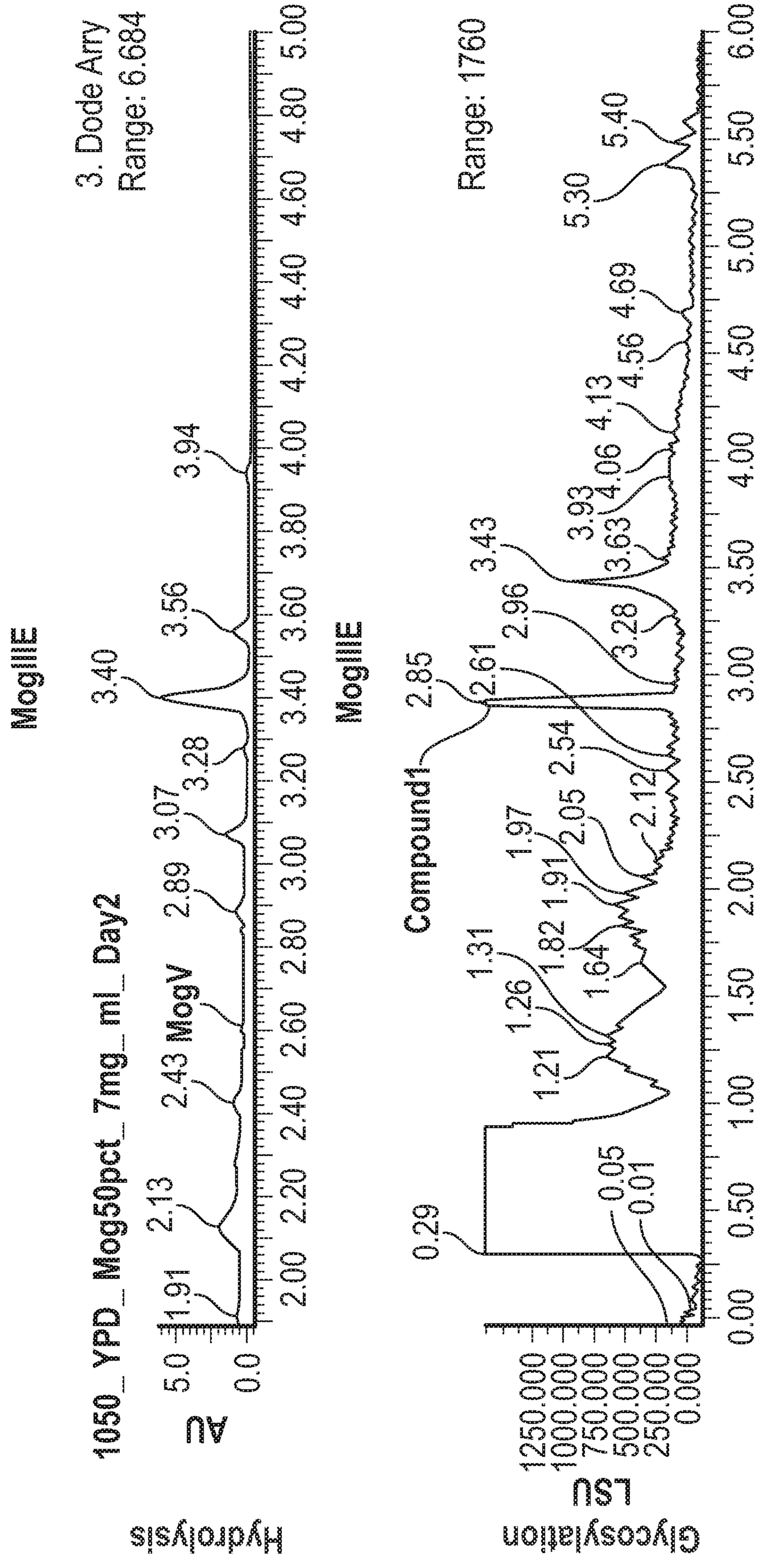

3. Dode Arry
Range: 6.684
MogIIE
1050_YPD_Mog50pct_7mg_ml_Day2
2.43 MogV
AU
Hydrolysis
Range: 1760
MogIIE
Compound1
LSU
Glycosylation

FIG. 37

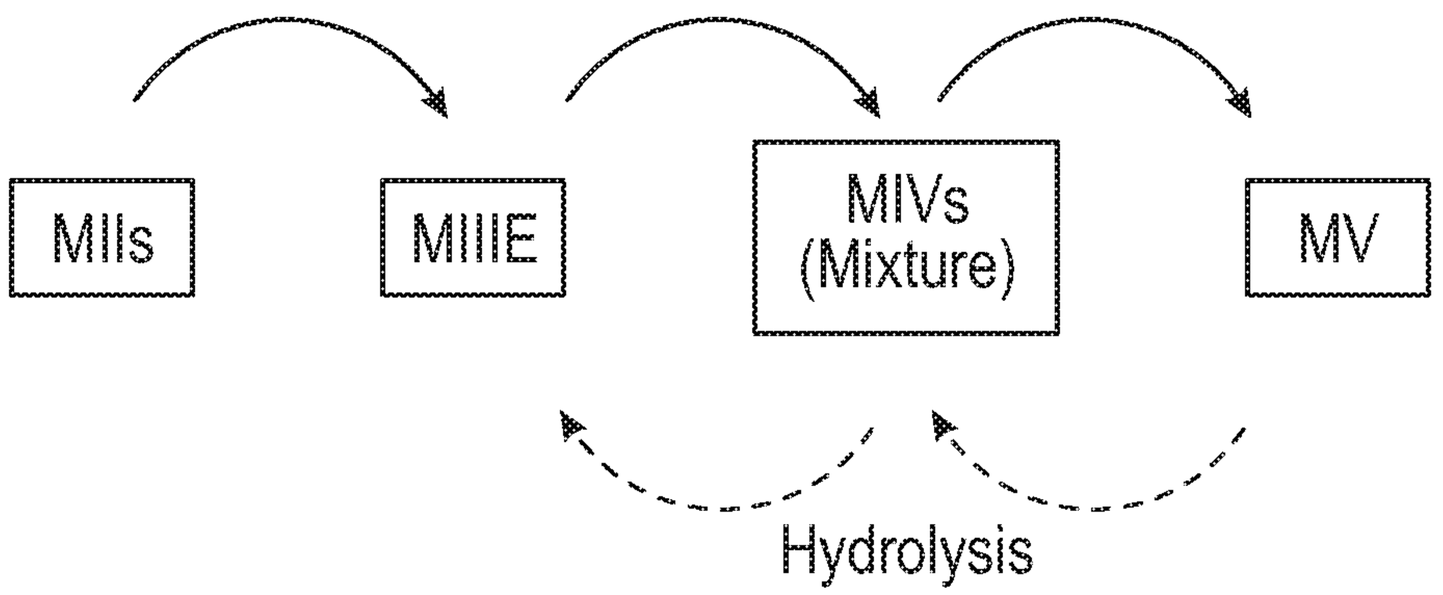

MIIs
MIIIE
MIVs
(Mixture)
MV
Hydrolysis

FIG. 38

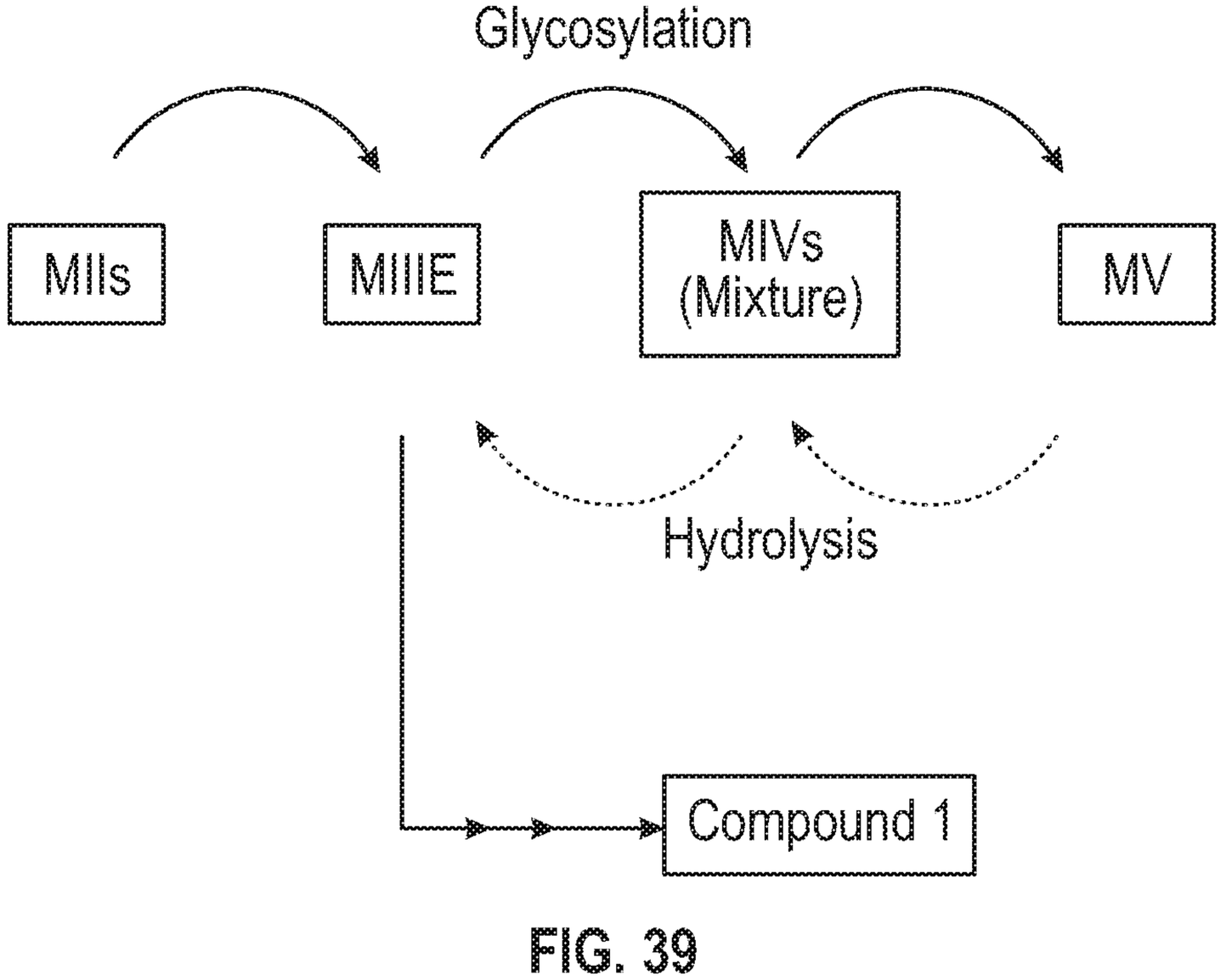

Glycosylation
MIIs
MIIIE
MIVs
(Mixture)
MV
Hydrolysis
Compound 1

FIG. 39

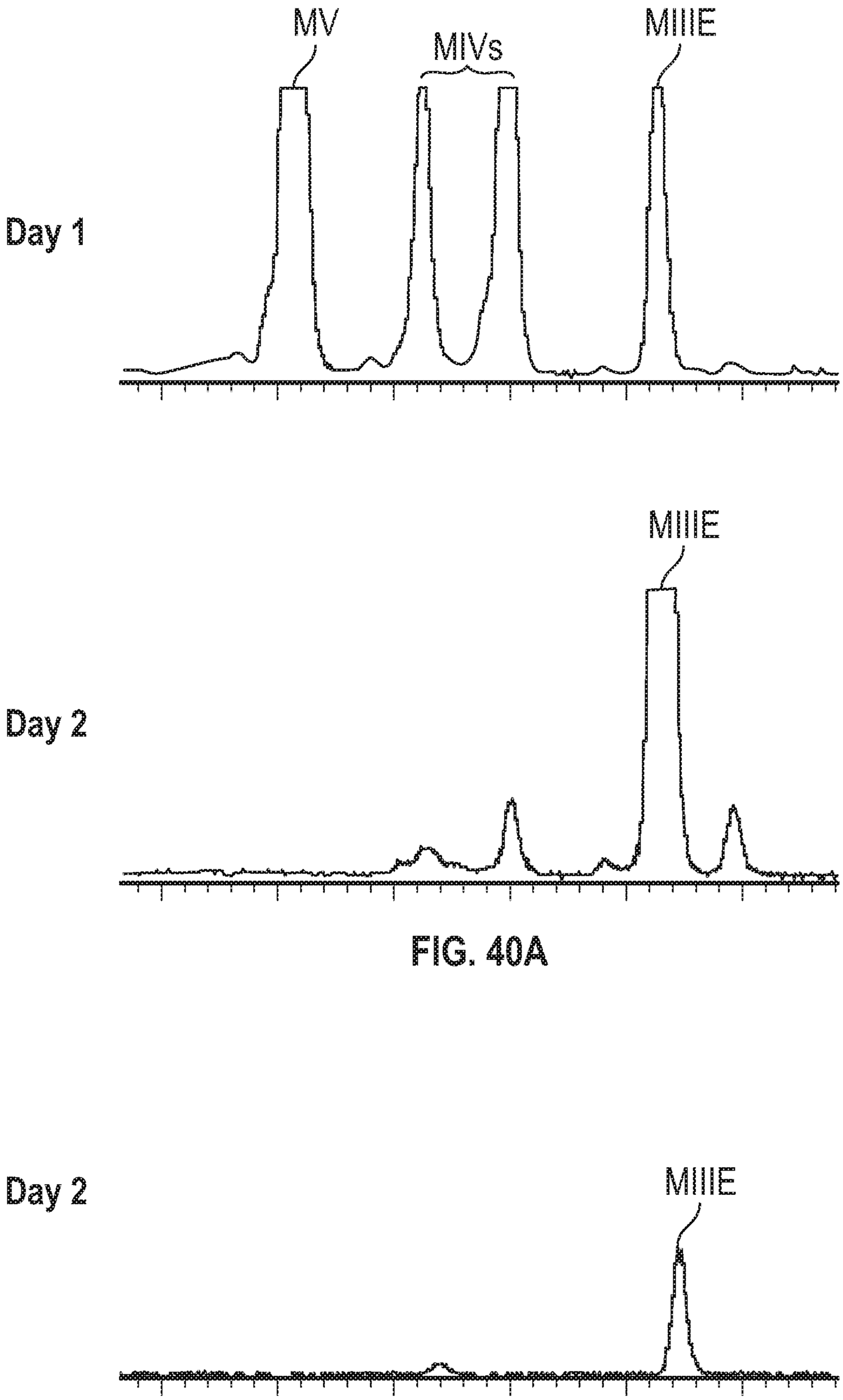


FIG. 40A

FIG. 40B

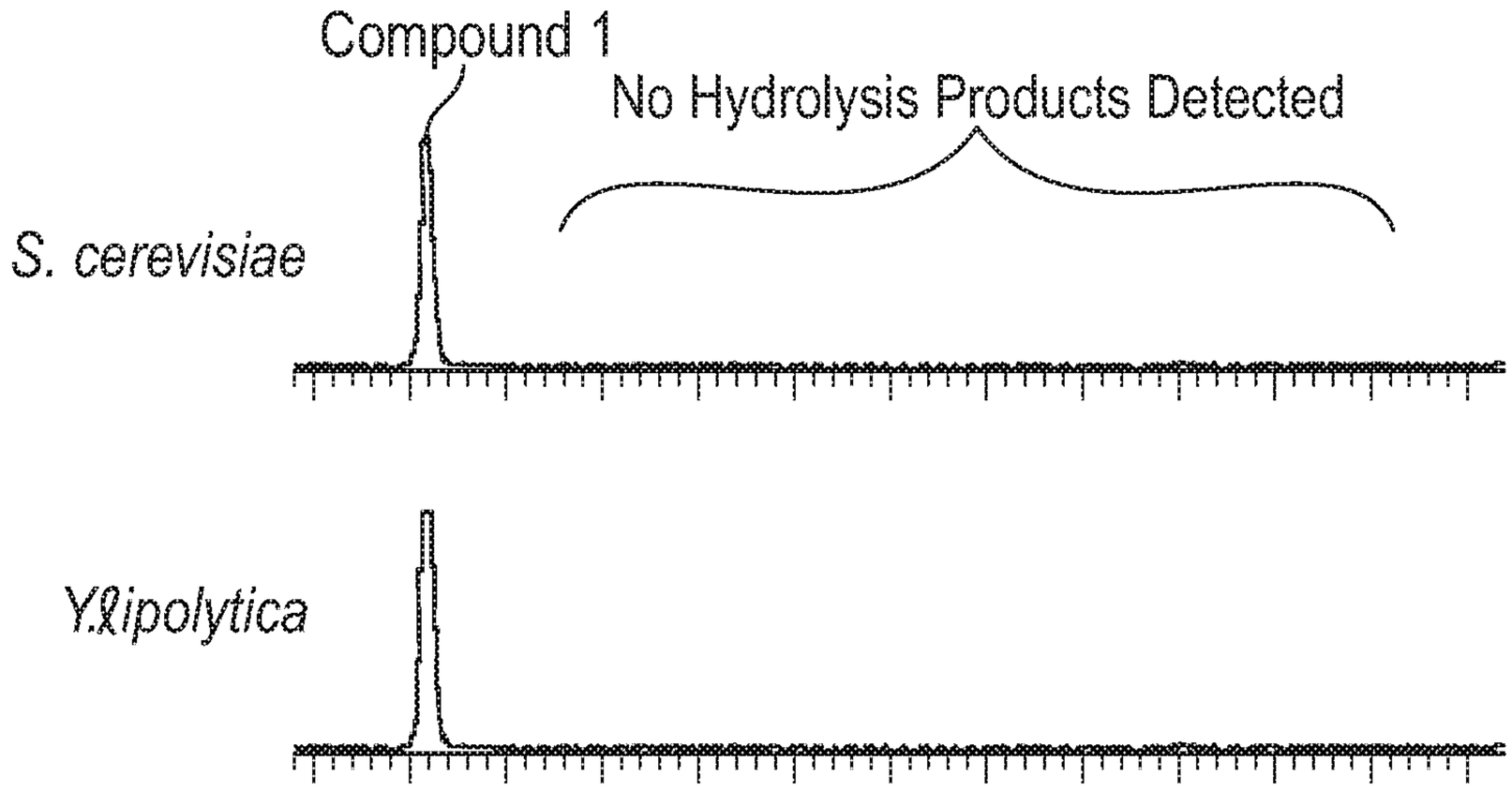

Compound 1
No Hydrolysis Products Detected
S. cerevisiae
Y.lipolytica

FIG. 41

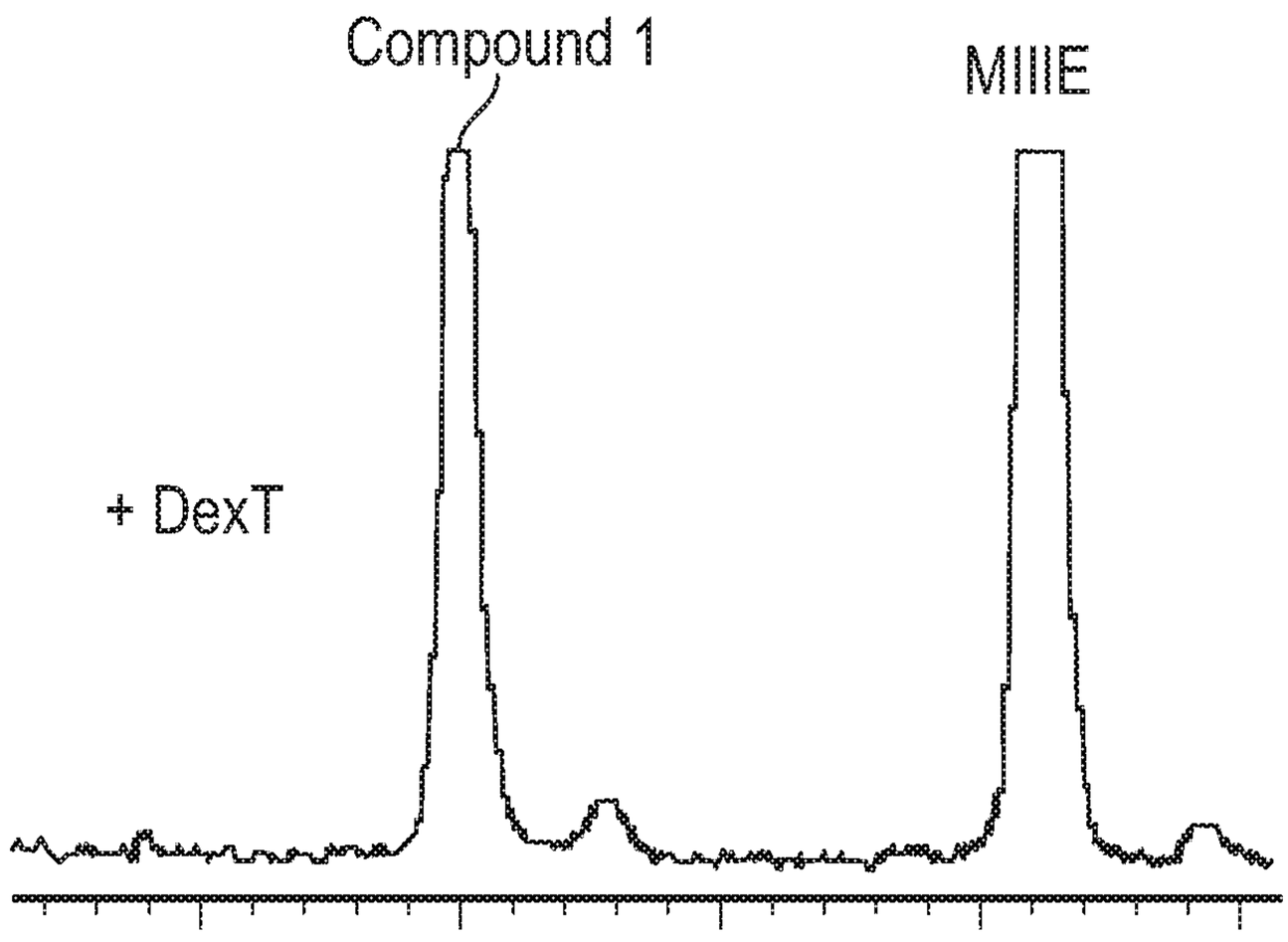
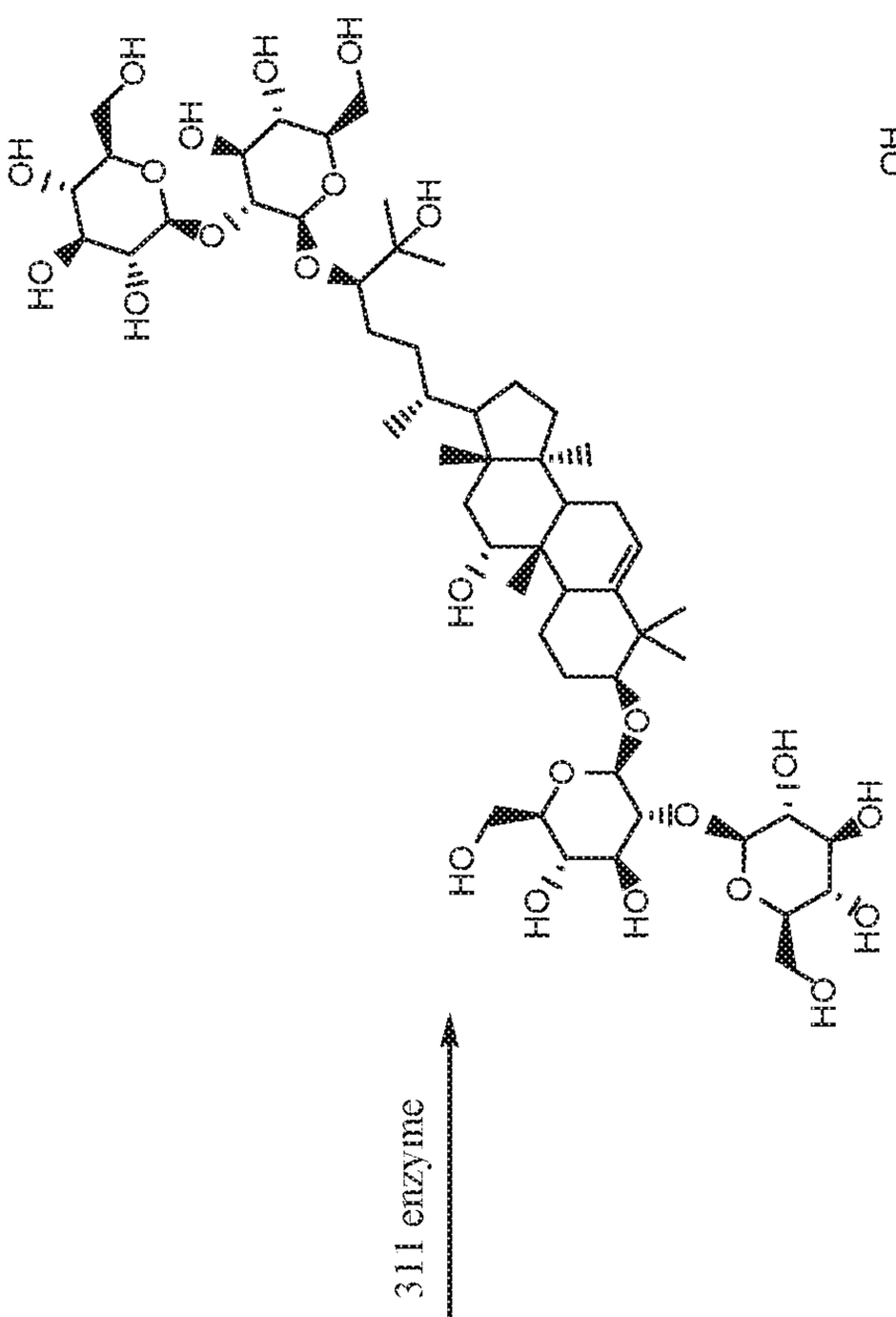
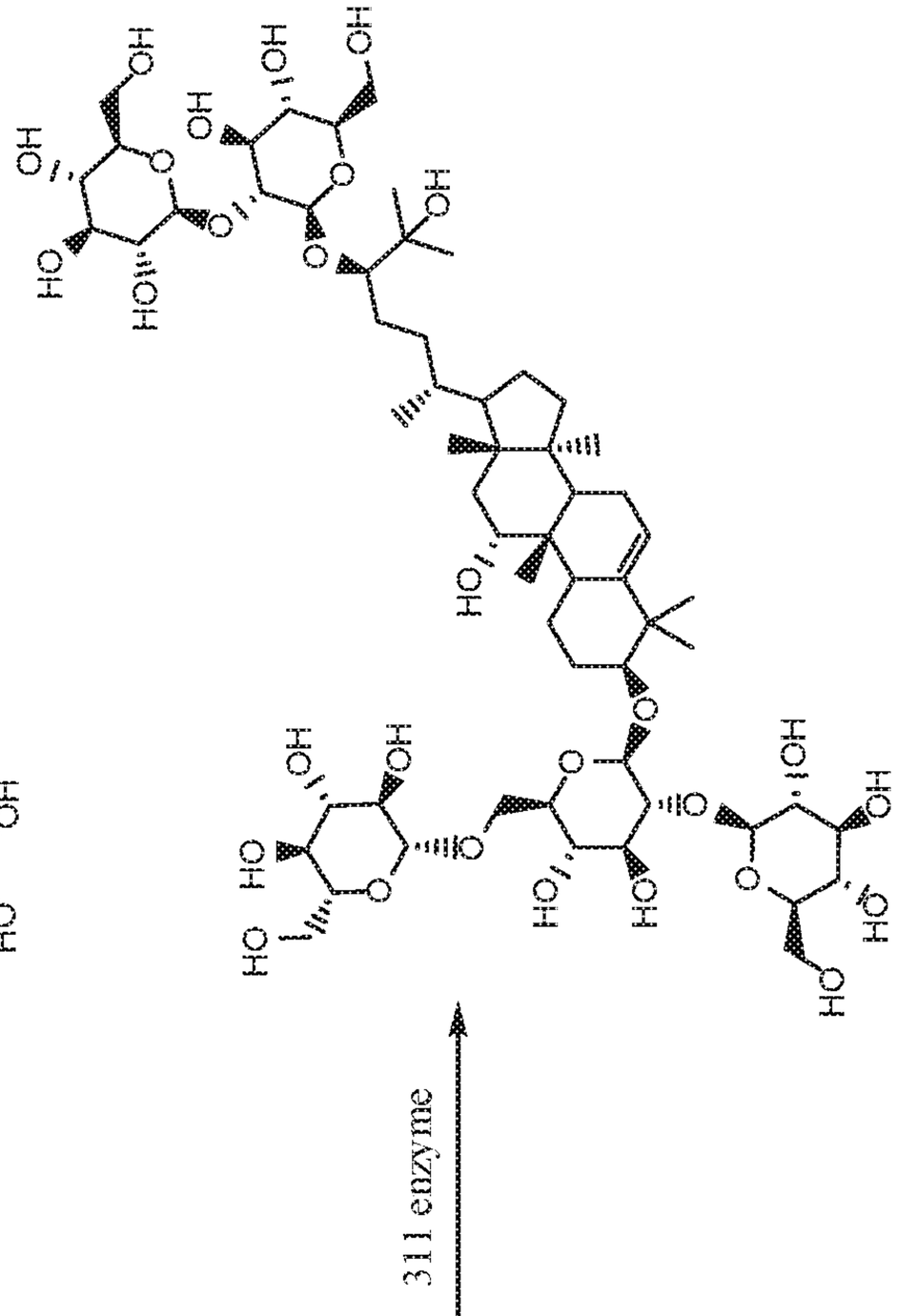
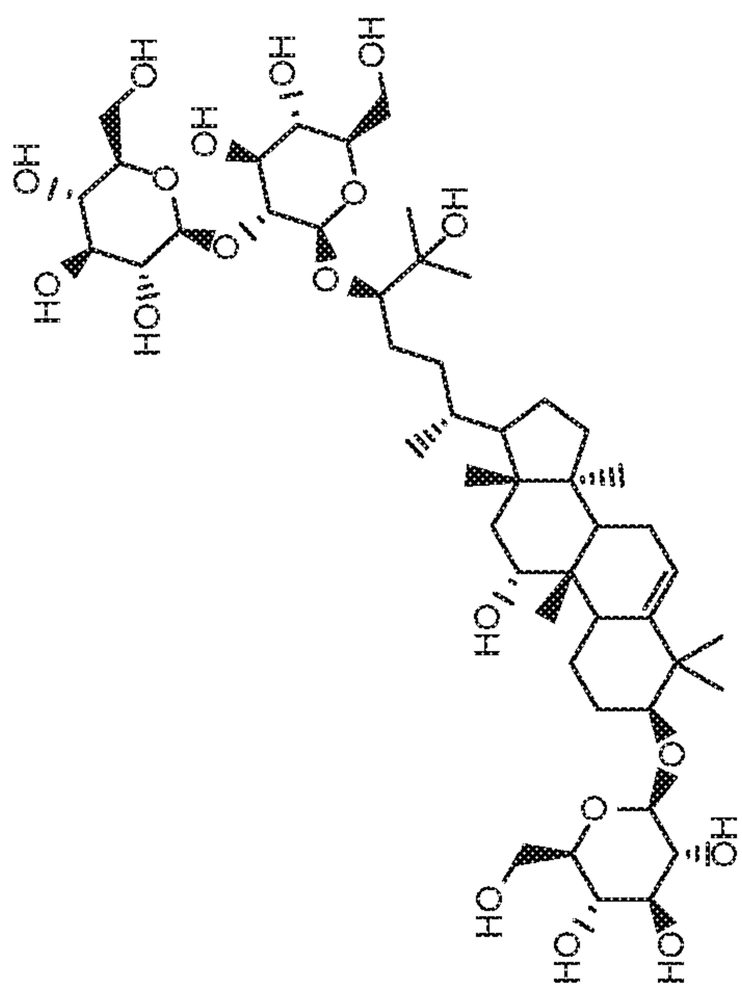

Compound 1
MIIIE
+ DexT

FIG. 42







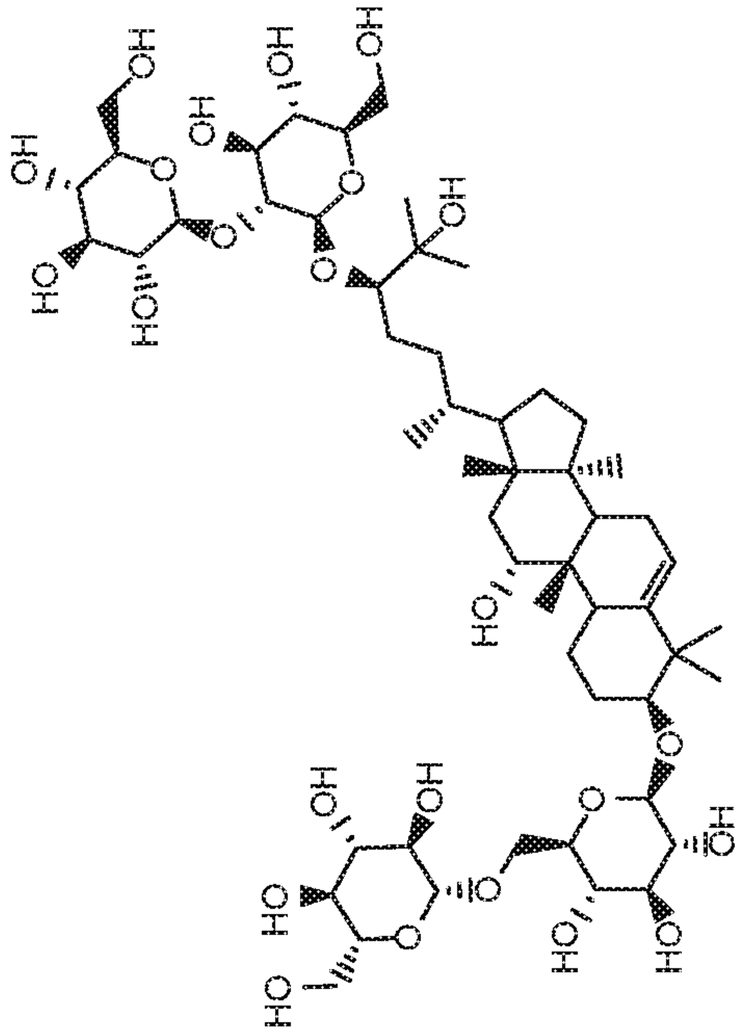


FIG. 43

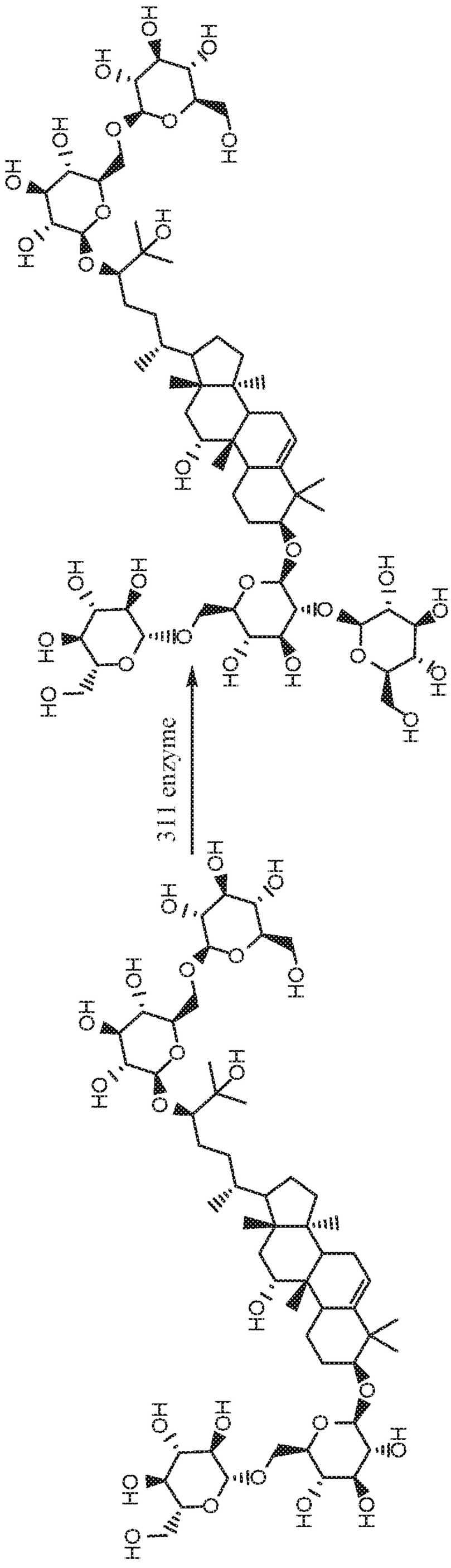


FIG. 43
(Continued)