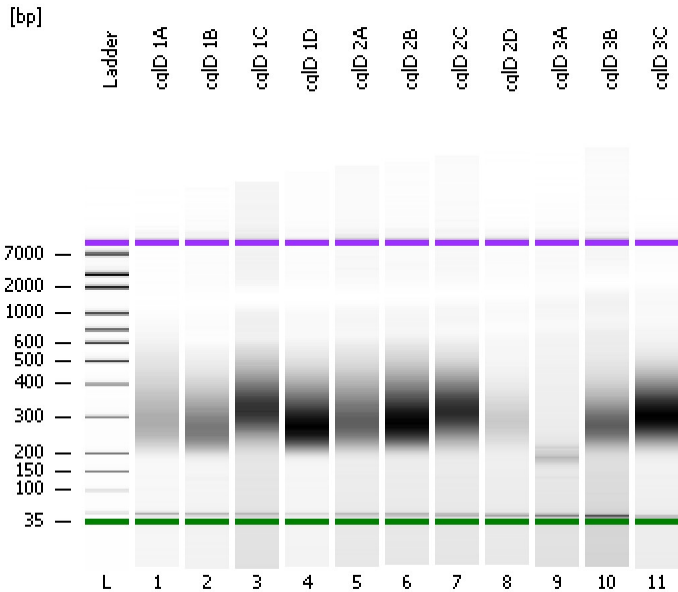


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
Modified: 5/20/2016 10:57:56 AM

Electrophoresis File Run Summary



Instrument Information:

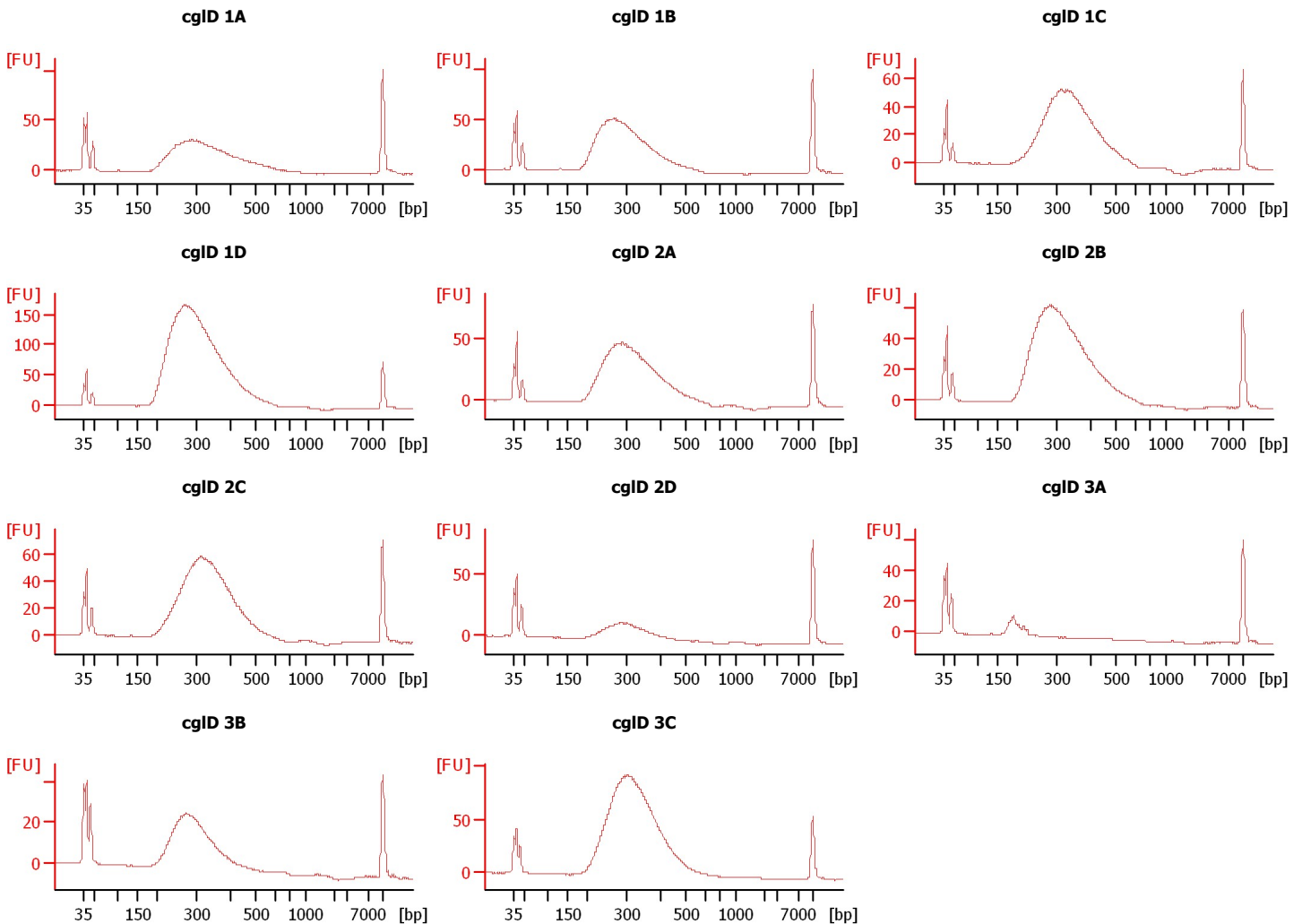
Instrument Name: DE13701086 Firmware: C.01.069
Serial#: DE13701086 Type: G2938B

Assay Information:

Assay Origin Path: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\assays\dsDNA\High Sensitivity DNA.xsy
Assay Class: High Sensitivity DNA Assay
Version: 1.03
Assay Comments: Copyright © 2003-2010 Agilent Technologies

Chip Information:

Chip Lot #: Reagent Kit Lot #: Chip Comments:



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
Modified: 5/20/2016 10:57:56 AM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
cglD 1A		<input type="checkbox"/>	✓			
cglD 1B		<input type="checkbox"/>	✓			
cglD 1C		<input type="checkbox"/>	✓			
cglD 1D		<input type="checkbox"/>	✓			
cglD 2A		<input type="checkbox"/>	✓			
cglD 2B		<input type="checkbox"/>	✓			
cglD 2C		<input type="checkbox"/>	✓			
cglD 2D		<input type="checkbox"/>	✓			
cglD 3A		<input type="checkbox"/>	✓			
cglD 3B		<input type="checkbox"/>	✓			
cglD 3C		<input type="checkbox"/>	✓			
Ladder		<input type="checkbox"/>	✓			

Chip Lot #

Reagent Kit Lot #

Chip Comments :

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
Modified: 5/20/2016 10:57:56 AM

Electrophoresis Assay Details

General Analysis Settings

Number of Available Sample and Ladder Wells (Max.) : 12
Minimum Visible Range [s] : 32
Maximum Visible Range [s] : 138
Start Analysis Time Range [s] : 33
End Analysis Time Range [s] : 137.5
Ladder Concentration [pg/μl] : 1950
Uses Standard Area for Ladder Fragments
Lower Marker Concentration [pg/μl] : 125
Upper Marker Concentration [pg/μl] : 75
Used Upper Marker for Quantitation
Standard Curve Fit is Point to Point
Show Data Aligned to Lower and Upper Marker

Integrator Settings

Integration Start Time [s] : 33.05
Integration End Time [s] : 137
Slope Threshold : 0.8
Height Threshold [FU] : 5
Area Threshold : 0.1
Width Threshold [s] : 0.6
Baseline Plateau [s] : 0.5

Filter Settings

Filter Width [s] : 0.5
Polynomial Order : 4

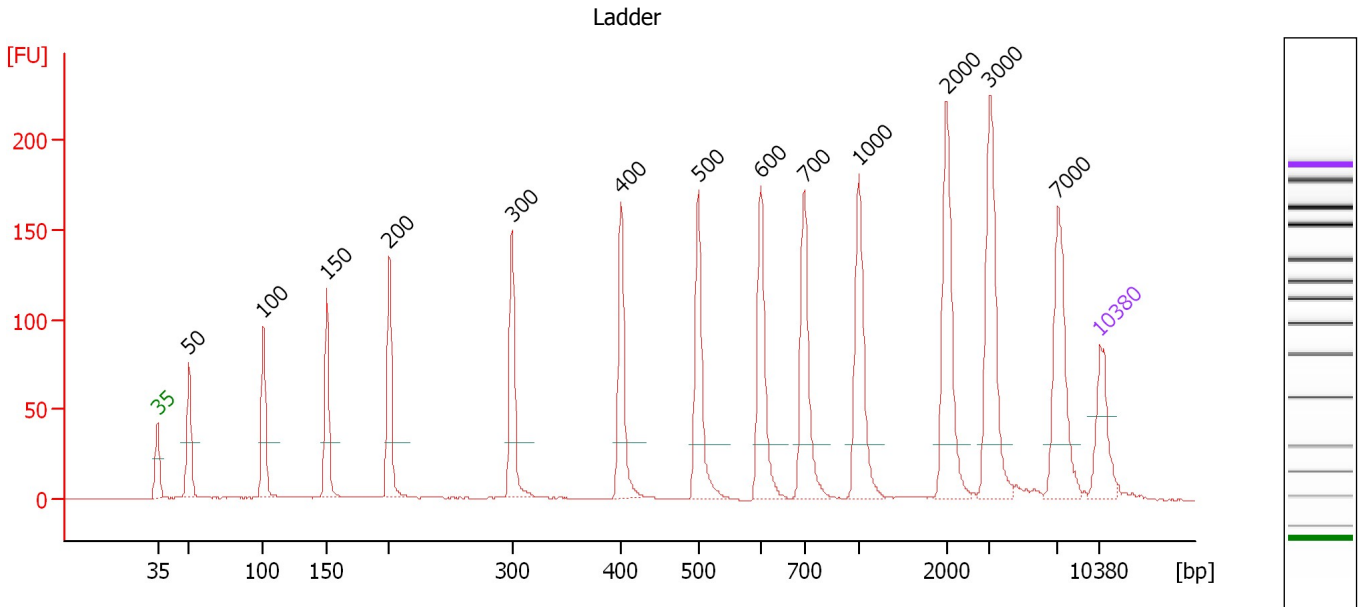
Ladder

Ladder Peak	Size	Area
1	35	160
2	50	210
3	100	208
4	150	221
5	200	242
6	300	270
7	400	305
8	500	306
9	600	336
10	700	321
11	1000	366
12	2000	413
13	3000	411
14	7000	400
15	10380	214

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
 Modified: 5/20/2016 10:57:56 AM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

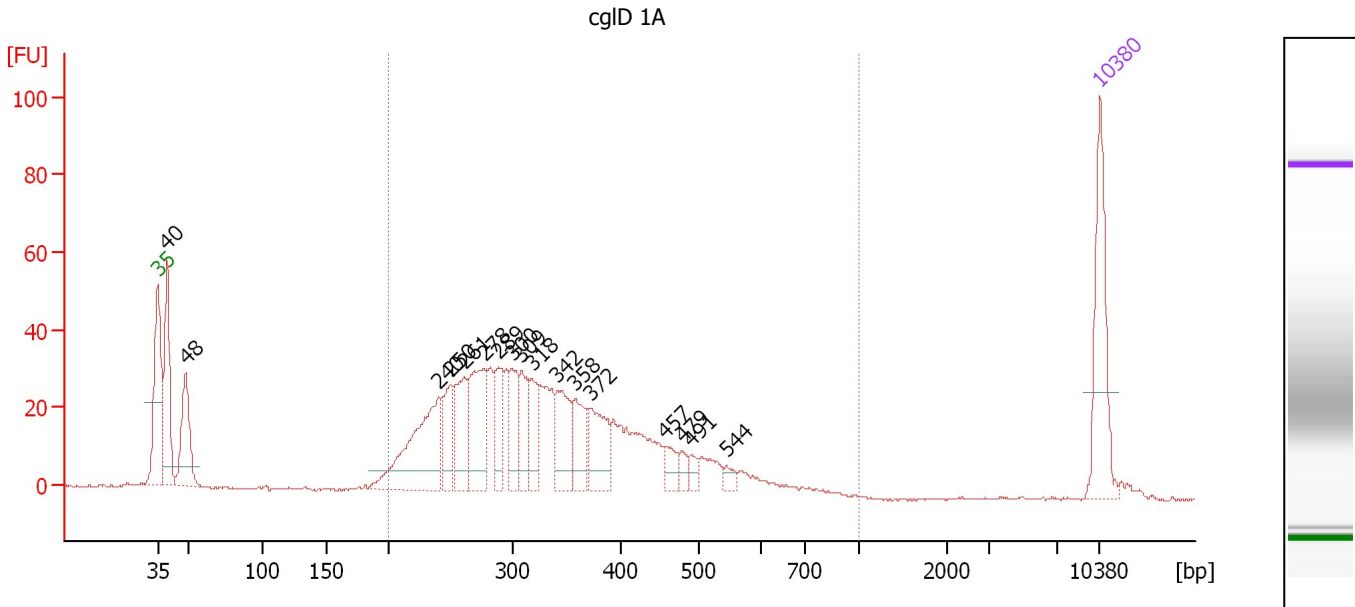
Peak table for Ladder

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	50	150.00	4,545.5	Ladder Peak	45.32
3	100	150.00	2,272.7	Ladder Peak	50.85
4	150	150.00	1,515.2	Ladder Peak	55.57
5	200	150.00	1,136.4	Ladder Peak	60.20
6	300	150.00	757.6	Ladder Peak	69.33
7	400	150.00	568.2	Ladder Peak	77.41
8	500	150.00	454.5	Ladder Peak	83.18
9	600	150.00	378.8	Ladder Peak	87.81
10	700	150.00	324.7	Ladder Peak	91.03
11	1,000	150.00	227.3	Ladder Peak	95.07
12	2,000	150.00	113.6	Ladder Peak	101.61
13	3,000	150.00	75.8	Ladder Peak	104.83
14	7,000	150.00	32.5	Ladder Peak	109.87
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
 Modified: 5/20/2016 10:57:56 AM

Electropherogram Summary Continued ...



Overall Results for sample 1 : cgID 1A

Number of peaks found: 17 Corr. Area 1: 760.2
 Noise: 0.3

Peak table for sample 1 : cgID 1A

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	40	119.81	4,575.6		43.72
3	48	88.13	2,757.1		45.07
4	240	152.01	959.0		63.87
5	250	50.28	304.7		64.77
6	261	62.20	361.2		65.76
7	278	95.40	520.5		67.29
8	289	46.10	241.6		68.33
9	300	47.19	238.4		69.32
10	309	44.26	217.1		70.04
11	318	41.13	195.8		70.81
12	342	59.67	264.6		72.70
13	358	42.70	180.4		74.06
14	372	54.99	223.7		75.18
15	457	18.08	60.0		80.68
16	479	10.48	33.2		81.94
17	491	10.05	31.0		82.67
18	544	8.70	24.2		85.23
19	10,380	75.00	10.9	Upper Marker	113.00

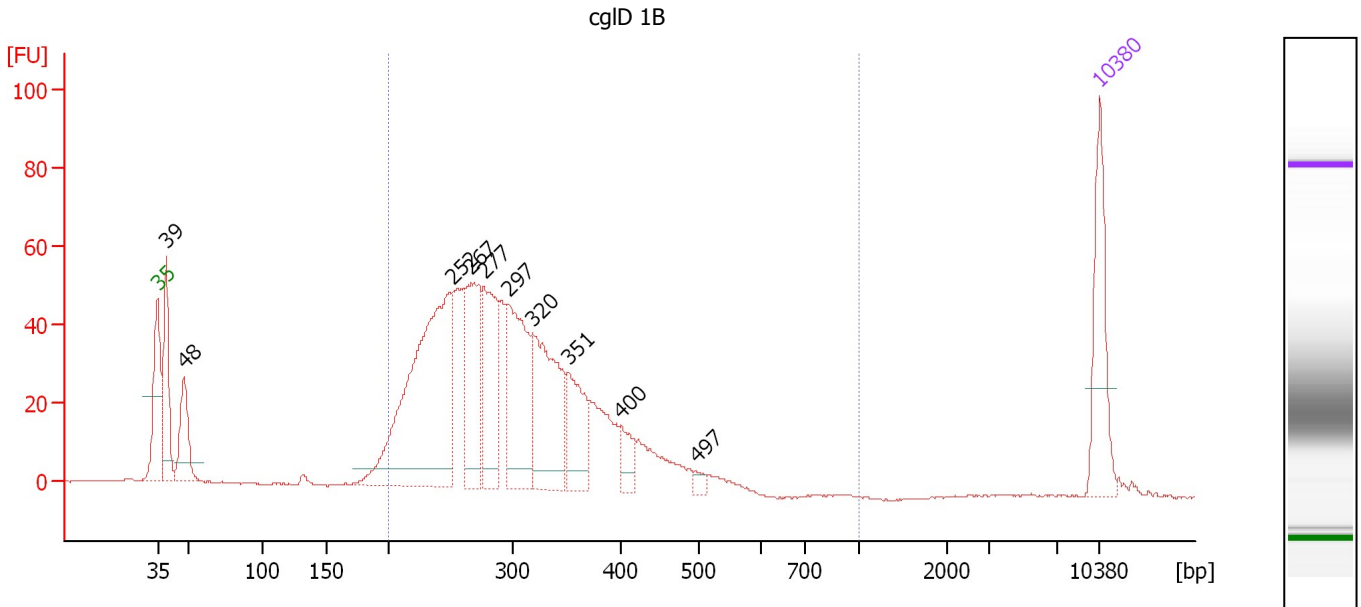
Region table for sample 1 : cgID 1A

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	342	760.2	5,095.3	1,046.09	85	28.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
 Modified: 5/20/2016 10:57:56 AM

Electropherogram Summary Continued ...



Overall Results for sample 2 : cgID 1B

Number of peaks found: 10 Corr. Area 1: 1,033.9
 Noise: 0.2

Peak table for sample 2 : cgID 1B

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	39	119.62	4,638.7		43.63
3	48	81.82	2,593.5		44.98
4	252	415.17	2,500.3		64.91
5	267	146.50	831.9		66.30
6	277	132.46	724.1		67.25
7	297	171.22	873.9		69.04
8	320	165.52	784.2		70.93
9	351	83.90	361.7		73.49
10	400	28.83	109.2		77.39
11	497	7.99	24.3		83.01
12	10,380	75.00	10.9	Upper Marker	113.00

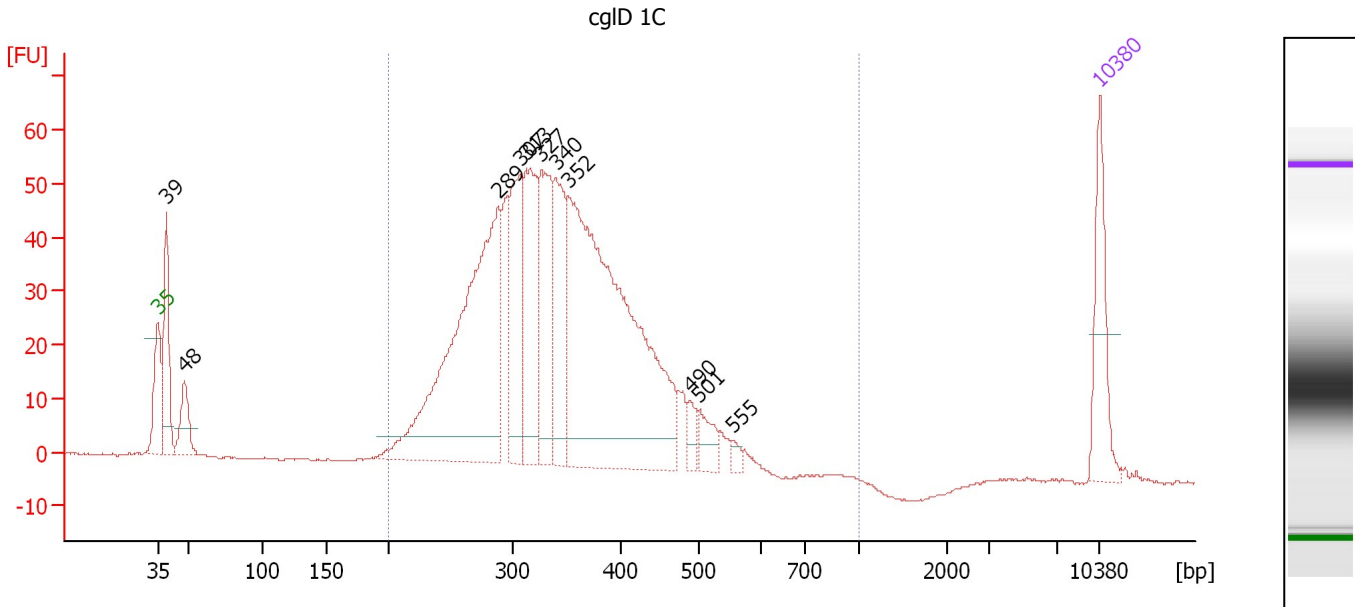
Region table for sample 2 : cgID 1B

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	304	1,033.9	7,552.0	1,430.32	87	22.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
 Modified: 5/20/2016 10:57:56 AM

Electropherogram Summary Continued ...



Overall Results for sample 3 : cgID 1C

Number of peaks found: 11 Corr. Area 1: 1,069.1
 Noise: 0.2

Peak table for sample 3 : cgID 1C

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	39	138.00	5,343.7		43.64
3	48	61.60	1,945.5		45.00
4	289	547.41	2,872.1		68.31
5	307	171.85	848.0		69.90
6	313	182.78	884.1		70.40
7	327	162.01	751.2		71.49
8	340	151.23	673.4		72.58
9	352	708.72	3,054.6		73.49
10	490	19.19	59.4		82.60
11	501	32.59	98.5		83.23
12	555	8.86	24.2		85.74
13	10,380	75.00	10.9	Upper Marker	113.00

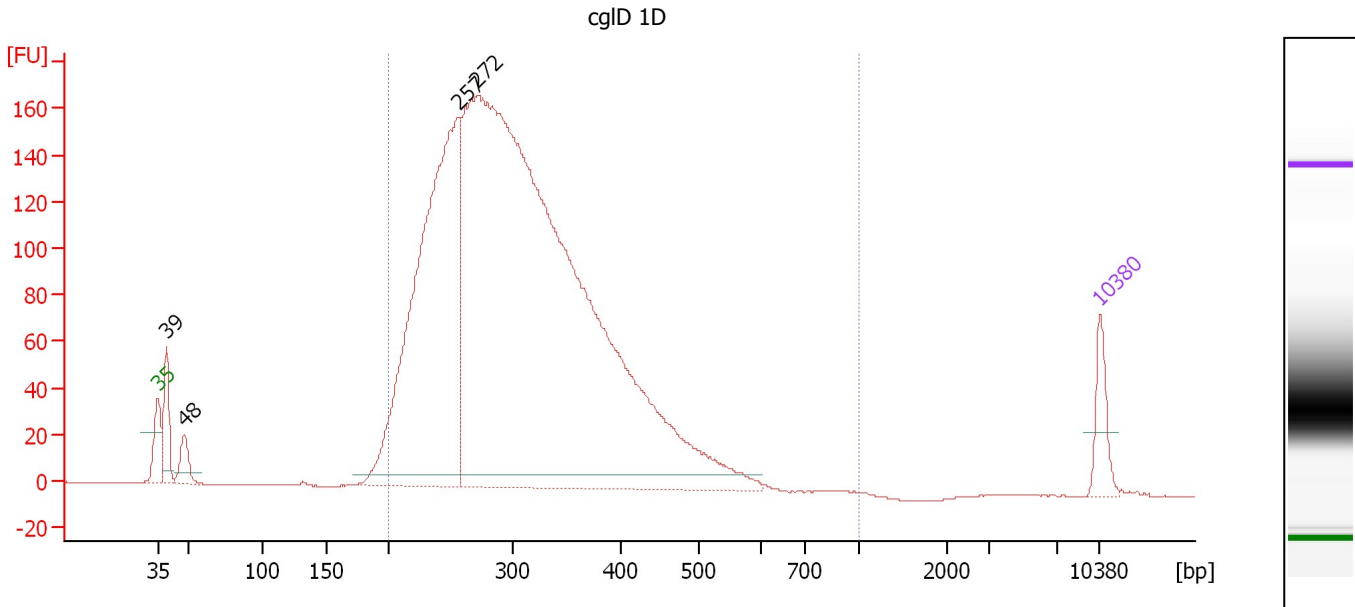
Region table for sample 3 : cgID 1C

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	345	1,069.1	9,810.2	2,110.13	93	20.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
 Modified: 5/20/2016 10:57:56 AM

Electropherogram Summary Continued ...



Overall Results for sample 4 : cgID 1D

Number of peaks found: 4 Corr. Area 1: 3,317.5
 Noise: 0.2

Peak table for sample 4 : cgID 1D

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	39	158.04	6,105.4		43.65
3	48	87.23	2,756.0		45.00
4	257	1,790.84	10,573.2		65.37
5	272	4,893.57	27,267.0		66.77
6	10,380	75.00	10.9	Upper Marker	113.00

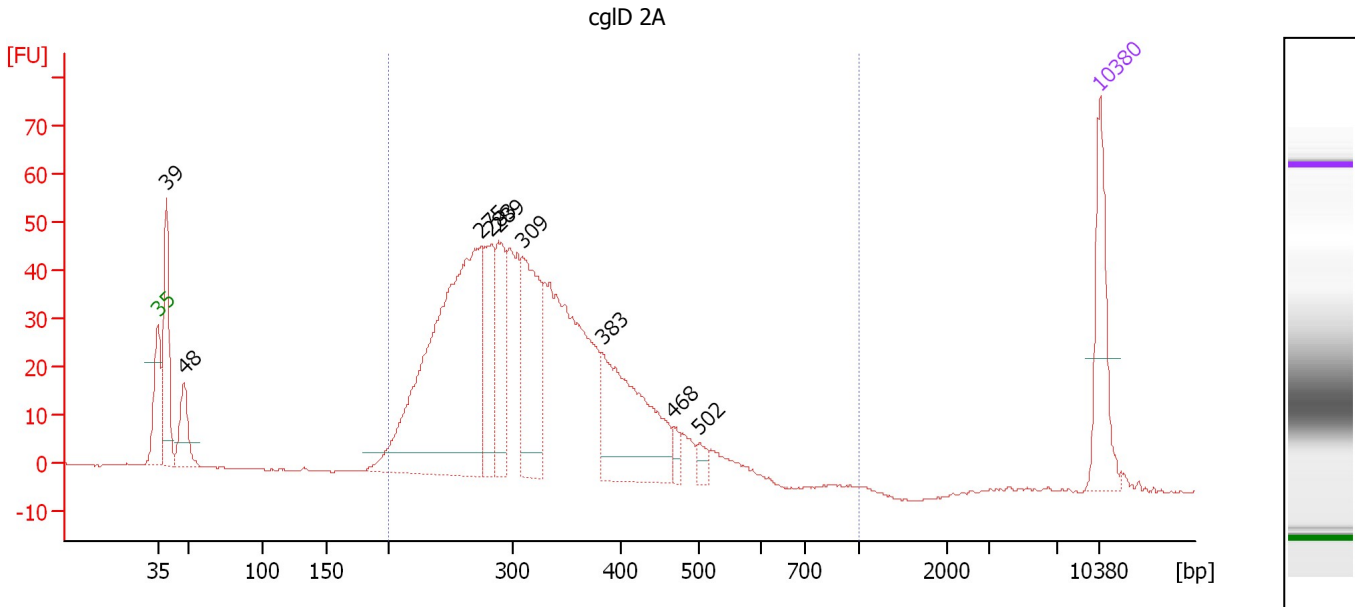
Region table for sample 4 : cgID 1D

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	311	3,317.5	31,554.9	6,088.02	96	23.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
 Modified: 5/20/2016 10:57:56 AM

Electropherogram Summary Continued ...



Overall Results for sample 5 : cgID 2A

Number of peaks found: 9 Corr. Area 1: 982.9
 Noise: 0.2

Peak table for sample 5 : cgID 2A

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	39	138.01	5,324.0		43.66
3	48	66.76	2,128.4		44.93
4	275	562.61	3,100.8		67.04
5	283	107.44	574.9		67.79
6	289	106.52	558.7		68.31
7	309	167.55	821.6		70.06
8	383	207.75	822.9		76.00
9	468	13.07	42.3		81.32
10	502	12.62	38.1		83.26
11	10,380	75.00	10.9	Upper Marker	113.00

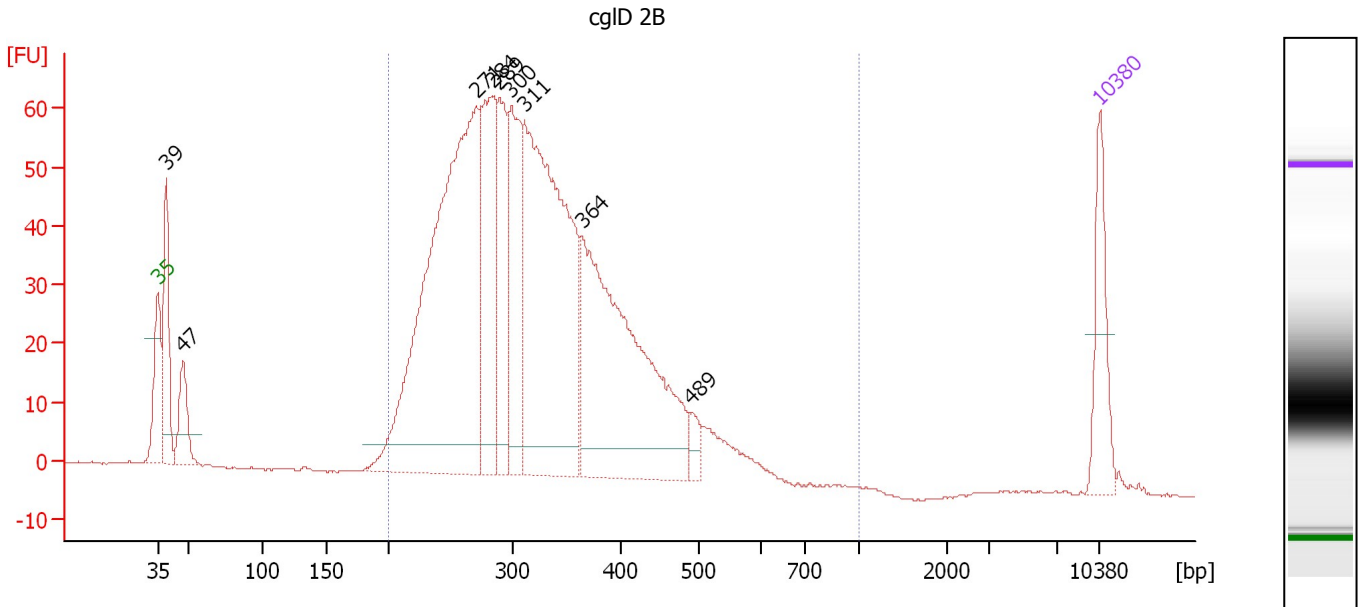
Region table for sample 5 : cgID 2A

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	323	982.9	8,301.3	1,659.19	91	22.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
 Modified: 5/20/2016 10:57:56 AM

Electropherogram Summary Continued ...



Overall Results for sample 6 : cgID 2B

Number of peaks found: 9 Corr. Area 1: 1,312.5
 Noise: 0.2

Peak table for sample 6 : cgID 2B

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	39	154.27	5,943.5		43.67
3	47	84.79	2,712.2		44.91
4	271	901.28	5,032.5		66.72
5	284	253.91	1,355.1		67.86
6	289	158.84	832.4		68.34
7	300	197.29	997.8		69.29
8	311	668.49	3,253.2		70.25
9	364	540.62	2,247.3		74.54
10	489	23.13	71.6		82.56
11	10,380	75.00	10.9	Upper Marker	113.00

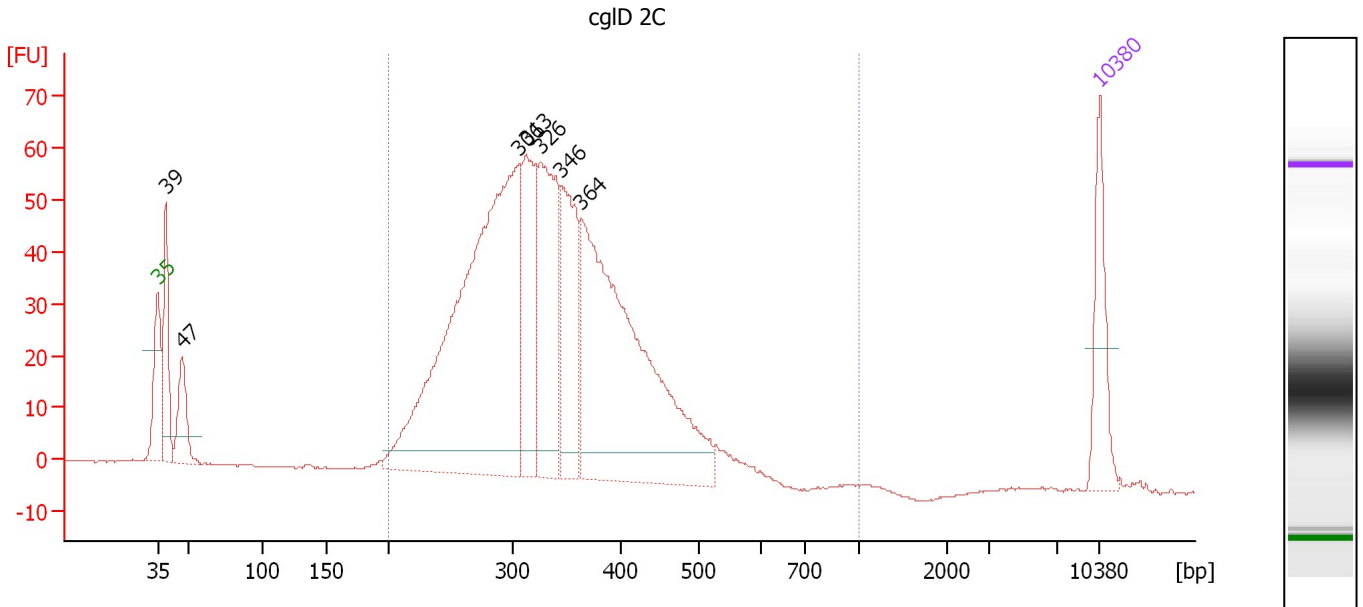
Region table for sample 6 : cgID 2B

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	324	1,312.5	14,018.7	2,809.76	93	23.4

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
 Modified: 5/20/2016 10:57:56 AM

Electropherogram Summary Continued ...



Overall Results for sample 7 : cgID 2C

Number of peaks found: 7 Corr. Area 1: 1,152.0
 Noise: 0.2

Peak table for sample 7 : cgID 2C

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	39	145.37	5,636.5		43.63
3	47	87.20	2,816.0		44.84
4	306	894.55	4,428.5		69.82
5	313	198.12	958.3		70.40
6	326	262.72	1,219.5		71.46
7	346	196.11	859.8		73.01
8	364	645.82	2,691.4		74.47
9	10,380	75.00	10.9	Upper Marker	113.00

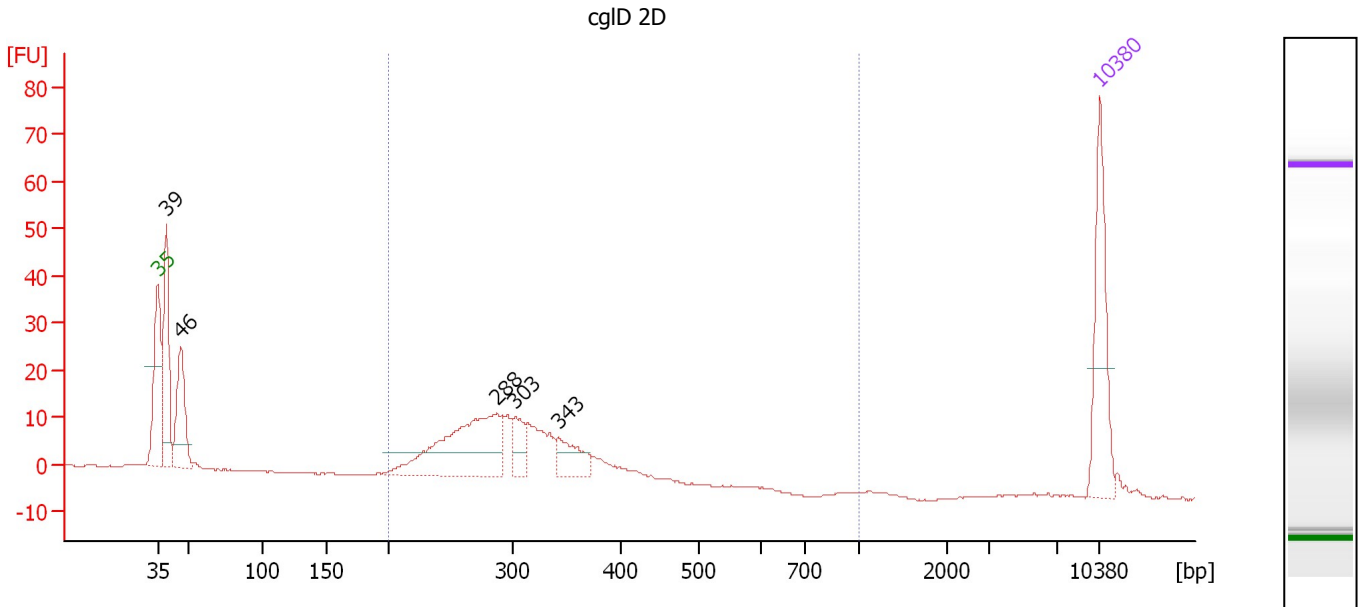
Region table for sample 7 : cgID 2C

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	337	1,152.0	10,482.7	2,206.44	92	20.6

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
 Modified: 5/20/2016 10:57:56 AM

Electropherogram Summary Continued ...



Overall Results for sample 8 : cgID 2D

Number of peaks found: 5 Corr. Area 1: 199.1
 Noise: 0.1

Peak table for sample 8 : cgID 2D

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	39	129.28	5,007.3		43.64
3	46	95.64	3,144.5		44.71
4	288	169.78	893.6		68.22
5	303	31.60	158.2		69.54
6	343	40.00	176.9		72.77
7	10,380	75.00	10.9	Upper Marker	113.00

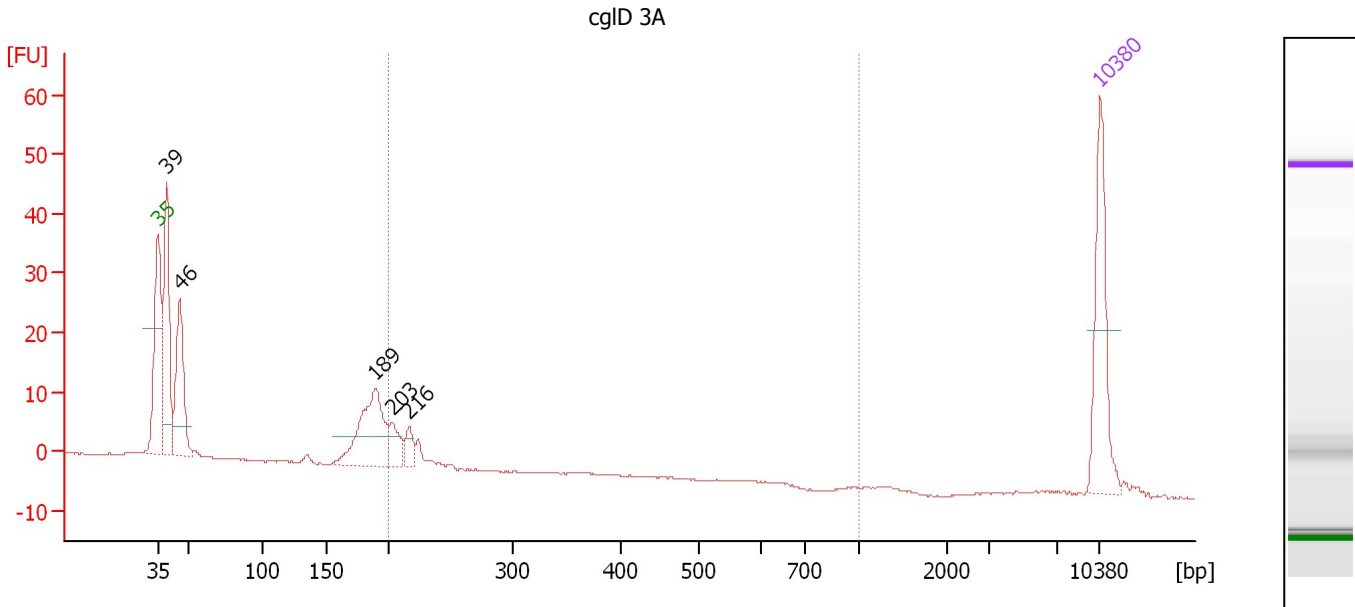
Region table for sample 8 : cgID 2D

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	302	199.1	1,813.3	350.33	65	16.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
 Modified: 5/20/2016 10:57:56 AM

Electropherogram Summary Continued ...



Overall Results for sample 9 : cgID 3A

Number of peaks found: 5 Corr. Area 1: 22.1
 Noise: 0.1

Peak table for sample 9 : cgID 3A

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	39	152.82	5,915.3		43.64
3	46	122.52	4,078.5		44.62
4	189	113.64	911.1		59.18
5	203	26.00	194.2		60.46
6	216	18.18	127.3		61.69
7	10,380	75.00	10.9	Upper Marker	113.00

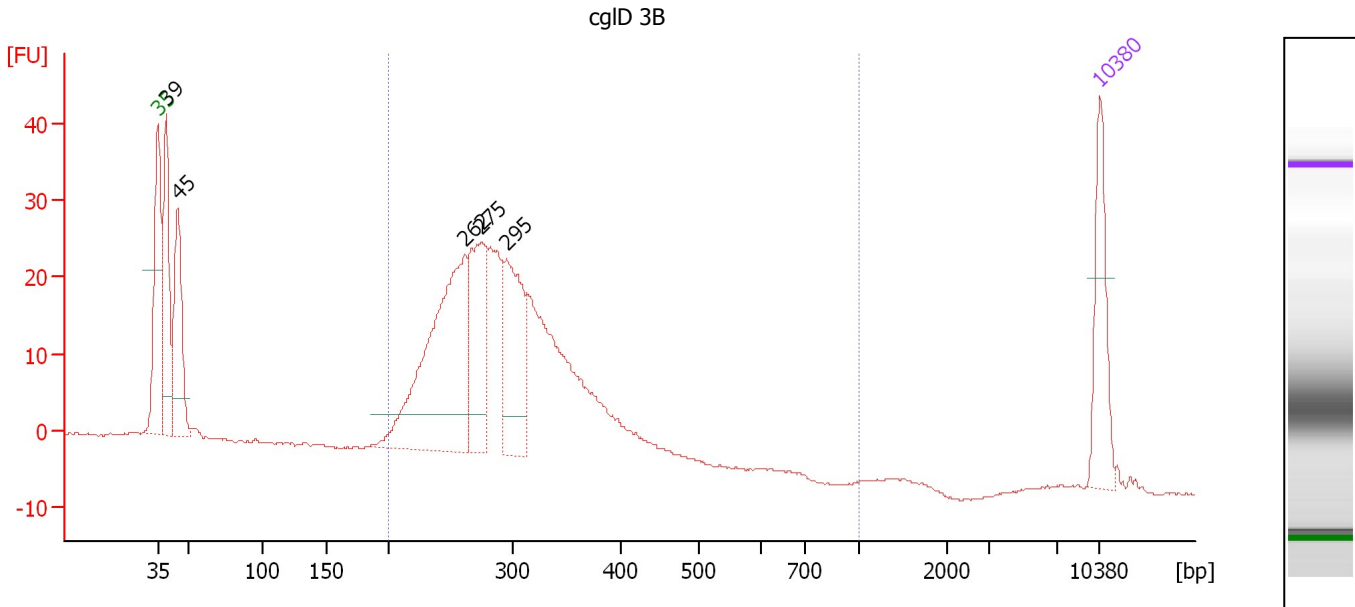
Region table for sample 9 : cgID 3A

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	213	22.1	382.1	53.83	13	4.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
 Modified: 5/20/2016 10:57:56 AM

Electropherogram Summary Continued ...



Overall Results for sample 10 : cgID 3B

Number of peaks found: 5 Corr. Area 1: 410.2
 Noise: 0.2

Peak table for sample 10 : cgID 3B

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	39	175.49	6,783.8		43.65
3	45	169.13	5,734.9		44.49
4	262	372.96	2,160.8		65.82
5	275	164.33	904.8		67.06
6	295	161.24	827.1		68.91
7	10,380	75.00	10.9	Upper Marker	113.00

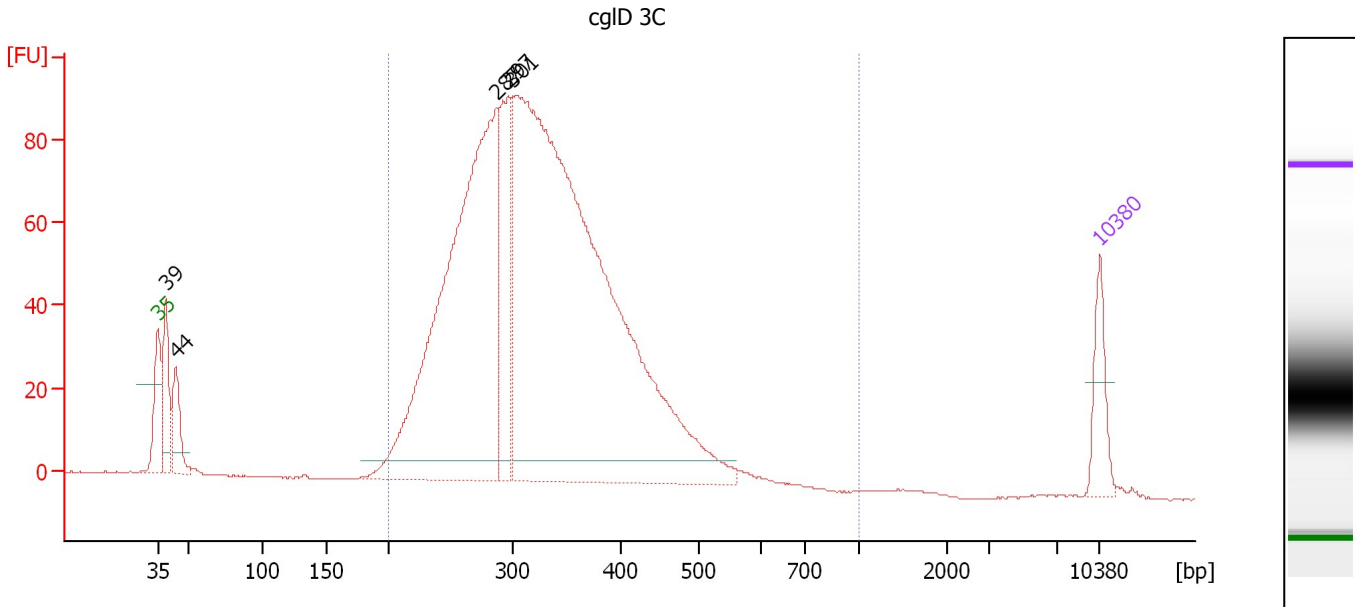
Region table for sample 10 : cgID 3B

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	296	410.2	6,076.3	1,148.71	80	17.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
 Modified: 5/20/2016 10:57:56 AM

Electropherogram Summary Continued ...



Overall Results for sample 11 : cgID 3C

Number of peaks found: 5 Corr. Area 1: 1,711.2
 Noise: 0.1

Peak table for sample 11 : cgID 3C

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	39	161.78	6,303.2		43.60
3	44	119.65	4,144.2		44.35
4	287	1,436.02	7,579.2		68.15
5	297	290.95	1,484.6		69.05
6	301	2,549.24	12,837.6		69.40
7	10,380	75.00	10.9	Upper Marker	113.00

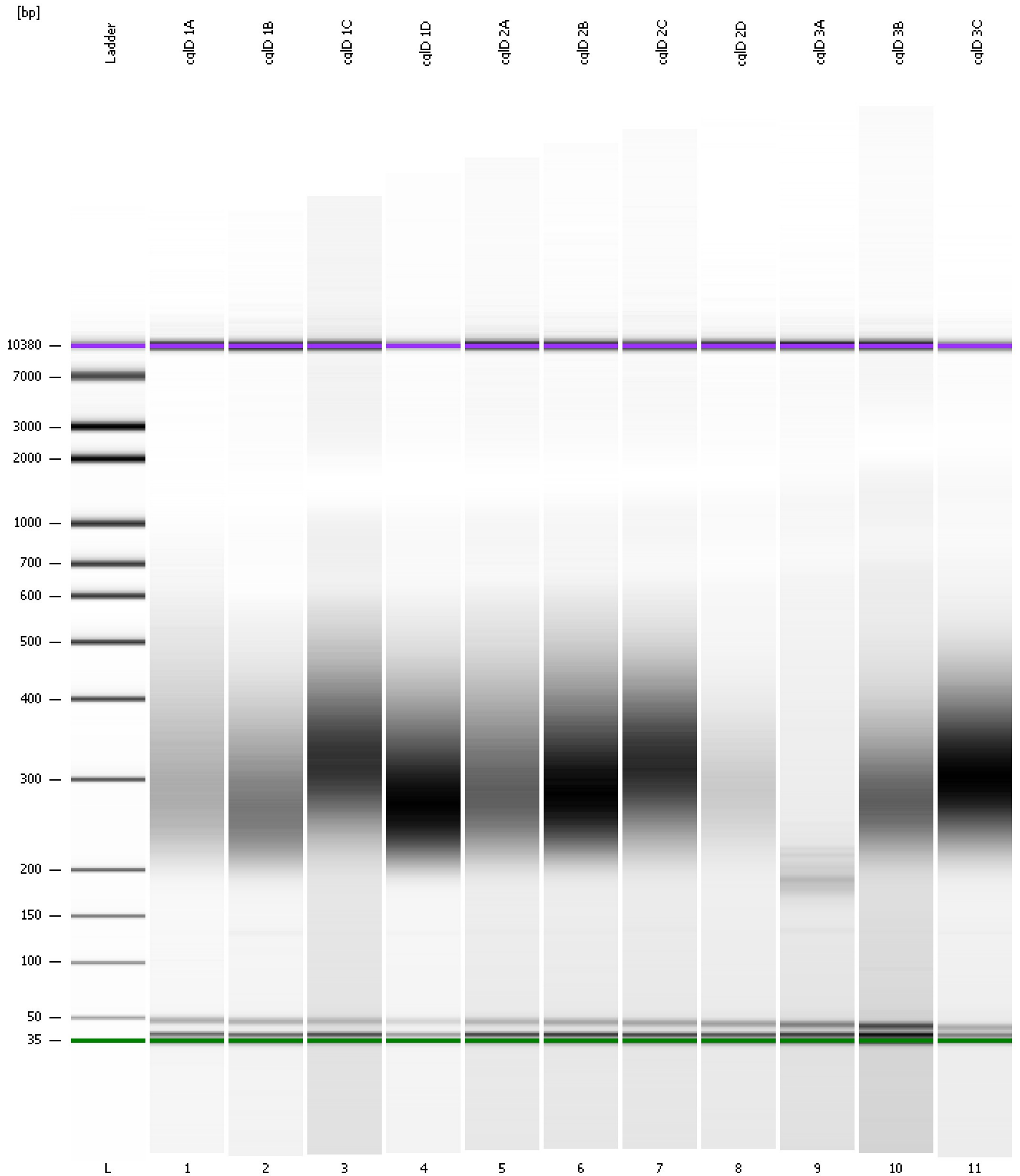
Region table for sample 11 : cgID 3C

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	328	1,711.2	19,981.0	4,094.82	94	21.1

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
Modified: 5/20/2016 10:57:56 AM

Gel Image



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad

Created: 5/20/2016 10:17:22 AM
 Modified: 5/20/2016 10:57:56 AM

Run Logbook

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 12)		Instrument	Run		5/20/2016 10:57:50 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2016-05-20\2016-05-20_002.xad)		Instrument	Run		5/20/2016 10:17:28 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		5/20/2016 10:17:28 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		5/20/2016 10:17:28 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		5/20/2016 10:17:28 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		5/20/2016 10:17:28 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		5/20/2016 10:17:28 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		5/20/2016 10:17:28 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1