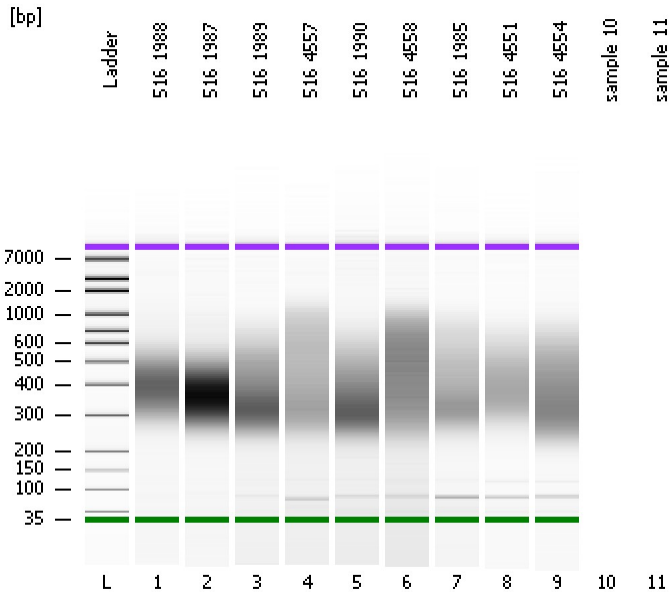


Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad

Created: 10/3/2016 1:43:49 PM
Modified: 10/3/2016 2:49:23 PM

Electrophoresis File Run Summary



Instrument Information:

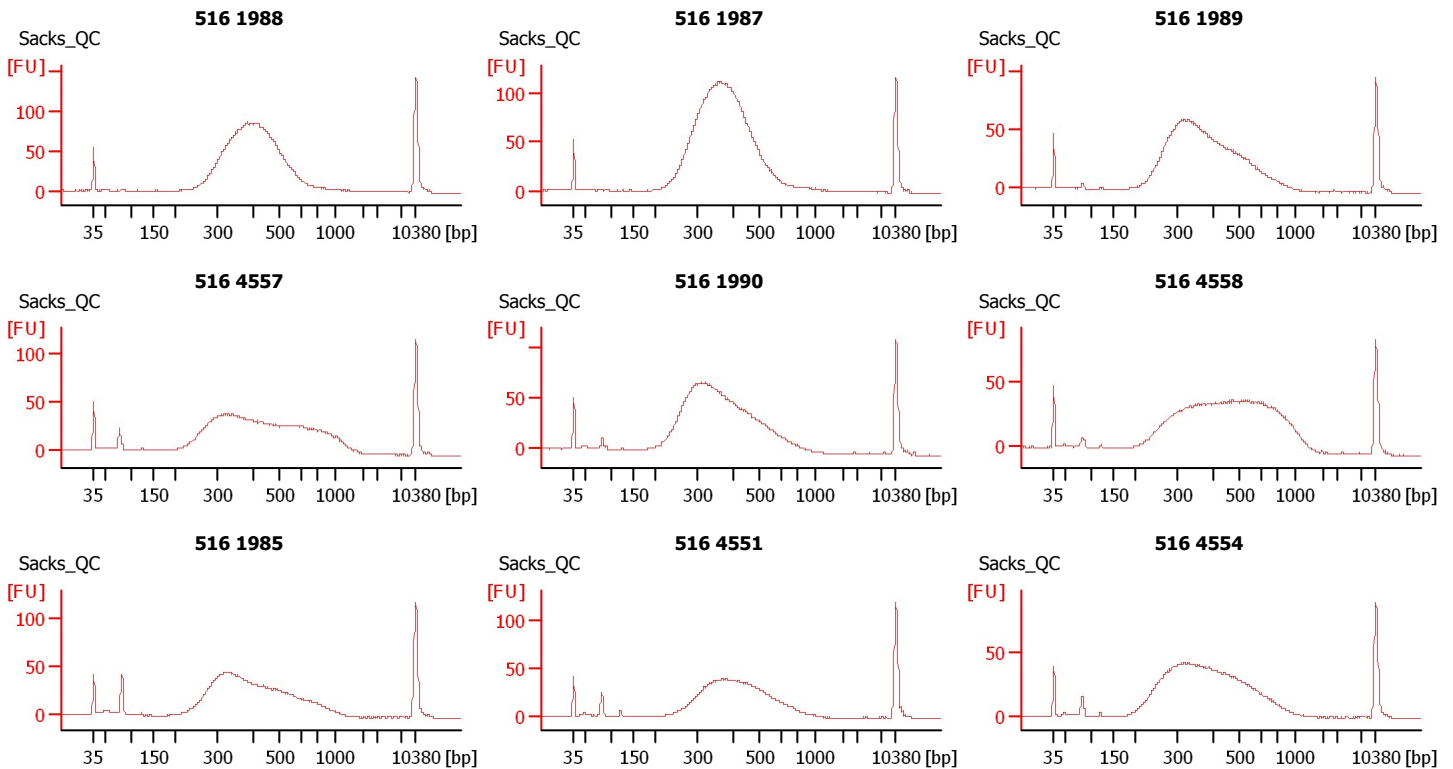
Instrument Name: DE13701086 Firmware: C.01.069
Serial#: DE13701086 Type: G2938B

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\2016-10-03\2016-10-03_003.xad

Created: 10/3/2016 1:43:49 PM
Modified: 10/3/2016 2:49:23 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
516 1988	Sacks_QC	<input type="checkbox"/>	✓			
516 1987	Sacks_QC	<input type="checkbox"/>	✓			
516 1989	Sacks_QC	<input type="checkbox"/>	✓			
516 4557	Sacks_QC	<input type="checkbox"/>	✓			
516 1990	Sacks_QC	<input type="checkbox"/>	✓			
516 4558	Sacks_QC	<input type="checkbox"/>	✓			
516 1985	Sacks_QC	<input type="checkbox"/>	✓			
516 4551	Sacks_QC	<input type="checkbox"/>	✓			
516 4554	Sacks_QC	<input type="checkbox"/>	✓			
sample 10		<input type="checkbox"/>				
sample 11		<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\2016-10-03\2016-10-03_003.xad

Created: 10/3/2016 1:43:49 PM
Modified: 10/3/2016 2:49:23 PM

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

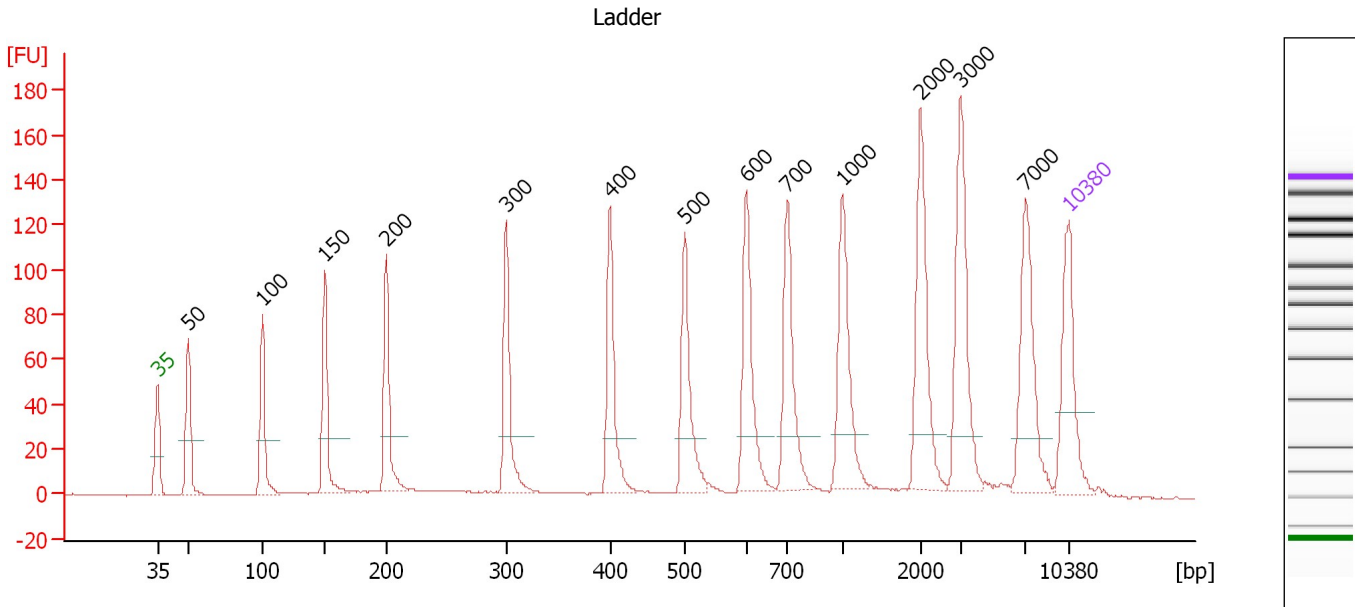
Ladder

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\2016-10-03\2016-10-03_003.xad

Created: 10/3/2016 1:43:49 PM
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Electropherogram Summary



Overall Results for Ladder

Noise: 0.1

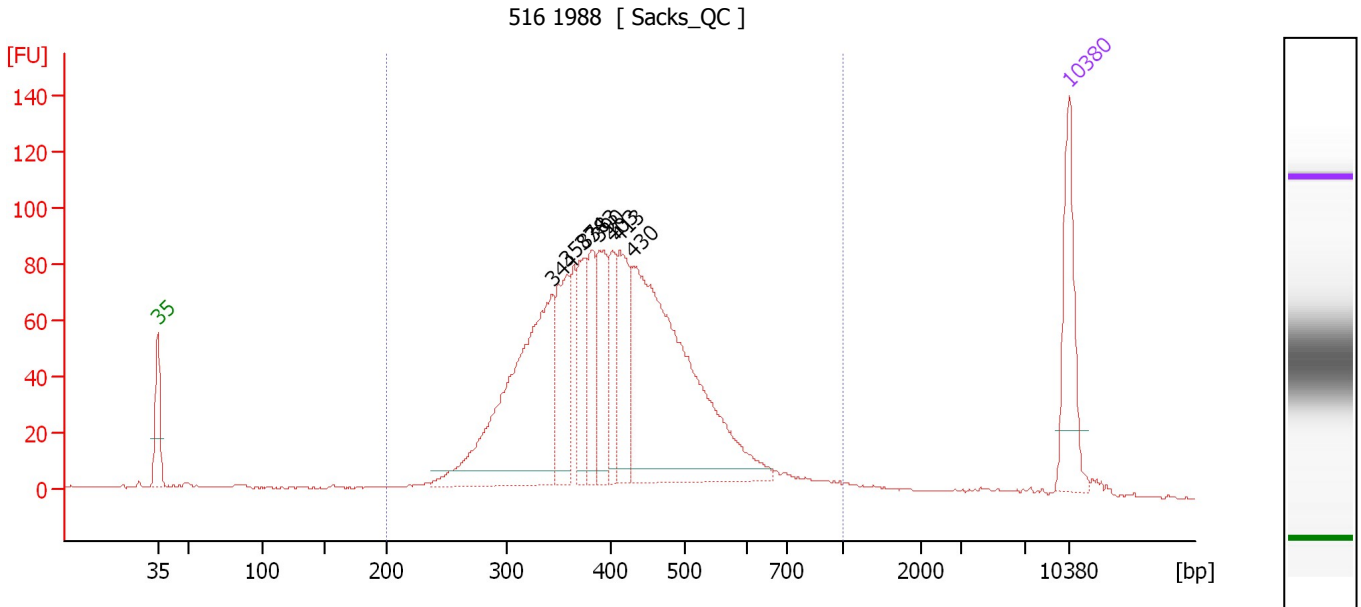
Peak table for Ladder

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	45.36
3	100	150.00	2,272.7	Ladder Peak	51.04
4	150	150.00	1,515.2	Ladder Peak	55.86
5	200	150.00	1,136.4	Ladder Peak	60.59
6	300	150.00	757.6	Ladder Peak	69.77
7	400	150.00	568.2	Ladder Peak	77.76
8	500	150.00	454.5	Ladder Peak	83.49
9	600	150.00	378.8	Ladder Peak	88.22
10	700	150.00	324.7	Ladder Peak	91.39
11	1,000	150.00	227.3	Ladder Peak	95.59
12	2,000	150.00	113.6	Ladder Peak	101.60
13	3,000	150.00	75.8	Ladder Peak	104.68
14	7,000	150.00	32.5	Ladder Peak	109.69
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad

Created: 10/3/2016 1:43:49 PM
 Modified: 10/3/2016 2:49:23 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : 516 1988

Number of peaks found: 8 Corr. Area 1: 1,686.1
 Noise: 0.3

Peak table for sample 1 : 516 1988

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	344	350.97	1,545.3		73.30
3	358	105.01	444.1		74.43
4	374	71.73	290.4		75.71
5	383	68.08	269.6		76.37
6	390	85.30	331.7		76.94
7	403	56.77	213.5		77.93
8	413	97.62	358.3		78.50
9	430	445.28	1,568.4		79.49
10	10,380	75.00	10.9	Upper Marker	113.00

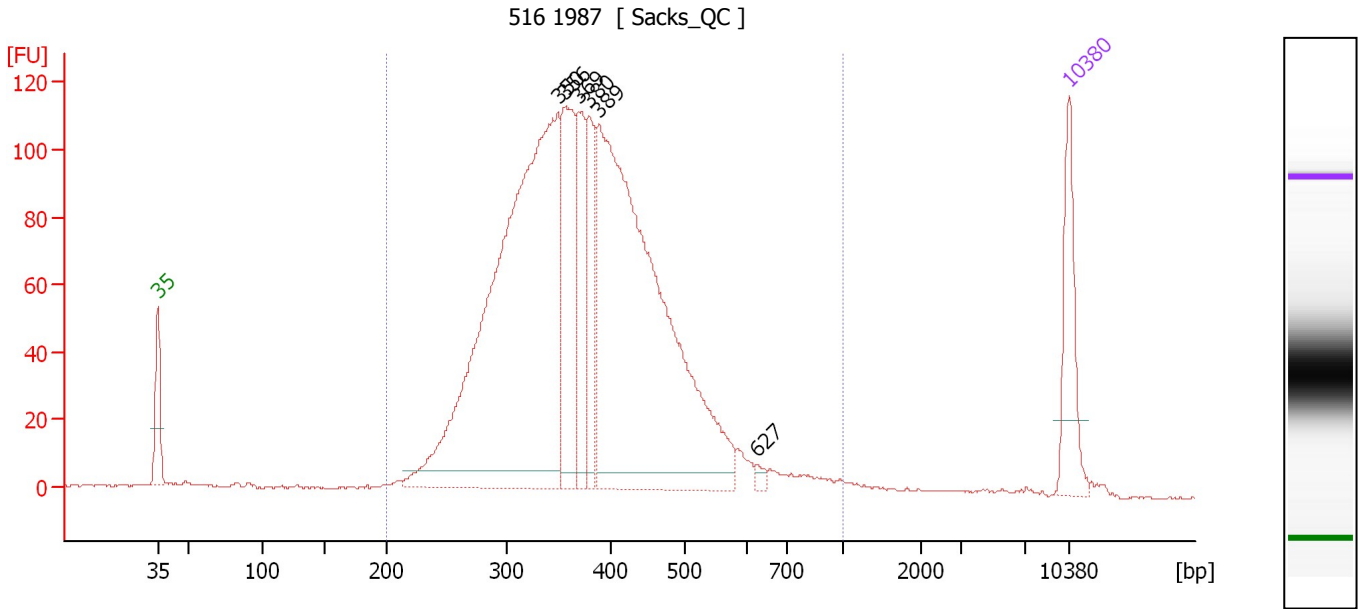
Region table for sample 1 : 516 1988

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	417	1,686.1	5,823.7	1,489.97	93	25.0

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad

Created: 10/3/2016 1:43:49 PM
 Modified: 10/3/2016 2:49:23 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : 516 1987

Number of peaks found: 6 Corr. Area 1: 2,210.1
 Noise: 0.3

Peak table for sample 2 : 516 1987

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	350	967.27	4,189.5		73.75
3	356	199.79	850.9		74.23
4	369	122.82	503.7		75.32
5	380	103.10	411.0		76.17
6	389	845.09	3,291.6		76.88
7	627	6.71	16.2		89.08
8	10,380	75.00	10.9	Upper Marker	113.00

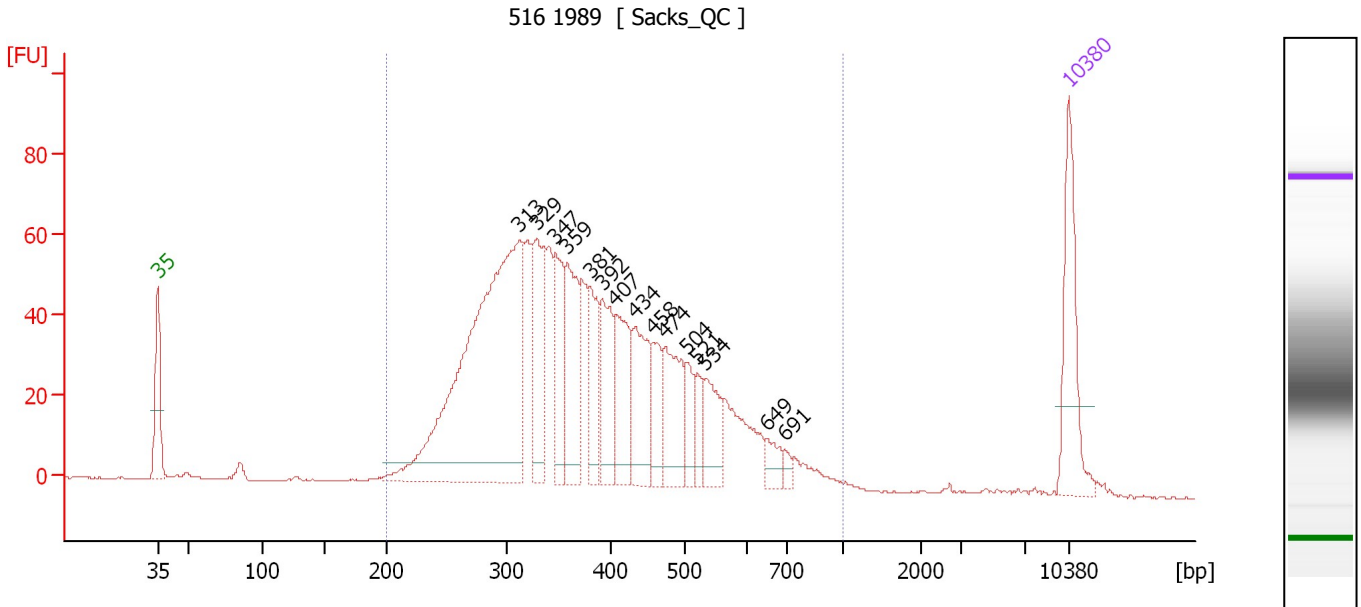
Region table for sample 2 : 516 1987

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	387	2,210.1	10,188.2	2,421.66	96	25.1

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad

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Electropherogram Summary Continued ...



Overall Results for sample 3 : 516 1989

Number of peaks found: 15 Corr. Area 1: 1,411.0
 Noise: 0.2

Peak table for sample 3 : 516 1989

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	313	552.99	2,677.1		70.81
3	329	98.86	455.0		72.11
4	347	83.68	365.1		73.55
5	359	98.17	414.6		74.46
6	381	58.44	232.4		76.24
7	392	77.00	297.3		77.16
8	407	81.25	302.4		78.17
9	434	83.81	292.6		79.71
10	458	44.91	148.5		81.10
11	474	81.60	260.7		82.02
12	504	30.38	91.4		83.65
13	521	25.77	75.0		84.47
14	534	48.63	138.0		85.10
15	649	17.82	41.6		89.76
16	691	8.10	17.7		91.11
17	10,380	75.00	10.9	Upper Marker	113.00

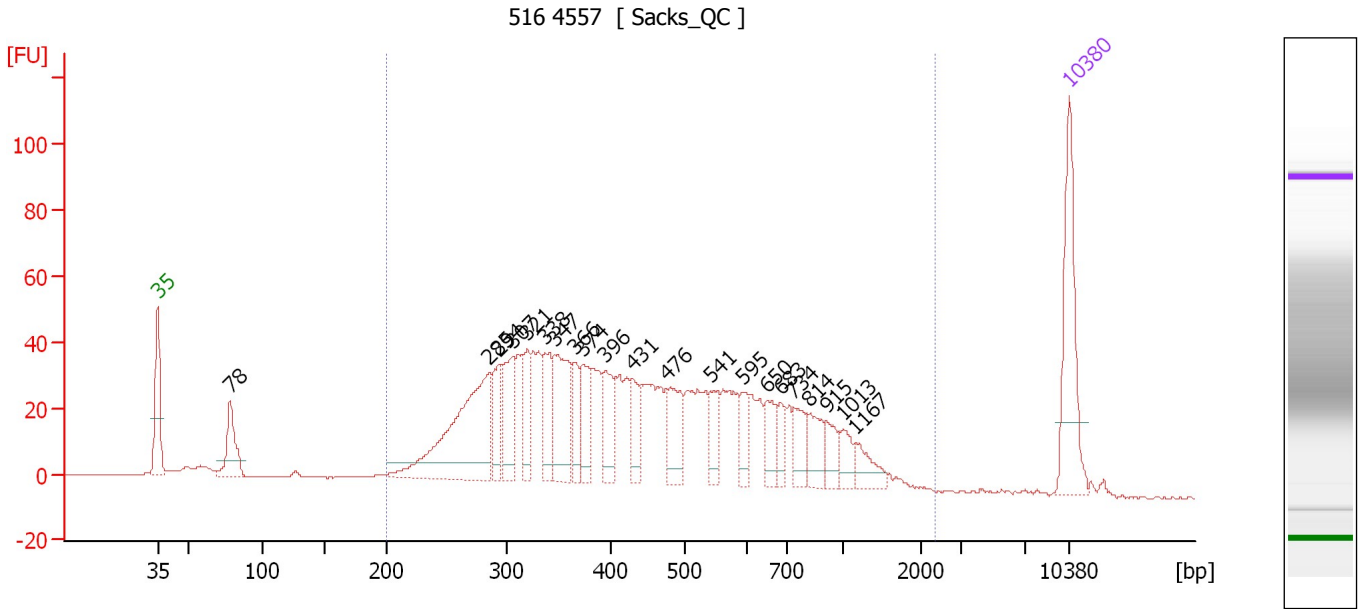
Region table for sample 3 : 516 1989

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	394	1,411.0	7,584.5	1,772.77	97	30.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad

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 Modified: 10/3/2016 2:49:23 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : 516 4557

Number of peaks found: 21 Corr. Area 1: 1,268.6
 Noise: 0.2

Peak table for sample 4 : 516 4557

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	78	55.43	1,074.1		48.56
3	285	192.47	1,021.7		68.43
4	294	42.89	221.1		69.21
5	307	59.43	293.2		70.34
6	321	39.91	188.7		71.41
7	338	46.68	209.5		72.78
8	347	77.53	338.7		73.51
9	366	33.05	136.7		75.07
10	374	41.73	169.0		75.71
11	396	39.40	150.9		77.41
12	431	25.75	90.6		79.51
13	476	47.88	152.5		82.10
14	541	26.13	73.2		85.42
15	595	20.84	53.1		87.96
16	650	26.91	62.7		89.81
17	683	18.51	41.1		90.84
18	734	26.76	55.2		91.86
19	814	29.61	55.1		92.99
20	915	18.51	30.7		94.40
21	1,013	17.28	25.9		95.67
22	1,167	19.98	25.9		96.60
23	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad

Created: 10/3/2016 1:43:49 PM
Modified: 10/3/2016 2:49:23 PM

Electropherogram Summary Continued ...

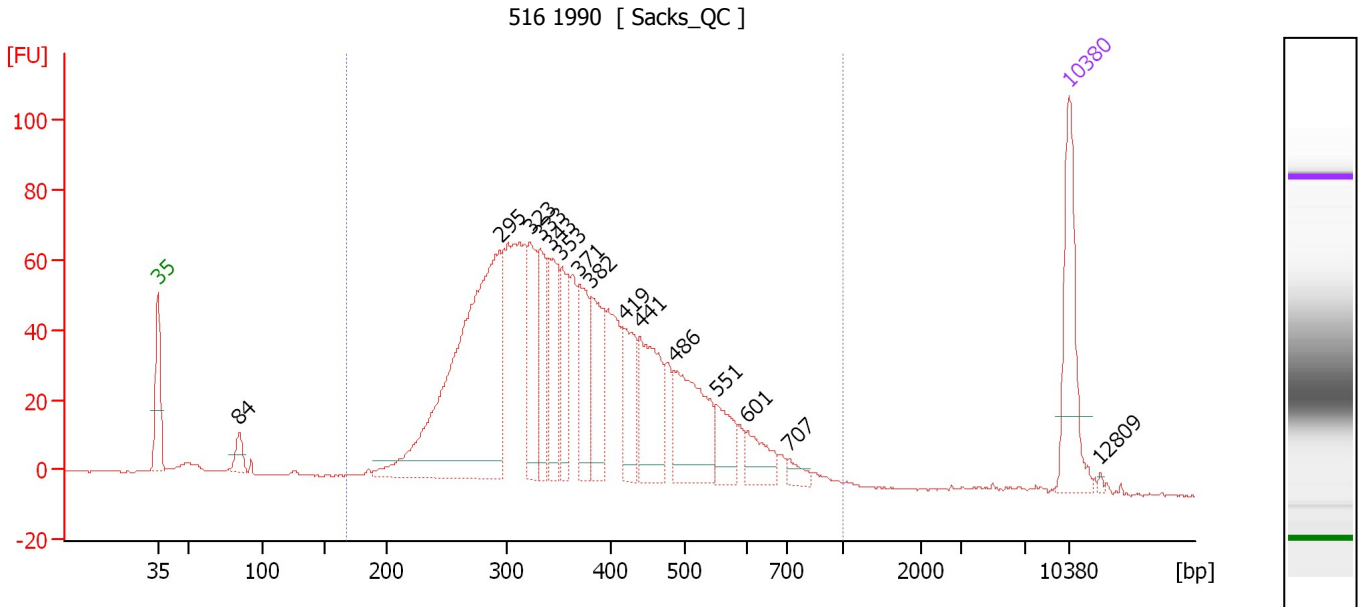
... Region table for sample 4 : 516 4557

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	2,353	500	1,268.6	5,233.7	1,355.20	93	51.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad

Created: 10/3/2016 1:43:49 PM
 Modified: 10/3/2016 2:49:23 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : 516 1990

Number of peaks found: 15 Corr. Area 1: 1,559.5
 Noise: 0.1

Peak table for sample 5 : 516 1990

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	84	21.82	392.7		49.25
3	295	474.54	2,440.6		69.27
4	323	95.13	446.3		71.60
5	333	75.34	342.9		72.40
6	343	75.64	334.3		73.19
7	353	57.27	245.6		74.03
8	371	73.74	301.4		75.42
9	382	77.53	307.6		76.31
10	419	58.87	212.9		78.84
11	441	103.21	355.0		80.08
12	486	111.11	346.7		82.66
13	551	39.11	107.6		85.88
14	601	31.12	78.4		88.26
15	707	11.13	23.9		91.48
16	10,380	75.00	10.9	Upper Marker	113.00
17	12,809	0.00	0.0		115.38

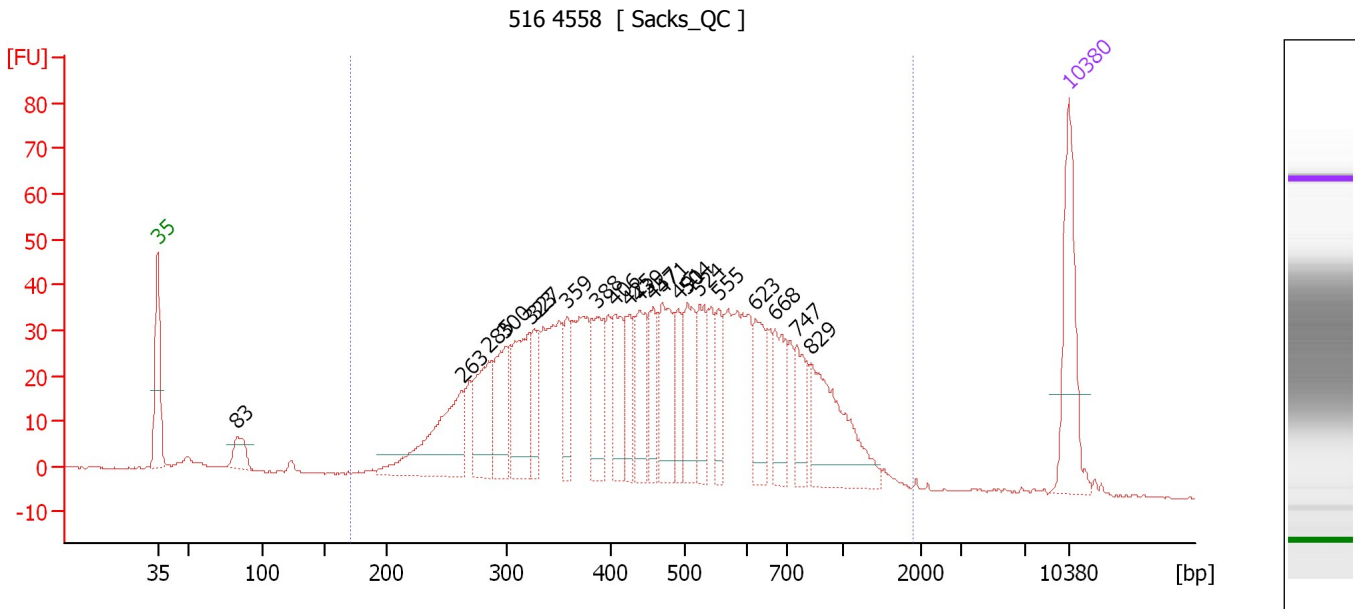
Region table for sample 5 : 516 1990

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
167	1,000	381	1,559.5	7,715.1	1,744.57	97	29.7

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad

Created: 10/3/2016 1:43:49 PM
 Modified: 10/3/2016 2:49:23 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : 516 4558

Number of peaks found: 21 Corr. Area 1: 1,318.9
 Noise: 0.2

Peak table for sample 6 : 516 4558

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	83	28.95	528.1		49.12
3	263	130.39	751.4		66.37
4	285	78.02	414.3		68.42
5	300	72.59	367.2		69.73
6	323	98.14	460.9		71.58
7	327	43.65	202.2		71.93
8	359	43.46	183.4		74.49
9	388	63.96	249.8		76.80
10	406	59.75	223.0		78.10
11	425	40.45	144.2		79.20
12	439	59.66	205.8		80.01
13	457	44.05	146.1		81.01
14	471	75.57	243.2		81.81
15	491	39.85	123.0		82.96
16	504	61.93	186.3		83.67
17	524	50.92	147.2		84.62
18	555	36.58	99.9		86.07
19	623	47.15	114.8		88.93
20	668	53.49	121.2		90.39
21	747	39.91	81.0		92.04
22	829	109.12	199.5		93.19
23	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad

Created: 10/3/2016 1:43:49 PM
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Electropherogram Summary Continued ...

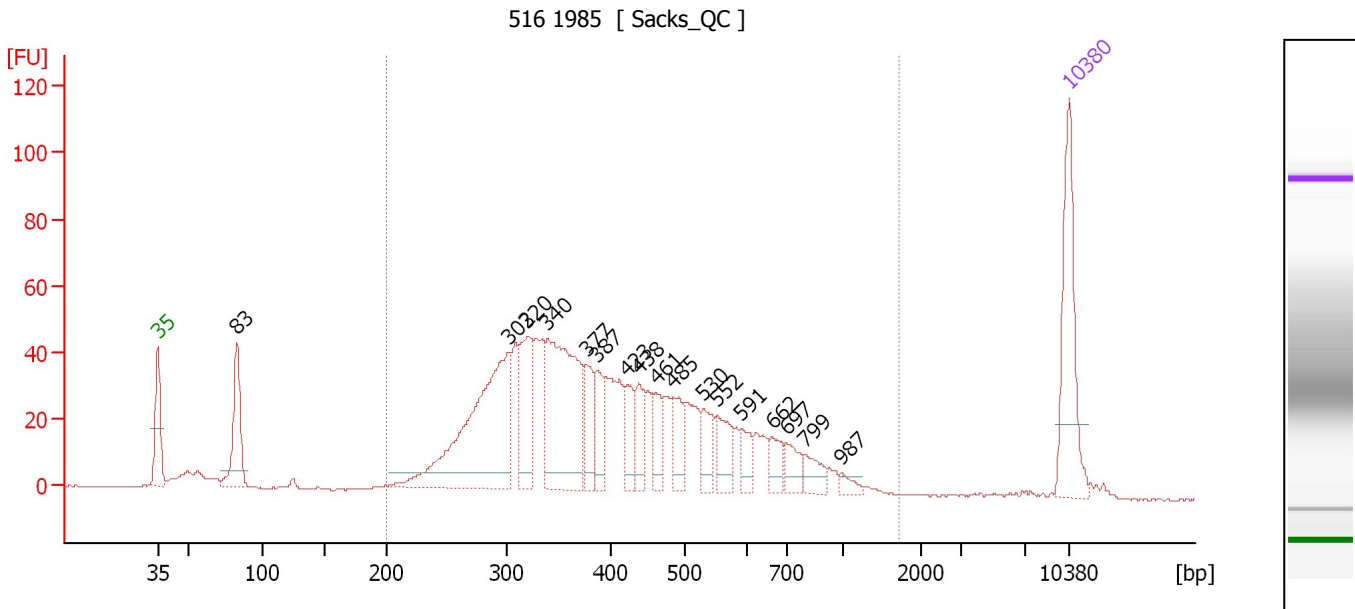
... Region table for sample 6 : 516 4558

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
171	1,904	505	1,318.9	6,770.8	■ 1,818.64	96	44.2

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad

Created: 10/3/2016 1:43:49 PM
 Modified: 10/3/2016 2:49:23 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : 516 1985

Number of peaks found: 17 Corr. Area 1: 1,106.1
 Noise: 0.2

Peak table for sample 7 : 516 1985

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	83	84.82	1,544.8		49.13
3	302	240.64	1,208.0		69.92
4	320	72.55	343.3		71.39
5	340	174.53	778.1		72.96
6	377	40.01	160.9		75.90
7	387	39.39	154.0		76.76
8	423	31.57	113.0		79.09
9	438	30.89	106.8		79.95
10	461	28.43	93.4		81.27
11	485	30.07	93.9		82.64
12	530	25.86	73.9		84.92
13	552	31.79	87.3		85.93
14	591	17.95	46.0		87.81
15	662	18.87	43.2		90.19
16	697	18.76	40.7		91.31
17	799	16.49	31.3		92.78
18	987	6.87	10.5		95.41
19	10,380	75.00	10.9	Upper Marker	113.00

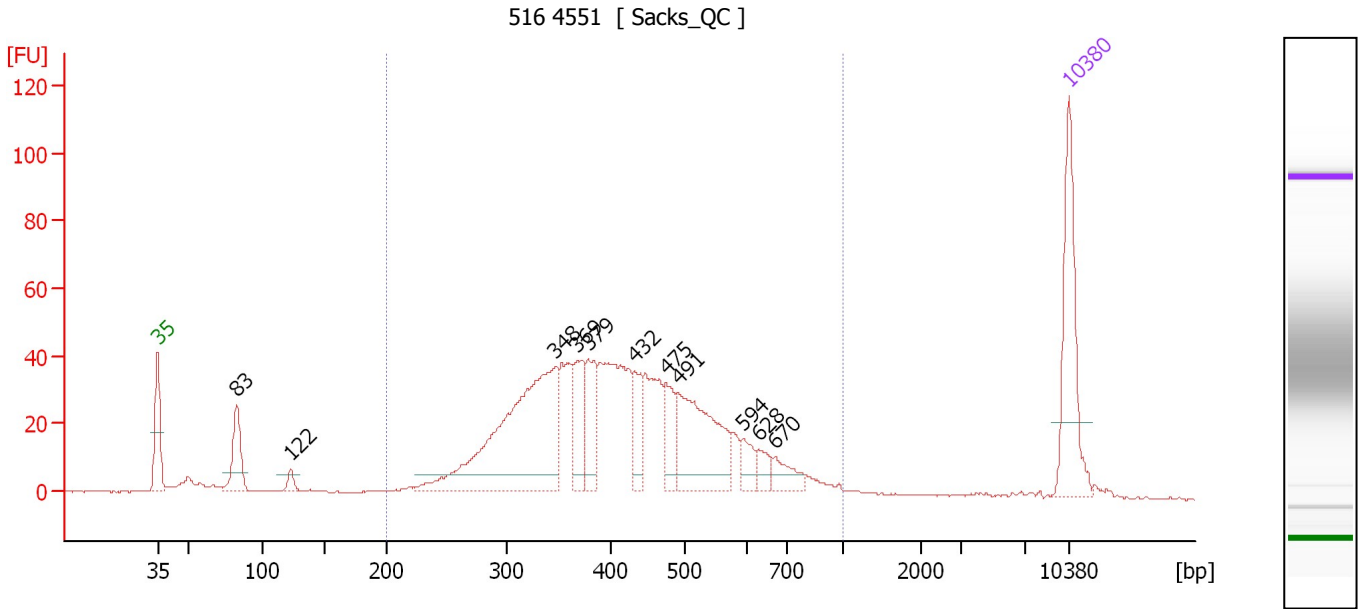
Region table for sample 7 : 516 1985

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,716	434	1,106.1	4,654.4	1,148.86	91	38.8

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad

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 Modified: 10/3/2016 2:49:23 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : 516 4551

Number of peaks found: 11 Corr. Area 1: 900.1
 Noise: 0.2

Peak table for sample 8 : 516 4551

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	83	51.60	946.9		49.06
3	122	10.13	125.5		53.19
4	348	266.67	1,162.7		73.57
5	369	48.16	198.0		75.25
6	379	46.98	187.6		76.11
7	432	31.01	108.8		79.58
8	475	33.86	107.9		82.08
9	491	112.01	345.4		82.99
10	594	16.84	42.9		87.93
11	628	14.21	34.3		89.11
12	670	19.12	43.2		90.43
13	10,380	75.00	10.9	Upper Marker	113.00

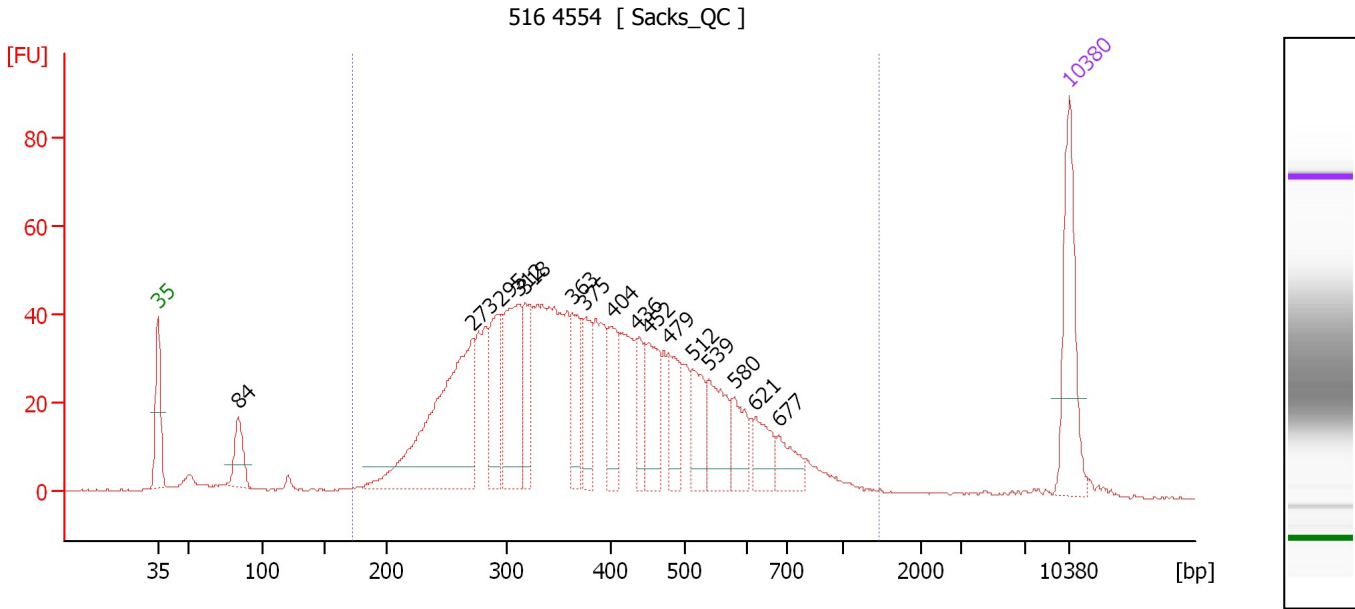
Region table for sample 8 : 516 4551

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	430	900.1	3,659.2	941.83	91	28.3

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad

Created: 10/3/2016 1:43:49 PM
 Modified: 10/3/2016 2:49:23 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : 516 4554

Number of peaks found: 16 Corr. Area 1: 1,224.7
 Noise: 0.1

Peak table for sample 9 : 516 4554

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	84	47.43	858.4		49.19
3	273	274.97	1,527.8		67.26
4	295	79.21	406.3		69.35
5	312	123.40	598.4		70.77
6	318	55.62	265.4		71.17
7	363	54.35	226.7		74.83
8	375	55.32	223.3		75.79
9	404	52.60	197.4		77.97
10	436	36.51	127.0		79.80
11	452	60.99	204.6		80.72
12	479	50.42	159.4		82.29
13	512	44.73	132.3		84.07
14	539	61.15	171.9		85.34
15	580	38.46	100.5		87.26
16	621	34.11	83.2		88.89
17	677	29.14	65.2		90.66
18	10,380	75.00	10.9	Upper Marker	113.00

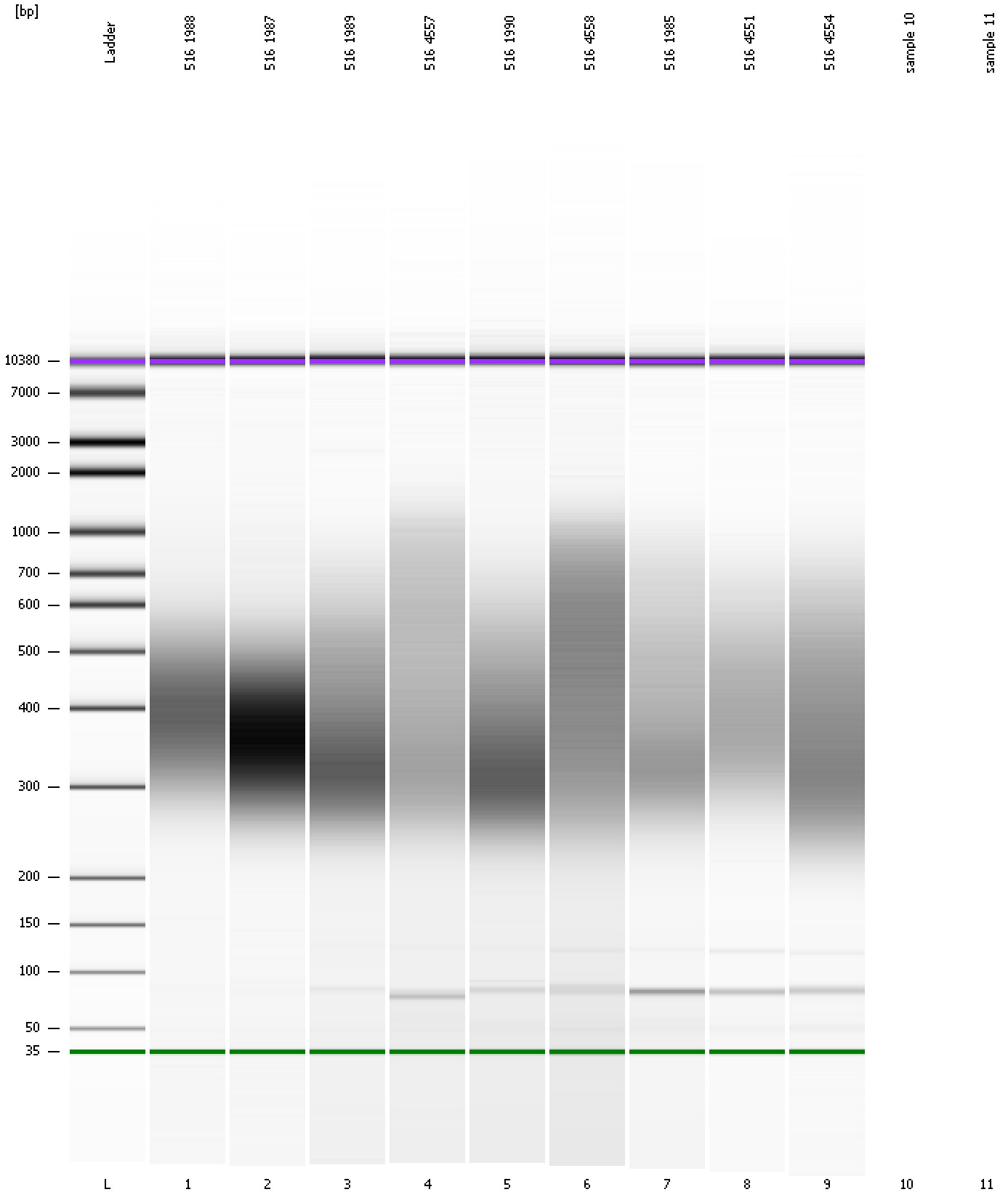
Region table for sample 9 : 516 4554

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
172	1,477	408	1,224.7	7,443.8	1,724.96	94	36.6

Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad

Created: 10/3/2016 1:43:49 PM
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Gel Image



Assay Class: High Sensitivity DNA Assay
Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad

Created: 10/3/2016 1:43:49 PM
Modified: 10/3/2016 2:49:23 PM

Invalid Samples

Sample 10 has not been run, no results available.

Sample 11 has not been run, no results available.

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad

Created: 10/3/2016 1:43:49 PM
 Modified: 10/3/2016 2:49:23 PM

Run Logbook

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 10)		Instrument	Run		10/3/2016 2:19:22 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2016-10-03\2016-10-03_003.xad)		Instrument	Run		10/3/2016 1:43:54 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		10/3/2016 1:43:54 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		10/3/2016 1:43:54 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		10/3/2016 1:43:54 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		10/3/2016 1:43:54 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		10/3/2016 1:43:54 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		10/3/2016 1:43:54 PM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1