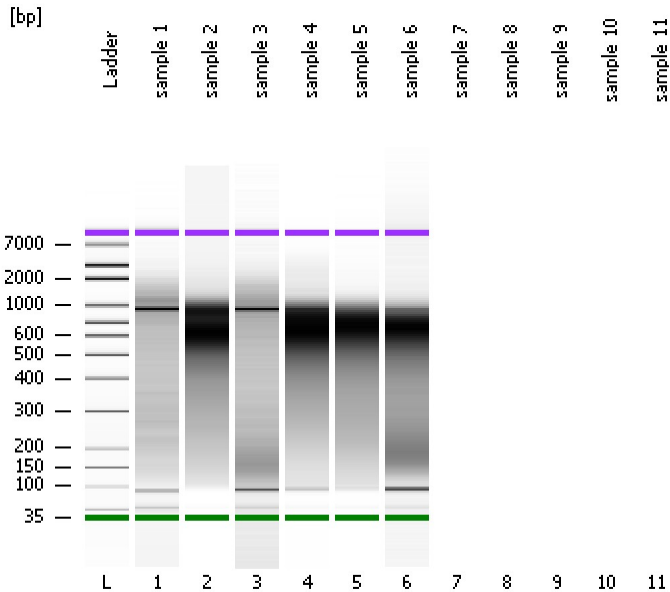


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
Modified: 4/7/2016 11:01:15 AM

### Electrophoresis File Run Summary



#### Instrument Information:

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

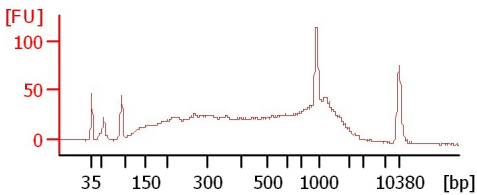
#### Assay Information:

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

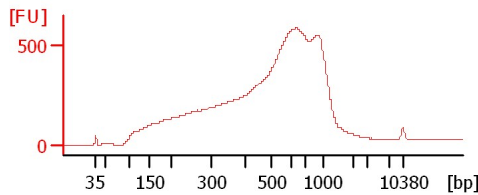
#### Chip Information:

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

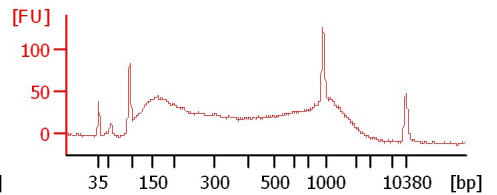
sample 1



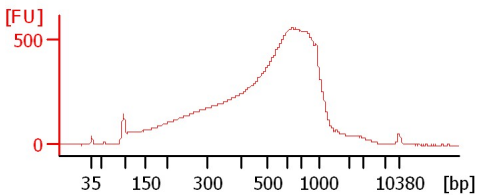
sample 2



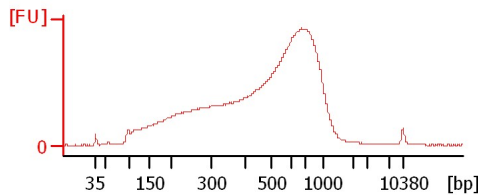
sample 3



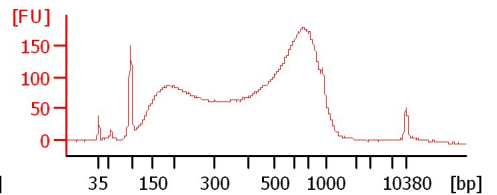
sample 4



sample 5



sample 6



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
 Modified: 4/7/2016 11:01:15 AM

**Electrophoresis File Run Summary (Chip Summary)**

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
sample 1		<input type="checkbox"/>	✓			
sample 2		<input type="checkbox"/>	✓			
sample 3		<input type="checkbox"/>	✓			
sample 4		<input type="checkbox"/>	✓			
sample 5		<input type="checkbox"/>	✓			
sample 6		<input type="checkbox"/>	✓			
sample 7		<input type="checkbox"/>				
sample 8		<input type="checkbox"/>				
sample 9		<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:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
Modified: 4/7/2016 11:01:15 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/ $\mu$ l] : 1950  
Uses Standard Area for Ladder Fragments  
Lower Marker Concentration [pg/ $\mu$ l] : 125  
Upper Marker Concentration [pg/ $\mu$ l] : 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

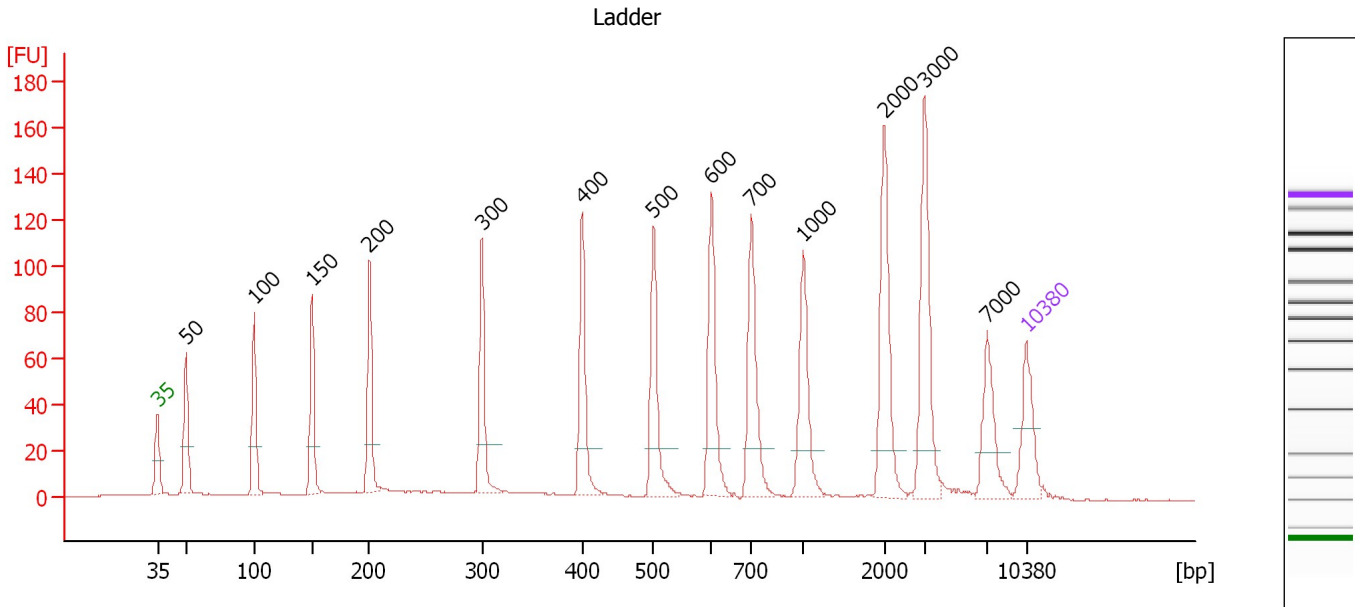
### Ladder

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:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
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**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

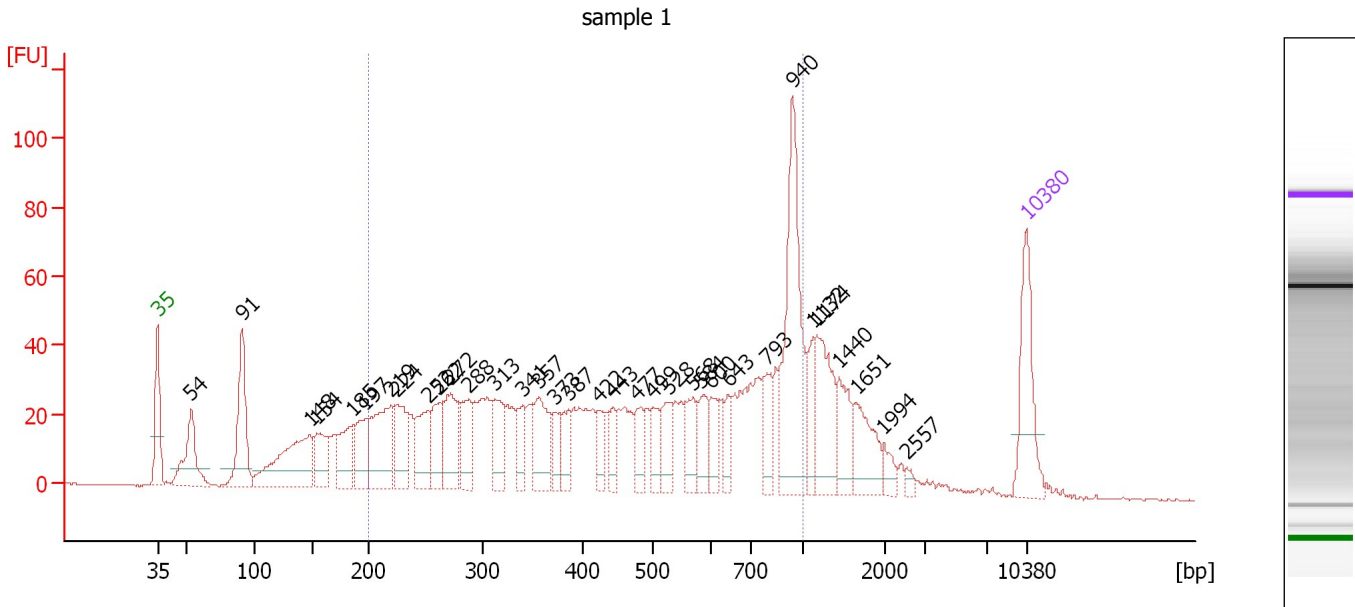
**Peak table for Ladder**

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	45.31
3	100	150.00	2,272.7	Ladder Peak	50.79
4	150	150.00	1,515.2	Ladder Peak	55.45
5	200	150.00	1,136.4	Ladder Peak	60.06
6	300	150.00	757.6	Ladder Peak	69.15
7	400	150.00	568.2	Ladder Peak	77.22
8	500	150.00	454.5	Ladder Peak	82.98
9	600	150.00	378.8	Ladder Peak	87.59
10	700	150.00	324.7	Ladder Peak	90.82
11	1,000	150.00	227.3	Ladder Peak	95.02
12	2,000	150.00	113.6	Ladder Peak	101.56
13	3,000	150.00	75.8	Ladder Peak	104.79
14	7,000	150.00	32.5	Ladder Peak	109.82
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
 Modified: 4/7/2016 11:01:15 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : sample 1**

Number of peaks found: 34                      Corr. Area 1: 1,274.5  
 Noise: 0.2

**Peak table for sample 1 : sample 1**

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	54	101.12	2,854.8		45.71
3	91	137.22	2,287.4		49.79
4	148	165.05	1,690.7		55.26
5	154	65.62	644.1		55.85
6	185	69.67	569.9		58.70
7	197	64.24	494.9		59.75
8	219	120.26	830.7		61.82
9	224	72.25	488.9		62.23
10	252	67.15	403.4		64.80
11	262	62.35	360.2		65.72
12	272	83.84	466.3		66.64
13	288	53.01	278.8		68.06
14	313	60.64	293.2		70.22
15	341	34.80	154.8		72.42
16	357	74.09	314.4		73.75
17	373	28.31	115.0		75.04
18	387	33.73	132.2		76.14
19	422	28.83	103.5		78.48
20	443	24.89	85.0		79.72
21	477	34.06	108.2		81.65
22	499	33.85	102.7		82.93
23	528	38.00	109.1		84.27
24	568	41.26	110.1		86.10
25	584	37.76	98.0		86.84

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
 Modified: 4/7/2016 11:01:15 AM

**Electropherogram Summary Continued ...**

**... Peak table for sample 1 : sample 1**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	600	31.09	78.6		87.57
27	643	26.24	61.8		88.99
28	793	37.47	71.6		92.11
29	940	195.31	314.7		94.18
30	1,132	33.89	45.4		95.88
31	1,174	81.67	105.4		96.15
32	1,440	44.39	46.7		97.90
33	1,651	54.02	49.6		99.28
34	1,994	14.76	11.2		101.52
35	2,557	5.96	3.5		103.36
36	10,380	75.00	10.9	Upper Marker	113.00

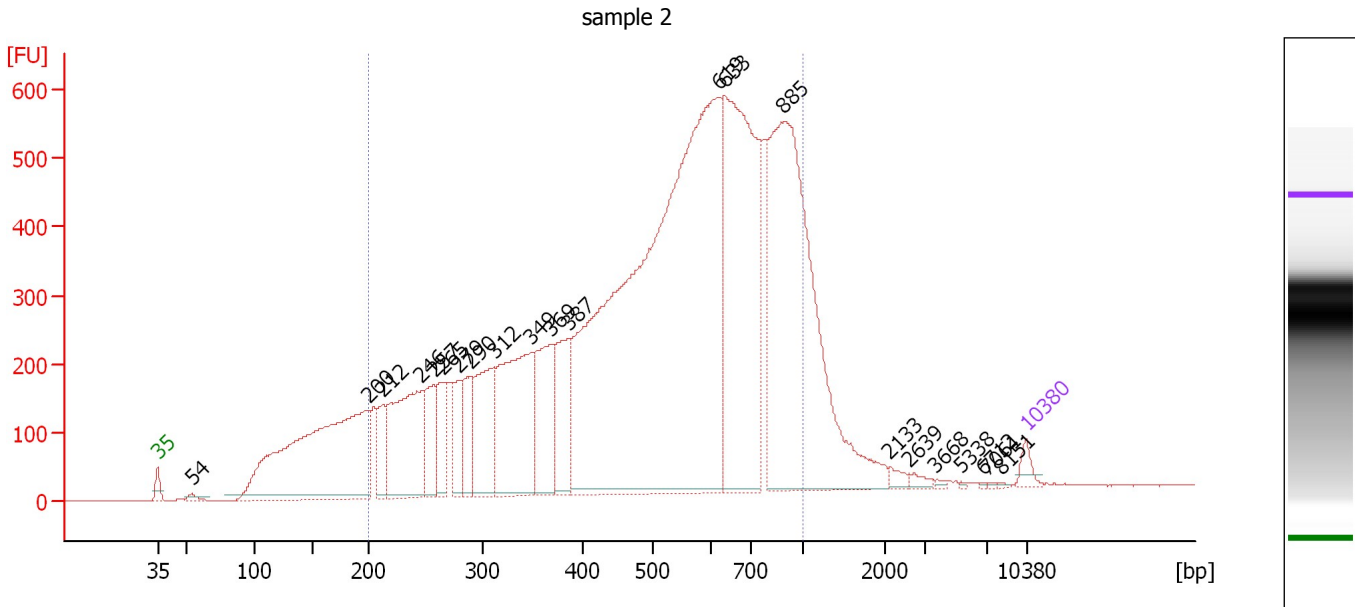
**Region table for sample 1 : sample 1**

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	511	1,274.5	7,269.4	1,811.41	68	45.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
 Modified: 4/7/2016 11:01:15 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : sample 2**

Number of peaks found: 22                      Corr. Area 1: 13,541.9  
 Noise: 0.4

**Peak table for sample 2 : sample 2**

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	54	48.96	1,361.5		45.80
3	200	3,288.98	24,970.6		60.02
4	212	331.16	2,362.4		61.19
5	246	1,429.81	8,796.5		64.27
6	257	495.89	2,922.9		65.25
7	265	406.29	2,320.6		65.99
8	279	399.33	2,167.6		67.25
9	290	469.39	2,448.8		68.28
10	312	865.75	4,199.7		70.14
11	349	1,568.35	6,813.8		73.08
12	369	849.02	3,486.4		74.71
13	387	704.70	2,759.8		76.16
14	619	8,353.57	20,462.7		88.19
15	633	3,128.82	7,489.4		88.66
16	885	3,805.59	6,512.2		93.41
17	2,133	53.88	38.3		101.99
18	2,639	43.89	25.2		103.63
19	3,668	16.00	6.6		105.63
20	5,338	7.58	2.2		107.73
21	6,712	6.21	1.4		109.46
22	7,061	6.89	1.5		109.88
23	8,151	7.01	1.3		110.90
24	10,380	75.00	10.9	Upper Marker	113.00


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
Modified: 4/7/2016 11:01:15 AM

**Electropherogram Summary Continued ...**

... Region table for sample 2 :

sample 2

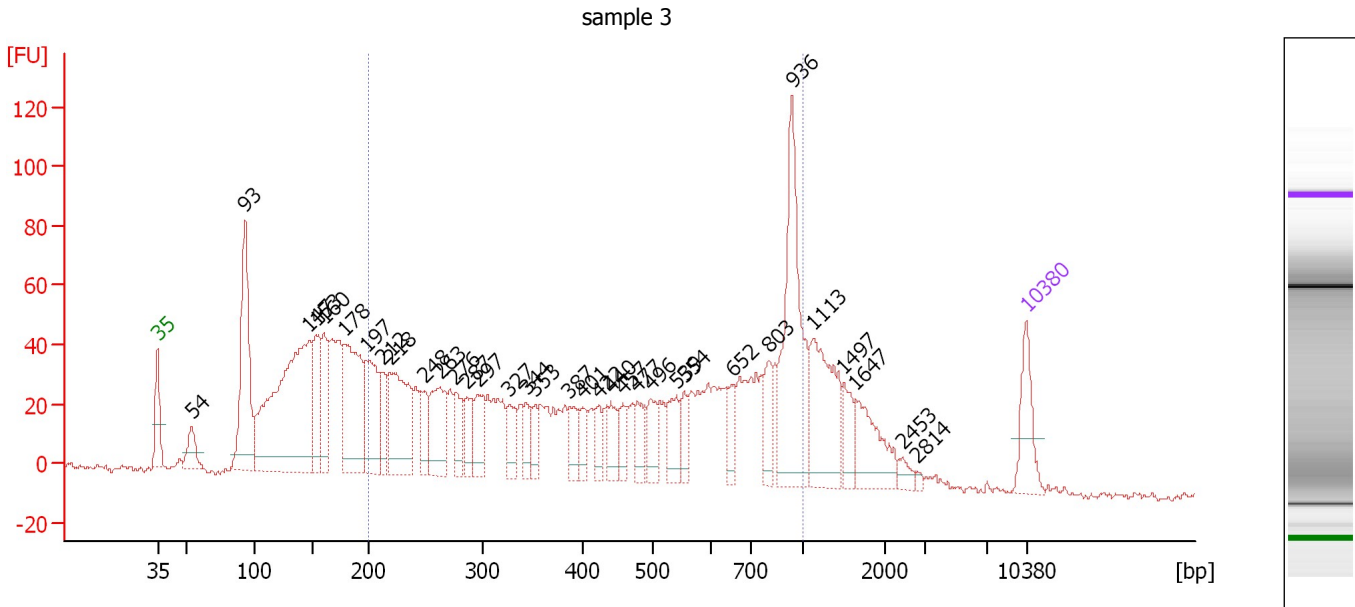
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	542	13,541.9	82,341.5	 23,305.76	84	36.7



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

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 Modified: 4/7/2016 11:01:15 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : sample 3**

Number of peaks found: 34                      Corr. Area 1: 1,434.8  
 Noise: 1.3

**Peak table for sample 3 : sample 3**

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	54	68.73	1,911.7		45.80
3	93	380.30	6,188.4		50.04
4	147	752.14	7,730.2		55.21
5	153	137.08	1,353.4		55.77
6	160	134.14	1,270.0		56.38
7	178	314.03	2,677.4		58.01
8	197	198.53	1,523.7		59.82
9	212	85.00	608.2		61.13
10	218	259.44	1,799.7		61.74
11	248	63.32	386.6		64.44
12	263	154.42	891.2		65.74
13	276	66.29	363.4		67.00
14	287	58.25	307.4		67.98
15	297	87.87	448.4		68.87
16	327	58.85	272.6		71.34
17	344	44.37	195.5		72.69
18	353	42.70	183.5		73.39
19	387	54.69	214.0		76.18
20	401	43.85	165.8		77.25
21	422	40.88	146.6		78.51
22	440	53.04	182.5		79.54
23	457	43.99	145.8		80.52
24	477	53.96	171.2		81.68
25	496	61.05	186.5		82.75

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
 Modified: 4/7/2016 11:01:15 AM

### Electropherogram Summary Continued ...

#### ... Peak table for sample 3 : sample 3

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	539	71.12	200.1		84.76
27	554	42.93	117.5		85.46
28	652	48.50	112.7		89.28
29	803	66.94	126.3		92.26
30	936	339.36	549.1		94.13
31	1,113	197.48	268.8		95.76
32	1,497	50.81	51.4		98.27
33	1,647	111.47	102.6		99.25
34	2,453	16.57	10.2		103.03
35	2,814	5.29	2.8		104.19
36	10,380	75.00	10.9	Upper Marker	113.00

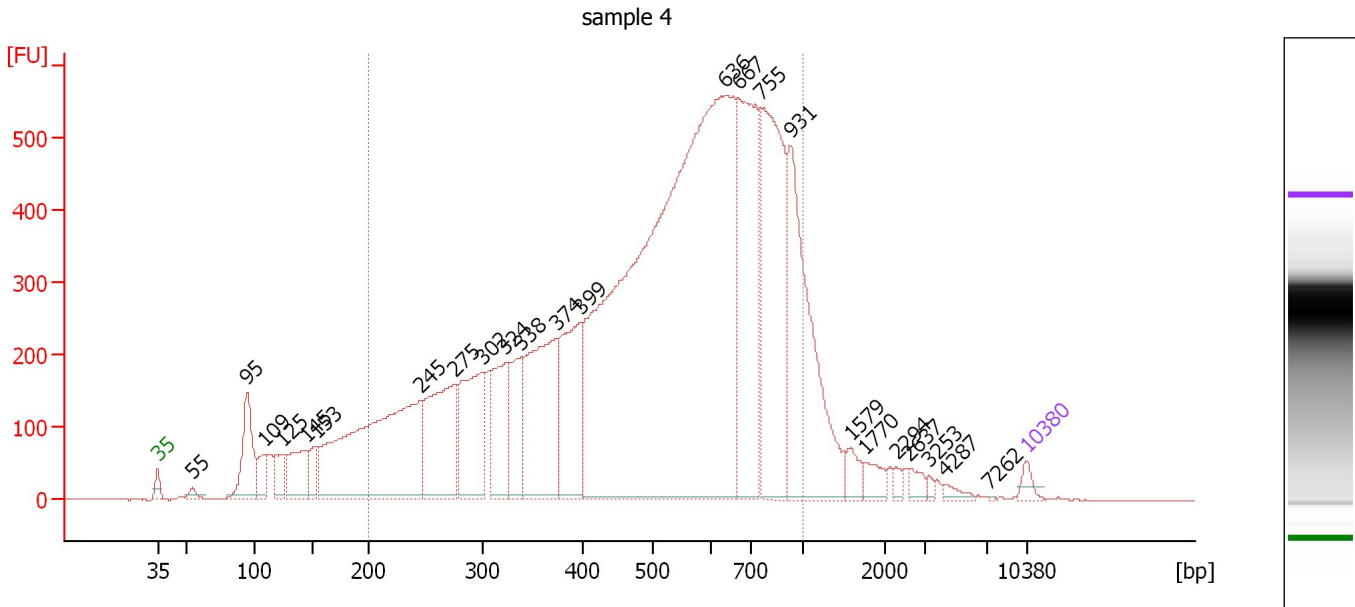
#### Region table for sample 3 : sample 3

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	507	1,434.8	12,230.7	2,962.02	57	46.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

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**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : sample 4**

Number of peaks found: 24                      Corr. Area 1: 13,137.8  
 Noise: 0.6

**Peak table for sample 4 : sample 4**

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	55	72.09	1,991.1		45.84
3	95	879.61	14,066.5		50.22
4	109	276.38	3,831.2		51.66
5	125	304.80	3,700.5		53.10
6	145	645.82	6,751.1		54.98
7	153	251.60	2,487.7		55.75
8	245	3,522.19	21,811.2		64.12
9	275	1,562.71	8,597.7		66.91
10	302	1,288.00	6,472.5		69.27
11	324	833.65	3,903.7		71.05
12	338	690.76	3,092.2		72.25
13	374	1,813.18	7,340.8		75.14
14	399	1,276.63	4,851.6		77.11
15	636	11,320.62	26,970.6		88.75
16	667	2,216.23	5,032.4		89.76
17	755	2,477.57	4,971.0		91.59
18	931	2,186.95	3,560.8		94.04
19	1,579	158.46	152.0		98.81
20	1,770	140.31	120.1		100.06
21	2,294	46.42	30.7		102.51
22	2,637	83.91	48.2		103.62
23	3,253	32.27	15.0		105.11
24	4,287	57.53	20.3		106.41
25	7,263	4.00	0.8		110.07

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
 Modified: 4/7/2016 11:01:15 AM

### Electropherogram Summary Continued ...

#### ... Peak table for sample 4 : sample 4

Peak	Size [bp]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	10,380	75.00	10.9	Upper Marker	113.00

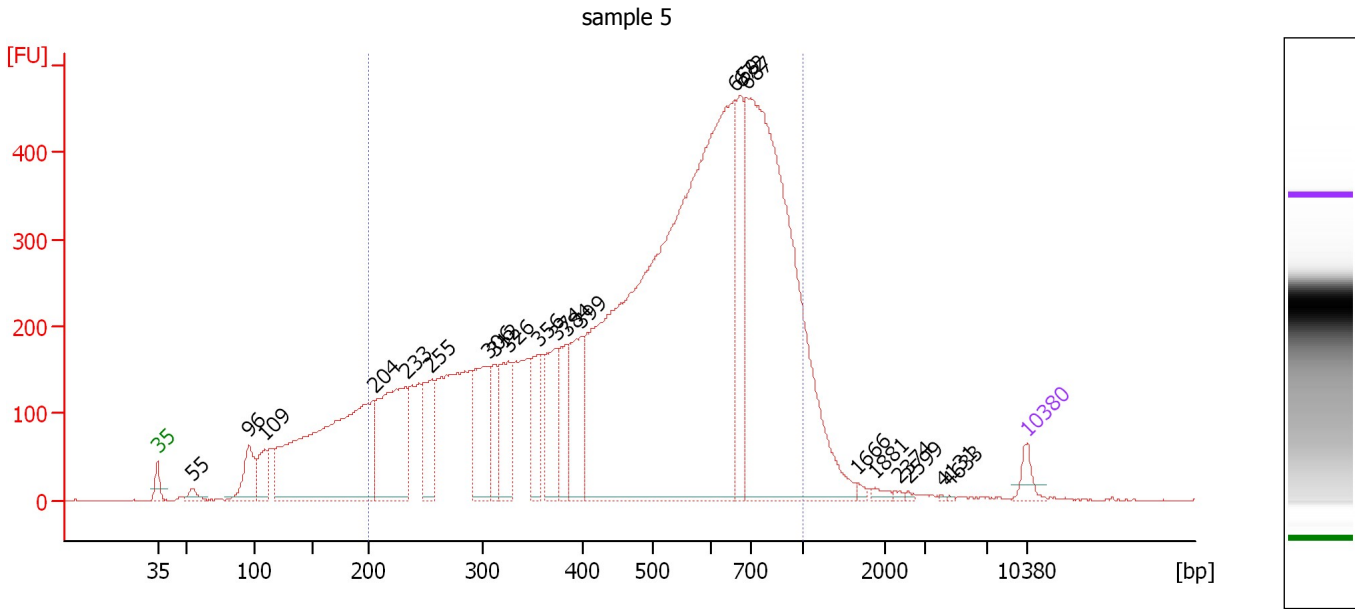
#### Region table for sample 4 : sample 4

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/ $\mu$ l]	% of Total	Size distribution in CV [%]
200	1,000	542	13,137.8	99,788.0	28,543.69	84	36.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
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**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : sample 5**

Number of peaks found: 22                      Corr. Area 1: 10,523.1  
 Noise: 1.0

**Peak table for sample 5 : sample 5**

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	55	68.25	1,893.6		45.81
3	96	347.01	5,469.3		50.37
4	109	252.24	3,490.5		51.68
5	204	2,556.61	18,961.7		60.45
6	233	1,148.44	7,481.8		63.02
7	255	434.76	2,583.4		65.06
8	306	620.25	3,067.2		69.66
9	312	278.53	1,350.9		70.15
10	326	463.72	2,153.8		71.26
11	356	373.67	1,591.9		73.64
12	374	492.09	1,995.3		75.09
13	384	374.19	1,474.6		75.96
14	399	503.89	1,913.9		77.13
15	659	6,999.51	16,098.4		89.49
16	672	588.57	1,326.5		89.93
17	687	4,073.17	8,979.1		90.41
18	1,666	20.75	18.9		99.38
19	1,881	27.65	22.3		100.78
20	2,374	12.81	8.2		102.77
21	2,599	9.69	5.6		103.50
22	4,131	4.60	1.7		106.21
23	4,633	4.32	1.4		106.84
24	10,380	75.00	10.9	Upper Marker	113.00


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
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**Electropherogram Summary Continued ...**

... Region table for sample 5 :

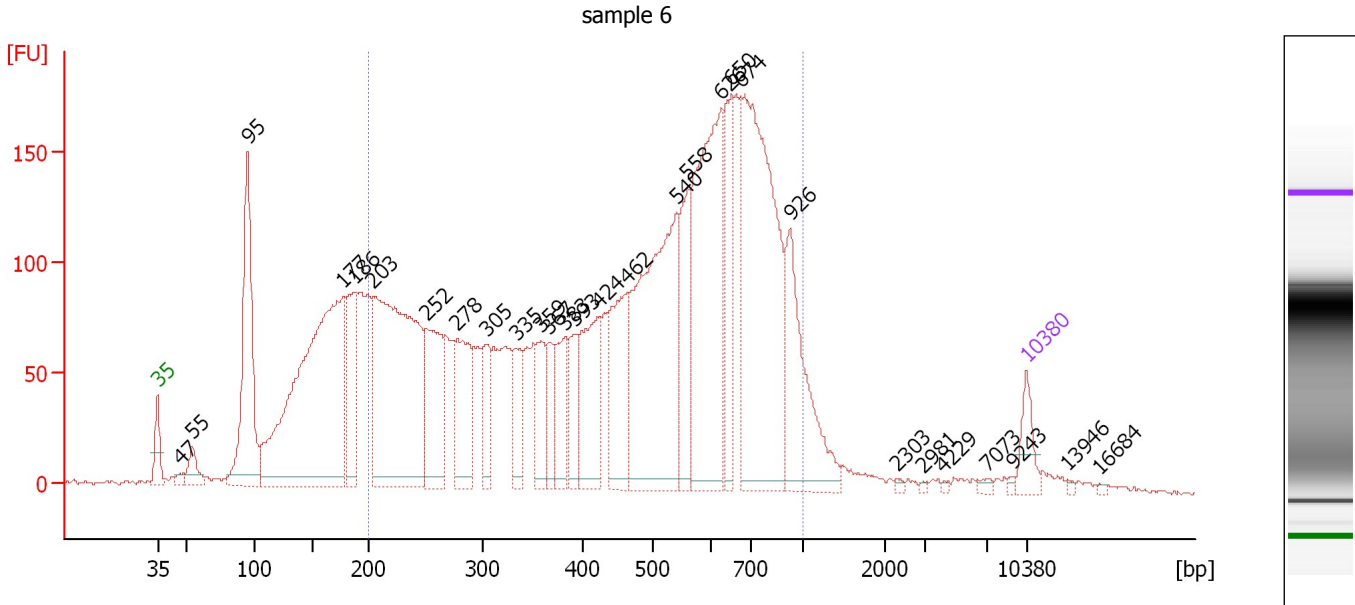
sample 5

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/ $\mu$ l]	% of Total	Size distribution in CV [%]
200	1,000	530	10,523.1	69,187.9	 19,059.89	85	37.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
 Modified: 4/7/2016 11:01:15 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : sample 6**

Number of peaks found: 29                      Corr. Area 1: 4,300.4  
 Noise: 1.1

**Peak table for sample 6 : sample 6**

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	47	23.99	778.2		44.80
3	55	100.95	2,796.3		45.82
4	95	804.87	12,832.3		50.25
5	177	1,746.48	14,911.8		57.98
6	186	349.64	2,841.7		58.81
7	203	1,426.46	10,628.5		60.37
8	252	406.34	2,447.6		64.74
9	278	320.81	1,746.5		67.18
10	305	168.21	836.9		69.51
11	335	172.89	782.8		71.94
12	359	161.72	681.8		73.94
13	367	120.95	499.0		74.57
14	383	191.99	759.7		75.84
15	393	139.17	536.4		76.66
16	424	362.66	1,295.5		78.61
17	462	351.86	1,153.6		80.80
18	540	1,011.87	2,838.0		84.83
19	558	264.05	716.8		85.66
20	626	903.83	2,187.2		88.43
21	650	279.01	650.2		89.21
22	674	1,191.91	2,678.1		89.99
23	926	434.44	710.9		93.98
24	2,303	7.18	4.7		102.54
25	2,981	4.88	2.5		104.73

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
 Modified: 4/7/2016 11:01:15 AM

### Electropherogram Summary Continued ...

#### ... Peak table for sample 6 : sample 6

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	4,229	5.34	1.9		106.34
27	7,073	12.42	2.7		109.89
28	9,243	7.08	1.2		111.93
29	10,380	75.00	10.9	Upper Marker	113.00
30	13,946	0.00	0.0		116.36
31	16,684	0.00	0.0		118.93

#### Region table for sample 6 : sample 6

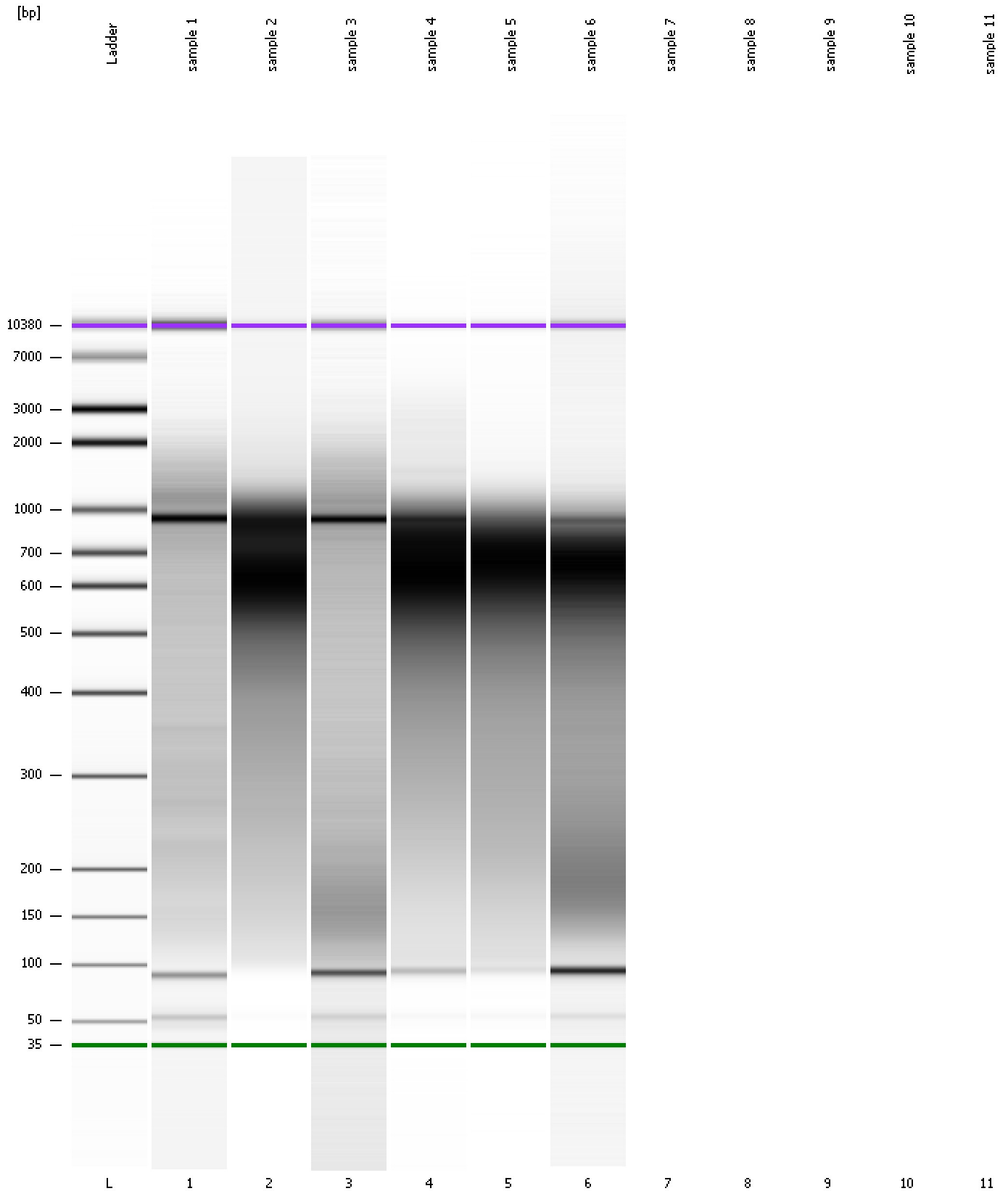
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	506	4,300.4	35,665.9	9,143.29	74	39.2



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
Modified: 4/7/2016 11:01:15 AM

**Gel Image**

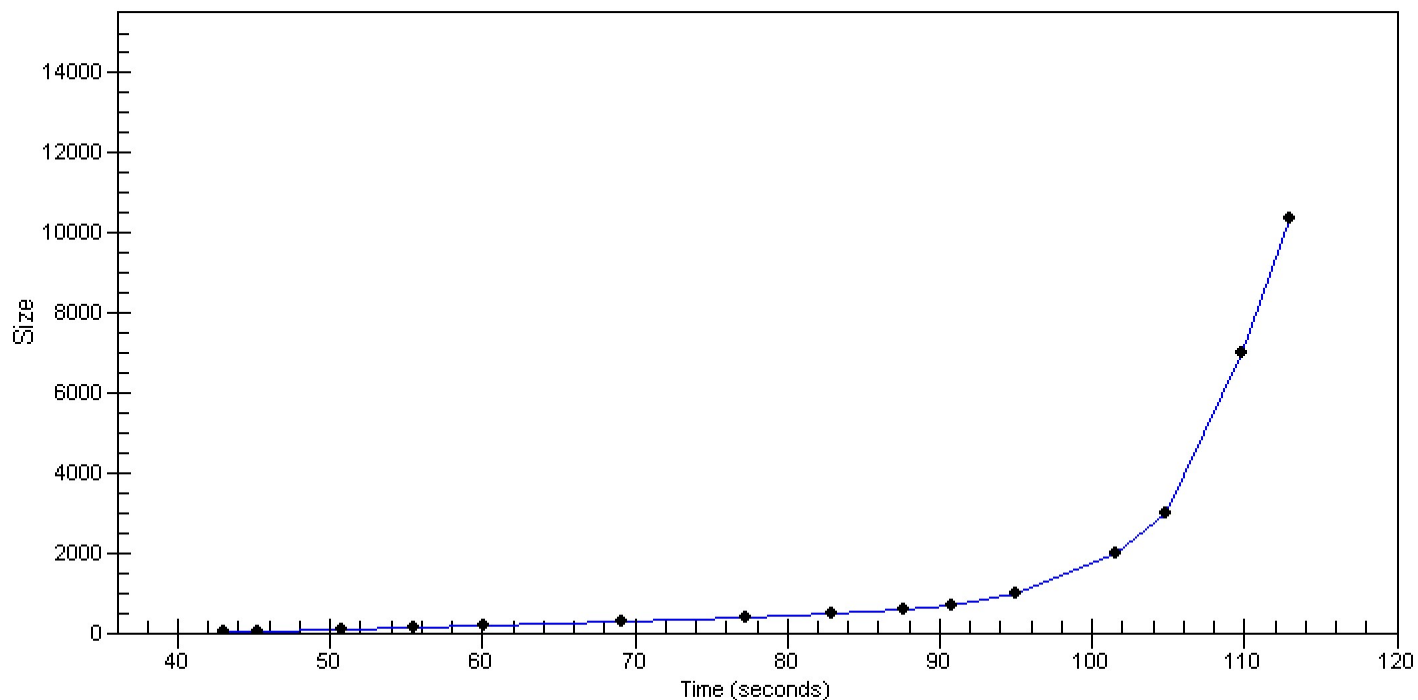


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
Modified: 4/7/2016 11:01:15 AM

**Curves**

**Standard Curve**



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
Modified: 4/7/2016 11:01:15 AM

**Invalid Samples**

Sample 7 has not been run, no results available.

Sample 8 has not been run, no results available.

Sample 9 has not been run, no results available.

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:\Documents and Settings\UC Davis\Desktop\2016-04-07\_Chen.xad

Created: 4/7/2016 10:22:41 AM  
 Modified: 4/7/2016 11:01:15 AM

**Run Logbook**

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 7)		Instrument	Run		4/7/2016 10:49:42 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\2016-04-07\2016-04-07_001.xad)		Instrument	Run		4/7/2016 10:22:46 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		4/7/2016 10:22:46 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		4/7/2016 10:22:46 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		4/7/2016 10:22:46 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		4/7/2016 10:22:46 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		4/7/2016 10:22:46 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		4/7/2016 10:22:46 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1