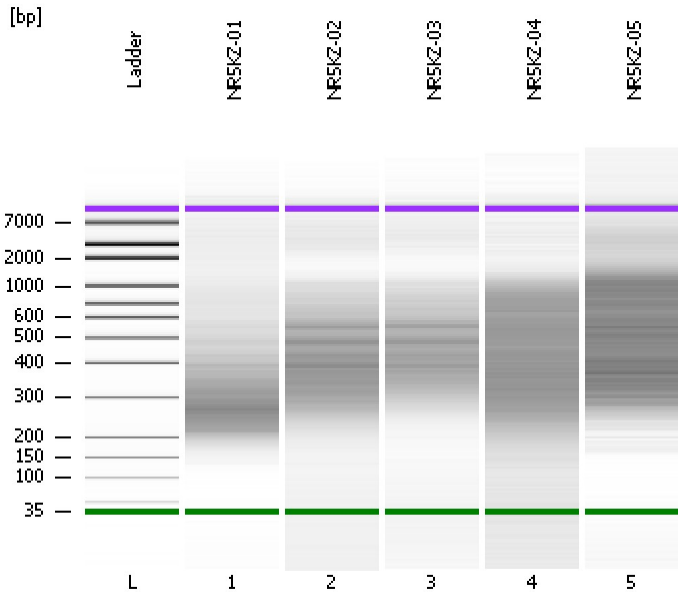


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
Modified: 3/11/2016 4:52:14 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

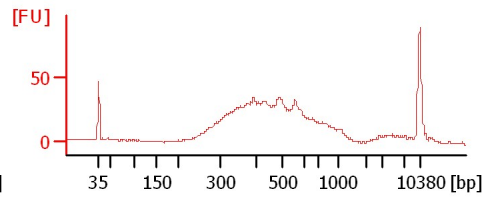
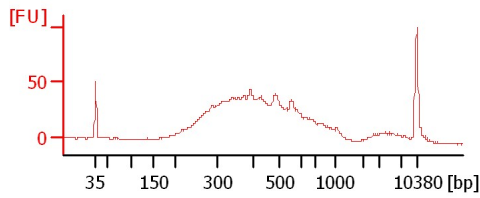
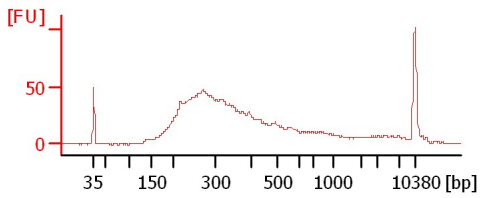
#### Chip Information:

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

NR5KZ-01

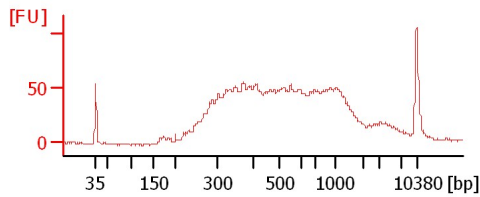
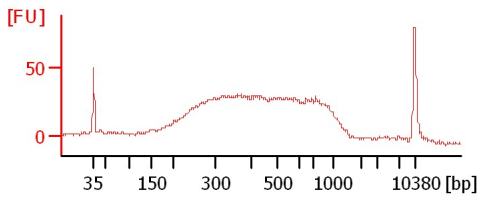
NR5KZ-02

NR5KZ-03



NR5KZ-04

NR5KZ-05



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
Modified: 3/11/2016 4:52:14 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
NR5KZ-01		<input type="checkbox"/>	✓			
NR5KZ-02		<input type="checkbox"/>	✓			
NR5KZ-03		<input type="checkbox"/>	✓			
NR5KZ-04		<input type="checkbox"/>	✓			
NR5KZ-05		<input type="checkbox"/>	✓			
Ladder		<input type="checkbox"/>	✓			

**Chip Lot #** **Reagent Kit Lot #**

**Chip Comments :**

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
Modified: 3/11/2016 4:52:14 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

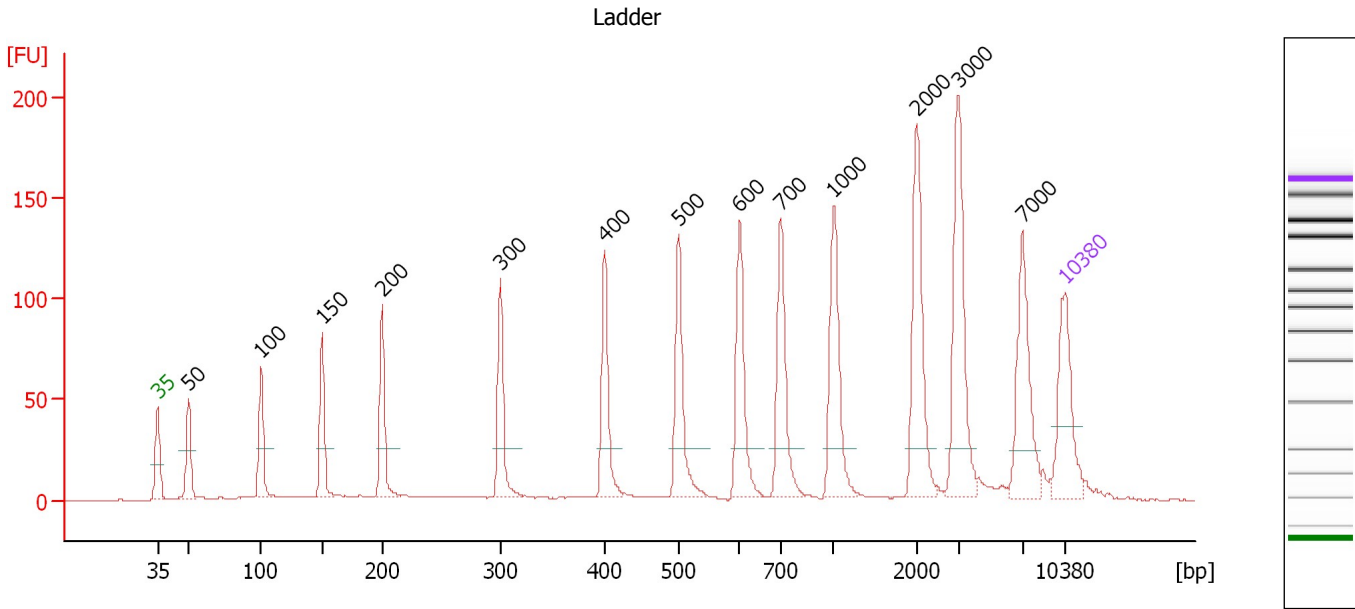
**Ladder**

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:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
 Modified: 3/11/2016 4:52:14 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

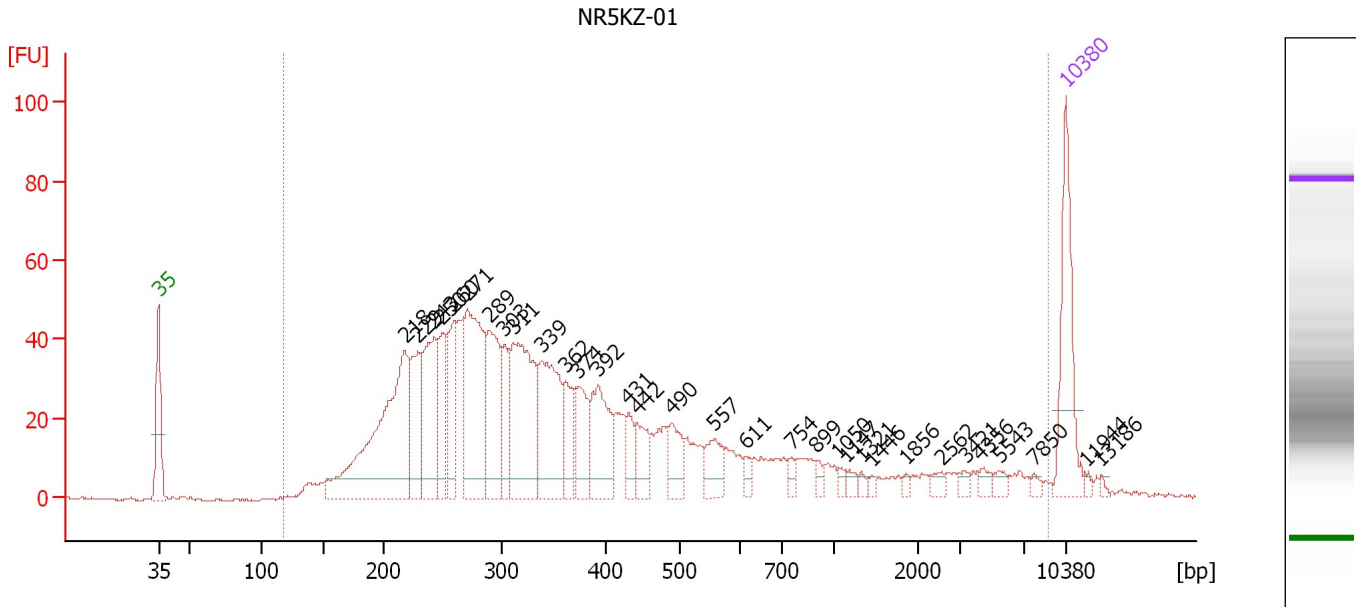
**Peak table for Ladder**

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	45.39
3	100	150.00	2,272.7	Ladder Peak	50.96
4	150	150.00	1,515.2	Ladder Peak	55.70
5	200	150.00	1,136.4	Ladder Peak	60.35
6	300	150.00	757.6	Ladder Peak	69.46
7	400	150.00	568.2	Ladder Peak	77.51
8	500	150.00	454.5	Ladder Peak	83.22
9	600	150.00	378.8	Ladder Peak	87.91
10	700	150.00	324.7	Ladder Peak	91.10
11	1,000	150.00	227.3	Ladder Peak	95.17
12	2,000	150.00	113.6	Ladder Peak	101.58
13	3,000	150.00	75.8	Ladder Peak	104.77
14	7,000	150.00	32.5	Ladder Peak	109.73
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
 Modified: 3/11/2016 4:52:14 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : NR5KZ-01**

Number of peaks found: 32                      Corr. Area 1: 1,375.8  
 Noise: 0.3

**Peak table for sample 1 : NR5KZ-01**

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	218	284.95	1,976.5		62.03
3	229	78.26	517.3		63.01
4	243	120.32	749.1		64.30
5	250	57.85	351.0		64.88
6	260	73.19	426.5		65.81
7	271	178.86	999.1		66.84
8	289	103.72	543.2		68.49
9	303	46.98	235.1		69.69
10	311	165.47	805.8		70.36
11	339	125.04	559.2		72.59
12	362	44.52	186.6		74.41
13	374	52.19	211.6		75.39
14	392	78.86	304.4		76.91
15	431	24.02	84.5		79.27
16	442	33.48	114.6		79.94
17	490	34.96	108.1		82.66
18	557	29.95	81.4		85.91
19	611	7.92	19.6		88.27
20	754	7.54	15.2		91.84
21	899	6.66	11.2		93.80
22	1,050	4.73	6.8		95.49
23	1,147	6.23	8.2		96.11
24	1,321	3.94	4.5		97.23
25	1,446	3.18	3.3		98.03

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
 Modified: 3/11/2016 4:52:14 PM

**Electropherogram Summary Continued ...**

**... Peak table for sample 1 : NR5KZ-01**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	1,856	3.04	2.5		100.66
27	2,562	6.40	3.8		103.38
28	3,421	5.59	2.5		105.29
29	4,356	6.94	2.4		106.45
30	5,543	6.65	1.8		107.92
31	7,850	3.69	0.7		110.55
32	10,380	75.00	10.9	Upper Marker	113.00
33	11,944	0.00	0.0		114.51
34	13,186	0.00	0.0		115.72

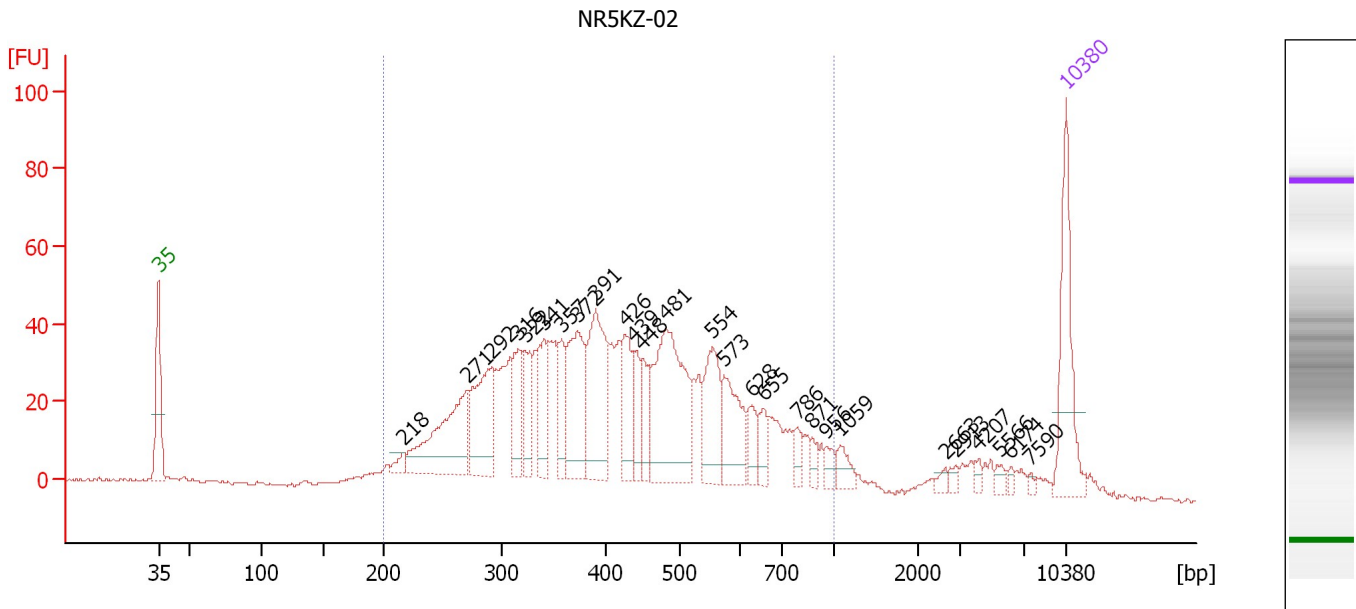
**Region table for sample 1 : NR5KZ-01**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
118	8,968	640	1,375.8	9,535.3	1,917.07	99	100.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
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**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : NR5KZ-02**

Number of peaks found: 27                      Corr. Area 1: 1,242.4  
 Noise: 0.5

**Peak table for sample 2 : NR5KZ-02**

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	218	10.14	70.5		61.96
3	271	133.98	749.9		66.79
4	292	104.41	542.5		68.70
5	316	52.48	251.3		70.78
6	322	46.43	218.2		71.27
7	341	53.19	236.6		72.73
8	357	37.61	159.6		74.06
9	372	100.98	410.7		75.30
10	391	116.60	452.3		76.76
11	426	53.08	189.0		78.97
12	439	31.00	107.0		79.73
13	448	31.26	105.7		80.26
14	481	164.07	516.3		82.16
15	554	68.05	186.1		85.75
16	573	63.09	166.9		86.64
17	628	21.37	51.5		88.81
18	655	20.44	47.3		89.65
19	786	14.14	27.2		92.27
20	871	9.12	15.9		93.42
21	956	9.95	15.8		94.57
22	1,059	14.61	20.9		95.54
23	2,663	4.93	2.8		103.70
24	2,913	4.75	2.5		104.49
25	4,207	4.60	1.7		106.27

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
 Modified: 3/11/2016 4:52:14 PM

### Electropherogram Summary Continued ...

#### ... Peak table for sample 2 : NR5KZ-02

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	5,566	5.98	1.6		107.95
27	6,174	3.45	0.8		108.70
28	7,590	2.56	0.5		110.30
29	10,380	75.00	10.9	Upper Marker	113.00

#### Region table for sample 2 : NR5KZ-02

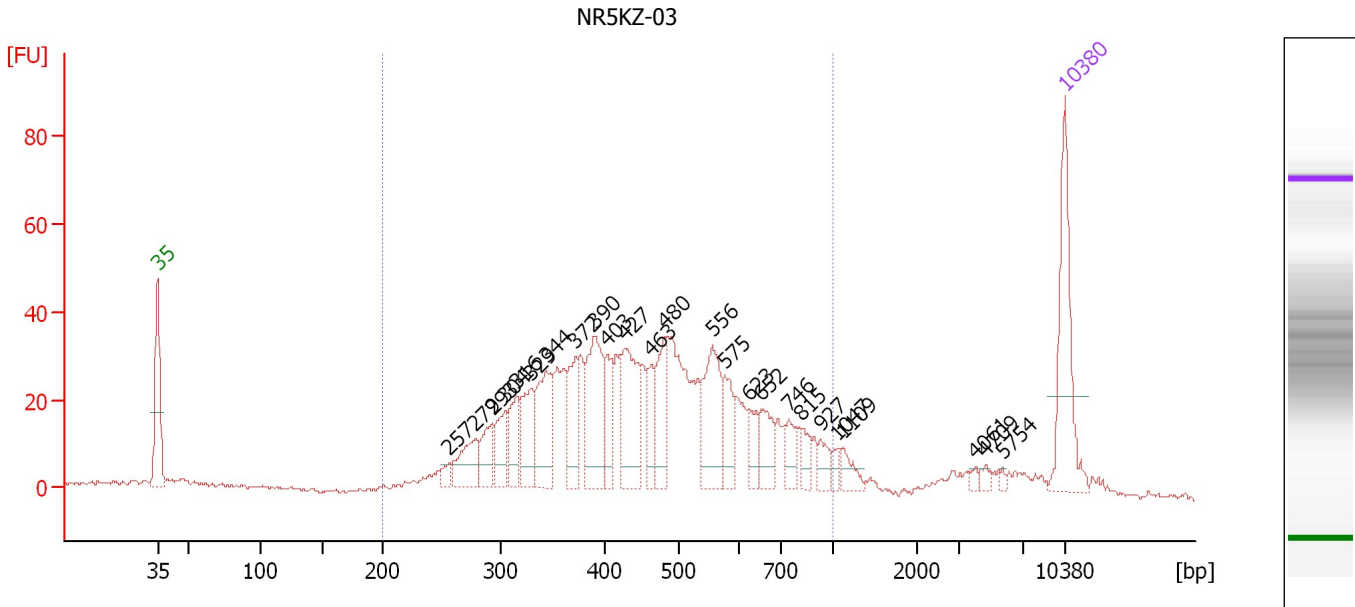
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	439	1,242.4	6,673.6	1,657.09	90	35.0



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
 Modified: 3/11/2016 4:52:14 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : NR5KZ-03**

Number of peaks found: 25                      Corr. Area 1: 870.7  
 Noise: 0.5

**Peak table for sample 3 : NR5KZ-03**

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	257	10.06	59.3		65.53
3	279	43.77	237.8		67.54
4	293	32.71	169.1		68.83
5	304	35.98	179.1		69.81
6	316	32.50	155.8		70.75
7	329	51.95	239.0		71.82
8	344	74.42	327.5		73.03
9	372	46.93	191.2		75.26
10	390	90.53	352.0		76.68
11	403	34.03	127.8		77.71
12	427	84.36	299.4		79.05
13	463	28.16	92.2		81.10
14	480	45.92	144.9		82.08
15	556	71.79	195.8		85.83
16	575	34.07	89.8		86.72
17	623	20.89	50.8		88.64
18	652	31.39	72.9		89.58
19	746	18.01	36.6		91.72
20	815	15.19	28.3		92.66
21	927	13.56	22.2		94.17
22	1,047	6.59	9.5		95.47
23	1,109	12.14	16.6		95.87
24	4,061	3.24	1.2		106.08
25	4,709	4.26	1.4		106.89

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
 Modified: 3/11/2016 4:52:14 PM

### Electropherogram Summary Continued ...

#### ... Peak table for sample 3 : NR5KZ-03

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	5,754	2.56	0.7		108.18
27	10,380	75.00	10.9	Upper Marker	113.00

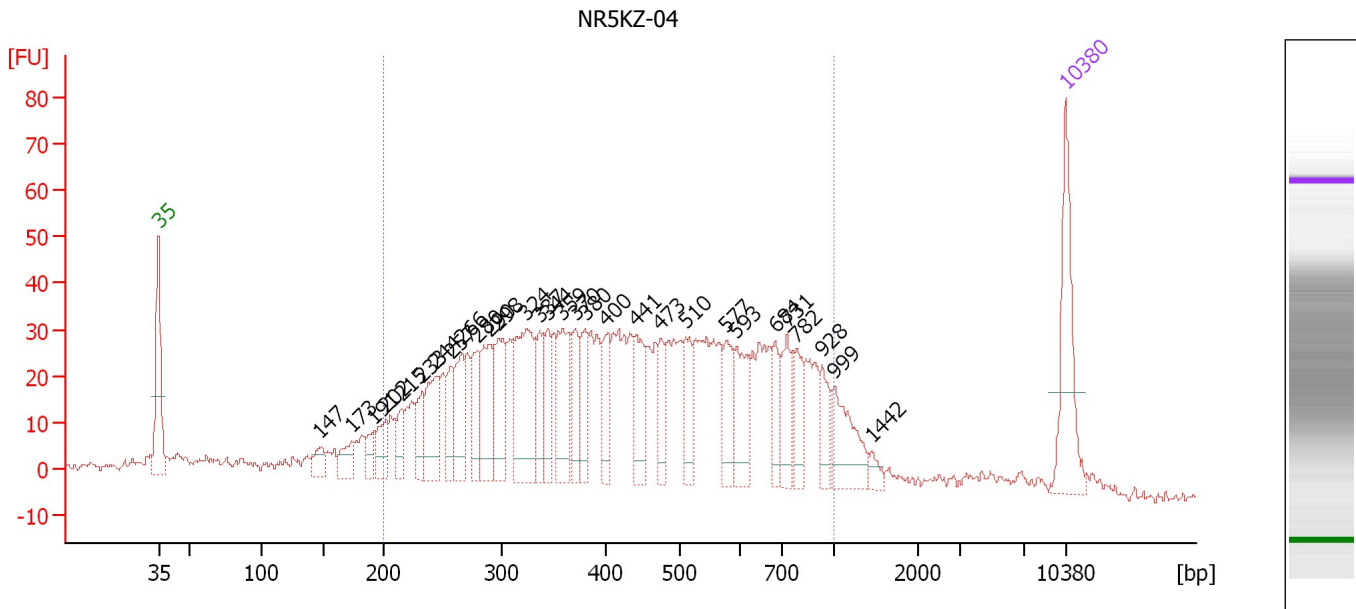
#### Region table for sample 3 : NR5KZ-03

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	472	870.7	4,514.2	1,232.56	89	32.2

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
 Modified: 3/11/2016 4:52:14 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : NR5KZ-04**

Number of peaks found: 30                      Corr. Area 1: 1,284.2  
 Noise: 0.9

**Peak table for sample 4 : NR5KZ-04**

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	147	25.43	262.2		55.41
3	173	30.07	262.9		57.86
4	191	20.06	158.9		59.54
5	202	33.59	252.5		60.49
6	215	27.84	196.2		61.71
7	233	38.20	248.5		63.34
8	244	68.83	426.9		64.39
9	257	39.21	231.0		65.56
10	266	60.79	346.0		66.38
11	280	49.48	267.6		67.65
12	290	73.98	386.5		68.55
13	298	72.49	369.2		69.23
14	324	129.28	605.2		71.36
15	337	42.90	193.1		72.40
16	344	42.69	187.8		73.04
17	359	76.77	324.4		74.17
18	370	43.74	179.0		75.12
19	380	42.80	170.7		75.89
20	400	42.74	162.1		77.48
21	441	54.23	186.4		79.83
22	473	34.17	109.4		81.69
23	510	43.59	129.5		83.69
24	577	42.95	112.9		86.81
25	593	54.24	138.6		87.58

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
 Modified: 3/11/2016 4:52:14 PM

### Electropherogram Summary Continued ...

#### ... Peak table for sample 4 : NR5KZ-04

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	684	30.55	67.7		90.57
27	731	38.47	79.7		91.52
28	782	33.52	65.0		92.20
29	928	28.45	46.4		94.20
30	999	57.05	86.6		95.15
31	1,442	9.34	9.8		98.00
32	10,380	75.00	10.9	Upper Marker	113.00

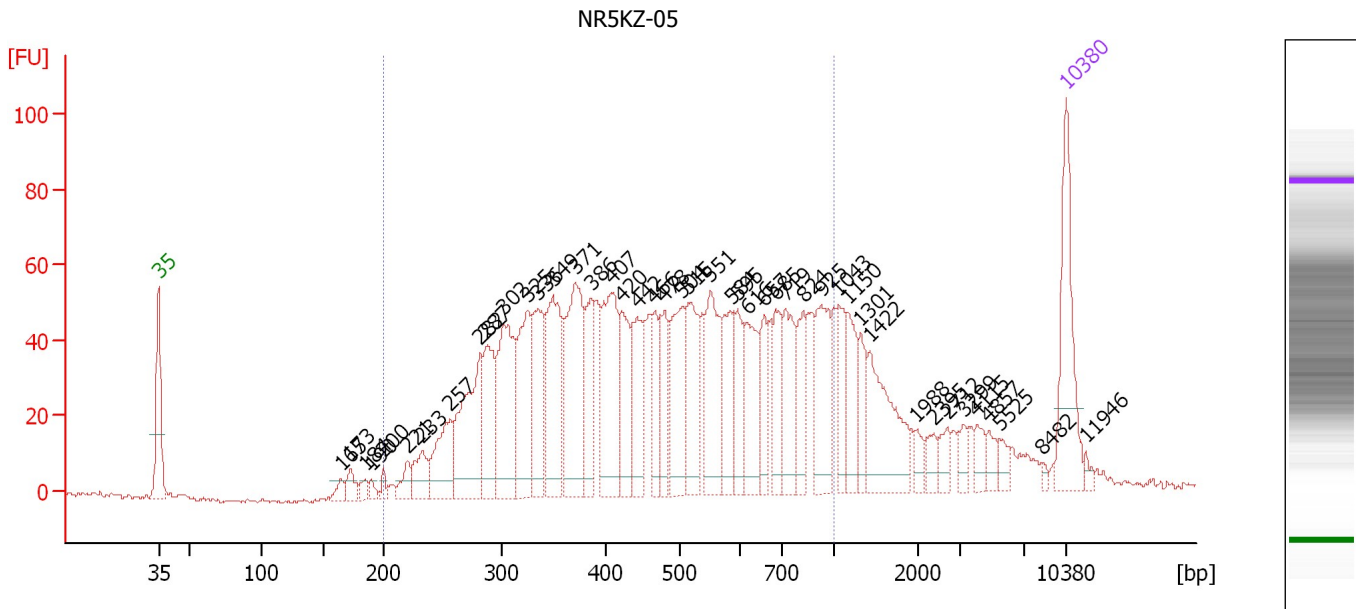
#### Region table for sample 4 : NR5KZ-04

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	461	1,284.2	8,241.6	2,029.32	82	39.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
 Modified: 3/11/2016 4:52:14 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : NR5KZ-05**

Number of peaks found: 45                      Corr. Area 1: 1,711.6  
 Noise: 0.7

**Peak table for sample 5 : NR5KZ-05**

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	165	10.90	100.3		57.06
3	173	15.06	132.2		57.80
4	184	8.17	67.1		58.90
5	190	6.27	50.0		59.41
6	200	7.29	55.1		60.37
7	221	17.75	121.7		62.26
8	233	33.51	218.3		63.32
9	257	64.81	382.4		65.52
10	282	124.91	671.1		67.82
11	287	77.09	406.9		68.28
12	302	126.06	631.5		69.66
13	325	98.81	460.2		71.50
14	336	74.69	337.3		72.32
15	349	113.47	492.3		73.43
16	371	134.35	548.8		75.17
17	386	58.42	229.4		76.37
18	407	113.32	421.5		77.93
19	420	57.68	208.0		78.67
20	442	65.07	223.1		79.91
21	466	41.00	133.3		81.29
22	478	43.38	137.5		81.98
23	504	80.26	241.4		83.40
24	515	74.47	219.3		83.91
25	551	79.83	219.6		85.61

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
 Modified: 3/11/2016 4:52:14 PM

**Electropherogram Summary Continued ...**

**... Peak table for sample 5 : NR5KZ-05**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	584	56.62	146.9		87.17
27	595	47.06	119.9		87.67
28	616	58.66	144.4		88.41
29	657	37.68	86.8		89.74
30	685	45.01	99.6		90.62
31	719	56.63	119.4		91.35
32	824	40.92	75.3		92.78
33	925	66.58	109.0		94.16
34	1,043	34.06	49.5		95.44
35	1,150	38.82	51.1		96.13
36	1,301	26.31	30.6		97.10
37	1,422	81.57	86.9		97.88
38	1,988	10.14	7.7		101.51
39	2,395	11.95	7.6		102.84
40	2,712	12.55	7.0		103.85
41	3,299	9.54	4.4		105.14
42	4,115	12.50	4.6		106.15
43	4,857	10.42	3.3		107.07
44	5,525	9.24	2.5		107.90
45	8,482	3.01	0.5		111.16
46	10,380	75.00	10.9	Upper Marker	113.00
47	11,946	0.00	0.0		114.52

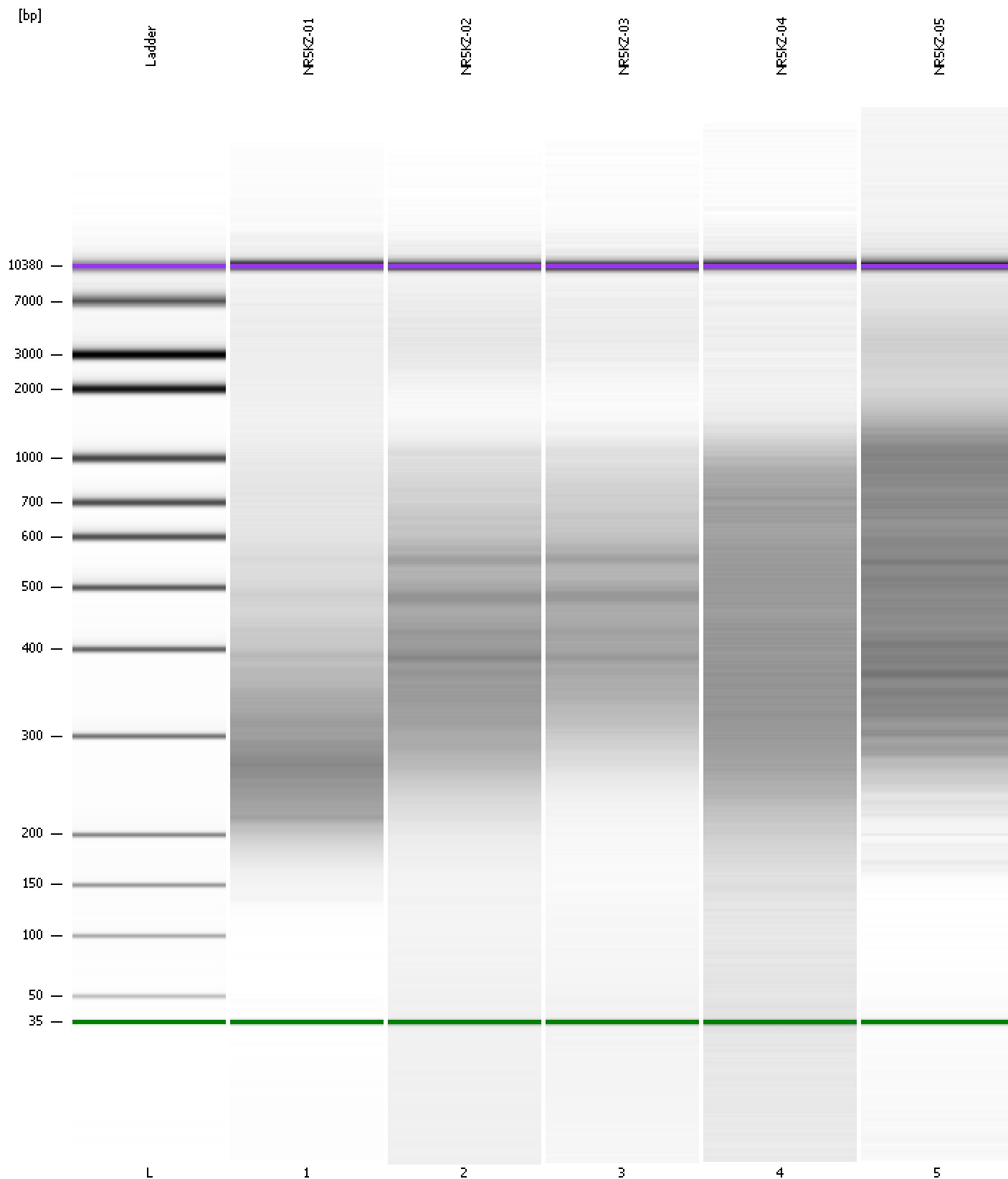
**Region table for sample 5 : NR5KZ-05**

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	494	1,711.6	7,348.7	1,993.99	83	37.5

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
Modified: 3/11/2016 4:52:14 PM

**Gel Image**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...rt\data\2016-03-11\2016-03-11\_003\_HiSeq\_446\_NRSKZ-01-05.xad

Created: 3/11/2016 12:43:10 PM  
 Modified: 3/11/2016 4:52:14 PM

**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		3/11/2016 1:23:39 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2016-03-11\2016-03-11_003.xad)		Instrument	Run		3/11/2016 12:43:16 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		3/11/2016 12:43:16 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		3/11/2016 12:43:16 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		3/11/2016 12:43:16 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		3/11/2016 12:43:16 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		3/11/2016 12:43:16 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		3/11/2016 12:43:16 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1