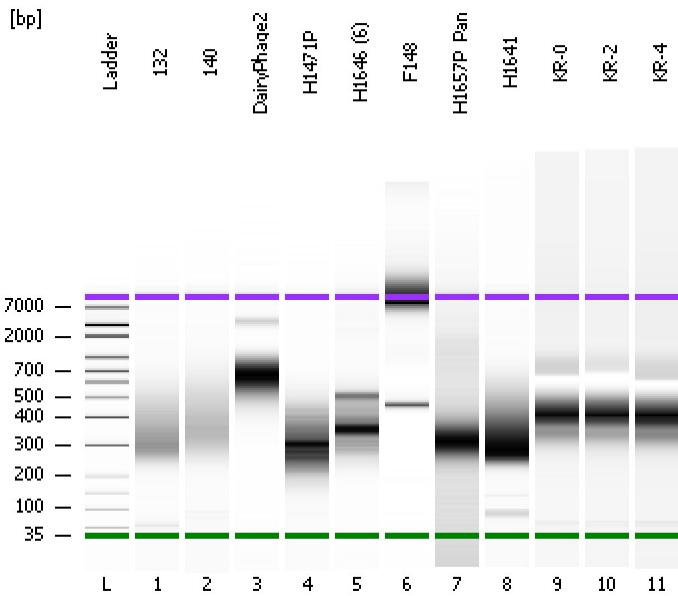


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
Modified: 12/20/2018 6:10:51 PM

### Electrophoresis File Run Summary



#### Instrument Information:

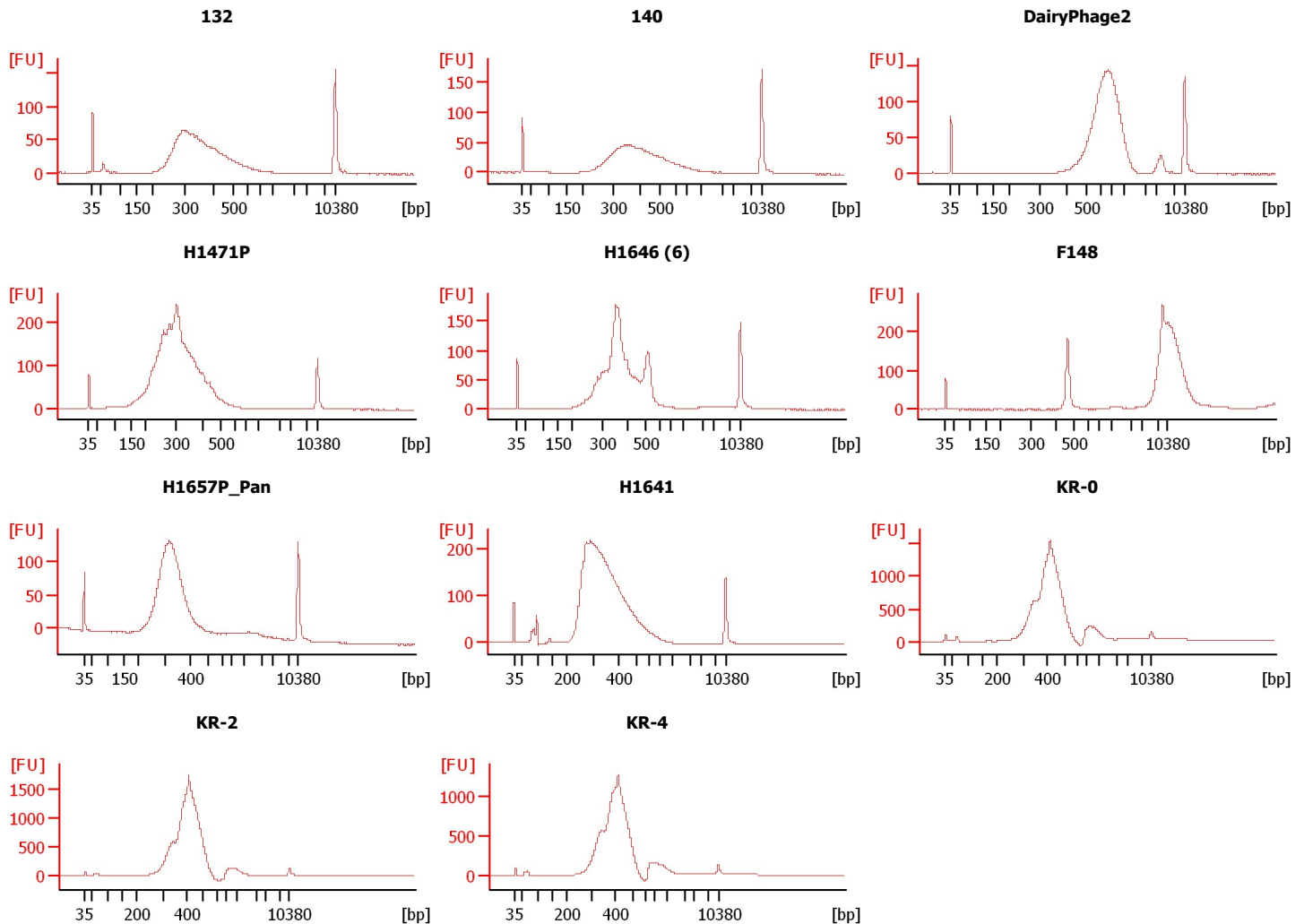
Instrument Name: DE34903152      Firmware: C.01.069  
Serial#: DE34903152      Type: G2938C

#### 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\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
 Modified: 12/20/2018 6:10:51 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
132		<input type="checkbox"/>	✓			
140		<input type="checkbox"/>	✓			
DairyPhage2		<input type="checkbox"/>	✓			
H1471P		<input type="checkbox"/>	✓			
H1646 (6)		<input type="checkbox"/>	✓			
F148		<input type="checkbox"/>	✓			
H1657P_Pan		<input type="checkbox"/>	✓			
H1641		<input type="checkbox"/>	✓			
KR-0		<input type="checkbox"/>	✓			
KR-2		<input type="checkbox"/>	✓			
KR-4		<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\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
Modified: 12/20/2018 6:10:51 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

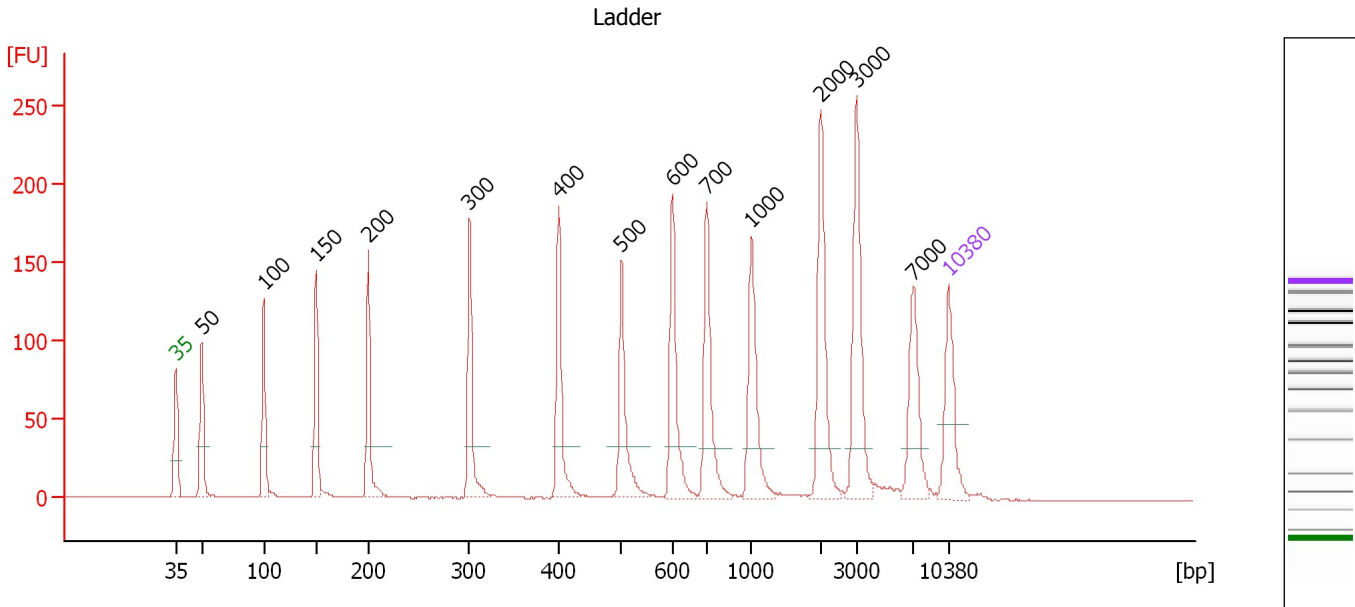
**Ladder**

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\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
 Modified: 12/20/2018 6:10:51 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

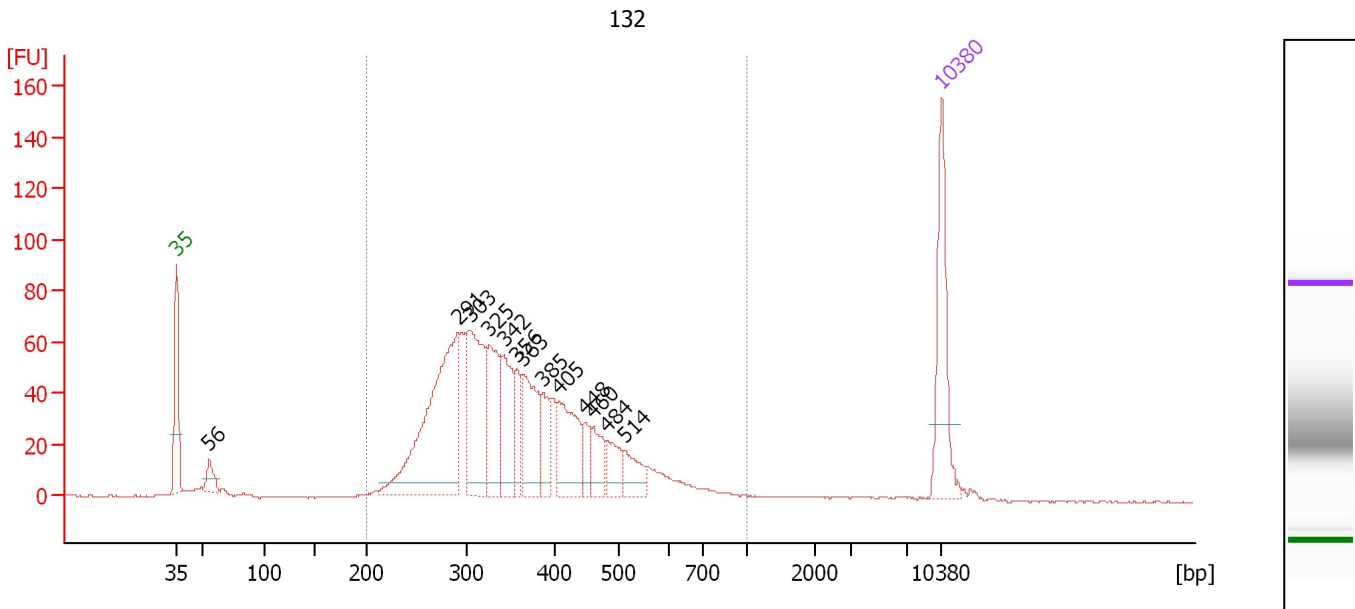
**Peak table for Ladder**

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	45.37
3	100	150.00	2,272.7	Ladder Peak	50.97
4	150	150.00	1,515.2	Ladder Peak	55.71
5	200	150.00	1,136.4	Ladder Peak	60.44
6	300	150.00	757.6	Ladder Peak	69.62
7	400	150.00	568.2	Ladder Peak	77.69
8	500	150.00	454.5	Ladder Peak	83.39
9	600	150.00	378.8	Ladder Peak	87.98
10	700	150.00	324.7	Ladder Peak	91.12
11	1,000	150.00	227.3	Ladder Peak	95.17
12	2,000	150.00	113.6	Ladder Peak	101.45
13	3,000	150.00	75.8	Ladder Peak	104.69
14	7,000	150.00	32.5	Ladder Peak	109.81
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
 Modified: 12/20/2018 6:10:51 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : 132**

Number of peaks found: 13                      Corr. Area 1: 1,296.7  
 Noise: 0.3

**Peak table for sample 1 : 132**

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	56	24.28	658.6		46.02
3	291	279.50	1,457.3		68.76
4	303	147.19	735.5		69.88
5	325	92.11	429.4		71.63
6	342	74.47	330.0		73.00
7	356	34.99	148.7		74.17
8	363	83.38	347.9		74.71
9	385	34.42	135.3		76.51
10	405	79.64	297.9		77.98
11	448	20.39	69.0		80.41
12	460	30.24	99.6		81.10
13	484	29.38	92.0		82.46
14	514	28.23	83.2		84.02
15	10,380	75.00	10.9	Upper Marker	113.00

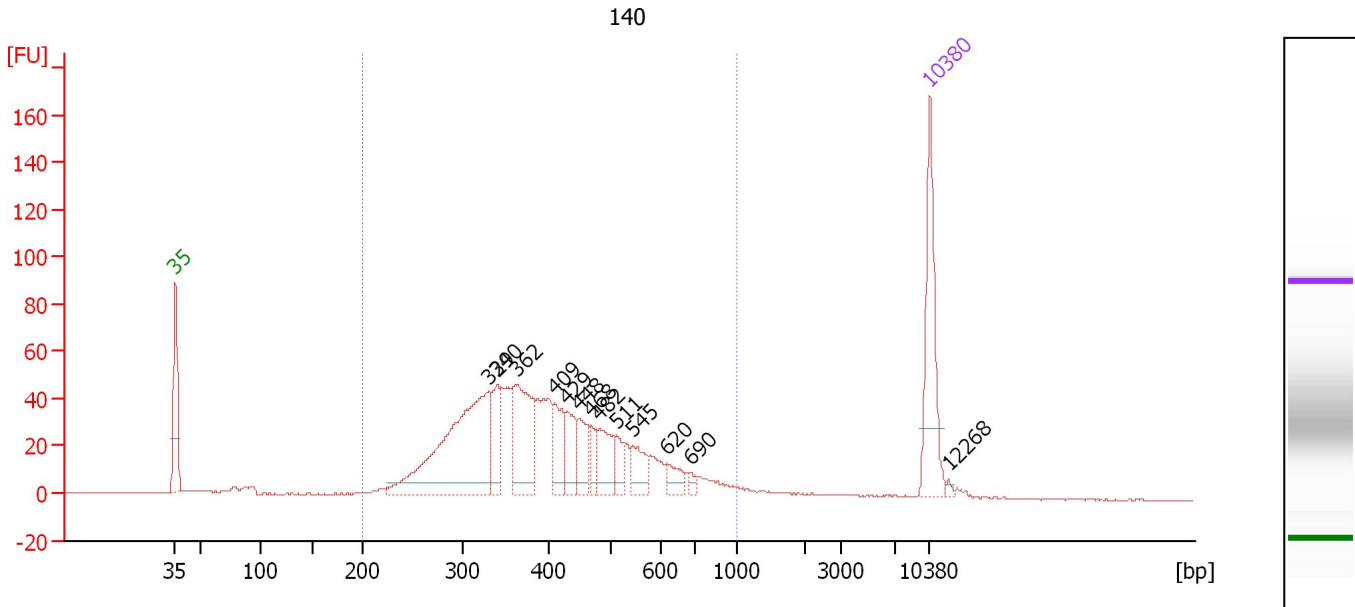
**Region table for sample 1 : 132**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	368	1,096.01	1,296.7	4,931.5	94	28.2

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
 Modified: 12/20/2018 6:10:51 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : 140**

Number of peaks found: 13                      Corr. Area 1: 1,058.3  
 Noise: 0.3

**Peak table for sample 2 : 140**

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	329	242.50	1,115.5		71.99
3	340	45.30	202.0		72.83
4	362	100.17	419.4		74.61
5	409	40.97	151.6		78.22
6	429	33.84	119.4		79.36
7	448	30.49	103.0		80.45
8	468	18.34	59.3		81.59
9	482	37.32	117.2		82.38
10	511	19.83	58.8		83.91
11	545	26.60	74.0		85.45
12	620	14.83	36.2		88.61
13	690	5.16	11.3		90.79
14	10,380	75.00	10.9	Upper Marker	113.00
15	12,268	0.00	0.0		114.78

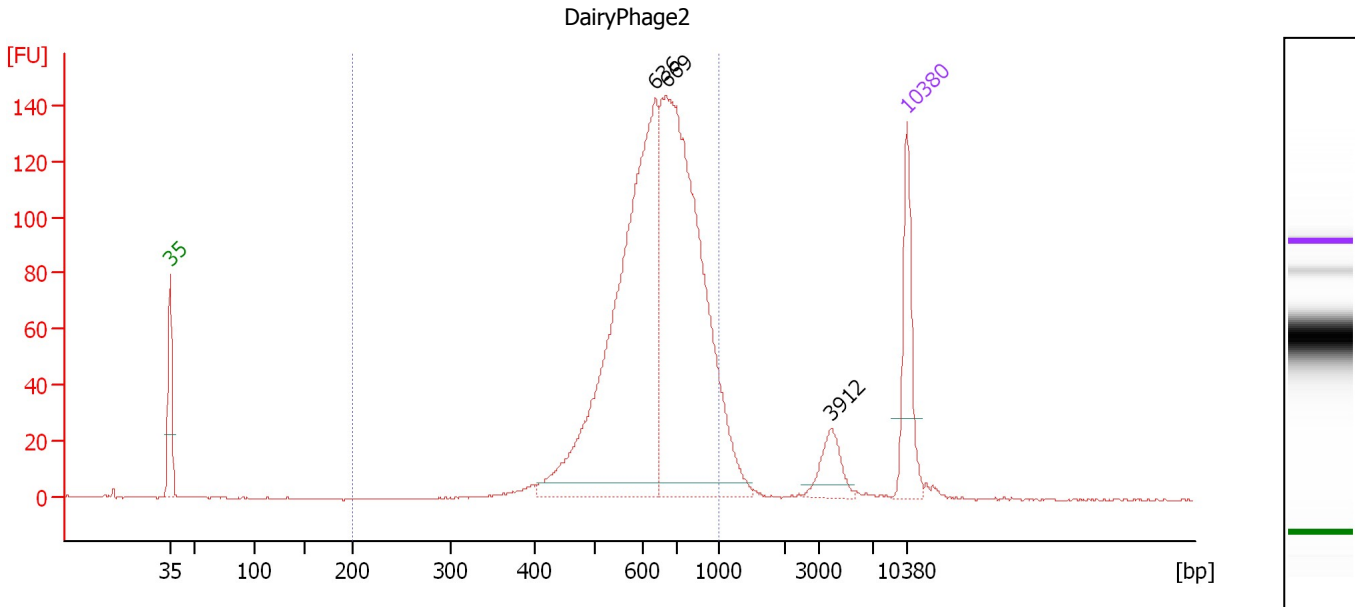
**Region table for sample 2 : 140**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	414	842.82	1,058.3	3,429.2	94	30.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
 Modified: 12/20/2018 6:10:51 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : DairyPhage2**

Number of peaks found: 3                      Corr. Area 1: 1,454.0  
 Noise: 0.2

**Peak table for sample 3 : DairyPhage2**

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	636	616.83	1,470.5		89.09
3	669	634.50	1,436.1		90.16
4	3,912	36.03	14.0		105.86
5	10,380	75.00	10.9	Upper Marker	113.00

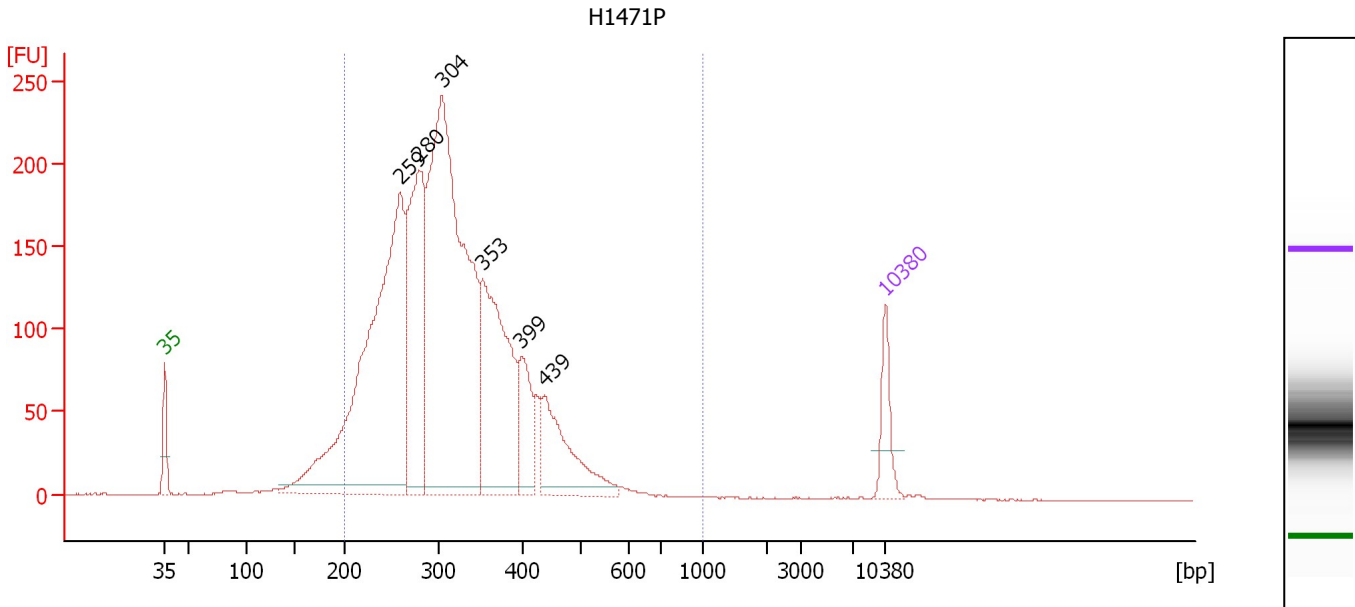
**Region table for sample 3 : DairyPhage2**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	661	1,237.50	1,454.0	2,972.7	91	19.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
 Modified: 12/20/2018 6:10:51 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : H1471P**

Number of peaks found: 6                      Corr. Area 1: 3,945.3  
 Noise: 0.1

**Peak table for sample 4 : H1471P**

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	259	1,467.70	8,575.4		65.88
3	280	639.53	3,465.3		67.75
4	304	1,630.53	8,132.6		69.92
5	353	595.81	2,560.6		73.86
6	399	163.66	620.9		77.64
7	439	255.52	881.7		79.92
8	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 4 : H1471P**

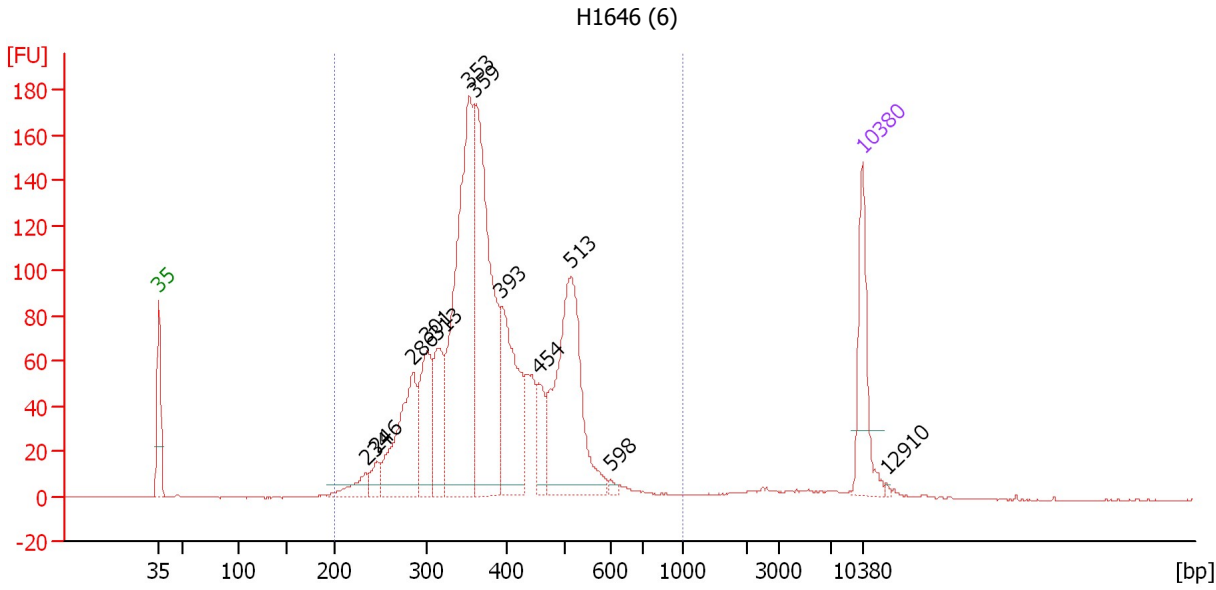
From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	1,000	319	4,672.29	3,945.3	23,631.9	94	23.3



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
 Modified: 12/20/2018 6:10:51 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : H1646 (6)**

Number of peaks found: 12                      Corr. Area 1: 2,119.4  
 Noise: 0.2

**Peak table for sample 5 : H1646 (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	234	29.05	188.0		63.58
3	246	24.06	148.0		64.69
4	286	167.42	888.2		68.30
5	301	113.77	572.0		69.73
6	313	94.18	455.6		70.68
7	353	408.07	1,750.2		73.92
8	359	371.94	1,568.9		74.39
9	393	171.24	660.7		77.10
10	454	45.53	152.0		80.76
11	513	272.29	803.9		83.99
12	598	4.72	12.0		87.86
13	10,380	75.00	10.9	Upper Marker	113.00
14	12,910	0.00	0.0		115.39

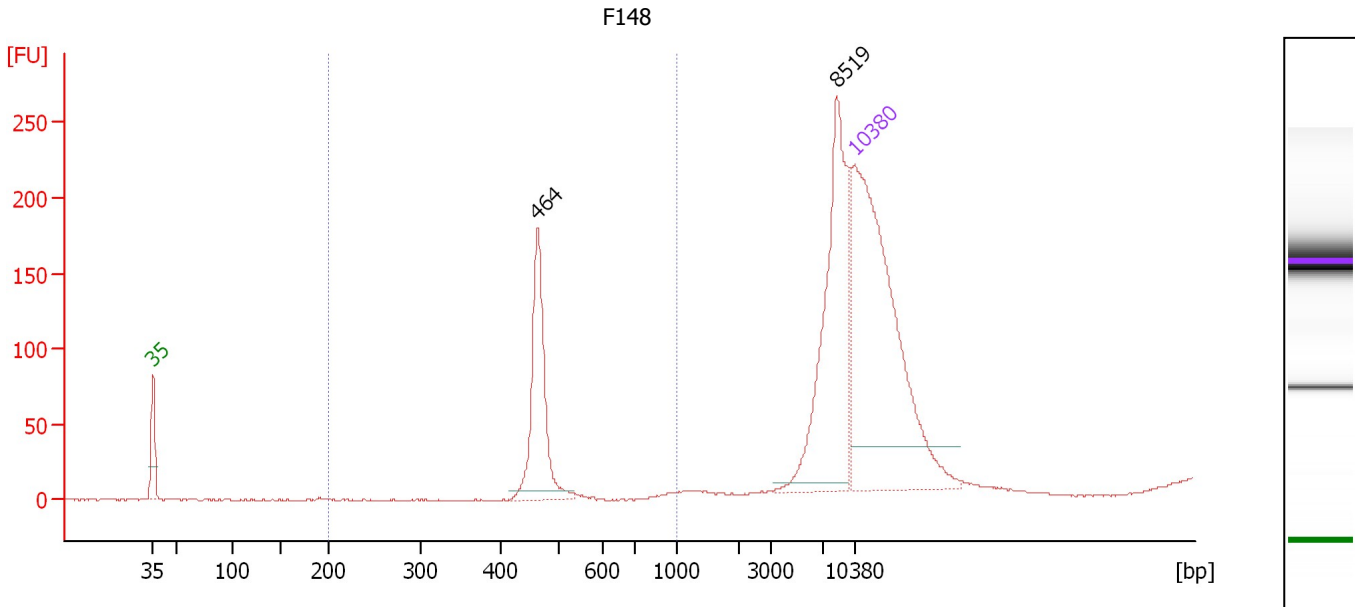
**Region table for sample 5 : H1646 (6)**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	388	1,804.34	2,119.4	7,524.5	97	22.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
 Modified: 12/20/2018 6:10:51 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : F148**

Number of peaks found: 2                      Corr. Area 1: 281.3  
 Noise: 0.5

**Peak table for sample 6 : F148**

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	464	36.27	118.4		81.35
3	8,519	52.25	9.3		111.24
4	10,380	75.00	10.9	Upper Marker	113.00

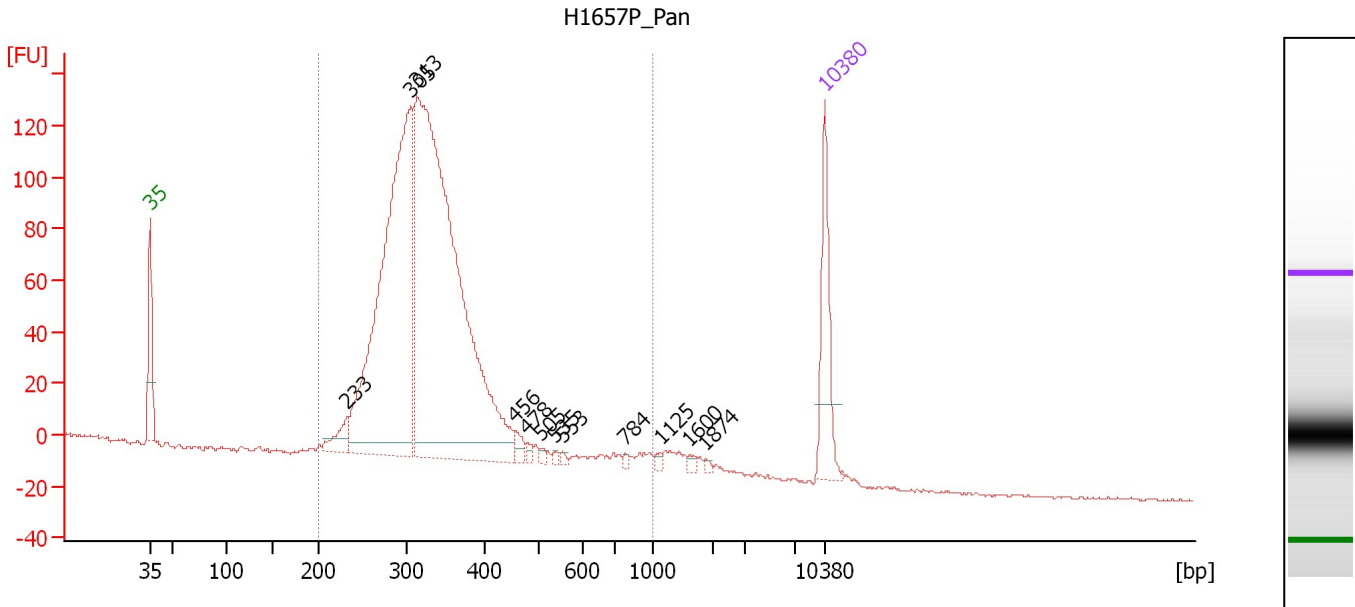
**Region table for sample 6 : F148**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	466	32.01	281.3	104.0	31	2.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
 Modified: 12/20/2018 6:10:51 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : H1657P\_Pan**

Number of peaks found: 12      Corr. Area 1: 1,766.8  
 Noise: 0.7

**Peak table for sample 7 : H1657P\_Pan**

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	233	32.16	209.0		63.47
3	305	672.38	3,335.1		70.06
4	313	1,001.38	4,847.3		70.67
5	456	13.64	45.3		80.91
6	478	5.68	18.0		82.12
7	505	4.05	12.1		83.62
8	535	3.19	9.0		85.00
9	553	3.83	10.5		85.83
10	784	3.21	6.2		92.25
11	1,125	3.70	5.0		95.96
12	1,600	4.01	3.8		98.94
13	1,874	2.66	2.2		100.66
14	10,380	75.00	10.9	Upper Marker	113.00

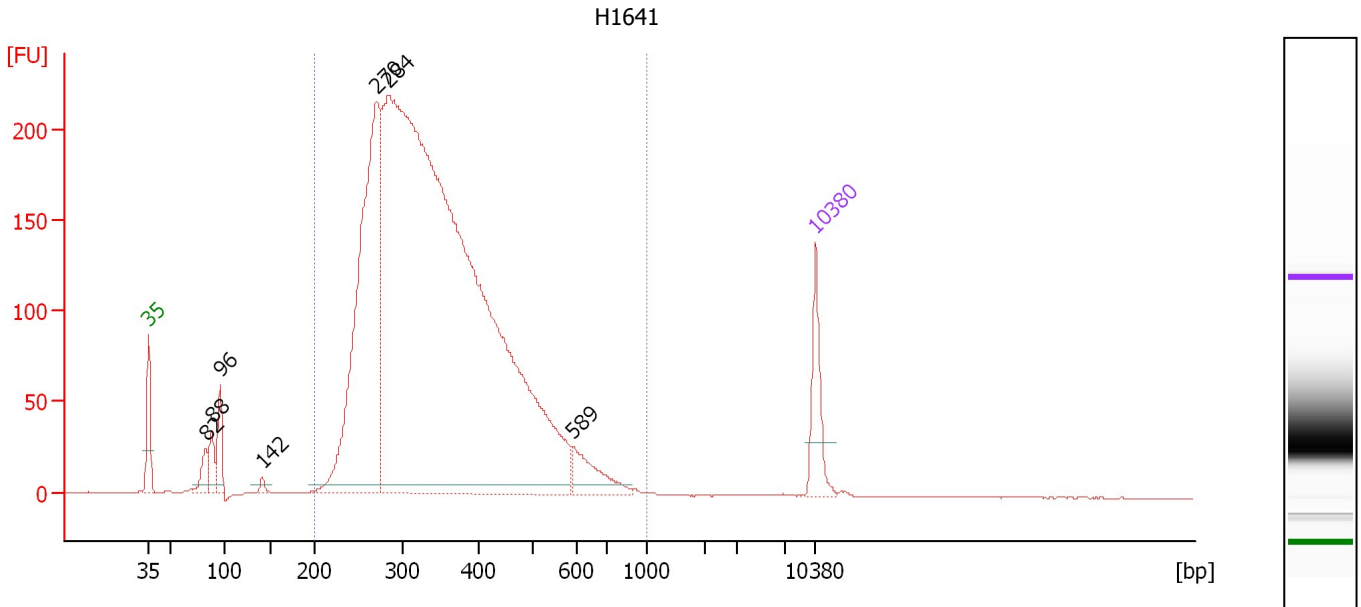
**Region table for sample 7 : H1657P\_Pan**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	1,000	337	1,724.76	1,766.8	8,169.0	98	26.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
 Modified: 12/20/2018 6:10:51 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : H1641**

Number of peaks found: 7                      Corr. Area 1: 4,215.4  
 Noise: 0.2

**Peak table for sample 8 : H1641**

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	82	48.29	889.0		48.99
3	88	53.75	927.7		49.60
4	96	77.73	1,229.6		50.50
5	142	12.27	131.3		54.92
6	270	908.90	5,094.7		66.89
7	284	3,669.35	19,553.5		68.18
8	589	76.27	196.1		87.48
9	10,380	75.00	10.9	Upper Marker	113.00

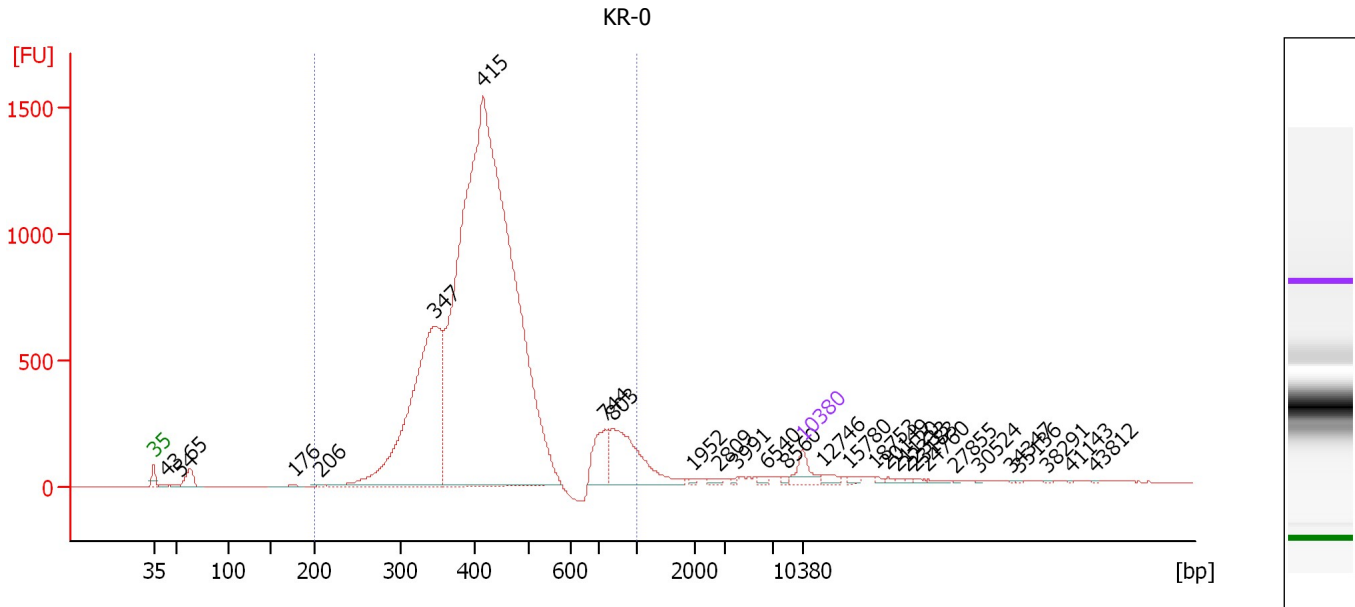
**Region table for sample 8 : H1641**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	1,000	354	4,177.14	4,215.4	19,392.7	96	26.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
 Modified: 12/20/2018 6:10:51 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : KR-0**

Number of peaks found: 29                      Corr. Area 1: 17,014.6  
 Noise: 0.2

**Peak table for sample 9 : KR-0**

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	43	13.00	454.6		44.32
3	54	18.23	512.3		45.80
4	65	119.21	2,794.7		47.01
5	176	14.98	129.0		58.17
6	206	8.77	64.5		60.97
7	347	1,994.24	8,713.2		73.39
8	415	6,991.07	25,521.2		78.54
9	744	215.47	438.9		91.71
10	803	463.88	875.3		92.51
11	1,952	6.88	5.3		101.15
12	2,809	15.36	8.3		104.07
13	3,991	8.04	3.1		105.96
14	6,540	14.05	3.3		109.22
15	8,560	10.40	1.8		111.28
16	10,380	75.00	10.9	Upper Marker	113.00
17	12,746	0.00	0.0		115.23
18	15,780	0.00	0.0		118.09
19	18,753	0.00	0.0		120.90
20	20,149	0.00	0.0		122.22
21	21,120	0.00	0.0		123.13
22	22,333	0.00	0.0		124.28
23	23,183	0.00	0.0		125.08
24	24,760	0.00	0.0		126.57
25	27,855	0.00	0.0		129.48

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
 Modified: 12/20/2018 6:10:51 PM

**Electropherogram Summary Continued ...**

**... Peak table for sample 9 : KR-0**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	30,524	0.00	0.0		132.00
27	34,347	0.00	0.0		135.61
28	35,136	0.00	0.0		136.35
29	38,291	0.00	0.0		139.33
30	41,143	0.00	0.0		142.02
31	43,812	0.00	0.0		144.54

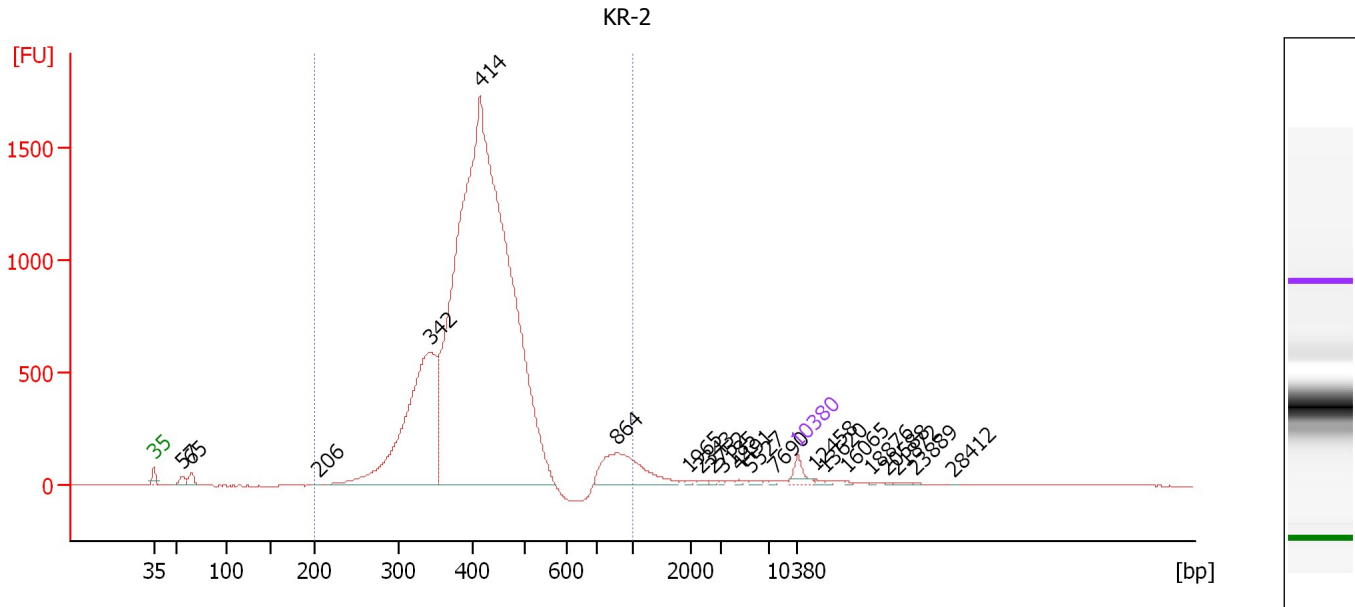
**Region table for sample 9 : KR-0**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	1,000	437	9,550.81	17,014.6	35,449.5	94	27.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
 Modified: 12/20/2018 6:10:51 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : KR-2**

Number of peaks found: 21                      Corr. Area 1: 17,645.3  
 Noise: 0.8

**Peak table for sample 10 : KR-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	57	70.61	1,888.1		46.11
3	65	75.13	1,740.4		47.09
4	206	7.54	55.5		60.99
5	342	2,407.69	10,653.4		73.04
6	414	9,898.22	36,260.3		78.46
7	864	498.73	874.3		93.34
8	1,965	8.53	6.6		101.24
9	2,343	14.49	9.4		102.56
10	2,752	10.03	5.5		103.89
11	3,185	8.75	4.2		104.93
12	4,491	9.11	3.1		106.60
13	5,527	19.21	5.3		107.93
14	7,690	9.58	1.9		110.46
15	10,380	75.00	10.9	Upper Marker	113.00
16	12,458	0.00	0.0		114.96
17	13,620	0.00	0.0		116.06
18	16,065	0.00	0.0		118.36
19	18,876	0.00	0.0		121.01
20	20,588	0.00	0.0		122.63
21	21,872	0.00	0.0		123.84
22	23,889	0.00	0.0		125.74
23	28,412	0.00	0.0		130.01

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
Modified: 12/20/2018 6:10:51 PM

**Electropherogram Summary Continued ...**

... Region table for sample 10 : KR-2

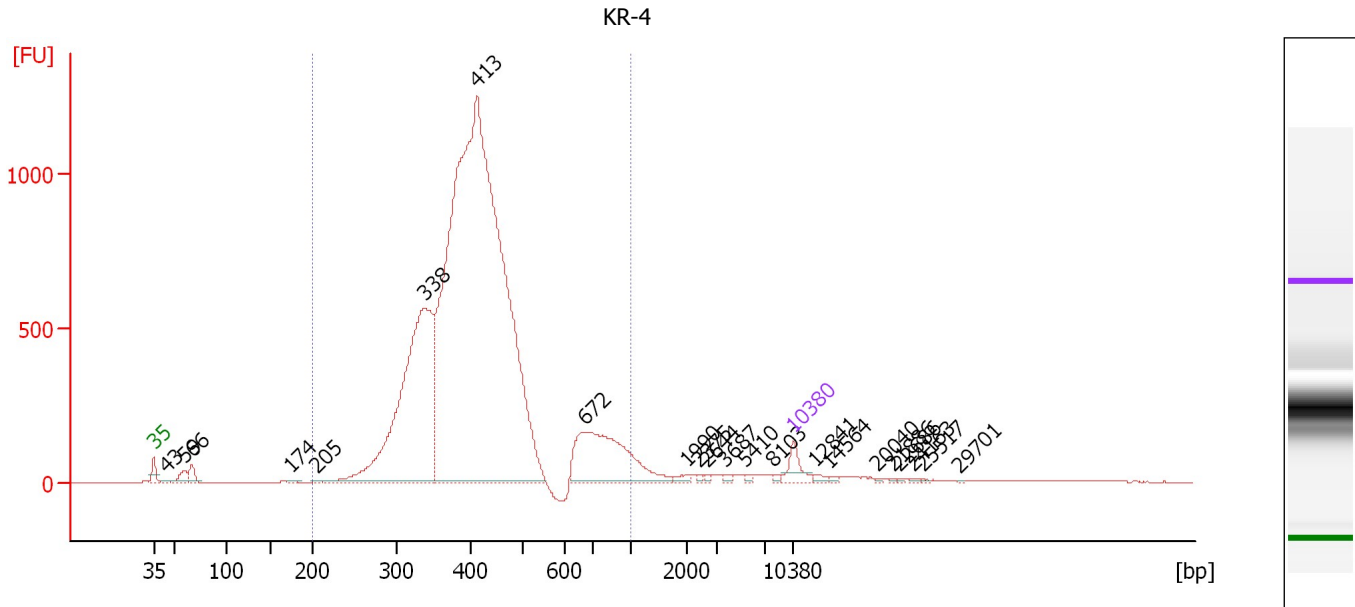
From [bp]	To [bp]	Average Size [bp]	Conc. [pg/ $\mu$ l]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	424	12,756.84	17,645.3	47,975.8	 95	24.0



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
 Modified: 12/20/2018 6:10:51 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : KR-4**

Number of peaks found: 22                      Corr. Area 1: 14,520.7  
 Noise: 0.8


**Peak table for sample 11 : KR-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	43	15.31	533.7		44.33
3	59	74.85	1,908.0		46.42
4	66	65.73	1,505.2		47.18
5	174	7.80	67.9		57.98
6	205	5.70	42.2		60.88
7	338	2,090.31	9,378.5		72.66
8	413	6,545.23	24,033.3		78.41
9	672	693.02	1,561.8		90.25
10	1,990	18.07	13.8		101.39
11	2,375	8.53	5.4		102.67
12	2,644	7.98	4.6		103.54
13	3,687	10.65	4.4		105.57
14	5,410	8.63	2.4		107.78
15	8,103	7.37	1.4		110.85
16	10,380	75.00	10.9	Upper Marker	113.00
17	12,841	0.00	0.0		115.32
18	14,564	0.00	0.0		116.95
19	20,040	0.00	0.0		122.11
20	21,886	0.00	0.0		123.85
21	22,686	0.00	0.0		124.61
22	24,163	0.00	0.0		126.00
23	25,517	0.00	0.0		127.28
24	29,701	0.00	0.0		131.23

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
Modified: 12/20/2018 6:10:51 PM

**Electropherogram Summary Continued ...****... Region table for sample 11 : KR-4**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/ $\mu$ l]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	426	9,318.47	14,520.7	35,492.9	 94	27.4

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-20\2018-12-20\_002.xad

Created: 12/20/2018 5:29:31 PM  
Modified: 12/20/2018 6:10:51 PM

**Gel Image**

