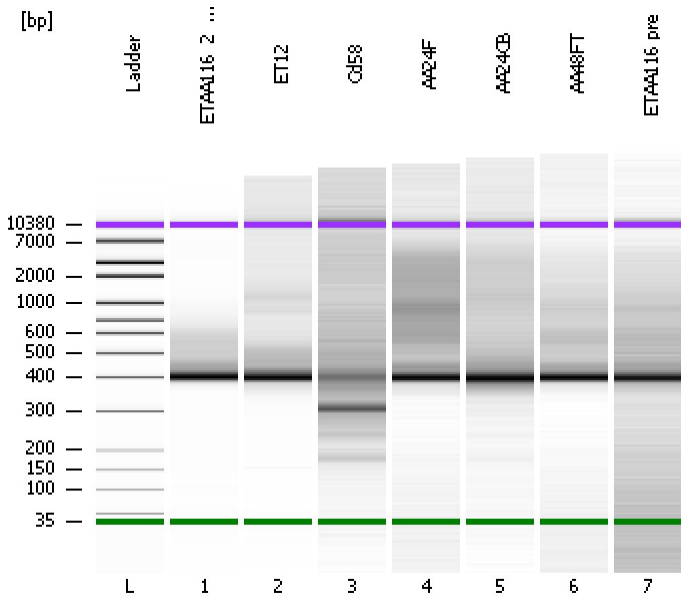


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad

Created: 12/10/2014 12:20:00 PM  
Modified: 12/10/2014 1:03:44 PM

**Electrophoresis File Run Summary**



Instrument Information:

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

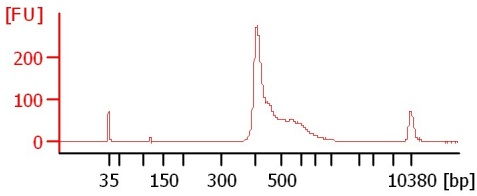
Assay Information:

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

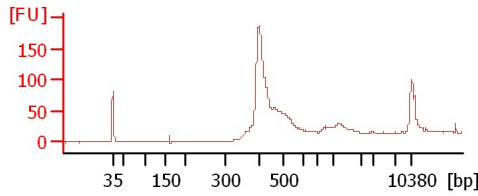
Chip Information:

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

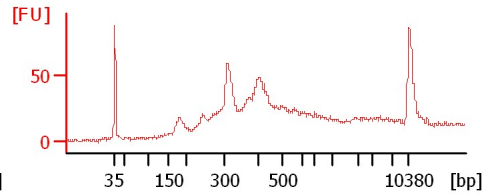
**ETAA116\_2\_Pepper**



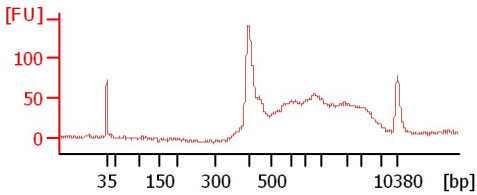
**ET12**



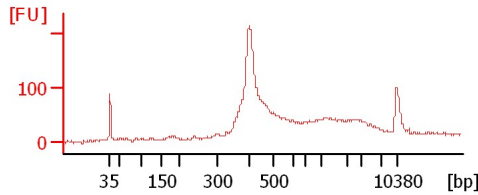
**Cd58**



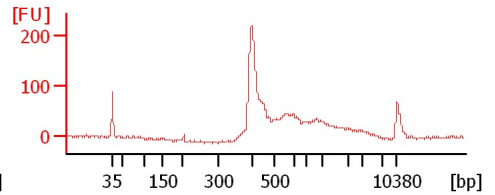
**AA24F**



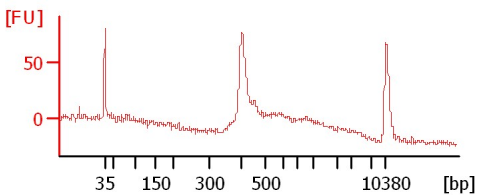
**AA24CB**



**AA48FT**



**ETAA116 pre**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad

Created: 12/10/2014 12:20:00 PM  
 Modified: 12/10/2014 1:03:44 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
ETAA116_2_Pepper		<input type="checkbox"/>				
ET12		<input type="checkbox"/>		✓		
Cd58		<input type="checkbox"/>		✓		
AA24F		<input type="checkbox"/>		✓		
AA24CB		<input type="checkbox"/>		✓		
AA48FT		<input type="checkbox"/>		✓		
ETAA116 pre		<input type="checkbox"/>		✓		
Ladder		<input type="checkbox"/>		✓		

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

**Chip Comments :**

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad

Created: 12/10/2014 12:20:00 PM  
Modified: 12/10/2014 1:03:44 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

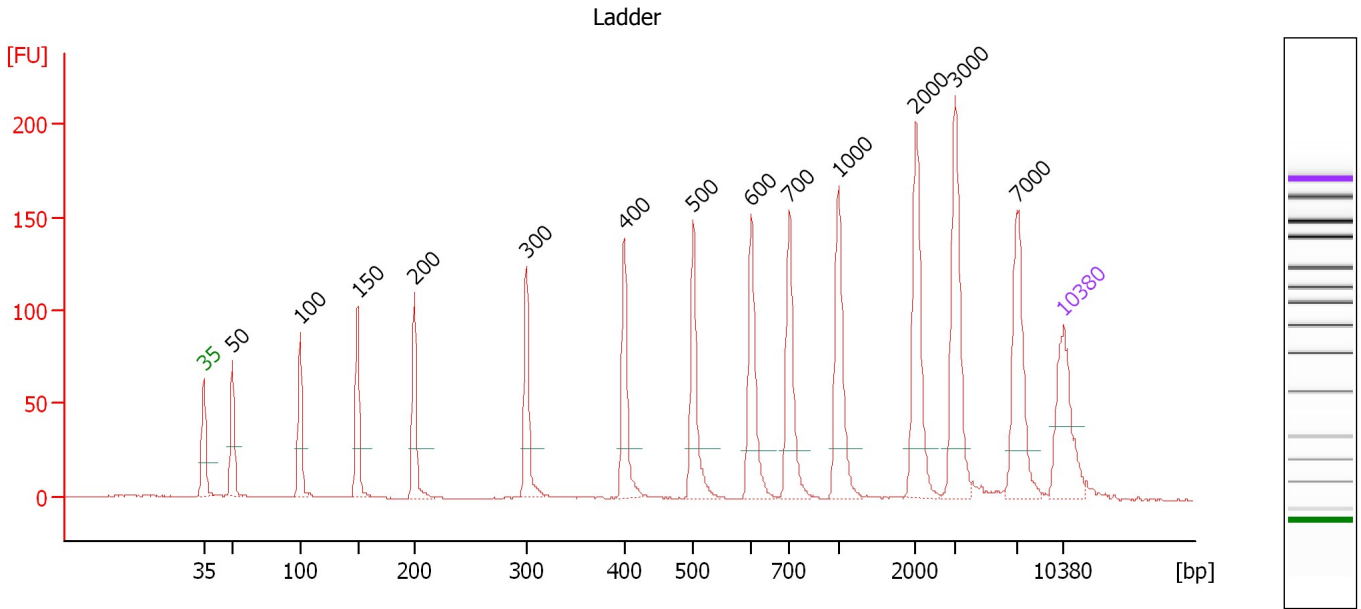
**Ladder**

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:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad

Created: 12/10/2014 12:20:00 PM  
 Modified: 12/10/2014 1:03:44 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.1

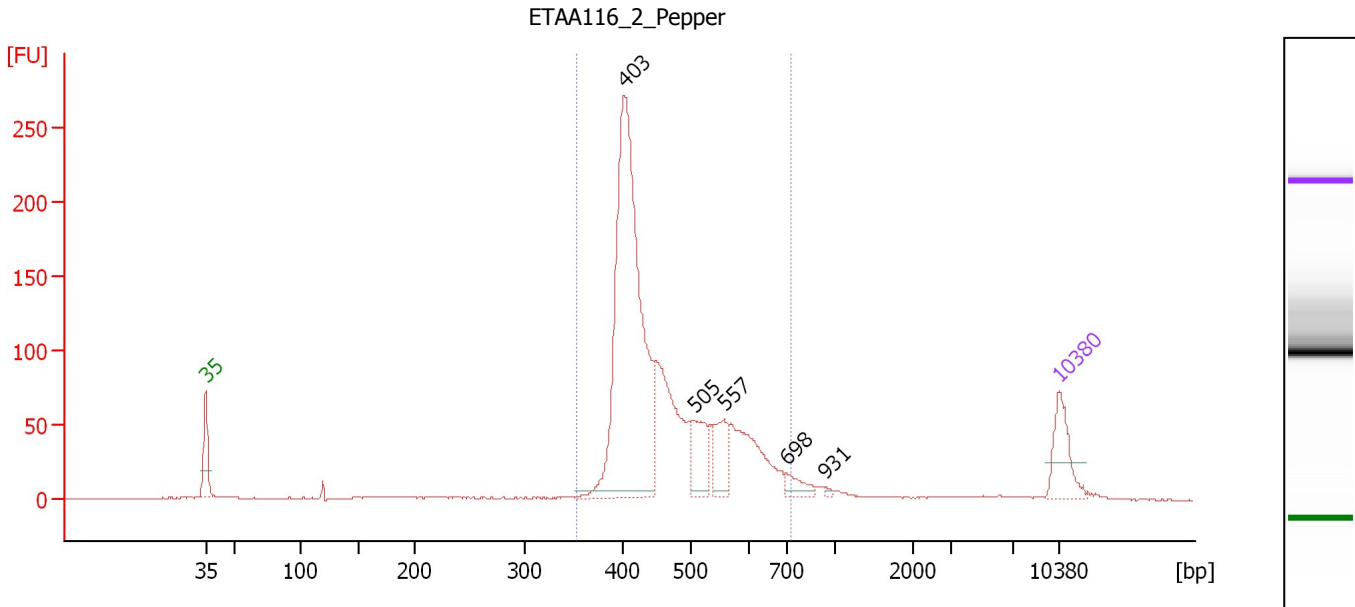
**Peak table for Ladder**

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	45.30
3	100	150.00	2,272.7	Ladder Peak	50.82
4	150	150.00	1,515.2	Ladder Peak	55.51
5	200	150.00	1,136.4	Ladder Peak	60.11
6	300	150.00	757.6	Ladder Peak	69.23
7	400	150.00	568.2	Ladder Peak	77.22
8	500	150.00	454.5	Ladder Peak	82.82
9	600	150.00	378.8	Ladder Peak	87.55
10	700	150.00	324.7	Ladder Peak	90.68
11	1,000	150.00	227.3	Ladder Peak	94.67
12	2,000	150.00	113.6	Ladder Peak	100.97
13	3,000	150.00	75.8	Ladder Peak	104.18
14	7,000	150.00	32.5	Ladder Peak	109.18
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad

Created: 12/10/2014 12:20:00 PM  
 Modified: 12/10/2014 1:03:44 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : ETAA116 2 Pepper**

Number of peaks found: 5                      Corr. Area 1: 1,521.2  
 Noise: 0.2

**Peak table for sample 1 : ETAA116 2 Pepper**

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	403	945.86	3,559.4		77.37
3	505	98.02	294.2		83.05
4	557	87.03	236.9		85.50
5	698	32.52	70.6		90.61
6	931	4.51	7.3		93.76
7	10,380	75.00	10.9	Upper Marker	113.00

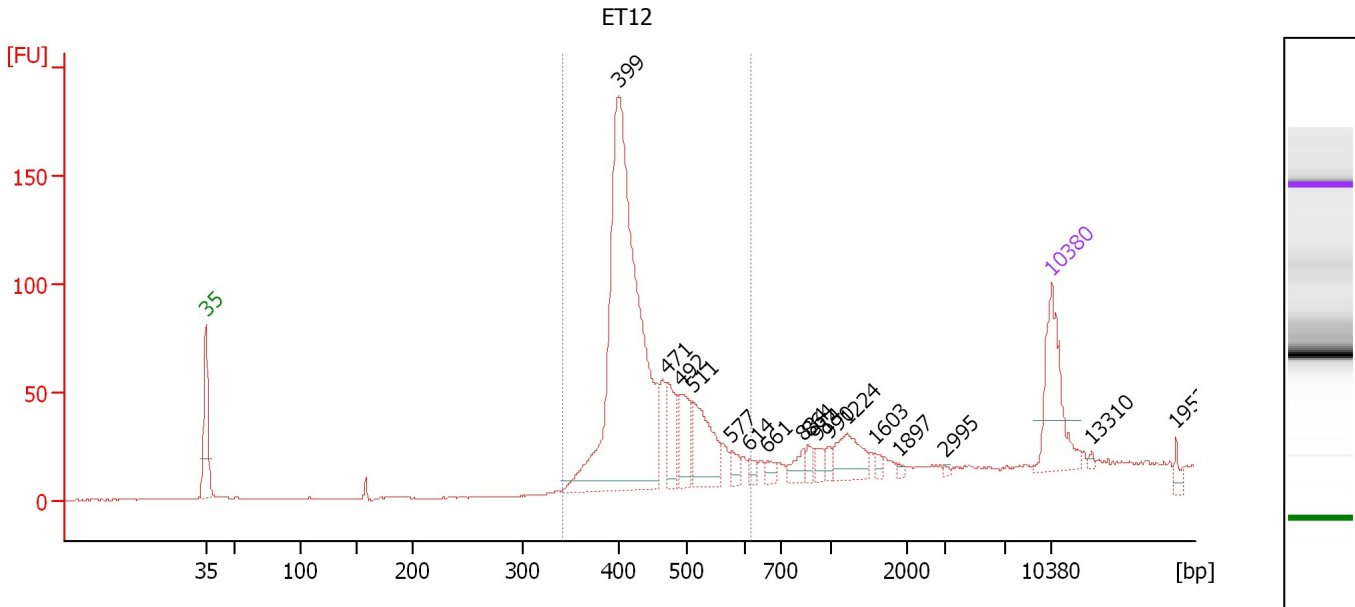
**Region table for sample 1 : ETAA116 2 Pepper**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
352	467	727	1,521.2	90	16.7	1,668.36	5,586.8	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad

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 Modified: 12/10/2014 1:03:44 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : ET12**

Number of peaks found: 17                      Corr. Area 1: 905.0  
 Noise: 0.2

**Peak table for sample 2 : ET12**

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	399	621.32	2,359.4		77.14
3	471	49.67	159.7		81.20
4	492	48.55	149.6		82.35
5	511	80.13	237.8		83.32
6	577	12.90	33.9		86.46
7	614	7.85	19.4		88.00
8	661	9.98	22.9		89.46
9	834	15.60	28.3		92.46
10	864	8.87	15.6		92.86
11	914	11.15	18.5		93.52
12	990	7.90	12.1		94.54
13	1,224	41.55	51.4		96.09
14	1,603	5.02	4.7		98.47
15	1,897	2.83	2.3		100.32
16	2,995	1.94	1.0		104.17
17	10,380	75.00	10.9	Upper Marker	113.00
18	13,310	0.00	0.0		116.31
19	19,521	0.00	0.0		123.33

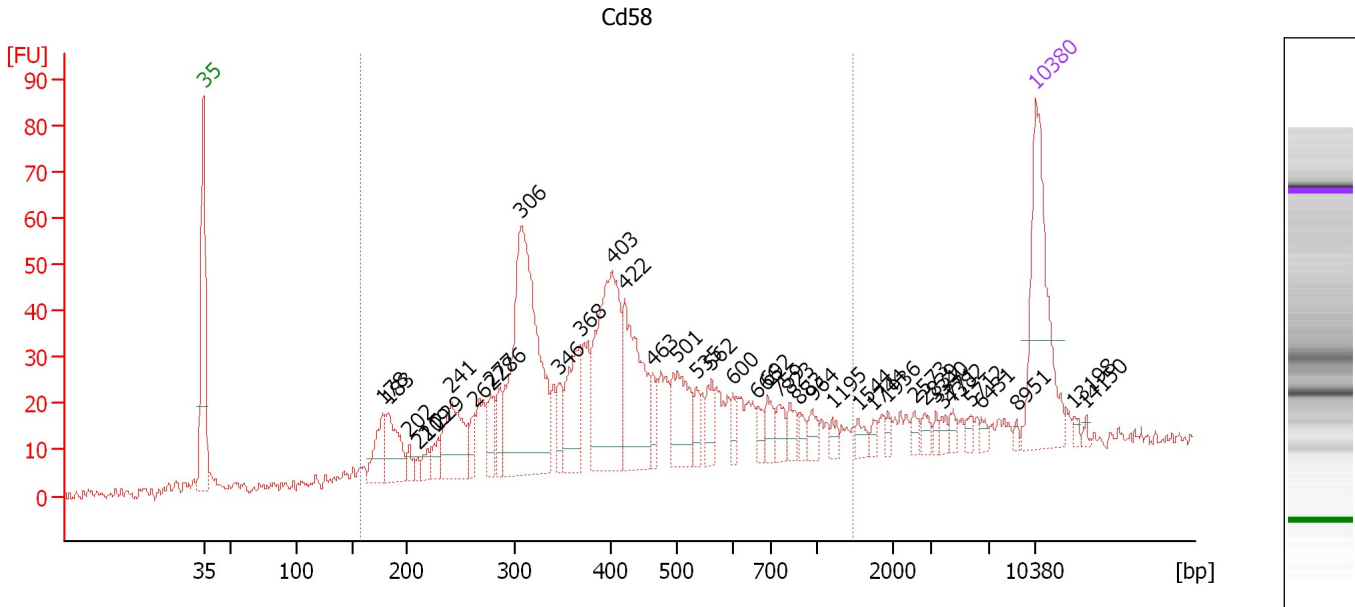
**Region table for sample 2 : ET12**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
342	441	618	905.0	81	12.3	816.87	2,848.6	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad

Created: 12/10/2014 12:20:00 PM  
 Modified: 12/10/2014 1:03:44 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : Cd58**

Number of peaks found: 40                      Corr. Area 1: 1,020.4  
 Noise: 1.4

**Peak table for sample 3 : Cd58**

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	178	33.44	284.8		58.08
3	183	42.89	355.5		58.53
4	202	7.94	59.5		60.32
5	210	5.61	40.4		61.04
6	219	9.37	64.8		61.85
7	229	11.90	78.8		62.74
8	241	58.64	368.4		63.87
9	262	13.57	78.5		65.75
10	277	19.80	108.2		67.14
11	286	18.25	96.7		67.95
12	306	217.08	1,073.3		69.74
13	346	16.30	71.4		72.88
14	368	50.62	208.3		74.68
15	403	124.66	469.0		77.37
16	422	81.36	292.1		78.45
17	463	14.35	47.0		80.74
18	501	43.05	130.1		82.89
19	535	10.76	30.5		84.46
20	562	15.92	42.9		85.76
21	600	9.45	23.9		87.56
22	666	7.72	17.6		89.62
23	692	11.85	26.0		90.43
24	759	10.42	20.8		91.46
25	823	10.17	18.7		92.31

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad


Created: 12/10/2014 12:20:00 PM  
 Modified: 12/10/2014 1:03:44 PM

**Electropherogram Summary Continued ...**

**... Peak table for sample 3 : Cd58**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	883	6.12	10.5		93.12
27	964	8.42	13.2		94.20
28	1,195	5.11	6.5		95.90
29	1,544	6.24	6.1		98.10
30	1,744	3.49	3.0		99.36
31	1,936	3.76	2.9		100.57
32	2,573	4.64	2.7		102.81
33	2,839	5.35	2.9		103.67
34	3,340	3.17	1.4		104.61
35	3,771	4.28	1.7		105.15
36	4,382	4.07	1.4		105.91
37	5,712	3.75	1.0		107.57
38	6,431	3.19	0.8		108.47
39	8,951	1.87	0.3		111.38
40	10,380	75.00	10.9	Upper Marker	113.00
41	13,198	0.00	0.0		116.19
42	14,150	0.00	0.0		117.26

**Region table for sample 3 : Cd58**

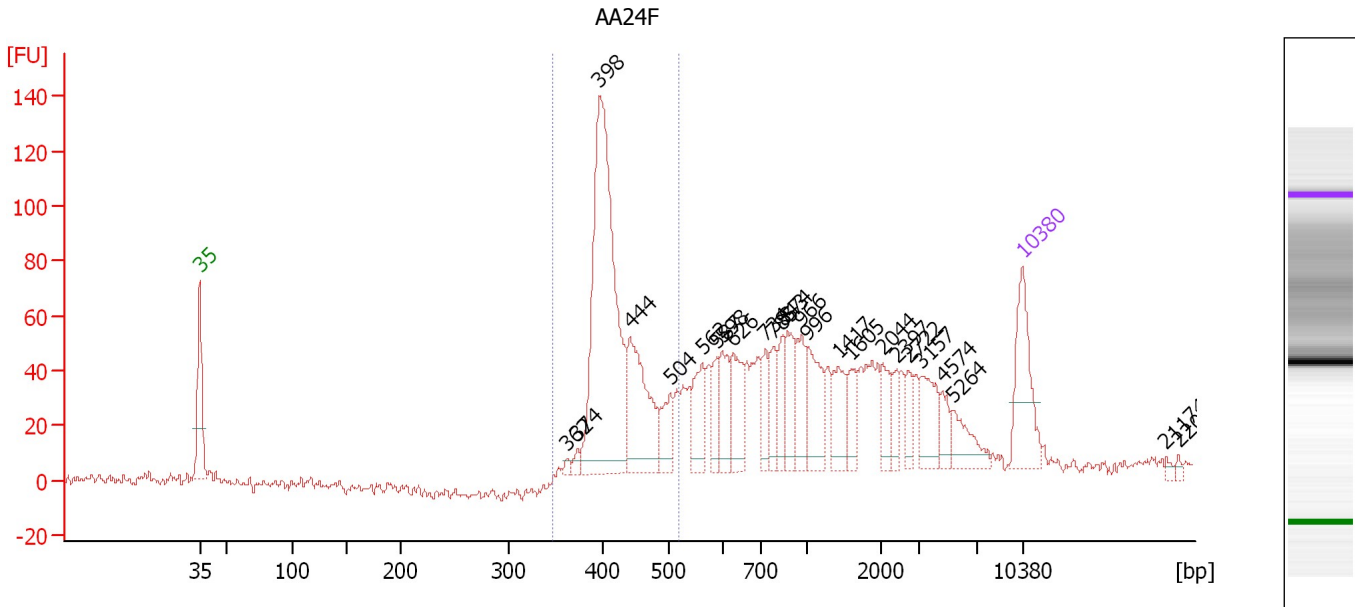
From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
157	439	1,481	1,020.4	84	48.7	1,056.16	4,683.4	



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad

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**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : AA24F**

Number of peaks found: 25                      Corr. Area 1: 571.2  
 Noise: 1.7

**Peak table for sample 4 : AA24F**

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	362	5.29	22.1		74.21
3	374	8.19	33.2		75.12
4	398	459.63	1,751.6		77.02
5	444	144.39	493.3		79.66
6	504	44.25	133.0		83.01
7	562	57.31	154.6		85.73
8	587	32.40	83.6		86.96
9	598	49.62	125.7		87.46
10	626	59.63	144.3		88.37
11	734	35.32	72.9		91.13
12	785	37.90	73.1		91.81
13	843	34.42	61.9		92.59
14	874	47.58	82.5		92.99
15	966	47.90	75.2		94.22
16	996	67.61	102.8		94.63
17	1,417	44.17	47.2		97.30
18	1,605	27.33	25.8		98.48
19	2,044	30.27	22.4		101.11
20	2,397	20.77	13.1		102.25
21	2,722	20.22	11.3		103.29
22	3,157	47.47	22.8		104.38
23	4,574	19.50	6.5		106.15
24	5,264	36.62	10.5		107.01
25	10,380	75.00	10.9	Upper Marker	113.00


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad

Created: 12/10/2014 12:20:00 PM  
Modified: 12/10/2014 1:03:44 PM

**Electropherogram Summary Continued ...****... Peak table for sample 4 : AA24F**

Peak	Size [bp]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	21,174	0.00	0.0		125.20
27	22,097	0.00	0.0		126.25

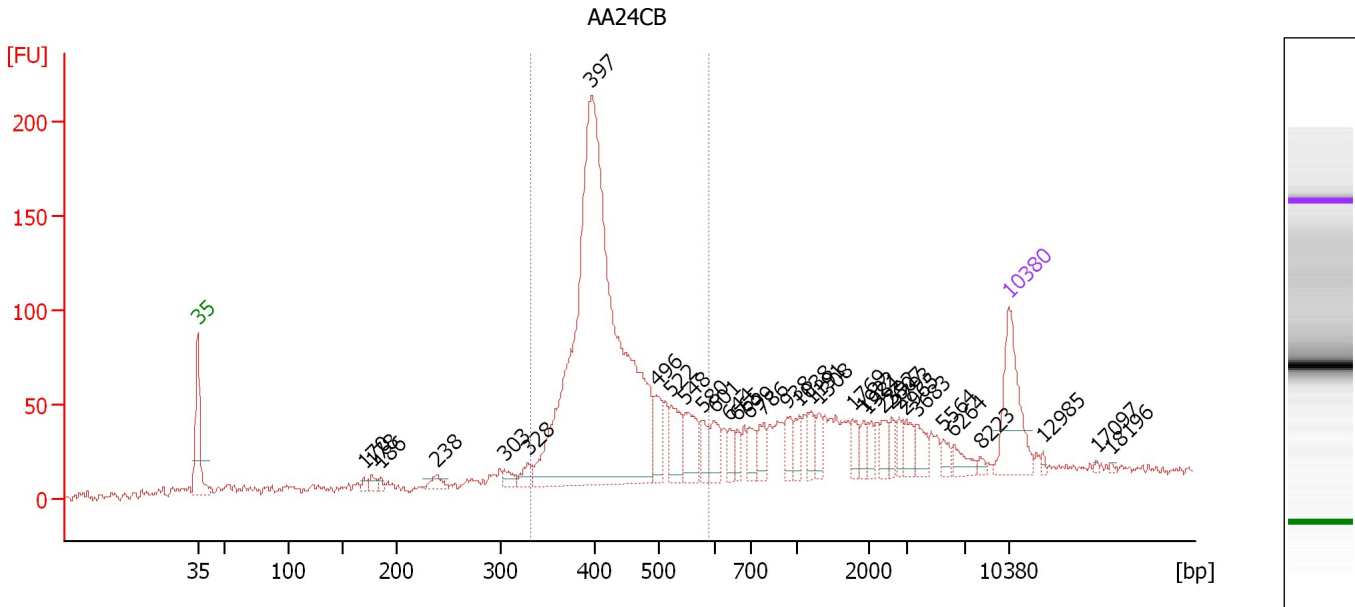
**Region table for sample 4 : AA24F**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Color
348	426	519	571.2	36	8.4	661.50	2,368.3	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad

Created: 12/10/2014 12:20:00 PM  
 Modified: 12/10/2014 1:03:44 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : AA24CB**

Number of peaks found: 34                      Corr. Area 1: 1,327.5  
 Noise: 1.8

**Peak table for sample 5 : AA24CB**

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	170	6.38	56.8		57.36
3	178	10.52	89.8		58.05
4	186	6.14	50.1		58.79
5	238	15.32	97.4		63.62
6	303	13.95	69.8		69.46
7	328	15.86	73.2		71.49
8	397	975.02	3,717.4		77.01
9	496	40.09	122.6		82.58
10	522	45.50	132.0		83.87
11	548	49.33	136.3		85.11
12	580	24.49	63.9		86.63
13	601	29.06	73.2		87.60
14	644	14.86	35.0		88.93
15	665	14.64	33.4		89.57
16	699	19.82	43.0		90.63
17	786	21.68	41.8		91.83
18	938	20.05	32.4		93.85
19	1,038	17.24	25.2		94.91
20	1,191	17.90	22.8		95.88
21	1,308	14.82	17.2		96.62
22	1,769	16.44	14.1		99.52
23	1,922	12.14	9.6		100.48
24	1,981	11.17	8.5		100.85
25	2,392	14.78	9.4		102.23

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad


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 Modified: 12/10/2014 1:03:44 PM

**Electropherogram Summary Continued ...**

**... Peak table for sample 5 : AA24CB**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	2,607	11.40	6.6		102.92
27	2,793	11.38	6.2		103.52
28	2,965	17.11	8.7		104.07
29	3,683	18.53	7.6		105.04
30	5,564	10.47	2.9		107.39
31	6,264	14.73	3.6		108.26
32	8,223	3.78	0.7		110.56
33	10,380	75.00	10.9	Upper Marker	113.00
34	12,985	0.00	0.0		115.95
35	17,097	0.00	0.0		120.59
36	18,196	0.00	0.0		121.84

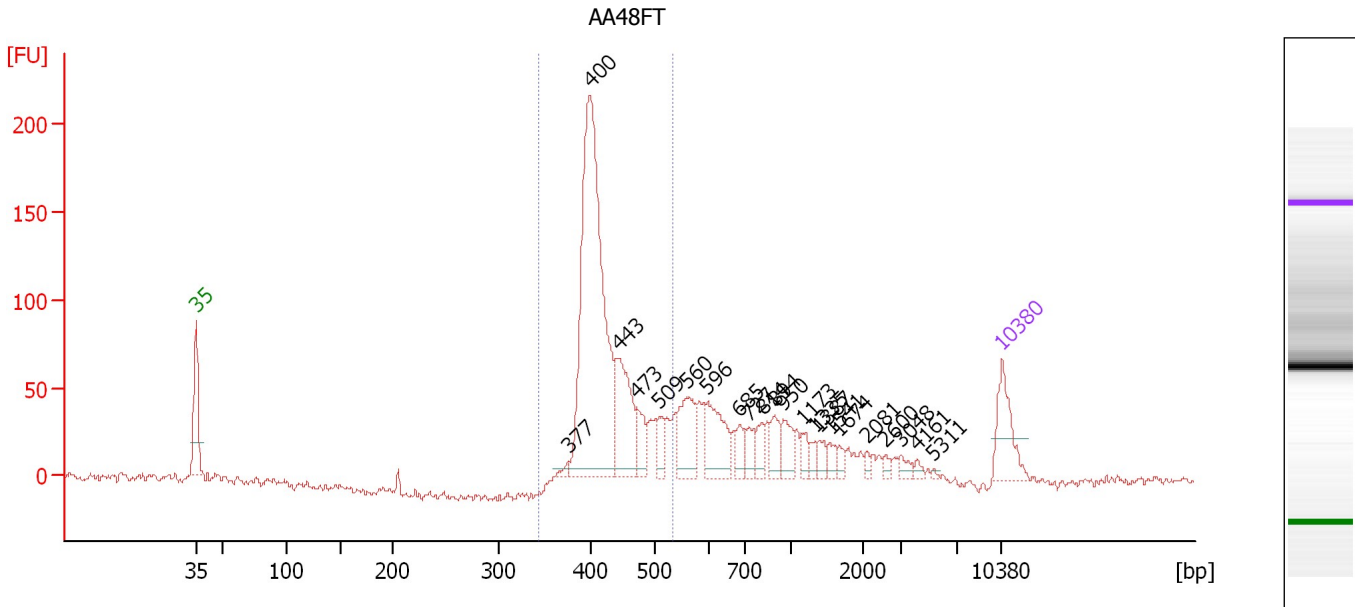
**Region table for sample 5 : AA24CB**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
332	431	590	1,327.5	63	13.5	1,139.13	4,082.9	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad

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 Modified: 12/10/2014 1:03:44 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : AA48FT**

Number of peaks found: 22                      Corr. Area 1: 879.9  
 Noise: 2.1

**Peak table for sample 6 : AA48FT**

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	377	10.44	42.0		75.38
3	400	772.03	2,922.1		77.24
4	443	167.66	573.0		79.64
5	473	55.32	177.2		81.31
6	509	31.31	93.2		83.26
7	560	104.20	281.8		85.67
8	596	107.67	273.6		87.38
9	685	30.38	67.2		90.21
10	727	31.08	64.8		91.04
11	814	31.24	58.1		92.20
12	894	39.53	67.0		93.26
13	950	41.78	66.7		94.01
14	1,173	21.91	28.3		95.77
15	1,335	14.32	16.3		96.79
16	1,387	18.44	20.1		97.11
17	1,541	16.65	16.4		98.08
18	1,674	13.18	11.9		98.92
19	2,081	8.21	6.0		101.23
20	2,600	9.12	5.3		102.90
21	3,048	13.00	6.5		104.24
22	4,161	7.38	2.7		105.63
23	5,311	2.82	0.8		107.07
24	10,380	75.00	10.9	Upper Marker	113.00


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad

Created: 12/10/2014 12:20:00 PM  
Modified: 12/10/2014 1:03:44 PM

**Electropherogram Summary Continued ...**

... Region table for sample 6 :

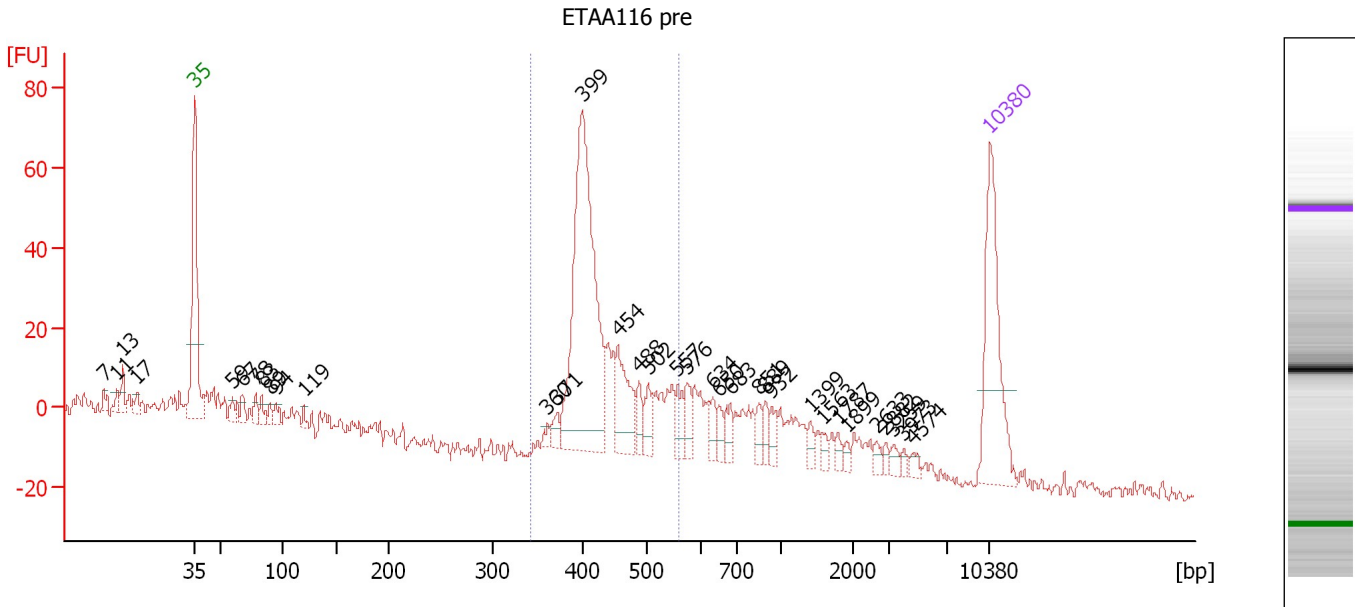
AA48FT

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Color
345	428	533	879.9	59	8.9	1,112.77	3,967.6	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad

Created: 12/10/2014 12:20:00 PM  
 Modified: 12/10/2014 1:03:44 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : ETAA116 pre**

Number of peaks found: 34                      Corr. Area 1: 368.0  
 Noise: 2.1

**Peak table for sample 7 : ETAA116 pre**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	7	0.00	0.0		35.02
2	11	0.00	0.0		36.15
3	13	0.00	0.0		36.67
4	17	0.00	0.0		37.93
5	35	125.00	5,411.3	Lower Marker	43.00
6	59	8.84	225.8		46.33
7	67	8.90	200.1		47.22
8	78	9.60	186.5		48.40
9	83	8.28	151.7		48.91
10	89	7.00	119.0		49.62
11	94	9.00	145.5		50.13
12	119	4.71	59.9		52.62
13	360	4.83	20.3		74.06
14	371	8.30	33.9		74.90
15	399	239.09	907.4		77.16
16	454	45.76	152.7		80.25
17	488	12.63	39.2		82.13
18	502	14.12	42.6		82.93
19	557	13.76	37.4		85.51
20	576	13.69	36.0		86.40
21	634	10.14	24.2		88.60
22	650	8.53	19.9		89.12
23	683	11.43	25.4		90.15
24	851	8.57	15.3		92.68
25	889	8.66	14.7		93.20

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad


Created: 12/10/2014 12:20:00 PM  
 Modified: 12/10/2014 1:03:44 PM

### Electropherogram Summary Continued ...

#### ... Peak table for sample 7 : ETAA116 pre

Peak	Size [bp]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	932	9.46	15.4		93.76
27	1,399	6.00	6.5		97.19
28	1,563	4.24	4.1		98.22
29	1,787	3.86	3.3		99.63
30	1,899	3.36	2.7		100.33
31	2,633	4.34	2.5		103.01
32	2,882	3.11	1.6		103.80
33	3,259	4.47	2.1		104.51
34	3,973	2.85	1.1		105.40
35	4,574	4.04	1.3		106.15
36	10,380	75.00	10.9	Upper Marker	113.00

#### Region table for sample 7 : ETAA116 pre

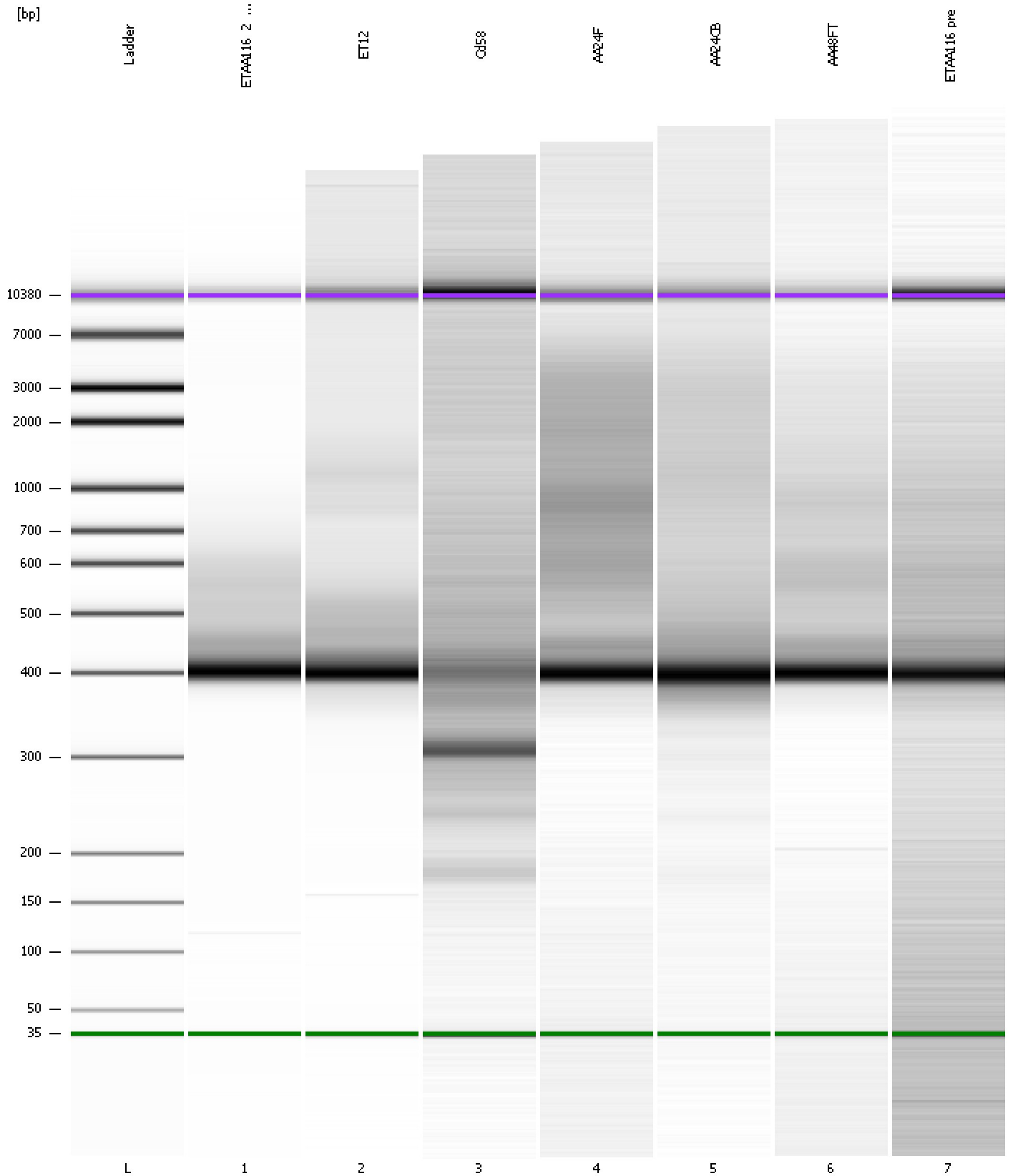
From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/ $\mu$ l]	Molarity [pmol/l]	Color
342	434	558	368.0	56	11.1	368.32	1,303.6	



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad

Created: 12/10/2014 12:20:00 PM  
Modified: 12/10/2014 1:03:44 PM

**Gel Image**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...d Settings\Bioanalyzer\2014-12-10\2014-12-10\_004\_MattQC.xad

Created: 12/10/2014 12:20:00 PM  
 Modified: 12/10/2014 1:03:44 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		12/10/2014 1:01:19 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2014-12-10\2014-12-10_004.xad)		Instrument	Run		12/10/2014 12:20:06 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		12/10/2014 12:20:06 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		12/10/2014 12:20:06 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		12/10/2014 12:20:06 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		12/10/2014 12:20:06 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		12/10/2014 12:20:06 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		12/10/2014 12:20:06 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1