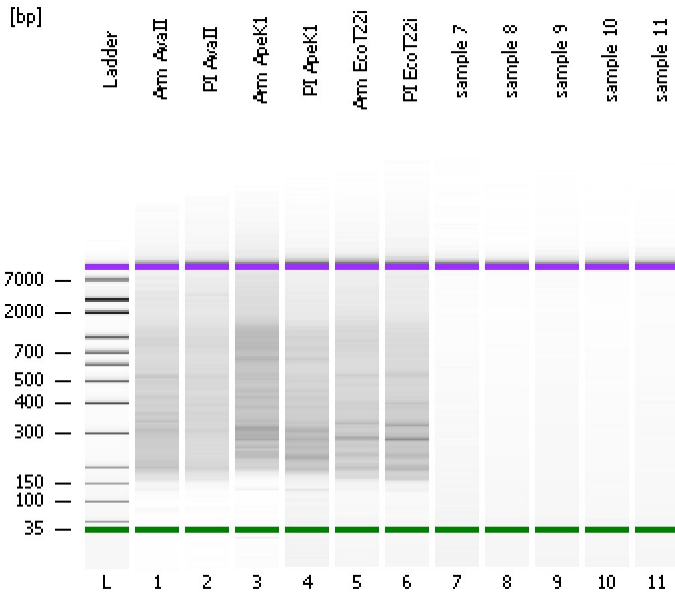


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
Modified: 2/27/2015 11:36:43 AM

Electrophoresis File Run Summary



Instrument Information:

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

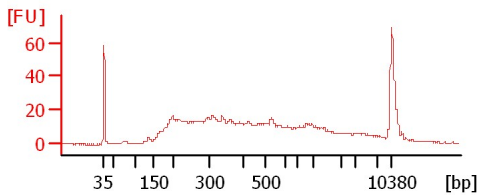
Assay Information:

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

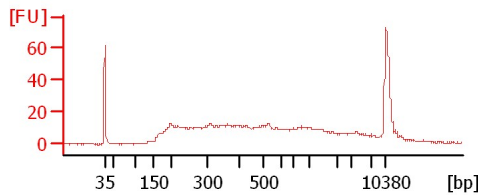
Chip Information:

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

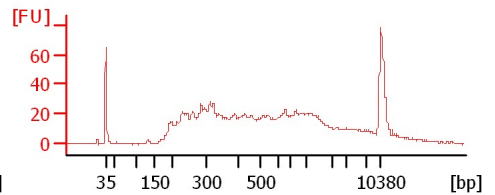
Arm AvaII



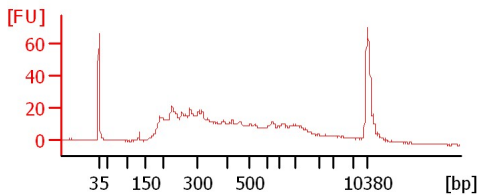
PI AvaII



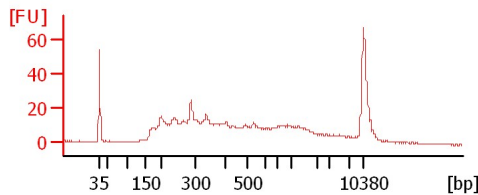
Arm ApeK1



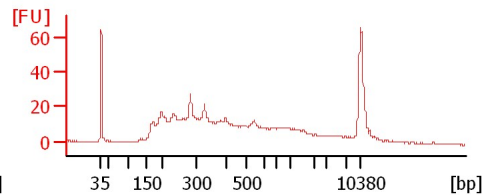
PI ApeK1



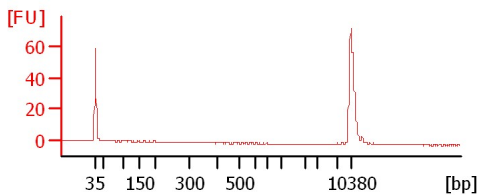
Arm EcoT22i



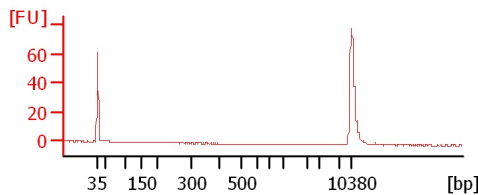
PI EcoT22i



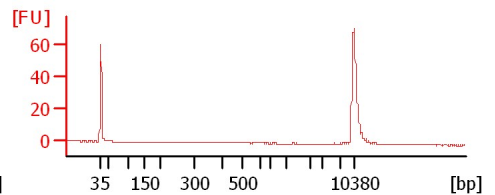
sample 7



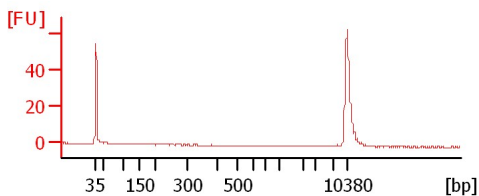
sample 8



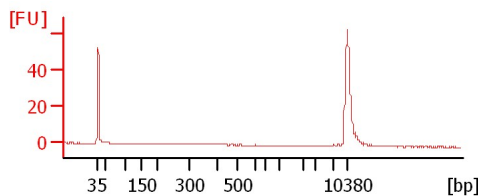
sample 9



sample 10



sample 11



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
 Modified: 2/27/2015 11:36:43 AM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
Arm AvaII		<input type="checkbox"/>	✓			
PI AvaII		<input type="checkbox"/>	✓			
Arm ApeK1		<input type="checkbox"/>	✓			
PI ApeK1		<input type="checkbox"/>	✓			
Arm EcoT22i		<input type="checkbox"/>	✓			
PI EcoT22i		<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:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
Modified: 2/27/2015 11:36:43 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/ μ l] : 1950
Uses Standard Area for Ladder Fragments
Lower Marker Concentration [pg/ μ l] : 125
Upper Marker Concentration [pg/ μ 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

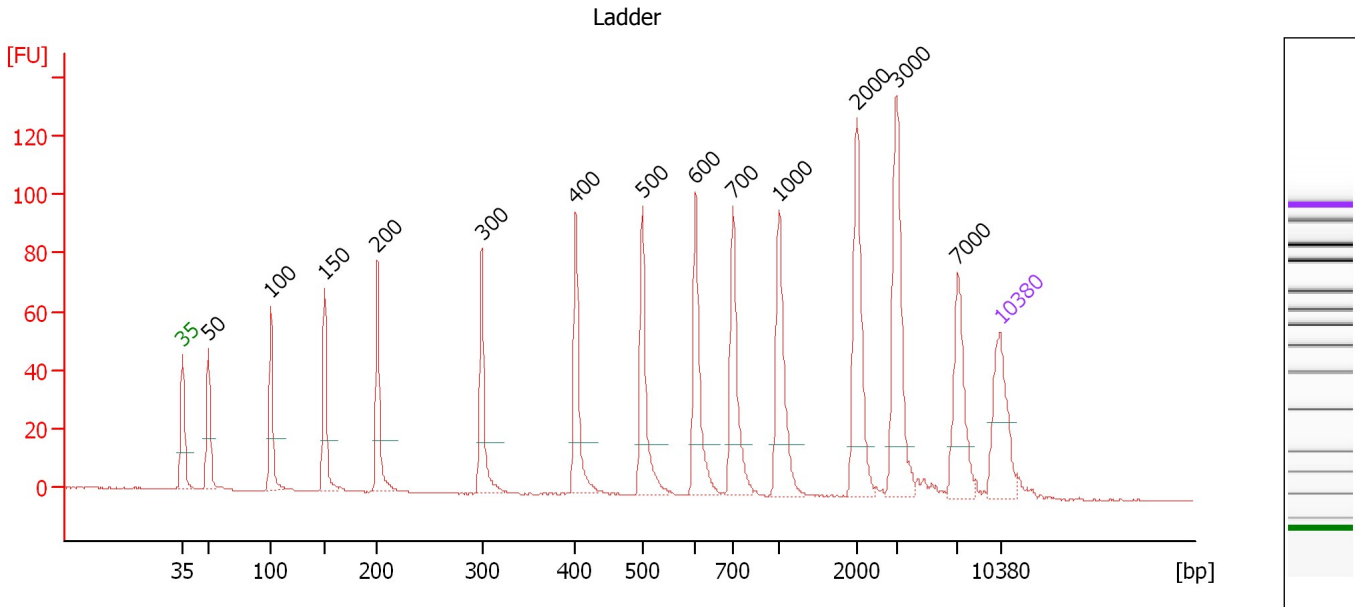
Ladder

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:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
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Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

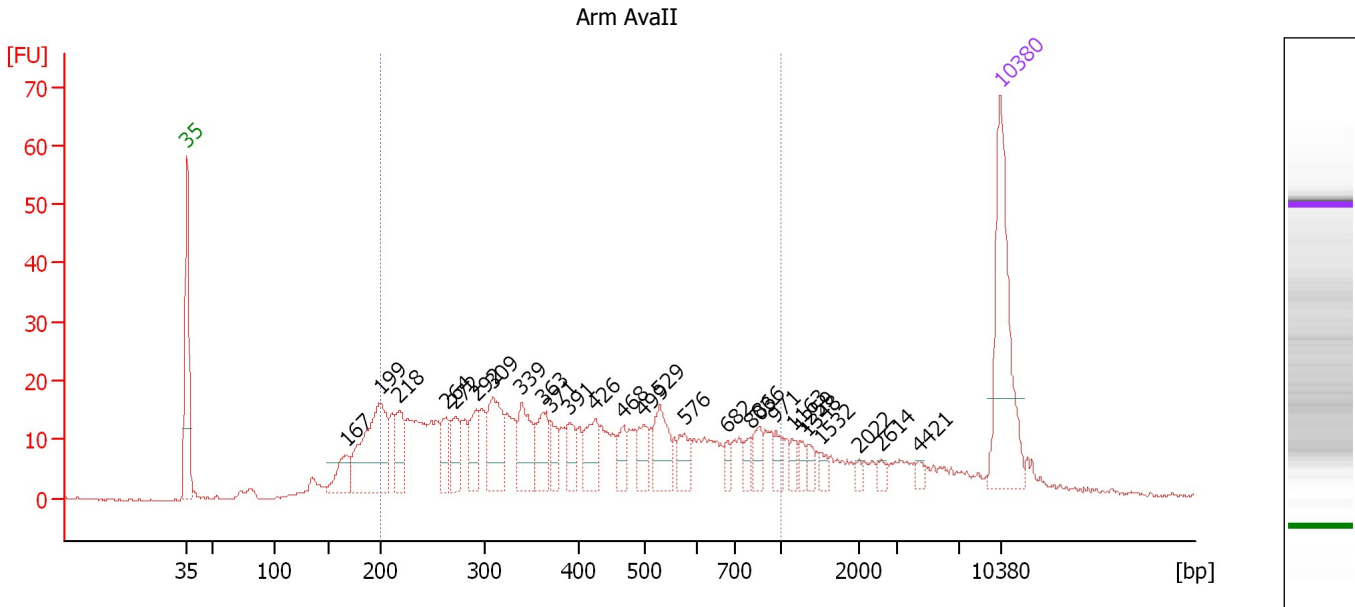
Peak table for Ladder

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	45.19
3	100	150.00	2,272.7	Ladder Peak	50.53
4	150	150.00	1,515.2	Ladder Peak	55.15
5	200	150.00	1,136.4	Ladder Peak	59.67
6	300	150.00	757.6	Ladder Peak	68.62
7	400	150.00	568.2	Ladder Peak	76.65
8	500	150.00	454.5	Ladder Peak	82.36
9	600	150.00	378.8	Ladder Peak	86.93
10	700	150.00	324.7	Ladder Peak	90.12
11	1,000	150.00	227.3	Ladder Peak	94.05
12	2,000	150.00	113.6	Ladder Peak	100.76
13	3,000	150.00	75.8	Ladder Peak	104.10
14	7,000	150.00	32.5	Ladder Peak	109.39
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
 Modified: 2/27/2015 11:36:43 AM

Electropherogram Summary Continued ...



Overall Results for sample 1 : Arm AvaII

Number of peaks found: 27 Corr. Area 1: 595.2
 Noise: 0.2

Peak table for sample 1 : Arm AvaII

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	167	26.08	235.9		56.72
3	199	103.23	784.2		59.62
4	218	30.02	208.8		61.27
5	264	23.27	133.8		65.35
6	272	21.63	120.6		66.09
7	292	23.27	120.6		67.92
8	309	48.27	236.6		69.35
9	339	38.55	172.1		71.78
10	363	29.49	123.1		73.66
11	371	14.44	59.0		74.30
12	391	17.33	67.2		75.91
13	426	27.53	97.8		78.16
14	468	14.82	48.0		80.55
15	499	17.75	53.9		82.29
16	529	31.35	89.9		83.67
17	576	16.33	43.0		85.83
18	682	6.83	15.2		89.54
19	803	7.91	14.9		91.47
20	866	11.30	19.8		92.30
21	971	9.28	14.5		93.68
22	1,163	6.22	8.1		95.14
23	1,259	5.37	6.5		95.79
24	1,348	6.30	7.1		96.38
25	1,532	4.72	4.7		97.62

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad


Created: 2/27/2015 10:53:05 AM
 Modified: 2/27/2015 11:36:43 AM

Electropherogram Summary Continued ...

... Peak table for sample 1 : Arm AvaII

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	2,022	2.78	2.1		100.84
27	2,614	3.76	2.2		102.81
28	4,421	3.69	1.3		105.98
29	10,380	75.00	10.9	Upper Marker	113.00

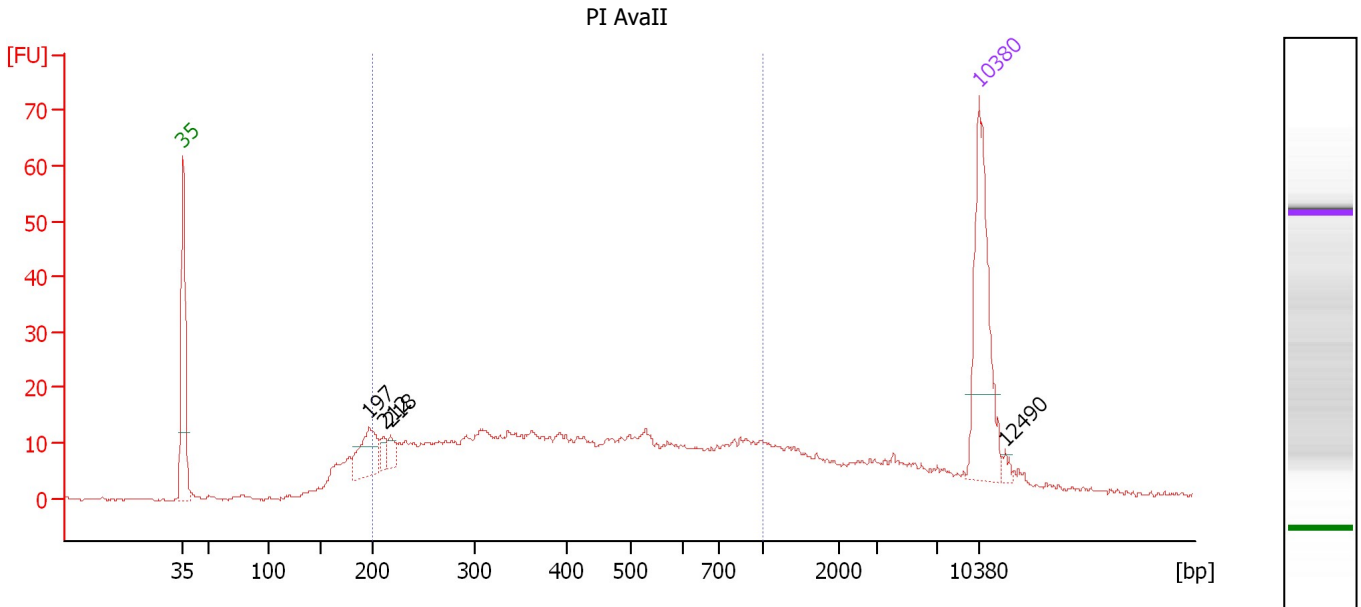
Region table for sample 1 : Arm AvaII

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	431	1,000	595.2	73	43.6	815.56	3,625.4	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
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Electropherogram Summary Continued ...



Overall Results for sample 2 : PI AvaII

Number of peaks found: 4 Corr. Area 1: 488.4
 Noise: 0.3

Peak table for sample 2 : PI AvaII

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	197	40.49	311.8		59.37
3	212	9.15	65.4		60.73
4	218	10.92	76.0		61.25
5	10,380	75.00	10.9	Upper Marker	113.00
6	12,490	0.00	0.0		115.25

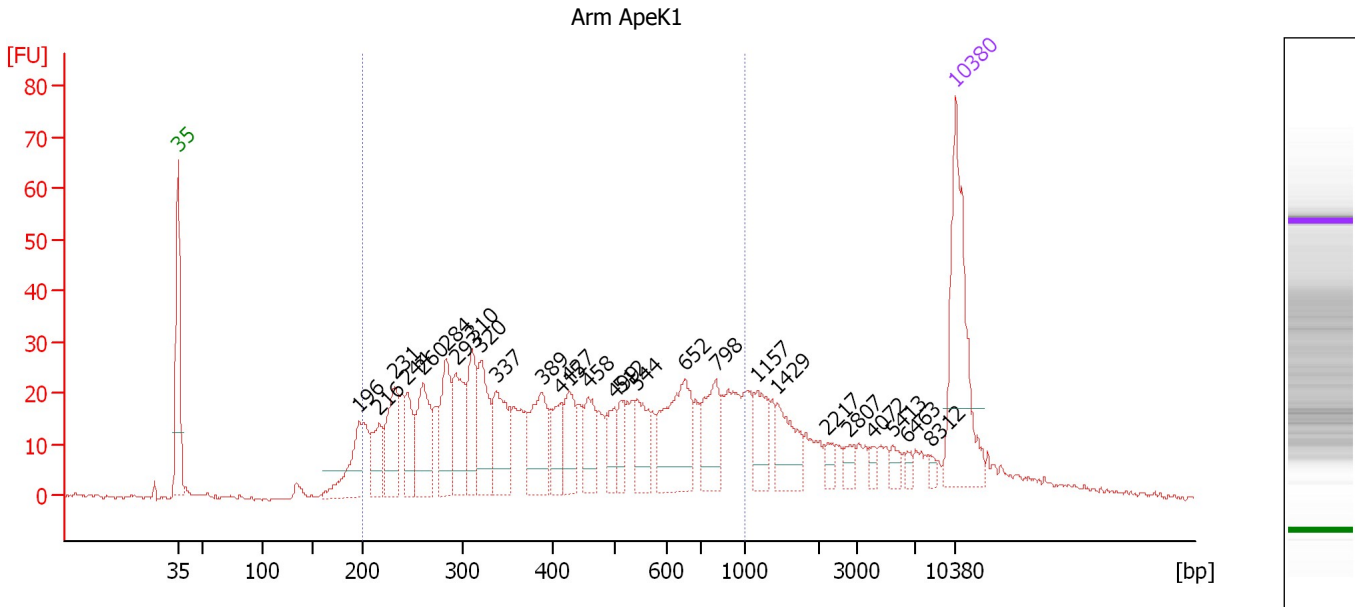
Region table for sample 2 : PI AvaII

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	444	1,000	488.4	70	43.0	614.28	2,657.3	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
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Electropherogram Summary Continued ...



Overall Results for sample 3 : Arm ApeK1

Number of peaks found: 27 Corr. Area 1: 871.0
 Noise: 0.4

Peak table for sample 3 : Arm ApeK1

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	196	44.05	340.4		59.31
3	216	31.25	218.8		61.14
4	231	52.06	340.8		62.48
5	244	31.31	194.2		63.63
6	260	55.04	320.3		65.07
7	284	50.22	268.0		67.18
8	293	47.72	246.7		68.00
9	310	41.33	201.9		69.44
10	320	48.01	227.5		70.20
11	337	50.00	224.7		71.59
12	389	50.71	197.5		75.77
13	415	24.20	88.4		77.50
14	427	29.76	105.7		78.17
15	458	26.32	87.1		79.94
16	499	19.33	58.7		82.29
17	512	15.57	46.1		82.92
18	544	25.87	72.1		84.36
19	652	65.61	152.5		88.58
20	798	37.06	70.3		91.41
21	1,157	23.88	31.3		95.10
22	1,429	27.94	29.6		96.93
23	2,217	6.37	4.4		101.49
24	2,807	5.66	3.1		103.45
25	4,072	4.28	1.6		105.52

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad


Created: 2/27/2015 10:53:05 AM
 Modified: 2/27/2015 11:36:43 AM

Electropherogram Summary Continued ...

... Peak table for sample 3 : Arm ApeK1

Peak	Size [bp]	Conc. [pg/ μ l]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	5,413	5.83	1.6		107.29
27	6,463	3.37	0.8		108.68
28	8,312	2.97	0.5		110.79
29	10,380	75.00	10.9	Upper Marker	113.00

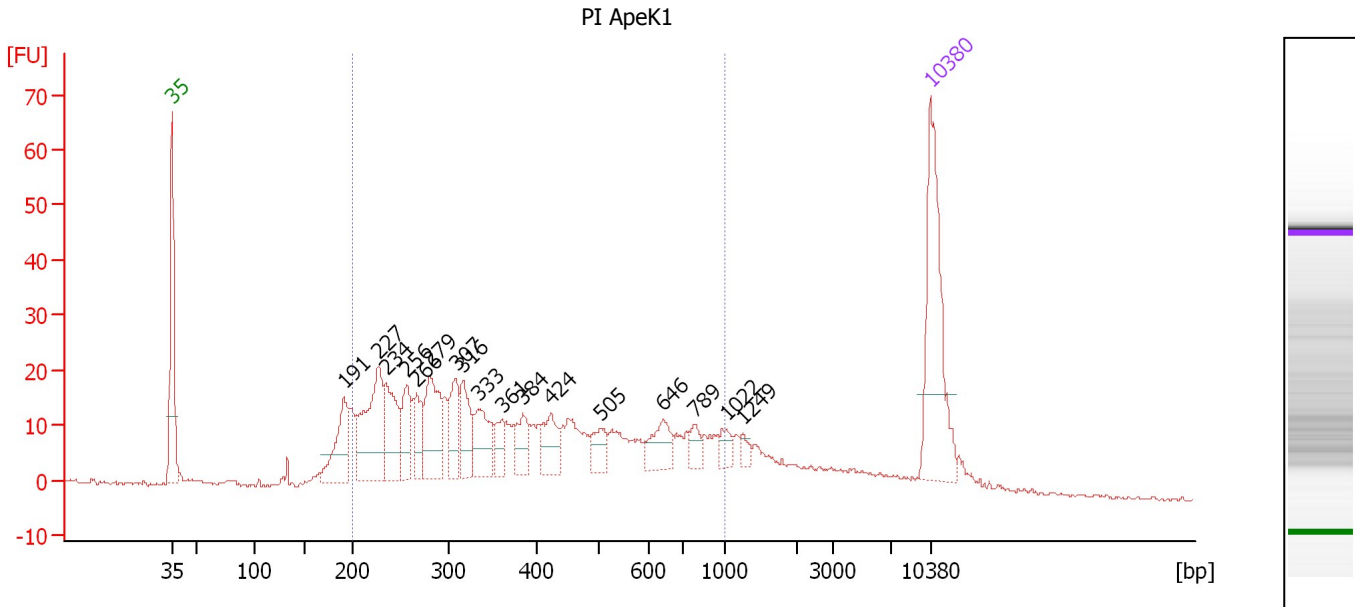
Region table for sample 3 : Arm ApeK1

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/ μ l]	Molarity [pmol/l]	Color
200	455	1,000	871.0	76	43.2	927.21	3,934.9	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
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Electropherogram Summary Continued ...



Overall Results for sample 4 : PI ApeK1

Number of peaks found: 17 Corr. Area 1: 611.4
 Noise: 0.4

Peak table for sample 4 : PI ApeK1

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	191	50.61	401.5		58.85
3	227	85.77	572.0		62.10
4	234	51.19	331.0		62.74
5	256	32.40	191.9		64.66
6	266	26.74	152.5		65.55
7	279	57.95	314.2		66.78
8	307	31.75	156.6		69.19
9	316	32.21	154.6		69.88
10	333	34.78	158.0		71.31
11	361	14.44	60.6		73.52
12	384	21.25	83.8		75.39
13	424	24.11	86.2		78.00
14	505	15.56	46.7		82.58
15	646	23.02	54.0		88.39
16	789	9.73	18.7		91.29
17	1,022	8.25	12.2		94.20
18	1,249	4.91	6.0		95.72
19	10,380	75.00	10.9	Upper Marker	113.00

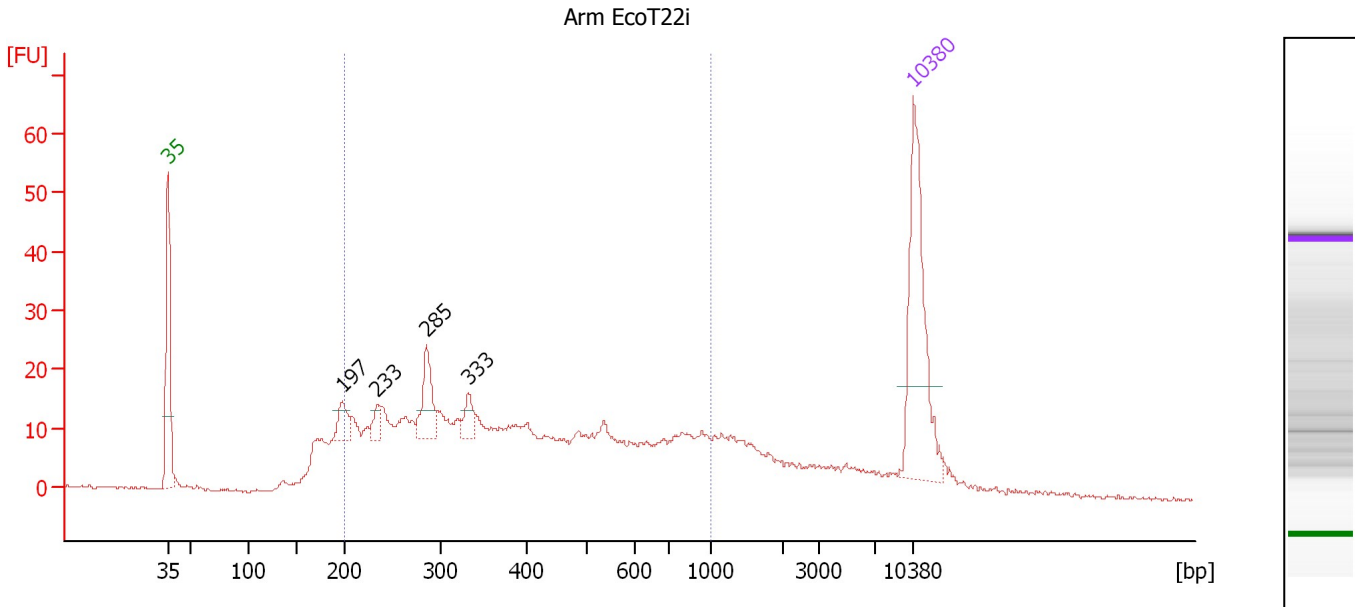
Region table for sample 4 : PI ApeK1

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	420	1,000	611.4	78	44.7	744.90	3,394.2	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
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Electropherogram Summary Continued ...



Overall Results for sample 5 : Arm EcoT22i

Number of peaks found: 4 Corr. Area 1: 517.4
 Noise: 0.3

Peak table for sample 5 : Arm EcoT22i

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	197	16.65	128.2		59.37
3	233	9.51	61.8		62.63
4	285	32.69	173.7		67.28
5	333	12.60	57.4		71.24
6	10,380	75.00	10.9	Upper Marker	113.00

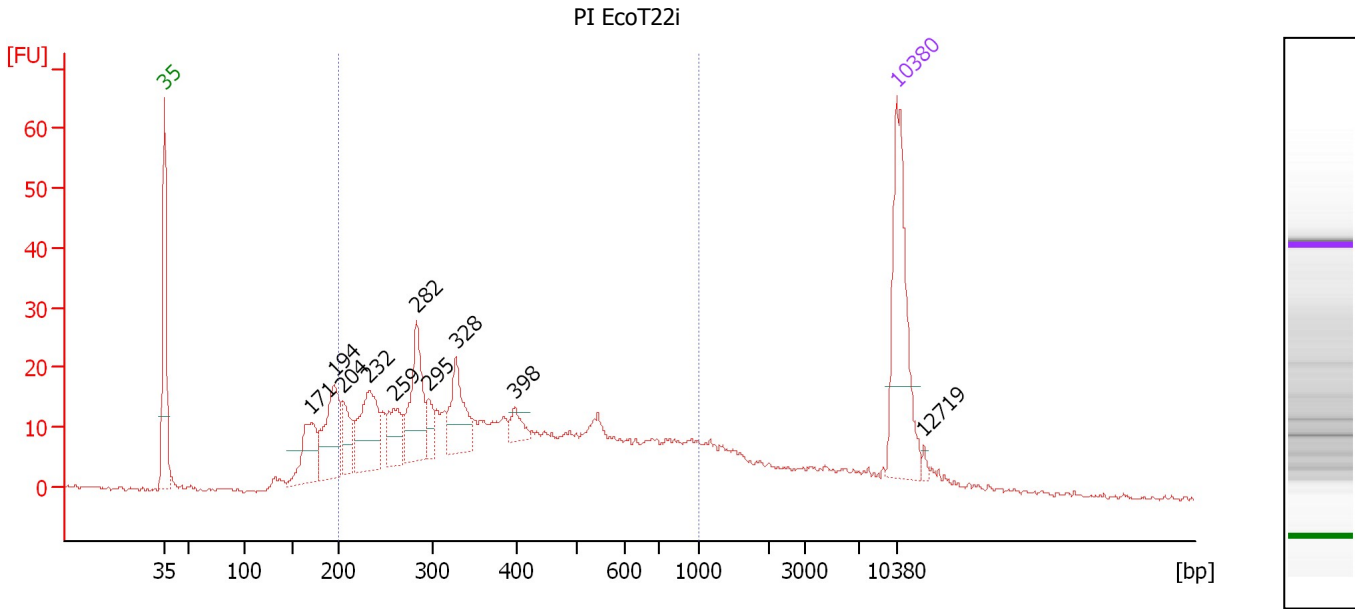
Region table for sample 5 : Arm EcoT22i

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	429	1,000	517.4	73	44.4	631.65	2,820.7	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
 Modified: 2/27/2015 11:36:43 AM

Electropherogram Summary Continued ...



Overall Results for sample 6 : PI EcoT22i

Number of peaks found: 10 Corr. Area 1: 553.0
 Noise: 0.3

Peak table for sample 6 : PI EcoT22i

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	171	49.32	437.9		57.01
3	194	65.19	508.4		59.15
4	204	29.28	217.6		60.02
5	232	63.92	416.8		62.56
6	259	29.90	175.2		64.91
7	282	61.61	330.5		67.05
8	295	15.39	79.0		68.17
9	328	44.68	206.4		70.87
10	398	11.70	44.6		76.47
11	10,380	75.00	10.9	Upper Marker	113.00
12	12,719	0.00	0.0		115.50

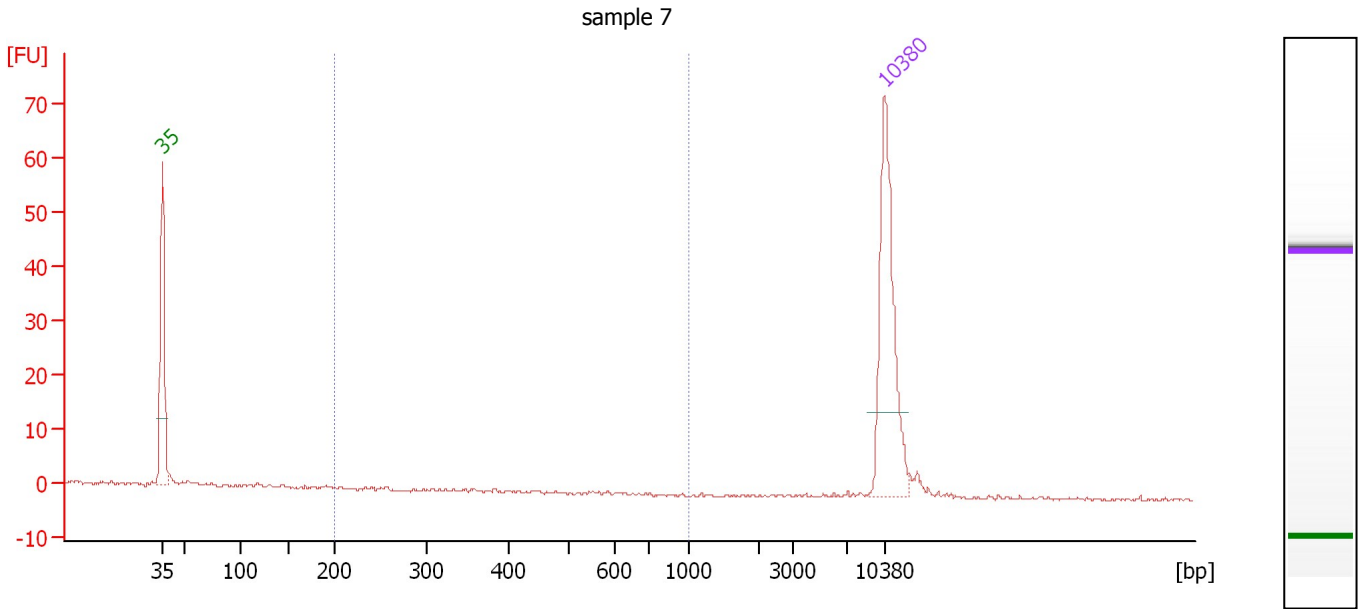
Region table for sample 6 : PI EcoT22i

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	415	1,000	553.0	74	43.7	725.72	3,302.4	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
 Modified: 2/27/2015 11:36:43 AM

Electropherogram Summary Continued ...



Overall Results for sample 7 : sample 7

Number of peaks found: 0 Corr. Area 1: 0.0
 Noise: 0.3

Peak table for sample 7 : sample 7

Pea k	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	10,380	75.00	10.9	Upper Marker	113.00

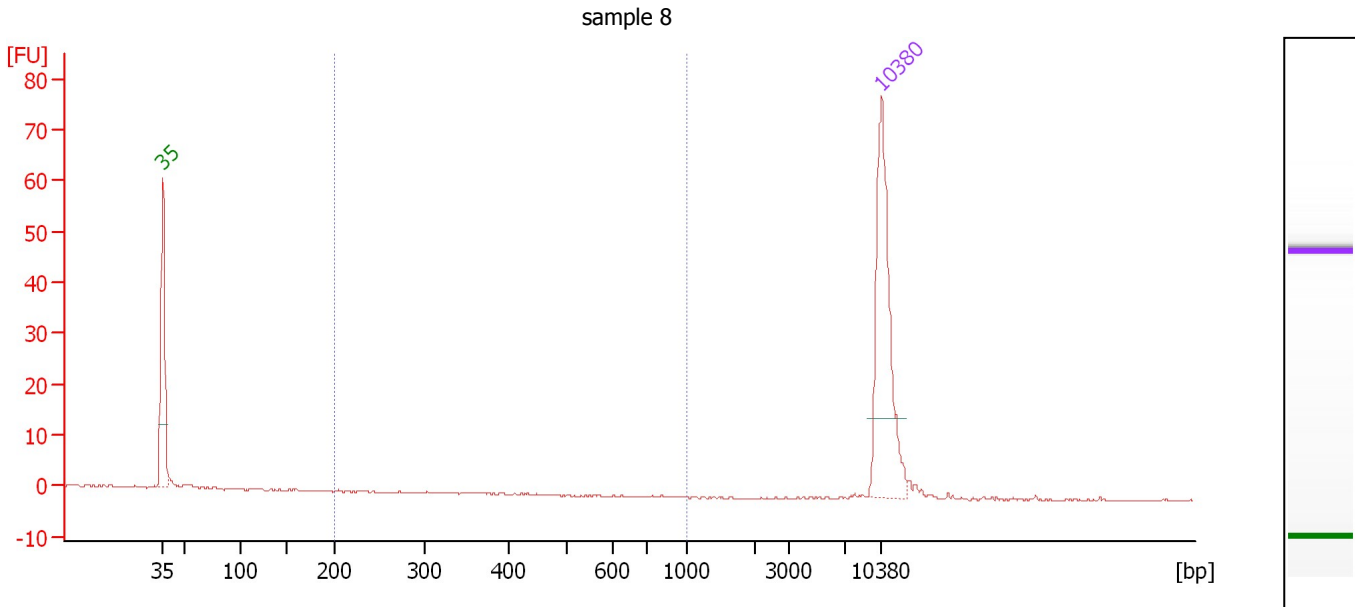
Region table for sample 7 : sample 7

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Co lor
200	348	1,000	0.0	0	15.0	0.01	0.1	■

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
 Modified: 2/27/2015 11:36:43 AM

Electropherogram Summary Continued ...



Overall Results for sample 8 : sample 8

Number of peaks found: 0 Corr. Area 1: 0.0
 Noise: 0.2

Peak table for sample 8 : sample 8

Pea k	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	10,380	75.00	10.9	Upper Marker	113.00

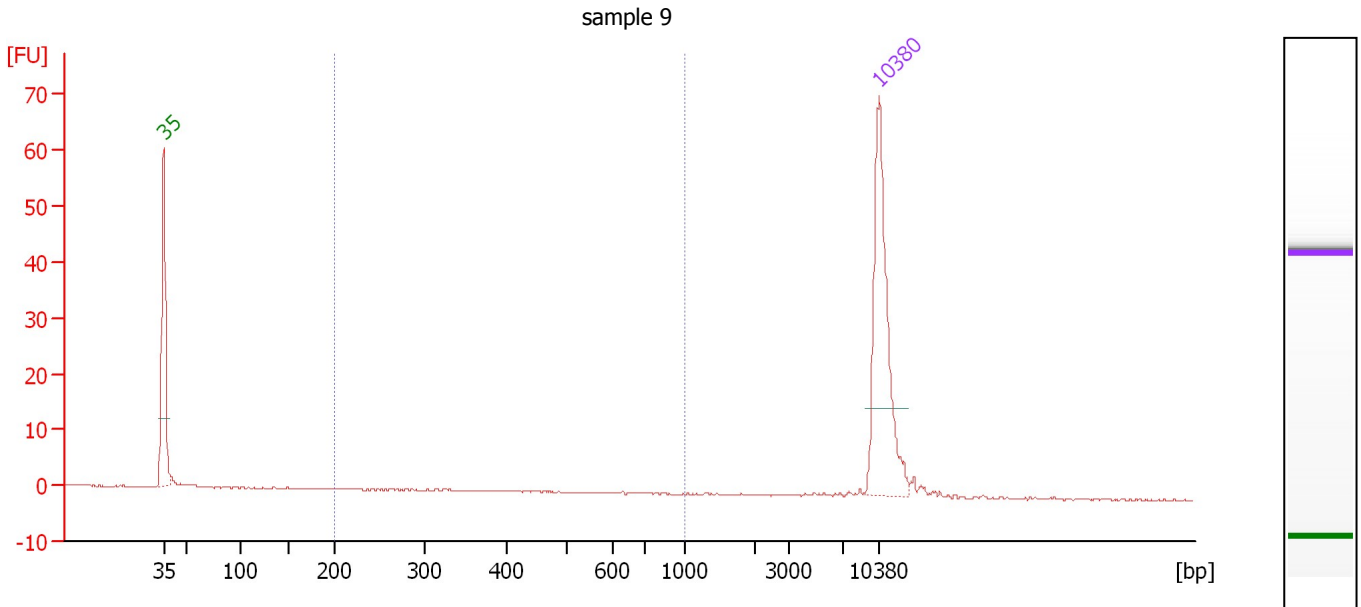
Region table for sample 8 : sample 8

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Co lor
200	0	1,000	0.0	0	0.0	0.00	0.0	■

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
 Modified: 2/27/2015 11:36:43 AM

Electropherogram Summary Continued ...



Overall Results for sample 9 : sample 9

Number of peaks found: 0 Corr. Area 1: 3.1
 Noise: 0.1

Peak table for sample 9 : sample 9

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	10,380	75.00	10.9	Upper Marker	113.00

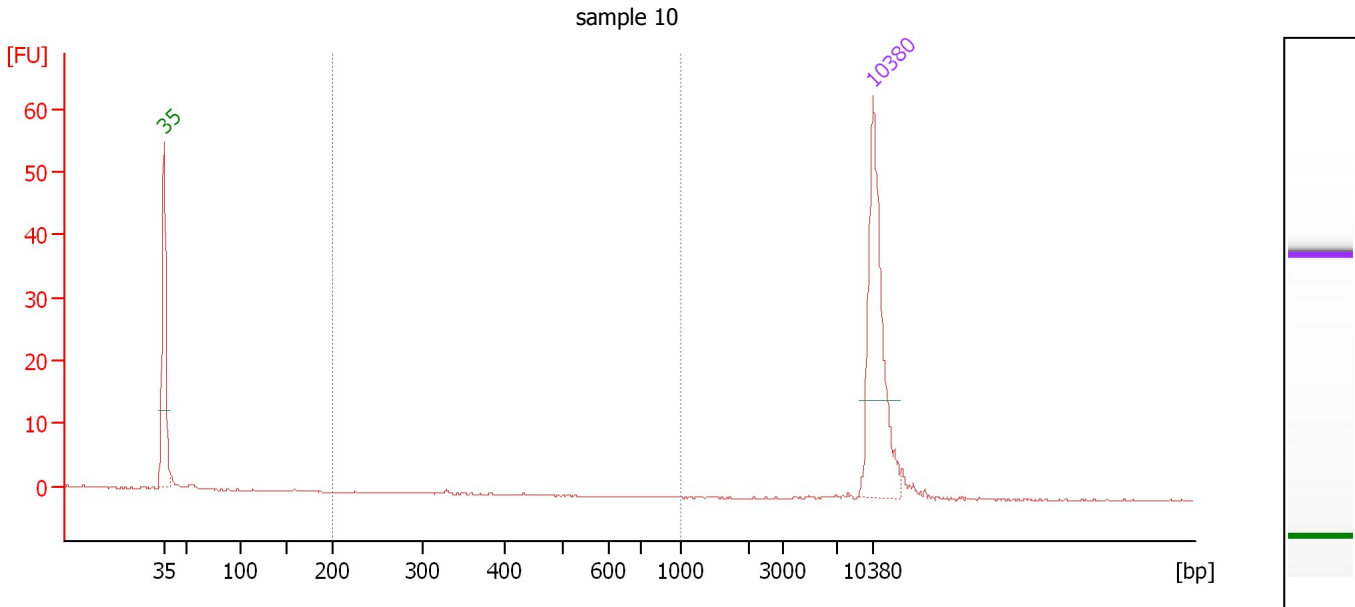
Region table for sample 9 : sample 9

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	424	1,000	3.1	17	35.6	3.54	14.7	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
 Modified: 2/27/2015 11:36:43 AM

Electropherogram Summary Continued ...



Overall Results for sample 10 : sample 10

Number of peaks found: 0 Corr. Area 1: 0.0
 Noise: 0.1

Peak table for sample 10 : sample 10

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	10,380	75.00	10.9	Upper Marker	113.00

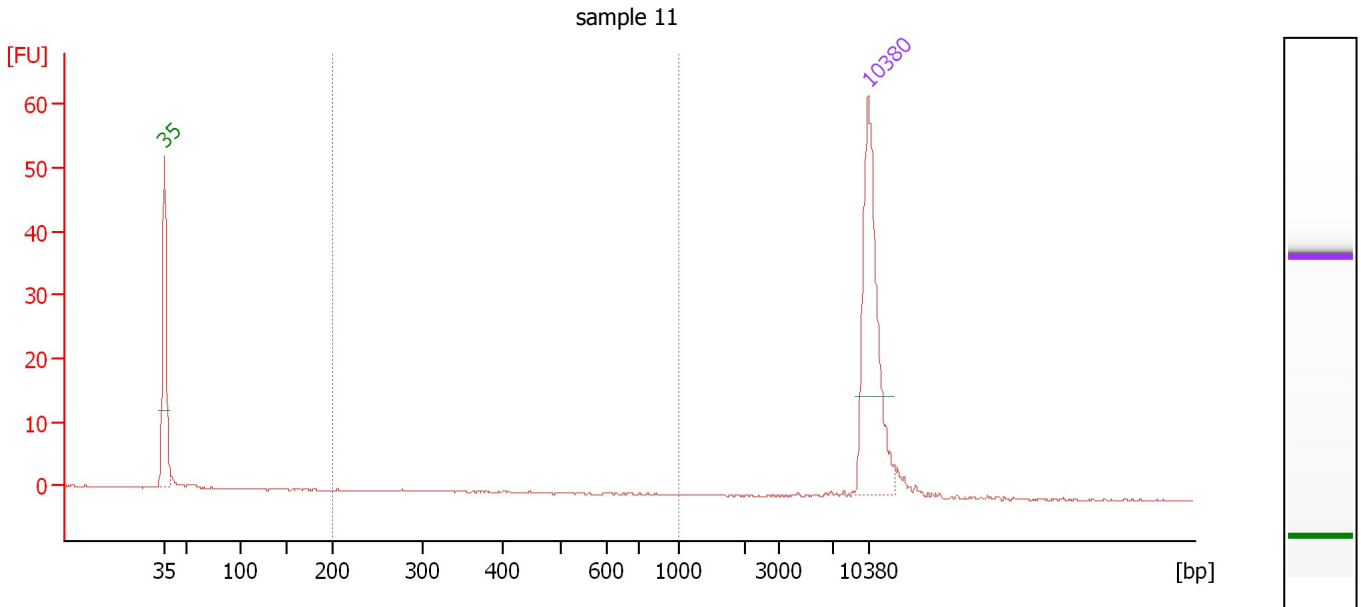
Region table for sample 10 : sample 10

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	328	1,000	0.0	0	0.1	0.02	0.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
 Modified: 2/27/2015 11:36:43 AM

Electropherogram Summary Continued ...



Overall Results for sample 11 : sample 11

Number of peaks found: 0 Corr. Area 1: 0.1
 Noise: 0.1

Peak table for sample 11 : sample 11

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	10,380	75.00	10.9	Upper Marker	113.00

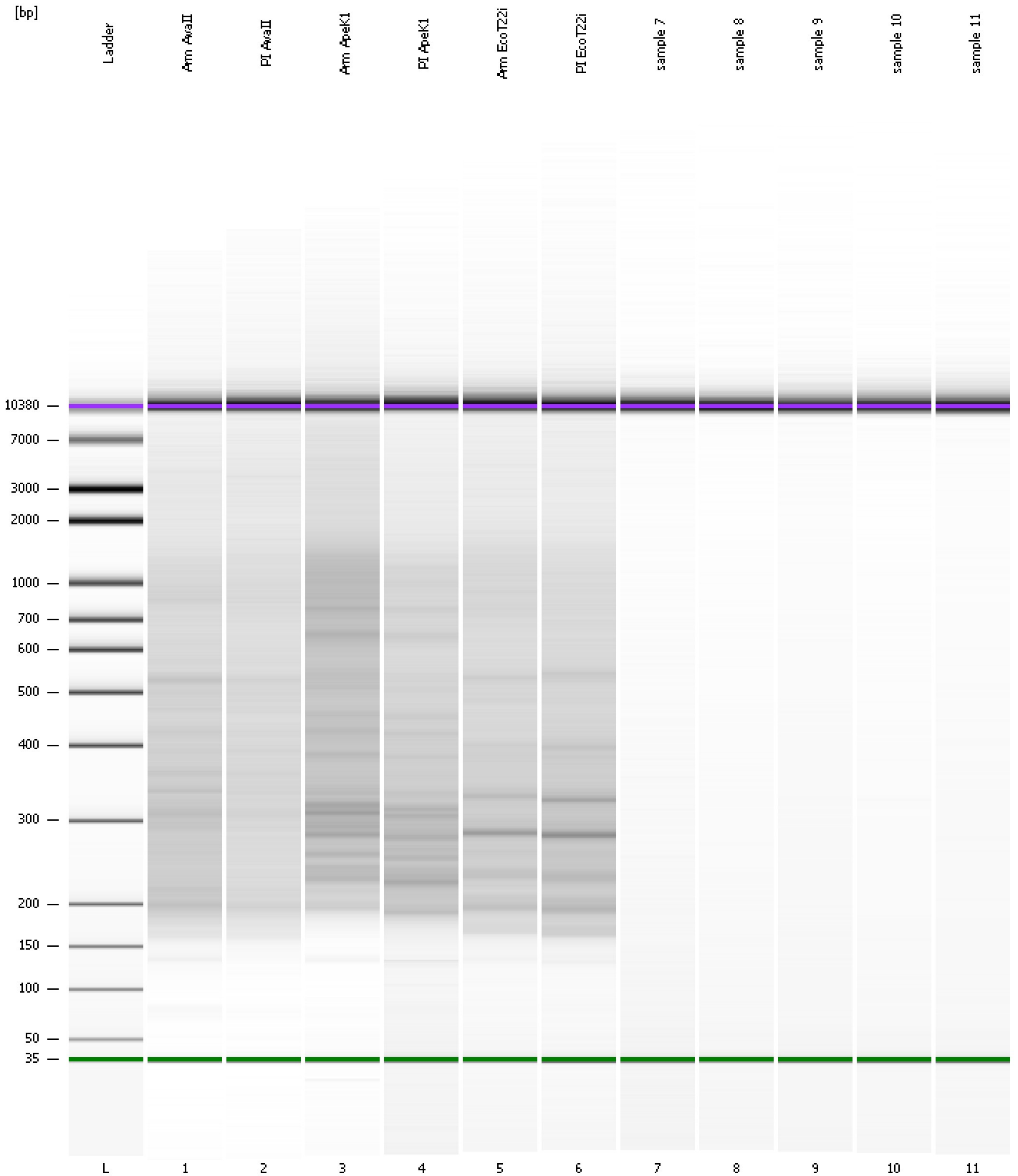
Region table for sample 11 : sample 11

From [bp]	Average Size [bp]	To [bp]	Corr. Area	% of Total	Size distribution in CV [%]	Conc. [pg/μl]	Molarity [pmol/l]	Color
200	396	1,000	0.1	1	12.8	0.09	0.4	Blue

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
Modified: 2/27/2015 11:36:43 AM

Gel Image



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad

Created: 2/27/2015 10:53:05 AM
 Modified: 2/27/2015 11:36:43 AM

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		2/27/2015 11:34:23 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2015-02-27\2015-02-27_002.xad)		Instrument	Run		2/27/2015 10:53:11 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		2/27/2015 10:53:11 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		2/27/2015 10:53:11 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		2/27/2015 10:53:11 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		2/27/2015 10:53:11 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		2/27/2015 10:53:11 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		2/27/2015 10:53:11 AM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1