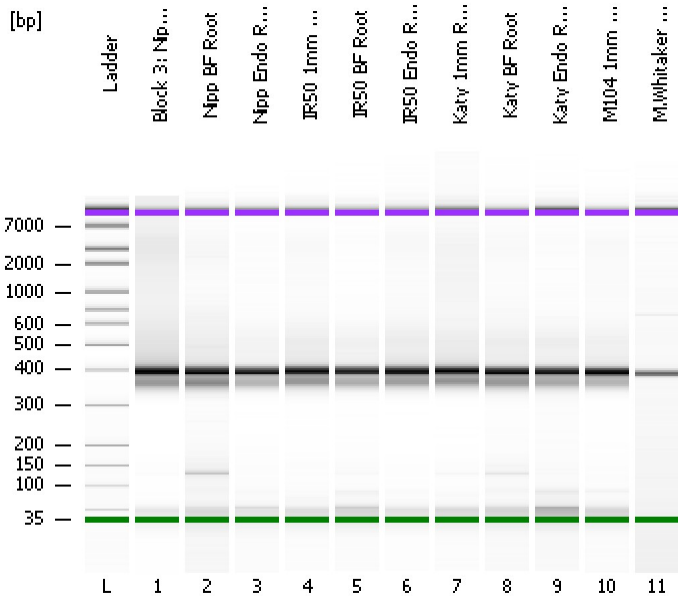


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
Modified: 1/4/2013 4:16:31 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

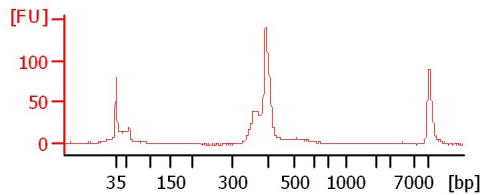
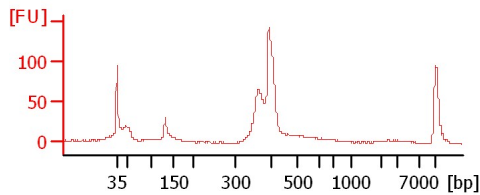
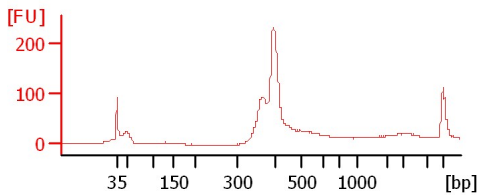
Chip Information:

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

Block 3: Nipp 1mm Root

Nipp BF Root

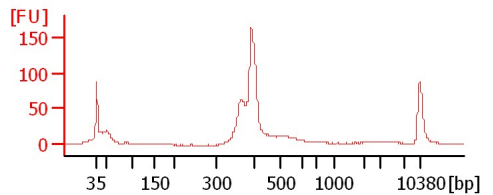
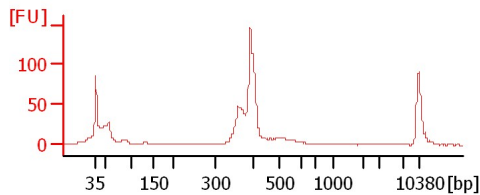
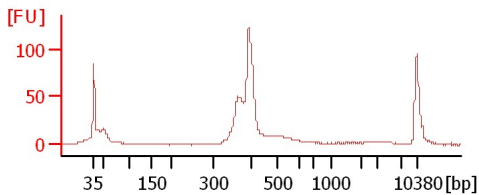
Nipp Endo Root



IR50 1mm Root

IR50 BF Root

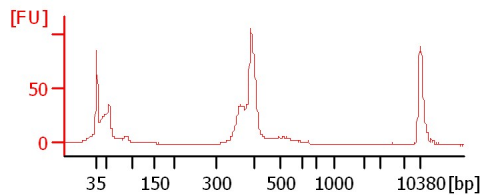
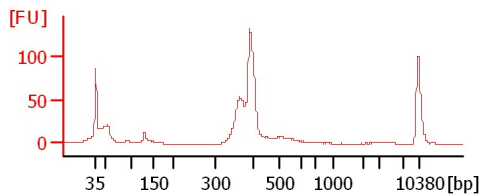
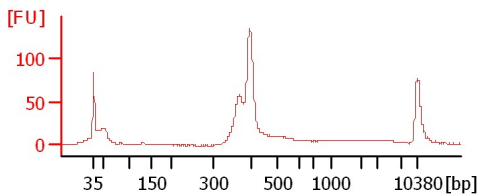
IR50 Endo Root



Katy 1mm Root

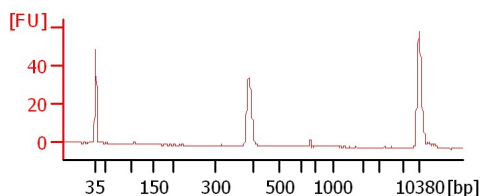
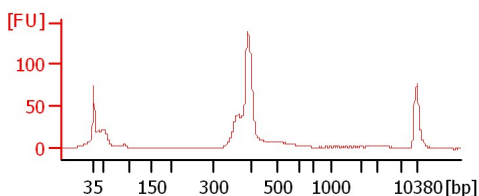
Katy BF Root

Katy Endo Root



M104 1mm Root

M.Whitaker 1/4/13



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
Modified: 1/4/2013 4:16:31 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
Block 3: Nipp 1mm Root		<input type="checkbox"/>	✓			
Nipp BF Root		<input type="checkbox"/>	✓			
Nipp Endo Root		<input type="checkbox"/>	✓			
IR50 1mm Root		<input type="checkbox"/>	✓			
IR50 BF Root		<input type="checkbox"/>	✓			
IR50 Endo Root		<input type="checkbox"/>	✓			
Katy 1mm Root		<input type="checkbox"/>	✓			
Katy BF Root		<input type="checkbox"/>	✓			
Katy Endo Root		<input type="checkbox"/>	✓			
M104 1mm Root		<input type="checkbox"/>	✓			
M.Whitaker 1/4/13		<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\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
Modified: 1/4/2013 4:16:31 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

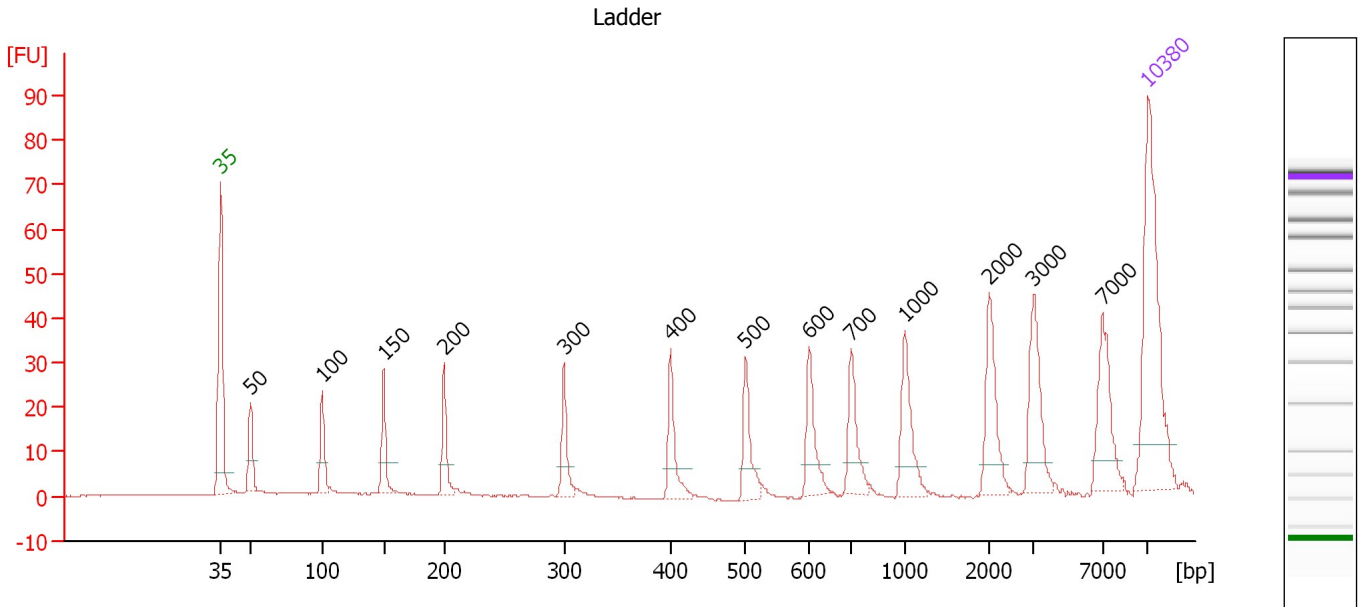
Ladder

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:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
 Modified: 1/4/2013 4:16:31 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

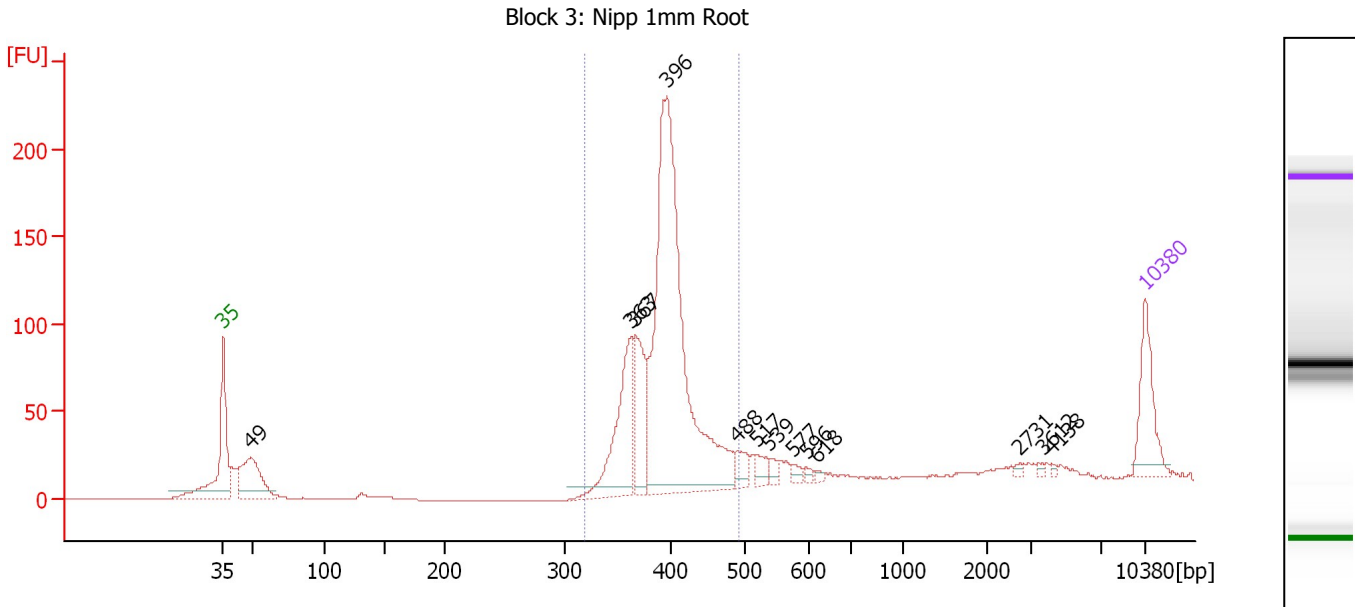
Peak table for Ladder

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	150.00	4,545.5	Ladder Peak
3	100	150.00	2,272.7	Ladder Peak
4	150	150.00	1,515.2	Ladder Peak
5	200	150.00	1,136.4	Ladder Peak
6	300	150.00	757.6	Ladder Peak
7	400	150.00	568.2	Ladder Peak
8	500	150.00	454.5	Ladder Peak
9	600	150.00	378.8	Ladder Peak
10	700	150.00	324.7	Ladder Peak
11	1,000	150.00	227.3	Ladder Peak
12	2,000	150.00	113.6	Ladder Peak
13	3,000	150.00	75.8	Ladder Peak
14	7,000	150.00	32.5	Ladder Peak
15	10,380	75.00	10.9	Upper Marker

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
 Modified: 1/4/2013 4:16:31 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : Block 3: Nipp 1mm Root

Number of peaks found: 13 Corr. Area 1: 1,036.1
 Noise: 0.2

Peak table for sample 1 : Block 3: Nipp 1mm Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	49	157.46	4,868.1	
3	363	197.16	822.4	
4	367	116.88	482.9	
5	396	797.34	3,051.5	
6	488	29.98	93.0	
7	517	20.90	61.3	
8	539	13.29	37.4	
9	577	10.24	26.9	
10	596	6.70	17.0	
11	618	5.27	12.9	
12	2,731	4.01	2.2	
13	3,612	3.69	1.5	
14	4,138	2.99	1.1	
15	10,380	75.00	10.9	Upper Marker

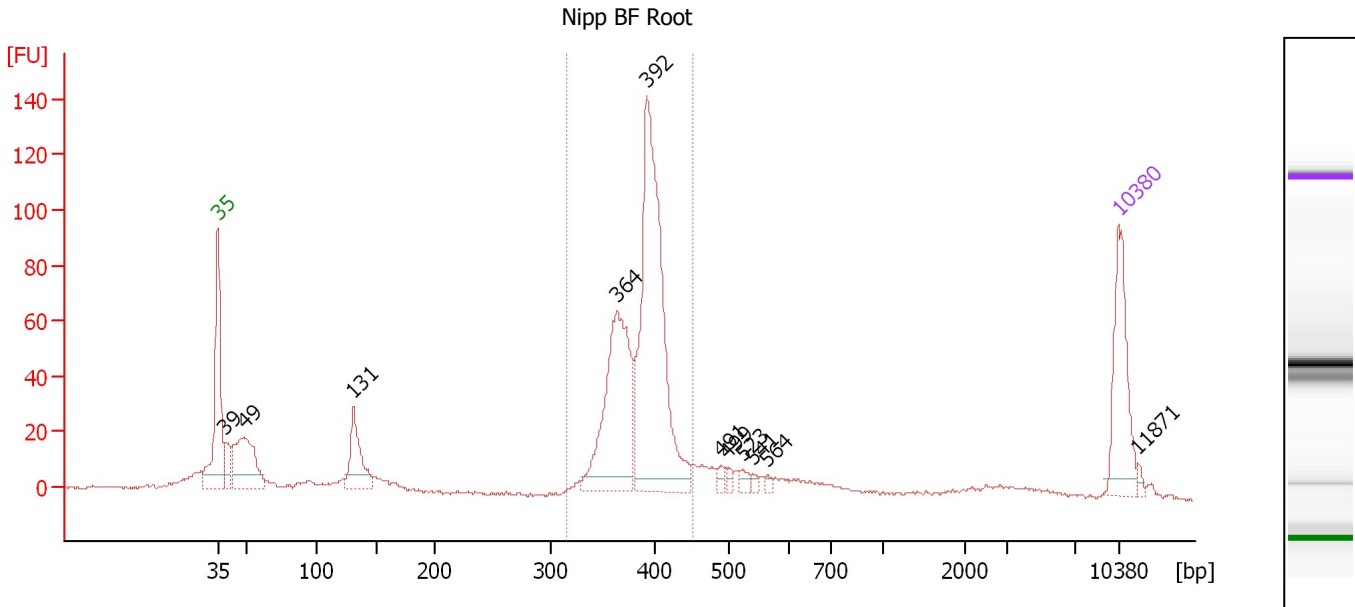
Region table for sample 1 : Block 3: Nipp 1mm Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
319	491	396	4,163.1	1,082.29	1,036.1	75	7.6	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
 Modified: 1/4/2013 4:16:31 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : Nipp BF Root

Number of peaks found: 11 Corr. Area 1: 603.9
 Noise: 0.6

Peak table for sample 2 : Nipp BF Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	39	34.25	1,344.8	
3	49	127.34	3,977.2	
4	131	77.84	902.6	
5	364	221.92	924.8	
6	392	381.11	1,473.4	
7	491	7.69	23.7	
8	499	6.22	18.9	
9	523	8.15	23.6	
10	541	4.99	14.0	
11	564	3.55	9.5	
12	10,380	75.00	10.9	Upper Marker
13	11,871	0.00	0.0	

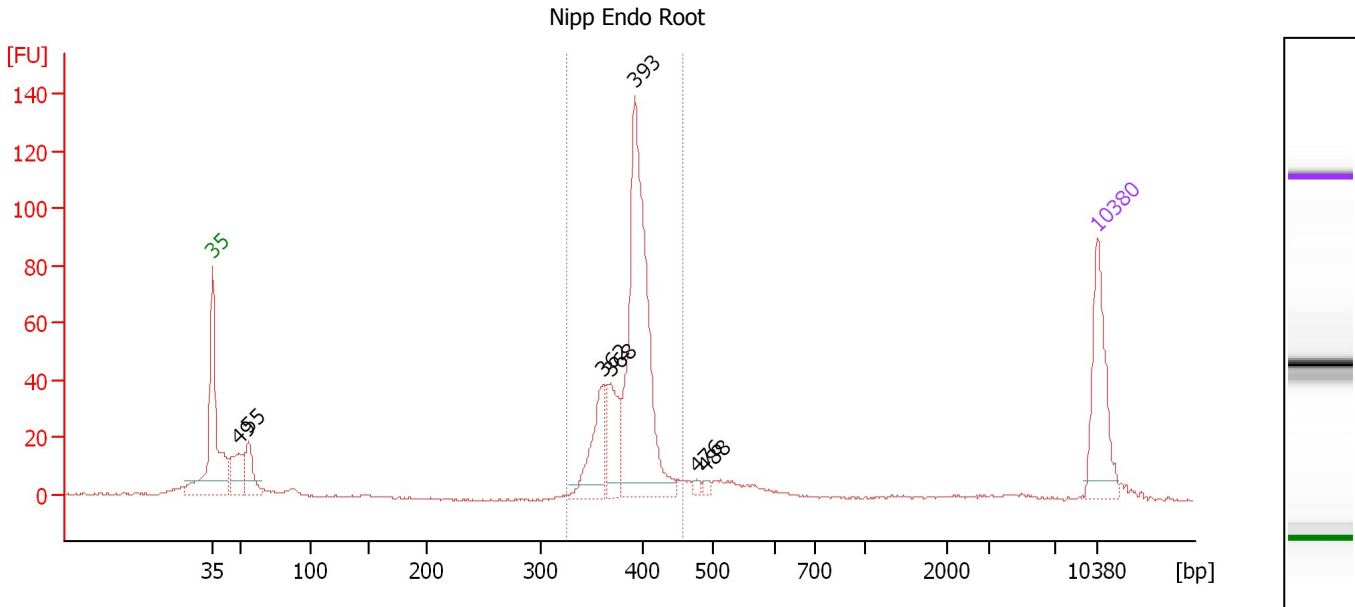
Region table for sample 2 : Nipp BF Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
314	453	387	2,425.5	617.26	603.9	60	6.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
 Modified: 1/4/2013 4:16:31 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : Nipp Endo Root

Number of peaks found: 7 Corr. Area 1: 450.4
 Noise: 0.3

Peak table for sample 3 : Nipp Endo Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	49	56.09	1,733.1	
3	55	52.71	1,444.9	
4	362	80.91	338.5	
5	368	62.13	255.5	
6	393	339.46	1,308.4	
7	476	4.18	13.3	
8	488	4.48	13.9	
9	10,380	75.00	10.9	Upper Marker

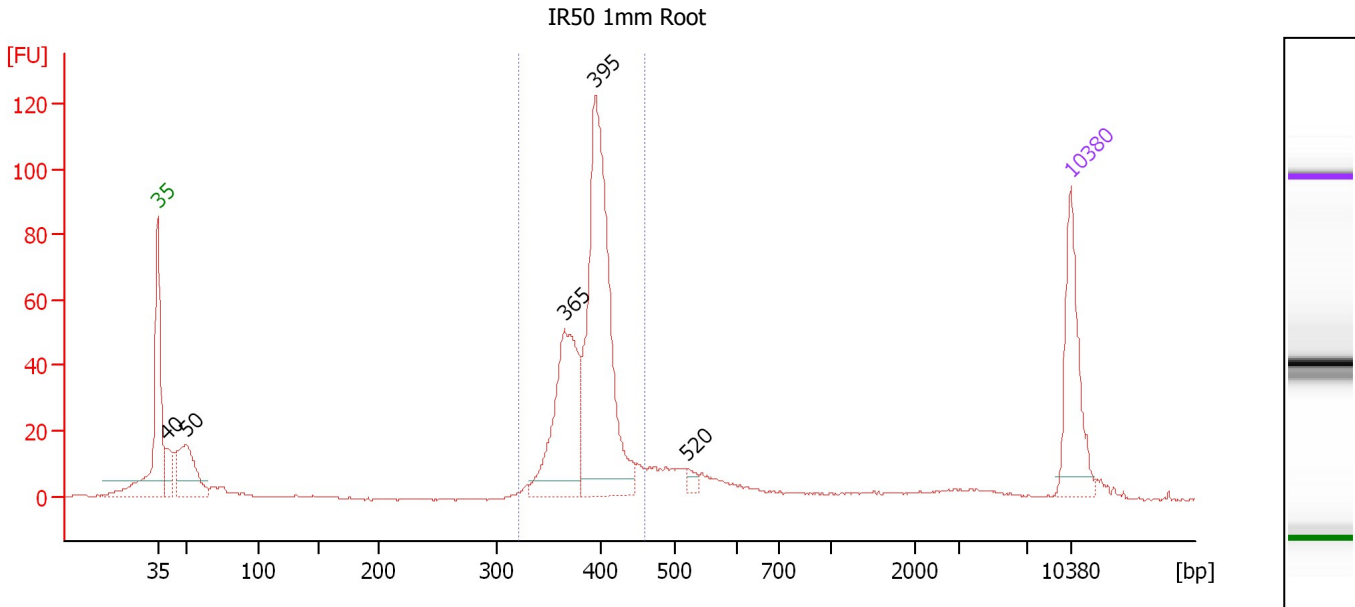
Region table for sample 3 : Nipp Endo Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
325	456	389	1,912.2	490.09	450.4	75	5.4	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
 Modified: 1/4/2013 4:16:31 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : IR50 1mm Root

Number of peaks found: 5 Corr. Area 1: 494.5
 Noise: 0.3

Peak table for sample 4 : IR50 1mm Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	40	37.41	1,421.6	
3	50	93.51	2,855.3	
4	365	175.06	725.9	
5	395	333.81	1,281.0	
6	520	8.25	24.0	
7	10,380	75.00	10.9	Upper Marker

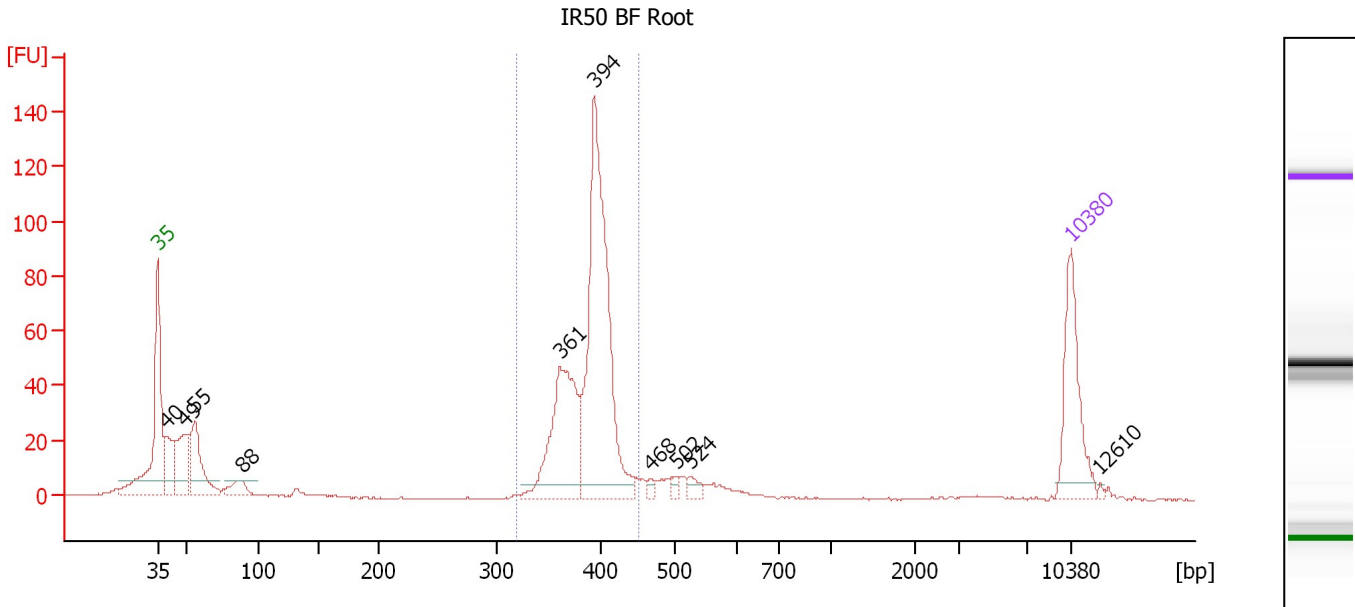
Region table for sample 4 : IR50 1mm Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
321	461	390	2,037.3	523.43	494.5	69	6.0	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
 Modified: 1/4/2013 4:16:31 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : IR50 BF Root

Number of peaks found: 10 Corr. Area 1: 489.0
 Noise: 0.2

Peak table for sample 5 : IR50 BF Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	40	55.09	2,104.6	
3	49	78.11	2,416.7	
4	55	91.56	2,502.9	
5	88	25.22	432.0	
6	361	165.96	696.3	
7	394	335.77	1,290.3	
8	468	5.37	17.4	
9	502	6.35	19.2	
10	524	10.34	29.9	
11	10,380	75.00	10.9	Upper Marker
12	12,610	0.00	0.0	

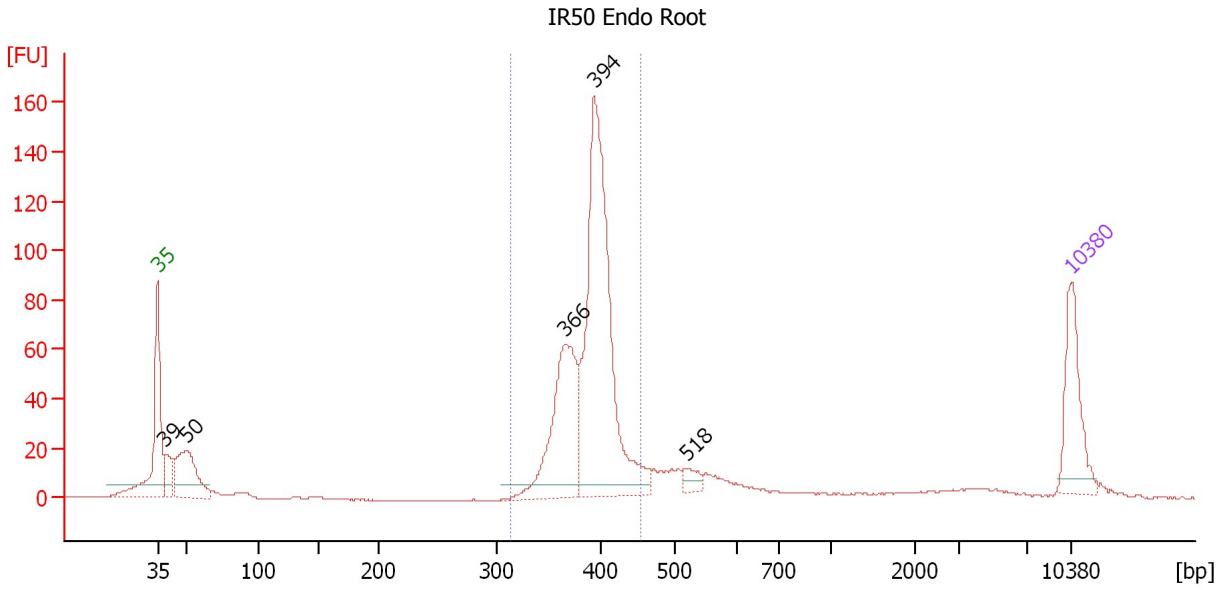
Region table for sample 5 : IR50 BF Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
321	452	389	1,934.2	495.90	489.0	65	5.5	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
 Modified: 1/4/2013 4:16:31 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : IR50 Endo Root

Number of peaks found: 5 Corr. Area 1: 639.5
 Noise: 0.2

Peak table for sample 6 : IR50 Endo Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	39	37.97	1,481.8	
3	50	125.97	3,839.3	
4	366	208.77	863.5	
5	394	460.88	1,773.2	
6	518	16.19	47.4	
7	10,380	75.00	10.9	Upper Marker

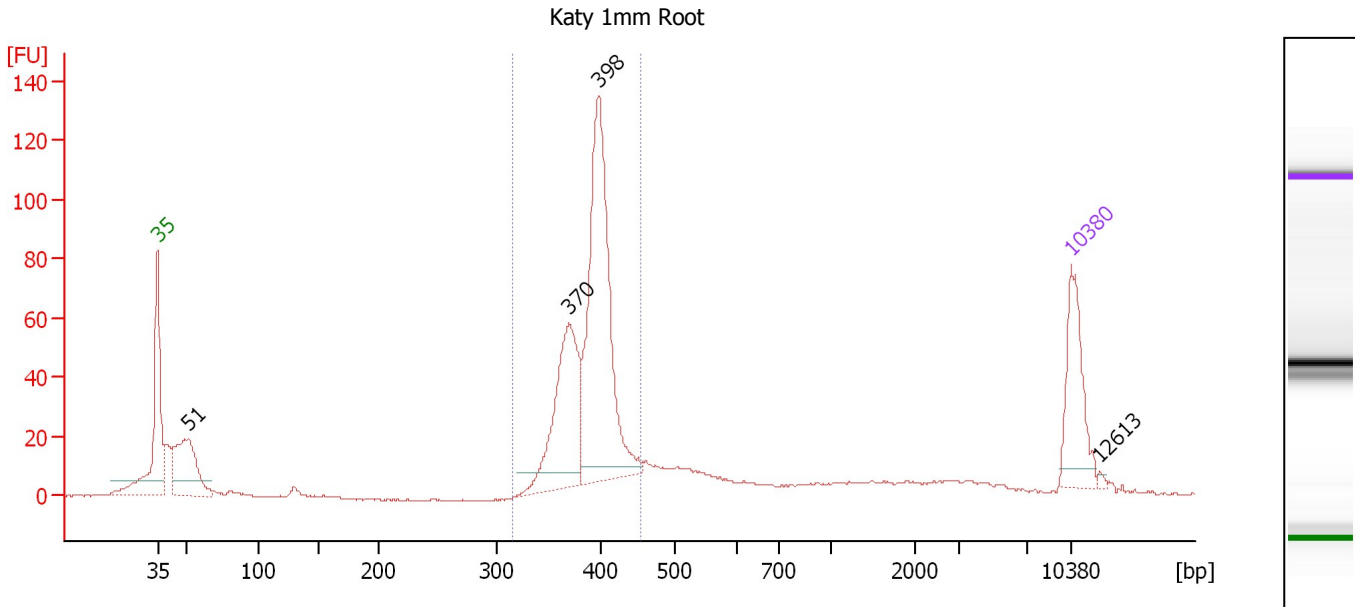
Region table for sample 6 : IR50 Endo Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
314	454	390	2,589.5	664.81	639.5	68	5.8	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
 Modified: 1/4/2013 4:16:31 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : Katy 1mm Root

Number of peaks found: 4 Corr. Area 1: 531.5
 Noise: 0.2

Peak table for sample 7 : Katy 1mm Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	51	145.38	4,350.4	
3	370	186.60	764.7	
4	398	356.87	1,358.4	
5	10,380	75.00	10.9	Upper Marker
6	12,613	0.00	0.0	

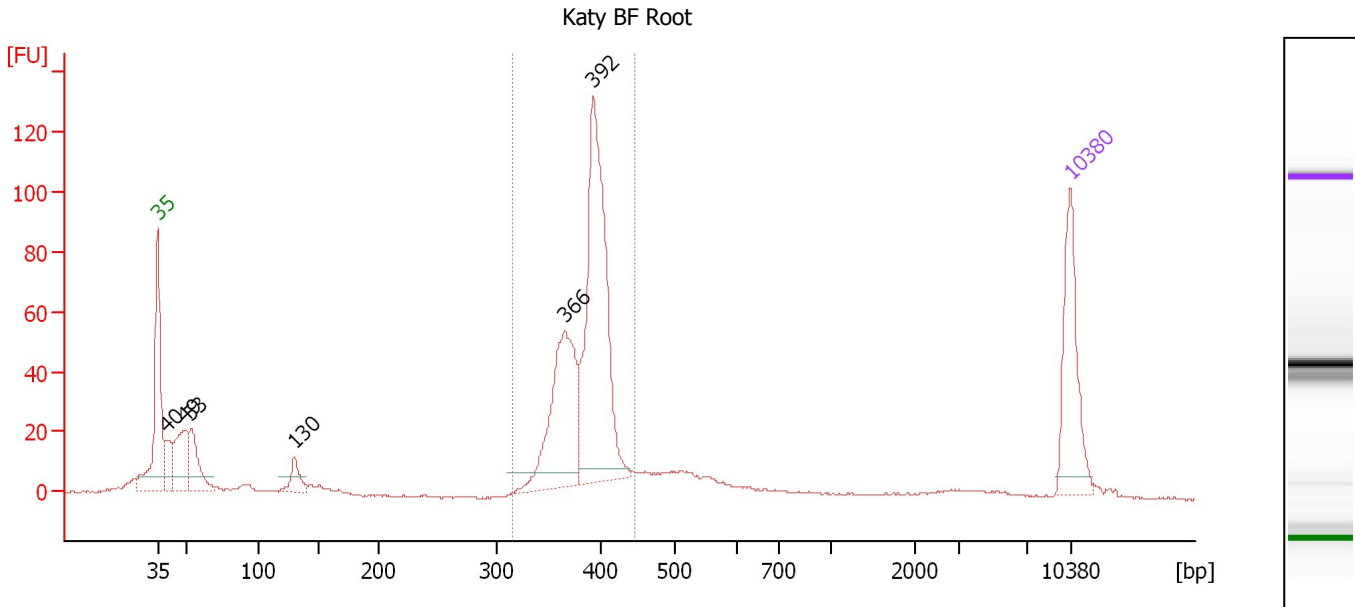
Region table for sample 7 : Katy 1mm Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
316	455	391	2,334.5	600.44	531.5	63	5.9	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
 Modified: 1/4/2013 4:16:31 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : Katy BF Root

Number of peaks found: 6 Corr. Area 1: 509.1
 Noise: 0.3

Peak table for sample 8 : Katy BF Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	40	35.52	1,353.7	
3	49	72.59	2,259.2	
4	53	58.77	1,676.6	
5	130	25.14	292.1	
6	366	166.34	689.5	
7	392	290.11	1,120.7	
8	10,380	75.00	10.9	Upper Marker

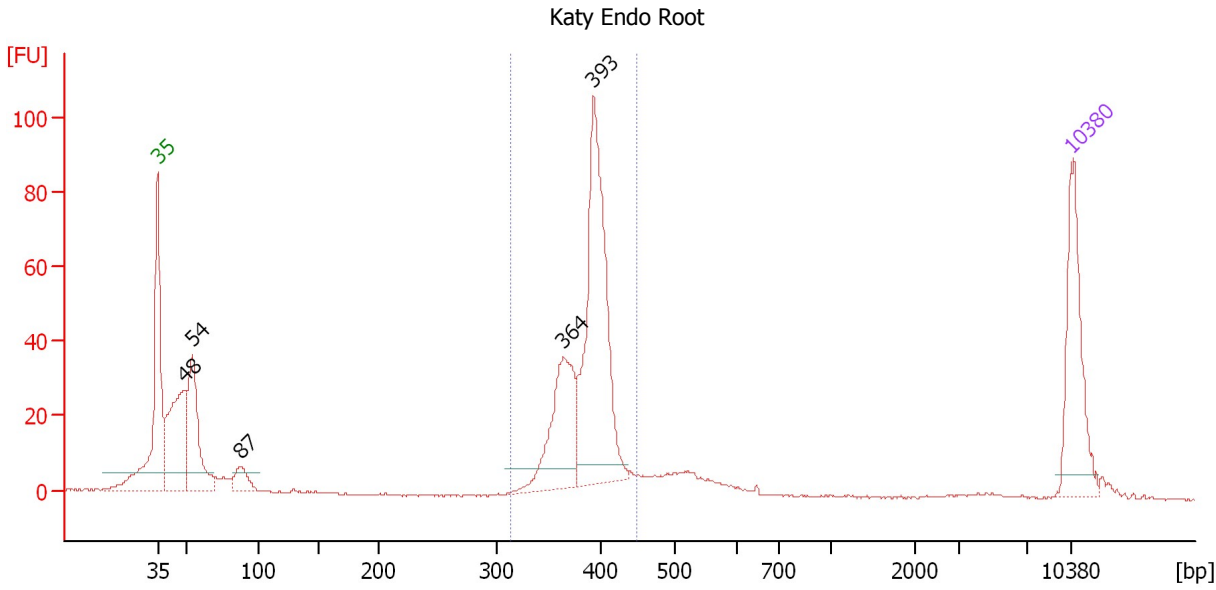
Region table for sample 8 : Katy BF Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
316	447	386	1,964.3	499.31	509.1	62	5.7	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
 Modified: 1/4/2013 4:16:31 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : Katy Endo Root

Number of peaks found: 5 Corr. Area 1: 372.8
 Noise: 0.2

Peak table for sample 9 : Katy Endo Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	48	140.51	4,392.2	
3	54	115.27	3,253.6	
4	87	25.25	438.7	
5	364	109.38	455.1	
6	393	241.12	929.1	
7	10,380	75.00	10.9	Upper Marker

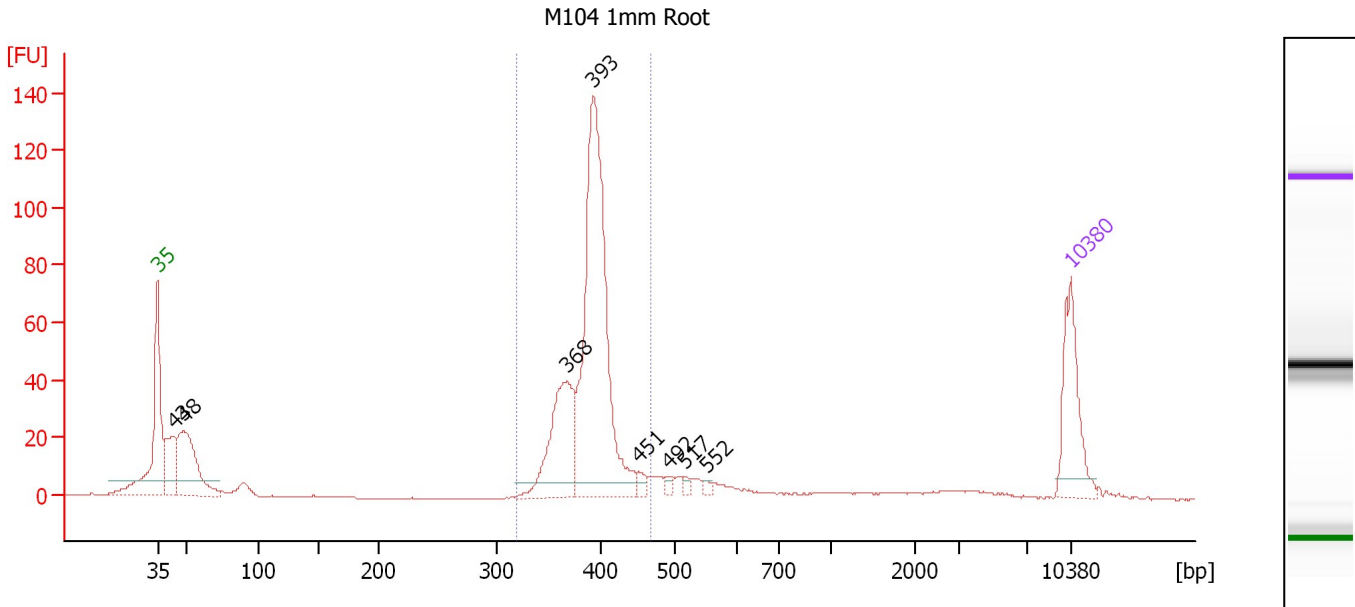
Region table for sample 9 : Katy Endo Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
315	450	387	1,497.6	382.19	372.8	57	5.6	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
 Modified: 1/4/2013 4:16:31 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : M104 1mm Root

Number of peaks found: 8 Corr. Area 1: 490.4
 Noise: 0.2

Peak table for sample 10 : M104 1mm Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	43	77.20	2,713.6	
3	48	157.28	4,943.4	
4	368	149.52	615.7	
5	393	428.45	1,653.6	
6	451	9.04	30.4	
7	492	5.67	17.5	
8	517	5.23	15.3	
9	552	4.56	12.5	
10	10,380	75.00	10.9	Upper Marker

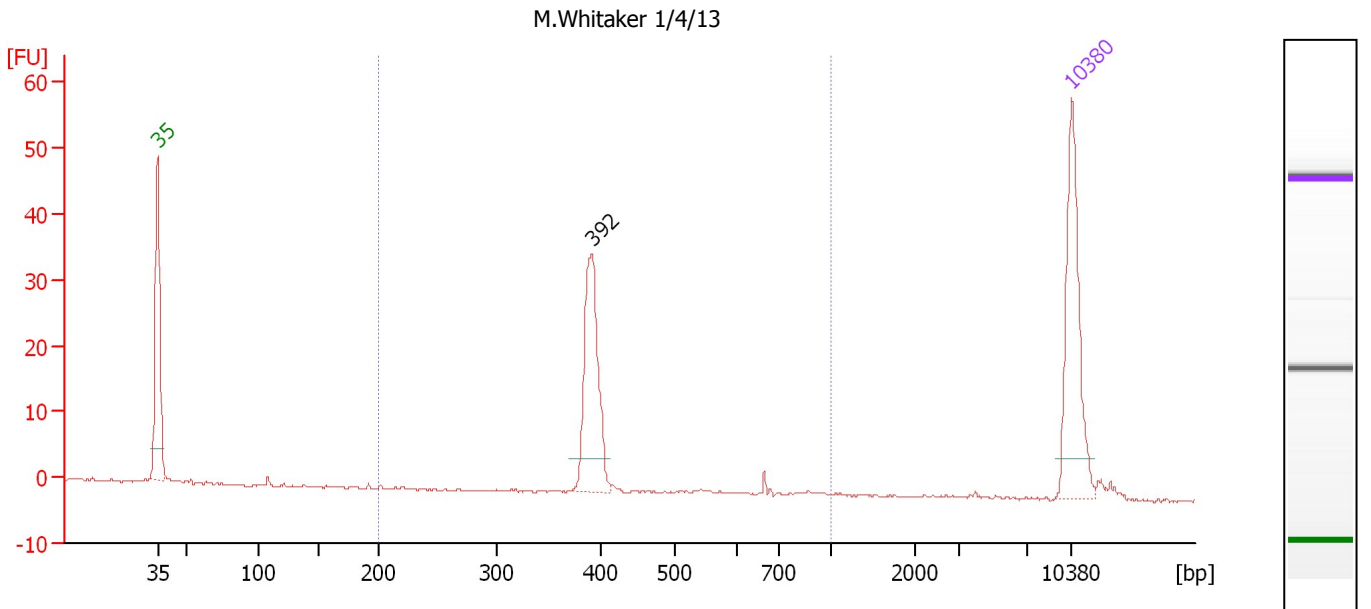
Region table for sample 10 : M104 1mm Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
319	469	390	2,307.9	593.19	490.4	65	5.9	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
 Modified: 1/4/2013 4:16:31 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : M. Whitaker 1/4/13

Number of peaks found: 1 Corr. Area 1: 61.5
 Noise: 0.2

Peak table for sample 11 : M. Whitaker 1/4/13

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	392	104.54	404.4	
3	10,380	75.00	10.9	Upper Marker

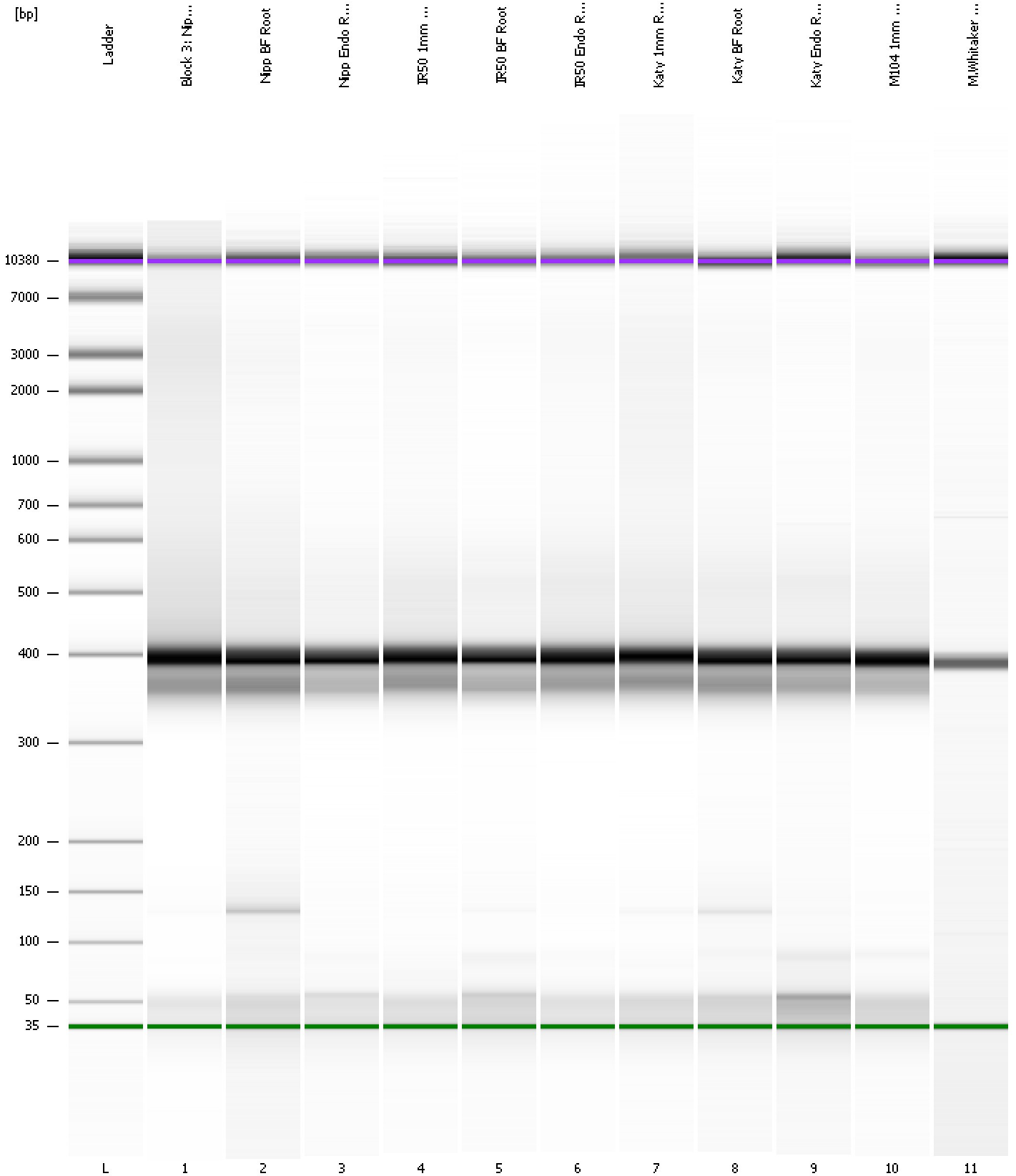
Region table for sample 11 : M. Whitaker 1/4/13

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	1,000	404	408.4	106.79	61.5	88	16.4	Blue

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
Modified: 1/4/2013 4:16:31 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad

Created: 1/4/2013 3:34:20 PM
 Modified: 1/4/2013 4:16:31 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		1/4/2013 4:15:39 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2013-01-04\2013-01-04_005.xad)		Instrument	Run		1/4/2013 3:34:26 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		1/4/2013 3:34:26 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		1/4/2013 3:34:26 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		1/4/2013 3:34:26 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		1/4/2013 3:34:26 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		1/4/2013 3:34:26 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		1/4/2013 3:34:26 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1