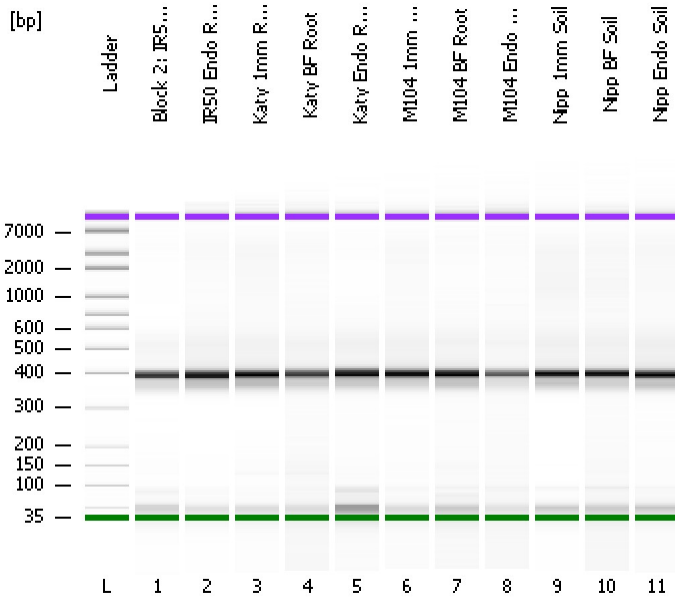


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
Modified: 1/3/2013 3:54:57 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

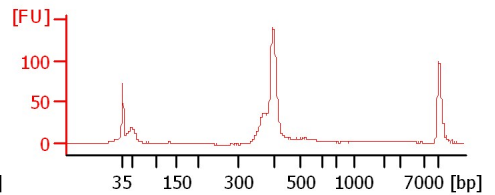
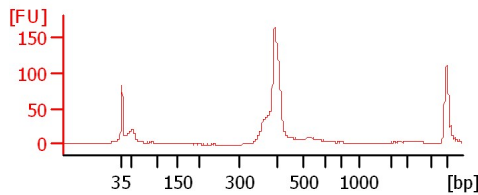
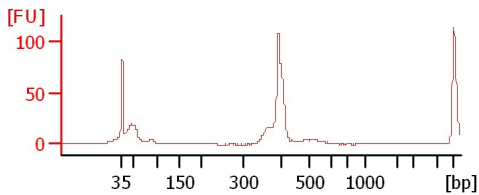
Chip Information:

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

Block 2: IR50 BF Root

IR50 Endo Root

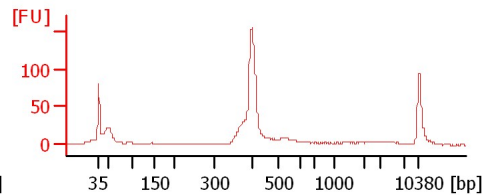
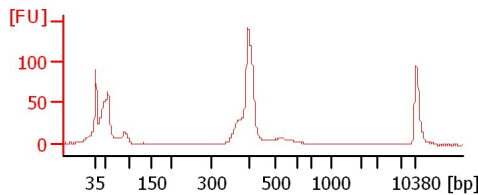
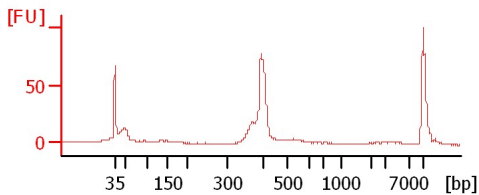
Katy 1mm Root



Katy BF Root

Katy Endo Root

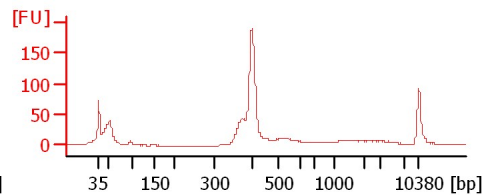
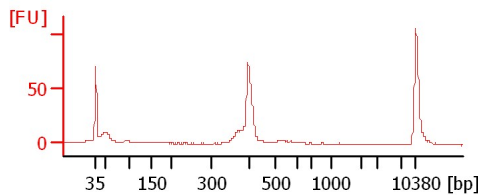
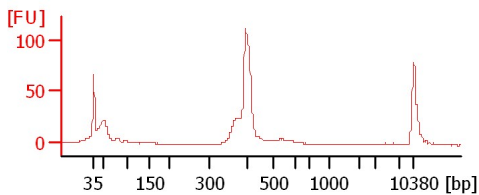
M104 1mm Root



M104 BF Root

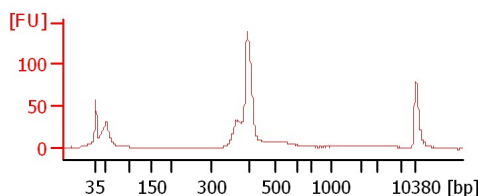
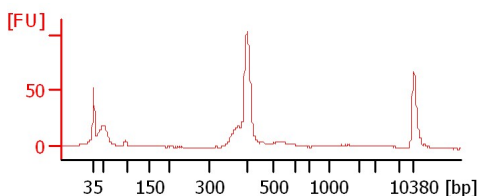
M104 Endo Root

Nipp 1mm Soil



Nipp BF Soil

Nipp Endo Soil



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
Modified: 1/3/2013 3:54:57 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
Block 2: 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"/>	✓			
M104 BF Root		<input type="checkbox"/>	✓			
M104 Endo Root		<input type="checkbox"/>	✓			
Nipp 1mm Soil		<input type="checkbox"/>	✓			
Nipp BF Soil		<input type="checkbox"/>	✓			
Nipp Endo Soil		<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\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
Modified: 1/3/2013 3:54:57 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

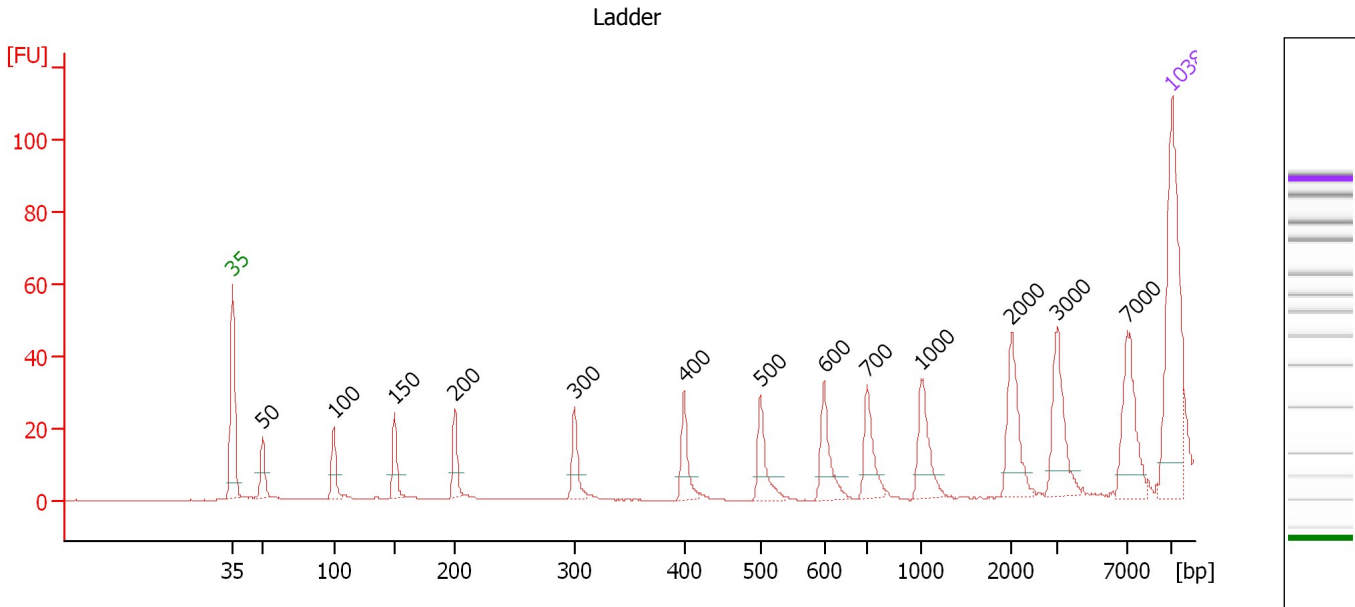
Ladder

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\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
 Modified: 1/3/2013 3:54:57 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.1

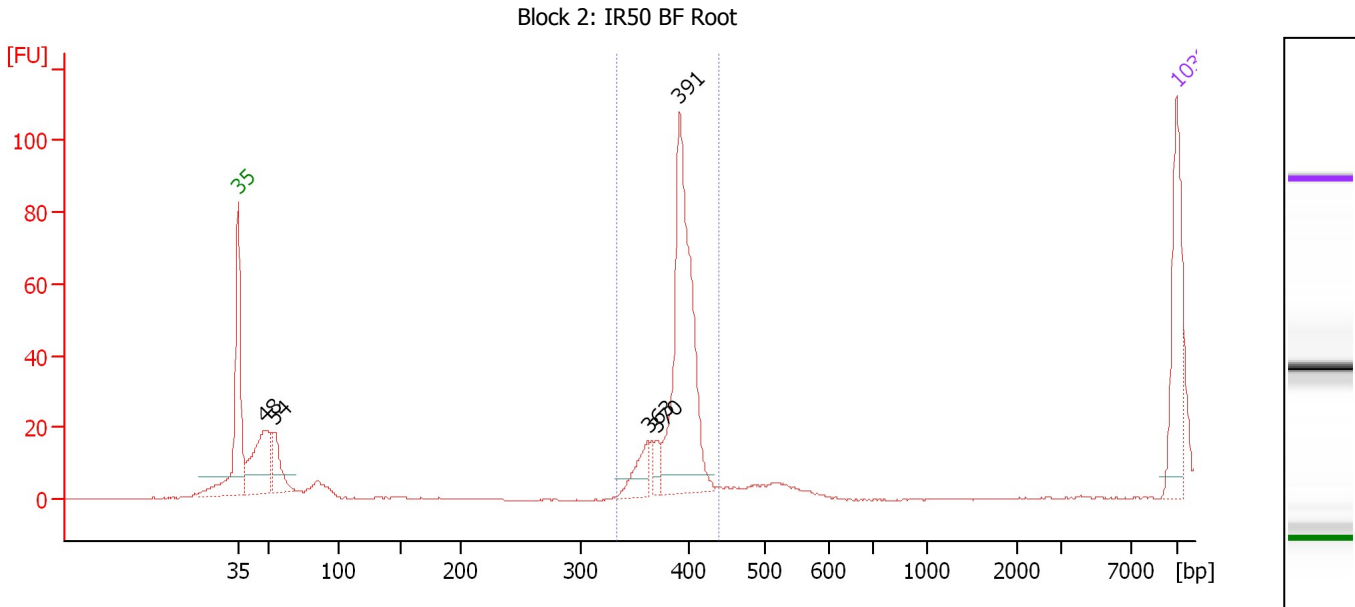
Peak table for Ladder

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\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
 Modified: 1/3/2013 3:54:57 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : Block 2: IR50 BF Root

Number of peaks found: 5 Corr. Area 1: 165.9
 Noise: 0.1

Peak table for sample 1 : Block 2: IR50 BF Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	48	126.57	3,962.3	
3	54	55.30	1,547.2	
4	363	37.50	156.7	
5	370	20.03	81.9	
6	391	293.92	1,139.1	
7	10,380	75.00	10.9	Upper Marker

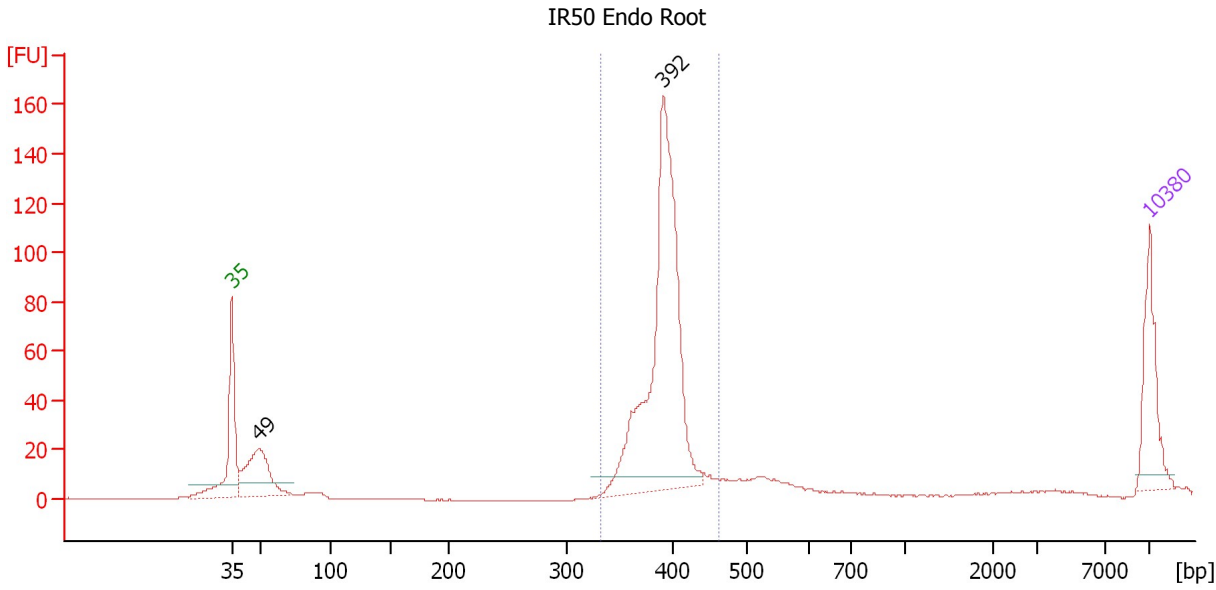
Region table for sample 1 : Block 2: IR50 BF Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
334	439	394	855.6	222.66	165.9	66	2.2	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
 Modified: 1/3/2013 3:54:57 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : IR50 Endo Root

Number of peaks found: 2 Corr. Area 1: 517.0
 Noise: 0.1

Peak table for sample 2 : IR50 Endo Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	49	151.73	4,720.3	
3	392	536.50	2,075.6	
4	10,380	75.00	10.9	Upper Marker

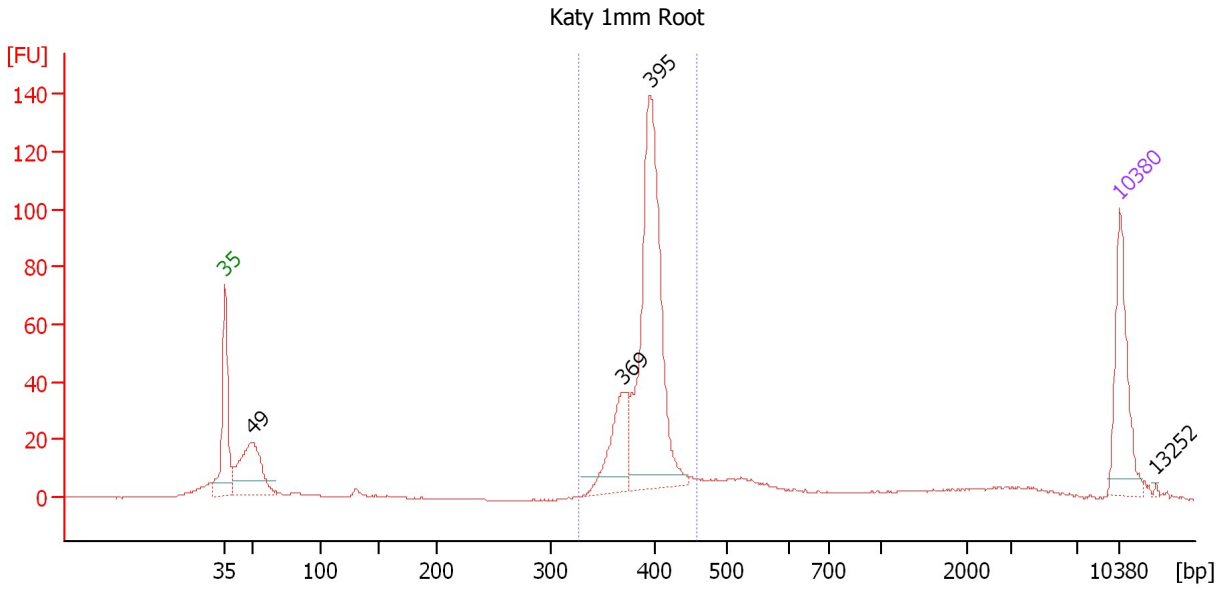
Region table for sample 2 : IR50 Endo Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
333	462	392	2,170.9	560.47	517.0	78	4.9	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
 Modified: 1/3/2013 3:54:57 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : Katy 1mm Root

Number of peaks found: 4 Corr. Area 1: 452.7
 Noise: 0.2

Peak table for sample 3 : Katy 1mm Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	49	142.04	4,387.2	
3	369	92.76	380.7	
4	395	364.71	1,397.8	
5	10,380	75.00	10.9	Upper Marker
6	13,252	0.00	0.0	

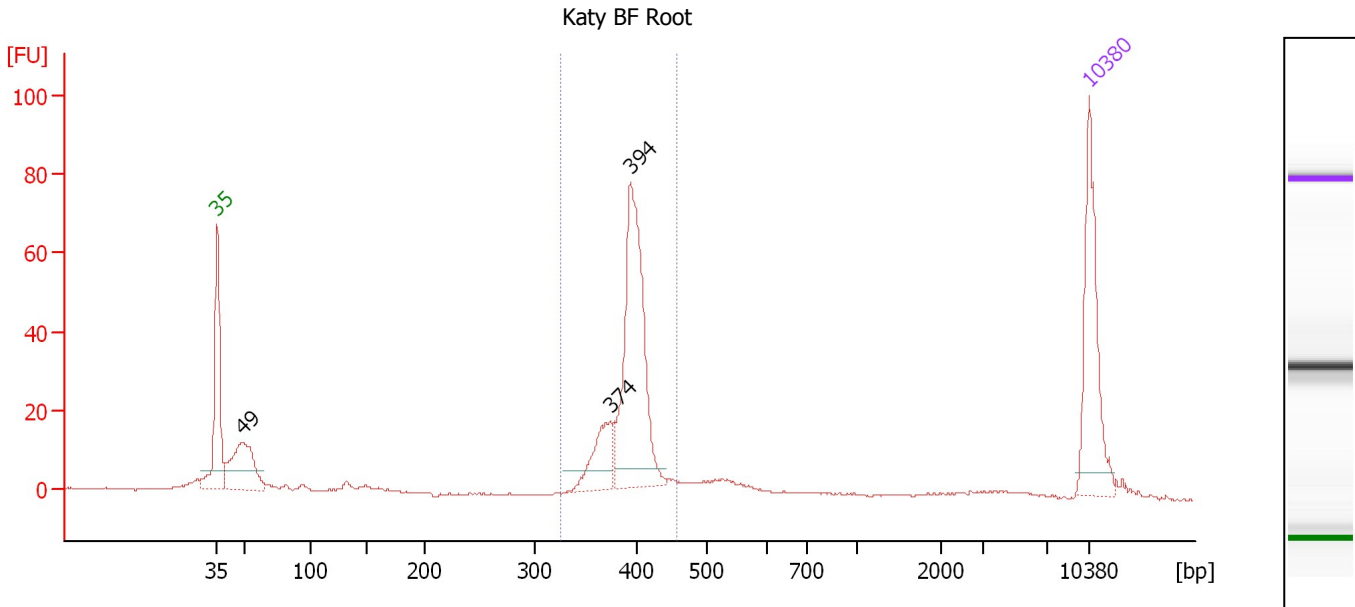
Region table for sample 3 : Katy 1mm Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
328	459	393	1,936.1	500.64	452.7	64	5.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
 Modified: 1/3/2013 3:54:57 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : Katy BF Root

Number of peaks found: 3 Corr. Area 1: 257.9
 Noise: 0.2

Peak table for sample 4 : Katy BF Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	49	93.94	2,931.1	
3	374	47.23	191.4	
4	394	199.02	764.4	
5	10,380	75.00	10.9	Upper Marker

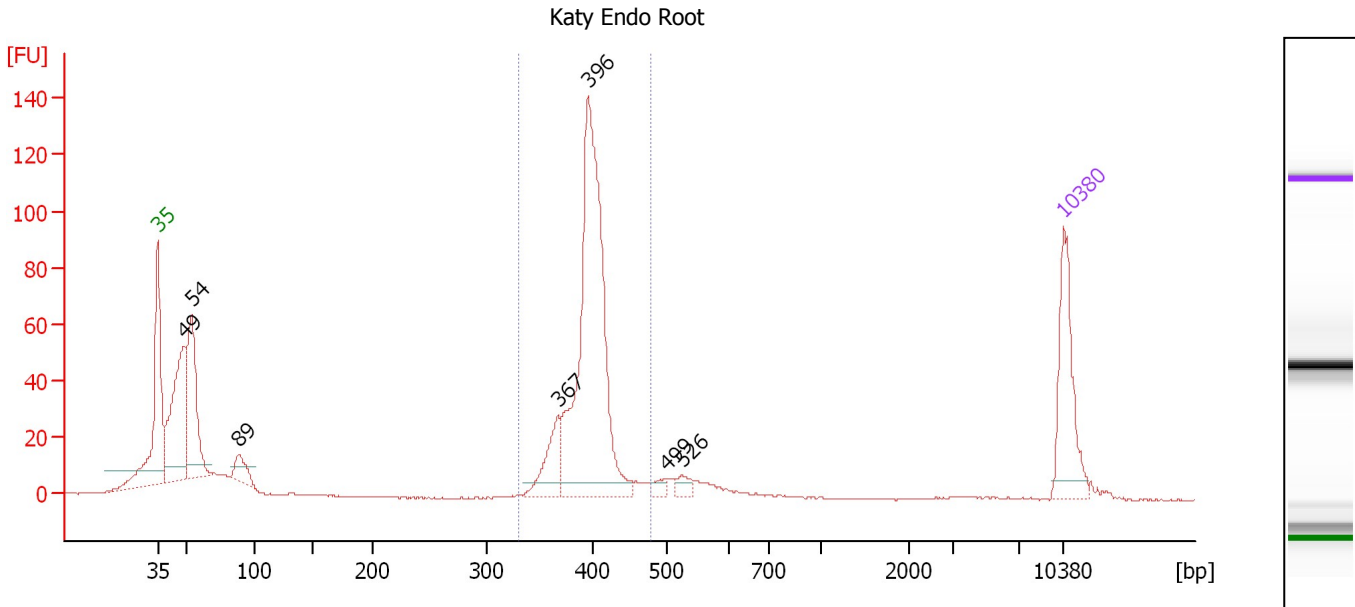
Region table for sample 4 : Katy BF Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
325	457	394	1,041.1	270.11	257.9	61	5.0	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
 Modified: 1/3/2013 3:54:57 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : Katy Endo Root

Number of peaks found: 7 Corr. Area 1: 459.8
 Noise: 0.2

Peak table for sample 5 : Katy Endo Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	49	206.85	6,406.8	
3	54	159.15	4,475.1	
4	89	31.35	535.0	
5	367	53.04	219.0	
6	396	401.22	1,537.0	
7	499	8.51	25.8	
8	526	10.97	31.6	
9	10,380	75.00	10.9	Upper Marker

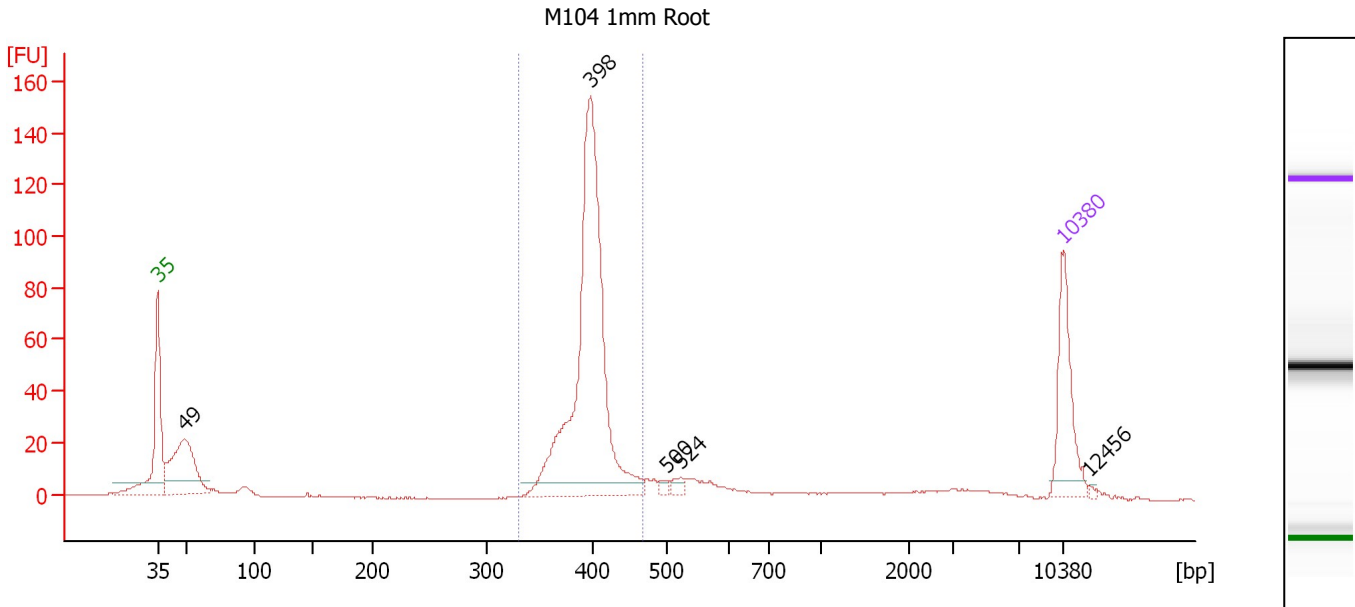
Region table for sample 5 : Katy Endo Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
331	479	397	1,774.3	464.32	459.8	51	5.4	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
 Modified: 1/3/2013 3:54:57 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : M104 1mm Root

Number of peaks found: 5 Corr. Area 1: 470.1
 Noise: 0.1

Peak table for sample 6 : M104 1mm Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	49	166.05	5,153.2	
3	398	512.23	1,948.9	
4	500	6.54	19.8	
5	524	8.82	25.5	
6	10,380	75.00	10.9	Upper Marker
7	12,456	0.00	0.0	

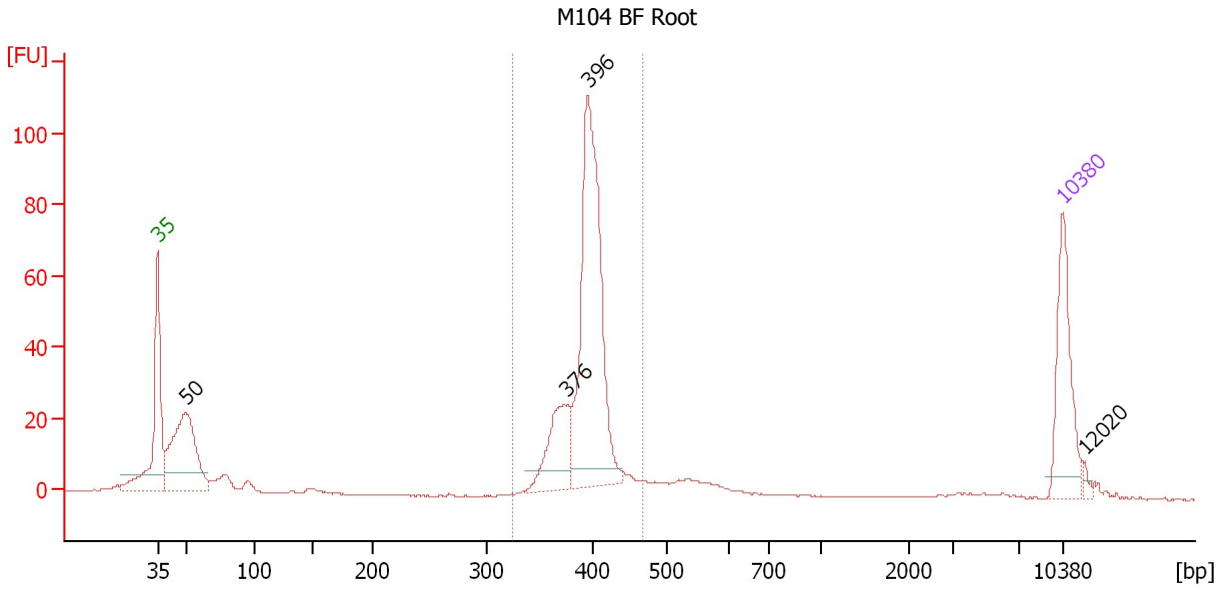
Region table for sample 6 : M104 1mm Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
330	468	398	1,973.6	516.77	470.1	67	5.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
 Modified: 1/3/2013 3:54:57 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : M104 BF Root

Number of peaks found: 4 Corr. Area 1: 356.4
 Noise: 0.1

Peak table for sample 7 : M104 BF Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	197.85	6,048.5	
3	376	82.63	332.8	
4	396	319.88	1,225.3	
5	10,380	75.00	10.9	Upper Marker
6	12,020	0.00	0.0	

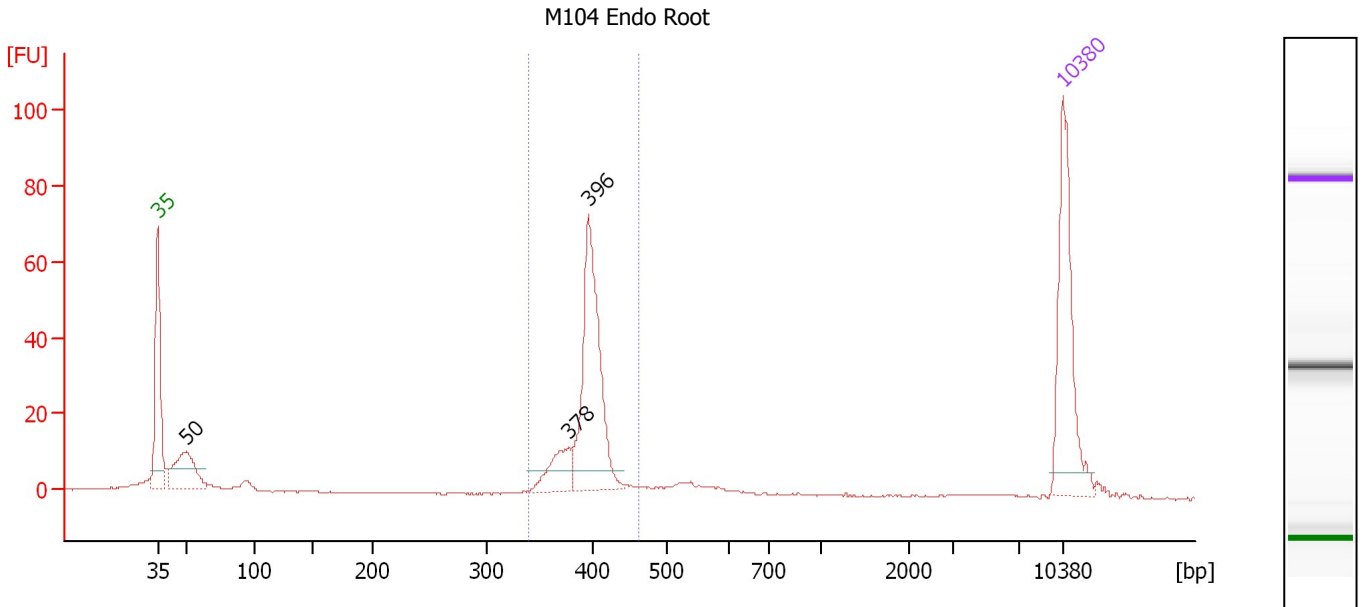
Region table for sample 7 : M104 BF Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
325	467	395	1,698.9	442.33	356.4	64	5.2	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
 Modified: 1/3/2013 3:54:57 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : M104 Endo Root

Number of peaks found: 3 Corr. Area 1: 189.5
 Noise: 0.1

Peak table for sample 8 : M104 Endo Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	57.37	1,750.7	
3	378	29.32	117.6	
4	396	136.89	523.8	
5	10,380	75.00	10.9	Upper Marker

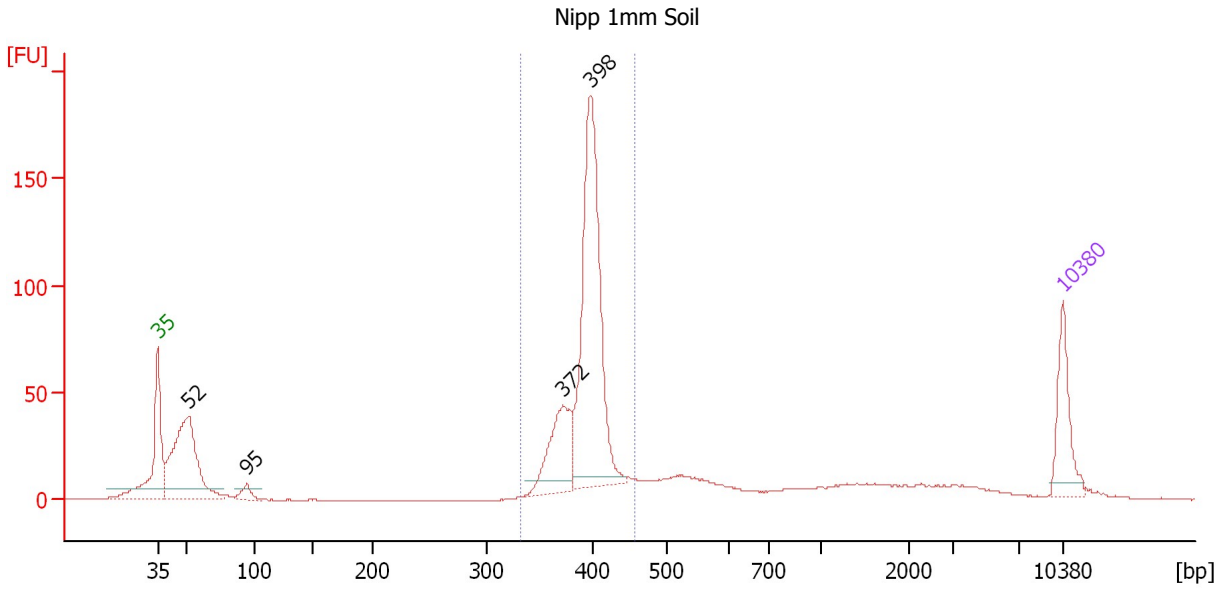
Region table for sample 8 : M104 Endo Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
339	463	396	688.6	179.61	189.5	62	4.7	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
 Modified: 1/3/2013 3:54:57 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : Nipp 1mm Soil

Number of peaks found: 4 Corr. Area 1: 558.8
 Noise: 0.2

Peak table for sample 9 : Nipp 1mm Soil

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	52	352.24	10,301.7	
3	95	24.47	392.4	
4	372	137.52	560.4	
5	398	497.59	1,893.9	
6	10,380	75.00	10.9	Upper Marker

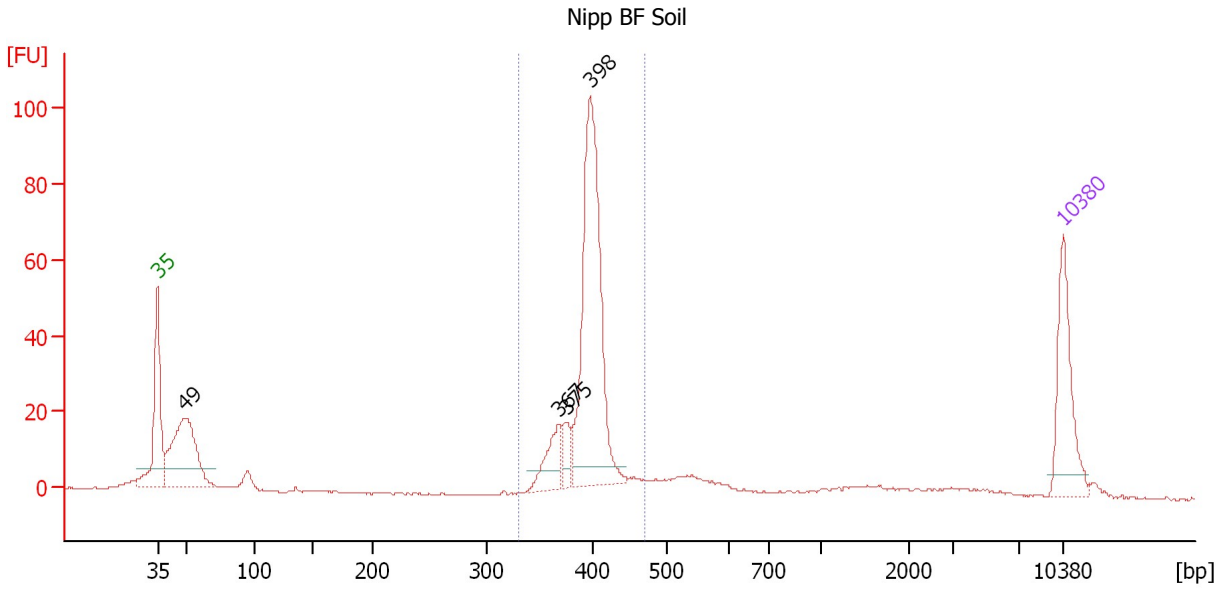
Region table for sample 9 : Nipp 1mm Soil

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
332	457	394	2,744.6	713.23	558.8	56	5.0	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
 Modified: 1/3/2013 3:54:57 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : Nipp BF Soil

Number of peaks found: 4 Corr. Area 1: 291.8
 Noise: 0.2

Peak table for sample 10 : Nipp BF Soil

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	49	190.38	5,852.9	
3	367	45.94	189.5	
4	375	23.46	94.9	
5	398	315.23	1,200.4	
6	10,380	75.00	10.9	Upper Marker

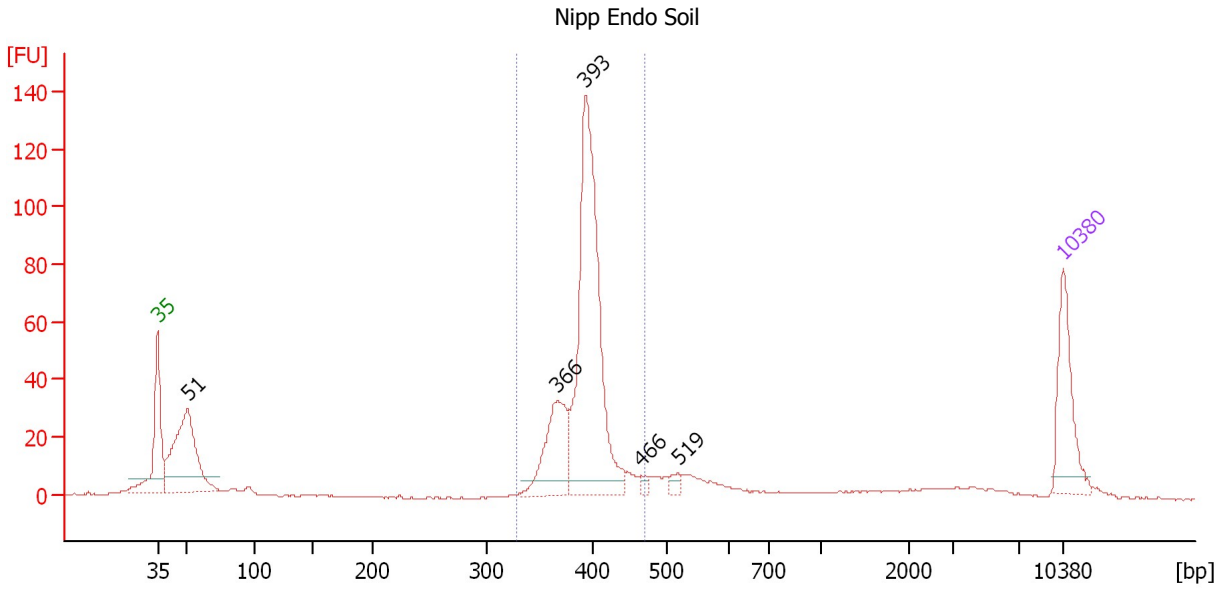
Region table for sample 10 : Nipp BF Soil

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
331	470	396	1,631.3	426.03	291.8	60	5.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
 Modified: 1/3/2013 3:54:57 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : Nipp Endo Soil

Number of peaks found: 5 Corr. Area 1: 441.6
 Noise: 0.2

Peak table for sample 11 : Nipp Endo Soil

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	51	228.62	6,803.7	
3	366	117.37	485.4	
4	393	413.44	1,593.3	
5	466	6.96	22.6	
6	519	9.32	27.2	
7	10,380	75.00	10.9	Upper Marker

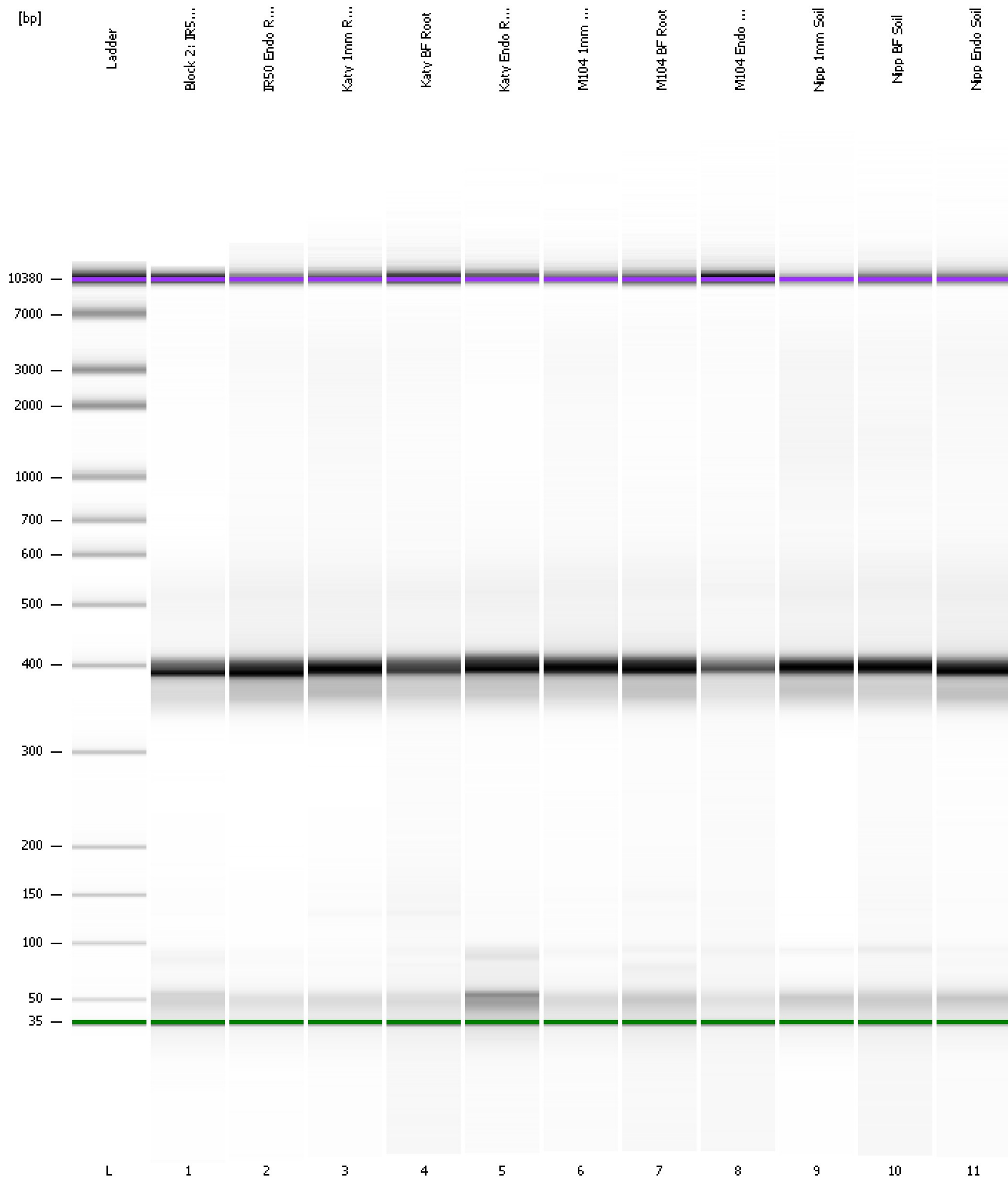
Region table for sample 11 : Nipp Endo Soil

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
329	472	394	2,149.2	557.44	441.6	61	5.7	Blue

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
Modified: 1/3/2013 3:54:57 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_004.xad

Created: 1/3/2013 3:13:07 PM
 Modified: 1/3/2013 3:54:57 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		1/3/2013 3:54:26 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2013-01-03\2013-01-03_004.xad)		Instrument	Run		1/3/2013 3:13:13 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		1/3/2013 3:13:13 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		1/3/2013 3:13:13 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		1/3/2013 3:13:13 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		1/3/2013 3:13:13 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		1/3/2013 3:13:13 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		1/3/2013 3:13:13 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1