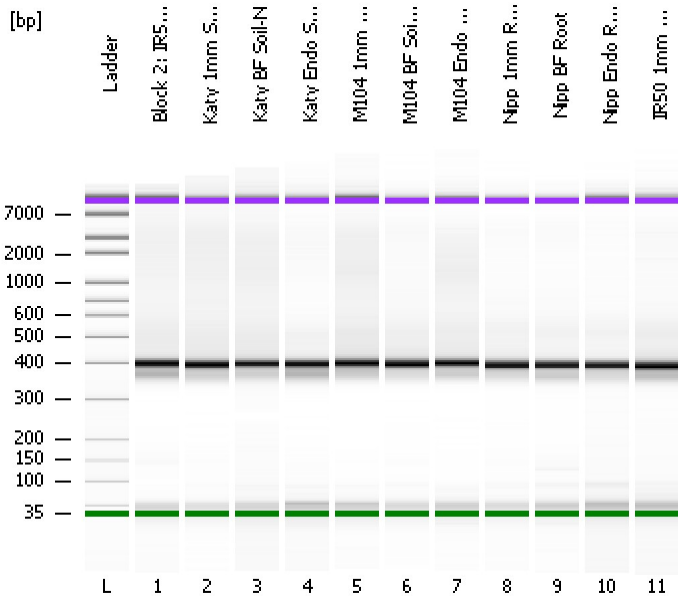


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad

Created: 1/3/2013 2:28:44 PM
Modified: 1/3/2013 3:11:29 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

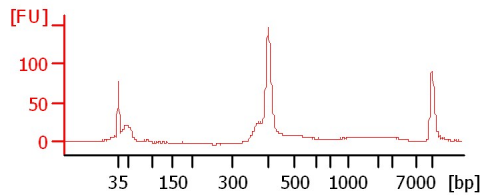
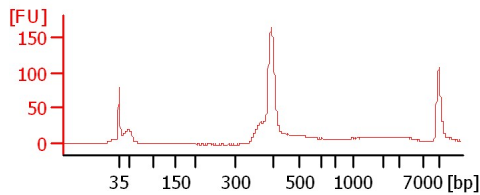
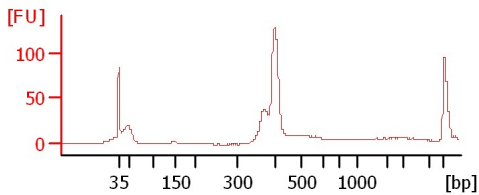
Chip Information:

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

Block 2: IR50 Endo Soil-N

Katy 1mm Soil-N

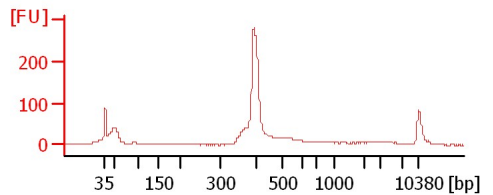
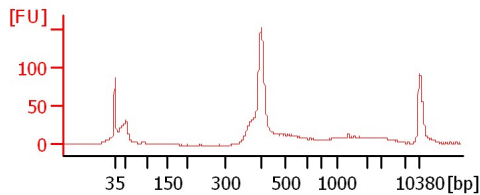
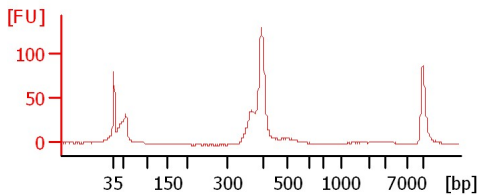
Katy BF Soil-N



Katy Endo Soil-N

M104 1mm Soil-N

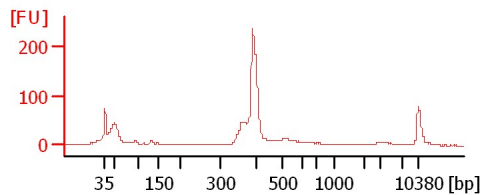
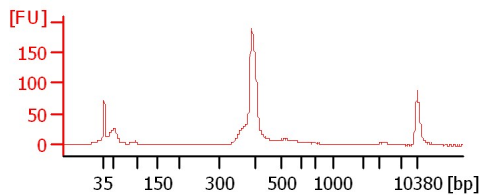
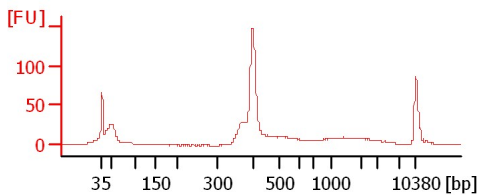
M104 BF Soil-N



M104 Endo Soil-N

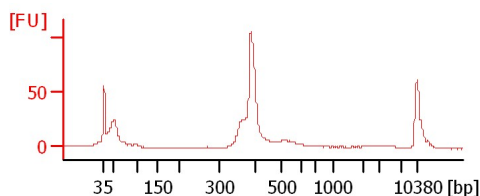
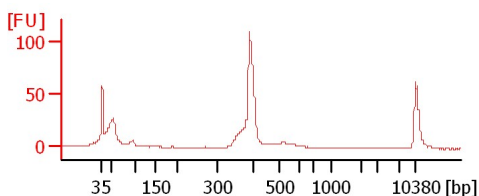
Nipp 1mm Root

Nipp BF Root



Nipp Endo Root

IR50 1mm Root



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad

Created: 1/3/2013 2:28:44 PM
 Modified: 1/3/2013 3:11:29 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
Block 2: IR50 Endo Soil-N		<input type="checkbox"/>	✓			
Katy 1mm Soil-N		<input type="checkbox"/>	✓			
Katy BF Soil-N		<input type="checkbox"/>	✓			
Katy Endo Soil-N		<input type="checkbox"/>	✓			
M104 1mm Soil-N		<input type="checkbox"/>	✓			
M104 BF Soil-N		<input type="checkbox"/>	✓			
M104 Endo Soil-N		<input type="checkbox"/>	✓			
Nipp 1mm Root		<input type="checkbox"/>	✓			
Nipp BF Root		<input type="checkbox"/>	✓			
Nipp Endo Root		<input type="checkbox"/>	✓			
IR50 1mm Root		<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_003.xad

Created: 1/3/2013 2:28:44 PM
Modified: 1/3/2013 3:11:29 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

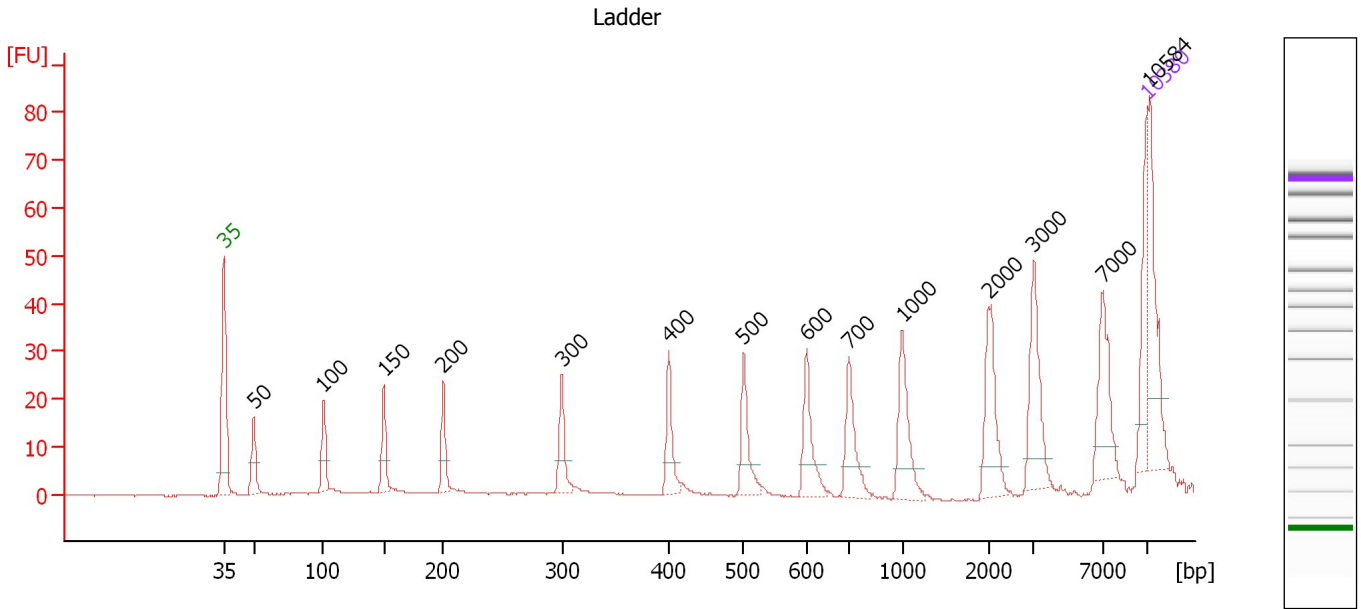
Ladder

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_003.xad

Created: 1/3/2013 2:28:44 PM
 Modified: 1/3/2013 3:11:29 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.1

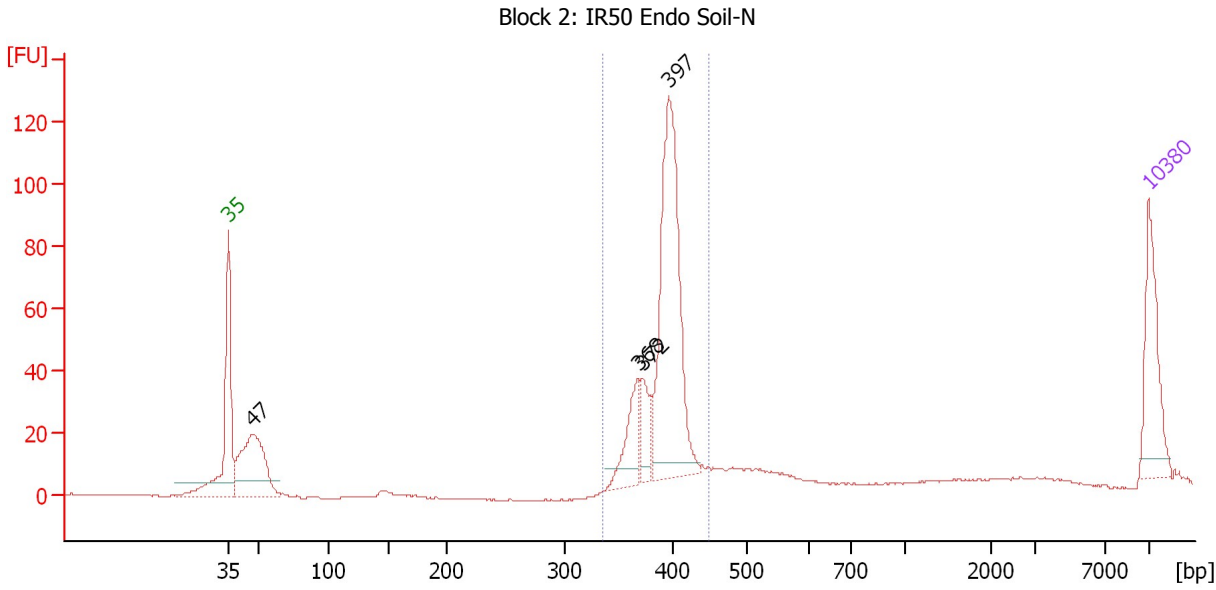
Peak table for Ladder

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
16	10,584	0.00	0.0	

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad

Created: 1/3/2013 2:28:44 PM
 Modified: 1/3/2013 3:11:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : Block 2: IR50 Endo Soil-N

Number of peaks found: 4 Corr. Area 1: 399.0
 Noise: 0.2

Peak table for sample 1 : Block 2: IR50 Endo Soil-N

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	47	186.34	5,960.1	
3	368	68.88	283.4	
4	372	42.42	172.7	
5	397	339.19	1,295.5	
6	10,380	75.00	10.9	Upper Marker

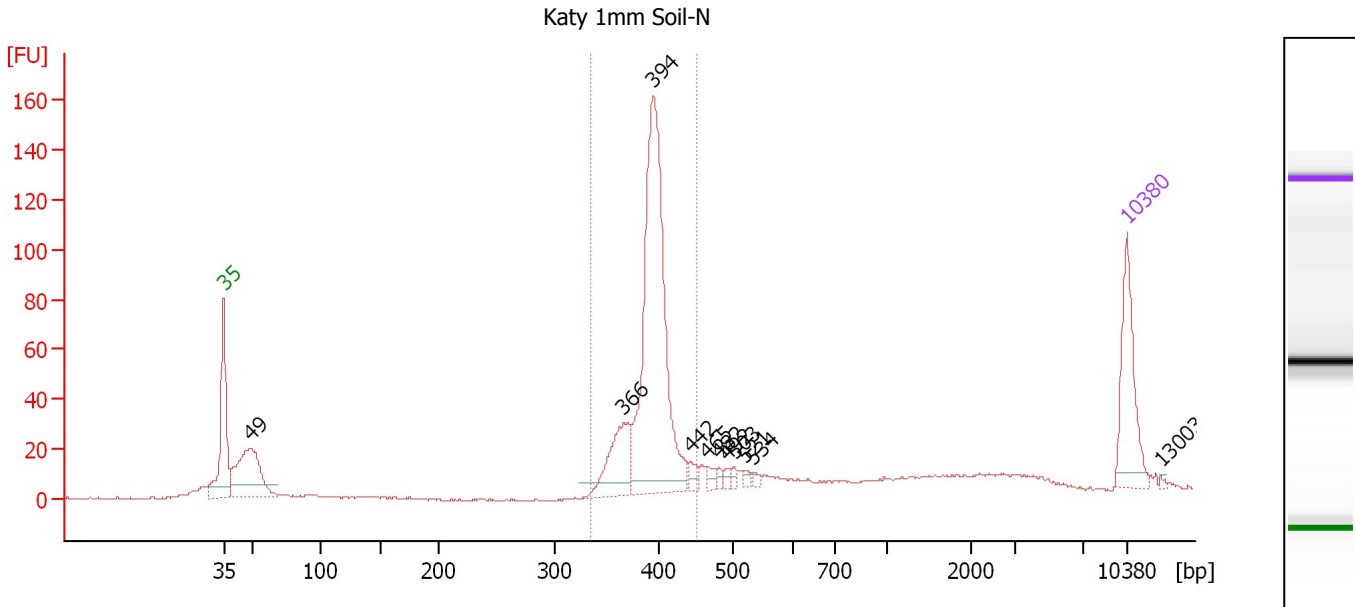
Region table for sample 1 : Block 2: IR50 Endo Soil-N

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
335	450	393	1,874.0	485.28	399.0	74	4.6	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad

Created: 1/3/2013 2:28:44 PM
 Modified: 1/3/2013 3:11:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : Katy 1mm Soil-N

Number of peaks found: 11 Corr. Area 1: 490.0
 Noise: 0.4

Peak table for sample 2 : Katy 1mm Soil-N

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	49	160.96	5,008.3	
3	366	87.01	360.1	
4	394	434.80	1,671.8	
5	442	11.99	41.1	
6	465	9.15	29.8	
7	482	6.05	19.0	
8	492	5.72	17.6	
9	503	5.58	16.8	
10	521	4.84	14.1	
11	534	4.28	12.2	
12	10,380	75.00	10.9	Upper Marker
13	13,003	0.00	0.0	

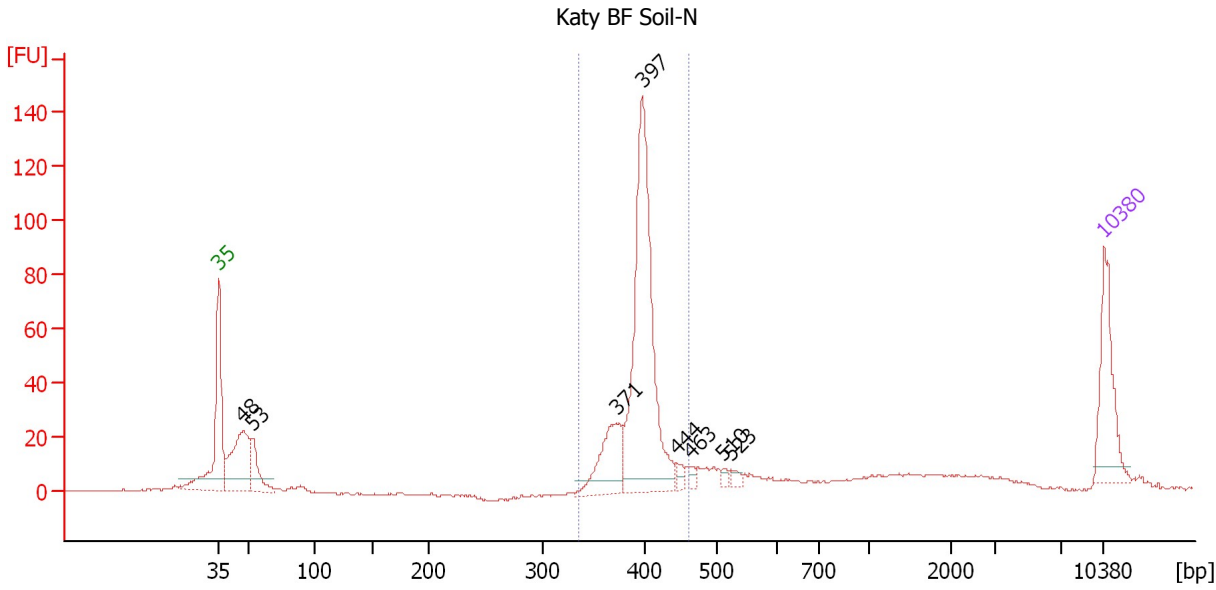
Region table for sample 2 : Katy 1mm Soil-N

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
335	453	393	2,011.1	520.75	490.0	63	4.8	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad

Created: 1/3/2013 2:28:44 PM
 Modified: 1/3/2013 3:11:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : Katy BF Soil-N

Number of peaks found: 8 Corr. Area 1: 396.2
 Noise: 0.4

Peak table for sample 3 : Katy BF Soil-N

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	48	150.62	4,796.6	
3	53	56.02	1,592.1	
4	371	92.35	376.8	
5	397	382.52	1,460.9	
6	444	9.72	33.2	
7	463	6.79	22.2	
8	510	5.75	17.1	
9	523	7.27	21.1	
10	10,380	75.00	10.9	Upper Marker

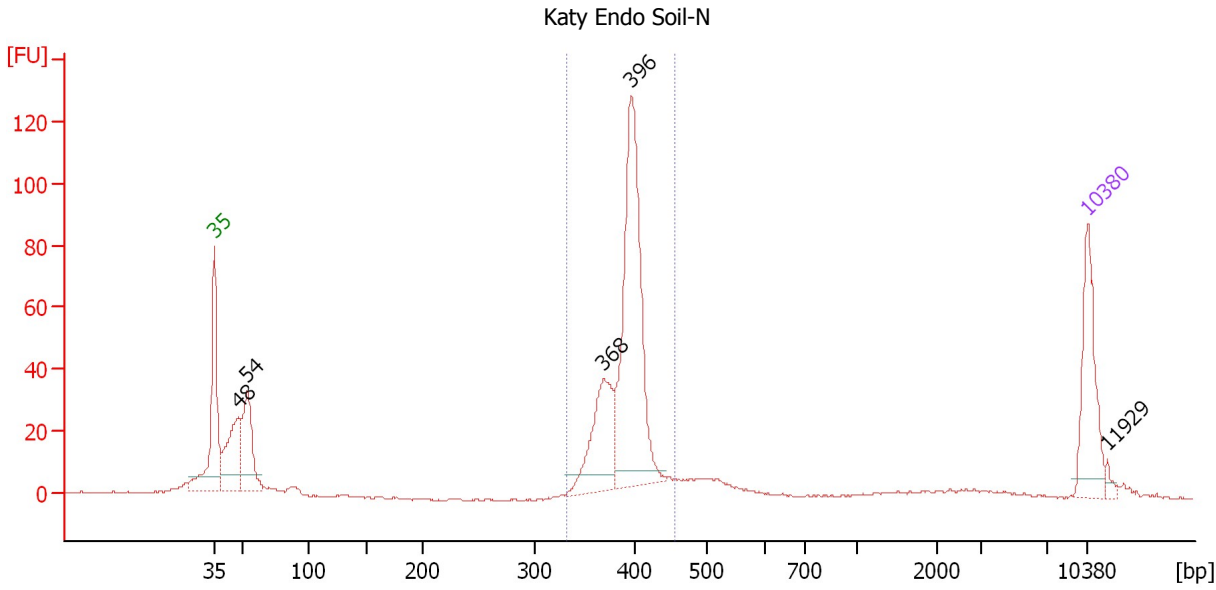
Region table for sample 3 : Katy BF Soil-N

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
335	459	396	1,827.4	476.21	396.2	58	5.0	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad

Created: 1/3/2013 2:28:44 PM
 Modified: 1/3/2013 3:11:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : Katy Endo Soil-N

Number of peaks found: 5 Corr. Area 1: 411.1
 Noise: 0.3

Peak table for sample 4 : Katy Endo Soil-N

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	48	119.66	3,798.0	
3	54	108.21	3,056.9	
4	368	117.46	483.1	
5	396	317.00	1,212.2	
6	10,380	75.00	10.9	Upper Marker
7	11,929	0.00	0.0	

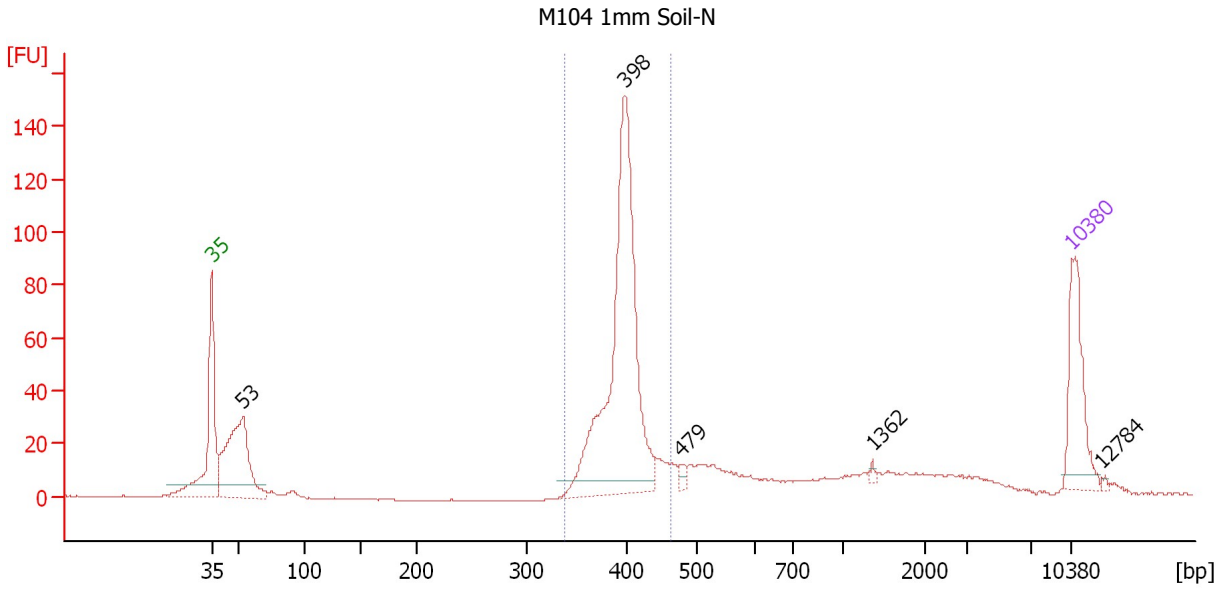
Region table for sample 4 : Katy Endo Soil-N

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
331	455	391	1,812.1	466.67	411.1	63	5.0	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad

Created: 1/3/2013 2:28:44 PM
 Modified: 1/3/2013 3:11:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : M104 1mm Soil-N

Number of peaks found: 5 Corr. Area 1: 480.7
 Noise: 0.2

Peak table for sample 5 : M104 1mm Soil-N

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	53	223.97	6,428.2	
3	398	454.10	1,729.5	
4	479	8.64	27.4	
5	1,362	2.66	3.0	
6	10,380	75.00	10.9	Upper Marker
7	12,784	0.00	0.0	

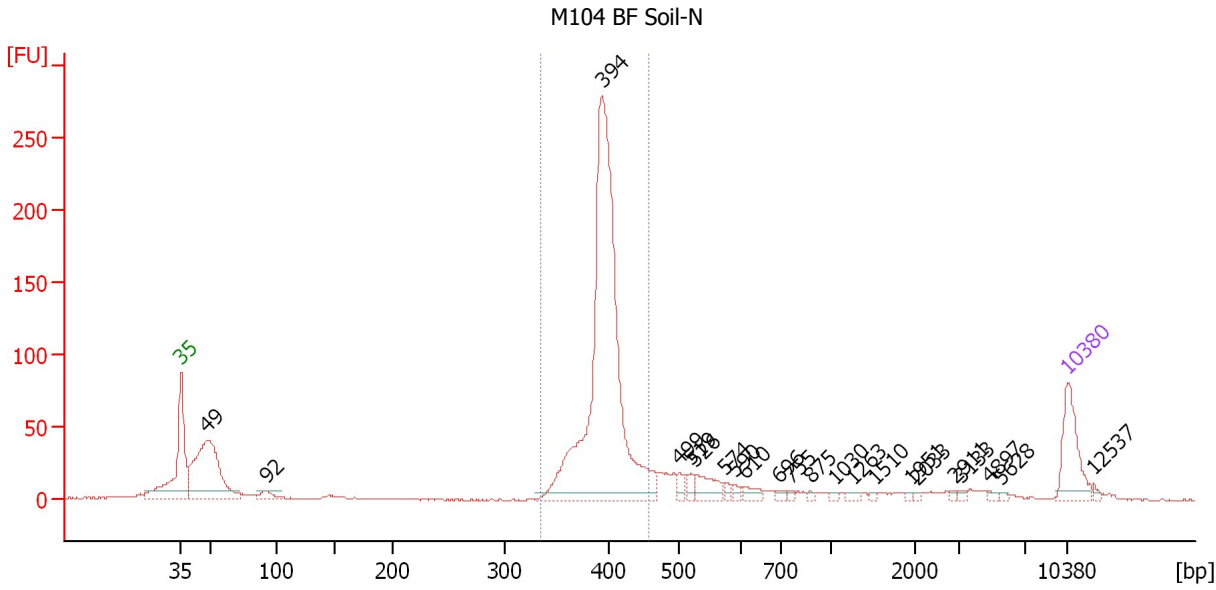
Region table for sample 5 : M104 1mm Soil-N

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
337	463	398	1,839.0	481.84	480.7	54	5.4	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad

Created: 1/3/2013 2:28:44 PM
 Modified: 1/3/2013 3:11:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : M104 BF Soil-N

Number of peaks found: 22 Corr. Area 1: 844.4
 Noise: 0.4

Peak table for sample 6 : M104 BF Soil-N

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	49	349.00	10,877.8	
3	92	22.03	363.7	
4	394	943.58	3,629.4	
5	499	14.88	45.1	
6	519	14.21	41.5	
7	526	43.40	125.1	
8	574	7.80	20.6	
9	590	8.86	22.8	
10	610	15.20	37.8	
11	696	6.03	13.1	
12	755	3.92	7.9	
13	875	3.67	6.4	
14	1,030	4.25	6.3	
15	1,263	6.12	7.3	
16	1,510	2.77	2.8	
17	1,951	2.35	1.8	
18	2,033	2.57	1.9	
19	2,911	2.82	1.5	
20	3,133	3.67	1.8	
21	4,897	3.59	1.1	
22	5,628	2.87	0.8	
23	10,380	75.00	10.9	Upper Marker
24	12,537	0.00	0.0	

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad

Created: 1/3/2013 2:28:44 PM
Modified: 1/3/2013 3:11:29 PM

Electropherogram Summary Continued ...

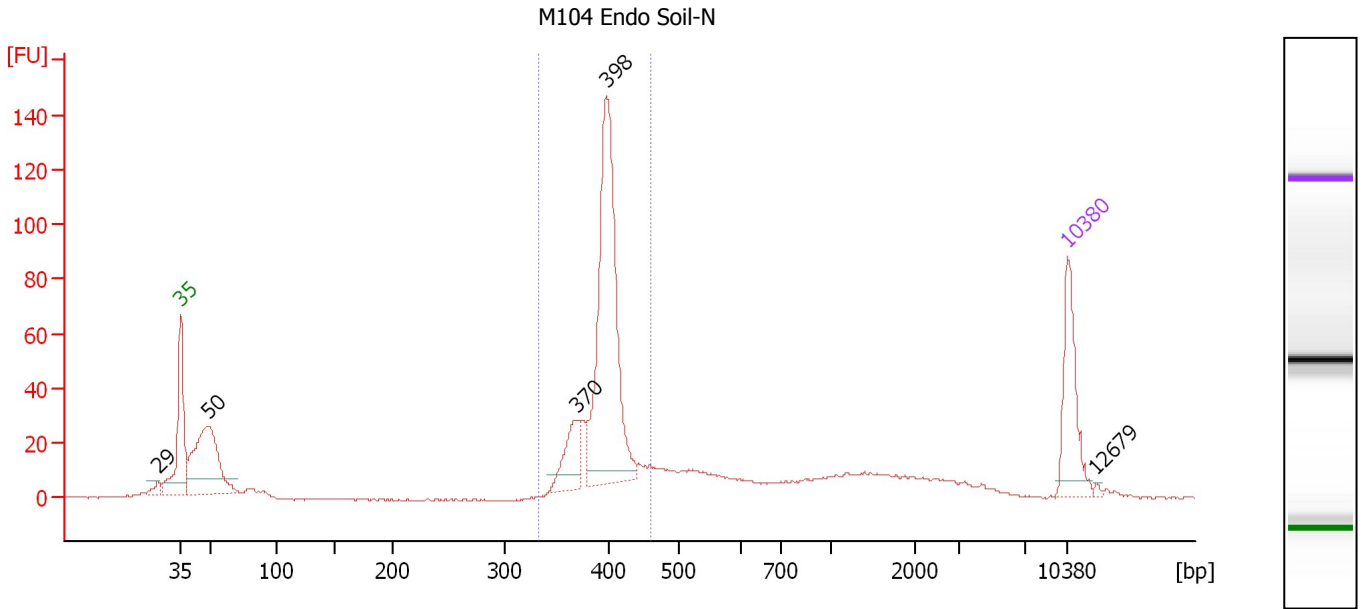
... Region table for sample 6 : M104 BF Soil-N

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
334	455	397	3,506.1	915.84	844.4	60	4.9	■

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad

Created: 1/3/2013 2:28:44 PM
 Modified: 1/3/2013 3:11:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : M104 Endo Soil-N

Number of peaks found: 5 Corr. Area 1: 434.0
 Noise: 0.3

Peak table for sample 7 : M104 Endo Soil-N

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	29	0.00	0.0	
2	35	125.00	5,411.3	Lower Marker
3	50	227.89	6,969.5	
4	370	63.28	258.9	
5	398	375.72	1,428.9	
6	10,380	75.00	10.9	Upper Marker
7	12,679	0.00	0.0	

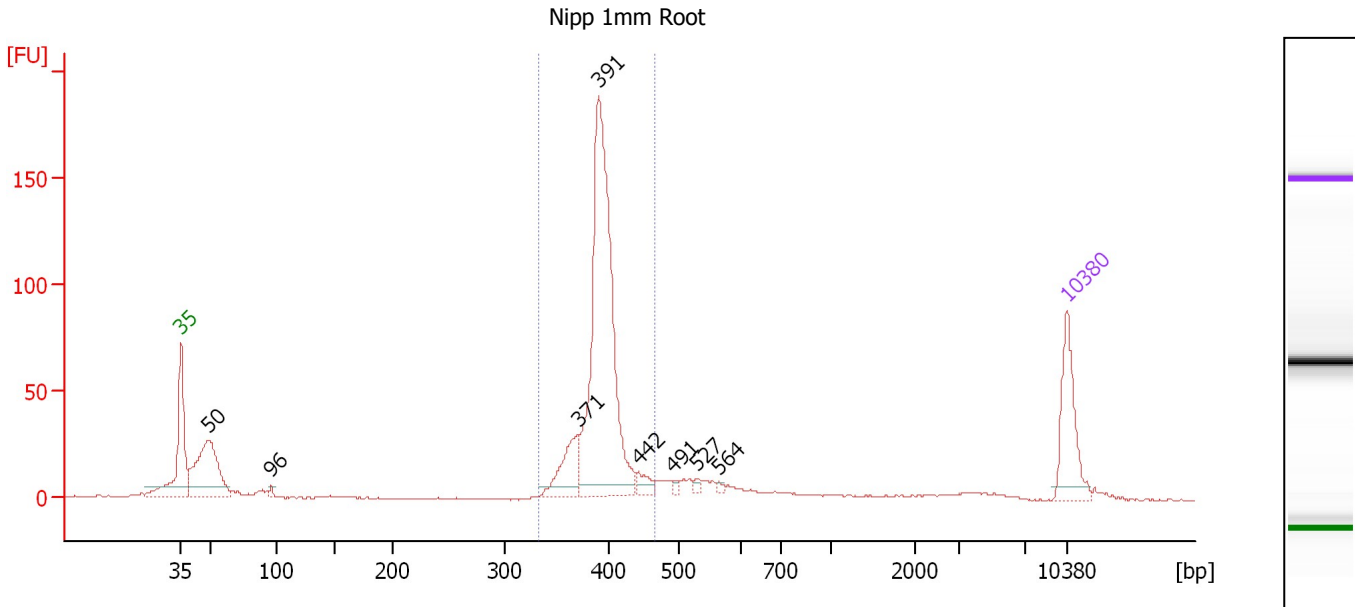
Region table for sample 7 : M104 Endo Soil-N

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
333	458	397	2,031.1	531.09	434.0	51	5.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad

Created: 1/3/2013 2:28:44 PM
 Modified: 1/3/2013 3:11:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : Nipp 1mm Root

Number of peaks found: 8 Corr. Area 1: 554.3
 Noise: 0.3

Peak table for sample 8 : Nipp 1mm Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	209.27	6,366.1	
3	96	5.89	92.9	
4	371	74.52	304.6	
5	391	519.53	2,015.2	
6	442	18.57	63.6	
7	491	5.11	15.8	
8	527	5.47	15.7	
9	564	3.40	9.1	
10	10,380	75.00	10.9	Upper Marker

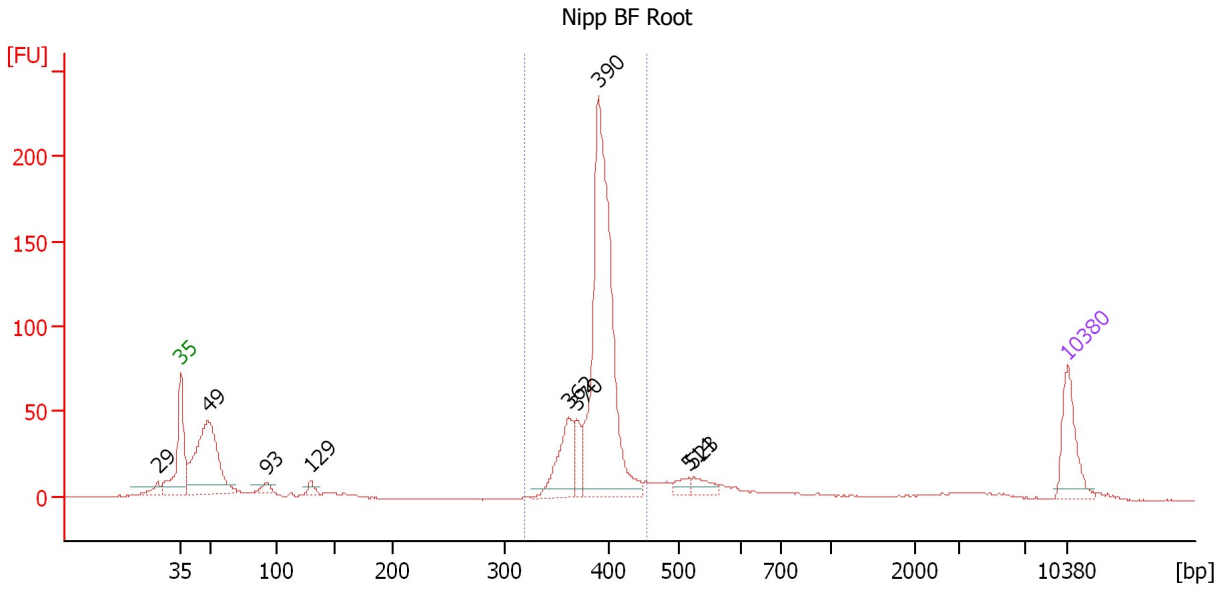
Region table for sample 8 : Nipp 1mm Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
333	466	394	2,413.5	626.14	554.3	67	5.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad

Created: 1/3/2013 2:28:44 PM
 Modified: 1/3/2013 3:11:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : Nipp BF Root

Number of peaks found: 9 Corr. Area 1: 686.2
 Noise: 0.3

Peak table for sample 9 : Nipp BF Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	29	0.00	0.0	
2	35	125.00	5,411.3	Lower Marker
3	49	355.08	10,974.5	
4	93	20.01	326.9	
5	129	17.09	200.4	
6	362	117.49	492.2	
7	370	47.07	192.8	
8	390	654.85	2,541.1	
9	514	16.74	49.4	
10	523	24.06	69.7	
11	10,380	75.00	10.9	Upper Marker

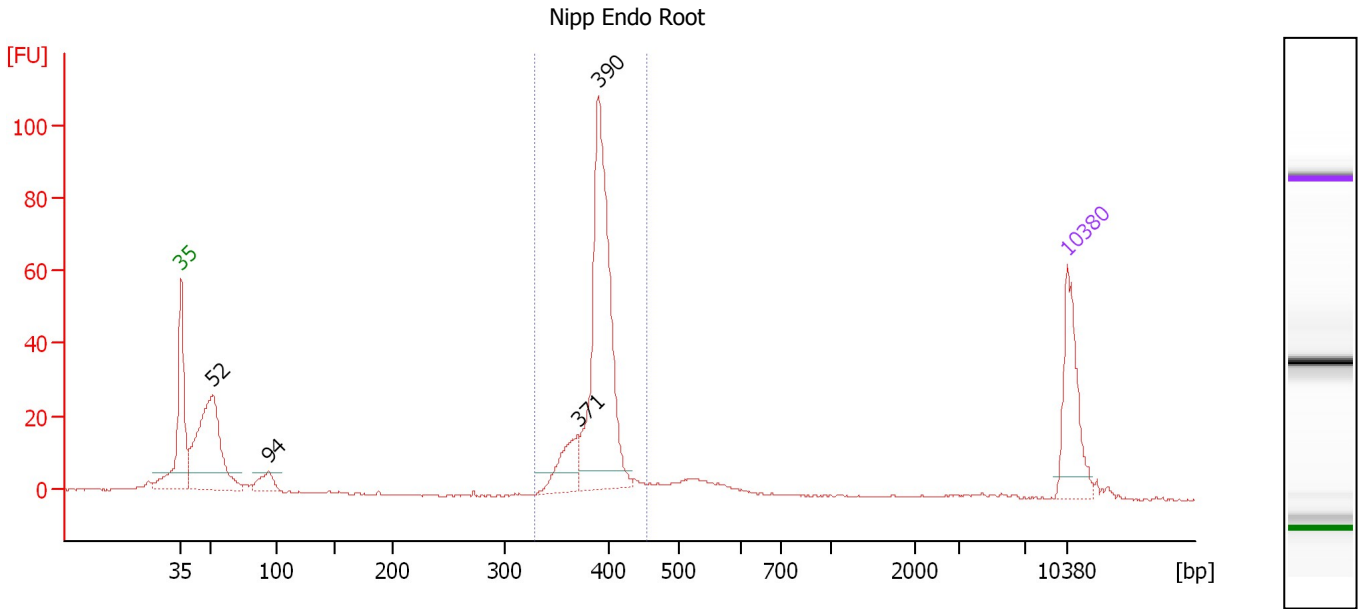
Region table for sample 9 : Nipp BF Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
319	454	390	3,257.3	837.03	686.2	58	5.0	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad

Created: 1/3/2013 2:28:44 PM
 Modified: 1/3/2013 3:11:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : Nipp Endo Root

Number of peaks found: 4 Corr. Area 1: 283.2
 Noise: 0.2

Peak table for sample 10 : Nipp Endo Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	52	278.54	8,042.6	
3	94	32.02	516.7	
4	371	55.73	227.8	
5	390	341.14	1,324.2	
6	10,380	75.00	10.9	Upper Marker

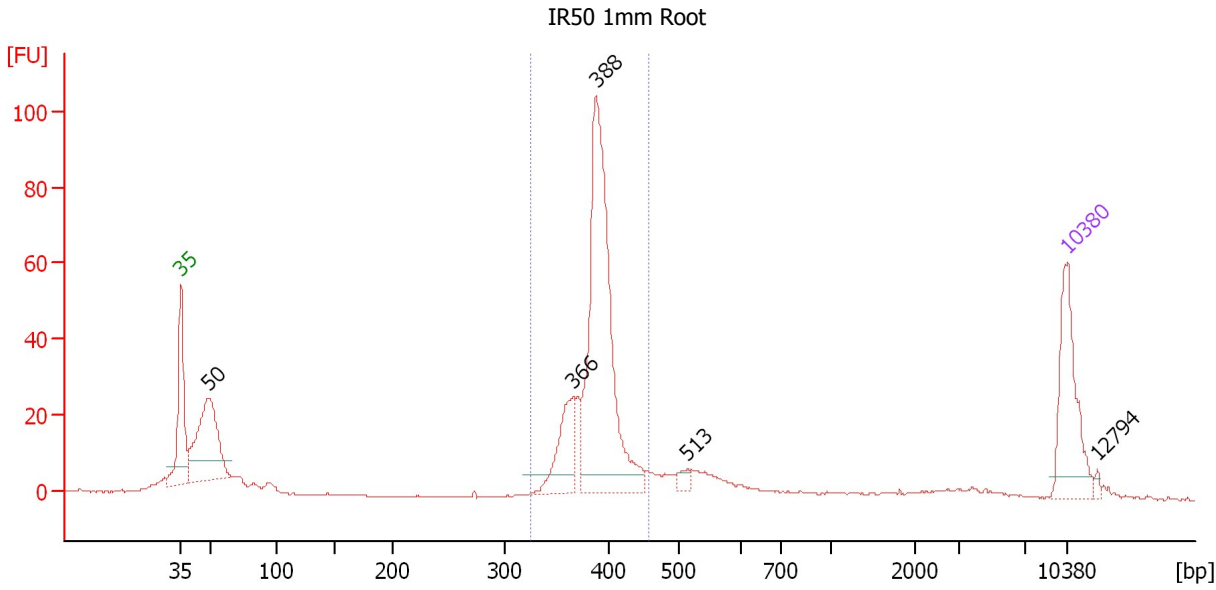
Region table for sample 10 : Nipp Endo Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
329	454	391	1,642.5	422.97	283.2	57	4.5	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad

Created: 1/3/2013 2:28:44 PM
 Modified: 1/3/2013 3:11:29 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : IR50 1mm Root

Number of peaks found: 5 Corr. Area 1: 344.9
 Noise: 0.1

Peak table for sample 11 : IR50 1mm Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	177.69	5,417.2	
3	366	73.04	302.2	
4	388	348.24	1,359.5	
5	513	8.90	26.3	
6	10,380	75.00	10.9	Upper Marker
7	12,794	0.00	0.0	

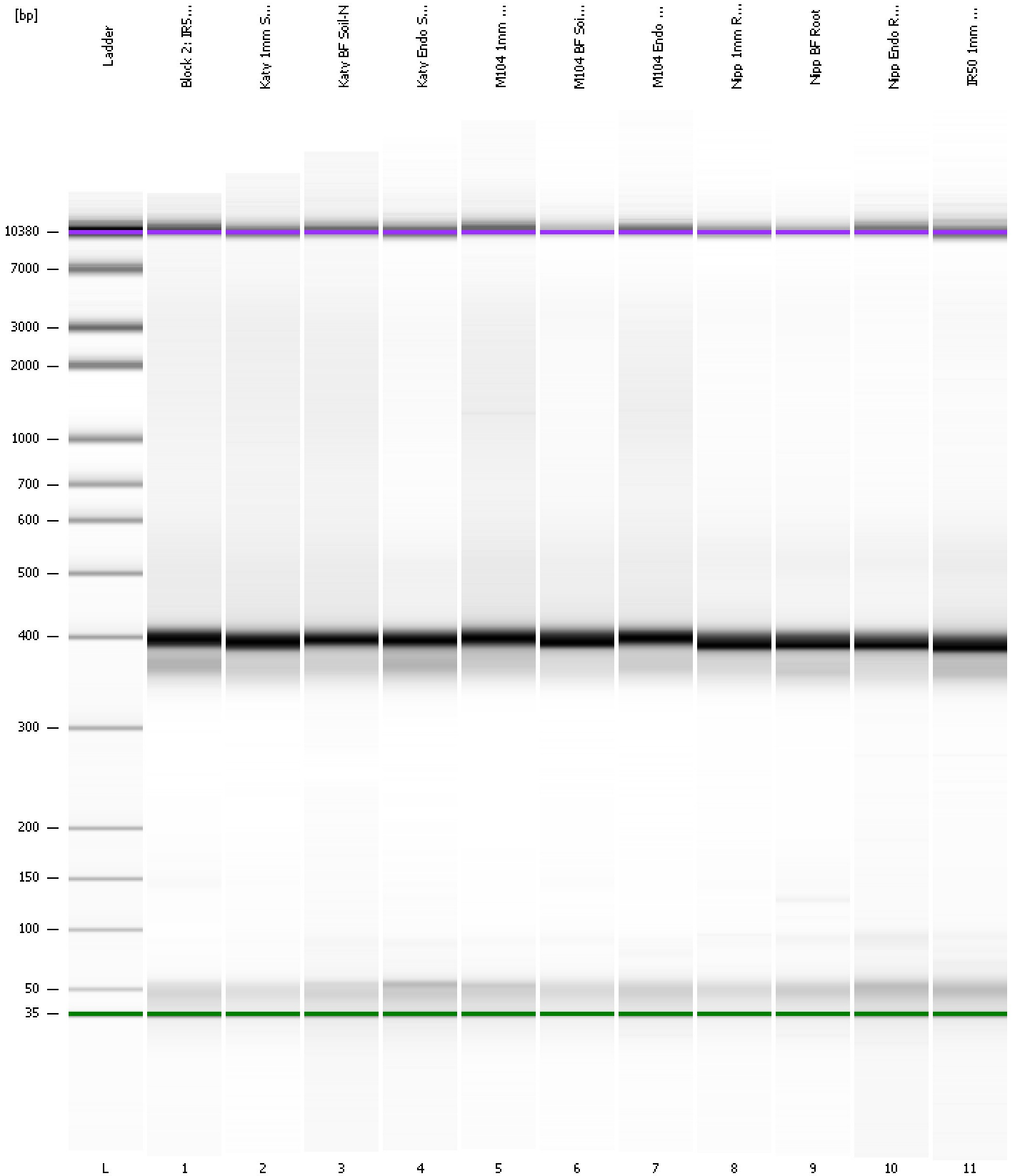
Region table for sample 11 : IR50 1mm Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
324	458	389	1,744.9	447.14	344.9	58	5.4	Blue

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad

Created: 1/3/2013 2:28:44 PM
Modified: 1/3/2013 3:11:29 PM

Gel Image



Assay Class: High Sensitivity DNA Assay Created: 1/3/2013 2:28:44 PM
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-03\2013-01-03_003.xad Modified: 1/3/2013 3:11:29 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 3:10:04 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_003.xad)		Instrument	Run		1/3/2013 2:28:50 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		1/3/2013 2:28:50 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		1/3/2013 2:28:50 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		1/3/2013 2:28:50 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		1/3/2013 2:28:50 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		1/3/2013 2:28:50 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		1/3/2013 2:28:50 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1