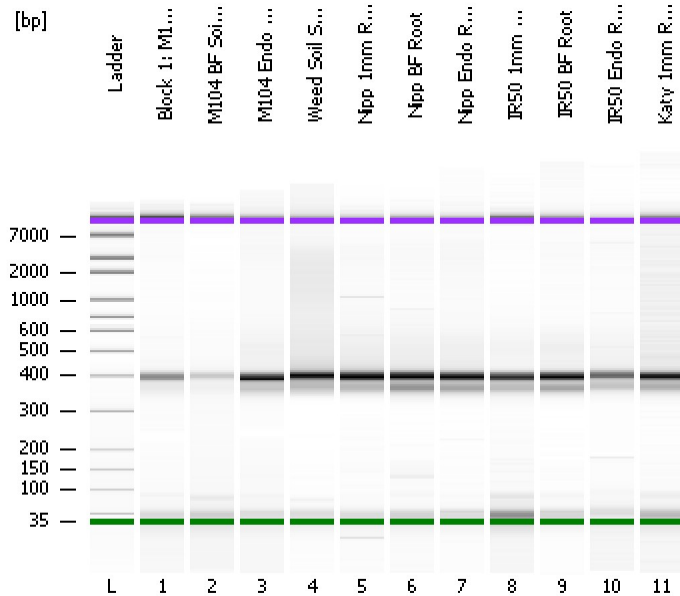


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
Modified: 12/28/2012 3:47:36 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

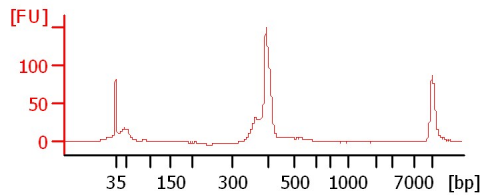
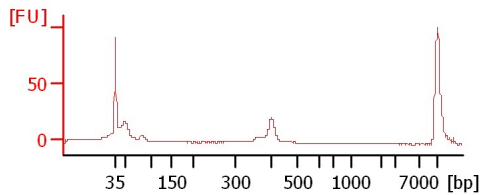
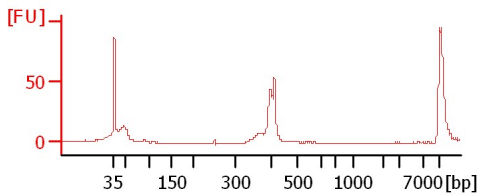
Chip Information:

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

Block 1: M104 1mm Soil-N

M104 BF Soil-N

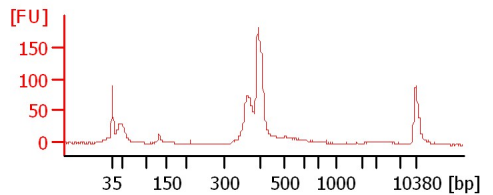
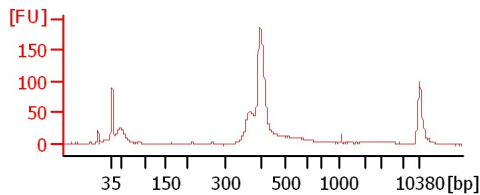
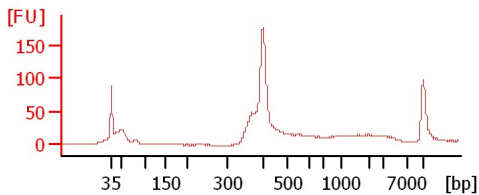
M104 Endo Soil-N



Weed Soil Soil-N

Nipp 1mm Root

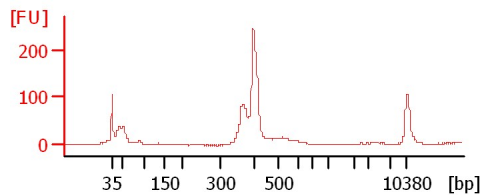
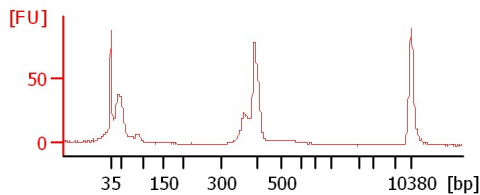
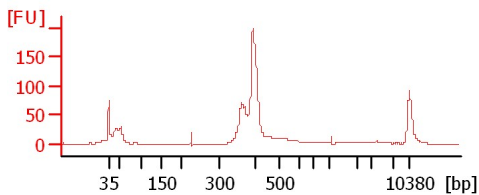
Nipp BF Root



Nipp Endo Root

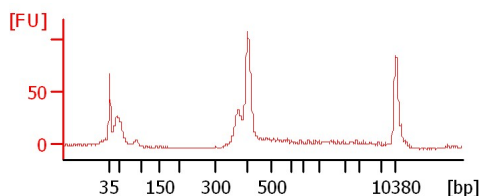
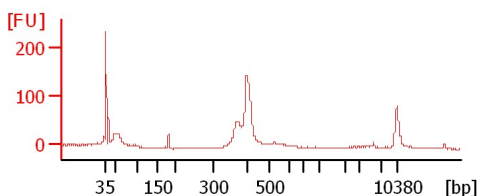
IR50 1mm Root

IR50 BF Root



IR50 Endo Root

Katy 1mm Root



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
 Modified: 12/28/2012 3:47:36 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
Block 1: M104 1mm Soil-N		<input type="checkbox"/>	✓			
M104 BF Soil-N		<input type="checkbox"/>	✓			
M104 Endo Soil-N		<input type="checkbox"/>	✓			
Weed Soil 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"/>	✓			
IR50 BF Root		<input type="checkbox"/>	✓			
IR50 Endo Root		<input type="checkbox"/>	✓			
Katy 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\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
Modified: 12/28/2012 3:47:36 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

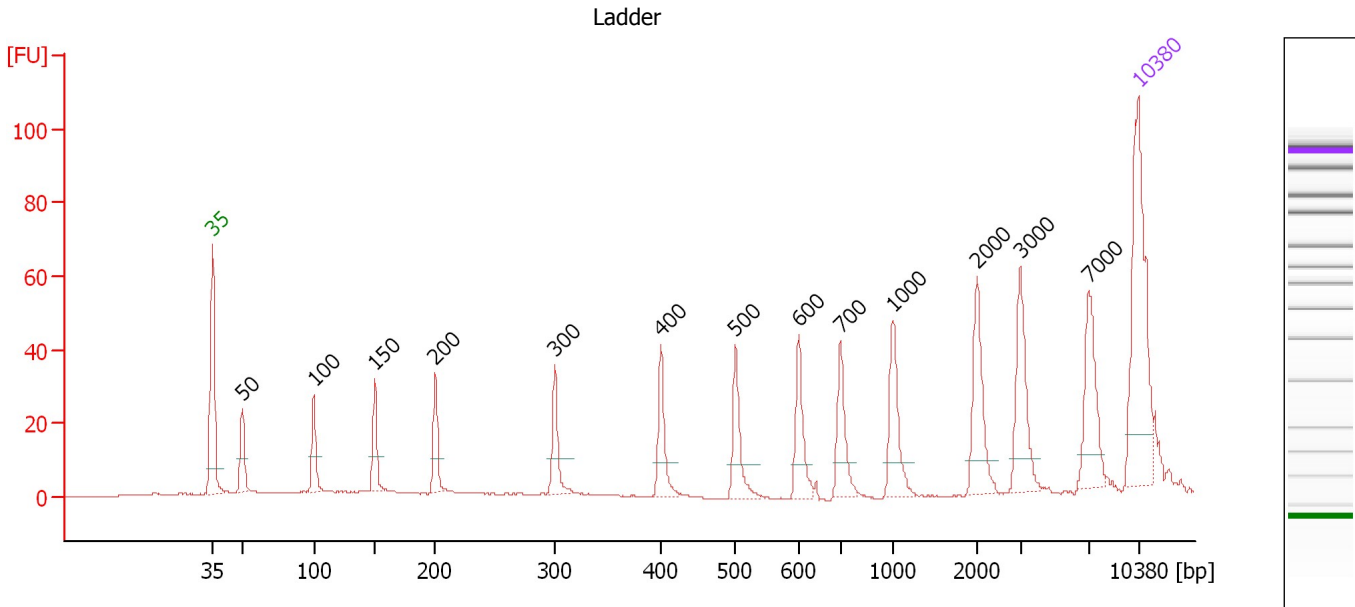
Ladder

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\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
 Modified: 12/28/2012 3:47:36 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.1

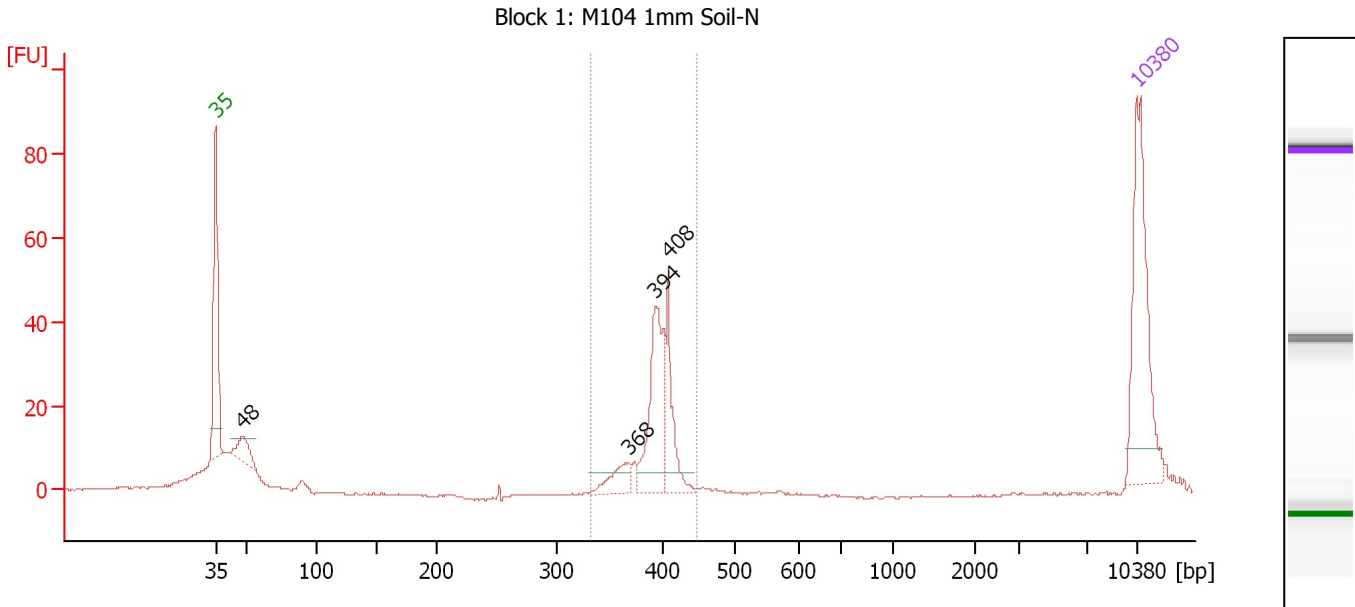
Peak table for Ladder

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\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
 Modified: 12/28/2012 3:47:36 PM

Electropherogram Summary Continued ...



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

Number of peaks found: 4 Corr. Area 1: 132.2
 Noise: 0.1

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

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	48	21.87	683.8	
3	368	19.47	80.2	
4	394	79.13	304.2	
5	408	39.09	145.1	
6	10,380	75.00	10.9	Upper Marker

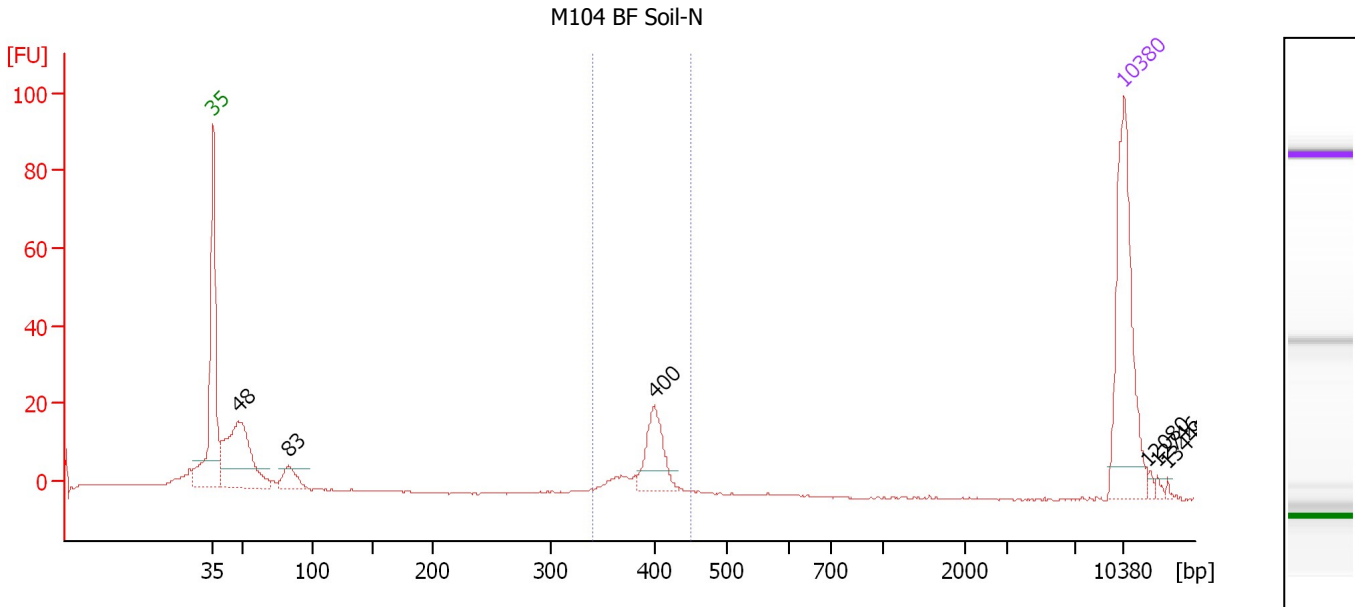
Region table for sample 1 : Block 1: M104 1mm Soil-N

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
333	448	395	506.3	131.80	132.2	53	4.2	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
 Modified: 12/28/2012 3:47:36 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : M104 BF Soil-N

Number of peaks found: 6 Corr. Area 1: 70.1
 Noise: 0.2

Peak table for sample 2 : M104 BF Soil-N

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	48	117.27	3,716.8	
3	83	19.39	353.9	
4	400	37.95	143.7	
5	10,380	75.00	10.9	Upper Marker
6	12,080	0.00	0.0	
7	12,746	0.00	0.0	
8	13,448	0.00	0.0	

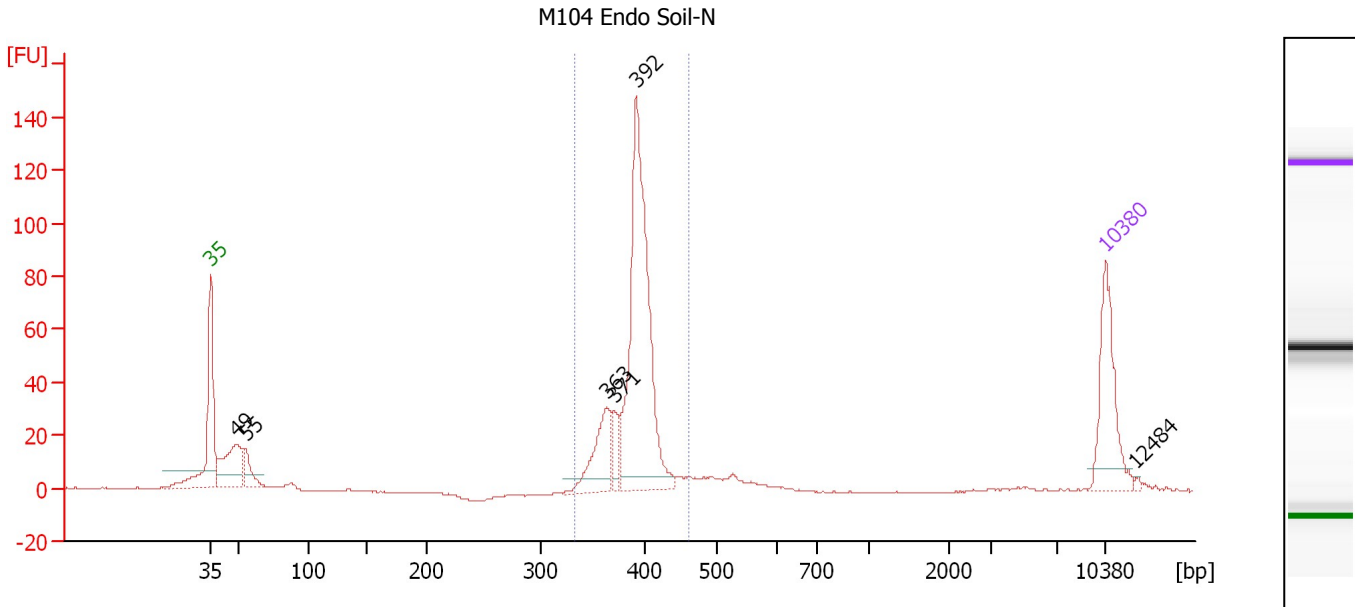
Region table for sample 2 : M104 BF Soil-N

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
341	452	395	223.1	58.02	70.1	25	5.2	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
 Modified: 12/28/2012 3:47:36 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : M104 Endo Soil-N

Number of peaks found: 6 Corr. Area 1: 424.1
 Noise: 0.2

Peak table for sample 3 : M104 Endo Soil-N

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	49	99.84	3,114.5	
3	55	35.69	990.9	
4	363	76.03	317.0	
5	371	24.59	100.3	
6	392	343.59	1,328.0	
7	10,380	75.00	10.9	Upper Marker
8	12,484	0.00	0.0	

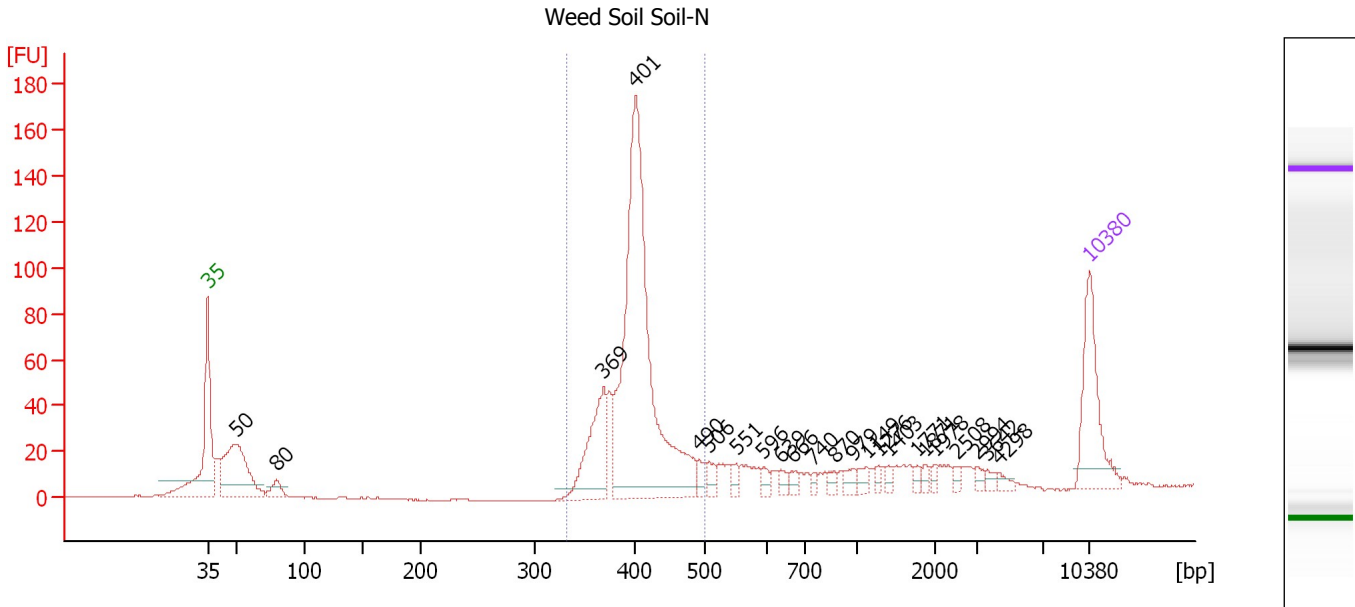
Region table for sample 3 : M104 Endo Soil-N

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
333	461	391	1,719.1	442.60	424.1	76	5.0	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
 Modified: 12/28/2012 3:47:36 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : Weed Soil Soil-N

Number of peaks found: 23 Corr. Area 1: 646.5
 Noise: 0.2

Peak table for sample 4 : Weed Soil Soil-N

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	161.56	4,933.2	
3	80	21.31	405.5	
4	369	107.05	439.9	
5	401	495.14	1,873.0	
6	490	12.37	38.2	
7	506	12.21	36.6	
8	551	9.52	26.2	
9	596	8.88	22.6	
10	639	8.49	20.1	
11	666	7.70	17.5	
12	740	5.09	10.4	
13	870	6.42	11.2	
14	979	9.47	14.7	
15	1,149	9.23	12.2	
16	1,276	5.12	6.1	
17	1,403	5.83	6.3	
18	1,771	5.29	4.5	
19	1,871	4.53	3.7	
20	1,978	4.47	3.4	
21	2,508	4.78	2.9	
22	2,994	5.60	2.8	
23	3,642	4.76	2.0	
24	4,298	5.56	2.0	
25	10,380	75.00	10.9	Upper Marker

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
Modified: 12/28/2012 3:47:36 PM

Electropherogram Summary Continued ...

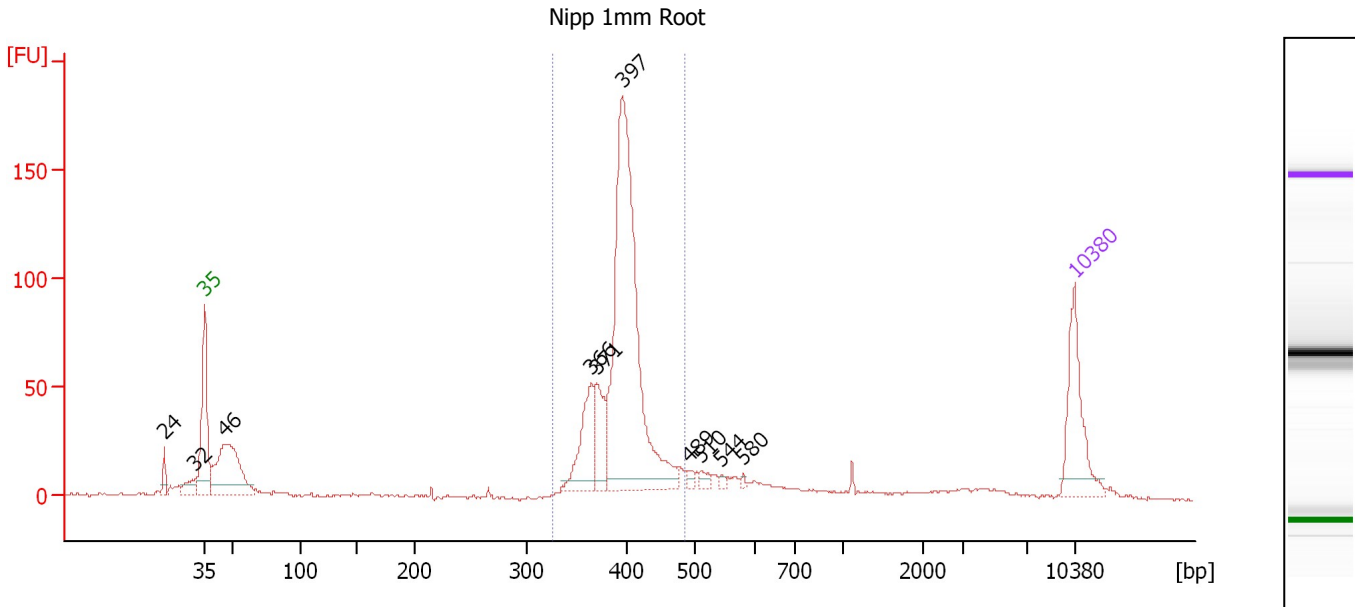
... Region table for sample 4 : Weed Soil Soil-N

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
333	500	403	2,236.3	592.63	646.5	62	7.5	■

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
 Modified: 12/28/2012 3:47:36 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : Nipp 1mm Root

Number of peaks found: 10 Corr. Area 1: 712.5
 Noise: 0.5

Peak table for sample 5 : Nipp 1mm Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	24	0.00	0.0	
2	32	0.00	0.0	
3	35	125.00	5,411.3	Lower Marker
4	46	184.44	6,097.1	
5	366	86.58	358.7	
6	371	57.49	234.8	
7	397	493.77	1,885.8	
8	489	7.25	22.4	
9	510	8.43	25.0	
10	544	3.44	9.6	
11	580	2.82	7.4	
12	10,380	75.00	10.9	Upper Marker

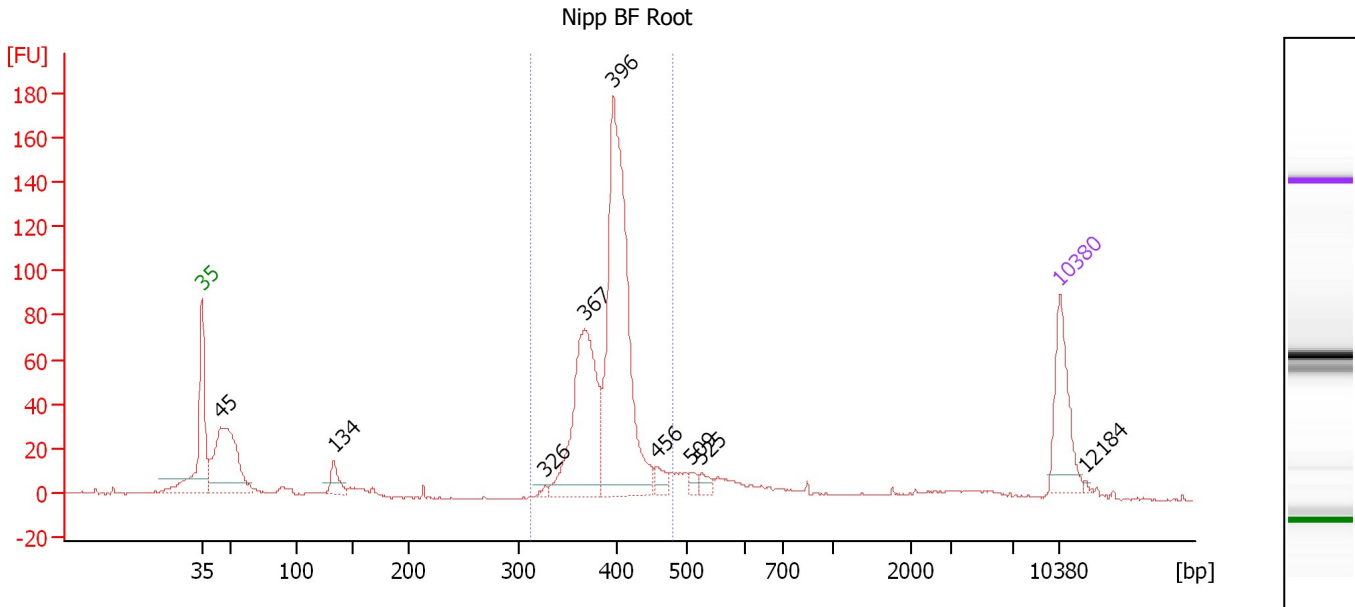
Region table for sample 5 : Nipp 1mm Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
327	484	398	2,624.3	687.10	712.5	66	6.7	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
 Modified: 12/28/2012 3:47:36 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : Nipp BF Root

Number of peaks found: 9 Corr. Area 1: 738.4
 Noise: 0.5

Peak table for sample 6 : Nipp BF Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	45	250.24	8,404.2	
3	134	32.00	363.0	
4	326	4.98	23.2	
5	367	260.29	1,075.6	
6	396	475.69	1,820.3	
7	456	18.45	61.3	
8	509	9.11	27.1	
9	525	12.48	36.0	
10	10,380	75.00	10.9	Upper Marker
11	12,184	0.00	0.0	

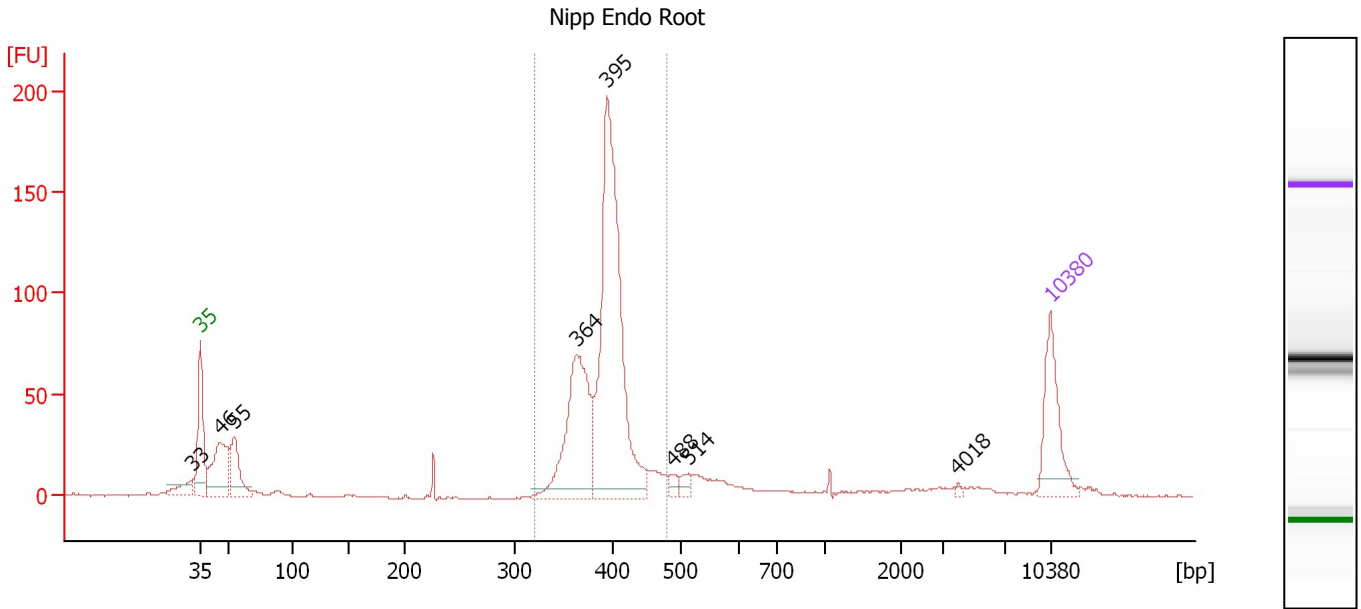
Region table for sample 6 : Nipp BF Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
312	482	393	2,973.1	769.06	738.4	66	6.8	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
 Modified: 12/28/2012 3:47:36 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : Nipp Endo Root

Number of peaks found: 8 Corr. Area 1: 724.8
 Noise: 0.2

Peak table for sample 7 : Nipp Endo Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	33	0.00	0.0	
2	35	125.00	5,411.3	Lower Marker
3	46	139.38	4,641.1	
4	55	86.21	2,370.1	
5	364	233.71	973.4	
6	395	489.33	1,877.2	
7	488	10.95	34.0	
8	514	13.15	38.8	
9	4,018	2.34	0.9	
10	10,380	75.00	10.9	Upper Marker

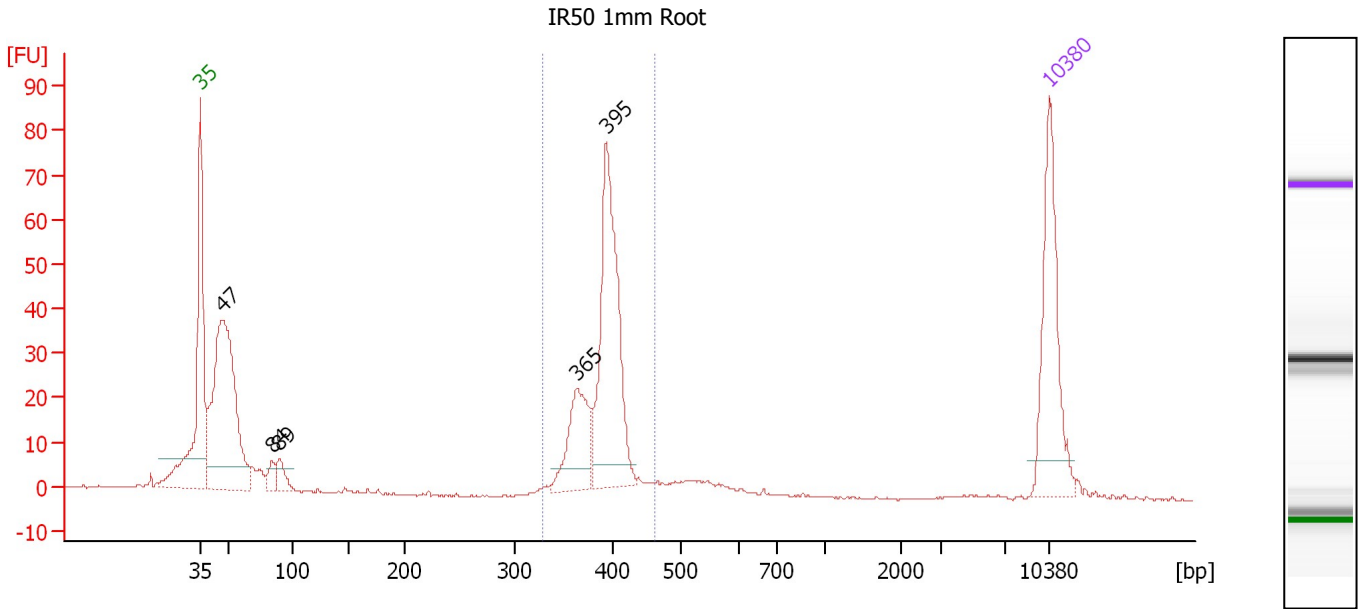
Region table for sample 7 : Nipp Endo Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
321	480	393	2,780.5	719.26	724.8	69	6.5	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
 Modified: 12/28/2012 3:47:36 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : IR50 1mm Root

Number of peaks found: 5 Corr. Area 1: 257.1
 Noise: 0.2

Peak table for sample 8 : IR50 1mm Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	47	280.21	9,039.4	
3	84	13.24	238.8	
4	89	18.41	312.4	
5	365	62.58	260.1	
6	395	165.29	634.5	
7	10,380	75.00	10.9	Upper Marker

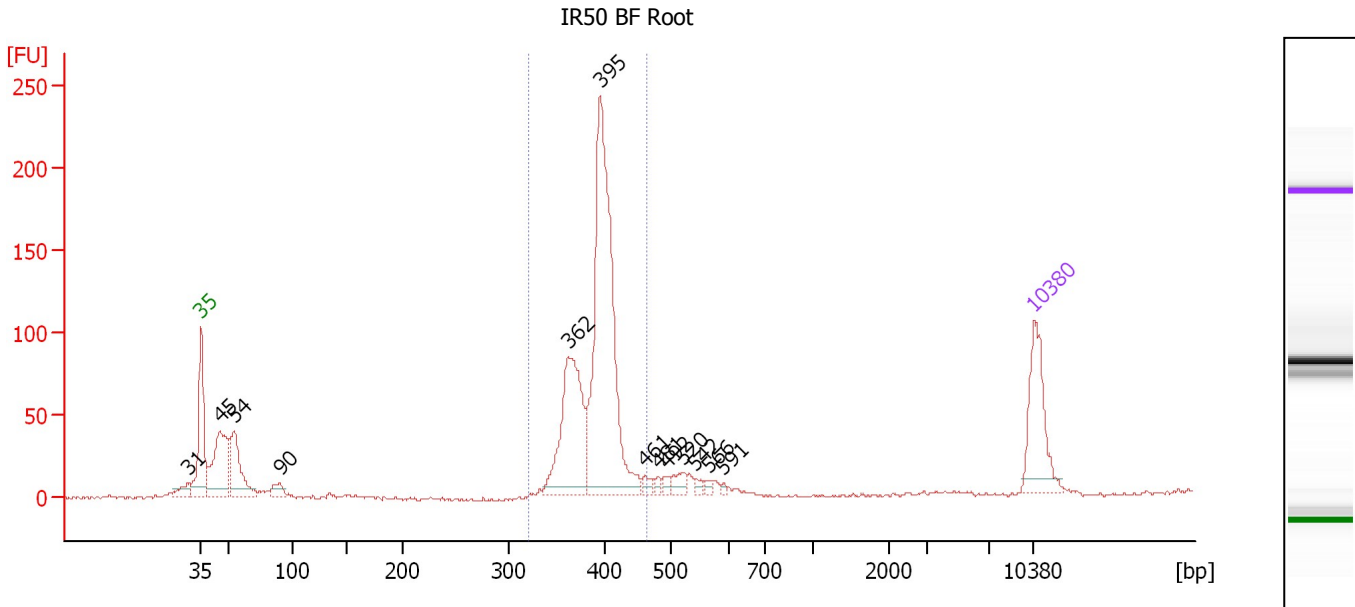
Region table for sample 8 : IR50 1mm Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
329	463	391	963.9	248.41	257.1	49	5.3	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
 Modified: 12/28/2012 3:47:36 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : IR50 BF Root

Number of peaks found: 13 Corr. Area 1: 802.8
 Noise: 1.0

Peak table for sample 9 : IR50 BF Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	31	0.00	0.0	
2	35	125.00	5,411.3	Lower Marker
3	45	156.18	5,243.5	
4	54	106.12	2,954.6	
5	90	19.22	323.3	
6	362	198.36	830.5	
7	395	441.70	1,692.6	
8	461	9.15	30.1	
9	481	5.72	18.0	
10	492	6.49	20.0	
11	520	15.72	45.8	
12	542	5.54	15.5	
13	566	5.55	14.8	
14	591	2.76	7.1	
15	10,380	75.00	10.9	Upper Marker

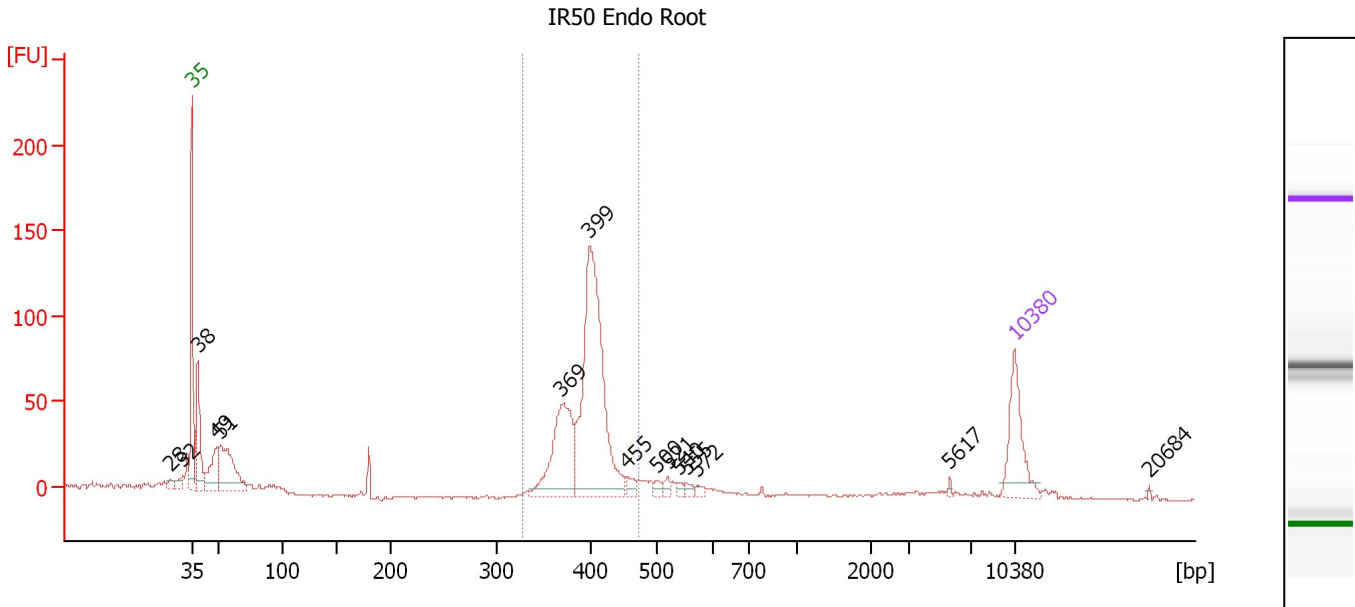
Region table for sample 9 : IR50 BF Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
321	464	391	2,435.3	627.64	802.8	70	5.6	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
 Modified: 12/28/2012 3:47:36 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : IR50 Endo Root

Number of peaks found: 15 Corr. Area 1: 527.2
 Noise: 0.5

Peak table for sample 10 : IR50 Endo Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	28	0.00	0.0	
2	32	0.00	0.0	
3	35	125.00	5,411.3	Lower Marker
4	38	125.28	4,954.3	
5	49	73.35	2,246.6	
6	51	147.14	4,341.1	
7	369	182.41	748.6	
8	399	430.05	1,632.4	
9	455	13.47	44.8	
10	500	8.79	26.6	
11	521	10.04	29.2	
12	540	6.43	18.1	
13	555	7.77	21.2	
14	572	5.69	15.1	
15	5,617	2.54	0.7	
16	10,380	75.00	10.9	Upper Marker
17	20,684	0.00	0.0	

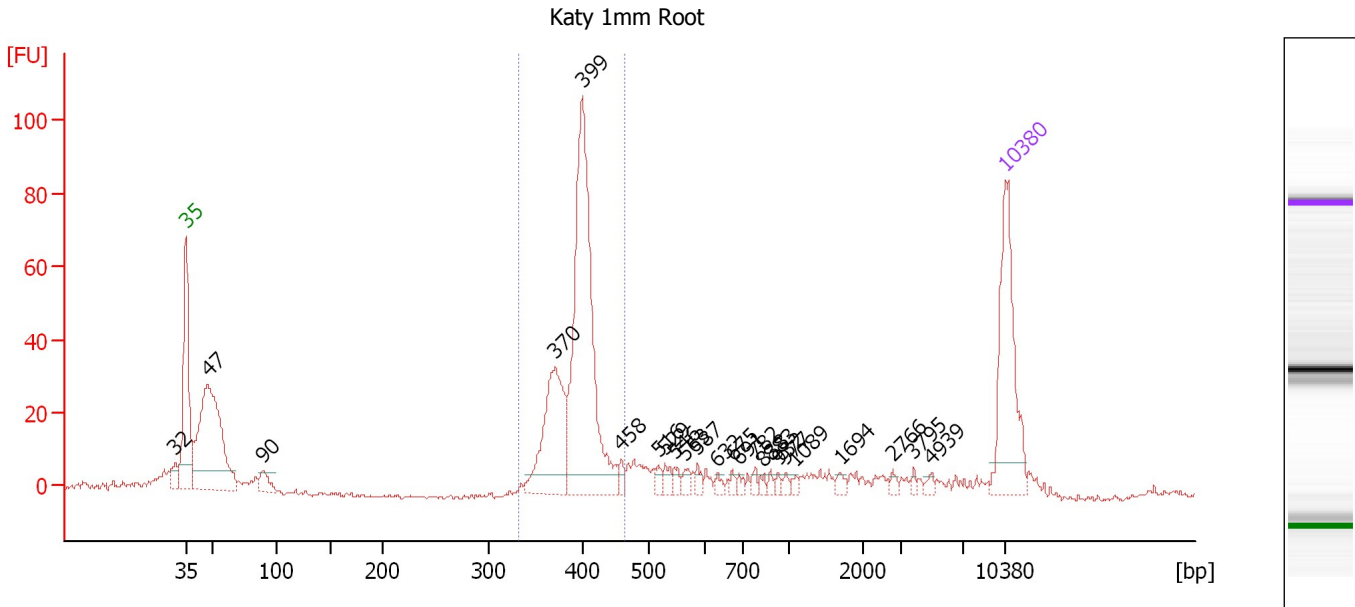
Region table for sample 10 : IR50 Endo Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
329	474	398	2,243.5	587.87	527.2	61	5.9	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
 Modified: 12/28/2012 3:47:36 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : Katy 1mm Root

Number of peaks found: 24 Corr. Area 1: 337.8
 Noise: 0.6

Peak table for sample 11 : Katy 1mm Root

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	32	0.00	0.0	
2	35	125.00	5,411.3	Lower Marker
3	47	212.65	6,818.5	
4	90	15.35	258.0	
5	370	99.90	409.2	
6	399	242.81	921.6	
7	458	5.92	19.6	
8	516	4.90	14.4	
9	529	6.61	18.9	
10	546	4.82	13.4	
11	563	5.84	15.7	
12	587	4.75	12.3	
13	632	3.60	8.6	
14	675	3.31	7.4	
15	691	3.43	7.5	
16	782	3.38	6.5	
17	838	2.99	5.4	
18	883	2.65	4.5	
19	932	2.76	4.5	
20	977	2.83	4.4	
21	1,089	2.63	3.7	
22	1,694	3.78	3.4	
23	2,766	2.67	1.5	
24	3,795	2.02	0.8	
25	4,939	3.02	0.9	
26	10,380	75.00	10.9	Upper Marker

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
Modified: 12/28/2012 3:47:36 PM

Electropherogram Summary Continued ...

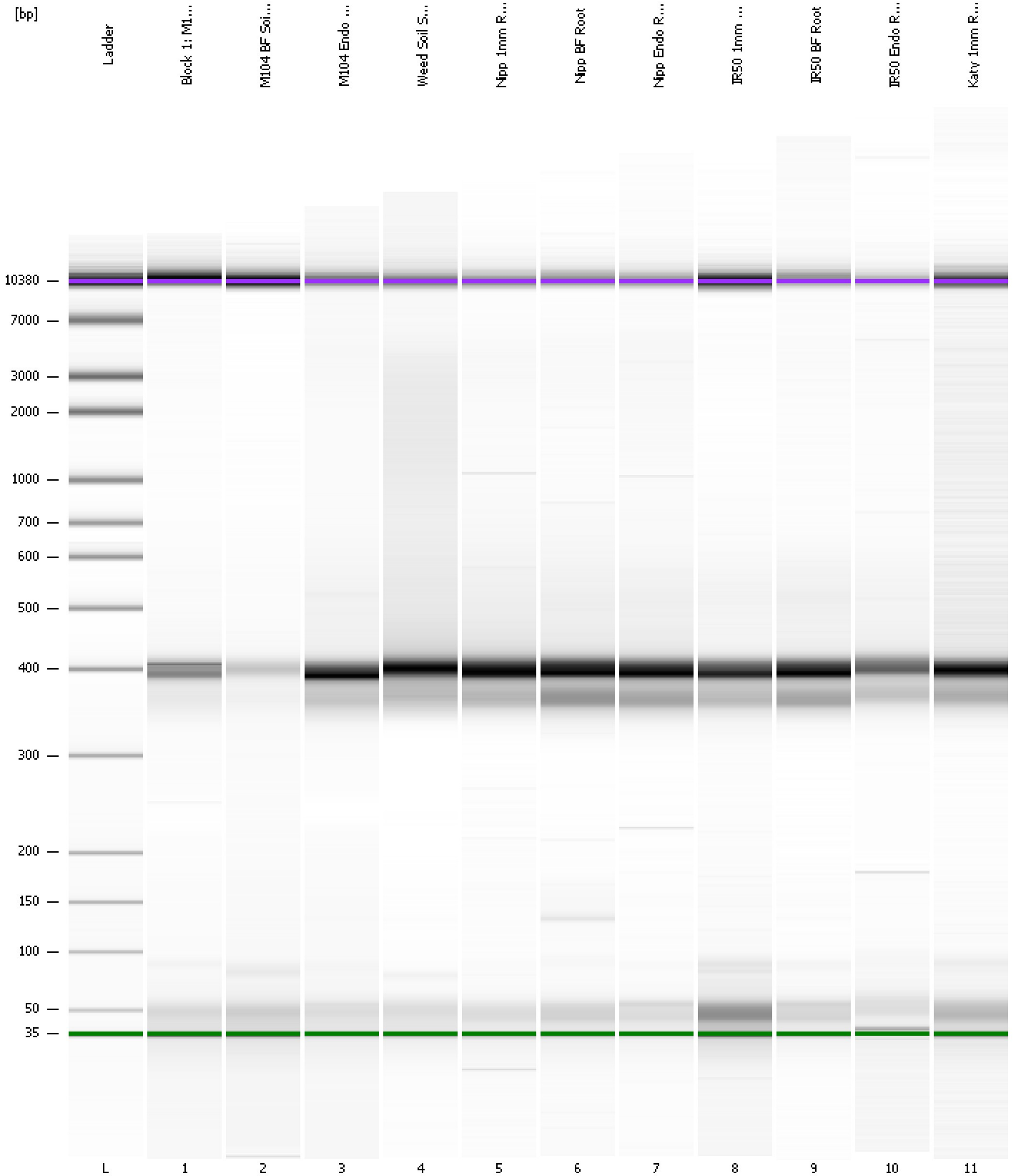
... Region table for sample 11 : Katy 1mm Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
332	463	395	1,280.9	332.85	337.8	52	5.5	■

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
Modified: 12/28/2012 3:47:36 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad

Created: 12/28/2012 3:05:13 PM
 Modified: 12/28/2012 3:47:36 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		12/28/2012 3:46:32 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2012-12-28\2012-12-28_004.xad)		Instrument	Run		12/28/2012 3:05:19 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		12/28/2012 3:05:19 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		12/28/2012 3:05:19 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		12/28/2012 3:05:19 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		12/28/2012 3:05:19 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		12/28/2012 3:05:19 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		12/28/2012 3:05:19 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1