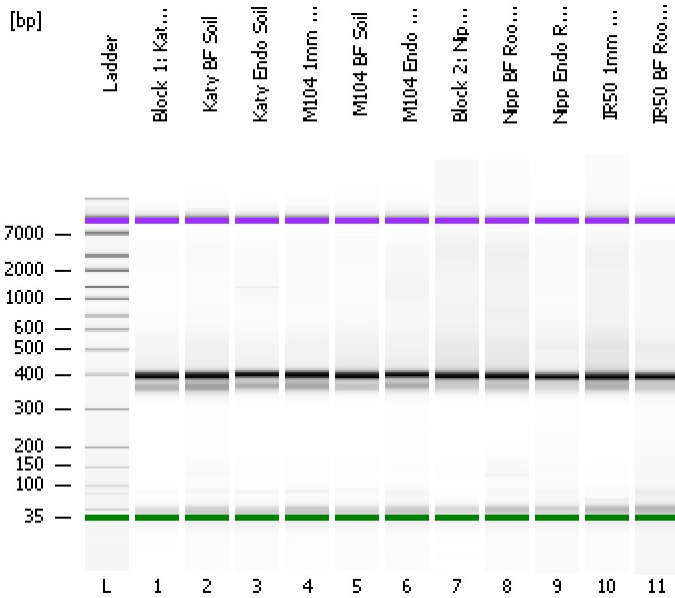


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
Modified: 1/2/2013 3:42:16 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

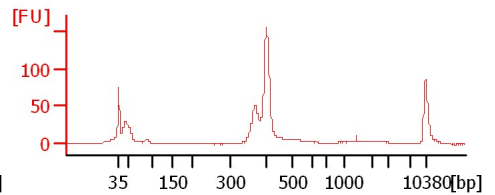
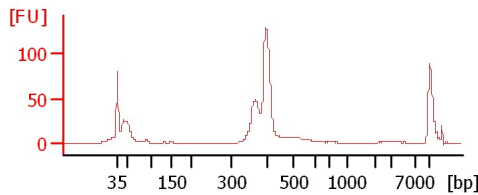
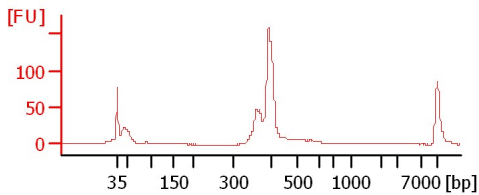
Chip Information:

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

**Block 1: Katy 1mm Soil**

**Katy BF Soil**

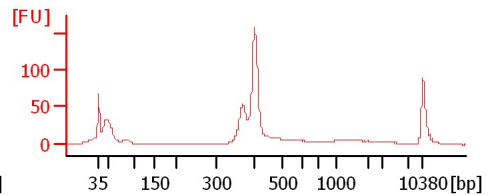
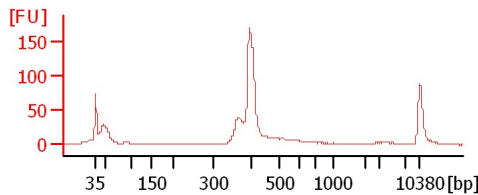
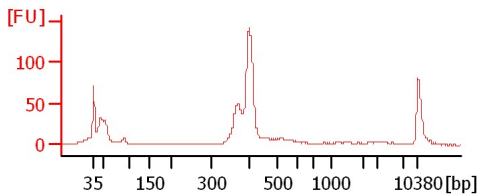
**Katy Endo Soil**



**M104 1mm Soil**

**M104 BF Soil**

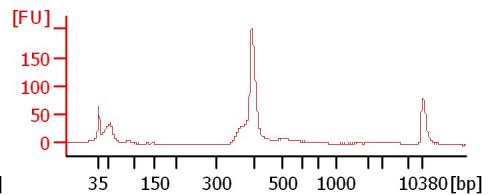
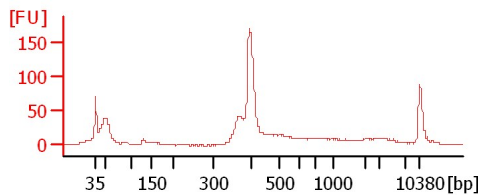
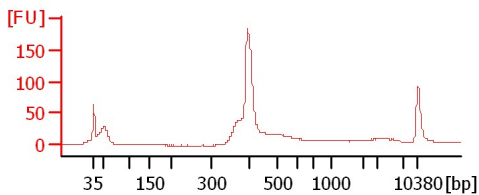
**M104 Endo Soil**



**Block 2: Nipp 1mm Root-N**

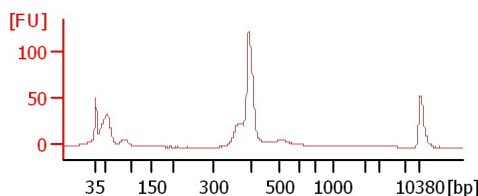
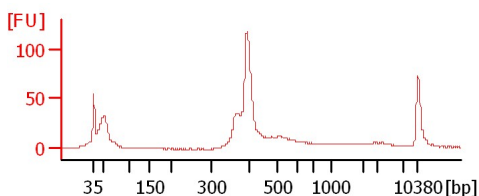
**Nipp BF Root-N**

**Nipp Endo Root-N**



**IR50 1mm Root-N**

**IR50 BF Root-N**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
 Modified: 1/2/2013 3:42:16 PM

**Electrophoresis File Run Summary (Chip Summary)**

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
Block 1: Katy 1mm Soil		<input type="checkbox"/>	✓			
Katy BF Soil		<input type="checkbox"/>	✓			
Katy Endo Soil		<input type="checkbox"/>	✓			
M104 1mm Soil		<input type="checkbox"/>	✓			
M104 BF Soil		<input type="checkbox"/>	✓			
M104 Endo Soil		<input type="checkbox"/>	✓			
Block 2: Nipp 1mm Root-N		<input type="checkbox"/>	✓			
Nipp BF Root-N		<input type="checkbox"/>	✓			
Nipp Endo Root-N		<input type="checkbox"/>	✓			
IR50 1mm Root-N		<input type="checkbox"/>	✓			
IR50 BF Root-N		<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\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
Modified: 1/2/2013 3:42:16 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

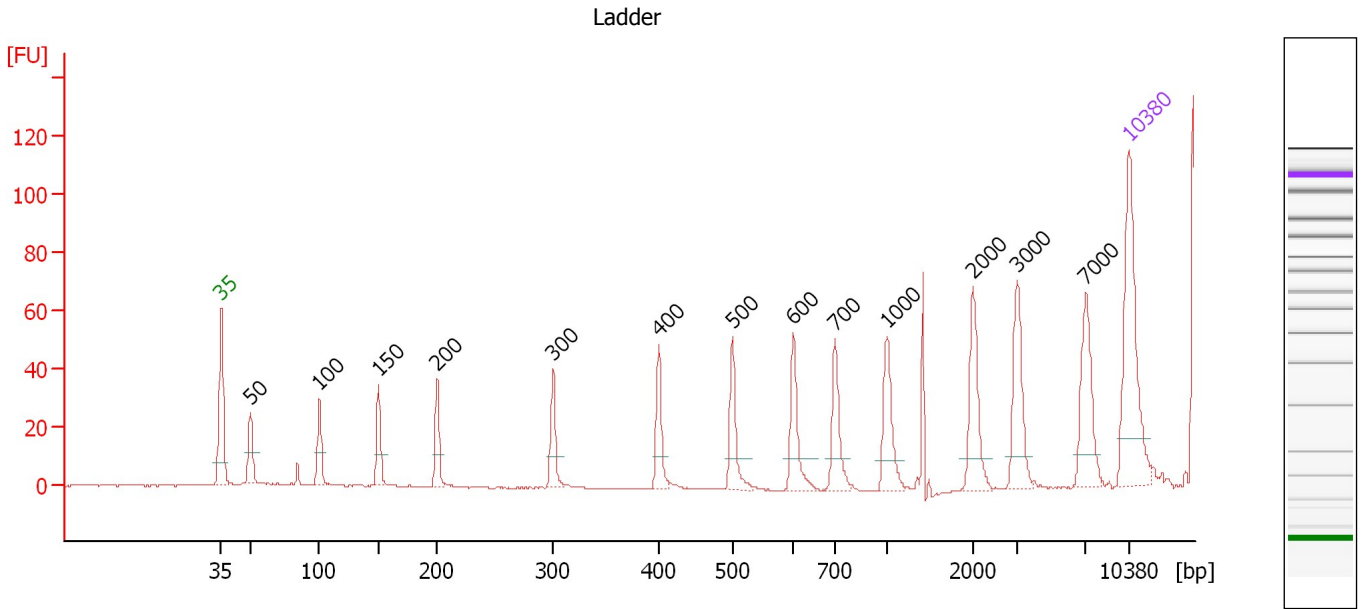
**Ladder**

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\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
 Modified: 1/2/2013 3:42:16 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.1

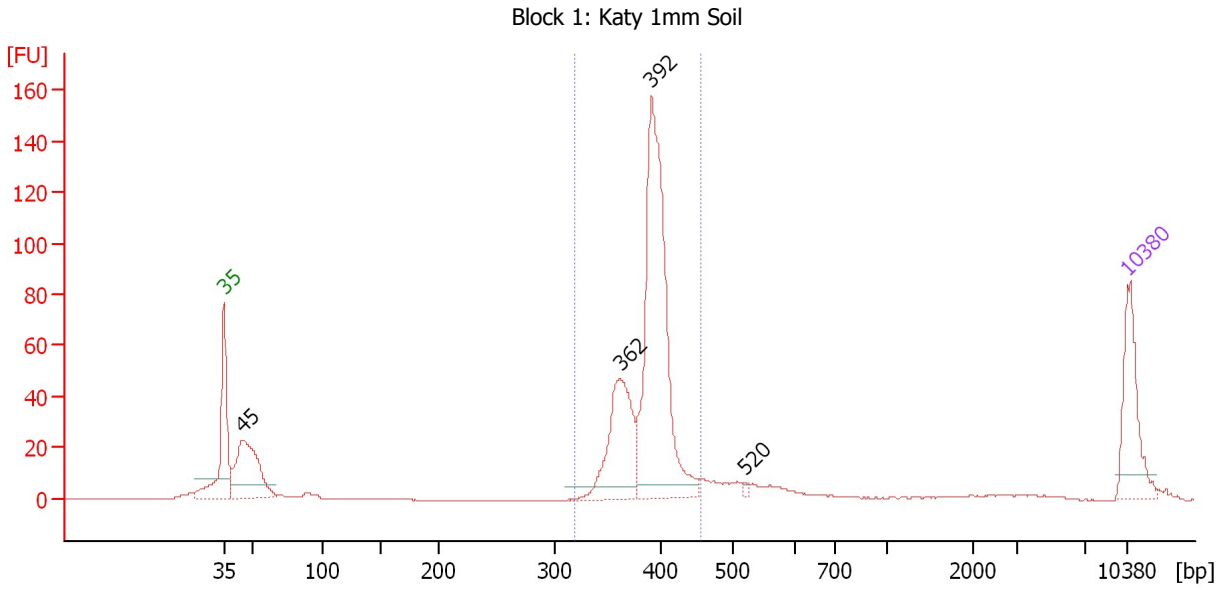
**Peak table for Ladder**

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\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
 Modified: 1/2/2013 3:42:16 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : Block 1: Katy 1mm Soil**

Number of peaks found: 4                      Corr. Area 1: 544.9  
 Noise: 0.2

**Peak table for sample 1 : Block 1: Katy 1mm Soil**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	45	189.11	6,427.4	
3	362	167.25	699.8	
4	392	441.26	1,706.1	
5	520	3.82	11.1	
6	10,380	75.00	10.9	Upper Marker

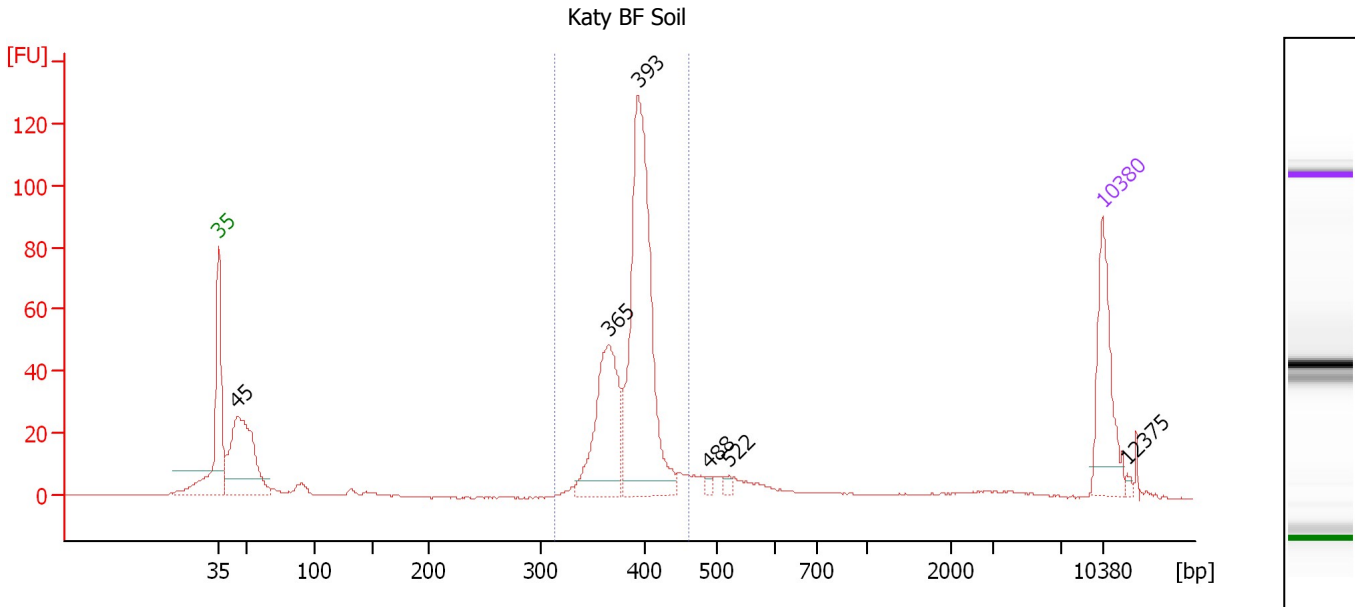
**Region table for sample 1 : Block 1: Katy 1mm Soil**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
320	457	389	2,380.1	610.47	544.9	71	5.4	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
 Modified: 1/2/2013 3:42:16 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : Katy BF Soil**

Number of peaks found: 6                      Corr. Area 1: 495.2  
 Noise: 0.2

**Peak table for sample 2 : Katy BF Soil**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	45	210.29	7,112.4	
3	365	163.58	679.9	
4	393	344.86	1,328.2	
5	488	5.28	16.4	
6	522	5.56	16.1	
7	10,380	75.00	10.9	Upper Marker
8	12,375	0.00	0.0	

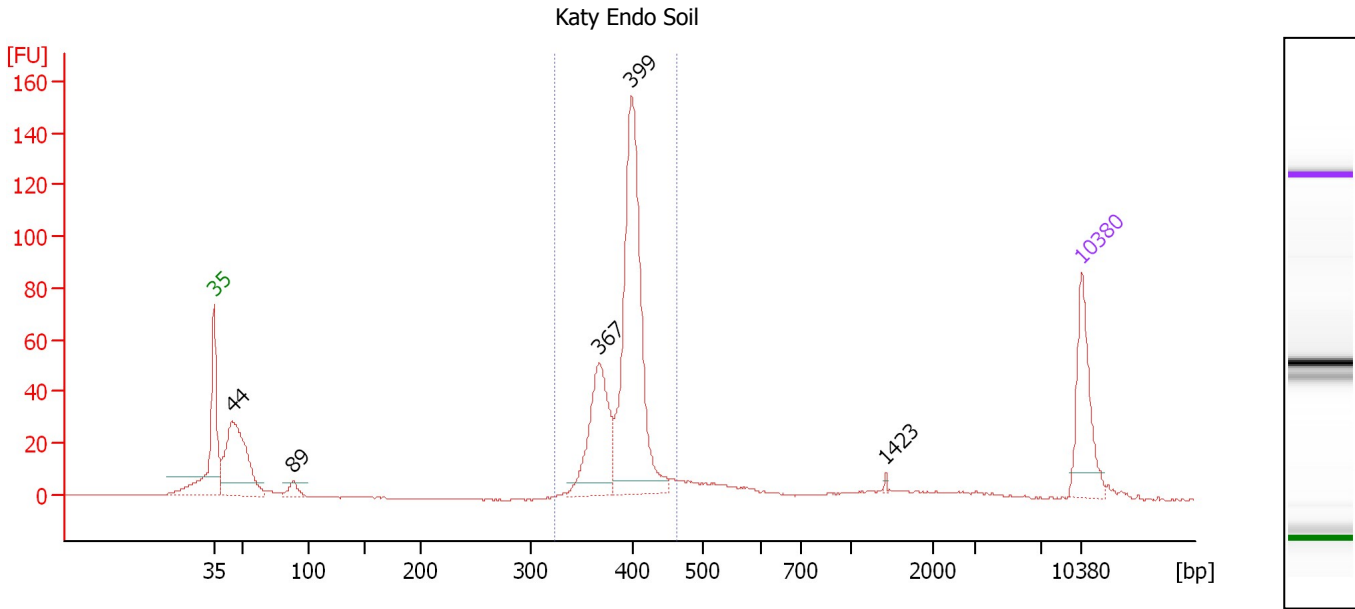
**Region table for sample 2 : Katy BF Soil**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
312	460	388	2,077.3	530.65	495.2	66	5.9	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
 Modified: 1/2/2013 3:42:16 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : Katy Endo Soil**

Number of peaks found: 5                      Corr. Area 1: 496.2  
 Noise: 0.2

**Peak table for sample 3 : Katy Endo Soil**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	44	236.22	8,058.2	
3	89	18.52	316.5	
4	367	161.45	666.6	
5	399	380.38	1,444.3	
6	1,423	1.86	2.0	
7	10,380	75.00	10.9	Upper Marker

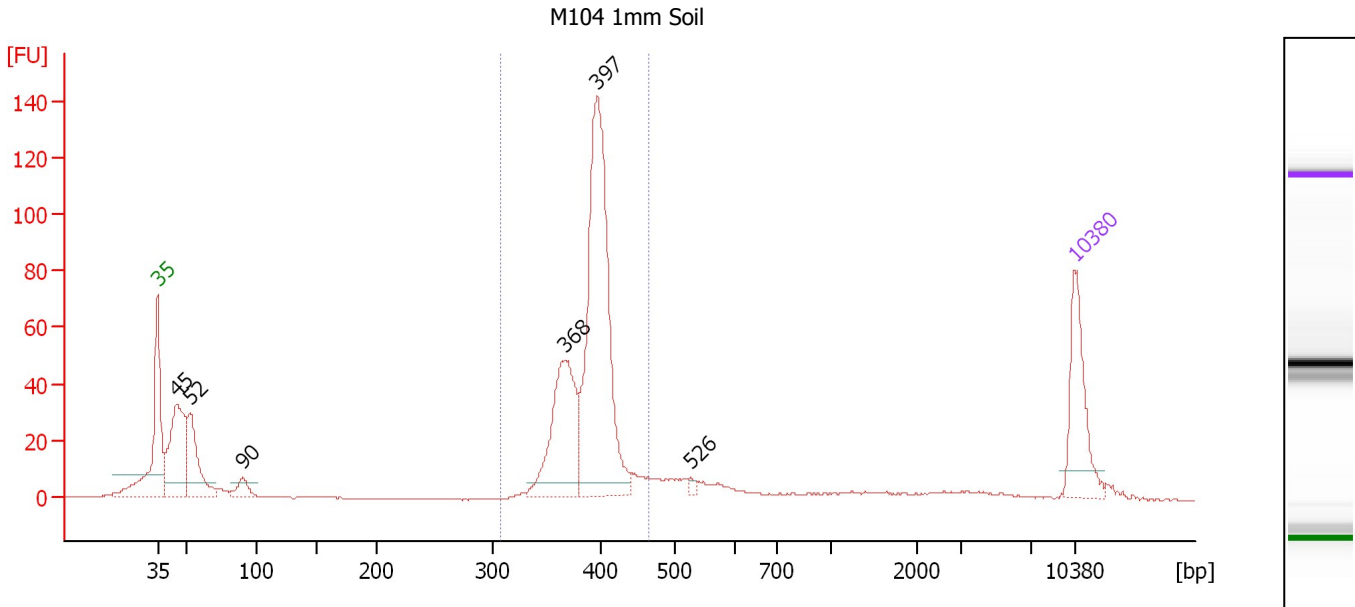
**Region table for sample 3 : Katy Endo Soil**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
323	462	393	2,179.2	563.65	496.2	65	5.5	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
 Modified: 1/2/2013 3:42:16 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : M104 1mm Soil**

Number of peaks found: 6      Corr. Area 1: 524.1  
 Noise: 0.2

**Peak table for sample 4 : M104 1mm Soil**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	45	176.40	5,991.3	
3	52	107.87	3,126.7	
4	90	22.81	384.3	
5	368	171.76	707.5	
6	397	398.74	1,520.4	
7	526	4.39	12.6	
8	10,380	75.00	10.9	Upper Marker

**Region table for sample 4 : M104 1mm Soil**

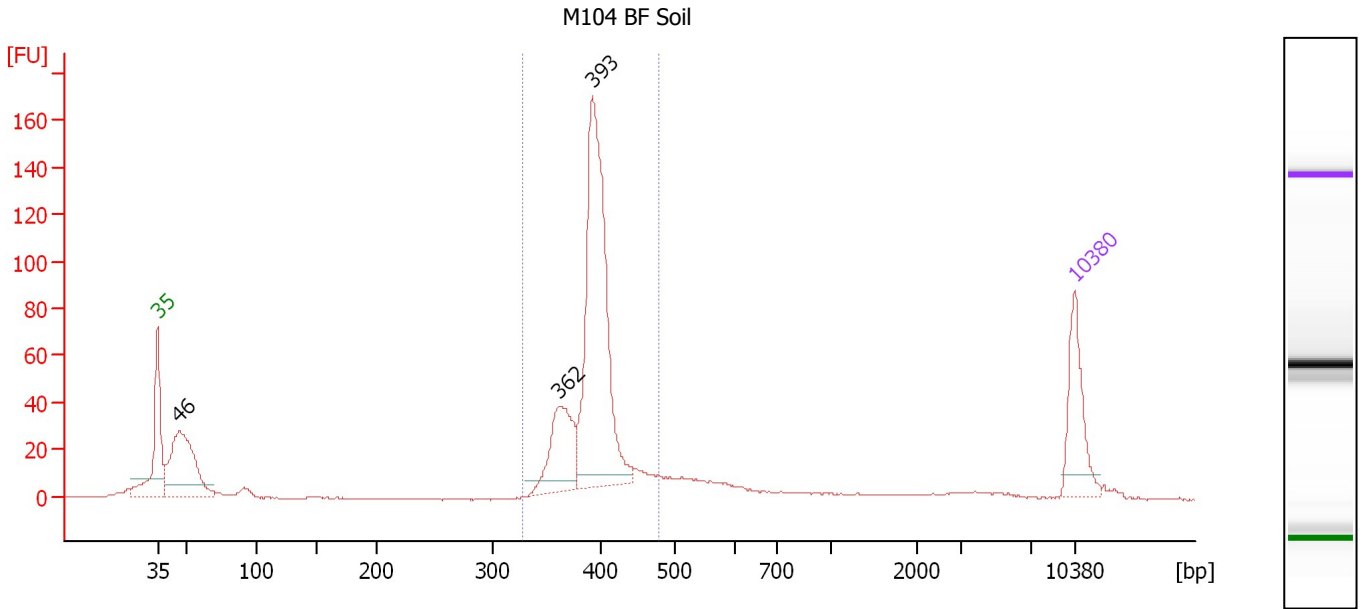
From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
307	466	392	2,343.7	604.13	524.1	62	5.8	Blue



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
 Modified: 1/2/2013 3:42:16 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : M104 BF Soil**

Number of peaks found: 3                      Corr. Area 1: 572.6  
 Noise: 0.2

**Peak table for sample 5 : M104 BF Soil**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	46	234.22	7,728.6	
3	362	121.45	508.2	
4	393	438.99	1,692.2	
5	10,380	75.00	10.9	Upper Marker

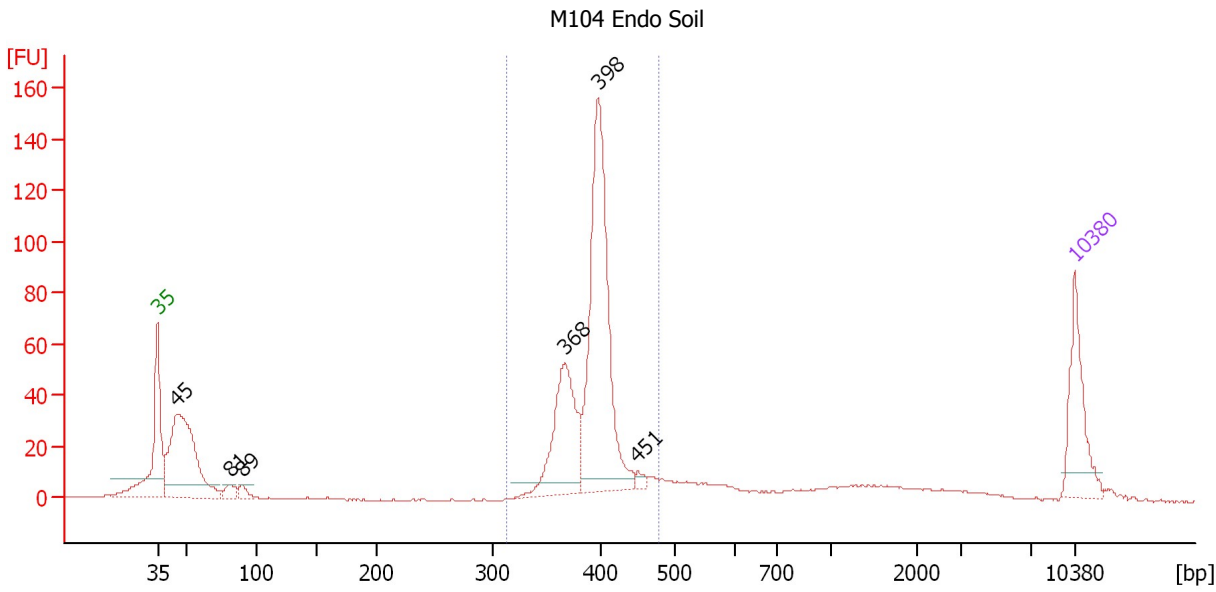
**Region table for sample 5 : M104 BF Soil**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
329	478	395	2,436.4	633.91	572.6	66	6.1	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
 Modified: 1/2/2013 3:42:16 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : M104 Endo Soil**

Number of peaks found: 6      Corr. Area 1: 522.8  
 Noise: 0.2

**Peak table for sample 6 : M104 Endo Soil**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	45	311.49	10,525.6	
3	81	17.79	333.5	
4	89	13.70	232.5	
5	368	175.87	725.0	
6	398	384.46	1,462.4	
7	451	7.72	25.9	
8	10,380	75.00	10.9	Upper Marker

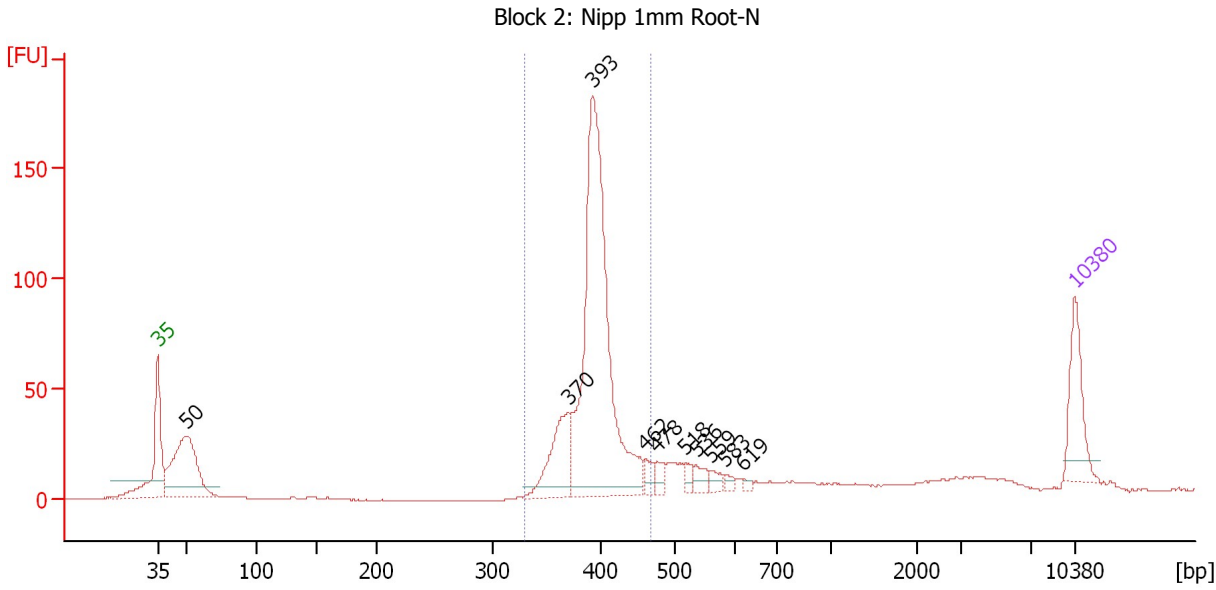
**Region table for sample 6 : M104 Endo Soil**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
313	479	394	2,371.9	615.60	522.8	60	6.4	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
 Modified: 1/2/2013 3:42:16 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : Block 2: Nipp 1mm Root-N**

Number of peaks found: 10                      Corr. Area 1: 598.1  
 Noise: 0.2

**Peak table for sample 7 : Block 2: Nipp 1mm Root-N**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	256.02	7,803.3	
3	370	125.79	514.7	
4	393	651.70	2,512.9	
5	462	17.76	58.3	
6	478	18.66	59.2	
7	518	11.78	34.4	
8	536	20.16	57.0	
9	559	13.05	35.4	
10	583	7.64	19.9	
11	619	4.92	12.1	
12	10,380	75.00	10.9	Upper Marker

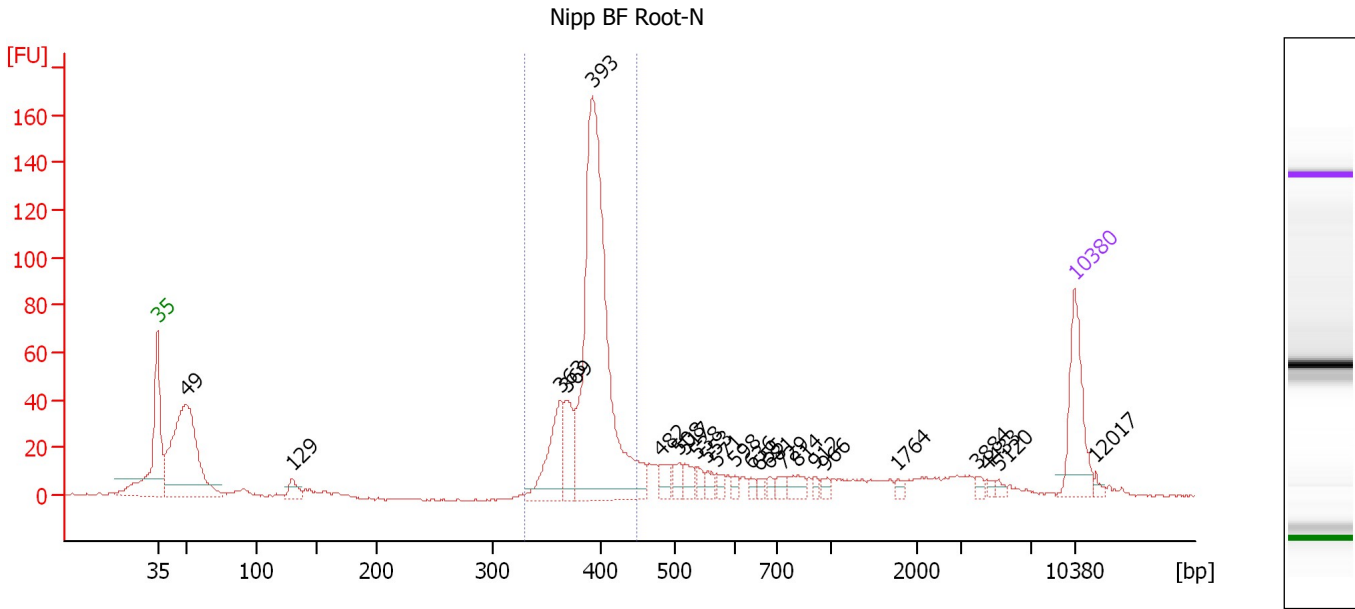
**Region table for sample 7 : Block 2: Nipp 1mm Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
329	469	397	2,950.9	770.31	598.1	63	5.8	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
 Modified: 1/2/2013 3:42:16 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : Nipp BF Root-N**

Number of peaks found: 24                      Corr. Area 1: 540.0  
 Noise: 0.5

**Peak table for sample 8 : Nipp BF Root-N**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	49	346.72	10,678.6	
3	129	21.06	246.7	
4	363	94.09	392.7	
5	369	56.32	231.5	
6	393	544.19	2,097.5	
7	482	20.72	65.1	
8	508	15.45	46.1	
9	517	18.30	53.6	
10	538	11.05	31.1	
11	553	11.64	31.9	
12	571	7.95	21.1	
13	598	7.07	17.9	
14	636	6.49	15.5	
15	655	6.44	14.9	
16	681	7.25	16.1	
17	729	9.41	19.6	
18	814	16.81	31.3	
19	912	5.67	9.4	
20	966	7.06	11.1	
21	1,764	6.03	5.2	
22	3,884	5.55	2.2	
23	4,433	4.25	1.5	
24	5,120	4.36	1.3	
25	10,380	75.00	10.9	Upper Marker
26	12,017	0.00	0.0	

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
Modified: 1/2/2013 3:42:16 PM

**Electropherogram Summary Continued ...**

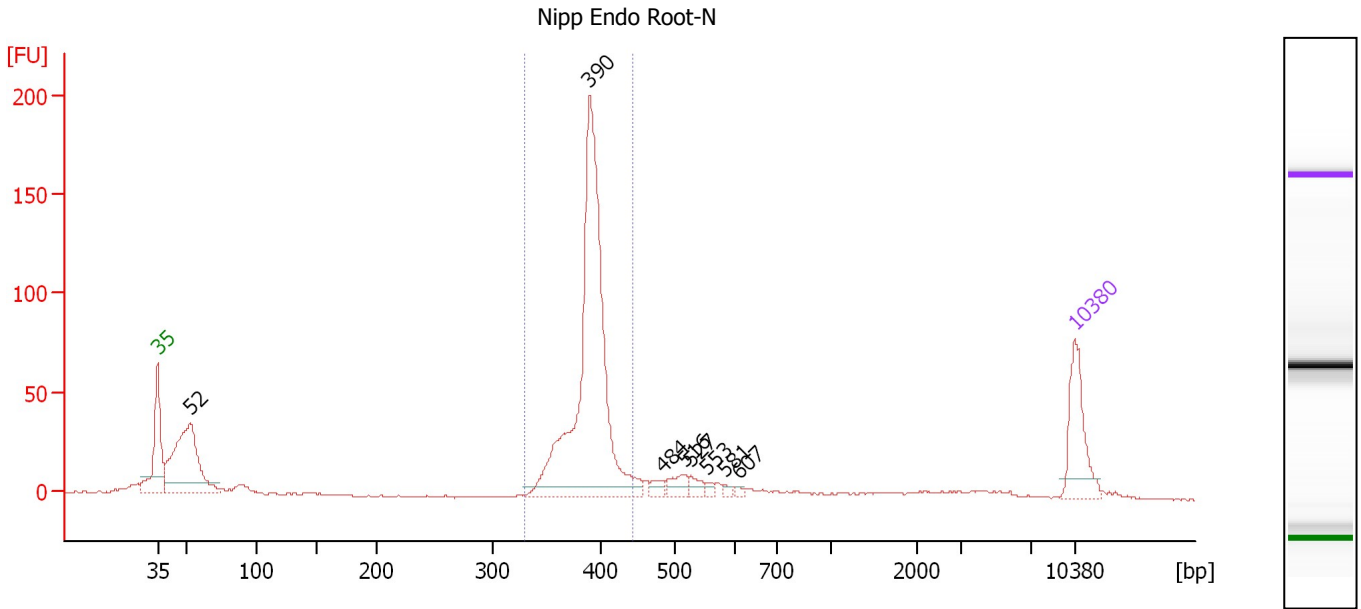
... Region table for sample 8 : Nipp BF Root-N

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
329	450	392	2,501.2	645.73	540.0	52	5.1	■

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
 Modified: 1/2/2013 3:42:16 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : Nipp Endo Root-N**

Number of peaks found: 8                      Corr. Area 1: 525.7  
 Noise: 0.5

**Peak table for sample 9 : Nipp Endo Root-N**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	52	277.59	8,084.2	
3	390	621.98	2,413.8	
4	484	12.60	39.4	
5	516	22.88	67.2	
6	527	14.34	41.3	
7	553	7.29	20.0	
8	581	5.89	15.4	
9	607	3.91	9.8	
10	10,380	75.00	10.9	Upper Marker

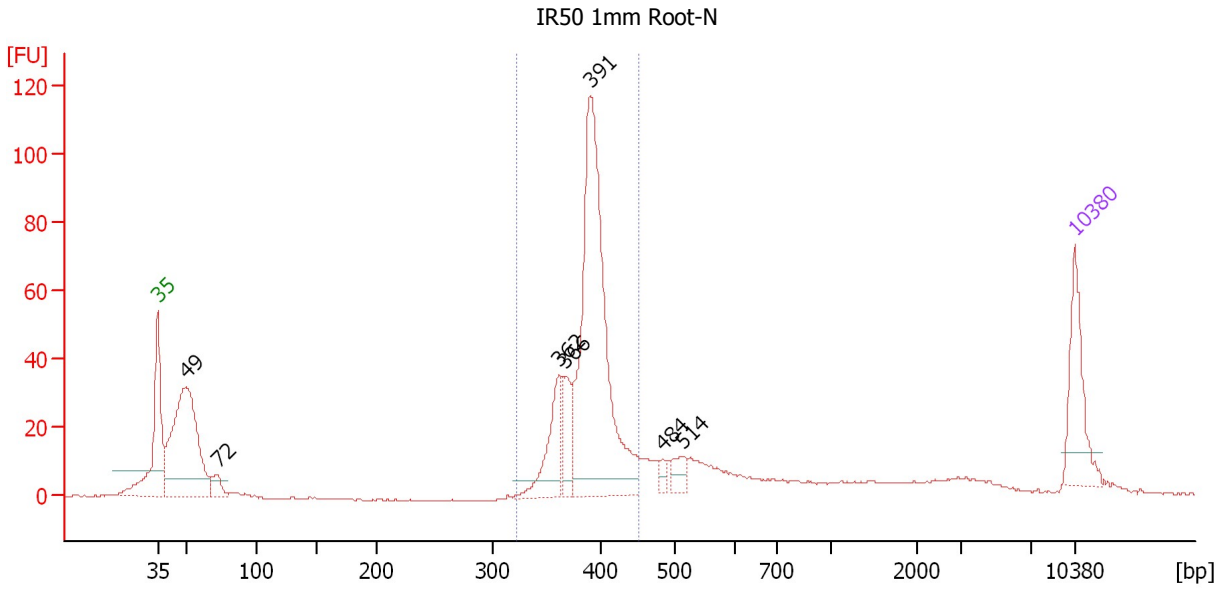
**Region table for sample 9 : Nipp Endo Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
330	444	390	2,359.8	606.71	525.7	60	4.4	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
 Modified: 1/2/2013 3:42:16 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : IR50 1mm Root-N**

Number of peaks found: 7                      Corr. Area 1: 411.3  
 Noise: 0.3

**Peak table for sample 10 : IR50 1mm Root-N**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	49	357.55	10,964.3	
3	72	27.26	575.0	
4	362	87.31	365.5	
5	366	52.29	216.2	
6	391	492.13	1,905.4	
7	484	10.90	34.1	
8	514	23.70	69.9	
9	10,380	75.00	10.9	Upper Marker

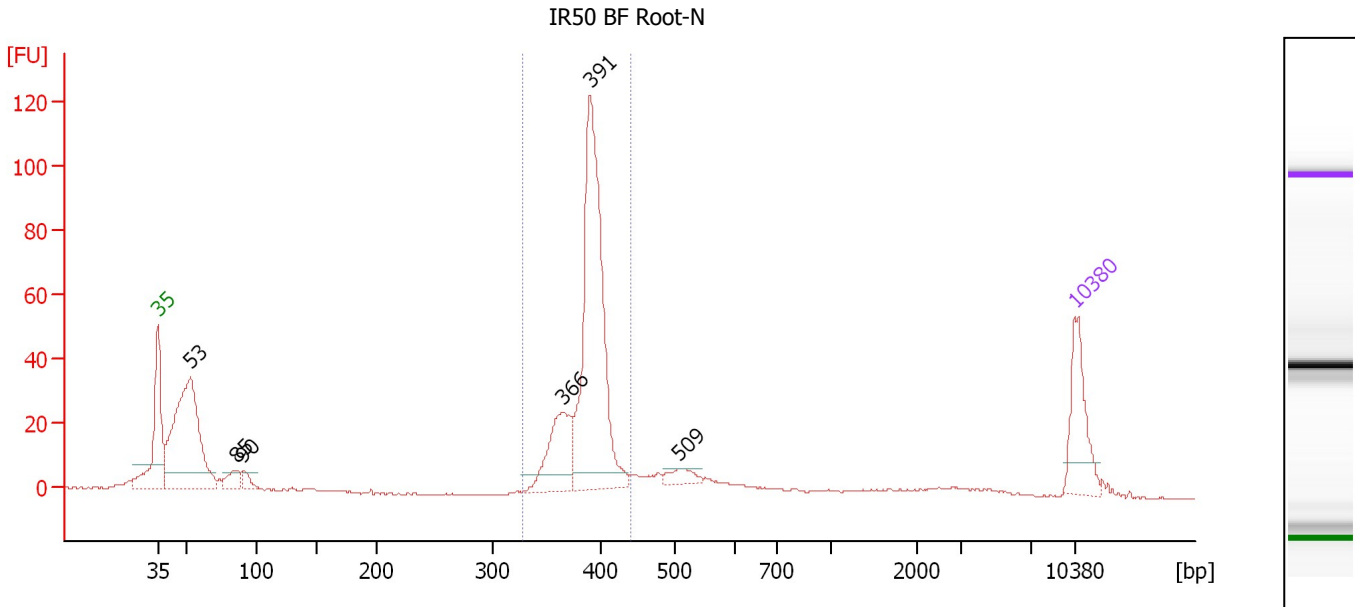
**Region table for sample 10 : IR50 1mm Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
322	453	390	2,482.6	637.91	411.3	53	5.5	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
 Modified: 1/2/2013 3:42:16 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : IR50 BF Root-N**

Number of peaks found: 6                      Corr. Area 1: 345.7  
 Noise: 0.2

**Peak table for sample 11 : IR50 BF Root-N**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	53	413.48	11,930.6	
3	85	34.23	609.0	
4	90	19.60	328.3	
5	366	120.86	500.1	
6	391	452.00	1,752.6	
7	509	23.10	68.8	
8	10,380	75.00	10.9	Upper Marker

**Region table for sample 11 : IR50 BF Root-N**

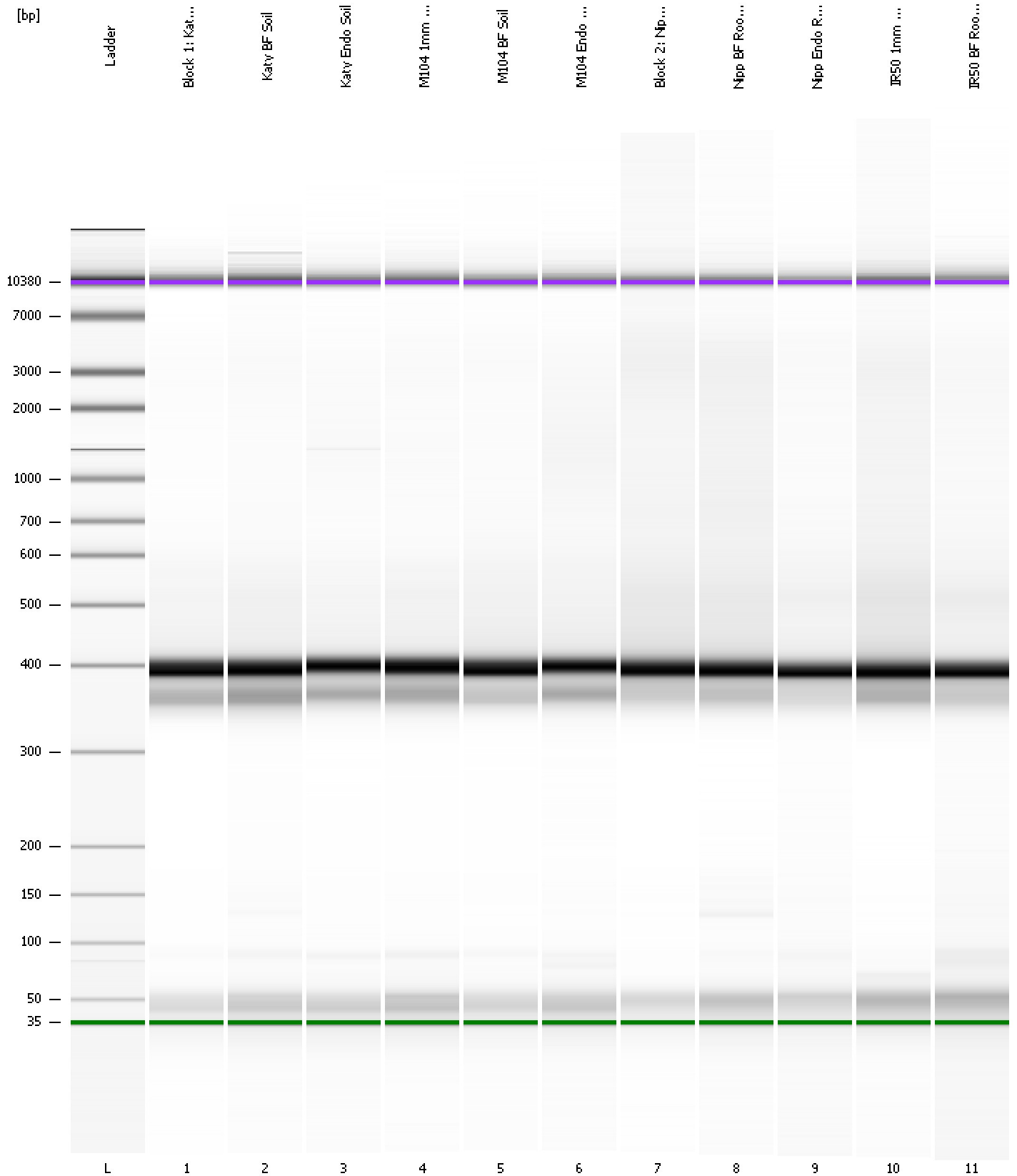
From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
328	442	389	2,295.5	588.29	345.7	53	4.6	Blue



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
Modified: 1/2/2013 3:42:16 PM

**Gel Image**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02\_004.xad

Created: 1/2/2013 2:59:49 PM  
 Modified: 1/2/2013 3:42:16 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		1/2/2013 3:41:03 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2013-01-02\2013-01-02_004.xad)		Instrument	Run		1/2/2013 2:59:50 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		1/2/2013 2:59:50 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		1/2/2013 2:59:50 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		1/2/2013 2:59:50 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		1/2/2013 2:59:50 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		1/2/2013 2:59:50 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		1/2/2013 2:59:50 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1