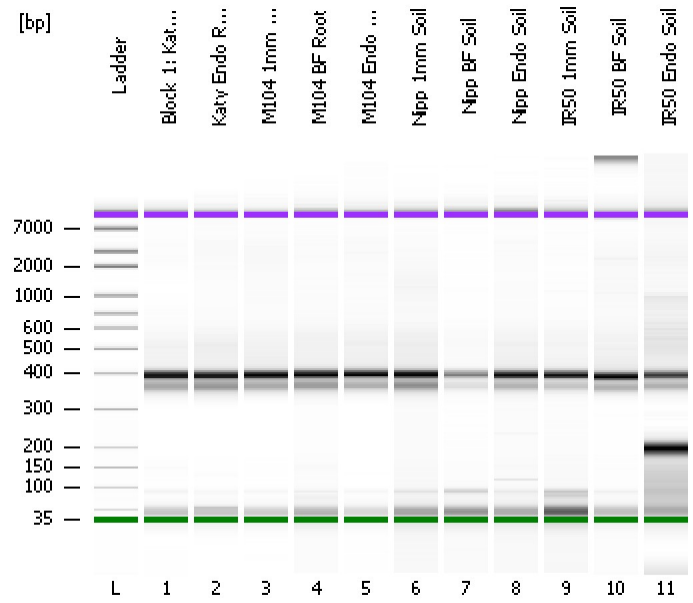
Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02_002.xad

Created: 1/2/2013 1:38:05 PM
Modified: 1/2/2013 2:20:52 PM

Electrophoresis File Run Summary



Instrument Information:

Instrument Name: DE13701086 Firmware: C.01.069
Serial#: DE13701086 Type: G2938B

Assay Information:

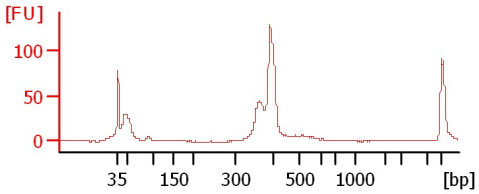
Assay Origin Path: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\assays\dsDNA\High Sensitivity DNA.xsy

Assay Class: High Sensitivity DNA Assay
Version: 1.03
Assay Comments: Copyright © 2003-2010 Agilent Technologies

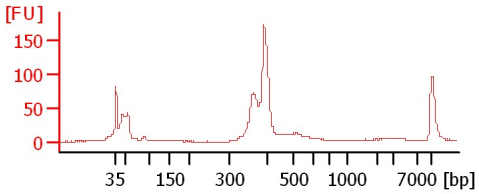
Chip Information:

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

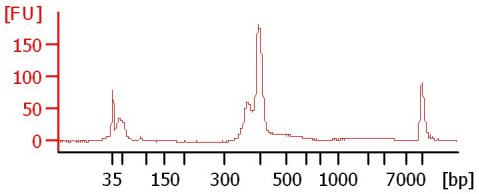
Block 1: Katy BF Root



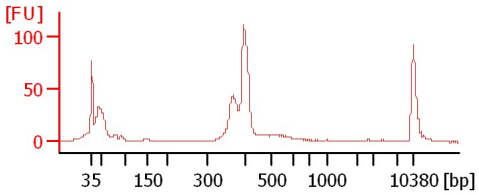
Katy Endo Root



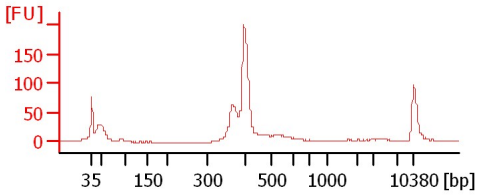
M104 1mm Root



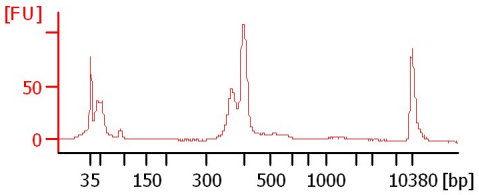
M104 BF Root



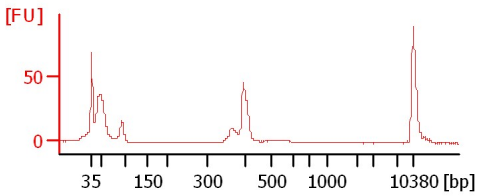
M104 Endo Root



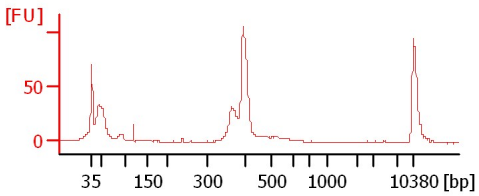
Nipp 1mm Soil



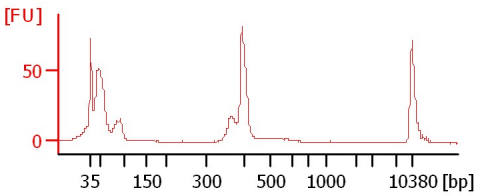
Nipp BF Soil



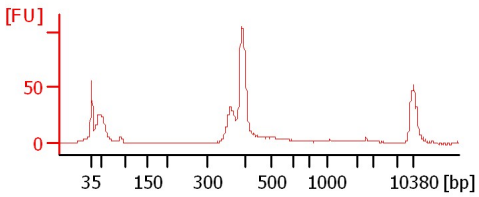
Nipp Endo Soil



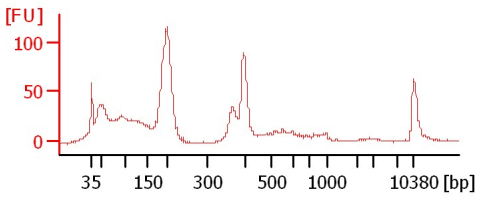
IR50 1mm Soil



IR50 BF Soil



IR50 Endo Soil



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02_002.xad

Created: 1/2/2013 1:38:05 PM
Modified: 1/2/2013 2:20:52 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
Block 1: Katy BF Root		☐	✔			
Katy Endo Root		☐	✔			
M104 1mm Root		☐	✔			
M104 BF Root		☐	✔			
M104 Endo Root		☐	✔			
Nipp 1mm Soil		☐	✔			
Nipp BF Soil		☐	✔			
Nipp Endo Soil		☐	✔			
IR50 1mm Soil		☐	✔			
IR50 BF Soil		☐	✔			
IR50 Endo Soil		☐	✔			
Ladder		☐	✔			

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_002.xad

Created: 1/2/2013 1:38:05 PM
Modified: 1/2/2013 2:20:52 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

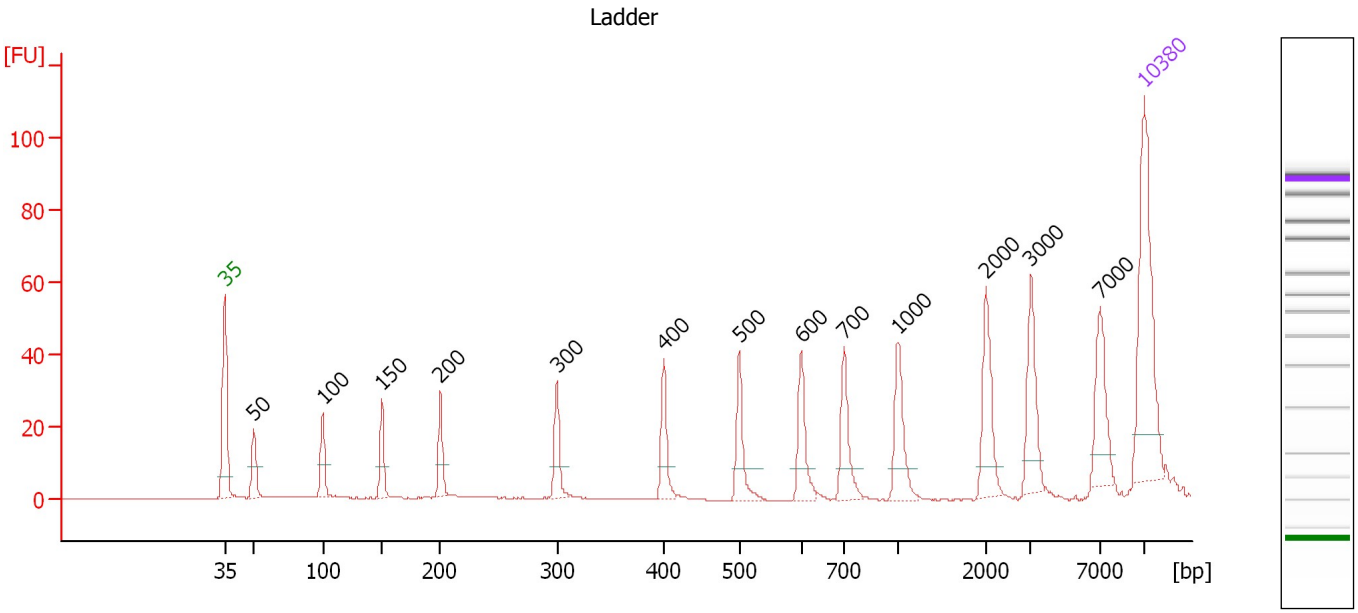
Ladder

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_002.xad

Created: 1/2/2013 1:38:05 PM
Modified: 1/2/2013 2:20:52 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_002.xad

Created: 1/2/2013 1:38:05 PM
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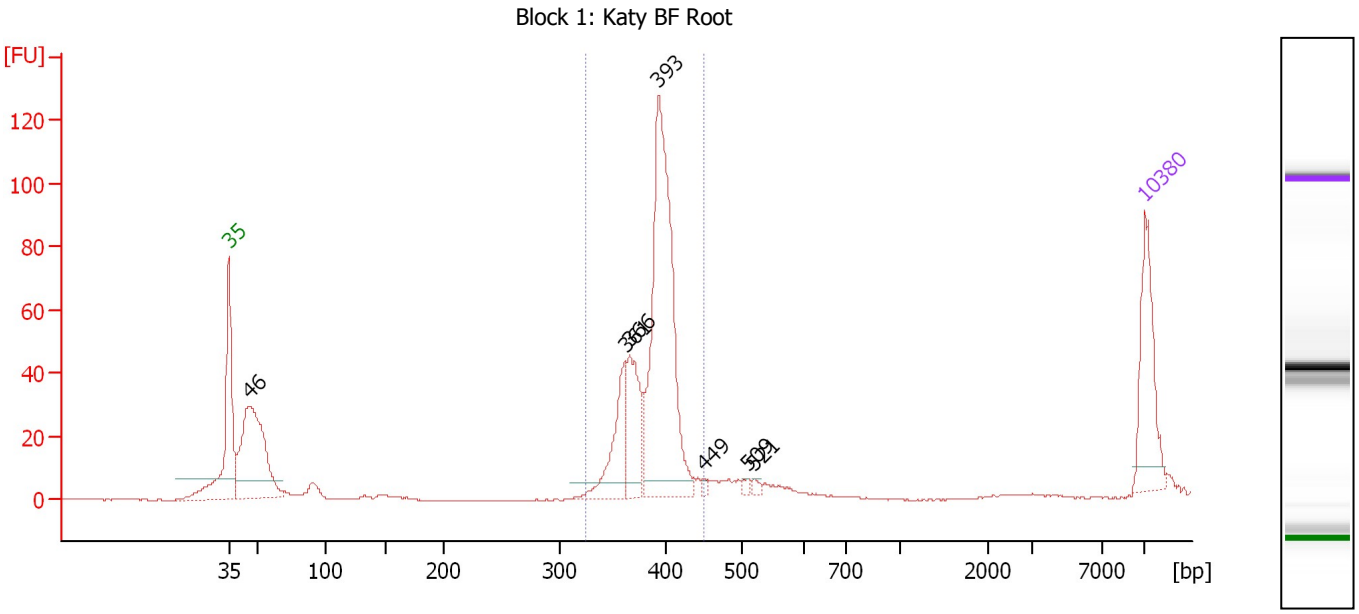
Electropherogram Summary Continued ...



Overall Results for sample 1 : Block 1: Katy BF Root

Number of peaks found:	7	Corr. Area 1:	444.4
Noise:	0.2		

Peak table for sample 1 : Block 1: Katy BF Root

Peak		Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1		35	125.00	5,411.3	Lower Marker
2		46	250.15	8,314.4	
3		361	85.97	360.6	
4		366	83.71	346.7	
5		393	359.23	1,386.0	
6		449	4.13	13.9	
7		509	4.55	13.5	
8		521	4.46	13.0	
9		10,380	75.00	10.9	Upper Marker

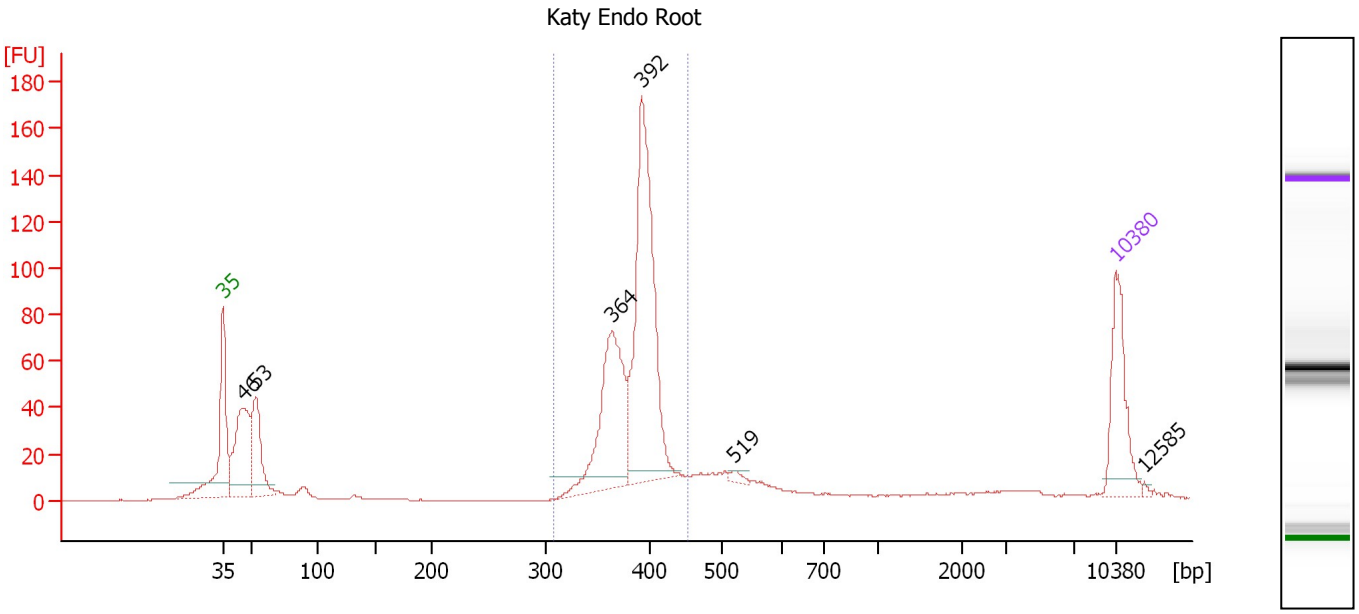
Region table for sample 1 : Block 1: Katy BF Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
325	451	388	2,012.1	514.24	444.4	70	5.2	

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02_002.xad

Created: 1/2/2013 1:38:05 PM
Modified: 1/2/2013 2:20:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : Katy Endo Root

Number of peaks found:	6	Corr. Area 1:	662.3
Noise:	0.2		

Peak table for sample 2 : Katy Endo Root

Peak		Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1		35	125.00	5,411.3	Lower Marker
2		46	173.70	5,774.9	
3		53	119.96	3,404.4	
4		364	205.69	855.9	
5		392	355.05	1,371.3	
6		519	7.18	20.9	
7		10,380	75.00	10.9	Upper Marker
8		12,585	0.00	0.0	

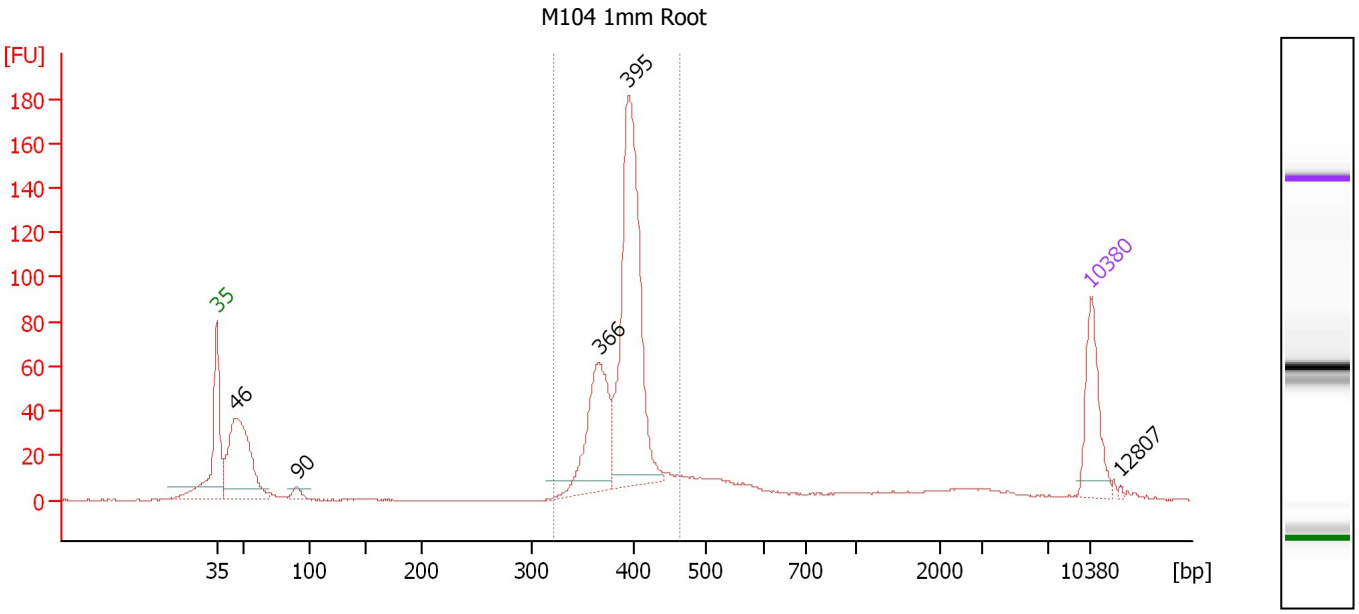
Region table for sample 2 : Katy Endo Root

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
307	454	386	2,504.9	636.32	662.3	61	5.9	

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02_002.xad

Created: 1/2/2013 1:38:05 PM
Modified: 1/2/2013 2:20:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : M104 1mm Root

Number of peaks found:	5	Corr. Area 1:	660.6
Noise:	0.2		

Peak table for sample 3 : M104 1mm Root

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	46	292.59	9,678.4	
3	90	18.06	303.3	
4	366	185.41	767.4	
5	395	448.40	1,720.7	
6	10,380	75.00	10.9	Upper Marker
7	12,807	0.00	0.0	

Region table for sample 3 : 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
321	463	391	2,770.8	712.61	660.6	64	5.8	

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02_002.xad

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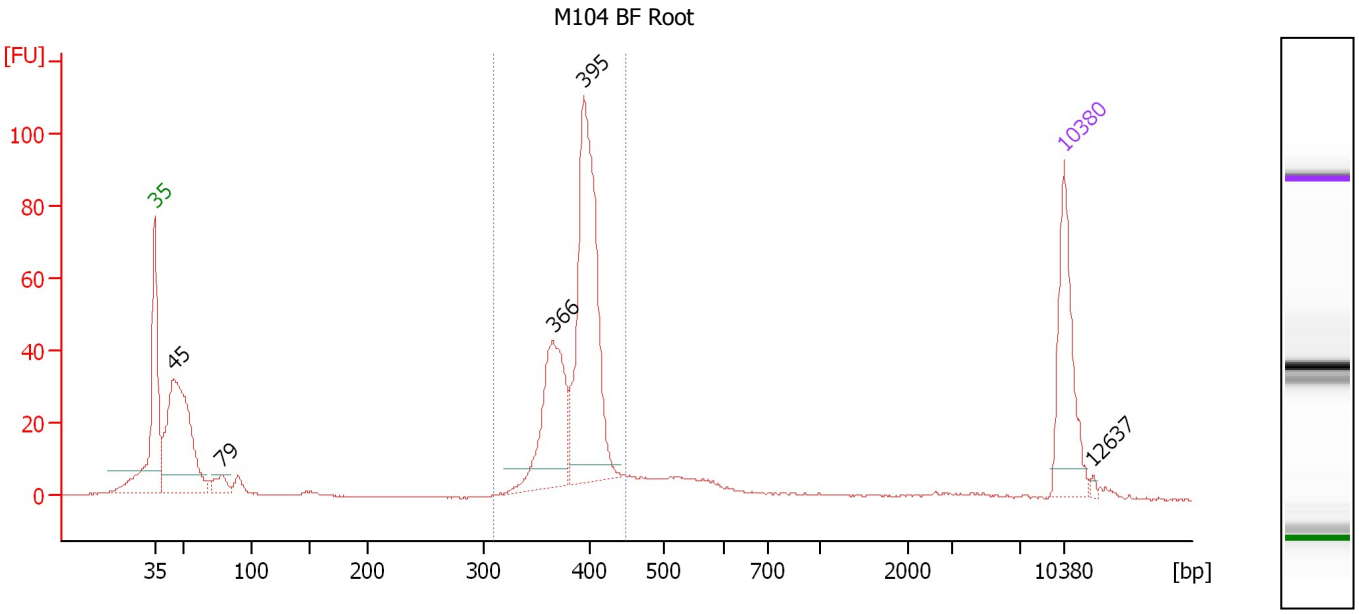

Overall Results for sample 4 : M104 BF Root

Number of peaks found:	5	Corr. Area 1:	411.7
Noise:	0.1		

Peak table for sample 4 : M104 BF Root

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	45	251.78	8,451.4	
3	79	18.59	358.5	
4	366	131.03	542.4	
5	395	259.33	993.8	
6	10,380	75.00	10.9	Upper Marker
7	12,637	0.00	0.0	

Region table for sample 4 : 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
311	450	390	1,702.7	436.68	411.7	58	5.6	

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02_002.xad

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Modified: 1/2/2013 2:20:52 PM

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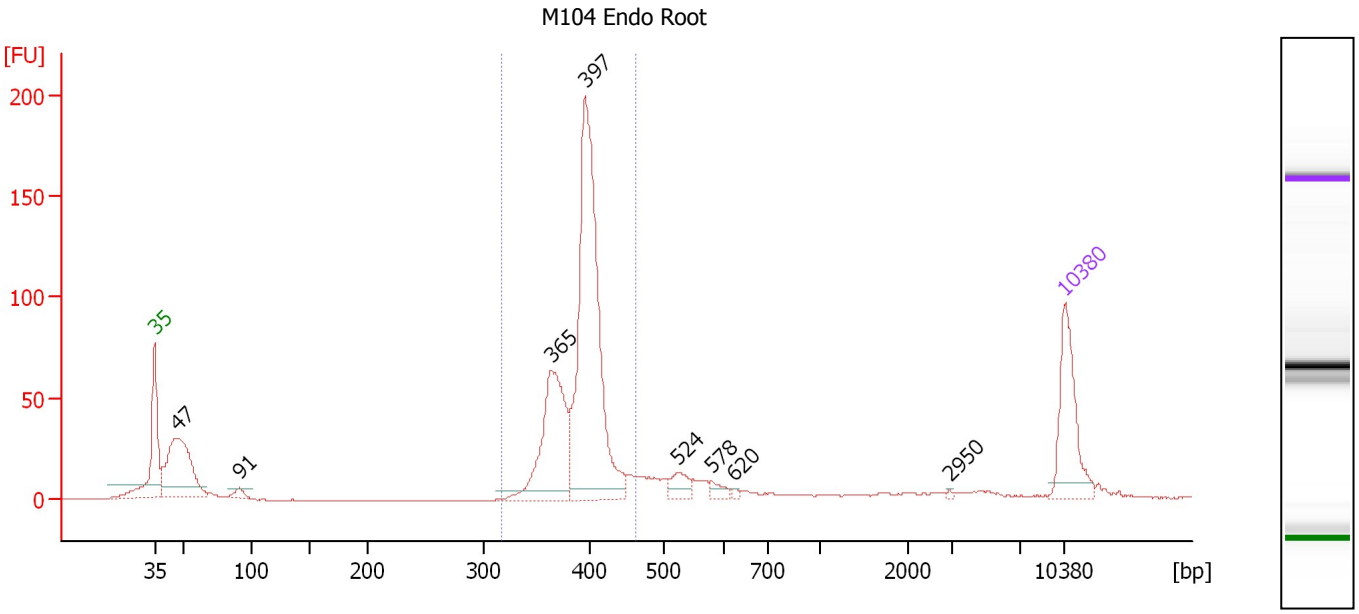

Overall Results for sample 5 : M104 Endo Root

Number of peaks found:	8	Corr. Area 1:	664.3
Noise:	0.2		

Peak table for sample 5 : M104 Endo Root

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	47	197.29	6,424.8	
3	91	11.92	197.8	
4	365	175.49	728.8	
5	397	415.33	1,585.6	
6	524	22.58	65.3	
7	578	11.45	30.0	
8	620	3.06	7.5	
9	2,950	1.53	0.8	
10	10,380	75.00	10.9	Upper Marker

Region table for sample 5 : 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
319	464	394	2,292.0	593.94	664.3	67	5.8	

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02_002.xad

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Modified: 1/2/2013 2:20:52 PM

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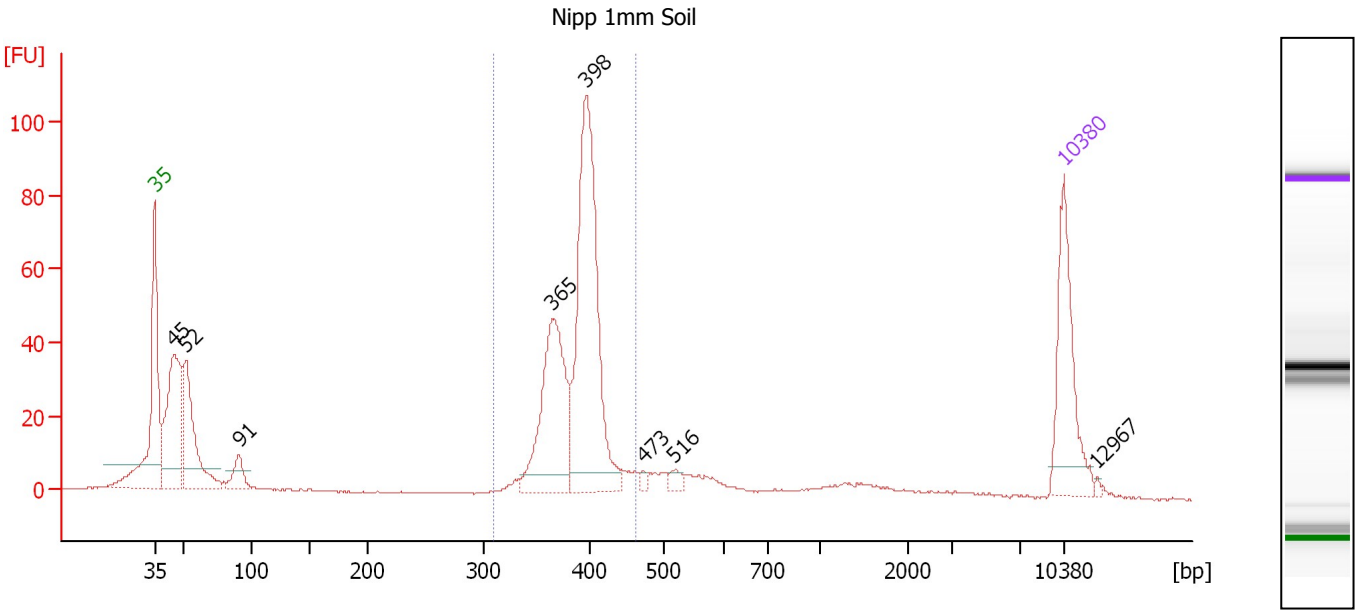

Overall Results for sample 6 : Nipp 1mm Soil

Number of peaks found:	8	Corr. Area 1:	422.4
Noise:	0.2		

Peak table for sample 6 : Nipp 1mm Soil

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	45	166.45	5,555.3	
3	52	124.10	3,608.1	
4	91	26.23	436.9	
5	365	152.40	632.3	
6	398	266.88	1,017.2	
7	473	4.00	12.8	
8	516	7.37	21.7	
9	10,380	75.00	10.9	Upper Marker
10	12,967	0.00	0.0	

Region table for sample 6 : 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
310	464	389	1,724.2	441.79	422.4	55	6.1	

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02_002.xad

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Modified: 1/2/2013 2:20:52 PM

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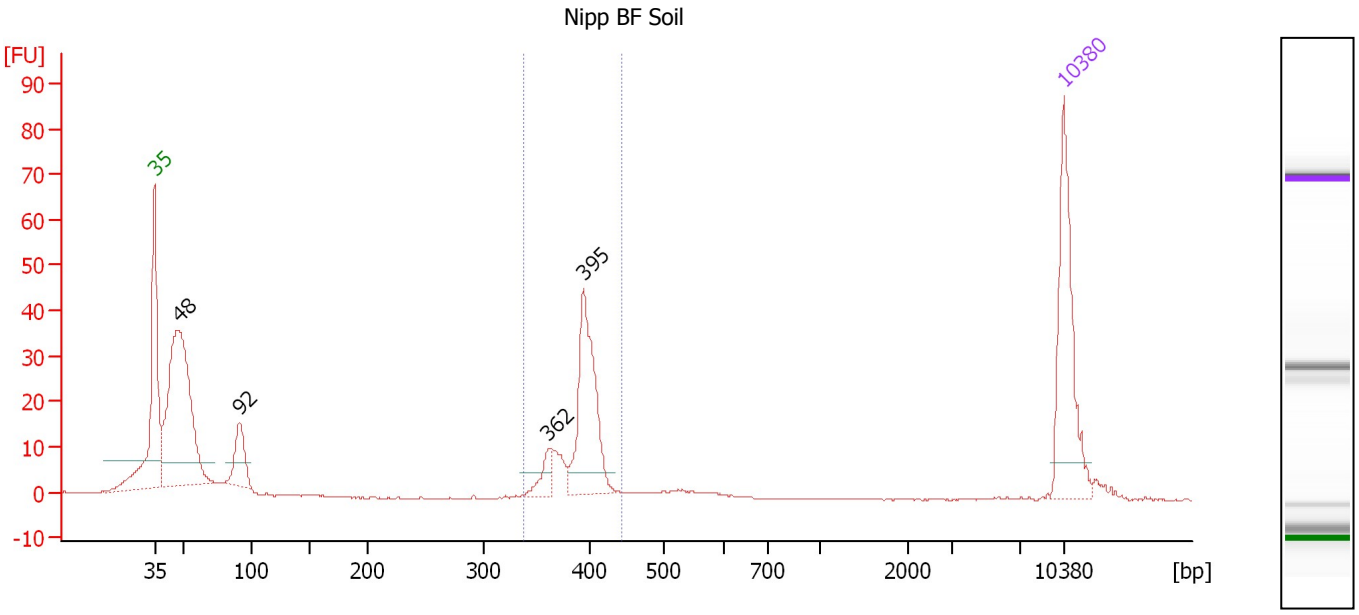


Overall Results for sample 7 : Nipp BF Soil

Number of peaks found:	4	Corr. Area 1:	120.3
Noise:	0.1		

Peak table for sample 7 : Nipp BF Soil

Peak		Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	◀	35	125.00	5,411.3	Lower Marker
2		48	273.95	8,709.0	
3		92	43.22	715.3	
4		362	17.52	73.4	
5		395	102.63	393.9	
6	▶	10,380	75.00	10.9	Upper Marker

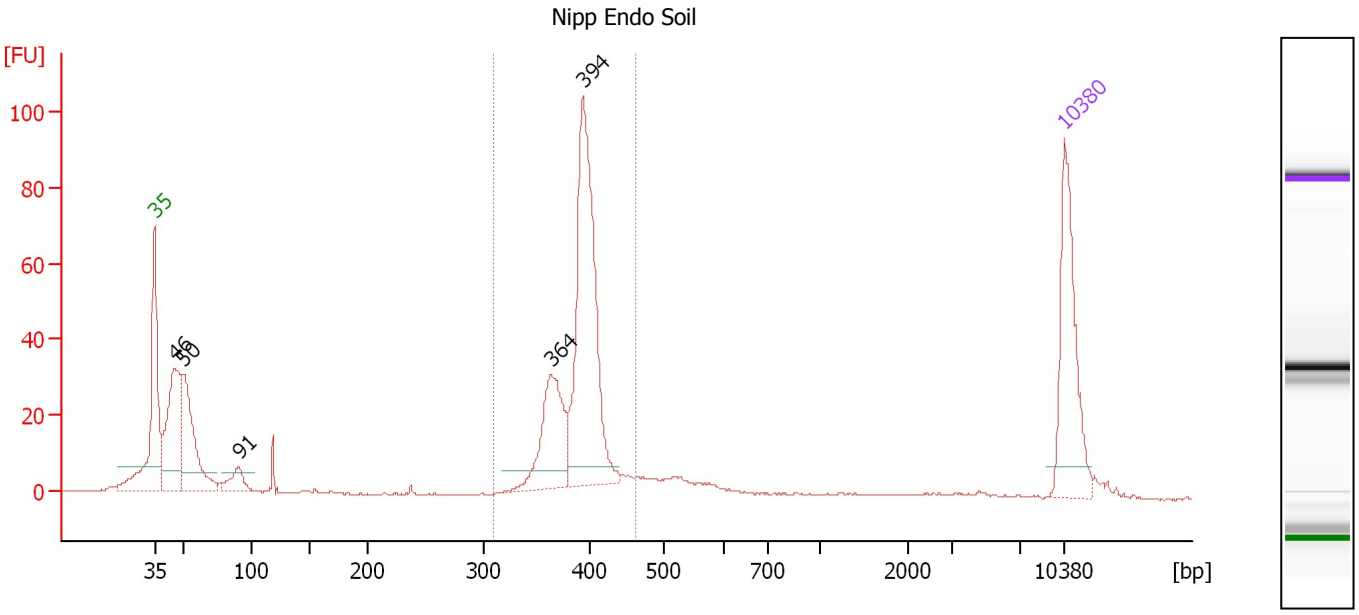
Region table for sample 7 : Nipp BF Soil

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
339	445	392	540.0	139.62	120.3	33	4.6	

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02_002.xad

Created: 1/2/2013 1:38:05 PM
Modified: 1/2/2013 2:20:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : Nipp Endo Soil

Number of peaks found:	5	Corr. Area 1:	336.9
Noise:	0.2		

Peak table for sample 8 : Nipp Endo Soil

Peak		Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	◀	35	125.00	5,411.3	Lower Marker
2		46	132.91	4,424.6	
3		50	104.01	3,138.7	
4		91	22.77	380.2	
5		364	85.41	355.2	
6		394	216.18	830.8	
7	▶	10,380	75.00	10.9	Upper Marker

Region table for sample 8 : 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
310	463	391	1,280.8	330.01	336.9	56	5.6	

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02_002.xad

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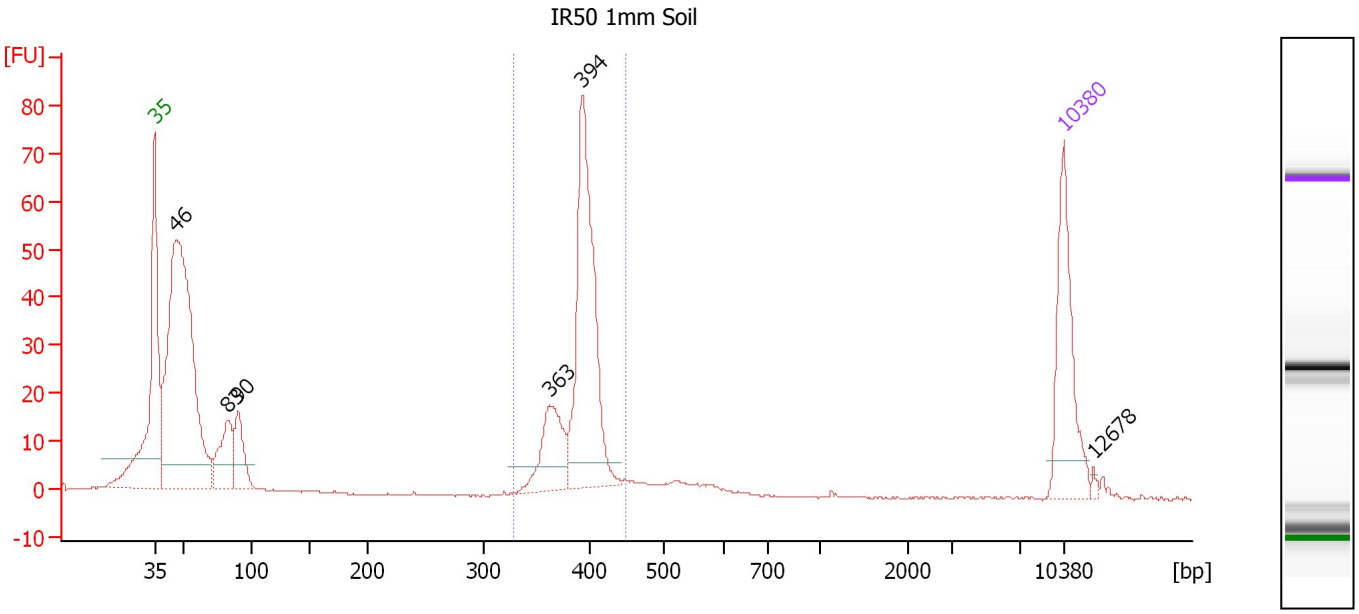
Modified: 1/2/2013 2:20:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : IR50 1mm Soil

Number of peaks found:	6	Corr. Area 1:	228.4
Noise:	0.2		

Peak table for sample 9 : IR50 1mm Soil

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	46	500.52	16,431.8	
3	83	64.54	1,176.8	
4	90	49.80	834.2	
5	363	63.05	263.3	
6	394	206.41	793.9	
7	10,380	75.00	10.9	Upper Marker
8	12,678	0.00	0.0	

Region table for sample 9 : IR50 1mm Soil

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	1,103.7	285.04	228.4	37	4.8	

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02_002.xad

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Modified: 1/2/2013 2:20:52 PM

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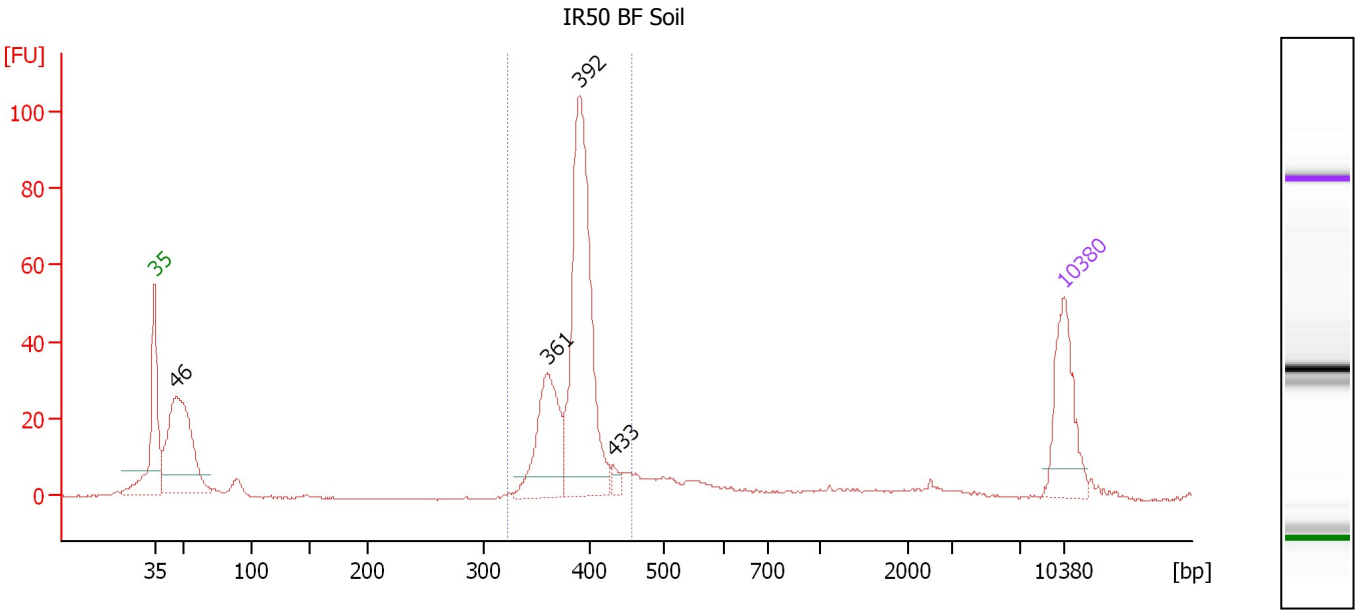


Overall Results for sample 10 : IR50 BF Soil

Number of peaks found:	4	Corr. Area 1:	165.5
Noise:	0.1		

Peak table for sample 10 : IR50 BF Soil

Peak		Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	◀	35	125.00	5,411.3	Lower Marker
2		46	253.39	8,269.8	
3		361	129.61	543.9	
4		392	321.40	1,243.8	
5		433	8.90	31.2	
6	▶	10,380	75.00	10.9	Upper Marker

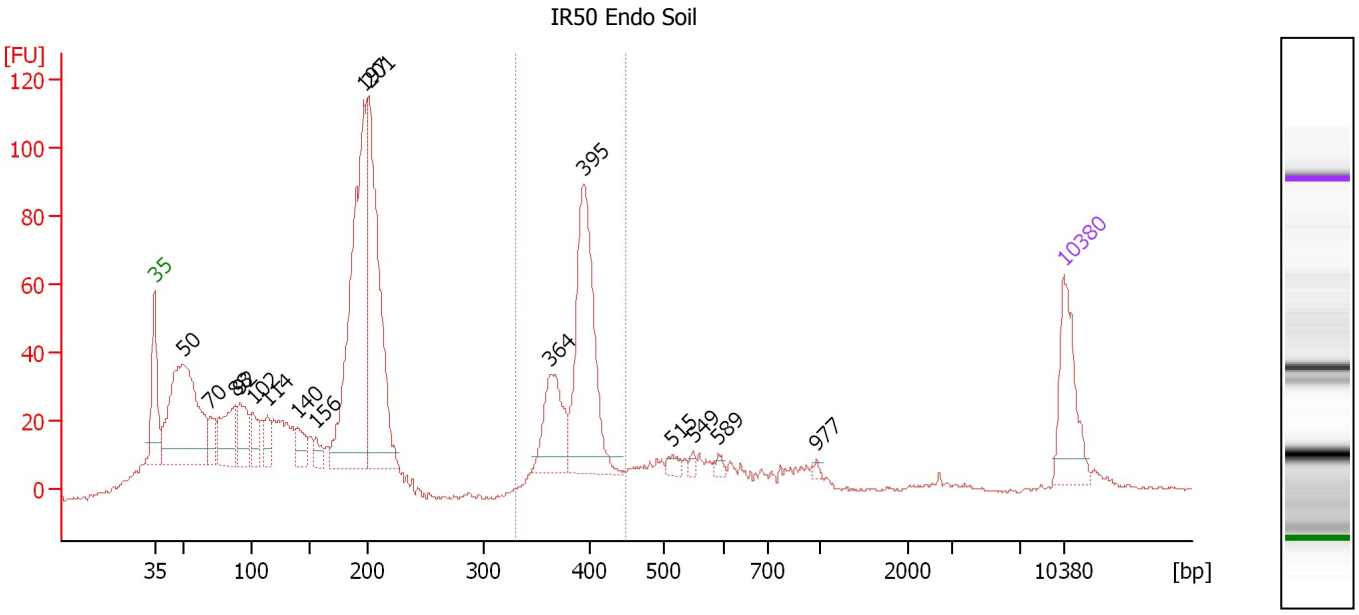
Region table for sample 10 : IR50 BF Soil

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
323	456	390	877.2	225.53	165.5	66	2.9	

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02_002.xad

Created: 1/2/2013 1:38:05 PM
Modified: 1/2/2013 2:20:52 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : IR50 Endo Soil

Number of peaks found:	16	Corr. Area 1:	247.3
Noise:	0.5		

Peak table for sample 11 : IR50 Endo Soil

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	353.17	10,755.8	
3	70	36.23	786.4	
4	88	97.75	1,679.4	
5	92	73.07	1,207.4	
6	102	44.09	657.9	
7	114	33.52	446.4	
8	140	35.32	383.0	
9	156	19.65	191.4	
10	197	439.80	3,389.1	
11	201	355.90	2,686.3	
12	364	103.22	429.9	
13	395	256.90	984.8	
14	515	10.46	30.7	
15	549	6.11	16.9	
16	589	6.63	17.0	
17	977	3.42	5.3	
18	10,380	75.00	10.9	Upper Marker

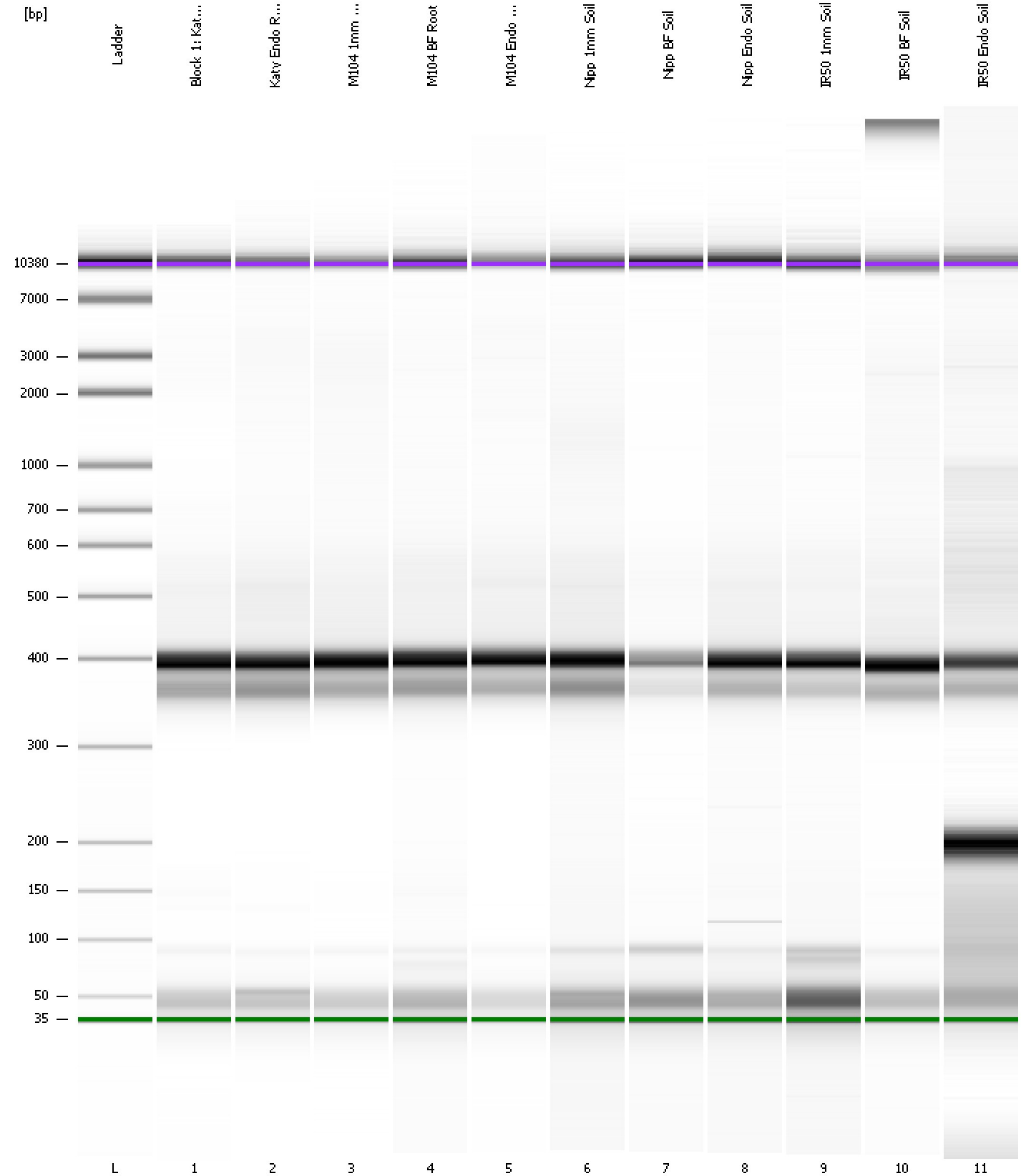
Region table for sample 11 : IR50 Endo Soil

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
331	449	390	1,375.1	353.10	247.3	22	4.3	

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02_002.xad

Created: 1/2/2013 1:38:05 PM
Modified: 1/2/2013 2:20:52 PM

Gel Image



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-01-02\2013-01-02_002.xad

Created: 1/2/2013 1:38:05 PM
Modified: 1/2/2013 2:20:52 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 2:19:24 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_002.xad)		Instrument	Run		1/2/2013 1:38:10 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		1/2/2013 1:38:10 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		1/2/2013 1:38:10 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		1/2/2013 1:38:10 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		1/2/2013 1:38:10 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		1/2/2013 1:38:10 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		1/2/2013 1:38:10 PM	(GMT --08:00) Pacific Standard Time	UC Davis	D8XSMGH1