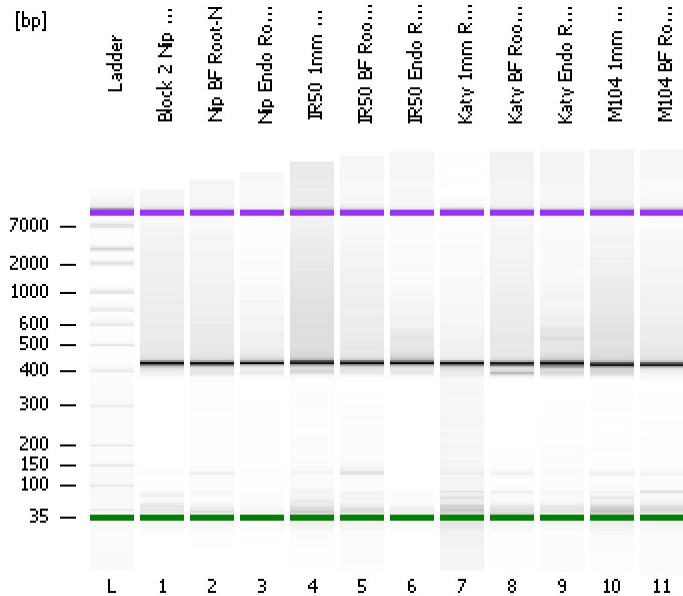


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
Modified: 12/18/2012 9:57:53 AM

### 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

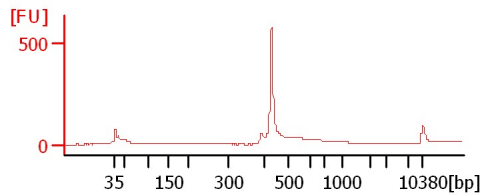
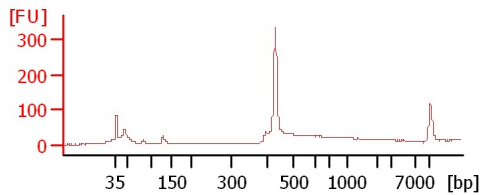
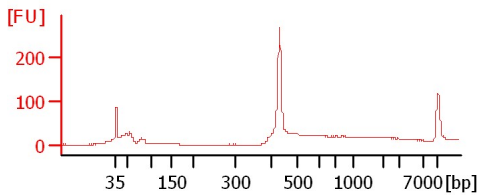
#### Chip Information:

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

Block 2 Nip 1mm Root-N

Nip BF Root-N

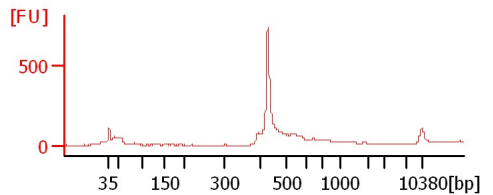
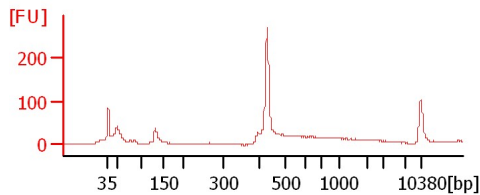
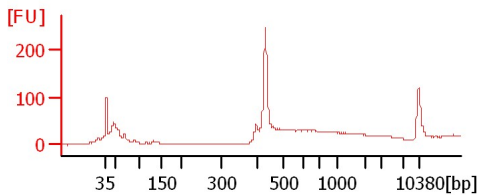
Nip Endo Root-N



IR50 1mm Root-N

IR50 BF Root-N

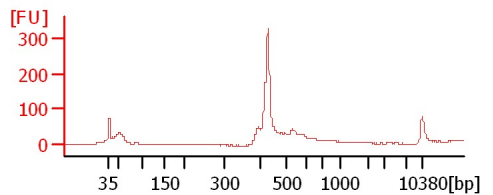
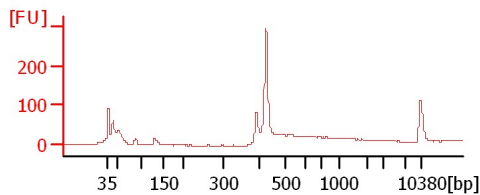
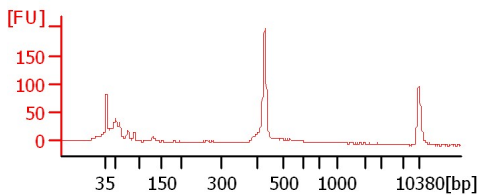
IR50 Endo Root-N



Katy 1mm Root-N

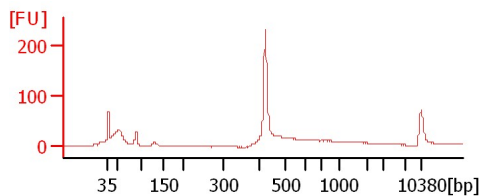
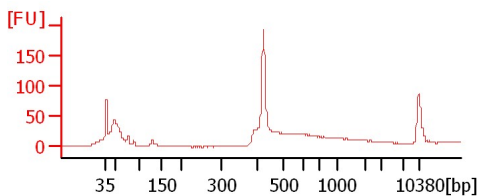
Katy BF Root-N

Katy Endo Root-N



M104 1mm Root-N

M104 BF Root-N



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
 Modified: 12/18/2012 9:57:53 AM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
Block 2 Nip 1mm Root-N		<input type="checkbox"/>	✓			
Nip BF Root-N		<input type="checkbox"/>	✓			
Nip Endo Root-N		<input type="checkbox"/>	✓			
IR50 1mm Root-N		<input type="checkbox"/>	✓			
IR50 BF Root-N		<input type="checkbox"/>	✓			
IR50 Endo Root-N		<input type="checkbox"/>	✓			
Katy 1mm Root-N		<input type="checkbox"/>	✓			
Katy BF Root-N		<input type="checkbox"/>	✓			
Katy Endo Root-N		<input type="checkbox"/>	✓			
M104 1mm Root-N		<input type="checkbox"/>	✓			
M104 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\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
Modified: 12/18/2012 9:57:53 AM

**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/ $\mu$ l] : 1950  
Uses Standard Area for Ladder Fragments  
Lower Marker Concentration [pg/ $\mu$ l] : 125  
Upper Marker Concentration [pg/ $\mu$ l] : 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

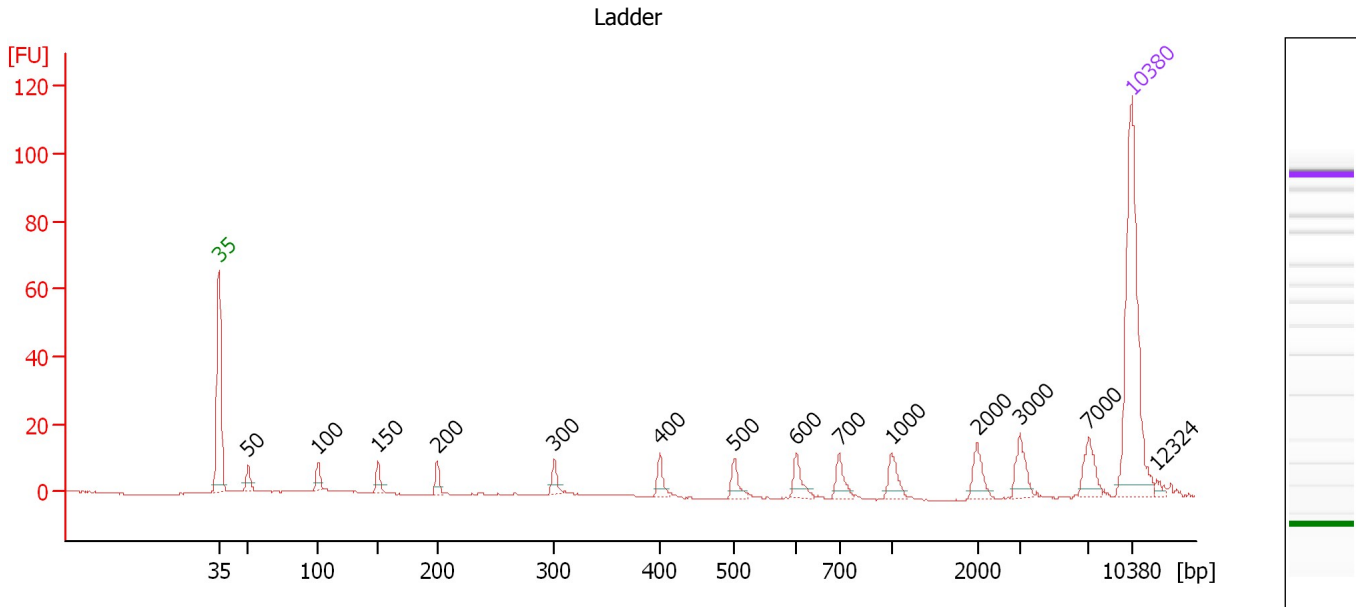
**Ladder**

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\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
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**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.1

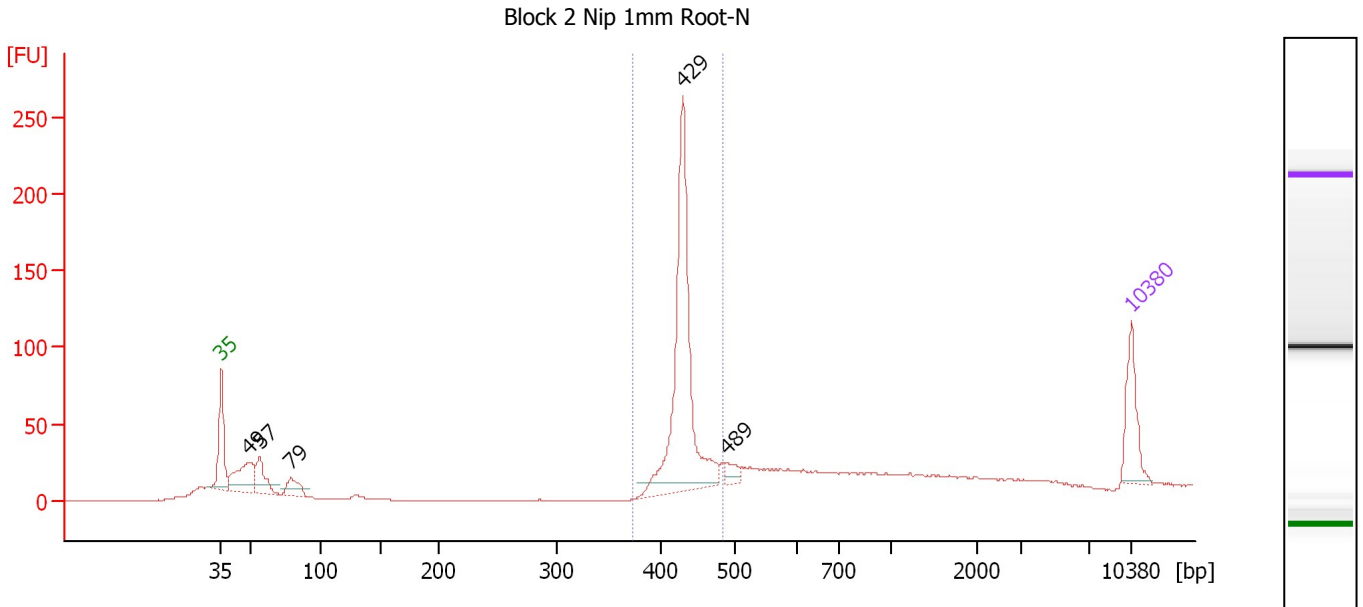
**Peak table for Ladder**

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	12,324	0.00	0.0	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
 Modified: 12/18/2012 9:57:53 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 5                      Corr. Area 1: 436.6  
 Noise: 0.2

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

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	49	135.78	4,157.1	
3	57	78.96	2,115.5	
4	79	53.92	1,032.5	
5	429	518.06	1,828.4	
6	489	21.38	66.2	
7	10,380	75.00	10.9	Upper Marker

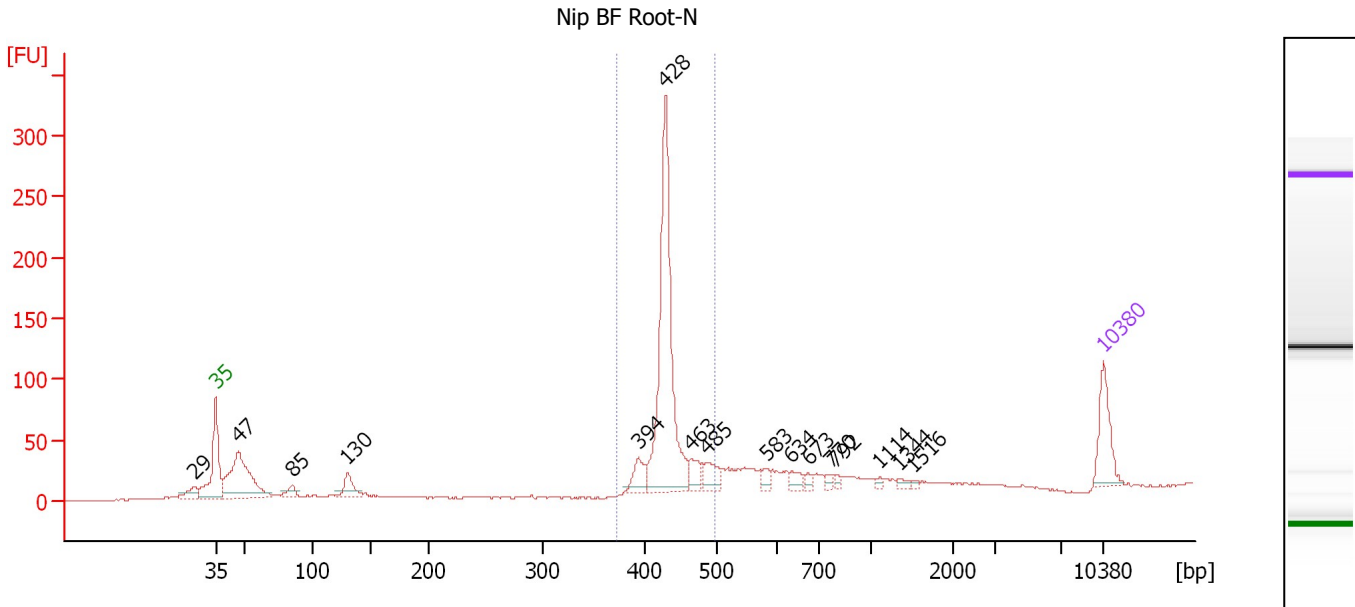
**Region table for sample 1 : Block 2 Nip 1mm Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
373	483	431	1,847.1	525.26	436.6	46	3.9	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
 Modified: 12/18/2012 9:57:53 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : Nip BF Root-N**

Number of peaks found: 16                      Corr. Area 1: 555.5  
 Noise: 0.6

**Peak table for sample 2 : Nip BF Root-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	47	306.63	9,933.2	
4	85	30.89	547.4	
5	130	56.26	654.3	
6	394	47.00	180.8	
7	428	535.86	1,896.7	
8	463	37.27	122.1	
9	485	47.12	147.1	
10	583	17.17	44.6	
11	634	18.97	45.4	
12	673	10.58	23.8	
13	770	10.92	21.5	
14	792	8.01	15.3	
15	1,114	6.29	8.6	
16	1,344	8.31	9.4	
17	1,516	3.23	3.2	
18	10,380	75.00	10.9	Upper Marker

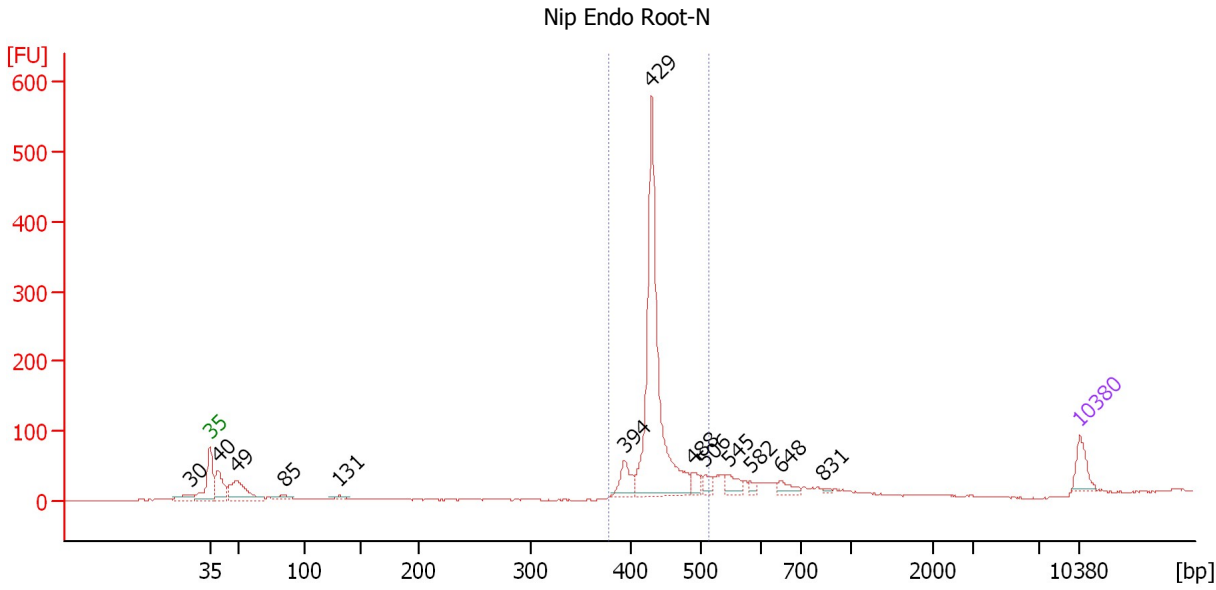
**Region table for sample 2 : Nip BF Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
373	496	432	2,282.3	650.74	555.5	51	4.9	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
 Modified: 12/18/2012 9:57:53 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : Nip Endo Root-N**

Number of peaks found: 13                      Corr. Area 1: 885.0  
 Noise: 0.7

**Peak table for sample 3 : Nip Endo Root-N**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	30	0.00	0.0	
2	35	125.00	5,411.3	Lower Marker
3	40	187.75	7,188.2	
4	49	244.21	7,549.8	
5	85	44.77	794.1	
6	131	22.00	255.0	
7	394	111.24	428.1	
8	429	1,218.37	4,299.6	
9	488	55.55	172.5	
10	506	46.60	139.5	
11	545	66.67	185.4	
12	582	20.02	52.1	
13	648	43.19	100.9	
14	831	9.69	17.7	
15	10,380	75.00	10.9	Upper Marker

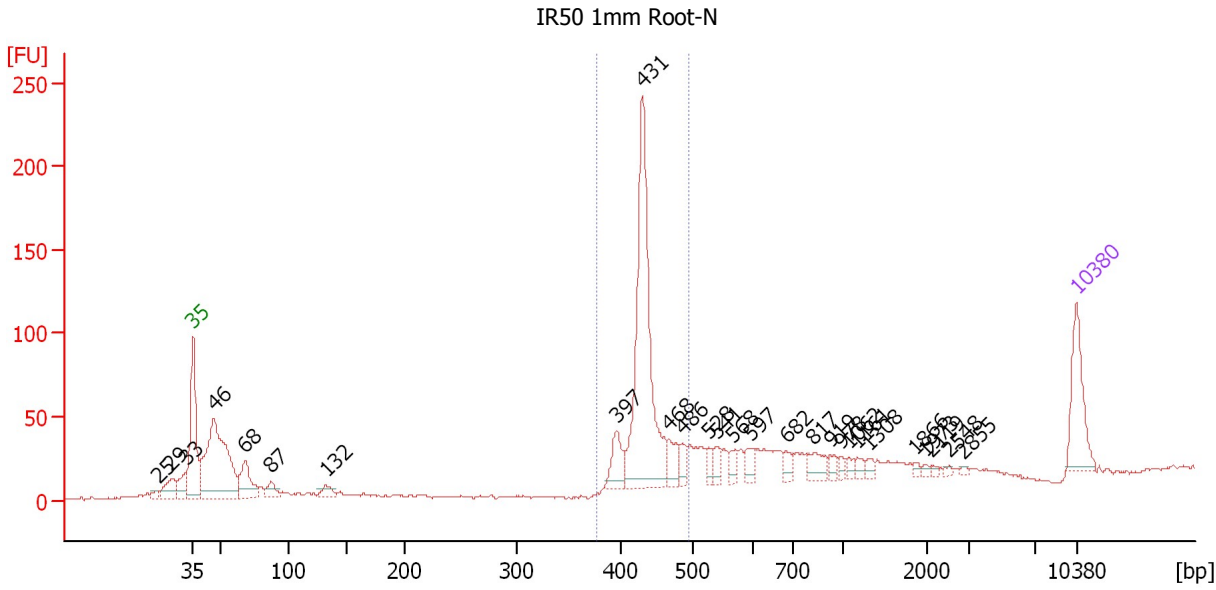
**Region table for sample 3 : Nip Endo Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
379	512	436	4,879.6	1,402.31	885.0	66	5.4	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
 Modified: 12/18/2012 9:57:53 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : IR50 1mm Root-N**

Number of peaks found: 27                      Corr. Area 1: 454.5  
 Noise: 0.7

**Peak table for sample 4 : IR50 1mm Root-N**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	25	0.00	0.0	
2	29	0.00	0.0	
3	33	0.00	0.0	
4	35	125.00	5,411.3	Lower Marker
5	46	370.35	12,173.2	
6	68	80.16	1,790.5	
7	87	27.48	480.7	
8	132	20.78	239.1	
9	397	54.67	208.6	
10	431	412.60	1,450.2	
11	468	34.89	113.0	
12	486	21.48	67.0	
13	528	16.87	48.5	
14	541	17.81	49.8	
15	568	17.89	47.7	
16	597	21.76	55.3	
17	682	15.95	35.4	
18	817	29.11	54.0	
19	919	11.53	19.0	
20	978	8.03	12.4	
21	1,062	7.26	10.4	
22	1,161	10.08	13.2	
23	1,308	7.81	9.0	
24	1,866	4.54	3.7	
25	1,973	4.05	3.1	
26	2,119	3.51	2.5	




Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad


Created: 12/18/2012 9:11:26 AM  
 Modified: 12/18/2012 9:57:53 AM

### Electropherogram Summary Continued ...

#### ... Peak table for sample 4 : IR50 1mm Root-N

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
27	2,548	3.49	2.1	
28	2,855	2.84	1.5	
29	 10,380	75.00	10.9	Upper Marker

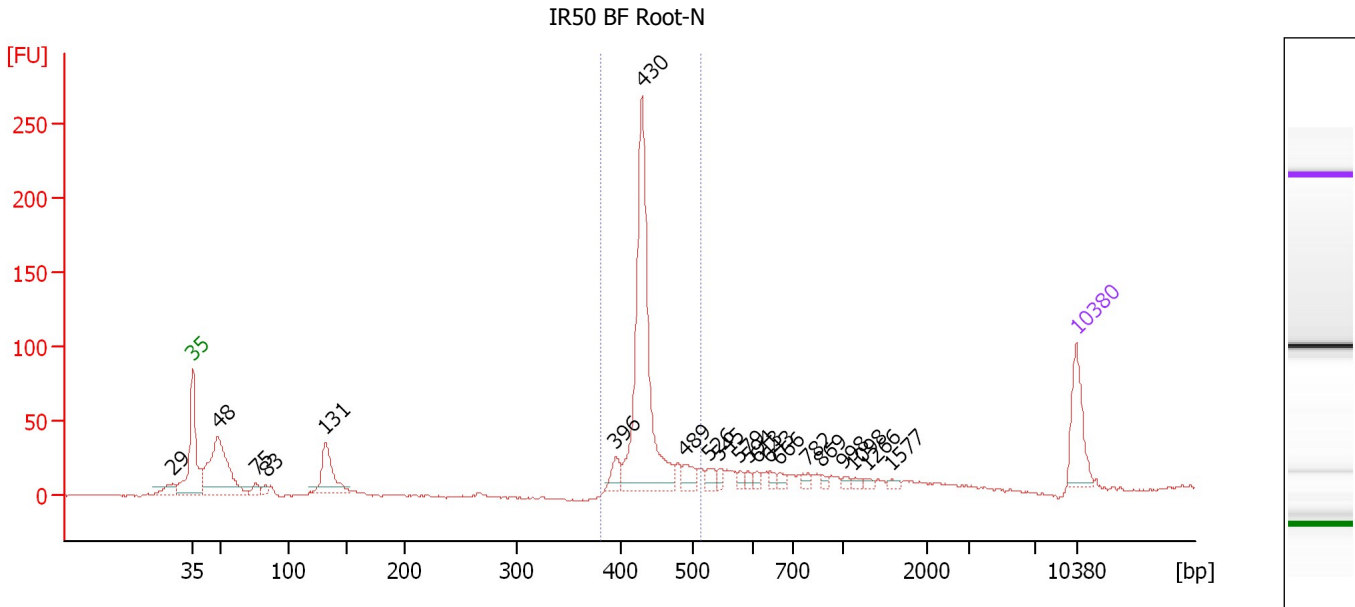
#### Region table for sample 4 : IR50 1mm Root-N

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
377	496	436	1,777.1	510.86	454.5	39	5.0	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
 Modified: 12/18/2012 9:57:53 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : IR50 BF Root-N**

Number of peaks found: 21                      Corr. Area 1: 469.4  
 Noise: 0.8

**Peak table for sample 5 : IR50 BF Root-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	48	292.34	9,165.9	
4	75	17.99	361.4	
5	83	13.28	242.8	
6	131	123.53	1,425.0	
7	396	32.83	125.7	
8	430	498.01	1,753.0	
9	489	29.31	90.7	
10	526	18.19	52.3	
11	545	11.48	31.9	
12	579	9.57	25.0	
13	594	9.64	24.6	
14	613	8.87	21.9	
15	643	10.12	23.9	
16	666	10.71	24.4	
17	782	10.28	19.9	
18	869	7.27	12.7	
19	998	6.21	9.4	
20	1,098	6.44	8.9	
21	1,266	6.15	7.4	
22	1,577	6.02	5.8	
23	10,380	75.00	10.9	Upper Marker

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
Modified: 12/18/2012 9:57:53 AM

**Electropherogram Summary Continued ...**

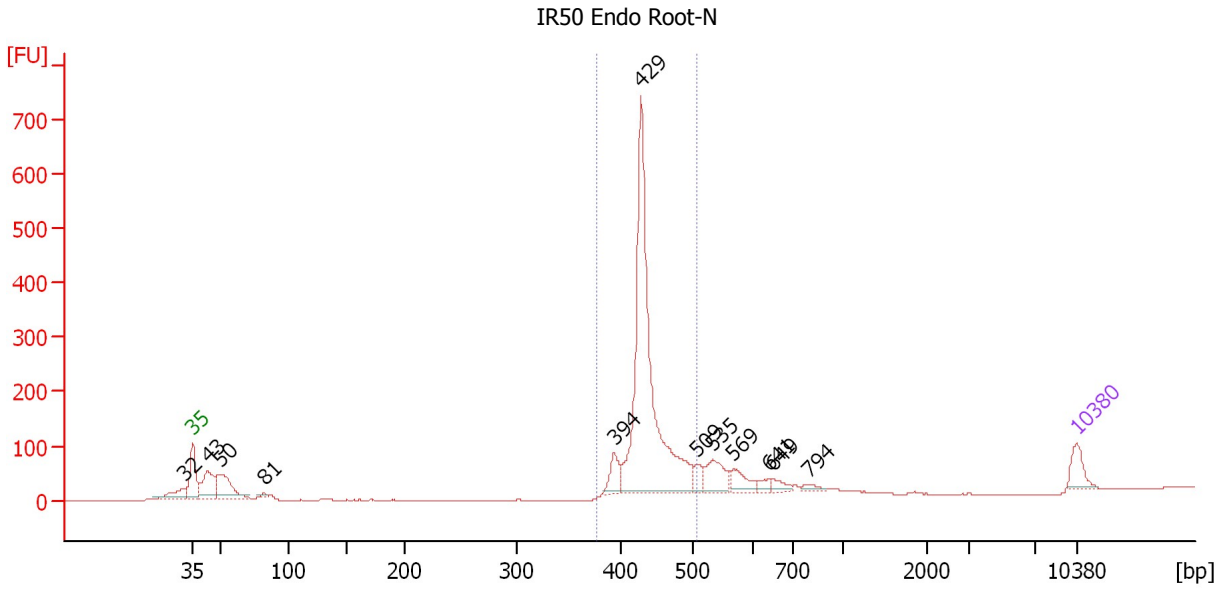
... Region table for sample 5 : IR50 BF Root-N

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
382	516	437	2,020.7	581.66	469.4	50	5.5	■

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
 Modified: 12/18/2012 9:57:53 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : IR50 Endo Root-N**

Number of peaks found: 12      Corr. Area 1: 1,383.1  
 Noise: 0.6

**Peak table for sample 6 : IR50 Endo Root-N**

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	43	248.18	8,730.3	
4	50	265.70	8,060.0	
5	81	20.41	380.3	
6	394	113.35	435.7	
7	429	1,661.70	5,863.9	
8	509	57.17	170.1	
9	535	163.22	462.5	
10	569	95.13	253.4	
11	641	32.97	77.9	
12	649	40.48	94.5	
13	794	24.62	47.0	
14	10,380	75.00	10.9	Upper Marker

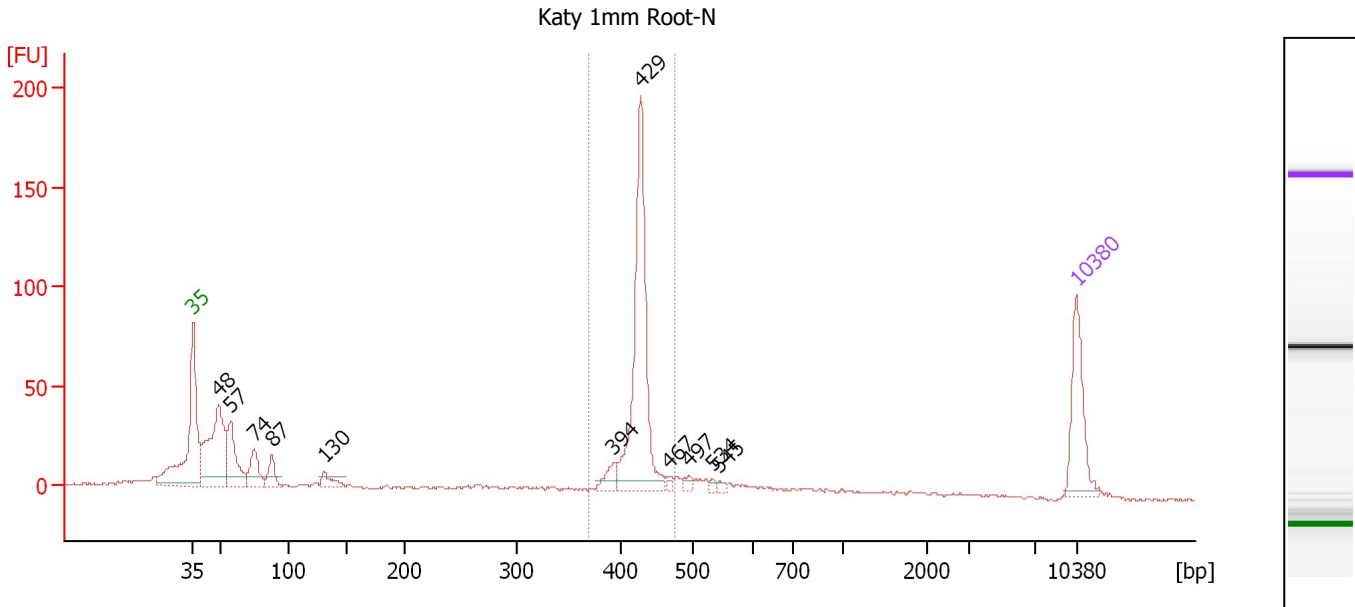
**Region table for sample 6 : IR50 Endo Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
377	506	438	6,179.7	1,782.56	1,383.1	66	5.4	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
 Modified: 12/18/2012 9:57:53 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : Katy 1mm Root-N**

Number of peaks found: 11                      Corr. Area 1: 302.3  
 Noise: 0.6

**Peak table for sample 7 : Katy 1mm Root-N**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	48	229.33	7,165.1	
3	57	104.46	2,791.1	
4	74	56.53	1,152.1	
5	87	33.66	583.8	
6	130	25.02	290.8	
7	394	21.89	84.2	
8	429	308.74	1,090.4	
9	467	6.69	21.7	
10	497	8.90	27.2	
11	534	4.98	14.1	
12	545	4.55	12.6	
13	10,380	75.00	10.9	Upper Marker

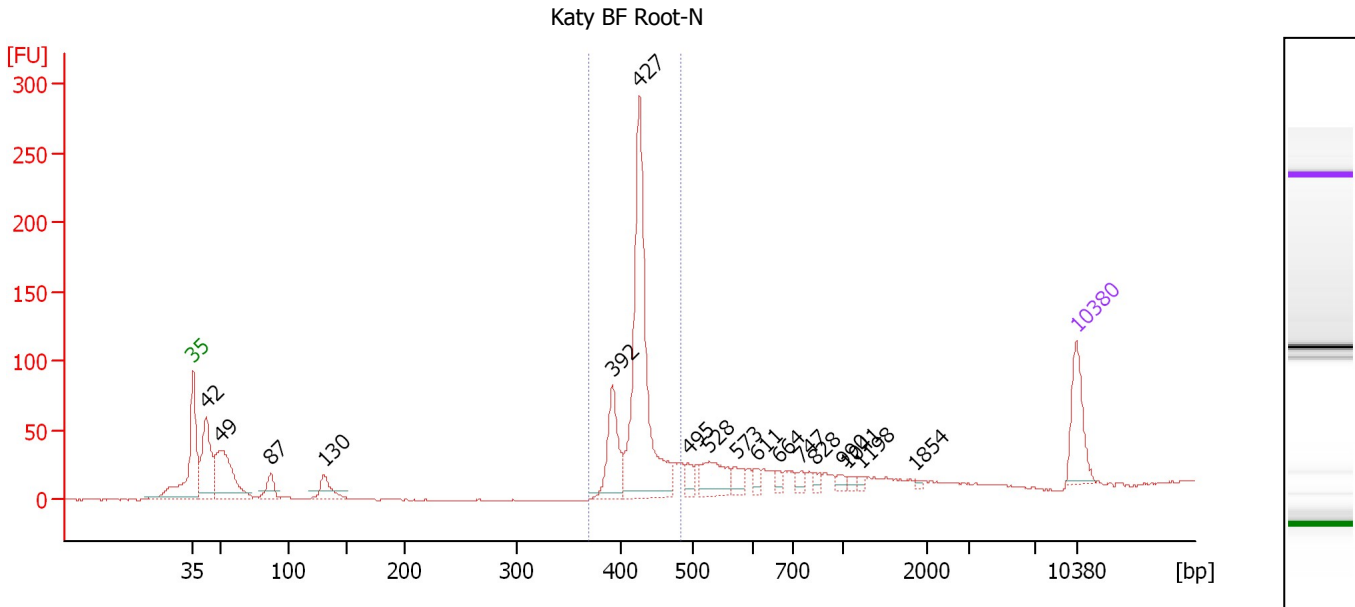
**Region table for sample 7 : Katy 1mm Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
370	476	426	1,218.1	342.11	302.3	43	3.7	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
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**Electropherogram Summary Continued ...**



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

Number of peaks found: 17                      Corr. Area 1: 507.4  
 Noise: 0.4

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

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	42	203.13	7,344.9	
3	49	222.64	6,828.0	
4	87	44.63	781.4	
5	130	52.67	611.8	
6	392	121.81	470.3	
7	427	488.55	1,733.4	
8	495	24.72	75.7	
9	528	72.42	207.9	
10	573	27.74	73.3	
11	611	12.69	31.5	
12	664	11.39	26.0	
13	747	14.07	28.5	
14	828	10.30	18.9	
15	990	10.28	15.7	
16	1,041	8.04	11.7	
17	1,198	5.76	7.3	
18	1,854	3.26	2.7	
19	10,380	75.00	10.9	Upper Marker

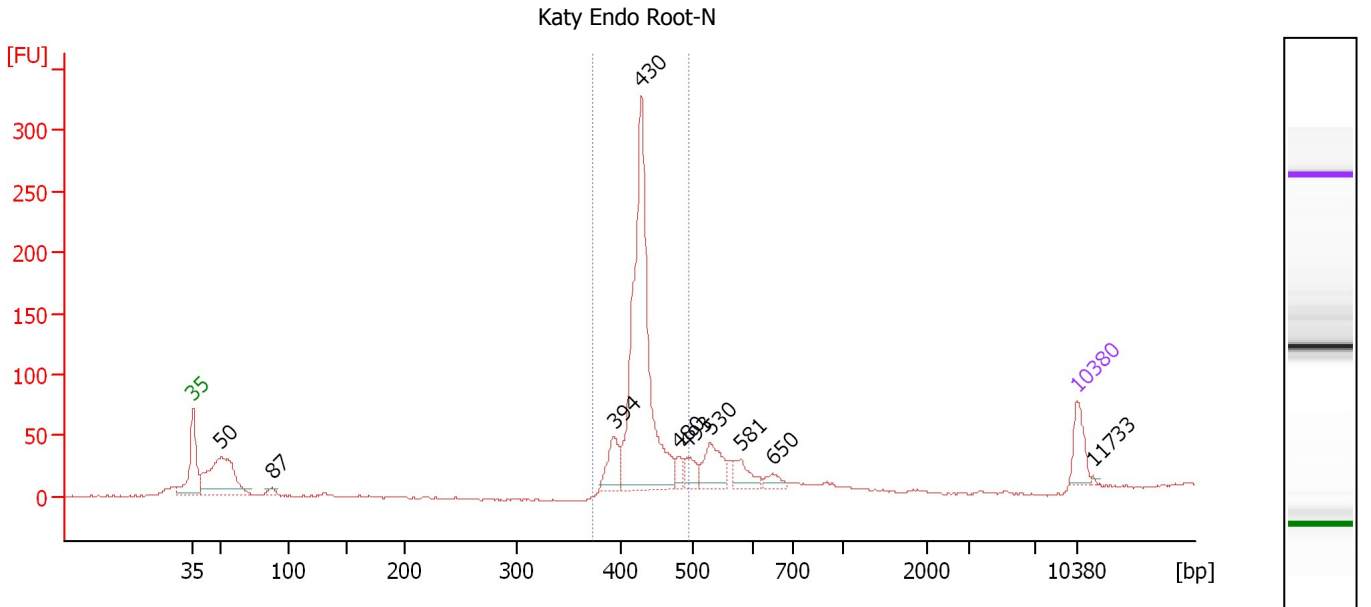
**Region table for sample 8 : Katy BF Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
370	484	425	2,029.5	568.66	507.4	50	4.7	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
 Modified: 12/18/2012 9:57:53 AM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 10                      Corr. Area 1: 688.2  
 Noise: 0.7

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

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	451.59	13,752.8	
3	87	17.50	304.3	
4	394	114.00	438.0	
5	430	1,051.76	3,707.5	
6	480	39.76	125.4	
7	493	60.31	185.4	
8	530	138.34	395.2	
9	581	71.89	187.5	
10	650	34.16	79.7	
11	10,380	75.00	10.9	Upper Marker
12	11,733	0.00	0.0	

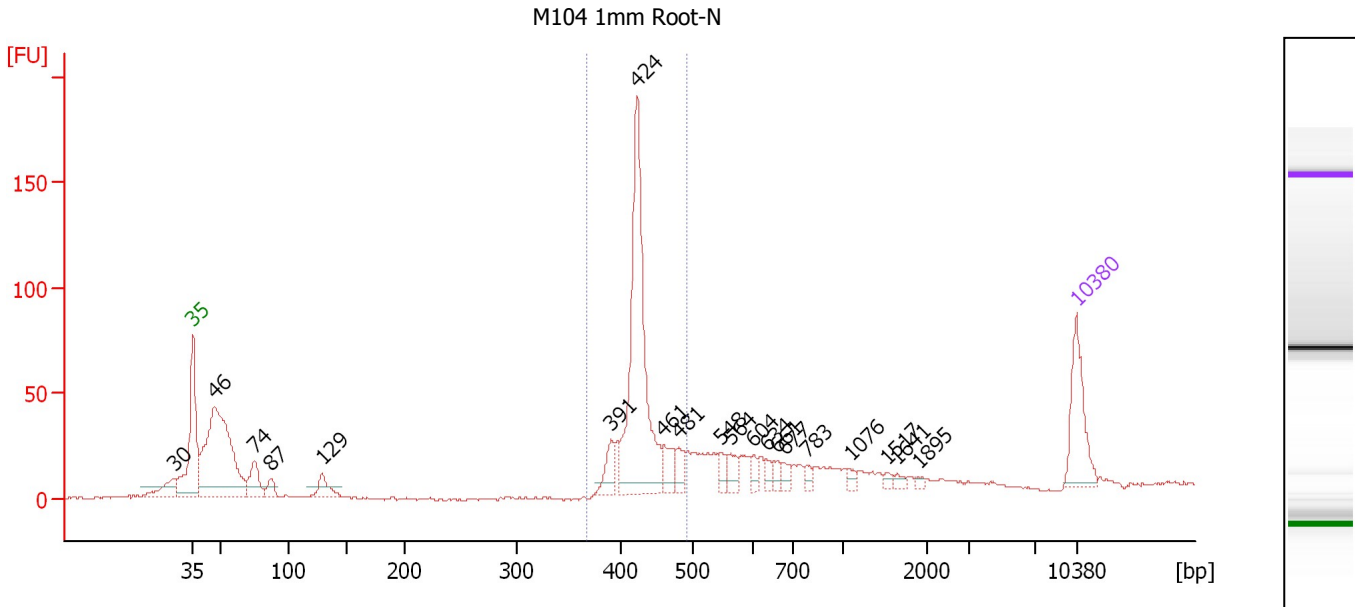
**Region table for sample 9 : Katy Endo Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
373	494	430	4,336.8	1,230.33	688.2	63	5.0	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
 Modified: 12/18/2012 9:57:53 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : M104 1mm Root-N**

Number of peaks found: 20                      Corr. Area 1: 381.1  
 Noise: 0.6

**Peak table for sample 10 : M104 1mm Root-N**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	30	0.00	0.0	
2	35	125.00	5,411.3	Lower Marker
3	46	447.94	14,696.0	
4	74	60.47	1,233.7	
5	87	23.31	408.1	
6	129	38.57	453.8	
7	391	35.85	138.7	
8	424	388.31	1,386.6	
9	461	35.46	116.6	
10	481	24.29	76.5	
11	548	17.21	47.6	
12	564	21.81	58.5	
13	604	13.49	33.9	
14	634	11.93	28.5	
15	661	11.38	26.1	
16	677	13.11	29.3	
17	783	11.17	21.6	
18	1,076	8.00	11.3	
19	1,517	6.37	6.4	
20	1,641	6.90	6.4	
21	1,895	4.46	3.6	
22	10,380	75.00	10.9	Upper Marker

**Region table for sample 10 : M104 1mm Root-N**

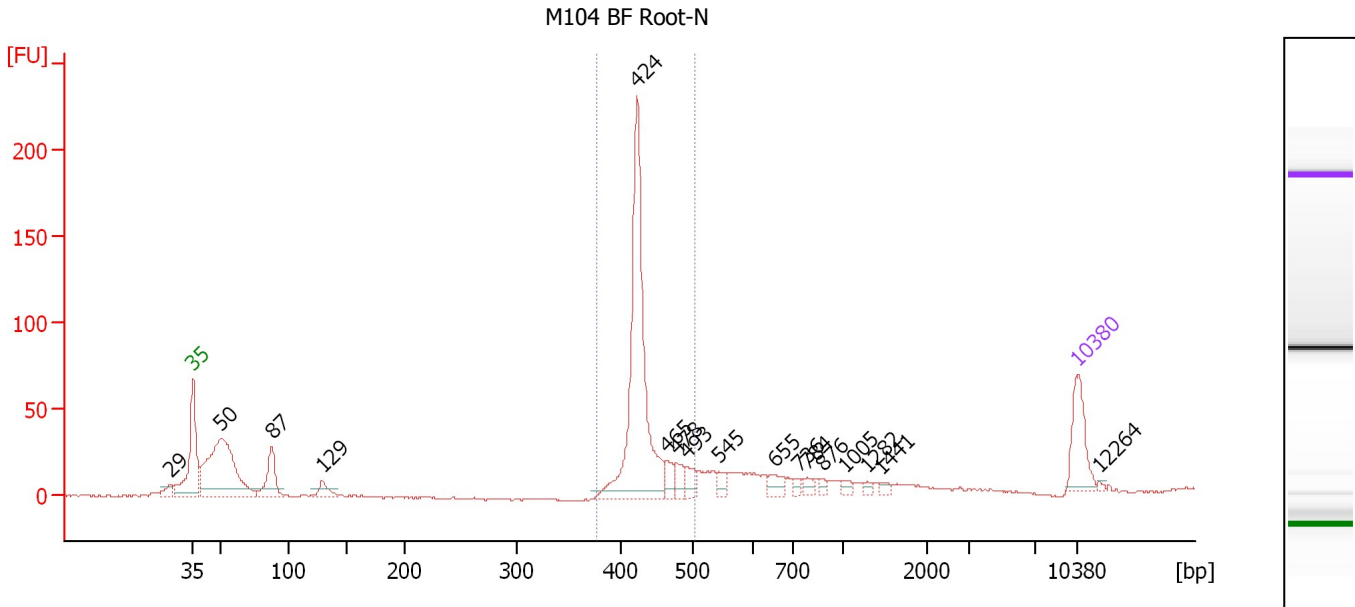
From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
368	494	430	1,747.7	494.87	381.1	39	5.5	Blue



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
 Modified: 12/18/2012 9:57:53 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : M104 BF Root-N**

Number of peaks found: 17                      Corr. Area 1: 369.6  
 Noise: 0.4

**Peak table for sample 11 : M104 BF Root-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	422.06	12,894.9	
4	87	100.18	1,738.8	
5	129	36.76	432.0	
6	424	535.63	1,914.3	
7	465	30.78	100.2	
8	478	28.10	89.1	
9	493	31.64	97.2	
10	545	20.27	56.4	
11	655	25.74	59.5	
12	736	10.62	21.9	
13	784	13.88	26.8	
14	876	8.64	14.9	
15	1,005	10.15	15.3	
16	1,282	6.18	7.3	
17	1,441	7.47	7.9	
18	10,380	75.00	10.9	Upper Marker
19	12,264	0.00	0.0	

**Region table for sample 11 : M104 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
377	505	433	1,938.9	553.45	369.6	50	5.1	Blue

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-18\2012-12-18\_001.xad

Created: 12/18/2012 9:11:26 AM  
Modified: 12/18/2012 9:57:53 AM

**Gel Image**

