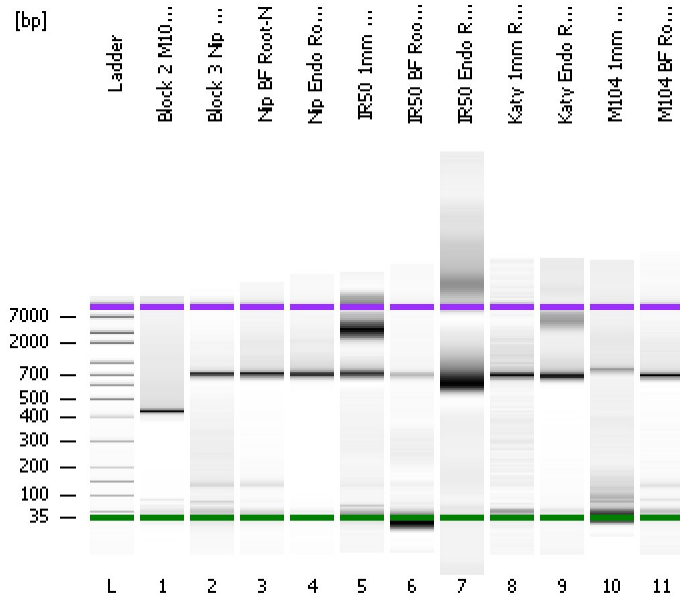


Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
 Modified: 12/19/2012 3:43:24 PM

**Electrophoresis File Run Summary**



Instrument Information:

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

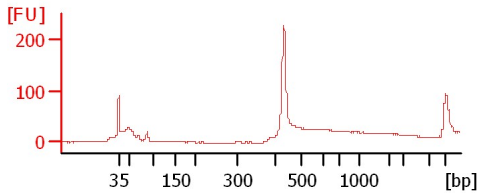
Assay Information:

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

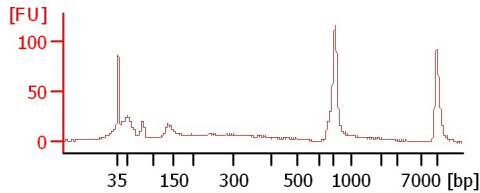
Chip Information:

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

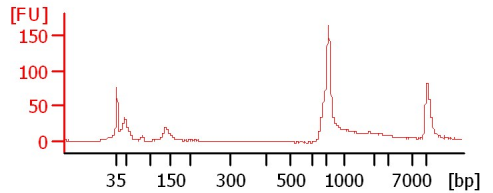
**Block 2 M104 Endo Soil**



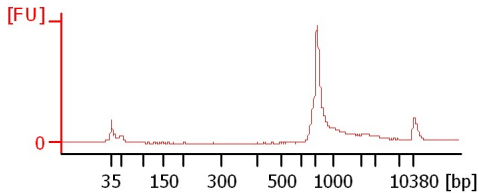
**Block 3 Nip 1mm Root-N**



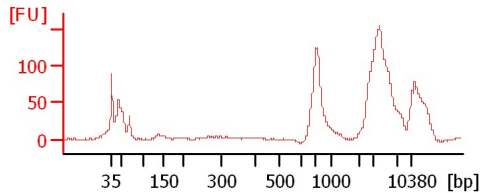
**Nip BF Root-N**



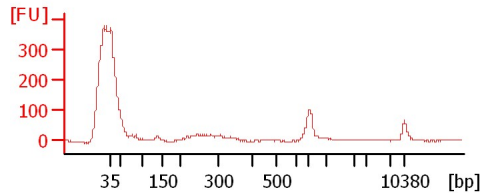
**Nip Endo Root-N**



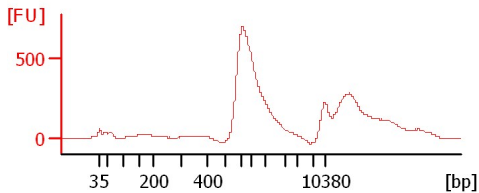
**IR50 1mm Root-N**



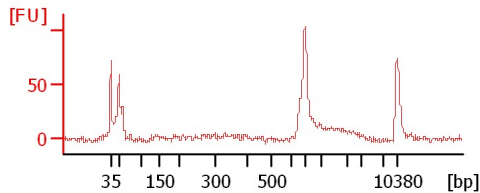
**IR50 BF Root-N**



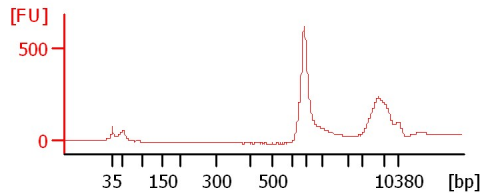
**IR50 Endo Root-N**



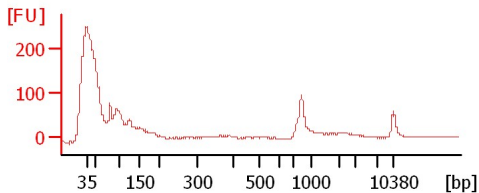
**Katy 1mm Root-N**



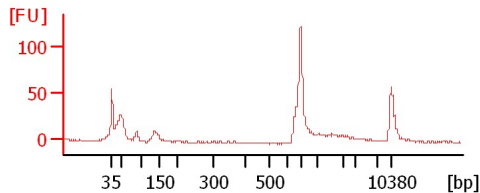
**Katy Endo Root-N**



**M104 1mm Root-N**



**M104 BF Root-N**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
 Modified: 12/19/2012 3:43:24 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
Block 2 M104 Endo Soil		<input type="checkbox"/>	✓			
Block 3 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 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\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
Modified: 12/19/2012 3:43:24 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

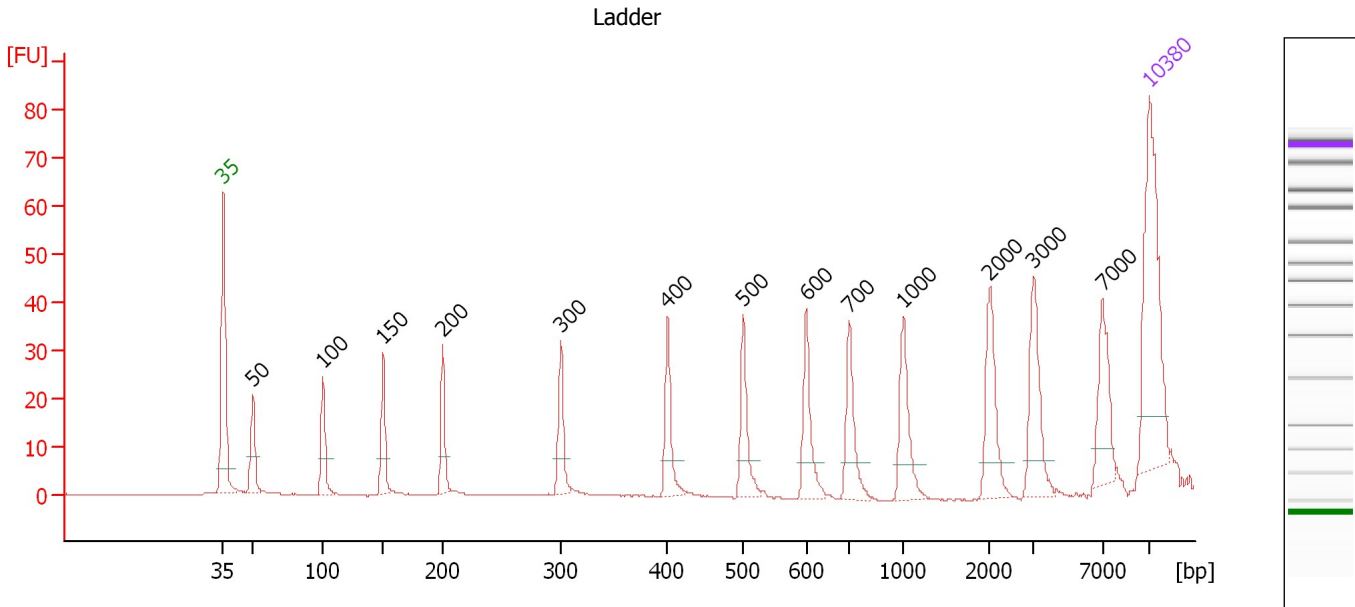
**Ladder**

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\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
 Modified: 12/19/2012 3:43:24 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

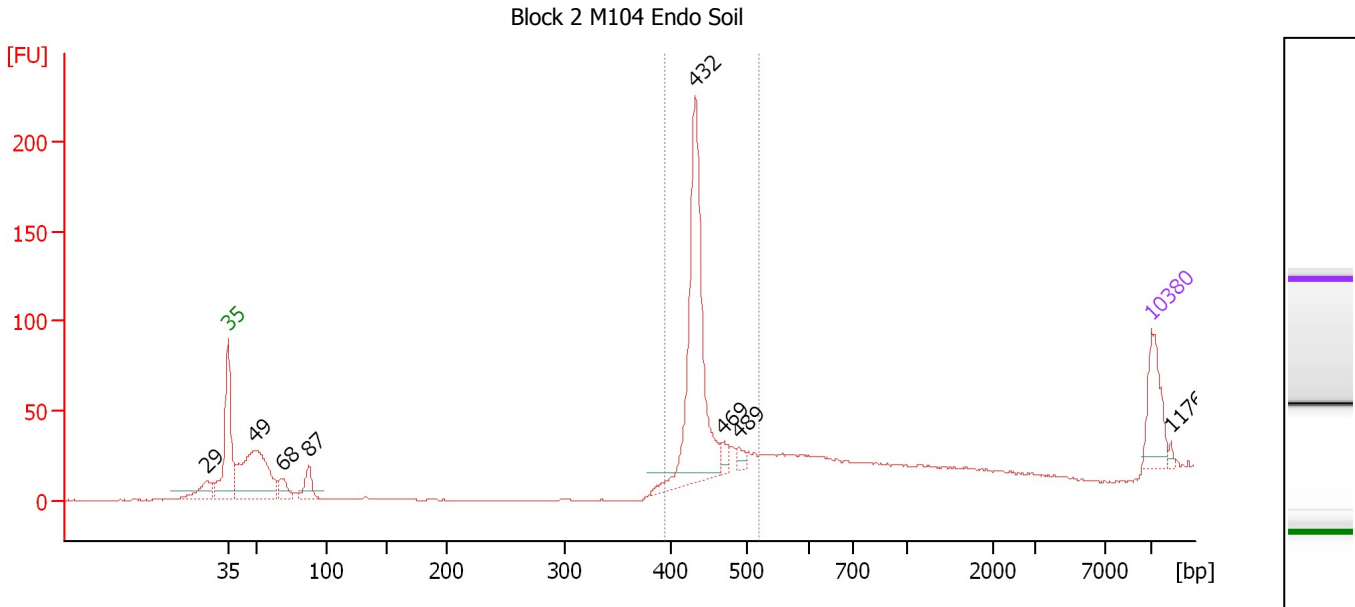
**Peak table for Ladder**

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\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
 Modified: 12/19/2012 3:43:24 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : Block 2 M104 Endo Soil**

Number of peaks found: 8                      Corr. Area 1: 389.6  
 Noise: 0.1

**Peak table for sample 1 : Block 2 M104 Endo Soil**

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	320.10	9,908.4	
4	68	40.19	896.6	
5	87	52.95	927.1	
6	432	462.63	1,622.3	
7	469	19.90	64.3	
8	489	14.37	44.5	
9	10,380	75.00	10.9	Upper Marker
10	11,767	0.00	0.0	

**Region table for sample 1 : Block 2 M104 Endo Soil**

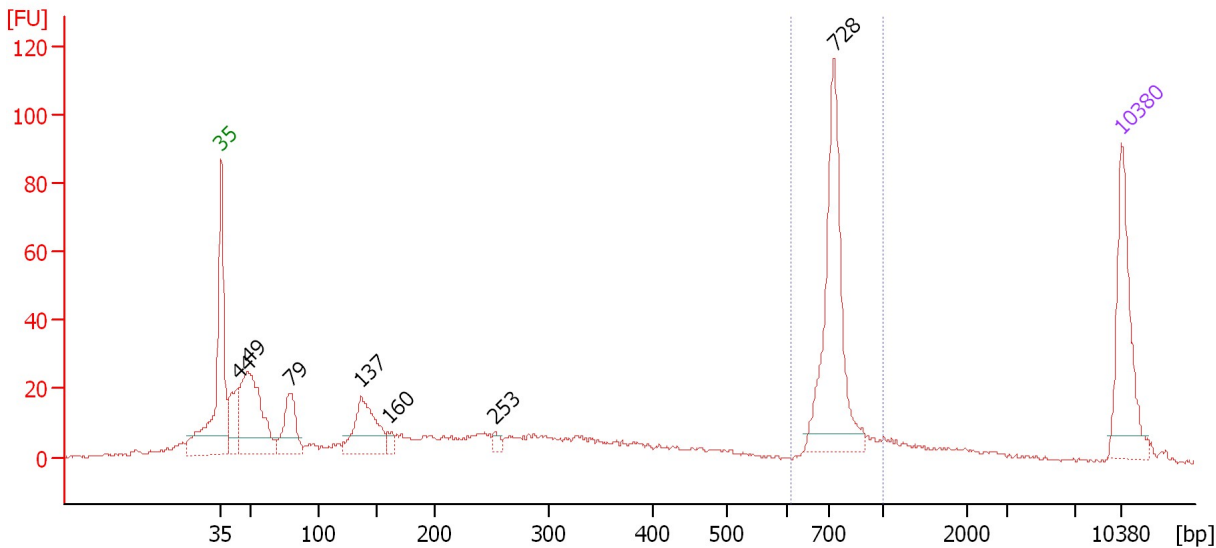
From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
394	520	443	1,761.9	514.27	389.6	55	5.2	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
 Modified: 12/19/2012 3:43:24 PM

**Electropherogram Summary Continued ...**

Block 3 Nip 1mm Root-N



**Overall Results for sample 2 : Block 3 Nip 1mm Root-N**

Number of peaks found: 7                      Corr. Area 1: 208.0  
 Noise: 0.5

**Peak table for sample 2 : Block 3 Nip 1mm Root-N**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	44	61.14	2,106.2	
3	49	166.59	5,147.7	
4	79	69.11	1,318.0	
5	137	94.17	1,041.4	
6	160	10.41	98.7	
7	253	8.43	50.5	
8	728	182.29	379.6	
9	10,380	75.00	10.9	Upper Marker

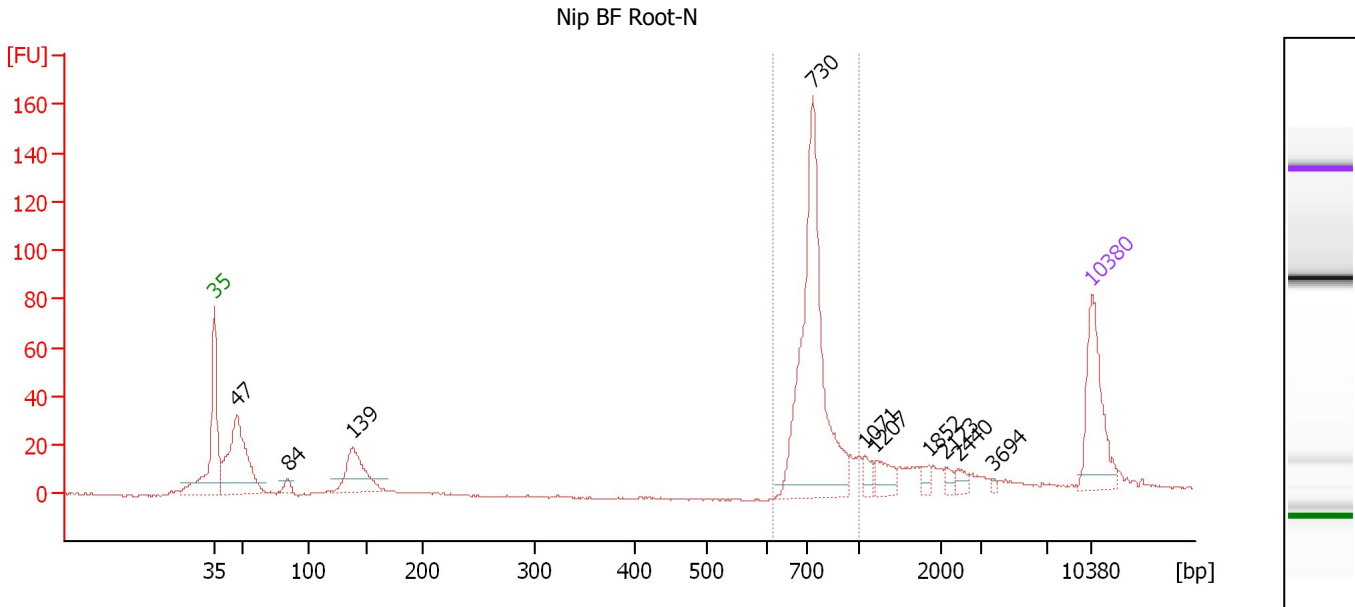
**Region table for sample 2 : Block 3 Nip 1mm Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
610	1,000	739	414.5	201.47	208.0	26	8.9	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
 Modified: 12/19/2012 3:43:24 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 10                      Corr. Area 1: 326.2  
 Noise: 0.4

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

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	47	202.15	6,504.5	
3	84	12.27	220.5	
4	139	89.00	972.5	
5	730	325.06	675.1	
6	1,071	12.71	18.0	
7	1,207	21.26	26.7	
8	1,852	8.04	6.6	
9	2,123	6.39	4.6	
10	2,440	7.92	4.9	
11	3,694	2.32	1.0	
12	10,380	75.00	10.9	Upper Marker

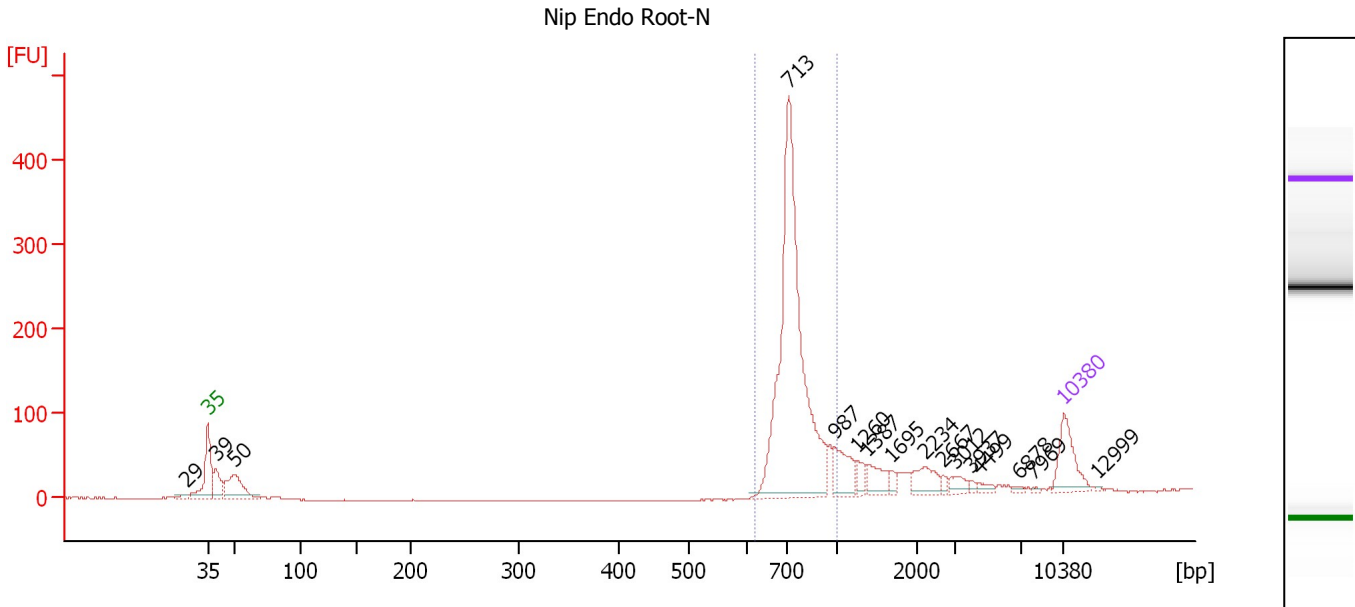
**Region table for sample 3 : Nip BF Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
617	1,000	750	632.9	311.58	326.2	50	9.9	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
 Modified: 12/19/2012 3:43:24 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : Nip Endo Root-N**

Number of peaks found: 16                      Corr. Area 1: 1,029.5  
 Noise: 0.5

**Peak table for sample 4 : Nip Endo 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	39	80.08	3,077.4	
4	50	141.77	4,317.1	
5	713	864.22	1,835.4	
6	987	74.45	114.3	
7	1,260	23.99	28.8	
8	1,387	44.34	48.4	
9	1,695	12.77	11.4	
10	2,234	45.11	30.6	
11	2,667	7.75	4.4	
12	3,012	19.62	9.9	
13	3,937	6.10	2.3	
14	4,499	9.95	3.4	
15	6,878	4.88	1.1	
16	7,969	2.24	0.4	
17	10,380	75.00	10.9	Upper Marker
18	12,999	0.00	0.0	

**Region table for sample 4 : Nip Endo Root-N**

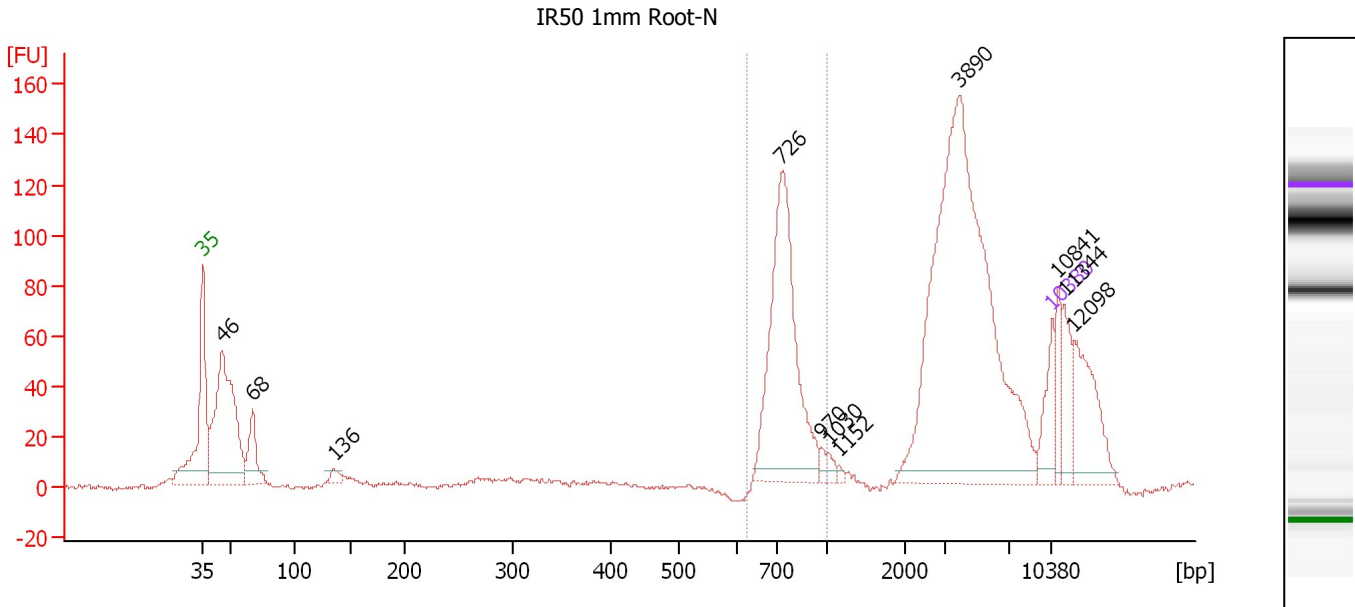
From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
622	1,000	756	1,693.7	840.33	1,029.5	68	10.6	Blue



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
 Modified: 12/19/2012 3:43:24 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : IR50 1mm Root-N**

Number of peaks found: 11      Corr. Area 1: 352.7  
 Noise: 0.9

**Peak table for sample 5 : IR50 1mm Root-N**

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	46	704.90	23,364.2	
3	68	146.55	3,284.6	
4	136	24.28	271.4	
5	726	642.51	1,341.5	
6	970	13.79	21.5	
7	1,030	16.21	23.8	
8	1,152	6.58	8.7	
9	3,890	1,172.02	456.5	
10	10,380	75.00	10.9	Upper Marker
11	10,841	0.00	0.0	
12	11,344	0.00	0.0	
13	12,098	0.00	0.0	

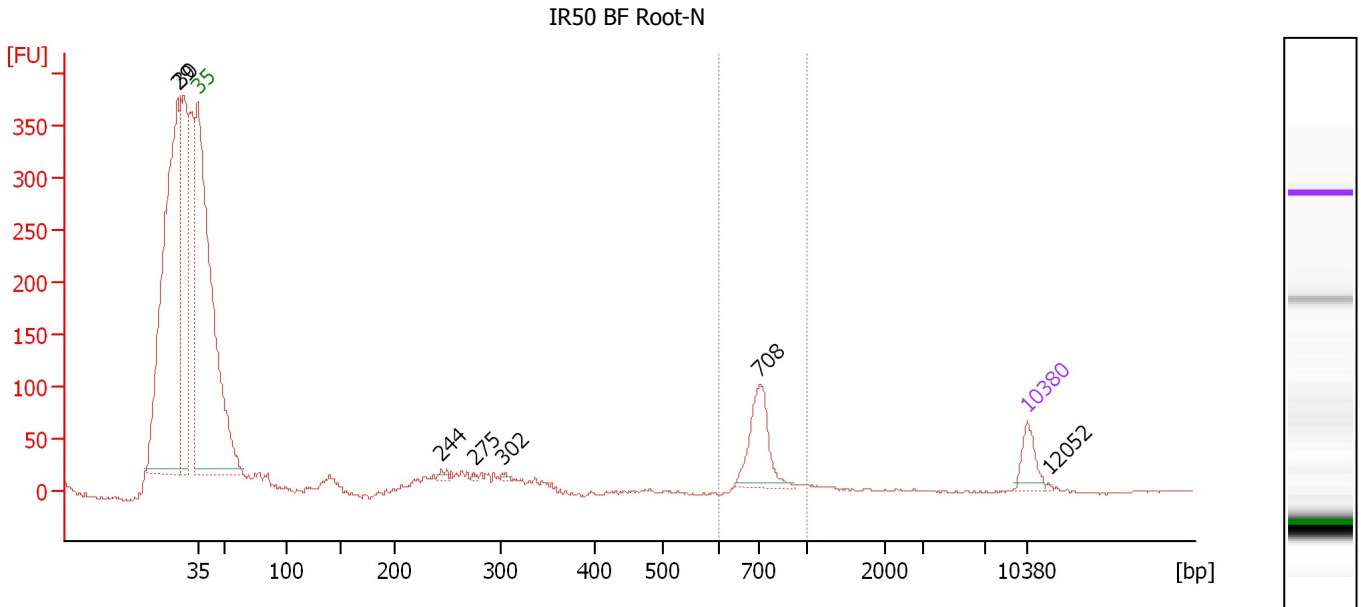
**Region table for sample 5 : IR50 1mm Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
625	1,000	758	1,309.5	651.37	352.7	21	10.1	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
 Modified: 12/19/2012 3:43:24 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 7                      Corr. Area 1: 233.5  
 Noise: 1.0

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

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	29	0.00	0.0	
2	30	0.00	0.0	
3	35	125.00	5,411.3	Lower Marker
4	244	20.17	125.3	
5	275	8.14	44.8	
6	302	14.31	71.8	
7	708	271.74	581.8	
8	10,380	75.00	10.9	Upper Marker
9	12,052	0.00	0.0	

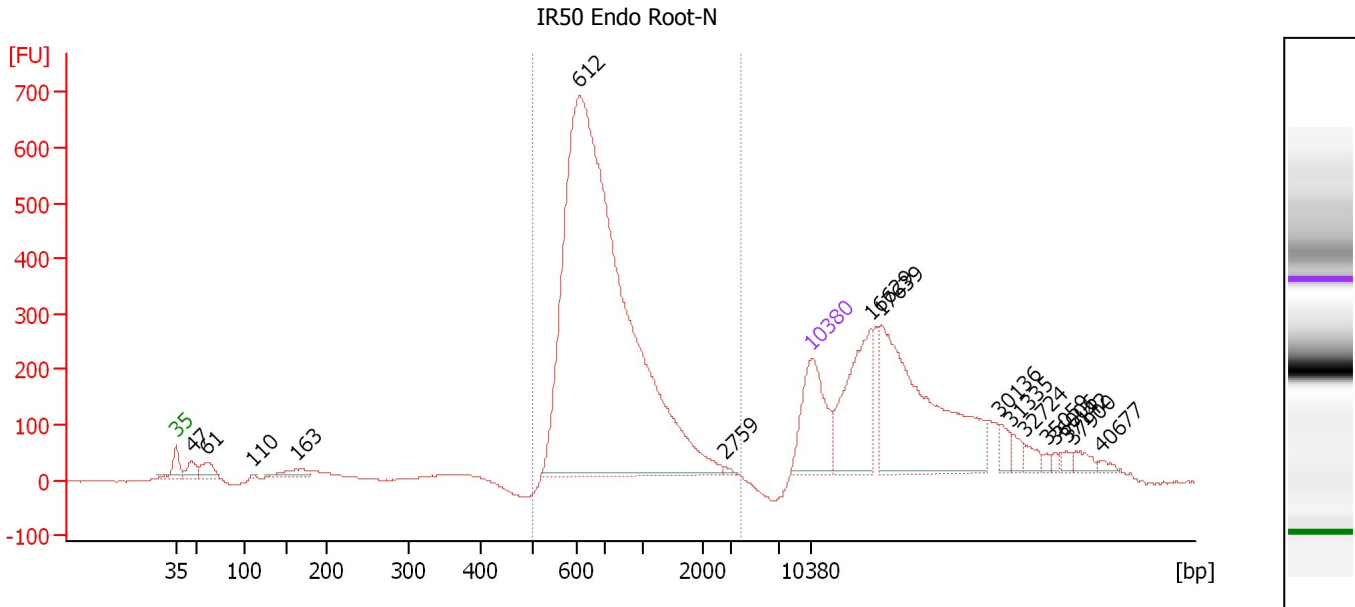
**Region table for sample 6 : IR50 BF Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
598	1,000	727	631.6	301.63	233.5	7	8.9	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
 Modified: 12/19/2012 3:43:24 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : IR50 Endo Root-N**

Number of peaks found: 16      Corr. Area 1: 4,783.0  
 Noise: 0.7

**Peak table for sample 7 : IR50 Endo Root-N**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	47	19.36	628.8	
3	61	23.16	576.2	
4	110	1.60	21.9	
5	163	20.63	192.0	
6	612	1,001.24	2,479.0	
7	2,759	1.95	1.1	
8	10,380	75.00	10.9	Upper Marker
9	16,629	0.00	0.0	
10	17,639	0.00	0.0	
11	30,136	0.00	0.0	
12	31,335	0.00	0.0	
13	32,724	0.00	0.0	
14	35,059	0.00	0.0	
15	36,006	0.00	0.0	
16	37,142	0.00	0.0	
17	37,900	0.00	0.0	
18	40,677	0.00	0.0	

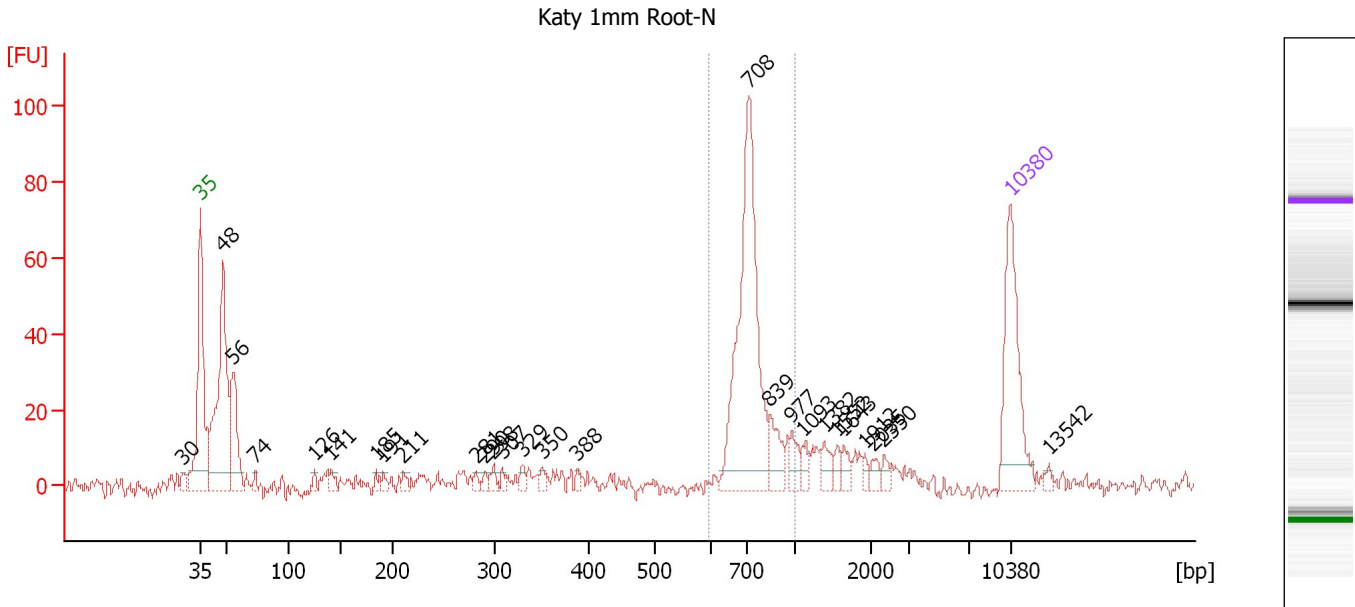
**Region table for sample 7 : IR50 Endo Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
501	3,802	788	2,004.3	939.20	4,783.0	66	39.3	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
 Modified: 12/19/2012 3:43:24 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : Katy 1mm Root-N**

Number of peaks found: 27                      Corr. Area 1: 231.6  
 Noise: 2.1

**Peak table for sample 8 : Katy 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	48	215.63	6,748.7	
4	56	81.62	2,207.5	
5	74	6.61	135.8	
6	126	5.60	67.3	
7	141	10.27	110.1	
8	185	5.32	43.7	
9	191	6.21	49.2	
10	211	6.27	45.1	
11	281	4.57	24.6	
12	290	5.59	29.1	
13	298	6.87	34.9	
14	307	4.16	20.5	
15	329	6.46	29.8	
16	350	5.07	22.0	
17	388	3.83	15.0	
18	708	225.20	482.0	
19	839	24.23	43.8	
20	977	12.34	19.1	
21	1,093	8.21	11.4	
22	1,382	11.09	12.2	
23	1,552	5.79	5.7	
24	1,643	7.97	7.3	
25	1,912	4.00	3.2	
26	2,035	5.77	4.3	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
 Modified: 12/19/2012 3:43:24 PM

### Electropherogram Summary Continued ...

#### ... Peak table for sample 8 : Katy 1mm Root-N

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
27	2,350	5.37	3.5	
28	 10,380	75.00	10.9	Upper Marker
29	13,542	0.00	0.0	

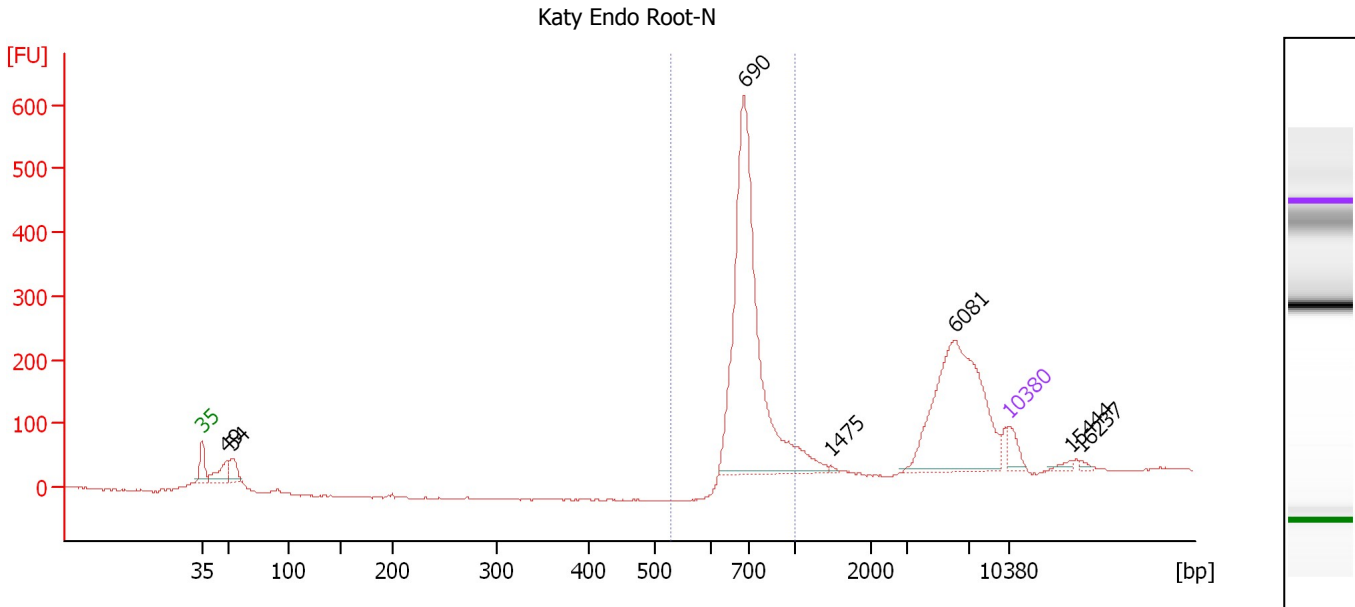
#### Region table for sample 8 : Katy 1mm Root-N

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
597	1,000	740	504.0	244.26	231.6	45	11.0	

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
 Modified: 12/19/2012 3:43:24 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 7                      Corr. Area 1: 1,503.8  
 Noise: 1.2

**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	49	200.73	6,158.5	
3	54	147.96	4,124.2	
4	690	2,515.59	5,522.7	
5	1,475	10.86	11.2	
6	6,081	1,190.41	296.6	
7	10,380	75.00	10.9	Upper Marker
8	15,444	0.00	0.0	
9	16,237	0.00	0.0	

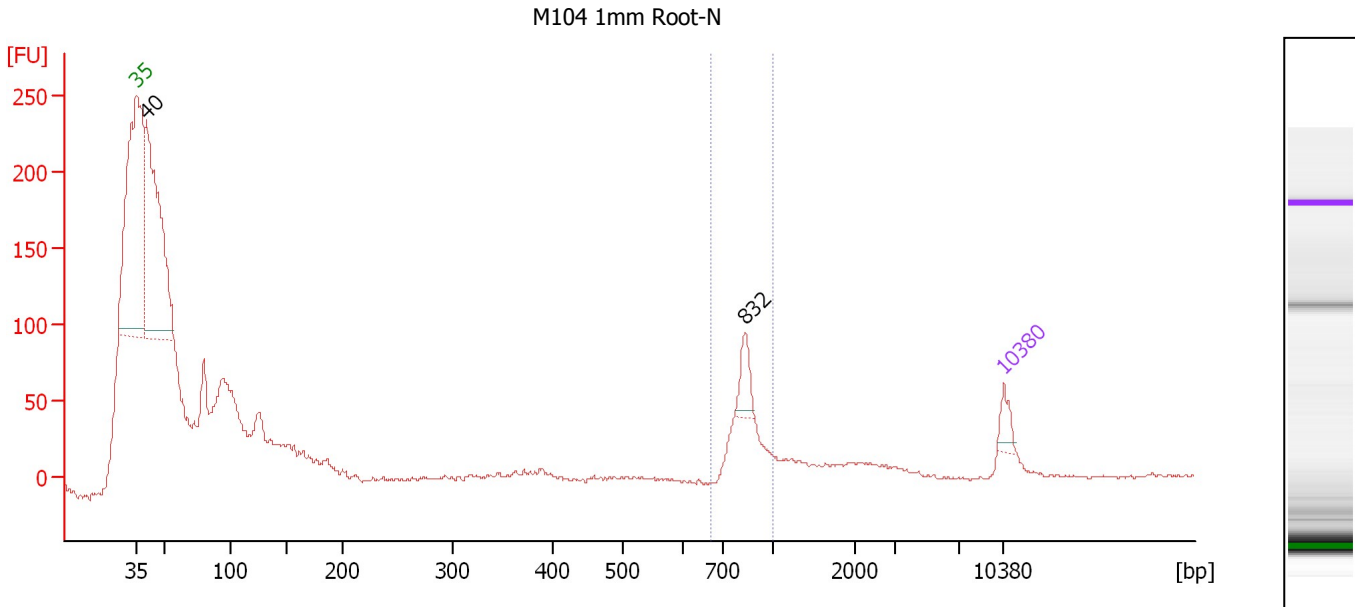
**Region table for sample 9 : Katy Endo Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
530	1,000	724	4,940.4	2,342.39	1,503.8	54	10.4	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
 Modified: 12/19/2012 3:43:24 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 2                      Corr. Area 1: 218.6  
 Noise: 1.0

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

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	40	2,520.35	96,282.4	
3	832	150.29	273.7	
4	10,380	75.00	10.9	Upper Marker

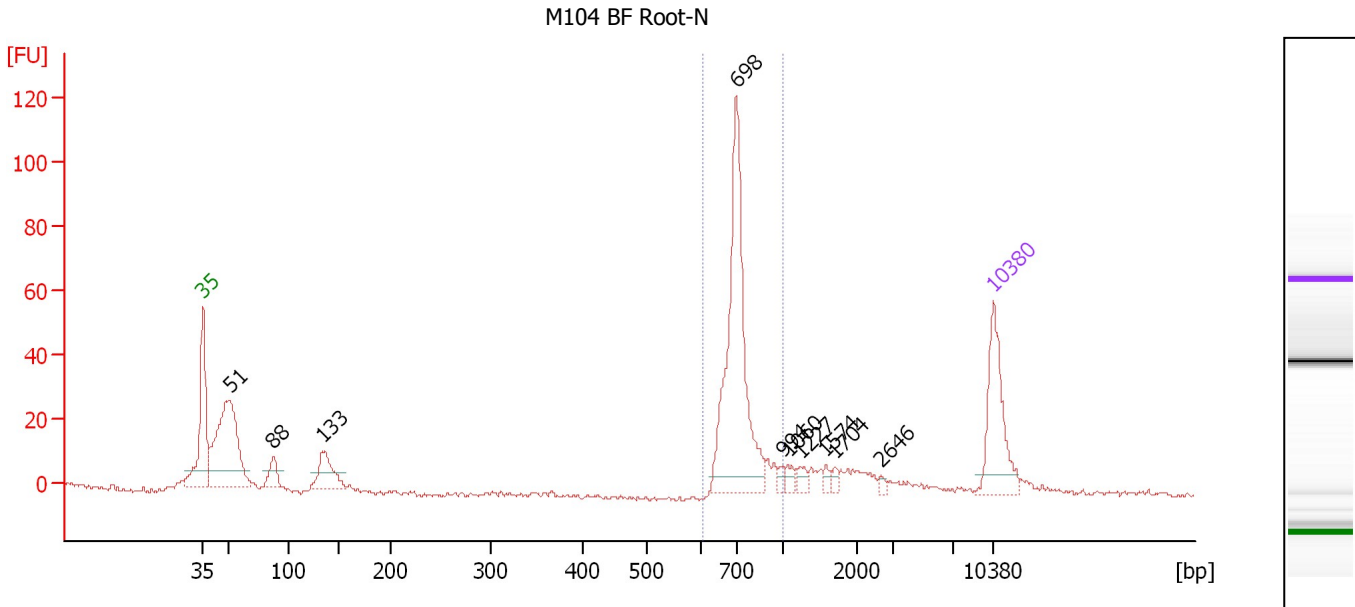
**Region table for sample 10 : M104 1mm Root-N**

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
671	1,000	835	1,037.2	571.45	218.6	7	7.9	Blue

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
 Modified: 12/19/2012 3:43:24 PM

**Electropherogram Summary Continued ...**



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

Number of peaks found: 10      Corr. Area 1: 230.4  
 Noise: 0.8

**Peak table for sample 11 : M104 BF Root-N**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	51	252.69	7,453.7	
3	88	30.04	518.6	
4	133	59.25	672.8	
5	698	278.85	605.6	
6	994	5.99	9.1	
7	1,060	7.99	11.4	
8	1,227	8.99	11.1	
9	1,574	6.17	5.9	
10	1,704	5.24	4.7	
11	2,646	3.95	2.3	
12	10,380	75.00	10.9	Upper Marker

**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
608	1,000	726	599.7	285.41	230.4	47	10.0	Blue



Assay Class: High Sensitivity DNA Assay  
Data Path: C:\...ents and Settings\Bioanalyzer\2012-12-19\2012-12-19\_006.xad

Created: 12/19/2012 2:59:29 PM  
Modified: 12/19/2012 3:43:24 PM

**Gel Image**

