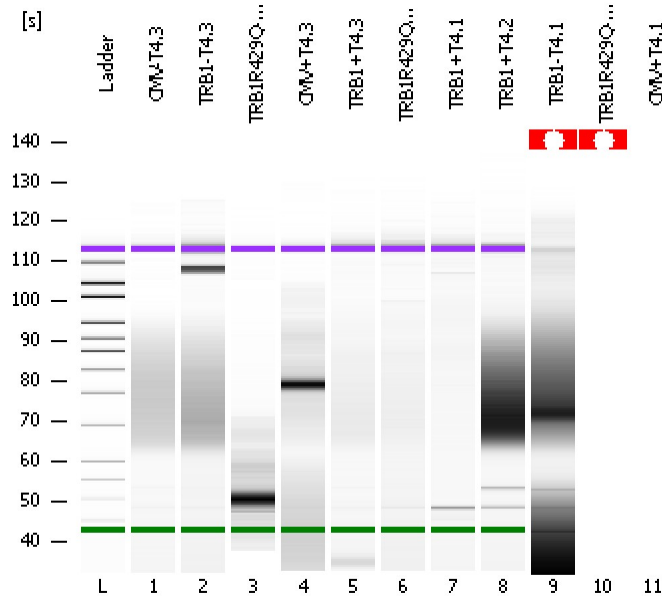


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
Modified: 6/10/2015 3:56:40 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

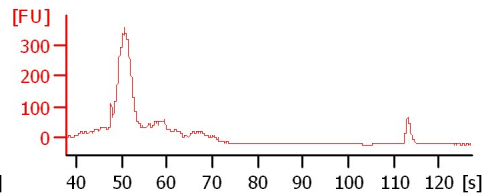
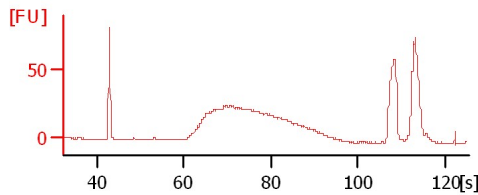
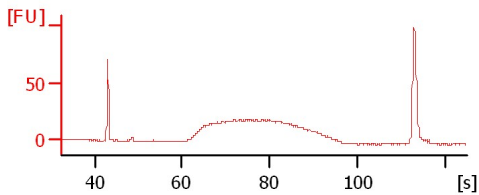
Chip Information:

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

CMV-T4.3

TRB1-T4.3

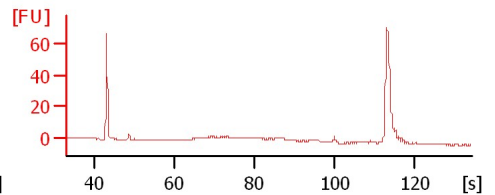
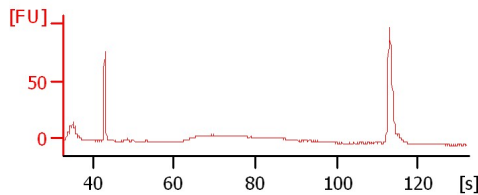
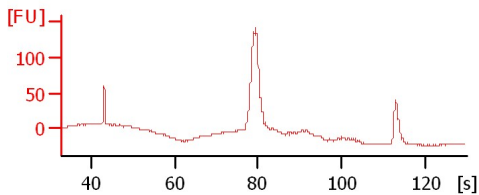
TRB1R429Q-T4.3



CMV+T4.3

TRB1+T4.3

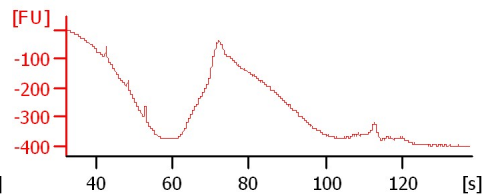
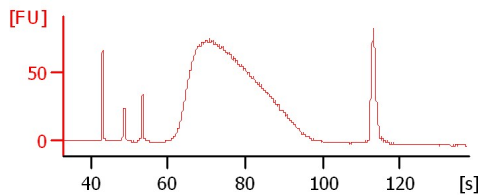
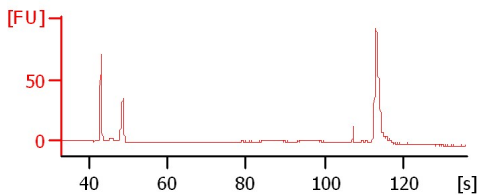
TRB1R429Q+T4.3



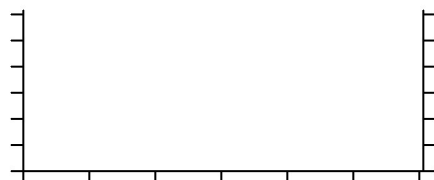
TRB1+T4.1

TRB1+T4.2

TRB1-T4.1



TRB1R429Q-T4.1



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
 Modified: 6/10/2015 3:56:40 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
CMV-T4.3		<input type="checkbox"/>	✓			
TRB1-T4.3		<input type="checkbox"/>	✓			
TRB1R429Q-T4.3		<input type="checkbox"/>	✓			
CMV+T4.3		<input type="checkbox"/>	✓			
TRB1+T4.3		<input type="checkbox"/>	✓			
TRB1R429Q+T4.3		<input type="checkbox"/>	✓			
TRB1+T4.1		<input type="checkbox"/>	✓			
TRB1+T4.2		<input type="checkbox"/>	✓			
TRB1-T4.1		<input type="checkbox"/>	✓			
TRB1R429Q-T4.1		<input type="checkbox"/>	✗			
CMV+T4.1		<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\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
Modified: 6/10/2015 3:56:40 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

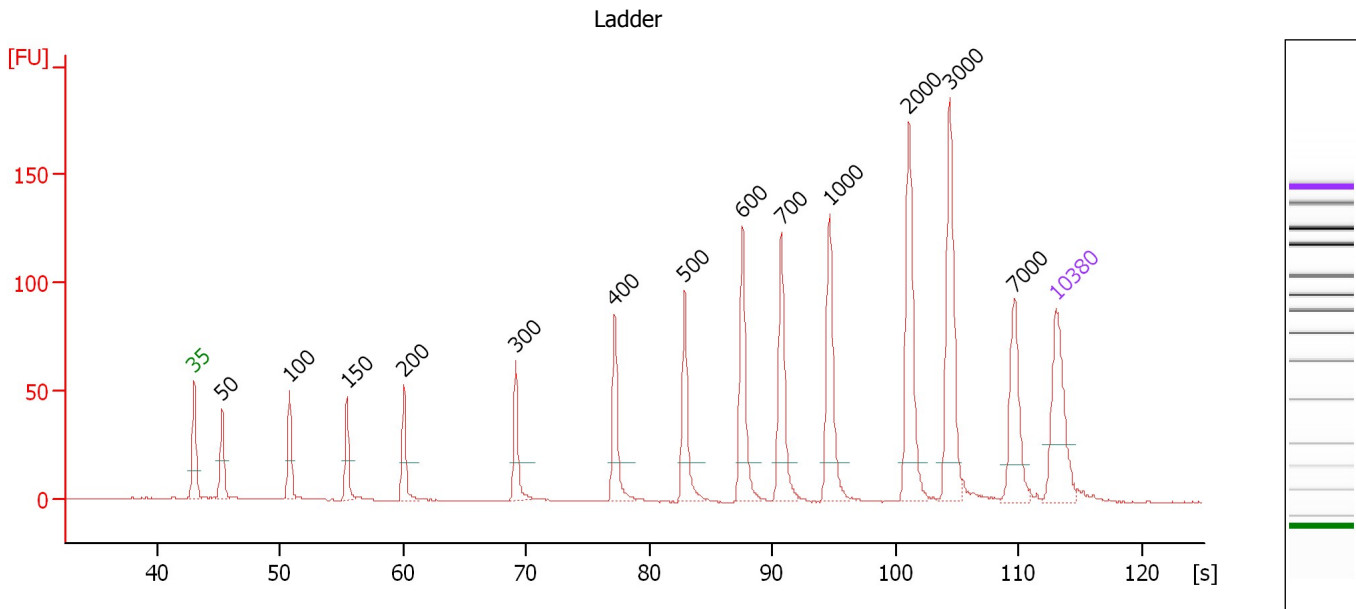
Ladder

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\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
 Modified: 6/10/2015 3:56:40 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.2

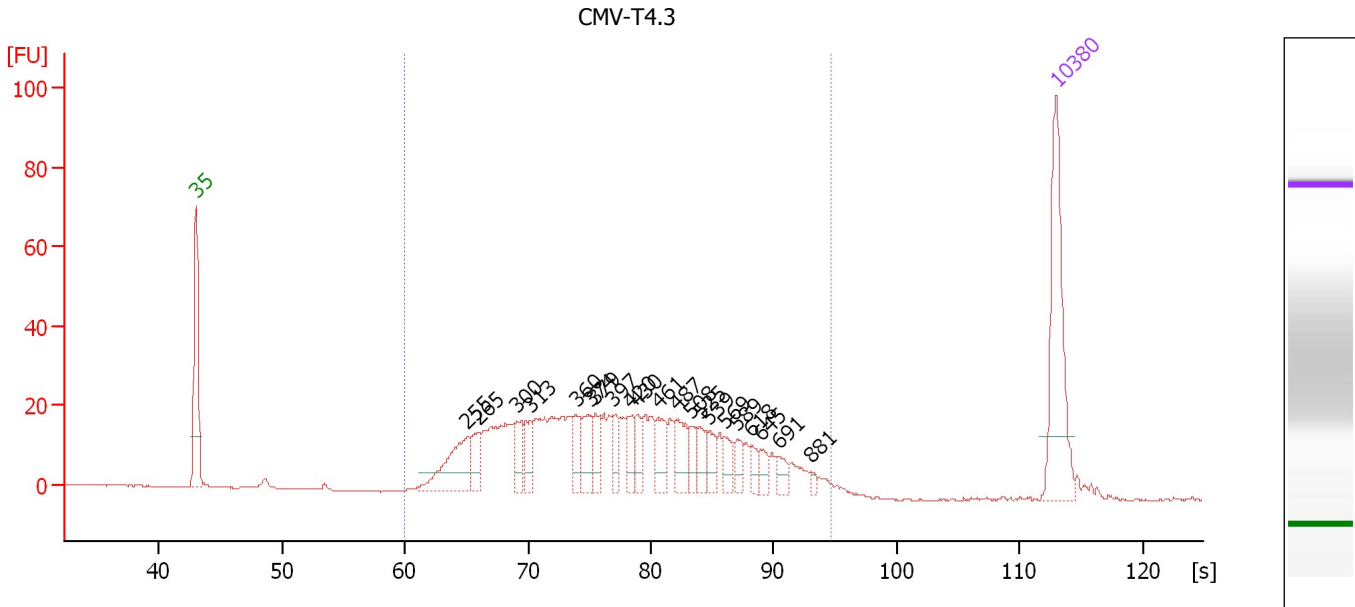
Peak table for Ladder

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	50	150.00	4,545.5	Ladder Peak	45.27
3	100	150.00	2,272.7	Ladder Peak	50.77
4	150	150.00	1,515.2	Ladder Peak	55.39
5	200	150.00	1,136.4	Ladder Peak	60.02
6	300	150.00	757.6	Ladder Peak	69.14
7	400	150.00	568.2	Ladder Peak	77.17
8	500	150.00	454.5	Ladder Peak	82.84
9	600	150.00	378.8	Ladder Peak	87.56
10	700	150.00	324.7	Ladder Peak	90.70
11	1,000	150.00	227.3	Ladder Peak	94.63
12	2,000	150.00	113.6	Ladder Peak	101.09
13	3,000	150.00	75.8	Ladder Peak	104.40
14	7,000	150.00	32.5	Ladder Peak	109.64
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
 Modified: 6/10/2015 3:56:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 1 : CMV-T4.3

Number of peaks found: 21 Corr. Area 1: 654.9
 Noise: 0.2


Peak table for sample 1 : CMV-T4.3

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	255	62.34	369.9		65.07
3	265	22.37	127.7		65.98
4	300	23.42	118.1		69.17
5	313	21.51	104.0		70.22
6	360	16.97	71.5		73.94
7	374	26.66	108.1		75.07
8	379	16.47	65.8		75.51
9	397	16.90	64.4		76.95
10	420	18.81	67.9		78.31
11	430	16.27	57.3		78.87
12	461	23.90	78.6		80.62
13	487	26.50	82.4		82.11
14	508	14.15	42.2		83.20
15	525	15.21	43.9		84.03
16	539	15.48	43.5		84.69
17	569	13.38	35.6		86.08
18	589	11.27	29.0		87.04
19	618	8.60	21.1		88.14
20	645	9.03	21.2		88.97
21	691	8.69	19.1		90.41
22	881	2.91	5.0		93.07
23	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
Modified: 6/10/2015 3:56:40 PM

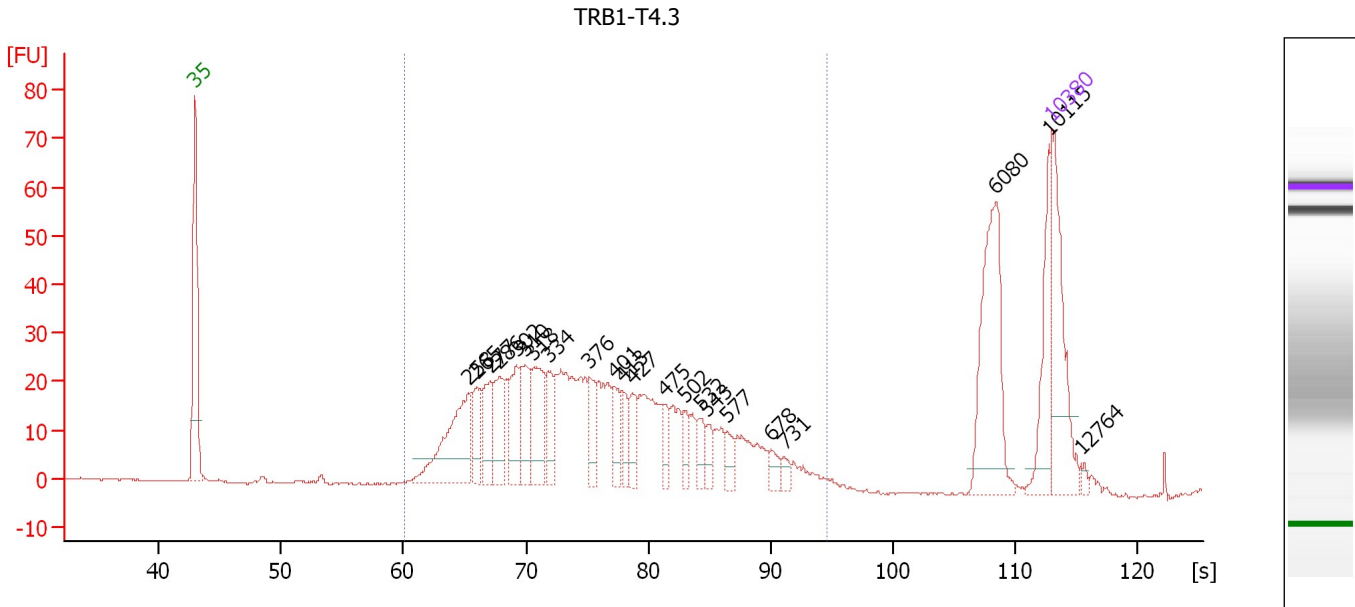
Electropherogram Summary Continued ...**... Region table for sample 1 : CMV-T4.3**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	432	1,000	654.9	2,874.4	 97	33.9	705.63

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
 Modified: 6/10/2015 3:56:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : TRB1-T4.3

Number of peaks found: 22 Corr. Area 1: 700.0
 Noise: 0.2

Peak table for sample 2 : TRB1-T4.3


Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	258	115.26	677.3		65.29
3	265	34.25	195.8		65.95
4	277	42.27	231.1		67.05
5	286	55.64	295.0		67.84
6	302	52.39	263.0		69.29
7	310	46.17	225.6		69.95
8	318	66.67	317.4		70.61
9	334	29.98	136.0		71.88
10	376	27.79	112.1		75.21
11	401	27.60	104.3		77.23
12	413	21.13	77.6		77.89
13	427	23.91	84.8		78.72
14	475	19.13	61.1		81.40
15	502	16.08	48.5		82.94
16	532	16.87	48.1		84.34
17	543	14.34	40.0		84.87
18	577	13.51	35.4		86.49
19	678	11.54	25.8		90.00
20	731	7.92	16.4		91.10
21	6,080	112.73	28.1		108.44
22	10,115	51.88	7.8		112.74
23	10,380	75.00	10.9	Upper Marker	113.00
24	12,764	0.00	0.0		115.37

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
Modified: 6/10/2015 3:56:40 PM

Electropherogram Summary Continued ...

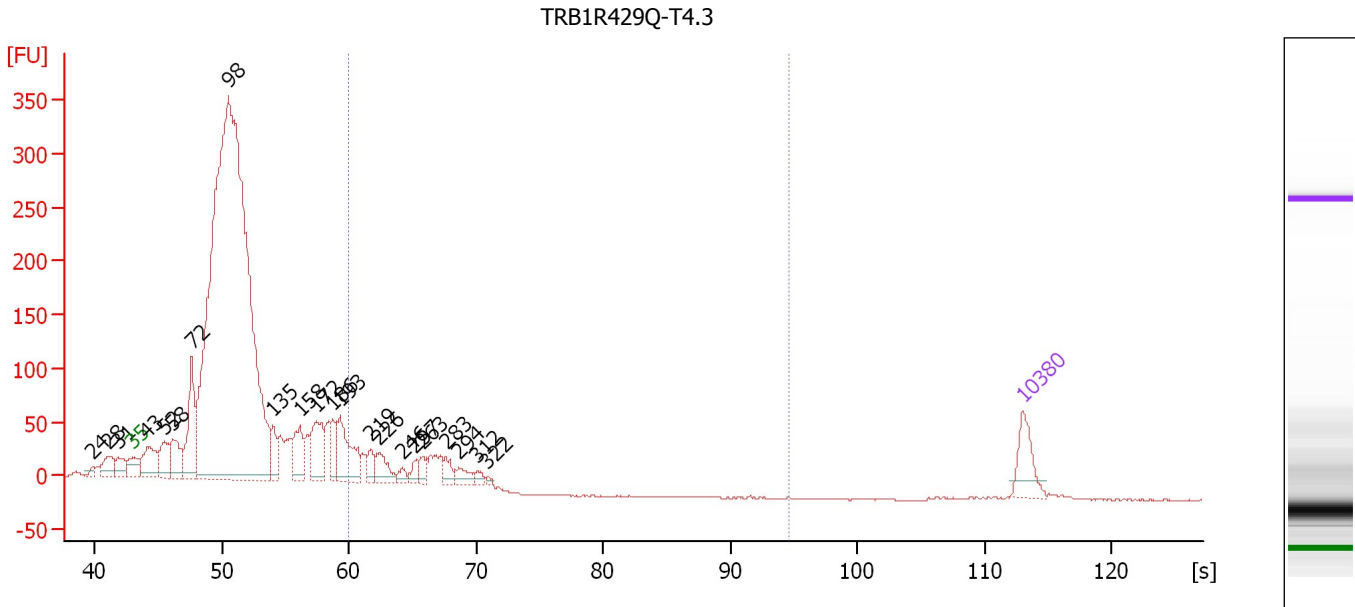
... Region table for sample 2 : TRB1-T4.3

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	402	1,000	700.0	4,516.5	 82	32.7	1,050.67

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
 Modified: 6/10/2015 3:56:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : TRB1R429Q-T4.3

Number of peaks found: 22 Corr. Area 1: 343.4
 Noise: 0.5


Peak table for sample 3 : TRB1R429Q-T4.3

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	24	0.00	0.0		39.83
2	28	0.00	0.0		41.14
3	31	0.00	0.0		41.86
4	35	125.00	5,411.3	Lower Marker	43.00
5	43	174.60	6,219.4		44.14
6	52	123.55	3,625.6		45.45
7	58	137.59	3,584.6		46.17
8	72	292.80	6,196.4		47.64
9	98	4,672.70	72,465.5		50.52
10	135	86.66	971.6		54.02
11	158	127.39	1,221.9		56.13
12	172	178.92	1,575.1		57.44
13	186	96.12	781.9		58.75
14	193	211.69	1,665.0		59.34
15	219	51.36	355.4		61.75
16	226	77.25	518.2		62.38
17	246	25.37	156.1		64.24
18	257	30.66	180.5		65.25
19	263	36.28	209.1		65.76
20	283	36.97	197.7		67.61
21	294	41.93	215.8		68.63
22	312	18.52	89.9		70.10
23	322	6.74	31.7		70.91
24	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

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Modified: 6/10/2015 3:56:40 PM

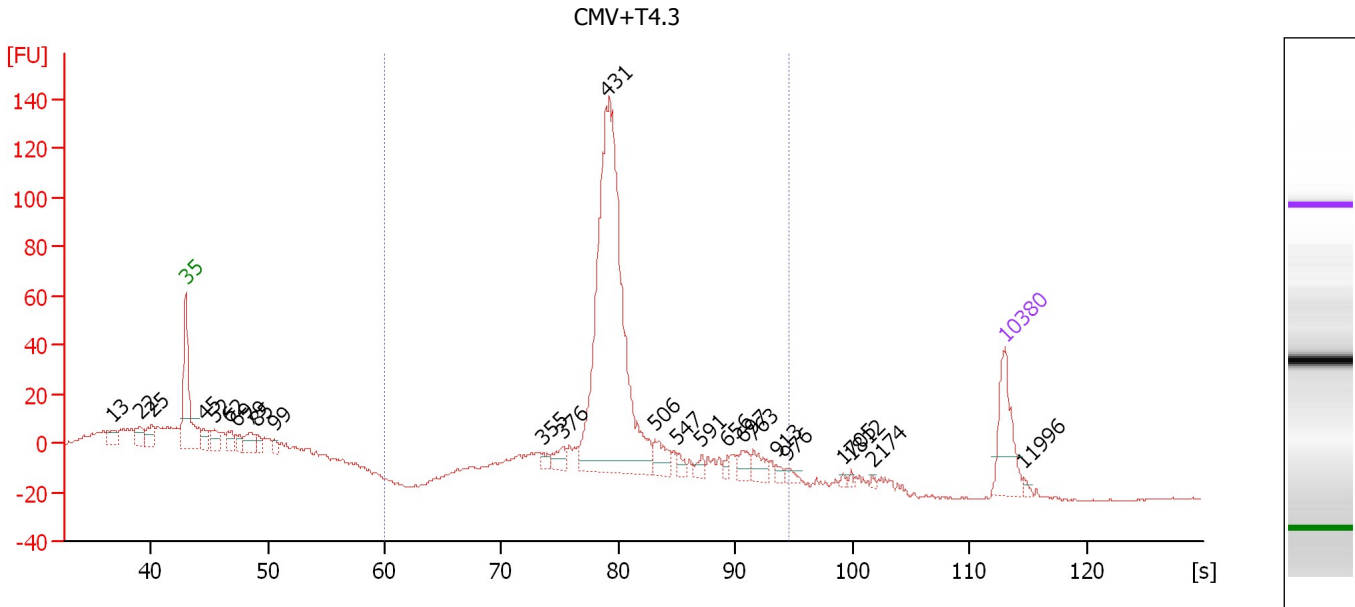
Electropherogram Summary Continued ...**... Region table for sample 3 : TRB1R429Q-T4.3**

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	251	1,000	343.4	2,675.6	 8	13.9	439.56

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
 Modified: 6/10/2015 3:56:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : CMV+T4.3

Number of peaks found: 25 Corr. Area 1: 632.6
 Noise: 0.3

Peak table for sample 4 : CMV+T4.3

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	13	0.00	0.0		36.67
2	22	0.00	0.0		39.14
3	25	0.00	0.0		40.11
4	35	125.00	5,411.3	Lower Marker	43.00
5	45	26.93	906.6		44.51
6	52	34.57	1,001.2		45.52
7	62	30.34	737.4		46.63
8	69	19.53	431.4		47.31
9	79	38.12	727.0		48.51
10	85	20.08	358.5		49.10
11	99	14.87	228.3		50.62
12	355	11.74	50.2		73.52
13	376	24.07	97.1		75.22
14	431	788.96	2,772.3		78.94
15	506	37.21	111.5		83.12
16	547	11.42	31.7		85.05
17	591	11.54	29.6		87.11
18	656	8.48	19.6		89.31
19	697	21.15	46.0		90.60
20	763	25.27	50.2		91.52
21	913	6.33	10.5		93.49
22	976	8.76	13.6		94.32
23	1,705	2.84	2.5		99.18
24	1,812	2.99	2.5		99.87
25	2,174	3.06	2.1		101.66

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
 Modified: 6/10/2015 3:56:40 PM

Electropherogram Summary Continued ...

... Peak table for sample 4 : CMV+T4.3

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
26	10,380	75.00	10.9	Upper Marker	113.00
27	11,996	0.00	0.0		114.61

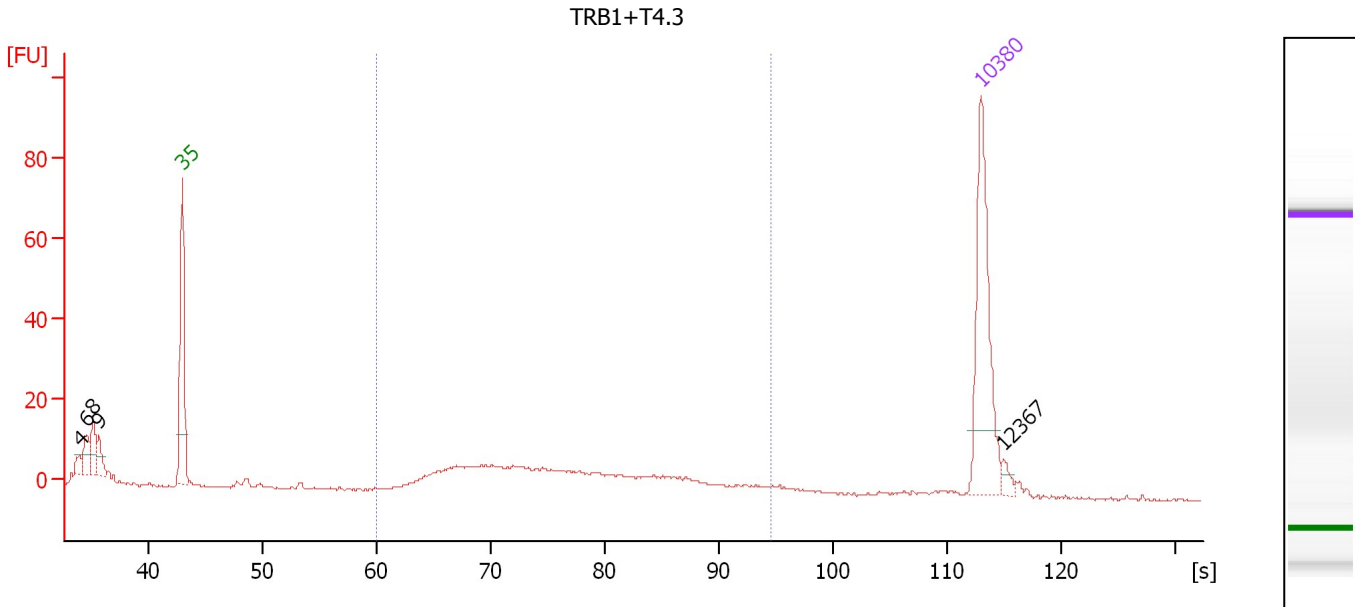
Region table for sample 4 : CMV+T4.3

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	471	1,000	632.6	3,263.1	72	22.1	972.63

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
 Modified: 6/10/2015 3:56:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : TRB1+T4.3

Number of peaks found: 5 Corr. Area 1: 113.5
 Noise: 0.2

Peak table for sample 5 : TRB1+T4.3

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	4	0.00	0.0		34.01
2	6	0.00	0.0		34.67
3	8	0.00	0.0		35.19
4	9	0.00	0.0		35.71
5	35	125.00	5,411.3	Lower Marker	43.00
6	10,380	75.00	10.9	Upper Marker	113.00
7	12,367	0.00	0.0		114.98

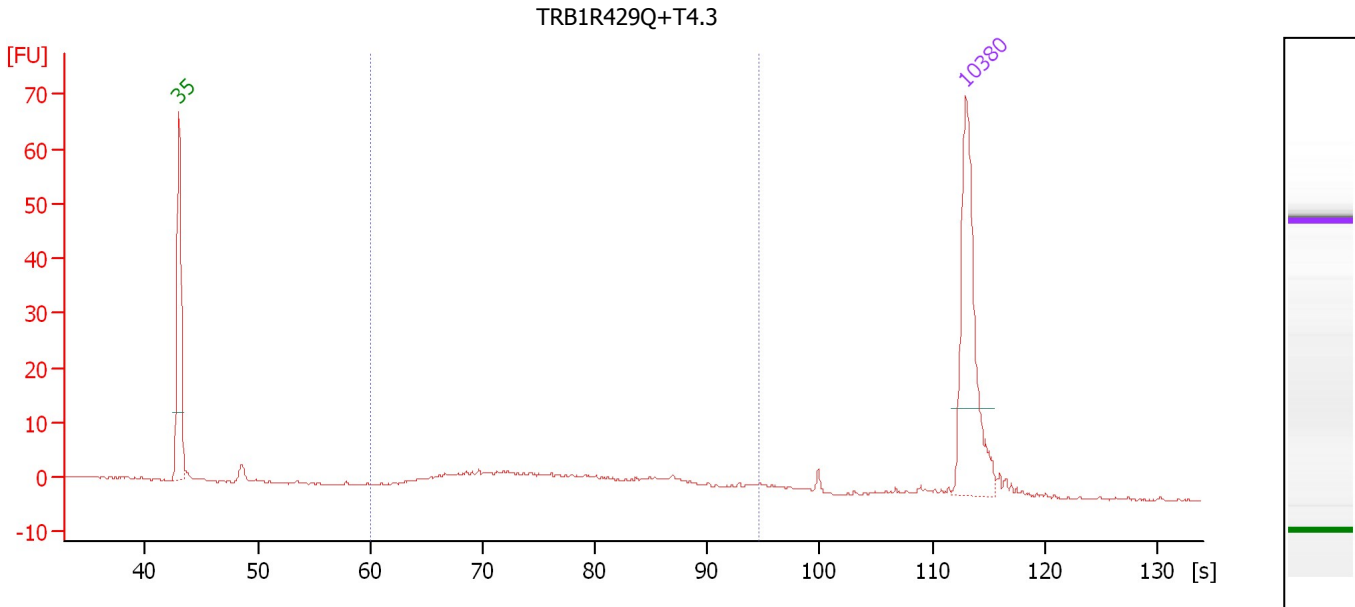
Region table for sample 5 : TRB1+T4.3

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	415	1,000	113.5	467.6	62	33.2	112.82

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
 Modified: 6/10/2015 3:56:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : TRB1R429Q+T4.3

Number of peaks found: 0 Corr. Area 1: 69.6
 Noise: 0.2

Peak table for sample 6 : TRB1R429Q+T4.3

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	10,380	75.00	10.9	Upper Marker	113.00

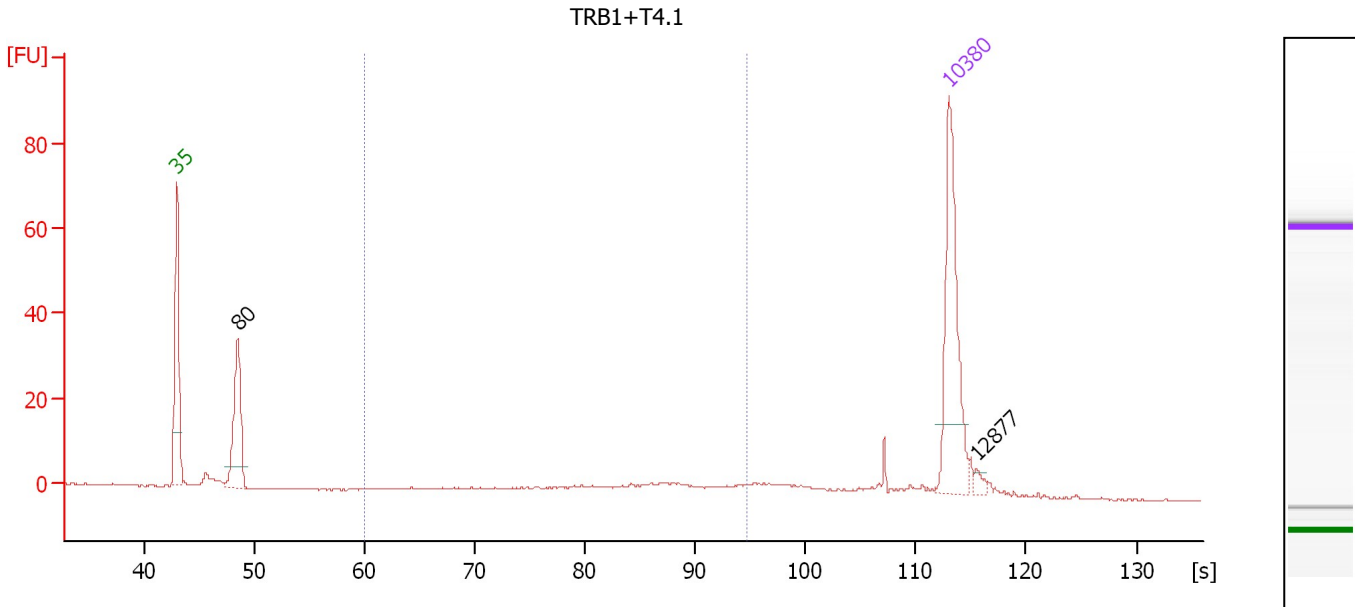
Region table for sample 6 : TRB1R429Q+T4.3

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	445	1,000	69.6	321.5	79	35.3	81.28

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
 Modified: 6/10/2015 3:56:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : TRB1+T4.1

Number of peaks found: 2 Corr. Area 1: 40.8
 Noise: 0.1

Peak table for sample 7 : TRB1+T4.1

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	80	84.35	1,601.0		48.55
3	10,380	75.00	10.9	Upper Marker	113.00
4	12,877	0.00	0.0		115.48

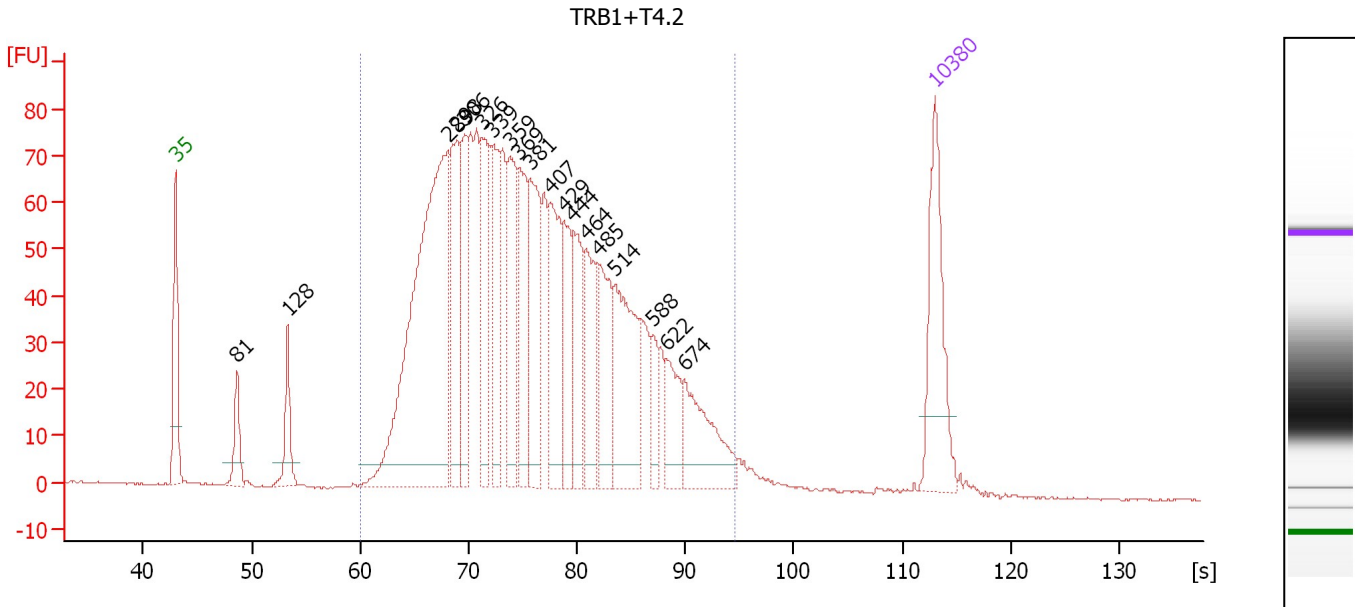
Region table for sample 7 : TRB1+T4.1

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	578	1,000	40.8	125.2	26	31.0	41.36

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
 Modified: 6/10/2015 3:56:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : TRB1+T4.2

Number of peaks found: 19 Corr. Area 1: 2,048.3
 Noise: 0.2

Peak table for sample 8 : TRB1+T4.2

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	81	41.99	788.5		48.64
3	128	45.85	543.3		53.35
4	289	446.48	2,344.2		68.10
5	298	112.89	574.4		68.94
6	306	83.06	411.1		69.63
7	326	95.48	443.1		71.27
8	339	85.03	379.6		72.31
9	359	97.75	413.1		73.84
10	369	82.98	340.7		74.68
11	381	102.74	408.2		75.67
12	407	97.43	362.9		77.55
13	429	62.87	222.2		78.79
14	444	69.00	235.3		79.68
15	464	66.10	215.7		80.82
16	485	73.59	229.8		82.01
17	514	118.78	350.3		83.50
18	588	24.68	63.6		87.01
19	622	38.67	94.2		88.25
20	674	73.71	165.7		89.88
21	10,380	75.00	10.9	Upper Marker	113.00

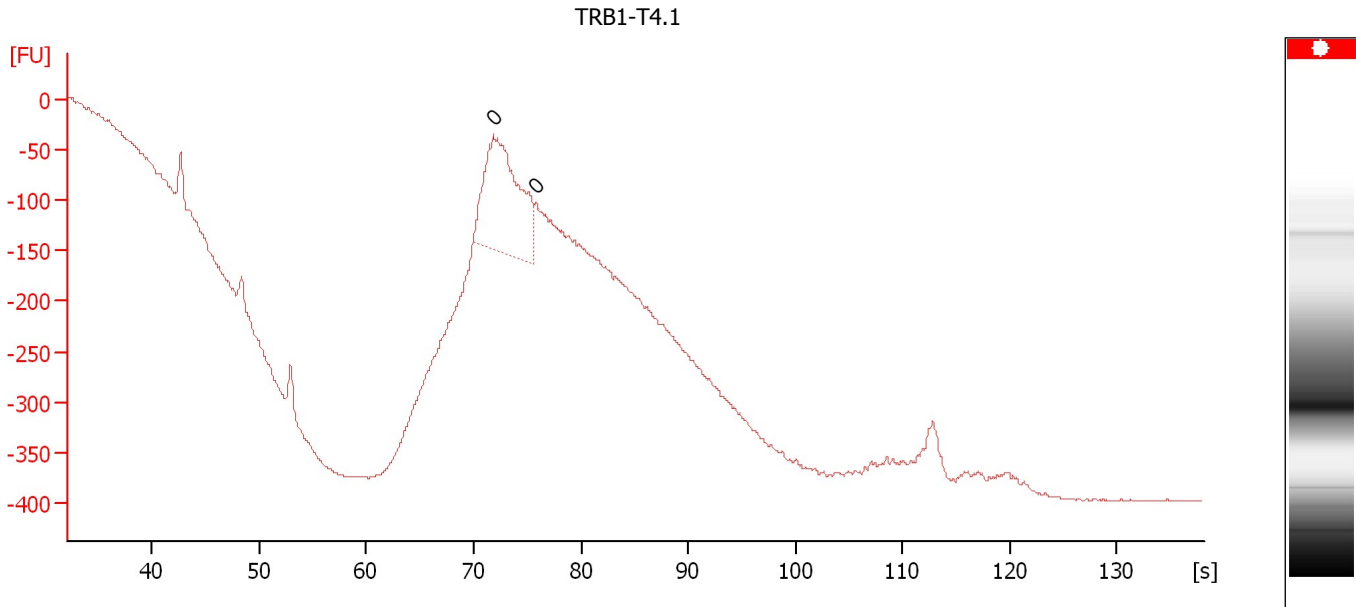
Region table for sample 8 : TRB1+T4.2

From [bp]	Average Size [bp]	To [bp]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]	Conc. [pg/μl]
200	407	1,000	2,048.3	8,932.9	95	33.0	2,114.07

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
Modified: 6/10/2015 3:56:40 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : TRB1-T4.1

Number of peaks found: 0 Noise: 0.7

Peak table for sample 9 : TRB1-T4.1

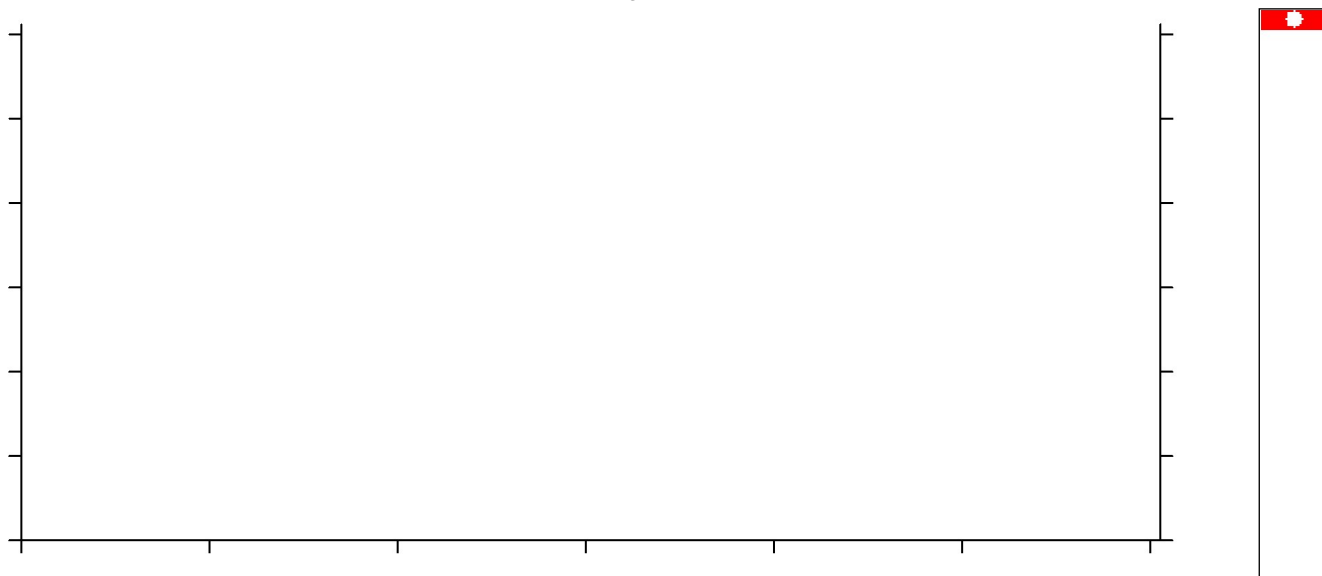
Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	0	0.00	0.0		71.85
2	0	0.00	0.0		75.85

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
Modified: 6/10/2015 3:56:40 PM

Electropherogram Summary Continued ...

TRB1R429Q-T4.1



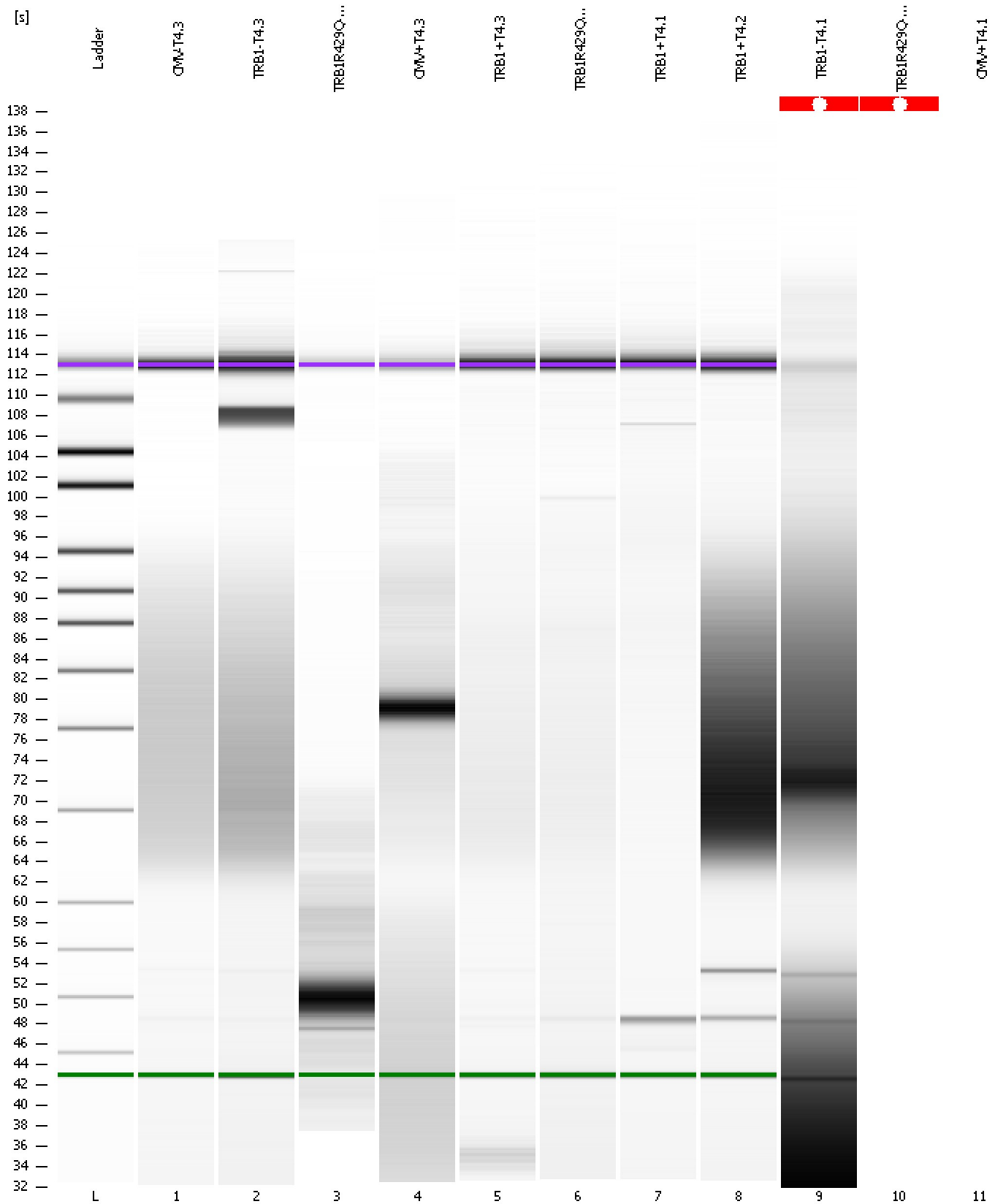
Setpoint Deviations for sample 10 : TRB1R429Q-T4.1

End Analysis Time Range [s] : 0.4

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
Modified: 6/10/2015 3:56:40 PM

Gel Image

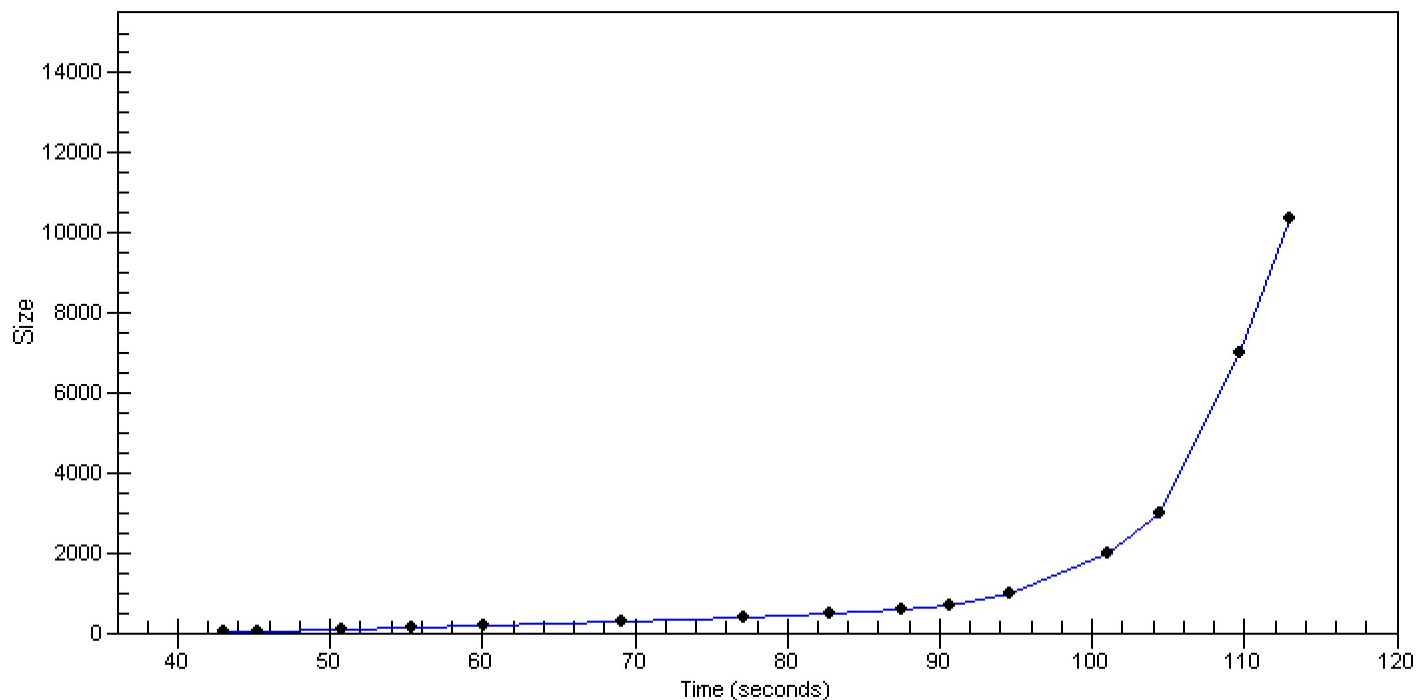


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
Modified: 6/10/2015 3:56:40 PM

Curves

Standard Curve



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2015-06-10\2015-06-10_005.xad

Created: 6/10/2015 3:21:10 PM
Modified: 6/10/2015 3:56:40 PM

Invalid Samples

Sample 11 has not been run, no results available.